EAST PARCEL REDEVELOPMENT
Sleepy Hollow, New York

FINAL ENVIRONMENTAL IMPACT STATEMENT

APPENDIX

Lead Agency:
Sleepy Hollow Local Development Corporation
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March 2017

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APPENDIX A

PUBLIC HEARING TRANSCRIPTS

VILLAGE OF SLEEPY HOLLOW
SLEEPY HOLLOW VILLAGE BOARD
SLEEPY HOLLOW LOCAL DEVELOPMENT CORPORATION
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JOINT PUBLIC HEARINGS
FOR THE EAST PARCEL PROPOSED REDEVELOPMENT

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August 23, 2016
Village Hall of Sleepy Hollow
28 Beekman Avenue
Tarrytown, New York
7:02 p.m.

B E F O R E:

SLEEPY HOLLOW VILLAGE BOARD:

KENNETH WRAY, Mayor
GLENN ROSENBLOOM, Deputy Mayor
RACHELLE GEBLER
JOHN LEAVY
DENISE SCAGLIONE
SAM GONZALAZ
SANDRA SPIRO
PAULA McCARTHY TOMKINS, Clerk

McCARTHY FINGAR, LLP
11 Martine Avenue, 12th Floor
White Plains, New York 10606
BY: CLINTON B. SMITH

SLEEPY HOLLOW LOCAL DEVELOPMENT CORPORATION:

DAVID SCHROEDEL, Chairman
MIKE DAWLEY
TERESA OESTE VILLAVIEGA
ANTHONY SCARPATI
DAVID SMITH, Planner
JOAN BUCCI, Acting Secretary

Ilana Michael Nathanson, Court Reporter

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MAYOR WRAY: Welcome. We're going to do something a little bit different than what our normal meetings are, and that's a joint public hearing this evening; the public hearing with the board of trustees on the -- the concept plan and the special permit that we are considering that is before us from the local development corporation. The Sleepy Hollow Local Development Corporation is also having a public hearing on the draft environmental impact statement, which I'm sure all of you have downloaded from the Village website and thoroughly read. And we look forward to your comments on that.

So what we're going to do right now is I'm going to ask the clerk to read the notice of the public hearing to the board of trustees.

MS. TOMKINS: Please take notice that the board of trustees of the Village of Sleepy Hollow along with the Sleepy Hollow Local Development Corporation, SHLDC, has scheduled a public hearing to be held on August 23rd, 2016, at 7 p.m. or shortly thereafter, to be continued to September 12th, 2016, and to be

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continued again to September 20th, 2016, at 7 p.m. or shortly thereafter, at the Sleepy Hollow Village Hall, 28 Beekman Avenue in Sleepy Hollow, New York 10591, to hear and consider comments from the public on the application for a special permit and riverfront development concept plan approval presented by the Sleepy Hollow Local Development Corporation as a proposed action in the draft environmental impact statement on the proposed redevelopment of the East Parcel of the formal -- of the former General Motors property located at the terminus of Continental Street.

A copy of the draft environmental impact statement is available for review in the village clerk's office and/or on the Village's website at www.sleepyhollowny.gov. All taxpayers and residents are welcome to attend and be heard at said meetings. Village hall is accessible to all persons with disabilities.

By order of the board of trustees, July 26th, 2016.

MAYOR WRAY: Thank you.

It's my pleasure now to recognize and

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welcome the members of the Sleepy Hollow Local Development Corporation and to invite their chair, Mr. Schroedel, to formally open their meeting.

MR. SCHROEDEL: Thank you, Mr. Mayor.

At this time, we open a regular meeting of the Sleepy Hollow Local Development Corporation and recognize Joan Bucci, acting secretary, to read the notice of public hearing.

MS. BUCCI: Please take notice that the board of trustees of the Village of Sleepy Hollow along with the Sleepy Hollow Local Development Corporation, SHLDC, has scheduled a public hearing to be held on August 23rd, 2016, at 7 p.m. or shortly thereafter, to be continued to September 12th, 2016, and to be continued again to September 20th, 2016, at 7 p.m. or shortly thereafter at the Sleepy Hollow Village Hall, 28 Beekman Avenue, Sleepy Hollow, New York 10591, to hear and consider comments from the public on the application for a special permit and riverfront development concept plan approval presented by the SHLDC as the proposed action and its draft environmental

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impact statement on the proposed redevelopment of the East Parcel of the former General Motors property located at the terminus of Continental Street.

A draft of the -- a copy of the draft environmental impact statement is available for review in the village clerk's office and/or on the Village's website, www.sleepyhollowny.gov. All taxpayers and residents are welcome to attend and be heard at said meetings. Village hall is accessible to all persons with disabilities.

By order of the Sleepy Hollow Local Development Corporation, July 25th, 2016.

MR. SCHROEDEL: Thank you, Ms. Bucci.

At this time, Mr. Mayor, we recognize you, for purposes of efficiency, as a member of the LDC Board. Chair cedes control of this public hearing to the mayor for the remainder of the public hearing.

MAYOR WRAY: Thank you, Mr. Schroedel.

We're going to begin with a presentation from David Smith who is the planner who has been involved in this project for longer than

he would like to think, but more than a decade, and he will outline the concept plan that many of you already had the opportunity to review.

DAVID SMITH: Good evening. Thank you, Mayor.

Members of the board of the trustees, the LDC, for the record, David Smith, principal with Planning and Development Advisors. We plan and consult the Village of Sleepy Hollow and the LDC.

Our role in the process tonight was to coordinate the preparation of the draft environmental impact statement along with certain sections and coordinate the other team members. There are other consultants that are involved with the project including WSP Parsons Brinckerhoff --

MAYOR WRAY: The mic; make sure it's close. Thank you.

DAVID SMITH: -- who -- you're welcome -- who were the principal preparers of the riverfront development concept plan. Also BHD, who prepared the traffic study as part of the DEIS.

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To orient the public with the graphic, the East Parcel is outlined in blue. North is to the left of the screen. That will be throughout the presentation. So the East Parcel, outlined in blue. Just to orient the public, DeVries Park, Pocantico River, the Philipsburg Manor restoration property. In this corner, Continental Street coming in off of Route 9, coming down into the parcel. Barnhart Park, the senior center right here, and then Beekman Avenue extending here down to the West Parcel, formerly known as Lighthouse Landing, now known as Edge-On-Hudson. And this structure right here is the existing pedestrian overpass, just for orientation.

Tonight's meeting and the public hearing is part of the State Environmental Quality Review Act, SEQRA process. The proposed action that both the LDC and Village board are considering is the granting of a special permit and a riverfront development concept plan. This is pursuant to the Village code. The East Parcel is located in the RF, the riverfront development district, and the requirements of

the zoning code require that the preparation of an environmental impact statement be prepared as part of this process. So that's what's being considered tonight.

The proposed action considers several different components: The construction of a new DPW facility, the construction of new parking facilities, construction of a proposed overpass connecting the East and West Parcels, construction of a new recreation of community facilities to serve the Village, the construction of a new bus repair garage for the Tarrytown School District.

It's important to note that the proposed action, in some shape or form, has been considered in the planning process by the Village for a number of years going back, even before Lighthouse Landing was being formally proposed. So as part of the environmental review, we wanted to consider the broadest scope of the action as possible for consideration.

The reason that we have both the LDC and the Village Board here tonight with this joint

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public hearing, the LDC is acting as an -- and I'll go through the process in a minute. But the LDC is acting as the lead agency who's coordinating the environmental review. They're also the funding agent for proposed improvements. The Village Board issues the special permit and the riverfront development concept and approval as part of the process. So that's why -- there's a public hearing requirement for both of these boards, both SEQRA and the zoning code encourage the coordination of public hearings whenever possible. That's why there's a joint public hearing on this matter tonight.

So a couple of East Parcel fast facts: The site is approximately 28 acres, as seen from the photograph. And if you've been down there, it's almost entirely impervious. It was, at one point, used as a municipal landfill, and that creates certain issues with respect to how that site is used in the future. It was also used for parking for the GM facility. And that's why, for the most part, it's an impervious condition. It has existing

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connections to Continental Street here, and then there's an existing viaduct which runs to Beekman Avenue that is noted as part of the Lighthouse Landing environmental review. And then, subsequent reviews, the viaduct is in a condition which really doesn't make it accessible for vehicular traffic.

The East Parcel is currently used informally for DPW operations, mulching, and it's also used at different times for overflow parking for events for Historic Hudson Valley. The East Parcel was part of a brownfields clean-up program along with the West Parcel as part of a comprehensive brownfields clean-up program for the GM site. There is currently a site management plan that's administered by the Department of Environmental Conservation, and that places certain restrictions on future use of the East Parcel.

There are also, as outlined in the draft environmental impact statement, certain restrictions on the use when the property was provided from GM to the LDC with respect to limitation on certain activities like

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retailing, commercial. And the site management plan restricts certain uses with respect to not allowing agricultural farm uses. So there are -- the public should be aware that there isn't a full range of uses that the East Parcel could be used for, and that's part of the planning that went into the riverfront development concept plan.

The highlighted area on the parcel -- there was a gentleman, I think Mr. Strasser [ph.], who's here tonight, raised an issue about a subdivision that occurred. There's a portion of the East Parcel that was subdivided. It has existing railroad sidings on it. It was subdivided and provided or sold to Metro-North Railroad to that effect.

Mr. Strasser, you had also raised some other questions, substantive questions on the -- on that activity, and others have emailed comments.

As part of the process, we're really not going to get into responding to those comments tonight. But rest assured that all comments submitted or raised either verbally tonight or

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in writing will be responded to subsequently, and I'll get through that as part of the presentation.

MAYOR WRAY: Mr. Smith.

DAVID SMITH: Yes, sir.

MAYOR WRAY: I'm getting comments that folks at home can't hear you. I'm sure the room is fine, but if you could speak more directly into the mic.

DAVID SMITH: Very good.

MAYOR WRAY: Or stop turning around and facing the audience or --

DAVID SMITH: There we go.

MAYOR WRAY: Thank you.

DAVID SMITH: You're welcome.

So project need: The existing DPW operations are split between multiple sites. The graphic I have up on the screen here is the existing DPW facility on River Street. The DPW had been using a portion of the West Parcel. That's currently no longer a consideration, given that activities -- construction activities on the West Parcel have started with Edge-On-Hudson, and they have used portions of

the East Parcel for operations, and they've also been storing equipment out here at the pump station. So there's a need for consolidation of activities. The existing DPW facility is undersized, not designed for contemporary operations. Much of the equipment is stored outside. That means that equipment is exposed to the elements. It reduces the average life span of equipment, makes it harder for vehicles and equipment to be started in the winter months. So there's an opportunity to correct that situation and provide for a -- an updated facility. And, in addition, the DPW -- proposed DPW facility doesn't require the full extent of use of the East Parcel. So there's opportunities, as we'll get to as part of the presentation, for other public uses, and some of which will be -- are described tonight. Others will be incorporated as potential alternatives going forward.

So very quickly, again, I just want to emphasize to the public that we're probably midway through the environmental review process, and no decision is being made tonight

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with respect to the types of uses that may be provided for on the East Parcel. But very quickly, the steps in the SEQRA process that have been conducted to date: The lead agency has been determined through a public circulation process. A public scoping session and process was held. In the appendix of the DEIS, there's a copy of the scoping outline. And, essentially, the scoping outline acts as a table of contents, if you will, for the draft environmental impact statement, and it identifies the extent of the analysis that needs to be included for public review.

The scoping outline was formally adopted early January of this year, 2016. And that set in motion the preparation of the preliminary draft environmental impact statement which was submitted to the LDC in early July. That document was reviewed against the scoping outline. We had substantive comments contributed by both members of the LDC and the Village Board. The document was revised and updated, and it was formally accepted as complete on July 25th, 2016, at which point,

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the public hearing was scheduled for tonight.

And so the public understands that there's also two more public hearings scheduled for September 12th and September 20th. A written comment period has been provided as required under SEQRA. The written comment period extends until September 30th of this year.

Now, as part of the process, all of the substantive comments that are raised during the DEIS public comment period -- again, we have a court stenographer here who is taking the transcript of the meeting. We would ask that if you have comments, please provide your name and address. All of those comments, whether provided tonight, orally, or submitted in writing to the Village Board, will be responded to in a subsequent document called the "Final Environmental Impact Statement."

So, Mr. Strasser, as I indicated earlier, all these substantive comments will be responded to in a formal document. And really, the purpose of tonight's public hearing, rather than getting into a back and forth, responding to comments, is to, again, allow the public as

much opportunity to provide input into the process as possible.

Once the FEIS has been reviewed and accepted, it's then circulated again for public review and comment. And it's at that point that the LDC and the Village Board would essentially conclude the environmental review process by issuing environmental findings. And at that point, the Village Board would be in a position, if they so chose, to issue this special permit and to grant approval to the riverfront development concept plan.

At that point, the environmental review process has concluded, and then the LDC would be in a position to approach the planning board with a site-specific site plan approval, and that's where we get into much more of the detail. So again, there's still some extensive process that needs to be reviewed and -- yes. And so the -- as part of the statement, we're identifying the mitigation of adverse impacts from site development. So the DEIS contains -- and here's a copy of both the DEIS and the appendices. There's copies available at the

village clerk's office. It's also available online. There are a number of chapters in the DEIS that identify topic areas listing -- that are listed above including land use and zoning and evaluating visual impacts of the proposed action, storm water management, which I'll get into in a couple of minutes, looking at the traffic and transportation, the impacts on the local roadway system, evaluation of natural resources. And believe it or not, the East Parcel does have some wetlands as they're defined under the Village code; so we have to evaluate that impact and mitigate that.

Evaluation of cultural resources. We've looked at construction impacts with respect to noise and dust and activities. Utilities. There are active utility lines that run through the site and need to be addressed as part of the site planning process.

We've included a series of alternatives which have been evaluated. One of the more important sections is the growth-inducing impacts. As I had indicated earlier in the presentation, the proposal is to move the DPW

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from their existing facility on River Street to a new facility, and that opens up the River Street property for potential redevelopment. And so in a conceptual evaluation, we have been able to evaluate what that means for -- as a -- more or less, an order of magnitude for the Village. And there's a potential for redevelopment of approximately 38 to 84 dwelling units on that site. And that includes not only the DPW, but the Village has other property holdings including the parcel on Hudson Street and then a portion of the South Parcel.

All in all, it's approximately 1.9 acres or so. So that's a significant economic issue for the Village and the board with respect to moving the DPW and then being able to capture the value of that existing property. So now we've got the conceptual riverfront development concept plan that was included in the DEIS. And I'll quickly walk the public through the plan.

Again, north is located to the left of the diagram. And essentially, we've got -- the DPW

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portion is located on approximately a three-and-a-half-to-four-acre pad right through here. Access -- here's Continental Street. Access is through -- off Continental Street. And essentially, the DPW -- and I'll get to this as part of the presentation -- will be raised from the existing elevation of approximately seven or eight to approximately 19, Elevation 19, by importing fill. And there are several reasons for that which I'll get to. But more importantly, it separates the DPW facility and those operations from the bounds of the East Parcel and really creates a -- kind of, a separate entity.

This building right here is an approximately 10,000-square-foot footprint for community facility building. It's contemplated that that would be two floors, so approximately 20,000 square foot building. Below that would be parking for approximately 45 vehicles. So that, kind of, rounds out this portion here. There's proposed parking for 500 vehicles in the northeast corner. It's contemplated that that parking would be used in conjunction with

not only the activities on the site, but Historic Hudson Valley has a proposed use for using it for overflow parking for their events to help support the economic activities for their operation.

The Continental Street essentially comes down, and then it's proposed that an overpass be created. And as part of the Lighthouse Landing, now Edge-On-Hudson, approval process, there was an easement created that would allow for the overpass to pass over the Metro-North tracks and then land on the West Parcel, connecting it to the system.

At this point, right in through here, WSP, as part of their design program, has suggested that the Village consider incorporating an amphitheater as part of a public open space element. There is the potential for views this way, towards the Hudson River and the new Tappan Zee Bridge. But it was a -- an opportunity to create more of a -- bring the public into the project site for active events, cultural events. And then the areas in green right now were -- we needed to provide for

recreation. These are essentially placeholders. So based on input -- and Trustee Gebler will be providing a summary of some of the informal meetings that the Village has held with potential uses for the East Parcel.

So we've included, as part of the evaluation, the environmental evaluation, active and passive recreation. And there are also a series of trail connections throughout these, both pedestrian and bicycle connections. And essentially, it would help to knit together DeVries Park in the north and Barnhart Park and the senior center in the south, and then also connecting east and west locations.

As part of the visual element, the LDC had been considering a design concept that isn't the typical institutional-type of DPW facility, but perhaps something that has more of a reflection of some of the rural elements in Sleepy Hollow and the Sleepy Hollow area. So these, again, are present examples of DPW buildings. There hasn't been any formal designs yet. We wanted to provide at least some indication of the design elements that are

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being considered. And this is an image of a salt shed. It looks more like a barn, and it may be more appealing with the surrounding community.

The other very important issue with respect to this site is the hydraulic analysis. This is a graphic of the FEMA flood map for the Pocantico River. And the Pocantico is right here. East Parcel is, essentially, this area in light blue. The area attached is a flood -- a floodway, which means it has a more serious connotation with respect to development. And essentially, there's no proposed development within the floodway. The floodplain is this other area in lighter blue. And this line right here, FEMA has mapped that at Elevation 18. And it's -- I think that there was a concern because the railroad tracks are at elevation between 12 and a half to 13, and nobody's in -- in our recent memory, nobody ever remembers the Pocantico flooding. Although the East Parcel does flood, nobody ever remembers the Pocantico flooding where it overtopped the Metro-North rail lines. So it

was a concern that, perhaps, FEMA had made an error in their mapping. That's not unusual. That's happened throughout New York State. There is a process for preparing a map revision.

As part of the draft environmental impact statement, an analysis was prepared, and it did reveal that the elevations for the floodplain were in error. So there's a process that the Village eventually will go to FEMA to have the maps revised. But it means that there's an opportunity to bring fill in and to accommodate not only the flood elevations, all the proposed buildings. Even though they're not in a floodway, but they may be in a floodplain. They will be elevated out of the floodplain itself.

And then, more importantly, New York State has guidelines for climate change. And the proposed design actually incorporates significant elements of climate change to the extent that the design is very conservative in its nature. So that's a very positive thing for having gone through the hydraulic analysis.

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And in addition, one of the design elements is the inclusion of permeable paving for the temporary park or the parking that would serve the East Parcel. This is important because it reduces storm water impact and runoff issues. It also helps reduce the heat effect. Because the East Parcel's adjacent to the Pocantico River, right now you have an issue where in summer months, you have all that pavement -- rain hits the pavement, becomes very hot, and then, when it runs off, it enters the Pocantico in a heated state. It's not good for the environment. We think this is a -- it's a low-impact development design concept that is very appropriate for this site. Okay. So I'm going to quickly wrap up.

The next steps: The public hearing is continued September 12th and the 20th. The written comment period extends until September 30th, 2016. Again, all substantive comments are responded to in the final EIS document. Both the LDC and the Village Board will issue environmental findings. Again, that's the document that summarizes the

environmental review process and certifies proposed action, avoids or minimizes adverse environmental impacts to the maximum extent practical.

The Village Board will issue the special permit and the development concept plan approval, and then there would be submission to the planning board for site plan approval.

Now, for more information, again, there's a hard copy available at the clerk's office. There's a hard copy available at the Warner Library. You can access the DEIS, the appendices, and the riverfront development concept plan at the Village website. To submit written comments, please send them to the care of Anthony Giaccio via 28 Beekman Avenue, Sleepy Hollow, New York. You can email Anthony. His email address is up there on the screen and also available on the website. And for those who still use fax, there's the fax number as well.

And, Mr. Chairman, Mr. Mayor, that ends my presentation for tonight. Thank you.

MAYOR WRAY: Thank you, Mr. Smith.

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I'm going to recognize Trustee Gebler who's going to explain some of the activity that she's been leading with the community and the board over the last several weeks.

MS. GEBLER: So all the information that I'm sharing with you tonight is included in my memo which has been given to Paula McCarthy Tomkins, our village clerk, and you will be able to access that from the website.

Because we had such a wonderful turn out at the three meetings that we held and there were so many suggestions, I won't be including all of them this evening in my report, but they all are included in an attachment in the memos. You'll be able to see everything if you -- if you go to the Village website.

So at the request of the mayor and the board, I hosted three informal information meetings about the East Parcel development on July 20th, July 27th, and August 10th. And all of these meetings were held at the Joseph F. Galgano Senior Center at 55 Elm Street. The purpose of the meetings was to provide Sleepy Hollow residents with a platform for discussion

concerning how they felt the East Parcel could best be used to the greatest benefit of the community.

So each meeting began with a presentation by myself, which included the actual boundaries of the East Parcel which Mr. Smith covered. Also, the 20-year history of the process that led us to this current phase of discussions. That included consultation of planners, traffic consultants, architects, engineers, and the public. And it also included legal decisions and the approval of a site clean-up plan by the New York State Department of Environmental Conservation. I also talked about the reasons why there are restrictions on what can be included at the site including the fact that it is a brownfield site and also in a floodplain. And then I shared a list of what we cannot have on the site which included retail, restaurants, commercial office space, outdoor vehicle storage, except those owned by the village, a theater, stand-alone daycare, a school, a hospital or medical offices, and residential space. And then also we talked about what has

been included in the engineer's concept plan which is a new DPW facility, a community center, sports field, open spaces, and event spaces, and parking. We also talked about really a brief discussion of the budget for the site which included the fact that we will be receiving $11.5 million from the developer, although that is over several years and in increments based on the thresholds they reach during their developments. And then we talked about some of the costs that are associated with the project which includes the preparation of the site, the cost of the fill, the construction costs, and then the annual operating expenses once the development is complete. And we didn't attach any specific dollar amounts to these costs which is something that you can, kind of, think about in the future as we go through the process. And then I also encouraged residents to visit the Village website and read the DEIS impact statement.

At that point, I opened floor up to the public to give their suggestions on what should

be included in the development as well as ask questions about the process. So as I mentioned, there's a complete list of those suggestions included with this memo which will be on the Village website.

But just as an overview, we talked about the green spaces on the site, and most felt that for those spaces we should include areas for sports as well as space for more passive uses such as picnicking and frisbee and that kind of thing. And then for the passing space, the general consensus is, you know, that it should look something along the lines of a Central Park. There was also a strong feeling that there wasn't a need for another baseball field as included in the East Parcel concept plan. Making the space appealing for patrons was a top priority, and that included the architecture of the buildings, the landscaping, public art, and maximizing views.

The concept of a community center was well received. There were several suggestions for its use including a space for the children in our community, both younger and older, during

after school hours and the weekends. This might take the form of after school homework help, art, dance, or karate classes, basketball pick-up games or other supervised activities that would happen in a safe environment.

It was also felt that this would be an opportunity to foster the arts in our community by providing flexible spaces for performances, rehearsals, and classes. There are several suggestions of including a pool and tennis courts in the property plan, and that ranged from simply, you know, outdoor pool, a bubbled space for a pool or tennis courts, up to an aquatic center.

It was also suggested that we take advantage of creating an area of natural beauty which would include rehabbing the Horseman Trail as well as creating a bird sanctuary and interpretive area along the border between the development and the Pocantico River.

Access to and from the site was deemed very important and could include creating a pedestrian and a bike-friendly trail system that would connect the site to the Croton

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Aqueduct to the future Riverwalk and Kingsland Park, to DeVries and the Horseman Trail, and to the Barnhart Park neighborhood.

Also a high priority, access was concerned to connect between site and the new Edge-On-Hudson development. Not only would this connect the East Parcel to the Hudson River, but also act as a way to integrate the Edge Community with the rest of the village.

And, finally, it was suggested that we send out a survey to the residents to increase the feedback we receive from the community about how they would like the East Parcel to be developed.

In general, I think everybody agreed that this was a unique opportunity for our community to create something beneficial for all of the residents. All the suggestions were thoughtful and inclusive, and those who participated in the meetings were very invested in the process and grateful to be included.

I just want to add that I was really heartened and grateful to see how many people from the community came out to these

information meetings and also to see how many people are here tonight. And I hope that more people will come in the next two public hearing meetings, because I feel that the only way we can make this East Parcel redevelopment something that truly benefits the community is by getting everyone's input on it.

Thank you very much.

MAYOR WRAY: Thank you, Trustee Gebler.

And the memo that she referred to will also be included in the public hearing comments. So anyone who raised something in one of those information sessions, that will now be part of the record for the public hearing.

I just wanted to -- quick reminder to folks before we open it up to your comments: First of all, it is a comment session tonight and the next two sessions. So we're here, that's the Board of Trustees and the Board of the Local Development Corporation, is here to listen to your comments. It's not a give and take. It's not a discussion. It's for you to make those comments. The substantive comments

will be responded to in writing. That's a requirement under the law. So you will receive a response to that. And we, of course, will have in our regular meetings, as we always have, public comments sections where you can come and address this again, even if it's not during a public -- this public hearing. Your written comments will be accepted. I just want to note that we already received -- before we even opened the public hearing, we received several written comments, and we are going to include those as part of the official comments and part of the hearing.

And I want to urge those of you who haven't had a chance to read the DEIS to do so, and I think it will be very informative to take a look at it. And also to go back and take a look at the special permit that was issued in 2011 that allows Edge-On-Hudson to build out their development on the west side of the tracks. It also addresses certain issues on the east side of the tracks very relevant to these public hearings. So please take a look at those. I think you will find it very

helpful.

And with that, we'll open it up. If anyone wishes to address either board or both boards on the matter of these public hearings, you may do so now. As you know, we have a vast viewing audience and -- well, we have several people who watch those meetings. So please use the microphone in the middle of the room. It will help folks at home hear and also help the other people in the room. So one last thing: Please state your name, and that will be very helpful to us as well.

This is where somebody gets up and says --

MS. MONROE: Good evening. My name is Sonnia Monroe, and I'm from Weber Park, 63 New Broadway. I have a letter written by Barbara Muldune who could not be here tonight. May I go ahead?

MAYOR WRAY: Sure.

MS. MONROE: It's very short.

MAYOR WRAY: Just to -- very quick, I think for you and everybody else: If you have a letter and it's like this, we'll just take it and you can summarize it.

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MS. MONROE: Three paragraphs.

MAYOR WRAY: Yeah. It didn't look like it was long.

Everybody else, if you have one and your comments are written, then please give us a copy as well.

MS. MONROE: I will. This was what Barbara Muldune wrote.

I am concerned about giving 500 parking spaces to --

MAYOR WRAY: Sonnia, closer to the microphone or boosted microphone.

MS. MONROE: Is that better?

MAYOR WRAY: Yes.

MS. MONROE: Okay. I am concerned about giving 500 parking spaces to Historic Hudson Valley. They have parking, and they have an overflow lot to accommodate visitors. Why would we dedicate 500 spaces to be used one month of the year? When I first moved here 50 years ago, when the restoration had events requiring additional parking, they would use Bellwood and DeVries Avenues for parking. We even got free passes to the restoration events

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and whatever other space in the manner that was needed.

Instead of dedicating precious new land, why not let them do what they did then, even without the free passes? That proposed parking space could be used for open space or closed space, performing arts, nice open building that could be multi-use for the residents of the Village without a charge, or if need be, for a small fee, and it would provide precious parking for those attendees, something we do not now have so people could attend whatever event was taking place conveniently.

Thank you, Barbara Muldune.

MAYOR WRAY: Yes, sir. Mr. Monroe. And then we'll come back to the front, right over here.

You're next.

AUDIENCE SPEAKER: Okay.

MR. MONROE: Pat Monroe, 63 New Broadway.

I'd just like to make two points. One is whether or not you considered -- or it's been done -- inviting the Board of Education to solicit the participation of students in the

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development of this whole project. It's a golden opportunity for young people to get involved in the development of a place where, perhaps, many of them will become senior citizens. I don't know whether there's already a dialogue between the Village and the Board of Education but if there isn't, it's a -- as I say, it's a wonderful opportunity for kids to get involved in studying what would be at best ways to develop this part of the Village and increase the size of the Village in the future. That's one point.

The second point is as I look at the proposed uses of the East Parcel, it occurred to me at a meeting we were at recently if there are already in Sleepy Hollow and in Tarrytown existing buildings and facilities that offer II-3 certain uses, we wouldn't want to put something into that new development that we duplicate a use that's already available. The only one I can think of offhand is when I was a little kid I went to St. Teresa's Grammar School on Depeyster Street, between Depeyster and Beekman Avenue. The building that's there, the school,

has a huge auditorium with capacity for hundreds of people and a big performance stage. I don't know how much it's used, but that's just one of the things that occur to me that if the use of the East Parcel would include some kind of -- I don't know what you mean by "theater," but concerts or other kinds of musical presentations or even dramas. We may have areas in both villages that already provide facilities for that. So why build another one and have yet another underused facility when we could better capitalize what we've got now?

That's it. Thank you.

MAYOR WRAY: Thank you.

Yes, ma'am.

MS. WHITE: My name is Ann White, and I'm brand new to Sleepy Hollow. I moved to Kendal on Hudson in May, coming from Saint Paul, Minnesota, where I was very much involved in planning, including planning and creating a coalition to testify on the DEIS for a light rail line that we were building to connect the downtown of Minneapolis and Saint Paul. And

what we did there was to organize the neighborhoods to do research and share it with the neighborhoods so that they could actively participate in the conversation.

I am so excited to see the attendance here and the way the people from the Village have turned out to comment on this project because -- and I attended the public -- last public meeting. It was terrific. A great turn out as well, with lots of substantive comments. So I'm very encouraged by the way people are getting involved.

I can't say that the population of Kendal on Hudson is very tuned in to this. What I've heard in talking to people is that their biggest concern, and this is mainly -- they really hardly know about the East Parcel. What their concern has been in relation to the West Parcel is that -- is -- relates to traffic congestion and parking getting worse in the Village. And I see the East Parcel as an opportunity to go beyond the connectivity within the parcel, but to address more fully in the DEIS how we can mitigate the lack of

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connectivity that currently exists and the shortage of parking in different areas, which I experienced tonight, coming here. I ended up about ten blocks away.

So what I would propose is that there be some additional study. The DEIS, and I did read the transportation chapter, goes into quite a lot of detail on the Continental Avenue -- the Continental Street connection and the intersections that are problematic to there. One possibility that I would suggest is a point where it meets Pocantico, maybe consider a traffic circle. That might be a fix for that intersection. But I think it's going to be really important to use this opportunity to make sure that we address the increased traffic. III.D-5

I think it's critical that the connection be made from Continental Street across. I was shocked, quite frankly, when I moved here and started walking to find that the only way into Kingsland Point Park was from the north in. So people from the Village have almost no access to that. I see the East Parcel having the III.D-6

possibility of ending up creating additional ways through for people walking, biking, and driving. And that crossing over the railroad tracks is critical for that. Also making sure that there's a path from Barnhart Park that comes down through the site so that people from that neighborhood can easily get to Kingsland Point Park. So connectivity is really critical to the success of this. I think the East Parcel can either be a catalyst for increased vibrancy in the community or it can end up being a stopper in the middle there that creates a -- a barrier to people getting through. II-4

Thank you very much.

MAYOR WRAY: Thank you, ma'am.

Does anyone else wish to address the board?

Yes, ma'am.

MS. FORSTMANN: Hi. My name is Ali Forstmann. I'm here with several members of our team, which is the Rivertown Composting Team. We were initially formed -- and I've had some -- just for full disclosure, some

conversations with both Ken and David Schroedel about the opportunities for the green spaces here in the Sleepy Hollow East Parcel and what we can do as a community to really reinvest food waste and clean up browns like leaves and wood and horse manure from several of the properties here in Pocantico and bring that back into the land to create a restored fertility and the opportunity for perennials to grow in a new way. We can also help with that landscaping plan as well as the erosion control using some really simple technologies like BioBags. So I just wanted to offer that as one of the ways we can restore green space for the community and fall under and within the compliance of the DEC restrictive residential requirements.

MAYOR WRAY: Thank you.

Someone -- yes, sir.

Oh, it's Dave.

MR. HODGSON: Hello. Sorry for missing the majority of the meeting. So if I cover points that have already been covered, I apologize for that. So --

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MAYOR WRAY: Just speak more directly into the -- I am getting updated comments on who can hear and who can't. So --

MR. HODGSON: Thank you. Okay.

So I am -- my name is David Hodgson, Sleepy Hollow resident. I have a couple of comments from the prior meetings, and I apologize if any of this is out of date, because I missed the beginning of this meeting. So I'd like to make sure that the board remembers some of the lessons that we've learned recently with the Kendal Landscaping and the connectivity issues and remind people to think ahead for the future connectivity. I know we were talking, you know, with the scenic Hudson about some proposed future developments that way. I think it's very important -- we all talk about parking all the time, but let's talk, you know, also about encouraging walking and biking in the community.

One of the things that's very important for communities is that people are out of their cars. To that end, it's been noted in prior meetings that the bridge sloped as proposed is

too high for biking. You know, please be aware that -- you know, Dan has sent the email around, and you know Dan. So -- is he here tonight? I'm not sure. But, you know, we want to make sure that that bridge is a bike-able bridge and connects everything. It's also something that if you build 400 parking spots, it's pretty sure that you're going to get 400 cars. If you have, you know, a nice place to visit, use the space appropriately. The people that are nearby in the community will use that space more than people from out of town. We have a lot of experience with Kingsland Park and people coming from all over the county to Kingsland. Let's build something, you know, that we can have our community and not have to worry about all sorts of other people. III.D-7

One of the things that make things bike and walk friendly is not having huge parking fields. If you look at the DeVries Park embankments now on that waterway, you can see there's a lot of trash down there. You know, people don't use DeVries Park for sitting on the banks of the river. You know, they just --

it's not amenable to that. In the future, you know, that Pocantico River is a beautiful, lovely river with a beautiful view right across it from the Horseman Trail to the Restoration. Beautiful job being done there in the restoration. It looks gorgeous. But bear in mind the restoration and History Hudson Valley don't pay any taxes. They are not guaranteed anything in the FEIS. You don't have to give them the parking. They're a shadow organization who doesn't publish their particular finances like all the other public organizations do. If you look at Scenic Hudson Valley and all the other up and down manners, I mean, not that we don't want to discourage them, but, you know, we don't owe them this parking field that has been proposed with numerous parking.

The connectivity I mentioned before. And I just would like to say that the communication about this parcel, you know, should definitely have another go round of going out because it's -- what was sent out in the initial batch was never, sort of, a refresh. So I'd like to

see if you guys could communicate further ideas in light of all the comments you've had.

Thank you very much.

MAYOR WRAY: Thank you.

Someone else -- yes, sir, in the back.

AUDIENCE SPEAKER: Hi. Matt Presso [ph.]. I'm a Sleepy Hollow resident since 2014. My proposal is probably a lot less high-minded as what's already been discussed. I'd like to see a skate park built in the space that's there. I -- why a skate park? Because it's fun.

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MAYOR WRAY: Matt, move the mic, please.

AUDIENCE SPEAKER: Oh, I'm sorry.

You know, anybody who's ridden a bicycle -- nobody here -- looks like -- but everybody knows the rush of riding a bicycle, skiing. Skateboarding is the same thing. When you catch air, you land it; the rush is exponentially greater.

It's a popular activity. Kids are into it. X games. It's going to be an official sport at the Olympics in Tokyo. It gets kids out, active, on their own. It's an individualistic activity. You know, it's self

expression.

I've been to skate parks all over this country, and I've never to been to one that's empty. If school's out, the kids are there, and guys like me. It can be a unique municipal asset in the sense that it gives the -- it gives the town an identity. A really well-designed state park is going to be known across the country. Skaters are tuned in to where the -- where the spots are and, you know, we know where to go.

It sends a signal that young people -- you know, when I was growing up skateboarding, we were marginalized. I grew up in White Plains. We were chased by the cops all the time. Building a skate park, it sends the message that kids who are not necessarily -- who are out there doing sports, doing activities, but not necessarily team activities, are welcomed and made a part of the community.

Like I said, skaters know where the spots are. It's going to bring people are from out of town to visit, hopefully, maybe their parents, maybe them. They'll be spending

money, and I think they'll help out some of the businesses here.

Safety. Skateboarders -- about one skateboarder's killed every week. The reason is because most times we're out on the streets. We get hit by cars. Building a skate park is going to bring the kids in off the street, provide some safety.

How much does it cost? So I've been doing a little bit of research. The national average for a skate park construction, a professionally built concrete skate park -- and it's important that it's a concrete skate park. There's a lot of outfits that will sell you a couple of ramps. They break down. They're not safe. They're actually really not fun to ride. So a well-designed concrete skate park is probably about 262,000. That's the national average. Conservative estimates for construction is probably about $40 per square foot. A 6,250 square foot skate park, which is not big but not small, probably could handle maybe ten skaters at a time. That's going to run about $250,000. From what I'm gathering, that's

about the same cost as a baseball field.

As far as future maintenance, a well-built skate park, there's hardly any maintenance. You clean up the garbage. But a concrete park is there -- it's there for decades. There's parks that are 40 years old and still -- still in business.

Now, I think skateboarders, we have a bad image, I think, some -- in some sense. But the Tony Hawk Foundation which gives grants -- Tony Hawk is one of the legendary skateboarders. He has a foundation, and he gives grants for the development of skate parks across the country. They did some research, and they found that it's actually -- the police departments in the municipalities that built the skate parks actually said that they were assets in the sense that it became a hub, a congregation point for young people in the neighborhood. And in -- you know, with the kids congregated in one spot, we can keep a better eye on them. So it reduced -- it reduced complaints about skateboarding in the Village. Not that -- I mean, maybe when Second Nature shut down.

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There's not so many skaters here anymore.

But it's -- it's one of the biggest concerns with skate parks is that kids don't want to wear helmets. So that's the -- that was the biggest complaint about them, biggest concern. It does -- skateboarding is a challenging activity. People do get hurt. But just -- it's -- you know, the injury rate is about four percent. One-third of emergency visits by skateboarders are skateboarders who just picked up a skateboard and have been skating for less than a week. You learn to fall pretty quickly when you're learning to skateboard. So, you know, injuries are going to be a concern. Liabilities are going to be a concern.

I did a little bit of research. I'm an attorney. I did a little bit of research. I found that general obligations law basically makes the municipalities immune from liability at the skate parks. Maybe I'm reading that wrong, but that was my -- my five-minute reading of the law. And in case anybody's interested, it's General Obligations Law

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Section 9103.

So what do we need? What would be the road map? The road map would assess the community needs. Basically, we could get an idea of how many skateboarders actually are going to use the facility. We can look at other facilities in the vicinity and try and offer something that's unique, that's not anywhere else. New York City has a number of parks. Down in Chelsea Pier, they have a fantastic concrete park there. And that was the built about two years ago, and it is packed all the time.

Then, pick a site. How much space can we set aside? The budget. And then there are a number of firms that I've been calling up and contacting about what to do, what's the process. And some of them are very involved. They get in, and they will help with the assessment and let us know, you know, based on population, based on the demographics, how many kids can we expect to be in the park at any particular time, what kind of obstacles do we want to create, what kind of design do we want

to have, layout, and then work with the Village on the budget.

I also just wanted to let everybody know I set up a Facebook page. It is -- you can go on Facebook and look for "Sleepy Hollow Skate Parks." And I'm trying to rally some of the guys in the neighborhood to come out and support.

I know that Sleepy Hollow's produced at least two notable skateboarders. There's one who's skating right now and another guy from my generation who had some notoriety. This town has a little bit of a history producing skateboarders, and I'd like to see that continue. I'd like to have a skate park up the street that I can hit first thing in the morning before work and be able to brag to my friend who tells me he does that in LA, and say I can do that.

Thanks.

MAYOR WRAY: Thank you, sir.

Next up. Would anyone else like to address the board at this time? Boards, excuse me. I'm not going to go once, twice, three

times, but I will just give a pause here. I'll remind everybody that what we're going to be doing is adjourning this meeting, not closing it. We'll see you all back. The next meeting is actually on Monday, September 12th, right here. Not on Tuesday. The LDC board meets normally on Monday nights. So we're going to have -- at least one of these sessions is going to be on Monday night the regular meeting time.

So the next session of this public hearing process will be on Monday, September 12th at 7:00, here in this room.

Does anybody else want to make a comment at this time? We'll go here, and we'll go -- I'm sorry, sir. Go first.

AUDIENCE SPEAKER: Yeah. Al Strasser. My name's been mentioned, and I sent in written comments.

And I just wanted to say three -- three comments, one general and two very detailed ones, and I think it's appropriate the detailed one be answered in writing and printed. The general one was just to -- this is the issue of renting and leasing, in the permanent way,

III.A-1

railroad siding to Metro-North. And I think it would be appropriate for one of the public meetings to identify the siding in your map and discuss what the pros and cons are, what the relationship, what the -- what the license agreement what the conditions of it are, and how this will interact with the East Parcel. And my suggestion is that this could be done at one of the public meetings.

MAYOR WRAY: Thank you, sir.

MR. HAMMER: Bill Hammer, Sleepy Hollow resident. I, kind of, came in late; so I don't know if this was covered. But I think that strong consideration should be given to an outdoor performance venue. And you're nodding your heads. Maybe there were people that spoke to that, because I don't want to be too redundant. Okay. So here's the thing, and here's the way I look at it: I attended a zoning board meeting in Tarrytown a few weeks ago to support Mark Morganelli. And those of you who have been here for a while know Mark's involvement in the community. And he does some really cool things over the summer. And I saw

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that this summer he actually produces 25 free jazz concerts in Tarrytown. And there are zero in Sleepy Hollow, yet this area is very -- is very much filled with music and the arts. I mean, our schools speak to that, the dance studios that are coming up, you know, in the area, the circus I think came in for a longer tenure than normal. So I think the area lends itself to that, especially if there's a long-term plan to reshape Beekman Avenue. I think an outdoor performance venue invites a lot of complimentary businesses that go along with it, restaurants, et cetera, et cetera.

So that's the short comment.

MAYOR WRAY: Thank you.

If there are no further comments at this time, I'm going to ask -- that was your opportunity. No? Okay.

Members of the board -- I'm just going to adjourn our public hearing.

(Indiscernible.)

CLINTON SMITH: Just a motion to adjourn

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and a vote.

MAYOR WRAY: All right. Can I get a motion to adjourn?

MR. ROSENBLOOM: Motion to adjourn the public hearing.

MAYOR WRAY: Until September 12th.

MR. ROSENBLOOM: Until Monday, September 12th.

MR. LEARY: Second.

MAYOR WRAY: Second in discussion. All in favor, say "aye."

BOARD MEMBERS: Aye.

MAYOR WRAY: We're adjourned until Monday, September 12th, at 7 p.m. here in this room.

I would ask Chairman Schroedel, since the public hearing is still open for the LDC, if you want to adjourn as well.

MR. SCHROEDEL: Motion to adjourn to September 12th.

MR. SCARPATI: Motion to adjourn to September 12th.

MR. SCHROEDEL: Second by Mike. Second by everyone. Second by Mike Dawley.

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Any further discussion? All in favor say "aye."

BOARD MEMBERS: Aye.

MR. SCHROEDEL: We are adjourned.

MAYOR WRAY: Thank you. Thank you for turning out tonight, ladies and gentlemen. We look forward to seeing you and more of your friends and neighbors here on the 12th.

(Time noted: 8:12 p.m.)

C E R T I F I C A T E

I, ILANA M. NATHANSON, a Certified Court Reporter and Notary Public of the State of New York, do hereby certify that the transcript of the foregoing proceedings, taken at the time and place aforesaid, is a true and correct transcription of my shorthand notes.



ILANA M. NATHANSON

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SLEEPY HOLLOW VILLAGE BOARD
SLEEPY HOLLOW LOCAL DEVELOPMENT CORPORATION
----------X

JOINT PUBLIC HEARINGS
FOR THE EAST PARCEL PROPOSED REDEVELOPMENT

----------X

September 12, 2016
Village Hall of Sleepy Hollow
28 Beekman Avenue
Tarrytown, New York
7:03 p.m.

B E F O R E:

SLEEPY HOLLOW VILLAGE BOARD:

KENNETH WRAY, Mayor
GLENN ROSENBLOOM, Deputy Mayor
RACHELLE GEBLER
JOHN LEAVY
DENISE SCAGLIONE
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MIKE DAWLEY
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ANTHONY SCARPATI
DAVID SMITH, Planner
JOAN BUCCI, Acting Secretary

Ilana Michael Nathanson, Court Reporter

EAST PARCEL PROPOSED REDEVELOPMENT

MR. SCHROEDEL: I call the meeting of the LDC, Sleepy Hollow Local Development Corporation, to order. The first item on our agenda tonight is a continuation of the public hearing on the DEIS.

Ms. Bucci, would you read -- kindly read the public notice.

MS. BUCCI: Please take notice that the Sleepy Hollow Local Development Corporation, LDC, along with the Board of Trustees of the Village of Sleepy Hollow, has scheduled a public hearing to be held on September 12th, 2016, at 7 p.m. or shortly thereafter, and to be continued again to September 20th, 2016, at 7 p.m. or shortly thereafter at the Sleepy Hollow Village Hall at 28 Beekman Avenue, Sleepy Hollow, New York 10591, to hear and consider comments from the public on the application for a special permit and riverfront development concept plan approval presented by the LDC as a proposed action and its draft environmental impact statement on the proposed redevelopment of the East Parcel of the former General Motors property located at the terminus

EAST PARCEL PROPOSED REDEVELOPMENT of Continental Street.

A copy of the draft environmental impact statement is available for review in the village clerk's office or on the Village's website, www.sleepyhollowny.gov. All taxpayers and residents are welcome to attend and be heard at said meetings. Village Hall is accessible to all persons with disabilities.

By the order of the Board of the Local Development Corporation.

MR. SCHROEDEL: Thank you, Ms. Bucci.

As most of you know, New York State encourages municipal governments and their sub-agencies to conduct public hearings in concert when possible. And tonight, the Board of Trustees is holding a concurrent public hearing on the special permit associated with the East Parcel development.

And at this time, I'm going to turn the conducting of the rest of the public hearing over to the mayor of Sleepy Hollow, Ken Wray.

MAYOR WRAY: Thank you, Chairman Schroedel.

I'm going to call to order the special

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meeting of the Board of Trustees the Village of Sleepy Hollow. This meeting is called to continue the public hearing that we opened, as Chairman Schroedel noted, jointly with the Sleepy Hollow Local Development Corporation. The notice for both public hearings was the same, so we'll not read it again.

The rules are pretty simple. If you would like to address the boards on the matter of the public hearing on the East Parcel, you may do so. We're going have a brief presentation from David Smith before that, just to lay some context again for folks on the discussion. But after that, if you wish to address us, you may do so in person this evening by addressing us. Please use the microphones to do that.

And I would remind members of the -- of both boards to use the microphones as well.

And you may also address us in writing, either tonight, by giving a copy to Ms. Bucci, or by sending your comments to Paula McCarthy Tompkins, the village clerk here at Village Hall, either through the mail or through her email address. And that's on the Village

website. You can also send it to any one of us. And our email addresses are also on the Village website.

So, Mr. Smith.

MR. SMITH: Thank you.

Good evening, Mayor, members of the LDC, members of the public. For the record, David Smith, principal with Planning and Development Advisors, consultants to both the Village of Sleepy Hollow and the Sleepy Hollow Local Development Corporation.

I'm going to give a slightly abbreviated presentation from the one that I had made on August 23rd. That full presentation is available on the Village website, if you care to review it in its entirety.

We can start with the graphic on the screen. North is oriented to the left throughout the presentation. The blue outline is the East Parcel. It's known as the East Parcel. DeVries Park, located to the north here. The Pocantico River. Historic Hudson Valley property. Continental Street neighborhood. Continental Street comes in off

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of Route 9 through here. Barnhart Park and the senior center located to the south, and then we have Beekman Avenue, Beekman Avenue Bridge. And then, the property here, the former General Motors site, now -- was, at one point, referred to "Lighthouse Landing," now called "Edge-On-Hudson." And just to orient the public, this is the Metro-North rail lines, and this is the existing -- or what's left of the existing pedestrian bridge that connected, at one point, the East Parcel with the West Parcel.

Tonight's public hearing is part of the State Environment Quality Review Act. A draft environmental impact statement was prepared as part of the description of a discussion of the proposed action. The proposed action includes the granting of a special permit and riverfront development concept plan. That's indicated in the open remarks by Chairman Schroedel. It's also a requirement under the Sleepy Hollow code.

For purposes of the review, the proposed action includes the construction of a new DPW

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facility, construction of new parking facilities, construction of a -- an overpass connecting both the East and West Parcels, construction of new recreation and community facilities to serve the Village, and lastly, construction of a new bus repair garage for the Tarrytown Community School District.

It's important to know that the East Parcel itself was part of an extensive environmental review as part of Lighthouse Landing. In fact, as Mr. Schroedel, I think, indicated at the last meeting, the provision of the East Parcel by General Motors to the Village is part of mitigation for that project.

So some fast facts very quickly: The East Parcel's approximately 28 acres. It's almost entirely impervious surface, given that it was, at one point, parking for employees of the General Motors site. We have existing connections to both Continental Street and Beekman Avenue. Although, it's important to note that the connection to Beekman Avenue is via an elevated viaduct. Given the condition of the viaduct, that's really not a serviceable

access route to Beekman Avenue at this point.

The East Parcel was formerly used as a municipal landfill, which presents certain environmental issues with respect to the reuse of the site. The East Parcel was part of a brownfields clean-up program conducted by General Motors. There's currently a site management plan administered by DEC, New York State DEC, and they have review authority over future uses on the East Parcel. And it prohibits certain uses, such as agricultural use. There are certain uses that are prohibited by the granting of the property from General Motors to the Local Development Corporation, such that there are no retail uses or commercial uses or residential uses permitted on the East Parcel. So those are some of the planning frameworks that the LDC and the Village are considering with respect to the use of the property.

Currently, the Village DPW uses the -- informally uses the East Parcel for some of their operations, mulching, and it's also used at sporadic times for overflow parking for

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events hosted by HHV. The area highlighted in yellow is a -- indicates a portion of the East Parcel that the LDC found out after it had acquired the property that contains some railroad spurs. And there's a process on the way for subdividing that portion and providing that to Metro-North.

Now, with respect to project need, the existing DPW operations are split amongst a number of different -- multiple sites. The existing DPW facility is located here, off of River Street. At one point, they had been using the West Parcel for storage of vehicles. Now that the Edge-On-Hudson development is underway, they need to move their equipment out from that site. They have been using, as I've communicated previously, portions of the East Parcel. And then the Village pump station is a location where some of the equipment is stored on a -- on a temporary basis.

The existing DPW facility is undersized and not designed for contemporary operations. Typically, that means that equipment is stored outside. That affects the service life of

equipment. It also means that during the colder weather months, it takes longer for equipment and machinery to warm up before they can be used. And the East Parcel provides opportunities not only for relocation of the DPW, but also for other public uses. Trustee Gebler went through some of those that were being considered in informal meetings prior to the public hearing being initiated.

So the proposed concept plan. I'll walk through this quickly. That was included as part of the DEIS document. We have location for approximately three and a half to four acres. This is Continental Street. To orient you again, north is to the left. Continental Street comes in. There's a separate access point to the proposed DPW facility. This is approximately three and a half to four acres. It's contemplated approximately 38,000 square feet of building programmed to accommodate the DPW operations.

In a separate building, separate entrance, there's approximately a 20,000-square foot community center. This is approximately a

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10,000-square foot footprint, and it's contemplated right now it would be two stories. It's approximately 20,000 square feet. And there's access through this service road underneath for parking, approximately 45 spaces. The -- there's parking proposed, approximately 500 spaces. The spaces would be used to service the -- the athletic and active uses proposed on the East Parcel. We also suggested that they would be used as overflow parking for HHV when they have special events that require additional parking.

In the green, we have a mixture of both active and -- currently, it's proposed to be a regulation-sized baseball field. There's a regulation-sized field that could be used for soccer or football. And then there's some other areas that are -- that have been designated for more informal uses. And based on input from the Village, the programming for these uses may change as the process moves forward, and they're formed with additional input from the public.

And then the area located right here at

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the intersection of the two roadways, the project designers, WSP, were retained by the LDC, have proposed an outdoor amphitheater. Again, there's an opportunity, given the grade change, for some potential views out towards the Hudson River and the new Tappan Zee Bridge.

The proposed overpass. Continental Street comes down.

(Indiscernible.)

And then, as part of the Edge-On-Hudson special permit and riverfront development concept plan approval, there was an easement that was provided, essentially in this location, that would allow for that connection to occur in the future.

One of the important elements of the site design as part of the site management plan for -- that's administered by DEC, the site needs to be capped with at least two feet of clean fill over the entirety of the site, but in certain areas, like the DPW, bringing the fill or the elevation up to approximate

Elevation 19. And that relates to some of the potential flooding issues with respect to the Pocantico River. So there will be -- there are remediation efforts that need to be incorporated as part of the site -- site plan. And there's also been a fair amount of thinking by the designers to incorporate a flood mitigation.

So, very quickly, to wrap up, the next steps: The public hearing will be continued to September 20th. Public comment period for written comments, it's open until September 30th, 2016. All substantive comments are responded to in what's called the Final Environmental Impact Statement.

And I think it's important to know for the public that the purpose for tonight's public hearing isn't to engage in a back and forth dialogue between the LDC and the Village Board and the public, but it's really to hear comments from the public with respect to the proposed action. And all comments, whether they're provided here tonight orally or submitted in writing, will be responded to in

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writing as part of a subsequent environmental document and made available to the public.

Both the LDC and the Village Board will issue environmental findings, which will essentially conclude the environmental review process. At that point, the Village Board will issue a special permit and a riverfront development concept plan. And, at that point, there would be the preparation of specific site plans and submission to the planning board for a site plan approval.

As the mayor indicated, for more information, there's a copy of the DEIS available here at the village clerk's office. There's a copy here at the Warner Library. You can find a copy available online with the Village website. And you can submit comments, again, either to Paula McCarthy Tompkins or to Anthony Giaccio or to any of the members of the board, and we will make that part of the public record. There's a fax number for those that still use the fax. And again, the written comment period ends on September 30th.

So, Mr. Chairman and Mr. Mayor, that

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concludes my presentation for the public.

MAYOR WRAY: Thank you, Mr. Smith.

Does anyone wish to address the board on -- boards, excuse me, on the matter in the public hearings? Well, thank you, and good night. All right.

MS. BROWN: Good evening. I'm Martina Brown, resident at Pleasant Street.

I have three major points that I want to address. And I read through the DEIS document. Took me a while. The first point is I wanted to address the 500 parking spots that were put in also per request of -- from the HHV. In my view, it is too many, and I think you could definitely reduce that. And also -- because it also sounded like the HHV had, kind of, almost, threatened the Village, saying we will pull events out if we don't get those parking spots. And I think it's very important that we really consider -- and I know it's a big tourist attraction, but that we consider the community first, and then we worry about the tourists that are coming in. So that is the first point.

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The second point has all to do with traffic and the street reconfiguration. There was a traffic study done, and it's in the DEIS document. And I think that it was -- kind of had an isolated view that there were not many alternatives looked at. To me, it sounded like that company was just told, Please look at Continental, Pocantico, and the possible new outlet onto Beekman as well as coming in from the DeVries Park. I just believe that we need to look at this in a much bigger scale, just because a week ago -- a week ago, there was an event at the -- down at the Historic Hudson Valley site, and traffic was just horrendous. And that was not even a big event. III.D-29

And Continental stay also one way. So there was -- it was just complete chaos at certain points. You couldn't get out or in or whatever into Continental Street. So I think, you know, making Continental a two-way street -- it needs to be looked at that there are other outlets. Kendal maybe is another way out; so that we can leave Continental a one-way street. Because that intersection, Continental III.D-14

and Pocantico, that point, it's just going to collapse. If I look at the numbers that the traffic study is mentioning with -- sometimes at peak times -- I don't remember exactly what it says. 700 cars in addition a day. It's just going to overflow Pocantico, basically.

And, also, I think it was not taken into consideration in that document that the HHV had also mentioned that they would increase the number of events if, of course, parking is going to be increased down there. I don't think the traffic study took that into consideration, at all. And then the other traffic issue is that the park that was given to Metro-North or rented out, I'm not quite sure, this talked about that it might be sold to them, that -- the tracks that are going to the side. We are seeing already an increase, because it has already started that they're using it. So we have seen a major increase in traffic. And that is not only small cars. It's major trucks too, 18-wheelers going down, cement blocks and cement pipes. And I would say it's about 15, 20 cars, vehicles, major

III.D-30

trucks, going up and down the street every day, including Saturday. And so I would like the Village also to consider not to, maybe, give this to Metro-North.

And I'm not sure if anybody from the West Parcel Development is here from the company. Because if you look down at the -- where they store all the equipment, it's very dirty. It is noisy, and it is really an eyesore with all the stuff that they have down there. I'm not quite sure, if they're developing houses on the other side, how -- that would probably decrease property value, and it would be a contentious point in the future.

And the -- to that degree, I would also like to make sure that whatever happens, even if it's given to Metro-North, then so be it, but that there's a buffer zone, like, a major buffer zone, in terms that you can't see it that much, hopefully with trees. Because it will be -- will all the fields down there, and you want to build an atrium down there; then you look down to Metro-North, and there is this ugly site that you have on the other side.

II-20

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So these were the major points for me. Thank you.

MAYOR WRAY: Thank you, ma'am.

There was a gentleman here.

MR. ANDERSON: Are you pointing to me, Ken?

MAYOR WRAY: All right. It's not a gentleman.

MR. ANDERSON: Hi, everyone. Ken Anderson. My son, Matthew.

We just wanted to lend our support to the idea of a skate park in the East Parcel. II-5 Matthew has to travel really far to skate right now. And, you know, the Olympics are coming. And skating -- skateboarding's going to be in the Olympics in 2020. So I think it would bring people to the Village, and it would be great for him to not have to travel so far. That's it.

Thank you.

MAYOR WRAY: Sure. Thank you.

Matthew, do you want to add anything?

AUDIENCE SPEAKER: Are you sure?

MAYOR WRAY: Keep those knee pads on and

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the --

MR. ANDERSON: Wrist guards.

MAYOR WRAY: Does anyone else wish to address the board about -- the boards in the matter of the public hearing?

Yes, ma'am.

MS. WHITE: Thank you, Mayor Wray, the Board of Trustees, and the CDC members.

My name is Ann White. I was here at the last public hearing, and I'm back again with a few more points to address.

You may remember that the last time I appeared before you, I focused mainly on the traffic chapter of the DEIS and some things that I thought -- that I felt that the connectivity to and through the East Parcel was critical to its success. So I won't say a whole lot more about that tonight. But I do want to reiterate three points, and some of them overlap with your points.

First, the importance of accommodating pedestrians and bicyclists as well as cars in accordance with the Complete Streets policy that you adopted in May. Second, the critical

III.D-7

need to reconfigure the intersection of Pocantico and Route 9. You have a terrific study that you had done. It has four different proposals from the Village and one from the State DOT. And somehow or other, you would need to bring those together and persuade the DOT that this is an important, urgent project. I've had great success with bringing some official to the location and setting them down in the middle of the desperate situation of the cars going every which way. So maybe you want to get the New York State Department of Transportation head to come down and experience what it's like at that intersection there. III.D-1

Third, I think it's absolutely crazy to think of greatly increasing event parking down Continental. It is -- I have cringed as I've seen the trucks going back and forth down there recently. It's just -- it would be impossible. And I think any parking that's needed should be -- could be shared with Historic Hudson, but should be really focused on meeting the needs of the people in the Village. III.D-19

I've now read through the entire DEIS,

browsing through some parts of it quickly, and I find a number of things missing. I'll go into more detail in written testimony that I will submit by the end of the month, but I wanted to come here tonight to suggest something to you that I think would answer a lot of questions that I have. This is that you ask your consultants to produce a three-dimensional physical model of the East Parcel site and a little bit of the surrounding area.

You see, there are a lot of things in the DEIS that are a matter of, you know, what the perspective will be, how high something is, what the slope is for bicycles on a bicycle trail, that are very difficult to understand, even for trained people. But for someone who's from the Village, who's not familiar with working with this kind of thing, a 3D model is absolutely wonderful in helping people understand it. And it's got a wow factor to it. You know, if you go out to a community meeting, and you have this great, big 3D model, people want to come and touch it and play with

it. And what I'm suggesting to you is -- and it doesn't have to be fancy. We made one out of styrofoam for a project that I was working on. But you take it out. You have the basic -- the new configuration. In other words, what are the heights of different areas within the East Parcel? And you'll be able to see that. So make it the way it's going to be when the level is -- the levels are raised in different places. And that will answer a lot of questions, and it will give people a feel for what it would be like if you put the DPW facilities in one place or another place. Are they -- if they're up on a high level, are they going to block views from the area above them, the views of the Hudson that we all value so much? And what about -- are the train tracks going to remain at the level they're at while the level of the rest of it is raised up? Because, actually, that would provide somewhat of a buffer for both the noise, which is substantial as measured when they were looking at the noise that the rock crusher would make, and that would help buffer it. Can we buffer

II-23

III.B-5

it further?

There's another problem. At the moment, none of the maps of the proposed alternatives have an indication of where the rail yards are. That's a substantial piece of property that we need to be clear is probably -- I understand is leased to the railroad at the moment, and will probably be bought by them. And we will get the benefit of the payment for that. But in terms of planning for this property, we need to be clear with people that that piece of property is not available.

III.A-1

Oh, I also -- I also made a note that the report by Parsons Brinckerhoff reviewed the level -- the hundred-year flood level that was determined by FEMA was substantially higher than they thought it should be, and they had recommended that you apply for a revision of that level. And so one of my questions is: Are you proposing to do that? And if you did that, would we be able to not have to raise the level as far? And would that be a savings that would be beneficial to us?

III.c-5

So I'll leave it to that at this point.

And I hope you would really, seriously consider the idea of getting a 3D model made, because I think it would be so helpful in involving people and helpful to all of us in looking at what this East Parcel area could look like and how it could function.

Thank you very much.

MAYOR WRAY: Thank you, ma'am.

Would anybody else like to address the boards on the matter of the public hearings?

Yes, sir.

MR. HAMMER: Hey. I was here last meeting. So for some of you, it would be redundant. I'll be saying the same things over again. So that said --

MAYOR WRAY: Pardon me, Mr. Hammer. They're asking what your name is for the record.

MR. HAMMER: Sorry. My name is Bill Hammer. I live in Sleepy Hollow. Okay.

So I was really here last time, and I really spoke about -- and that's why I'm here again, is to talk about why I think an outdoor performance venue makes a whole lot of sense.

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You think about what's the greatest attraction and what serves the people across all demographics and all ethnicities. It's really difficult. But I think we would all agree that performing arts really deliver that on a lot of levels. It compliments the area on -- indirectly. It can help drive revenue for related businesses, the kind of businesses that we're trying to attract, whether it be dining or hospitality, since we already have a vested interest in that area.

The communities around us are making inroads in these areas as well. And I think we need to really protect our interest and maybe even take it to a higher level. For example, the Village of Ossining, as I'm sure some of you know, has announced that they will be creating a museum around Sing Sing. That's going to be an attraction to many people, draw people to the area. Okay. And Tarrytown, besides the music hall and other things, they're having a free concert this Saturday at Pierson Park with a band that I know all too well. And that's going to attract, without

question, several hundred people. And out of these several hundred people, there are going to be people who come to Tarrytown, maybe, for the first time. And maybe, just maybe, they're going to stop along Main Street and grab a bite to eat or a refreshment of choice.

So I have nothing, at all, against a skate park or more parking for the Historic Hudson Valley, but I honestly don't believe that that is really in our best interest or what we all want and what we all want to do with this property. So I strongly encourage the boards to really think about what serves the greatest interest, the greatest number of people in the area, and that could help build this the destination that we want it to be.

Thank you.

MAYOR WRAY: Thank you, sir.

Anyone else wish to address the boards on the matter of the public hearings?

MS. KASHUBA: I'm from Tarrytown. Is it okay if I --

MAYOR WRAY: I said "anyone." So even -- even aliens are welcome.

EAST PARCEL PROPOSED REDEVELOPMENT

MS. KASHUBA: Even "town of Tarrytown-ers" are welcome. Thank you.

I'm Renee Kashuba from Tarrytown. And I attended some of -- one of the informational sessions, and we discussed the possibility of having different activities going on at the community center, arts and also sports and after school programs. And as a parent, I find that very attractive, to be able to bring my different kids for different purposes to the same place. My youngest son, unfortunately, has to do two activities that the older ones do, because I can't fit in a new, different activity for him. So that would be great.

And we had Raw there and Westchester Circus Arts. And down in Tarrytown, we have Rivertown Dance Academy, and they are looking for space also. So I think it would be a wonderful addition, to have more arts programming going on and classes for all ages and performances, and also have sports at the same place and a stadium.

Thank you.

MAYOR WRAY: Thank you, ma'am.

II-24

EAST PARCEL PROPOSED REDEVELOPMENT

Any other aliens, young people?

Yes, sir.

AUDIENCE SPEAKER: Hi. My name is Mark Seglione[ph.], and I just wanted to suggest some ideas for outside or around the recreation center. I think there should be a variety of outdoor activities such as bocce courts or shuffleboard or badminton courts in, kind of, like, a park setting with benches. And -- and the court's, like, supplies and equipment could be stored in the rec center to keep it safe or, kind of, like, a sign-out system. So if you're walking in, say, a park, you can -- you want to play the activities; you could go in, sign them out, and use them and return them. II-100

That's it.

MAYOR WRAY: Thank you.

Does anyone else wish to address the boards on the matter of the public hearing?

Mr. Schroedel, I would suggest that we adjourn.

Mr. Giaccio.

MR. GIACCIO: I'm going to enter a written email.

EAST PARCEL PROPOSED REDEVELOPMENT

(Indiscernible.)

I've received it.

MAYOR WRAY: And it's been circulated to members of both boards; correct?

MR. GIACCIO: Correct.

MAYOR WRAY: And so, as such, it will be a part of the public record.

Let me just reiterate something. And that is that these aren't question and answer sessions. So we're not responding directly to some of the things that come up. These are formal public hearings, and we are required to respond in writing to every substantive question or comment that comes up in these hearings. So the fact that we're not saying anything right now is just -- it's a matter of -- we are required, both boards, actually, to respond in writing to the comments that you're making. And we will, of course, be doing that.

So if there's no further public comment this evening, my suggestion is that we adjourn the meetings until next week. Our next public

EAST PARCEL PROPOSED REDEVELOPMENT

hearing will be on the 20th, which is a Tuesday, which will be here at 7:00. In the meantime, both boards continue to encourage you to send in your written comments, either to the clerk or to any one of us. And our email addresses are available on the Village website.

Can I get a motion from the Board of Trustees to adjourn the -- this public hearing until Tuesday, September 20th?

MS. GEBLER: Motion to adjourn the public hearing until Tuesday, September 20th, 2016, at or about 7:00.

MR. LEAVY: Seconded.

MAYOR WRAY: It has been seconded. Any discussion?

All in favor, say "aye."

BOARD MEMBERS: Aye.

(Indiscernible.)

MAYOR WRAY: Since that conducts -- concludes the business for the Board of Trustees for this evening, can I get a motion to end our special session?

EAST PARCEL PROPOSED REDEVELOPMENT

MS. SCAGLIONE: Motion to end our special session.

BOARD MEMBER: Seconded.

MAYOR WRAY: It has been seconded. All in favor, say "aye."

BOARD MEMBERS: Aye.

MAYOR WRAY: Our special session has ended.

Mr. Schroedel, it's your meeting.

MR. SCHROEDEL: Can I get a motion to suspend our public hearing until the 20th?

MR. SCARPATI: Motion to adjourn our special hearing until September 20th on or about 7 p.m.

MR. DAWLEY: Second.

MR. SCHROEDEL: Second by Mr. Dawley.

MR. SCARPATI: All in favor, say "aye."

BOARD MEMBERS: Aye.

(Time noted: 7:43 p.m.)

C E R T I F I C A T E

I, ILANA M. NATHANSON, a Certified Court Reporter and Notary Public of the State of New York, do hereby certify that the transcript of the foregoing proceedings, taken at the time and place aforesaid, is a true and correct transcription of my shorthand notes.



ILANA M. NATHANSON

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SLEEPY HOLLOW VILLAGE BOARD
SLEEPY HOLLOW LOCAL DEVELOPMENT CORPORATION
----------X

JOINT PUBLIC HEARINGS
FOR THE EAST PARCEL PROPOSED REDEVELOPMENT

----------X

September 20, 2016
Village Hall of Sleepy Hollow
28 Beekman Avenue
Tarrytown, New York
7:03 p.m.

B E F O R E:

SLEEPY HOLLOW VILLAGE BOARD:

KENNETH WRAY, Mayor
GLENN ROSENBLOOM, Deputy Mayor
RACHELLE GEBLER
JOHN LEAVY
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SLEEPY HOLLOW LOCAL DEVELOPMENT CORPORATION:

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DAVID SMITH, Planner
JOAN BUCCI, Acting Secretary

Ilana Michael Nathanson, Court Reporter

EAST PARCEL PROPOSED REDEVELOPMENT

MAYOR WRAY: This is a work session of the Board of Trustees of the Village of Sleepy Hollow, and our first order of business is a public hearing. We're in our third session. It's a joint session with the Sleepy Hollow Local Development Corporation.

Mr. Giaccio, could you read the notice of public hearing, please.

MR. GIACCIO: Please take notice that the Board of Trustees of the Village of Sleepy Hollow along with the Sleepy Hollow Local Development Corporation has scheduled a public hearing to be held on September 20th, 2016, at 7 p.m. or shortly thereafter, at the Sleepy Hollow Village Hall, 28 Beekman Avenue, Sleepy Hollow, New York 10591, to hear and consider comments from the public on the application for a special permit and riverfront development concept plan approval presented by the Sleepy Hollow Local Development Corporation as a proposed action in its draft environmental impact statement on the proposed redevelopment of the East Parcel of the former General Motors property located at the terminus of Continental

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Street. A copy of the draft environmental impact statement is available for review in the village clerk's office and/or on the Village's website, www.sleepyhollowny.gov. All taxpayers and residents are welcome to attend and be heard at said meetings. Village Hall is accessible to all persons with disabilities.

By order of the Board of Trustees, July 26, 2016. Paula A. McCarthy Tompkins, Village Clerk.

MAYOR WRAY: Thank you, Mr. Giaccio.

Since this is a joint public hearing, I will ask Mr. Schroedel to call the session for the LDC.

MR. SCHROEDEL: So the special meeting of the Sleepy Hollow Local Development Corporation is now in session. The sole item on the agenda tonight is the public hearing on the East Parcel.

Ms. Bucci, would you please read for the record the public notice.

MS. BUCCI: Please take -- please take notice, the Sleepy Hollow Local Development Corporation, SHLDC, along with the Board of

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Trustees of the Village of Sleepy Hollow, have scheduled a continued public hearing to be held September 20th, 2016, at 7 p.m. or shortly thereafter, at the Sleepy Hollow Village Hall, 28 Beekman Avenue, Sleepy Hollow, New York 10591, to hear and consider comments from the public on the application for a special permit and riverfront development concept plan approval presented by the SHLDC as the proposed action in its draft environmental impact statement on the proposed redevelopment of the East Parcel of the former General Motors property located at the terminus of Continental Street. A copy of the draft environmental impact statement is available for review in the village clerk's office or on the Village's website, www.sleepyhollowny.gov. All taxpayers and residents are welcome to attend and be heard at said meetings. Village Hall is accessible to all persons with disabilities.

By the order of the Sleepy Hollow Local Development Corporation.

MR. SCHROEDEL: Thank you, Ms. Bucci.

In the interest of efficiency, I'll turn

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over the running of the LDC's public hearing meeting to another LDC member, the mayor of the Village of Sleepy Hollow, Mayor Wray.

MAYOR WRAY: Thank you, Mr. Schroedel.

If anyone has a comment they would like to make to both boards, now would be the time. In addition, I just want to note again for the record that this hearing will be -- these hearings, excuse me, will be open for written comment through the end of the month. But this will be -- likely be the last public session of these joint hearings. If you would like to address the board -- sorry.

Let me ask a question to both boards. Each one of these public hearings has started off with a brief overview of the matters before us, and I think we have a fairly good idea of what it's all about at this point; and hopefully folks in the audience tonight do as well. What's your preference: Do you want to the set the stage with a representation by Mr. Smith?

MS. GEBLER: I think so, only because I see some new people in the audience, and it

might be nice.

MAYOR WRAY: That's good enough for me.

Mr. Smith, take it away.

MR. SMITH: Thank you, Mayor. Members of the Board, good evening.

For the record, David Smith, principal of Planning and Development Advisors. We are the planning consultants to both the Village of Sleepy Hollow and the Sleepy Hollow Local Development Corporation.

On the screen is a graphic that you'll see throughout the presentation. Just to orient the public, north is towards the left of the screen here. The parcel that's outlined in blue is the approximately 29-acre East Parcel that's the subject of the public hearing tonight in the environmental review. Just to the north is DeVries Park, here. The Pocantico River; the Historic Hudson Valley property here; Continental Street neighborhood. Continental Street comes in off of Route 9 here and enters the site.

To the south of the site is Barnhart Park, and the Sleepy Hollow Senior Center, this

plateau here. Beekman Avenue coming in off of Route 9, leading down to over the Beekman Avenue Bridge, and leading to what's now known as the West Parcel. It's part of the Edge-On-Hudson development, formerly known as Lighthouse Landing. These are the active Metro-North rail lines, and this structure right here is the existing pedestrian overpass that used to connect both the East and West parcels.

The presentation that I'm giving tonight is an abbreviated version of a more extensive presentation that was made on August 23rd. If you wanted to see the entirety of that presentation, you can certainly go online and review that.

But, very quickly, the purpose for tonight's meeting is part of the State Environmental Quality Review Act process. The proposed action that the Village and the LDC are considering is a granting of a special permit and a riverfront development concept plan. These are pursuant to the Village's zoning code. And the proposed action includes

several different items: Construction of a new DPW facility, construction of new parking facilities, construction of an overpass connecting the East and West Parcels, construction of new recreation community facilities to serve the Village, and construction of a new bus repair garage for the Tarrytown Community School District.

Some quick fast facts on the East Parcel: It's approximately 28 to 29 acres. It's almost entirely impervious, given that it historically provided parking for employees at the General Motors site. It was formerly a municipal landfill, which meant that the project was part of the -- this site was part of a brownfields clean-up program administered by DEC. In fact, it's a site management plan which would have been included as part of the environmental record as part of the environmental impact statement.

There are existing connections, again, as I've indicated, with Continental Street and a -- what's now known as the viaduct which connects to Beekman Avenue. But it's

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essentially structurally unsound for use for today's vehicles. So there -- but there is a -- an existing connection to Beekman Avenue located in the south end of the site.

The East Parcel is currently used for informal operations by the DPW for mulching, and it's also used as overflow parking for HHV events. The area that I've highlighted, very quickly, that's -- it's subject to an ongoing subdivision application, carving out some existing rail lines and selling that portion of the site to Metro-North for their use.

Again, project need: The existing DPW facility, which is located on River Street here. Their operations are essentially split in a number of different locations. They had been, at one point, using portions of the West Parcel. But now that that site is under construction, they need to relocate equipment off of that site. They're using portions of the East Parcel. And then the site out here, towards the -- the east, is the Village's pumping station, and equipment is stored there on a temporary basis. So there's a need to

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consolidate the DPW operations. There's a need for building a program where vehicles could be stored inside, outside of the weather. This enhances the functioning of the equipment, especially during cold weather months, and also enhances the lifespan of equipment going forward.

In addition, the East Parcel provides opportunities for other public uses which we'll get into. And, in fact, the Village has held several informal sessions where they've included input as to different uses for the site, and those will be incorporated and addressed as part of our final environmental impact statement going forward.

So, very quickly, this is the riverfront development concept plan that was included as part of the DEIS. We have Continental Street coming in off of Route 9. This is the proposed location for the overpass, and there is an existing easement that allows for that crossing for the overpass to land on the West Parcel. The DPW facility's approximately three and a half to four acres, located here. There's a

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separate entrance off of Continental Street. The building program is elevated above the existing grade of the East Parcel. The existing grade is between seven and a half to eight feet, and the proposed fill to be brought in would elevate that to approximately 18 to 19 feet. Again, there's some specific design considerations with respect to the Pocantico River floodplain; and so elevating the DPW facility gets that -- those important buildings and operations outside of the floodplain area.

The areas indicated here are proposed parking fields. It's approximately 500 spaces. The parking would be designed to serve the activities on the East Parcel, and then, during certain occasions, they would be used as overflow parking for HHV with a mutual arrangement with the Village. The areas in green are identified as, right now, active and passive recreation fields, some of which have been programmed, others of which are available for future programming as the Village identifies specific needs.

The area right at the intersection here,

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this area here -- the riverfront development concept plan was prepared by WSP, consultants to the Local Development Corporation as part of the environmental review. And as part of their design, they've included a -- an amphitheater for the opportunity -- provide the opportunity for the public to participate in music and other arts events. And as part of the design concept, this site would be elevated slightly, and there may be an opportunity for some views out towards the Hudson River and the new Tappan Zee Bridge.

So, very quickly, just to wrap up -- and I think it's important that as the -- as the Village considers the East Parcel in its entirety, it's important to know that the East Parcel is part of the mitigation measures for the -- offered as part of the development of the entirety of the General Motors site as part of Lighthouse Landing, now Edge-On-Hudson.

So the next steps: Public comment period is open for written comments until September 30th. All comments submitted or provided either in tonight's public hearing or

in writing will be responded to in the final environmental impact statement.

Just, kind of, ground rules: The purpose for tonight's hearing is really not to get into a back-and-forth dialogue. It's so we can hear from the public. But rest assured that all comments raised -- all substantive comments raised will be responded to in a subsequent document which will be made available to the public.

Procedurally, both the LDC and the Village Board will issue environmental findings which will conclude the environmental review process. The Village Board would issue their special permit and riverfront development concept plan. And at some point in the future, there would be a submission of a site plan to the planning board for their approval.

For more information, again, there's a copy of the draft environmental impact statement here at Village Hall, the clerk's office. There's a copy available at Warner Library. A copy is available online. Any written comments can be submitted to Anthony

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Giaccio. Actually, I think the mayor -- at the last meeting, he had indicated that written comments can be submitted to any of the members the board, of the LDC. They'll pass those along to Paula McCarthy Tompkins, who will record them as part of the public record. And for those that still use a fax, the fax number is up on the screen; submit them that way. And then, again, written comments will be submitted -- the comment period will end on September 30th.

So, Mr. Mayor, Mr. Chairman, that ends my presentation. And I thank you.

MAYOR WRAY: Thank you, Mr. Smith.

Now, if there's anyone in the public who would like to address the boards on the matter of the public hearings, you may do so now.

Yes. We're usually pretty calm at our meetings but --

AUDIENCE SPEAKER: Hi, Mr. Mayor and the Board. My name is Julia Halardis[ph.], and I am an avid skateboarder, and so I am here on behalf of my peers and I. This is because we would like to have a skate park in the East

II-5

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Parcel. First, a little bit about myself.

I am a skateboarder for the following reasons: First of all, it keeps me in shape. Secondly, it physically challenges me. Last but not least, I feel free from all the stress that any -- that any -- that any kid my age might have. So it would be a great -- it would be great to have something in the community that would allow kids to have fun engaging in an outdoor activity instead of rushing home to some sort of technology.

Where we live, there is no nearby skate parks. The closest ones are in Yonkers, Brooklyn, Nyack; but who wants to travel over the bridge anyway? An addition of a skate park, which would provide us with an enjoyable hobby, would be appreciated by kids of all ages.

Thank you for listening to my presentation, and I hope you will consider this idea.

MAYOR WRAY: Thank you. Could we get a copy of your comments?

Yes.

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AUDIENCE SPEAKER: Hello, Mr. Mayor and the Board. Hello. My name is Carley, and I would like a skateboard park in the East Parcel.

I'm starting to learn how to skateboard, and I am improving. It would be a tremendous help to have a skateboard park to improve and challenge my skills. If we got a skateboard park, it would be a safe place that is fun and really cool, to not skate on the street, and not to be constantly watching for cars. These reasons are why I would like a skate park. Also, I asked my gym teacher what he thought, and he gave me a little note. II-5

In my opinion, I think anything added to our community that will allow the children an opportunity to learn a new skill and increase physical activity is positive and should be considered. This is from my gym teacher, Mr. DiLorenzo.

MAYOR WRAY: Thank you.

Yes.

AUDIENCE SPEAKER: Hello. My name is Thea Layson[ph]. I am here to support my friends.

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As a kid, I used to skate, and I'm starting to practice some more. It would be exciting to have a skate park; to continue to improve my skills and hangout with my friends. If I continue to practice skateboarding, I feel that I would blossom into a better skater. I hope the next generation will carry on having a skateboard park to continue -- to continue this tradition. I hope this tradition starts with us.

MAYOR WRAY: Thank you.

AUDIENCE SPEAKER: Hi. My name is Justin, and I can't wait to skateboard with my friends.

(Indiscernible.)

MAYOR WRAY: Thank you.

Yes, ma'am.

MS. INZAR: Good evening. My name is Doris Inzar, and I'm the director of the Tarrytown Community Center. And last year, in December, I came before the board for funding for recreation on Friday and Saturday evenings.

Since the -- since last year of 2015, I

feel that the program allowing the community center to be opened for the children in the community has been very useful. It has stopped the young -- it has stopped individuals from hanging out in the merchants -- in the areas of McDonald's and Walgreens. And I'm asking the board to continue the funding so we can keep our doors open on Friday and Saturday.

Thank you.

MAYOR WRAY: Certainly. That's not a matter of -- subject matter of the public hearing, but the board has certainly heard you, and we'll keep that in mind as we move into our budget process.

Does anyone else wish to address the board on -- boards on the matter of the public hearings?

Yes, in the back.

MR. KAYE: The kids follow -- I follow the kids, because that mic was too tall for me as well. My name is Kevin Kaye. I'm a property owner and live in the community.

I've been following the progress on the East Parcel for a long time. I've attended

many of the group meetings that you've held and all of the public hearings. I commend the board and the LDC for trying to gather as much information from the community. It's a tremendous effort, and I'm looking forward to the end result. One comment I have, first of all: I love the idea of a skate park, and I'm definitely supporting that. II-5

One thing I would like to note is the design that you have has an accommodation for a community center, which I do think is important, and I do believe the community supports. However, at this point, as we proceed towards finalizing the public comment period and then go into an FEIS final document, I believe that the accommodation is too small. And I'll -- the reason why it's too small and the reason why it should be enlarged, at least at this point, is that when you're considering the studies for engineering and for environmental purposes, you're going to want to have the largest footprint possible. You can always reduce that, but it will be significantly more difficult to increase that II-10

if you put a smaller footprint now.

Why is it too small? That will accommodate one court effectively, one basketball court, and that's all it will accommodate. And that doesn't even account for fans and spectators. I know you've accommodated the possibility of going up a second floor. But when I look around and I see what our community needs, and consulting with people who run sports programs within our community -- I myself run an indoor sports facility.

To put this into perspective, my facility, which is woefully undersized, is already 25,000 square feet. And that doesn't have hard court, and it has two indoor playing surfaces, which are small as it is, and that's still not enough for our community.

So 25,000 square feet is not enough, and it doesn't have hard court. I really believe that you need to expand that, probably double it to about 50-, at least for the purposes of going forward and studying this thing. Give yourself enough flexibility. At least you have

something to play with. It could always be reduced later on. But for the purpose of the impervious surfaces and the studies, I do believe it needs to be increased.

Thank you.

MAYOR WRAY: Thank you.

Anyone else? Yes.

AUDIENCE SPEAKER: Hi. My name is Georgia. I just want to piggyback off of Kevin.

I also run multiple facilities. And in order to make it more revenue-based for the Village and cost effective, it would be ideal to have at least two or three courts, whether it's basketball, volleyball, indoor soccer, whatever it might be. It will attract other people from other areas, West Coast, Florida, Puerto Rico possibly. But I just wanted to piggyback, make that comment as well. You can't run a single tournament off of one court, regardless of what sport it is.

MAYOR WRAY: Thank you.

Anyone else? Over here, and then we'll come back over here. The gentleman defers.

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MS. GOLUB: I'm Catherine Golub, here representing the Philipse Manor Improvement Association. In addition to a written statement, much more detailed, taking into account all the feedback we've received from our community, I would like to point out the following comments of things that we see important.

We would like to prohibit any vehicular traffic between DeVries Park and the East Parcel, and also support the creation of a pedestrian and bicycle path to connect DeVries Park and the East Parcel. Install a buffer of trees in DeVries Avenue and the East Parcel to enhance the beauty of the area and reduce sound and light pollution to our neighborhood from the East Parcel. III.D-8 II-13

We recommend hiring a certified landscape architect specializing in urban parks to design the East Parcel, such that appropriate planting will thrive and require minimum care and upkeep, and implement a short-term and long-term maintenance plan to manage litter, garbage, green space, and facility upkeep. II-15

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Thank you.

MAYOR WRAY: Thank you.

MR. HODGSON: Hi. My name is David Hodgson. Thank you, Board, Mr. Mayor.

I have previously spoken out against the amount of parking designated in the current plan, and I would like to reiterate that 500 spaces is about the size of a Walmart parking space. It's way more than what we need for our village residents to come there. It's something that takes away and will add traffic. III.D-19

I do support any kind of indoor space/outdoor space that provides a safe place for our kids. As a parent, I'm very concerned. We've had some incidents in our local parks, and they're now being closed and patrolled at night; so there's not really a place for kids to go after sunset. So if we're considering something like a skate park or like an OnTrack or other facility, I would urge that there be lighting, that there would be some kind of programs available, there would be something set aside where that could be supported.

I know that there was, at one point, plans

for some kind of aquatic center and other kind of centers. You know, I think that something that's viable, sustainable, easy to get to, easy to access, especially by biking, especially by somebody with no access to cars. I would really urge the board to set aside enough space for the use of our village residents, especially our next generation. So if you could please keep in mind when you're planning for the various uses the people who are most likely going to be using it.

II-10

Thank you very much.

MAYOR WRAY: Thank you.

Would anyone else like to address the boards? Over here. All right.

AUDIENCE SPEAKER: Okay. It's a little bit long, but pardon the length. I'll try to -- this is abbreviated, and I'll submit the full written commentary via email. Thank you. I'm speaking on my own behalf this evening. The Environmental Advisory Committee of which I'm a member will be submitting written testimony by the end of the month, we hope. Thank you.

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A supplemental draft environmental impact statement is required. The sole focus for the traffic and transportation section was analyzing intersection levels of service during peak hours. It lacks examination of the negative impacts on air and noise pollution, traffic safety, and social pollution. These impacts will be significant, especially for the residents of Continental and Pocantico Streets. III.D-3

The documentation does not specify what measures will be used to implement two-way traffic on Continental Street, which properties will be taken or demolished, where will parking be eliminated if necessary. All of these need to be laid out, because implementing two-way traffic underpins the 700 new parking spaces and railroad overpass Edge-On-Hudson that the LDC is proposing.

The construction section lacks analysis of the air and noise pollution and safety risks of dump trucks carrying fill along Pocantico and Continental Streets. It also does not cover the impacts of Continental Street expansion work. The trip distribution and assignment

subsections says Continental Street will serve 72 percent of the entering trips and 59 percent of the exiting trips. Those figures are likely an underestimation of the situation, because motorists heading to the restoration's big events, Horseman's Hollow, et cetera, are largely from out of town and will be traveling on Route 9. The changes are the vast, vast majority of trips will be using Continental Street under the proposed plan.

The transportation land view section only provides peak hour vehicle counts. It must clearly layout a complete picture of the expected traffic flows. While some of the -- some of this is touched on in a foot note in the landings and zoning section, this is really no place for such essential information. I did objection the peak traffic on October 29th of this season using HHV's website and other information in the DEIS; and we'll probably get about 1,300 cars going to HHV on one night, on October 29th. III.D-16

In addition, HHV wants to expand their operations. And with -- this dedicated parking

resource will allow them to do that, and so we need to accommodate those and bring those bigger projected volumes into the analysis. Widening Continental Street and building the railroad overpass or the ramp to Beekman Avenue will also create a shortcut from the North Tarrytown Train Station area. These roadway expansion projects will also make driving easier, inducing new motor vehicle trips, not just redistributing the existing and projected ones. So the DEIS should account for this group as well. III.D-17

The Village is very interested in seeing the Beekman Avenue connection built as part of the long-range unified project, therefore, it should be considered in the core of the DEIS, not the alternatives. The proposal includes 695 new parking spaces, but the PDF, on page 11, says that they're only going to put in 585. The proposed actions section should summarize -- I'm sorry. The proposed action summaries in the DEIS should also clearly indicate the total number of parking spaces in the area will be an astounding 818 parking III.D-19

spaces, including existing and new spaces. I mean, are we building Yankee Stadium? I mean, come on. All right.

The DEIS fails to consider a variety of parking and access options that we -- in the LDC's objectives, and better financial and social and environmental cost benefit profiles. Rather than spending significant funds and squandering public land on new parking spaces, the majority of event parking should be used -- existing paved areas. For example, Bellwood, Pierson, and DeVries Avenues, which have been done in the past, plus the parking lots in DeVries Park, Elm Street School and High School are available.

To provide HHV with the stability that they desire and need, the Village should enter a long-term commitment to provide these parking locations, and HHV's website and ticketing processes could be upgraded to preallocate parking locations ahead of time to individual parties. You know, implementing the Beekman Avenue connection will provide a way for vehicles to get in and out of the site to

downtown which would bring the restoration residents through downtown, improving the chances to actually patronize our village and not just pass through here, which I suspect the vast majority of people do when they go to the events. They just go up Continental. They go home, and they're done.

So consider, instead of widening Continental Street, making a two-way signalization so you can flip the direction of the traffic as needed, and also shift a large quantity of the car parking to bicycle parking. I go on and say a whole bunch of other stuff about the car parking versus bike parking. Basically, we need to improve public policy and -- because parking is the number one way -- a very major determinant in why people make the decisions of how to get somewhere. So we need to provide an incentive to get people to get out of their cars. And the spaces down there should be metered. That would help also with that.

One other thing about Continental Street is the crosswalk at Pocantico Street is

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presently 39 feet long due to the unusual angles of Pocantico. So traffic calming measures and safety measures are needed here, even if no other changes are made to Continental. And the idea of widening Continental Street at this intersection if you add a left turn lane would significantly exacerbate this problem. Parking area designs should be all grass, because permeable and porous surfaces, while better than asphalt, are not much better because of heat effects and water flow issues.

Also, just quick points. I'll be done in a second. Thank you. The proposed walking and cycling path between Barnhart and the East Parcel along the ramp is a great idea. New roadways must have designated bike lanes or parallel bike paths. A natural -- large natural buffer area needs to be created along the Pocantico River, maybe a hundred feet wide or so. Right now, the plan is building right up to the river or, you know, within a few feet of it. We need to create an actual space between the two.

III.D-7

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The idea of a skate park would be very cool. And the idea of shoehorning thousands of cars through low income Continental Street neighborhood while leaving the wealthy --

(Indiscernible.)

And then I have some other comments, but I'll just leave it. Thank you so much.

MAYOR WRAY: Are you going to submit your written comments?

AUDIENCE SPEAKER: Yes, I will.

AUDIENCE SPEAKER: This will be much more abbreviated. It's, again, about the parking.

I think 500 spots is an inflated number, and I think there's a lot more creative ways, things that we can do --

MAYOR WRAY: I'm sorry. Can you just state your name?

AUDIENCE SPEAKER: My name is Ann, last name's Coney[ph.], and I'm a Sleepy Hollow resident.

And I think there's a lot more creative ways to address the one season a year event

that the Historic Hudson Valley -- there's a lot more spots. I'd like to see a lot of open, green space instead.

MAYOR WRAY: Thank you.

Yes, ma'am.

MS. GONZALEZ: Hi. My name's Michelle Gonzalez. First of all, I'd like to say, while I've never thought of a skate park, I love that idea. I'm here about the beautification of our village.

When they were doing -- when they were going to rebuild the high school, having the facade of the school look stately was really important, and it's a commanding presence in our village. The -- what you're talking about doing down there, it -- I agree with everyone. It's too much for the parking. Maybe if the parking were green and not as much asphalt; but it sounds like you're going to round that bend into a lot of blacktop, and that's not going to be attractive. And you are going to have water problems with that, because the soil won't be able to absorb any of the moisture that's coming down. III.C-6

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But Prince Charles -- Prince Charles developed his village, and his whole plan was about hiding the cars. So if we could really plan -- I mean, yes, we have to have parking; but acknowledge that it's unsightly. The cars are not attractive. Other things are more attractive than cars. We do need the parking, but you have to think of both things. And in the long run, having that area look attractive is going to be beneficial to us. Just like the high school looks great, that area has to look good too.

Thank you.

MAYOR WRAY: Thank you.

Next.

AUDIENCE SPEAKER: Hi. My name is Sheryl Patello[ph.], and I'm from Continental Street. And I would just like to talk about the parking and all the cars that go up and down our street, and how congested it is during the events.

But those additional 500 cars, along with whatever is already coming in there, and only having the one way in and out on our street

III.D-29

really needs to be looked at. We're one village, and there should be other egresses out of that development besides Continental Street. It's a very small, narrow street, and I just think we need to look at becoming one and not having people think that their area shouldn't have any of that traffic. Because that's -- we're all here for the same purpose. We live in this village. We love this village. We're here.

We like the fact that the Hudson Valley's here with art, and we bring in the tourists. We all need to look at where the parking's going and the traffic and the impact it's going to have on our street.

Thank you.

MAYOR WRAY: Thank you.

Yes, sir.

MR. ROBINSON: Thank you, Mayor Wray and Chairman Schroedel. I'm Nick Robinson. I've lived here since 1972. I'm making this statement on my own behalf. I haven't been asked by the Board of the Pocantico River Watershed Conservancy. They will be submitting

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written statement comments by the end of the month as required.

First, I want to thank the trustees and the members of the Local Development Authority for all time you've put in. I sat in this room chairing the planning board some ten years. And I must say, if everyone was articulate as the skateboarders, I would have had many more pleasant evenings in this room. And I too endorse the ideas for skateboards. I think that's been one of the great ideas that have come up this evening. I'm going to make two short comments. One is substantive, addressing issues in the draft impact statement, and the other is procedural.

On the substantive points, I'm going to address primarily the question of ecology and the Pocantico River. As you know, nature does not make a straight line like the northern side of this parcel. In fact, if you walk down there, it's already been intruded upon by the phragmites and the other plants and the wetlands. And the EIS needs to address the immediate off-site impacts on the estuary of

the Pocantico. It's silent on that now, and I think it needs to do it for at least two reasons. One is flooding. III.C-8

It's one thing to say you'll put in fill and raise up the garage to an 18-foot level that would be above the flood surge of Superstorm Sandy and what we think will be further flood surges. But the impact statement shows, without dealing with the fact, that there are two water courses that flow through the parking lot now into the Pocantico. They are classified by the Department of Environmental Conservation as intermittent artificial water courses. If you're going to deal with the flow of water that already exists and that has been mapped on the site, you either have to make a water feature to flow that water out or put in a storm drain. Either way, you'll probably have to deal with the fact that this water goes into the Pocantico. And during a flood, it won't go anywhere; because the Pocantico will have a flood surge coming up from the Hudson and then coming down from the watershed.

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I've studied this now for a long time with Dave Smith and others when we were on the planning board, and the only way to take the rain water off of that site, the normal, bad rain water, not withstanding storms like we've all experienced living here for a while, 1999, Hurricane Floyd, and 2011, Tropical Storm Irene, when this all flooded, it is to put in a collection system and pumping. And where are you going to pump it? You're either going to pump it under or over the railroad tracks when you build your crossway. You can bring it across the tracks there and over into the Hudson, or you're going to pump it into the Pocantico. But it has no place to go in the Pocantico. This is a natural basin that used to be a --

III.C-10

(Indiscernible.)

-- all been filled in. And the water has to go somewhere. And there's nothing in the EIS that tells us where the water's going to go, how you're going to collect it, and how

you're going to pump it off site. This is not a small problem. It can be solved. Engineering systems can be developed to do it, but the EIS has to look at it. The fact that the DEC classifies these, quote, ditch artificial intermittent streams, as a part of the East Parcel, should indicate this is a major water feature that needs to be taken into account.

Now, I would recommend not putting it into a pipe. I would recommend taking the restoration of the lower Pocantico and giving this village a classic water feature. The Pocantico, and as it flows out through DeVries Park, can be very beautiful, biologically productive area. There's already a little bit of kayaking there. It could be more effectively open for that. The DEIS ignores entirely the estuary of the Pocantico. And SEQRA makes it very clear that immediate adjacent and off-site impacts like this have to be part of an impact statement. II-18

Now, the Village has, on its web page -- and it did a very good study in 2014 with --

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(Indiscernible.)

-- Associates, a multi-hazard mitigation plan. And that multi-hazard mitigation plan was to take the dangerous places on our village and anticipate the problems that will come with more intense climate change and try to get ready for them. Raising the garage up to 18 feet is one way of getting ready for them. But the planning board granted a permit last December without an impact statement and without integrating it into the studies that you're doing now, to allow a lot of fill on that site. The water table is right below the surface of that so-called parking lot. The water table is five feet below, three feet in some places, maybe a little more than seven feet in others. But, basically, you can't put the water into the ground.

III.C-10

One of the techniques this village has used with the new site plans is to require a underwater storm drain that would put the water back into the ground and disburse it. This site can have no storm drains. The water is at

the surface. It used to be a bay. So we've got to come up with a use of that multi-hazardous mitigation plan and put it to work.

Frankly, given the likelihood of severe flooding down here, it doesn't make a whole lot of sense, if I were working from scratch, to put the Village garage and the school district's buses on a site which is in harm's way. The backside of the Village is uphill. It's high. It's safe. And you could have a property facility sited further away. That would open up more space for recreation and other things down here. It would also mitigate the traffic and so on that's necessary on that site. So I ask you to think twice about whether you really want to design a infrastructure facility which your own mitigation hazard study says is probably in the wrong place; and it hasn't been built yet.

III.C-15

Now, the wetlands that are there now are badly degraded because of Hurricane Floyd or Tropical Storm Floyd. We saw a lot of silt come down when the dam above the Sleepy Hollow

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Cemetery was first -- and so, basically, you have a mudflat in the Pocantico. If you drench that out, not only do you have fill to use in the restoration of a coast line and some fill to raise up the surface, but the basin can absorb more water. Right now, it doesn't have any space to absorb water. It's a degraded system. The impact studies need to look at that adjacent system. And if you plant wetlands there or restore the wetlands and create a wetlands buffer, or as the PMIA has wisely suggested, planting a tree buffer, a wall of green, you could basically absorb a lot of flood water. Wetlands have a huge hyper-logic absorption capacity. They suck up water, and they hold it. They release it slowly. So you could have a wetlands system which is a flood control system, looks good, helps wildlife, and is aesthetically pleasing, and you won't have a straight line.

III.C-16

(Indiscernible.)

So we've got to add this conservation

biology portion to the impact statement. Now, the -- there was eight acres in this site that was allocated to Historic Hudson Valley in the findings that the Board of Trustees adopted for the GM site as mitigation for the density and impact of the development of both the East and West Parcels. Those eight acres were to be used for a restoration -- expansion of the restoration. They had a provisional plan for a farm. They were going to do all sorts of interesting things. But it was, essentially, going to be open space and cultural space, natural space. That seems to have airbrushed -- been airbrushed out of the situation, and I think you've got -- you can't just do that, because that was a mitigation of impact. You need to have an offset of, what are you going to give us now for eight acres? And I suggest that you ought to take that eight acres and restore the estuary so you have a biologically conductive Pocantico River.

III.A-14

Now, the other point I want to make is the point that Dave Smith pointed out about the Village dump. The Village dump, of course, is

there, but it has one problem. It has methane in it. As the garbage degrades, methane comes out. Methane is a very potent greenhouse gas. Each methane molecule is 20 times more -- 20,000 times more potent than a carbon dioxide molecule, and it's eating the atmosphere. We have an obligation under the reference that is in the plan right now for the community resilience legislation that Albany adopted to mitigate that gas release and stop the gas release. In the earlier plans for the garage, we had decided we would somehow capture it and vent it through the garage. I now think that's inadequate. I think you have to capture that gas and not release it. We're in a very extreme period of trying to stop greenhouse gas emissions, and we have to do our bit with that site. And the New York State Community Risk and Resilience Act can give us some guidance on that as the state develops it. III.E-3

Finally, I think the bridge -- a second bridge across the railroad tracks is a very important safety feature. It's very clear in all the studies when I was on the planning III.D-6

board, you cannot rely on just Beekman Avenue. But I do think you should take a second look, even though I know Metro-North doesn't want you to, at the viaduct, at the road that comes down next to the cliff or the old General Motors union building. I know that's a difficult structure, but it can be engineered, and you can have a second entrance which would relieve the traffic on Continental Street, give an additional exit and egress for both cars and emergency vehicles, and it could be engineered in a way that didn't adversely impact the site.

And, finally, on the substance -- last point on the substance is: You need to update the stuff that was in the old impact statement. The impact statement for General Motors didn't go into everything. And since that time, there's new facts that can be added to those impact statements. For instance, at the end of Continental Street, there used to be water. There used to be a bay. It was the most important port in Sleepy Hollow and --

(Indiscernible.)

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And boats docked there. And if you've ever noticed the excavation of building sites on the edge of Manhattan, they always find sunken boats. When the Rockefellers financed the redevelopment of Historic Hudson Valley, there was an archeological dig. It was a treasure trove. They found all kinds of extraordinary artifacts of the colonial and early American and early New York period around that site. And I submit to you that, having been president twice of our historical society and knowing the archeological records of the Rockefellers, that that site is an archeological treasure trove, and you need to have required at least a Phase 1 and Phase 2 archeological review which, basically, is more than a literature review. It's actually sending an archeologist down with a shovel to dig and find out what's there before you decide there's nothing there. That is the -- the best practice for archeology. It's our heritage. It's our history. We're a very old village. And I think it would be extraordinary to have that site explored.

III.F-1

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Now, on the quick procedural points -- and I hesitate to raise these. I'd be glad to talk about them later, off record. But when the Village of Sleepy Hollow adopted the findings and -- on the final impact statement for the GM road -- site, it was acting as the regulator, the land use authority, for this village. It made findings of fact, and it granted a special permit. When the Village acquired the East Parcel, it didn't start the clock again. The Village became the developer -- not the Village. The Local Development Authority became the developer for the East Parcel. It now stood in the place of General Motors. And as the General Motors/LDA, it is subject to the special use permit. It's subject to the site plan review of the planning board. Nothing changed because you changed title. Now, this starting of the EIS, again, with a brand new process confuses that relationship.

At a minimum, you need to go back and have the trustees reexamine that special use permit and, perhaps, do a supplemental impact statement. You can build off of the one you're

starting now. You but need to clean up that relationship, because you've got the fox taking care of the chicken coop here. The Village trustees and the planning board are the regulatory land use authority. The developer is the local development authority. They are two different roles. They need to have those roles carefully explained and set forth, and then I think you would find out that some of the impact studies that are needed would flow from clarifying the role of the development authority.

The -- I'll elaborate this in the written comments, and I've been told that the Pocantico Watershed Conservancy will do the same. Logically, you need to clarify the several functions here. I'm sympathetic to having one public hearing between two boards, because it saves time and money and effort. But in the end, you're going to have to, in the FEIS and thereafter, go back and fix it. When I looked at the decision of this board, the Board of Trustees Resolution Number 11, 2016, it confuses those roles. And I submit to you that

unless that's clarified, that resolution is probably unlawful and improvidently granted. So I urge you to clean this up before we go too much further.

Thank you very much.

MAYOR WRAY: Thank you.

Does anyone else -- yes.

AUDIENCE SPEAKER: We're just going to exit.

MAYOR WRAY: Okay. I will pause for two seconds. Yes.

AUDIENCE SPEAKER: Good evening, Board of Trustees and LDC members. I'm here on behalf -- I'm here on behalf -- representing Philipse Manor Garden Club. And I'm just reading a statement which has been sent to the village office on behalf of our Philipse Manor Garden Club.

The Philipse Manor Garden Club has been committed to the welfare and beautification of Philipse Manor neighborhood in the Village of Sleepy Hollow for 90 years. We see the potential for a significant negative impact of the East Parcel development on residential

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streets and quiet parks, unless you, the planning board and LDC, take into serious consideration the following recommendations. This is very brief.

One, prohibit any vehicular traffic between Philipse Manor streets, especially Palmer Avenue, DeVries Avenue, and the East Parcel, and/or any part of the former General Motors site. Two, prohibit any vehicular access to the East Parcel from Kingsland Point Park and DeVries Park. This includes emergency vehicle access. The stipulation was assured to residents by the mayor and the trustees in a previous development plan. Number 3, to enlist the expertise of certified urban landscape architect and certified arborists to design a buffer between the East Parcel and DeVries and Kingsland Parks. Four, minimize the sound and light pollution to the neighborhood by choosing passive park space over lighted -- over lighted playing fields. And four -- and five, support the recommendations of our sister organization, PMIA, and their five-point memo of September 16th, 2016, titled "East Parcel."

III.D-8

II-13

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And this is submitted to the Village via email from --

(Indiscernible.)

-- chairs of the Philipse Manor Garden Club. And I'm on the committee.

Thank you.

MAYOR WRAY: Thank you.

Yes.

MS. JONES: Hello. My name is Abby Jones, and I'm a staff attorney with Riverkeeper.

We thank the Village of Sleepy Hollow for this opportunity to provide public comments. Riverkeeper will be submitting more extensive and detailed written comments on the proposed redevelopment on the GM East Parcel, but we would like to make the following comments on the proposed project at this time.

Riverkeeper has been involved with the plans for General Motors site since GM was out of the plant in 2000, and since that time, has been advocating for a portion of the site, much of which consists of the land fill former

channel of the Pocantico River, to be dedicated to meaningful habitat and/or wetland restoration and flood prevention. Riverkeeper supports the appropriate redevelopment of the East Parcel, provided that the final project avoids adverse environmental impacts and includes significant and meaningful habitat restoration and stormwater management on the site, including the necessary protections for the Pocantico River. Riverkeeper has been following closely the planned redevelopment of both the West and East Parcels of the former GM plant site.

Over the years, we have submitted comments and proposed alternatives regarding the various iterations of the clean up and redevelopment of the site on the shores of the Hudson River. We have consistently advocated for meaningful public access to the Hudson River, appropriate remediation of the site and the river, and habitat restoration and stormwater mitigation that would increase the ecological, recreational, and aesthetic value of the site.

We've also listened to the comments from

the public during these recent public meetings and 100 percent support the need to redevelop this contaminated site that, for almost 20 years now, has been nothing more than a dilapidated concrete slab.

Riverkeeper is pleased at the level of community engagement we see on this most recent proposal for the East Parcel, especially the thoughtful alternatives and suggestions for the proposed use of the site at the center for the community at large, whether it be cause for a public outdoor space, a community center or, as we've heard multiple times tonight, even a skate park.

As a part of the SEQRA process, the Sleepy Hollow LDC is required to take a, quote, hard look at the potential adverse environmental impact of the proposed project and develop alternatives or mitigation that avoid or minimize those impacts the maximum extent possible. We do not feel that this draft environmental impact statement meets these requirements, and the Sleepy Hollow LDC must do much more before it can issue the final FEIS

for this project.

For example, before issuing the FEIS and approving this redevelopment, the LDC must evaluate the environmental benefits of restoring the ecological value of the Pocantico River estuary, including, for example, possible restoration of native habitat and possible restoration of the Pocantico to enhance the fishery habitat and water quality of the river. Additionally, any final project must include a short and long-term management plan for stormwater, water quality, and habitat and wetland on the site. III.E-5

The bottom line is that we do not know what the affect of this proposed development will be on the stormwater, flooding, and water quality issues on the site or on the Pocantico River, and these adverse environmental impacts must be evaluated before this project can have a final environmental impact statement issued. III.C-7

In conclusion, Riverkeeper has long been a proponent of redeveloping the former GM plant site in Sleepy Hollow, provided that that redevelopment is done appropriately. We

believe that this is an excellent opportunity to revitalize this abandoned site and compliment the waterfront development on the West Parcel as well as the needs and desires of the Sleepy Hollow community. This is the final piece in the puzzle we've been waiting almost 20 years to finish. And we support a redevelopment plan for the East Parcel that is thoughtful and environmentally sensitive.

Thank you.

MAYOR WRAY: Thank you.

Yes.

MS. KYLE: My name's Lois Kyle. And at our association meeting last night, we discussed parking and egress and digress into this. And you definitely need something going out into Philipse Manor.

You just can't knock it into our neighborhood anymore. We lived through GM 40 years of my life. We're tired of all the traffic. The people from the Manor are not going to come all the way around and up and through Continental Street to get to this place and go back out. Your closest thing is you

III.D-13

either go out DeVries or go out Palmer. They have to realize this is one village. You're all getting the same tax money that we're all getting. And it's time they realized we're not a named area, but, you know what, we have rights too. And you can't keep slamming Continental and Howard. You just can't. There's too much traffic now, and they haven't even built down there yet. So, you know, keep that in mind. You know, they are part of this village too.

MAYOR WRAY: Thank you.

Does anyone else wish to address the boards on the matter of the public hearings? Yes.

AUDIENCE SPEAKER: Hi. Matt Presso[ph.].

MAYOR WRAY: No helmet, and a tie instead?

AUDIENCE SPEAKER: Yes. Straight from the office.

I addressed the -- the board, I guess, at the first meeting, proposed a skate park. I was walking in and I saw some kids going out with skateboards, and I was very, very happy to see that. I just wanted to, I guess, report.

Since then, I've been accosting every kid I see with a skateboard and saying, Hey, you know, do you want a skate park? Do you live in Sleepy Hollow? And I've been getting a lot of -- you know, a lot of enthusiasm. So just wanted to, I guess, share that. And, you know, like the movie Field of Dreams, maybe all the kids didn't show up tonight; but if you build it, they will come.

So thanks.

MAYOR WRAY: Thank you.

Does anyone else wish to address the boards? Does anyone else wish to address the boards? As it has been -- has been noted several times tonight, the period to submit written comments will be open after this evening. And it's my expectation that both boards will actually close the -- this part of the hearing. But I just want to make sure, does anybody else want to address the boards now? Okay. Well, thank you.

I'm going to turn it back to Mr. Schroedel.

MR. SCHROEDEL: Thank you, Mr. Mayor.

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On behalf of the LDC board, as lead agency, I want to thank the members of the public who have taken so much of their own time to voice opinions and their needs and wants and concerns on the development of the East Parcel through both spoken comments and these three public hearings we've held thus far and the submission of written comments. And I want to assure everyone, the LDC board has listened very, very carefully. We have and will continue to seriously consider these comments as we move forward with the environmental review process.

I also want to assure the community that the LDC board is acutely aware that the public trust is our responsibility. We are well-versed in the history of the former GM site, SEQRA process, the New York State DEC concerns, and requirements requiring residual methane gas evaporation, deed restrictions placed upon the property before it was transferred to us, very real flooding issues that the property has been subject to and made worse by the fact that it is a basically

impervious surface at the present time. In addition to those issues and concerns, we're aware -- acutely aware of the many varied interests and concerns that developing this property raises for both the immediately adjacent properties as well as the Village as a whole.

We've done our best to gather public input both formally, through these public hearings, and informally, through various community meetings and private conversations. Our job is to work through this process in a careful manner to assure that the resulting site plan takes into consideration all appropriate environmental concerns and that it reflects the best available thinking on meeting the current and future needs of our village.

We've brought in highly qualified consultants to help us with this task, including experts in planning, engineering, flood analysis, landscape architecture, and traffic flow. Our job is not done. Our next step is to carefully consider and respond to all of your comments and to work through what

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is necessary to take a hard look in our preparing for a final environmental impact statement. We hope to complete that work in the next few months, as this village has waited many decades to see work actually start on both the East and West parcels.

I want to also point out, as Professor Robinson made clear, and we are also very aware, this is not the final -- this environmental review process is not the final bite at the apple, so to speak. The development of the East Parcel is completely subject to the rules and regulations of the village. It must go through the planning board for any site plan approval process; so that there is more than simply this process in front of us as the Village considers what to do with these 28 acres.

And with that, I ask for a motion from someone on the LDC board to close the public hearings on the East Parcel.

MR. SCARPATI: Mr. Chairman, motion to close public hearings on the East Parcel DEIS.

MR. SCHROEDEL: Motion made by

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Mr. Scarpati. Is there a second?

MAYOR WRAY: Ask for a discussion; right?

MR. SCHROEDEL: Is there a discussion on the motion?

MAYOR WRAY: Yes. Just if the motion could be -- speaking as a matter of the LDC board, if the motion could be amended to allow for written comment until end of business on September 30th.

MR. SCARPATI: Yes. I would like to alter my motion, Mr. Chairman, to close the public hearing on the East Parcel DEIS, but also extend the public comment -- not public comment -- written comment to September 30th, 2016, on the DEIS.

MR. SCHROEDEL: Is there a second to the amended motion?

MR. DAWLEY: Second.

MR. SCHROEDEL: Seconded by Mr. Dawley. Is there further discussion on the motion?

All those in favor, say "aye."

BOARD MEMBERS: Aye.

MR. SCHROEDEL: The public hearing of the LDC is closed.

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Mr. Mayor, back over to you.

MAYOR WRAY: Thank you.

What's your pleasure, folks? I'd like to have a similar motion, if we could, just to close this portion of the public hearing, leaving it open until the 30th for a written comments.

MS. SCAGLIONE: Motion to close the public hearing and to leave it open for written comments until September 30th.

MAYOR WRAY: Okay. Is there a second?

MS. GEBLER: Second.

MAYOR WRAY: Moved and seconded. Any discussion?

All in favor, say "aye."

BOARD MEMBERS: Aye.

MAYOR WRAY: Extensions?

Resolutions approved. And that adjourns our public hearing for the evening.

(Time noted: 8:13 p.m.)

C E R T I F I C A T E

I, ILANA M. NATHANSON, a Certified Court Reporter and Notary Public of the State of New York, do hereby certify that the transcript of the foregoing proceedings, taken at the time and place aforesaid, is a true and correct transcription of my shorthand notes.



ILANA M. NATHANSON

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APPENDIX B

WRITTEN CORRESPONDENCE

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Robert P. Astorino
County Executive

Department of Environmental Facilities

Thomas J. Lauro, P.E.
Commissioner

July 14, 2016

Mr. Christopher Tallarini, P.E.
WSP Parsons Brinckerhoff
555 Pleasantville Road – South Building
Briarcliff Manor, NY 10510

Re: Yonkers Joint WWTP and Tarrytown North Intercepting Sewer
East Parcel Redevelopment
Continental Street Extension and Beekman Avenue
Sleepy Hollow (V)

Dear Mr. Tallarini:

In accordance with your June 27, 2016 request (attached) for a sewer capacity letter, please be advised that Westchester County's Yonkers Joint Wastewater Treatment Plant and Tarrytown North Intercepting Sewer will serve and have sufficient capacity to accommodate the proposed flow increase of 19,290 gallons per day that is expected to be generated by the above referenced project.

However, as we have done in other County sewer districts, we request that the additional flow to the system be offset by reductions in inflow/infiltration (I&I). The removal for this project should be on a three for one ratio similar to the requirements by NYSDEC for sewer extension approvals in the New Rochelle sewer district. For housing units that are considered fair and affordable housing, this ratio can be reduced to one to one. We feel this project warrants the same consideration. III.H-1

Please contact the undersigned at (914) 813-5419 if you need further information.

Very truly yours,

Marian Pompa, Jr., P.E.
Associate Engineer

cc: Thomas Lauro, P.E., Commissioner
Joseph Gibney, P.E. Director, Wastewater Treatment
David Kvinge, Westchester County Dept. of Planning
file

Division of Solid Waste
Wastewater Treatment
Water Agency

270 North Avenue
New Rochelle, New York 10801 Telephone: (914) 813-5400 Fax: (914) 813-5460 Website: westchestergov.com

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June 27, 2016

Marian Pompa, P.E.
Associate Engineer
Westchester County Department of Environmental Facilities
270 North Avenue
New Rochelle, NY 10801

Re: Re-Development of the East Parcel, Sleepy Hollow, New York – DEIS

Dear Mr. Pompa:

As part of the Draft Environmental Impact Study (DEIS) being drafted for the above referenced project, we are required to provide a "Capacity to Serve" letter from all involved utility owners, with one of those owners being Westchester County.

The proposed East Parcel project site consists of approximately 28.74 acres and is located east of the Metro-North rail lines, south of the Pocantico River, west of the Continental Street extension and north of Beekman Avenue.

The development of the East Parcel involves providing sanitary sewer service (as well as other utilities) to the proposed Department of Public Works (DPW) Facility. The existing DPW Facility is currently located on Beekman Avenue and will be demolished once the new facility is constructed.

Other planned services/amenities for the East Parcel project are:

- Community Center
- Amphitheater
- Baseball Field
- Flexible Work Space

Currently a Village-owned 24" (as per Village-supplied survey) traverses the East Parcel from Continental Street and connects to the 30" Westchester County Trunk Sanitary Sewer on the east side of the Metro-North rail lines. From this point the 30" trunk sewer continues west under the Metro-North rail lines and eventually to the Yonkers Joint Wastewater Treatment Plant (YJWWTP).

The conceptual plan is to utilize the existing 30" trunk sewer to convey sanitary wastewater from the DPW Facility and all the planned services/amenities on the East Parcel to the YJWWTP.

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The estimated sanitary wastewater flows for the East Parcel project are listed in Table 1 below.

Table 1: Average Daily Wastewater Discharges

Uses	Quantity	Units	Flow[1] (gpu)	Wastewater[2] (gpd)
DPW Garage	35	person	5	590
Vehicle Wash (DPW)	1,495	square feet	4.9	6,595
Community Center	90	person	5	405
Amphitheater	1,000	person	5	4,500
Baseball Field	1,500	person	5	6,750
195' x 330' Soccer Field	1.5	ac-in	38,510	NA[3]
Flexible Work Space	100	person	5	450
Total Flow (gpd)				**19,290**
Peak Flow (gpm)[4]				**40**

We are requesting a letter from the WCDEF stating that the existing 30" sanitary trunk sewer has the capacity to accept the additional proposed sanitary sewer flows as listed in Table 1.

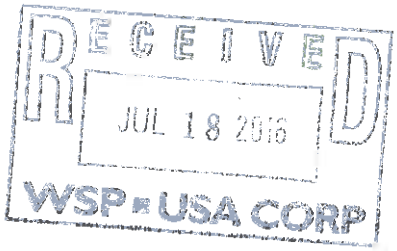
If you should have any questions, please contact me @ 914.747.1120.

Very truly yours,
WSP I PB



Christopher Tallarini, P.E.
Senior Project Engineer

Cc: Anthony Giacco, P.E. – Village of Sleepy Hollow
David Smith – Planning & Development Advisors
David Schroedel – Village of Sleepy Hollow LDC



Westchester gov.com

Robert P. Astorino
County Executive

County Planning Board

August 17, 2016

David Schroedel, Chairman
Sleepy Hollow Local Development Corporation
28 Beekman Avenue
Sleepy Hollow, NY 10591

Subject: **Referral File No. SLH 16-002 – East Parcel Redevelopment**
Draft Environmental Impact Statement

Dear Mr. Schroedel:

The Westchester County Planning Board has received a draft environmental impact statement (EIS) (dated accepted July 25, 2016), prepared pursuant to the NYS Environmental Quality Review Act (SEQR) for the above referenced project. The project involves the redevelopment of the 28.74-acre East Parcel of the former GM Assembly Plant for municipal purposes including a relocated Department of Public Works facility, a bus garage repair facility for the Tarrytown UFSD, new recreation facilities, new municipal parking and a new overpass connecting the East and West Parcels of the site over the Metro-North tracks. It is our understanding that this development proposal would require a special permit and conceptual plan approval from the Board of Trustees as well as a site plan approval from the Village Planning Board.

We have reviewed the draft EIS under the provisions of Section 239 L, M and N of the General Municipal Law and Section 277.61 of the County Administrative Code and we offer the following comment:

Pedestrian and bicycle circulation. Page II-6 of the draft EIS notes that "pedestrian and bicycle access is proposed as part of an interconnected series of trails running throughout the western portion of the site" connecting DeVries Park and Barnhart Park. To complement this, we recommend that the Continental Street extension and bridge be designed to include bicycle lanes in each direction in addition to the sidewalk discussed in the draft EIS. Using a "complete streets" approach for Continental Street would promote more non-motorized travel within the GM re-development, on both sides of the tracks. III.D-7

Thank you for calling this matter to our attention.

Respectfully,
WESTCHESTER COUNTY PLANNING BOARD

For:
By:

Edward Buroughs, AICP
Commissioner

EEB/LH

432 Michaelian Office Building
148 Martine Avenue
White Plains, New York 10601 Telephone: (914) 995-4400 Website: westchestergov.com

August 22, 2016

Dear Mayor Wray and Fellow Trustees,

On July 20, July 27 and August 10, at your request, I hosted information meetings concerning the East Parcel Redevelopment. These meetings were all held at the Joseph F. Galgano Senior Center at 55 Elm St. in Sleepy Hollow. The purpose of these meetings was to provide Sleepy Hollow residents with a platform for discussion concerning how they felt the East Parcel could best be used to the greatest benefit of the community.

Each meeting began with a presentation by myself which covered:

- The actual boundaries of the East parcel.
- The 20 year history of the process that led us to this current phase of community discussions which included the consultation of planners, traffic consultants, architects, engineers and the public. This process also included legal decisions and the approval of a site clean-up plan by the NYS Department of Environmental Conservation.
- The reasons why there are restrictions on what can be built at the site including the fact that the site is a brownfield and is in a flood plain.
- A list of what we cannot include in the development of the site: retail, restaurants, commercial office space, outdoor vehicle storage (except those owned by the village), a theater, stand-alone daycare, school, hospital or medical offices, and residential.
- A list of what has been included in the engineers' concept plan for the development: new DPW facility, community center, sports fields, open spaces/event spaces, and parking.
- A brief discussion of the budget for the project including the $11.5 million that will come to the village from Edge-on-Hudson over the next several years. Also discussed were some of the costs associated with the project including preparation of the site, cost of fill, construction cost, and annual

operating expenses once the development is complete. No specific dollar amounts were associated with these costs.

- I also encouraged residents to read the Draft Environmental Impact Statement located on the village's website as well as attend the Public Hearings taking place on Aug. 23, Sept. 12, and Sept. 20 to voice their comments and have them included in the public record.

The floor was then opened to the residents to give their suggestions of what should be included in the redevelopment of the site as well as ask questions about the process. A complete list of suggestions is attached and what follows is an overview of those suggestions and comments:

- The green spaces were very well-received. There were several suggestions for how they should be used (see below). Most felt that we should include areas for sports as well as space for more passive uses such as picnicking, Frisbee, etc. For the passive space, the general consensus was something along the lines of a Central Park. Most residents felt there was not a need for another baseball field as indicated in the concept plan.
- Making the space appealing for patrons was a top priority including the architecture of the buildings, landscaping, public art, and maximizing views.
- The concept of a Community Center was very well-received and there were several suggestion for its use (see below). The need for space for the children in our community, both younger and older, during after school hours and the weekends was universally seen as necessary. This might take the form of after school homework help, art/dance/karate-like classes, basketball pick-up games, or other supervised activities in a safe environment. It was also felt that this would be an opportunity to foster the arts in our community by providing flexible spaces for performances, rehearsals, and classes.
- The suggestions for a pool and tennis courts were brought up multiple times and ranged from simply outdoor, to bubbled space, to an aquatic center.
- Creating an area of natural beauty was high on the list of suggestions. This could include rehabbing the Horseman Trail as well as creating a bird

sanctuary and interpretive area along the border of the development and the Pocantico River.

- Access to/from the site was also deemed very important and could include creating a pedestrian and bike friendly trail system that would connect the site to the Croton Aqueduct, to the future River Walk and Kingsland Park, to Devries and the Horseman Trail, and to the Barnhart Park neighborhood.
- Also a high priority where access was concerned was some type of connector between the site and the new Edge-on-Hudson development. Not only would this connect the East Parcel to the Hudson River, but also act as a way to integrate the Edge community with the rest of the village.
- And finally, it was suggested that we send out a survey to the residents to increase the feedback we receive from the community about how they would like the East Parcel to be developed.

In general, it was agreed that this is a unique opportunity for our community to create something beneficial for all of the residents. The suggestions were thoughtful and inclusive and those who participated in the meetings were very invested in the process and grateful to be included.

Respectfully Submitted By,

Rachelle Gebler
Trustee
Village of Sleepy Hollow

East Parcel Redevelopment
Information Meetings
List of Suggestions from Community
(Numbers within parentheses indicate the number of times a suggestion was voiced during these meetings)

General

- Tennis Courts (3) - possibly with bubble for year-round use
- Basketball Courts
- Ice Skating - possibly by flooding tennis courts or other open space
- Open green space that can be bubbled
- Skateboard Park (2) – utilizing the change in elevation of the site, with lights for night use
- Multi-Purpose Fields
- Passive open space – flying kites, picnic, Frisbee, similar to Central Park
- Sports Field with lights
- Ensure multiple access/egress points to site
- Public Art – possibly outdoor sculpture with Legend of Sleepy Hollow theme
- Landscaping while taking advantage of topography
- Drop off/Pick up site
- Pedestrian and Bike friendly – possible connection to Old Croton Aqueduct Trail
- Something to keep children occupied while siblings are participating in sports, classes, etc
- Storage Sheds – for sports equipment, etc
- Access to/from Edge-on-Hudson property – car and/or pedestrian bridge. This would allow access to the future River Walk area, Kingsland Park, and also serve to make sure the new development is integrated into the village-at-large
- Spectator Seating
- Running Path
- Bird Sanctuary

- Pool (5) – ranges from community pool to indoor aquatic center. Possibility of bubbling a pool for year-round use. With indoor aquatic center, the potential uses listed were partnership with Phelps, high school would use, $ for town through tournaments/fees, swim lessons, exercise, possibly making it above-ground, include steam room/sauna. Also suggestion for indoor pool with a roof that opens.
- Access road for site through Devries Park (2)
- Swap location of DPW and larger parking lots allowing larger area for pool, community center, gym
- Concern about the smell of garbage being transported by train for those using site
- Should there be metered parking or permit required?
- Find alternate location for DPW
- Rock Climbing area
- Picnic area
- Maximize any possible views of the Hudson River
- Space for performances/festivals
- Public TV Access station
- Warner Library Annex
- Making sure the site is safe and secure
- Playground (2)
- Spray Park (2)
- Beware of duplicating what already exists in SH and TT
- Multiple access points for DPW
- Access for seniors FROM the senior center – walkway or ramp to upper level of community center
- Similarly, access from Barnhart Park area for those residents
- Historical Society Annex
- Refreshment Stand (2) – for site in general as well as for Community Center
- Community Gardens – since this is a Brownfield site, possibly through use of raised beds or on rooftops
- Amphitheater
- Cleaning up and rehabbing the Horseman Trail
- Preserving any wetlands that exist on the site

- Less space dedicated to parking
- Create a natural buffer between the Pocantico River and the site – would lead to a better experience while hiking the Horseman Trail, allow area for preservation of natural species, decrease cost of construction because less land developed
- Concern about the increased amount of traffic – on Continental, Elm, and Howard specifically
- Will need to broaden Continental St.
- Integrate renewable energy production – electric car chargers, solar panels
- Concern for the architectural look of buildings – creating something attractive and appropriate for the area
- Developing in phases to spread out the cost of development
- Educational Greening Program – community gardens, composting site
- How will MTA siding use affect patrons of site
- Traffic Patterns – discuss their effect on the community at different public events for more feedback from those impacted
- Making sure the Edge-on-Hudson residents are integrated into the village
- Move fields/Open Space away from railroad tracks. Switch with DPW and Community center
- Send out a survey to the public to increase participation in process and get more feedback
- Slide from Barnhart park to site
- Space for Artists – performance, flexible use space, Arts Center
- Dance Theater – similar to Peridance Center in NYC with indoor flexible performance spaces
- How many sports fields do we need?
- Food trucks
- Plaza with water fountains
- Clinton Extension – how will this affect the houses who will back up to that new road?
- Gazebo or Covered Pavilion Space for performances
- Cover the parking area and use roof for performances or park space
- Concern about train noise during outdoor performances
- Some type of buffer/fence along the length of the train tracks

- Using some type of architectural tool kit to facilitate the planning process
- Making sure there is enough parking if there is a pool or there are other events
- Nature Center
- Trolley from train station in Sept/Oct when tourist season is at its peak. This might not necessarily be to the East Parcel but to locations all over the village

Community Center

- Kitchen
- Large enough to have space for all community needs
- Dedicated space for Circus Arts – possibly 5000sqft to allow for equipment to be left out
- Include Flexible Space -- large spaces that can be partitioned for performances. No concrete floors as these are not appropriate for dance performances
- High Ceilings
- Music Performance space – intimate, proper acoustics
- Usable by different audiences and inclusive of multiple segments of community
- Storage Space – for equipment, etc
- Basketball Court(s) with spectator seating – with partitions so space can be broken up for multiple uses
- Classroom Space – for after school activities and rehearsal space
- Larger footprint of building – shifting road to make more room
- Pool – incorporate this into community center space
- Use outside companies to run some of the programs – i.e. karate classes, dance classes, etc
- Rehearsal Space – with keyboards for piano lessons/practice
- Studio Art Space
- Exhibit Space – art shows. Hastings Community Center has a nice space for this that could act as a template
- Safe space for kids to be after school and in the case of older children, also in the evenings

- Careful design for multi-use – art space, performance space, sports
- Consider lighting, acoustics, sound system
- Ping Pong & Fusbal area
- Make space easily accessible for children – walking/biking
- Rooftop Access for views of Hudson River
- Weight Room

DPW

- Concern about the noise level and how it will impact the surrounding neighborhoods – possibility of installing a noise barrier
- Quality of life for residents – noise, traffic, smell

From:	Joan Bucci
To:	David Smith (davidbsmith1992@gmail.com); David M. Rothman; jmiller@harrisbeach.com; Anthony Scarpati (ascarpati@sleepyhollowldc.org); David Schroedel (david.schroedel@sleepyhollowldc.org); Ken Wray (ken.wray@sleepyhollowldc.org); Mike Dawley (michael.dawley@sleepyhollowldc.org); Teresa Oeste (teresa.oeste@sleepyhollowldc.org)
Subject:	FW: Draft Environmental Impact Statement Comment
Date:	Tuesday, August 23, 2016 4:03:24 PM

From: Paula Mccarthy
Sent: Tuesday, August 23, 2016 4:01 PM
To: Ken Wray (kgwray@gmail.com); glennrosenbloom@gmail.com; Earthlink John Leavy; ddgebler@yahoo.com; Sandra Spiro; marg44@aol.com; Denise Scaglione; csmith@mccarthyfingar.com; Joan Bucci; Anthony Giaccio
Subject: FW: Draft Environmental Impact Statement Comment

Please see below – comment for tonight's public hearing,
Paula

From: Vishal Brown [mailto:vishalbrown@gmail.com]
Sent: Monday, August 22, 2016 12:25 AM
To: Paula Mccarthy
Cc: glennrosenbloom@gmail.com
Subject: Draft Environmental Impact Statement Comment

Re.: Proposed Action on the proposed redevelopment of the East Parcel of the former General Motors property located at the terminus of Continental Street.
Comments for the Board to consider:

Regarding moving the DPW to the East Parcel, is there any reason to move it to that location instead of reconstructing it at the existing location?

I bring this up for the following reasons:

1. I don't understand combining a proposed high activity recreation area i.e. high movement of people (especially kids) and large DPW vehicles for various purposes **II-6**
2. What is the cost of bringing the east parcel up to correct flood plain height vs redoing the existing location i.e. oppurtunity cost? **II-7**
3. Tarrytown's DPW is next door to existing DPW, i.e. both DPW's are centrally located so why move it **II-8**

I am not suggesting it should not be rebuilt but I haven't heard a good argument as to why it should be moved.

Vishal

From:	Joan Bucci
To:	David M. Rothman; David Smith (davidbsmith1992@gmail.com); jmiller@harrisbeach.com; Anthony Scarpati (ascarpati@sleepyhollowldc.org); David Schroedel (david.schroedel@sleepyhollowldc.org); Ken Wray (ken.wray@sleepyhollowldc.org); Mike Dawley (michael.dawley@sleepyhollowldc.org); Teresa Oeste (teresa.oeste@sleepyhollowldc.org)
Subject:	FW: Questions to Eat Parcel Public Meetings
Date:	Tuesday, August 23, 2016 4:04:04 PM

From: Paula Mccarthy
Sent: Tuesday, August 23, 2016 4:02 PM
To: Joan Bucci
Subject: FW: Questions to Eat Parcel Public Meetings

Please forward to LDC and DS

From: Alfred Strasser [mailto:stras68@verizon.net]
Sent: Monday, August 22, 2016 5:48 PM
To: Paula Mccarthy
Subject: Questions to Eat Parcel Public Meetings

Dear Ms. McCarthy,

I request that the following questions and items be covered in the presentations on the East Parcel development:

- The area included in the Rail Siding License should be clearly pointed out on a map of the East Parcel and the pros and cons of licensing this part of the East Parcel to Metro North be discussed. **III.A-1**
- Article I, Section 1.1, paragraph (e), item (A) of the Rail Siding License Agreement states that "no pollutants, contaminants, solid wastes, or toxic or hazardous substances will be stored, treated, generated disposed of or allowed to exist on the Facility except in compliance with all applicable laws as to which Licensee is not statutoriy exempt". Please clarify what materials fall into the category under the "except " clause. Are there potentially hazardous materials included in that? Especially since the next item (B) states that "Licensee will take all reasonable and prudent steps to prevent an unlawful release of hazardous substances onto the Facility or onto any other property" --- which implies that some hazardous materials are allowed to be stored there. Please clarify. **III.A-1**
- Article III, Section 3.3 indicates that Metro North can temporarily park vehicles on Village property (outside the licensed area). Please indicate the location for such parking and indicate where, in writing, Metro North will be limited in the number of vehicles and the length of time they can park there. **III.A-2**

Thank you for attending to these questions.
Sincerely,

Alfred Strasser

17 Pokahoe Drive,
Sleepy Hollow, NY, 10591 USA
(914) 366-8875, (914) 631-5644
Stras68@verizon.net



This email has been checked for viruses by Avast antivirus software.
www.avast.com

From: Joan Bucci
To: David M. Rothman; David Smith (davidbsmith1992@gmail.com); jmiller@harrisbeach.com; Anthony Scarpati (ascarpati@sleepyhollowldc.org); David Schroedel (david.schroedel@sleepyhollowldc.org); Ken Wray (ken.wray@sleepyhollowldc.org); Mike Dawley (michael.dawley@sleepyhollowldc.org); Teresa Oeste (teresa.oeste@sleepyhollowldc.org)
Subject: FW: East Parcel development
Date: Tuesday, August 23, 2016 4:04:23 PM

-----Original Message-----
From: Paula Mccarthy
Sent: Tuesday, August 23, 2016 4:03 PM
To: Ken Wray (kgwray@gmail.com); glennrosenbloom@gmail.com; Earthlink John Leavy; ddgebler@yahoo.com; Sandra Spiro; marg44@aol.com; Denise Scaglione; csmith@mccarthyfingar.com; Anthony Giaccio; Joan Bucci
Subject: FW: East Parcel development

For tonight's public hearing - comment, See below Paula

-----Original Message-----
From: Leslie Camilleri [mailto:camil@nevis.columbia.edu]
Sent: Tuesday, August 23, 2016 2:46 PM
To: Paula Mccarthy
Cc: Annette Camilleri
Subject: East Parcel development

Hi,
We would like to express our concern about the possibility of egress from the East Parcel via Devries, as we may not be able to attend tonight's meeting.
This would obviously significantly increase the traffic at that end of Philipse Manor.
Children and pedestrians are often using these streets and, additionally, it would increase the traffic load at the Broadway/Pierson traffic light.
We assume it will also be close to the Devries playground, another problem.

III.D-8

Our best regards

Leslie and Annette Camilleri
121 Farrington Avenue
Sleepy Hollow 10591

From:	Joan Bucci
To:	David Smith (davidbsmith1992@gmail.com); David M. Rothman; jmiller@harrisbeach.com; Anthony Scarpati (ascarpati@sleepyhollowldc.org); David Schroedel (david.schroedel@sleepyhollowldc.org); Ken Wray (ken.wray@sleepyhollowldc.org); Mike Dawley (michael.dawley@sleepyhollowldc.org); Teresa Oeste (teresa.oeste@sleepyhollowldc.org)
Subject:	FW: Question re: Chevy Site
Date:	Tuesday, August 23, 2016 4:04:55 PM

From: Paula Mccarthy
Sent: Tuesday, August 23, 2016 4:04 PM
To: Ken Wray (kgwray@gmail.com); Earthlink John Leavy; glennrosenbloom@gmail.com; ddgebler@yahoo.com; Sandra Spiro; marg44@aol.com; Denise Scaglione; Anthony Giaccio; csmith@mccarthyfingar.com; Joan Bucci
Subject: FW: Question re: Chevy Site

For tonight's public hearing – comment,
P

From: Catherine Fusillo [mailto:kaybird520@gmail.com]
Sent: Tuesday, August 23, 2016 3:47 PM
To: Paula Mccarthy
Subject: Question re: Chevy Site

Ms. McCarthy

Thank you for your email regarding the meeting tonight to discuss the old General Motors property. Unfortunately I will not be able to attend the meeting (I have been in the hospital and was just discharged) but I do have a question.

I was born and raised on Hudson Street and my family still owns the house I grew up in. **III.A-3**
Would you please tell me how the plans for the old Chevrolet site will impact Hudson Street?

Thanks in advance for your assistance.

Sincerely,
Catherine Fusillo
914 946 3583

From: David Schroedel on behalf of david.schroedel@sleepyhollowldc.org
To: Daniel Convissor
Cc: David Smith
Subject: Re: deis traffic counts
Date: Thursday, August 25, 2016 2:48:15 PM

Dan,
I am passing along your email to David Smith for inclusion as an official comment in the DEIS Public Hearing.
David

From: Daniel Convissor <danielc@panix.com>
Sent: Thursday, August 25, 2016 2:43 PM
To: David Schroedel
Subject: deis traffic counts

Hi David:

The DEIS traffic counts were only for peak hours. Can you please provide the estimated 24 hour volumes for Continental St just west of Pocantico St in both directions for the build scenario?

Hopefully the information would have hourly projections, though if that's not available, daily totals will suffice. The days desired are a normal weekday and an event weekend.

Which event was used as the basis for the weekend event projections?

Thanks,

--Dan

--
Follow me on Twitter at https://twitter.com/DanielConvissor

Daniel Convissor (@danielconvissor) | Twitter

twitter.com

The latest Tweets from Daniel Convissor (@danielconvissor). Transportation, environment & public policy activist in Sleepy Hollow, NY. See @convissor for my software development stuff. Sleepy Hollow, NY

From: Anthony Giaccio
To: James; David Schroedel; David Smith
Subject: Fwd: [Sleepy Hollow NY] East Parcel - amphitheater redundant
Date: Monday, August 29, 2016 5:40:26 PM

FYI

Sent from my iPhone

Begin forwarded message:

From: Sonya Munroe <sonyamunroe@yahoo.com<mailto:sonyamunroe@yahoo.com>>
Date: August 29, 2016 at 5:38:06 PM EDT
To: <agiaccio@sleepyhollowny.org<mailto:agiaccio@sleepyhollowny.org>>
Subject: [Sleepy Hollow NY] East Parcel - amphitheater redundant

agiaccio,

Someone has sent you a message using your contact form on the Sleepy Hollow NY site.

If you don't want to receive such e-mails, you can change your settings at
http://www.sleepyhollowny.gov/users/agiaccio.

Message:

Dear Anthony,

Thank you for taking villagers' comments at the last meeting. One topic that was brought up was to include an outdoor amphitheater which would host concerts and other performances. Don't we already have one in Kingsland Point Park - the $4 million renovation of the Pavilion above the bath house? It's rarely used and can accommodate many people for concerts and performances and is protected by a roof from the elements. A beautiful spot and rarely used. Could I suggest that we inventory the village assets before building new structures? **II-3**

The amphitheater will only be used 3 months of the year during summer. Wouldn't it be better to build an outdoor skate park that would be used all year, excepting when it snows? Skateboarders skate in all kinds of weather! They are passionate about their sport. **II-5**

Thank you for considering this idea. It's an exciting project that you're spearheading!

==========

Message sent by: Sonya Munroe (sonyamunroe@yahoo.com<mailto:sonyamunroe@yahoo.com>)

==========

From: David Smith
To: Hammer
Subject: FW: beekman connection
Date: Monday, August 29, 2016 5:48:23 PM

From: Daniel Convissor <danielc@panix.com>
Date: August 29, 2016 at 10:20:15 AM EDT
To: David Schroedel <david@finexmanagement.com>
Subject: beekman connection

Hi David:

There's been discussion of building a new road between the East Parcel and Beekman Ave via the old UAW property. It's not covered in the DEIS. Have those ambitions been put down or will that be considered at a later point in time? **III.D-18**

Thanks,

--Dan

--
Follow me on Twitter at https://twitter.com/DanielConvissor

The climate movement can learn from economic history:
http://shout.lbo-talk.org/lbo/RadioArchive/2015/15_11_05.mp3 (@ 25:53)

From:	Anthony Giaccio
To:	David Smith (davidbsmith1992@gmail.com); Joan Bucci
Cc:	David Schroedel (david@finexmanagement.com)
Subject:	FW: From Ally: RtC deck and bios 8-24-16
Date:	Monday, August 29, 2016 9:49:57 AM
Attachments:	RTC Info Deck Aug 2016 DEVELOPMENT.pdf ATT00001.htm RTC OT BIOS 8-24-16.pdf ATT00002.htm

Not sure if this gets added to the DEIS comments or not.

From: Allison Forstmann [mailto:allison@rivertowncomposting.com]
Sent: Wednesday, August 24, 2016 1:36 PM
To: Anthony Giaccio
Cc: Ken Wray; David Schroedel
Subject: From Ally: RtC deck and bios 8-24-16

Hi Anthony,

Attached please find the Rivertown Composting information as well as our team bios. All at RtC are excited in our approach. Please note, we are in conversations regarding the West parcel as well. Having said this, we are also in conversation with DSNY and Cornell to harness the support they are already willing to give us, among others.

Thank you for the opportunity to present our work last night and we look forward to next steps. As always, please feel free to contact me at any time.

Incidentally, we were repeatedly approached outside Town Hall with much interest.

All the best,
Ally

Allison Lee Forstmann
Founder, Managing Member
Rivertown Composting and Foundation
Restoring New York Soil.
Feeding the Future.

P.O. Box 632
Tarrytown, NY 10591
www.linkedin.com/in/allisonforstmann

Cell: 917-209-6723
Conference line: 914-246-8488 (NO PIN) -or- www.uberconference.com/allison04

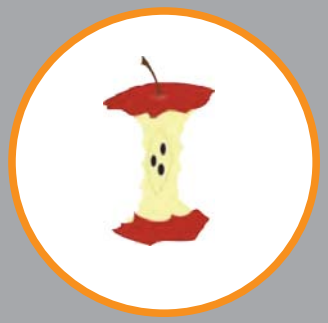
"*...Food is fabricated soil fertility.*"
- William Albrecht


Rivertown
Composting

Vision



Provide Infrastructure



Compost NYC Organic Waste



Utilize Finished Compost



Revitalize Alternative Transport



Reduce Greenhouse Gas Emissions

Opportunity



Convert >1000 tons/day Source Sorted Organic (SSO) waste in NYC and local communities into to nutrient-dense soil



Address capacity issues at regional facilities for organics



Address political and community imperative to divert organics from landfills and reduce waste



Create on-site compost to restore farm/land fertility and reclaim Brown Field sites

Waste Generators: Access & Diversion







Generators Currently Pay Municipal Solid Waste Tipping Fees for Source Sorted Organics (SSO) Disposal, into Landfills and Often Outside New York State

Generators Currently Seeking Alternative Methods of Waste Management to Reduce Trucking Distances and to Comply with Mandates

Political Landscape

0X30

Mayor DeBlasio's "OneNYC" Plan, pledges to send zero waste to landfills by 2030



July 19, 2016,
new law mandates 350 of the largest New York City food businesses to separate organic waste

Delivery: Truck, Barge & Rail





“Proof of Concept” Phase: Carters Provide Transportation

Post Ramp-Up: Barge and Rail Development

Numerous Backhaul Opportunities

The Process

Establish Decentralized Model of Multiple Temporary Composting Locations

Create High-quality, Nutrient-dense Compost On-site for Direct Impact to Individual Sites without Additional Trucking of Final Product(s)

Restore Farms and **Reclaim** Brown Fields

Reduce Traditional Facility Truck Traffic by >50%

Generate Opportunities for Ongoing Community Participation

Key Propositions

- **Profitability**: First-mover Advantage, Replicability, Scalability
- **Legal Landscape**: 2016 NYC's Commercial Organics Waste Law Mandates 350 Businesses with SSO to Source Separate
- **Uniqueness**: No Regional Processing Facility, No D.E.C. Permits Required, Alternative Transportation with NYC Access Point(s)
- **Job Creation**: 12 FTE Year 1, with 20% Increase Annually
- **Environmental Impact**: CO2 Reduction via Redirecting 12,000 Tons of SSO (= 1250 Cars Off Roads) in Year 1, Doubling Annually

Expansion Opportunities

Soil Center: Soil Services, Amendment R&D, Tree/flower blends; Compost-related Products and Blended Functional Soils

Product Development: Proprietary Shipping Containers/ Delivery Vehicles, Collection/Processing Units (MPU's)

Developing Network(s)/Strategic Business Acquisition(s)

Alternative Transportation: Fleet of Sponsored Barges/Rail Cars

NYS Canal Revitalization: Create Upstate-Downstate Model

Partners

Private: Farmers and Landowners, Brown Field Site owners, Waste Carters, Organics Collectors and Food Distribution Companies

Government: NYS Department of Environmental Conservation (D.E.C.), Department of Sanitation New York City (DSNY), NYS Department of Environmental Protection (D.E.P.), local municipalities

Institutional: Cornell Waste Management Institute, Yale University, Harvard University, M.I.T.

Critical Partner

Rivertown Composting Foundation

501(c)(3) Non-profit supports RtC's work through:

- **Education**
- **Marketing Campaigns**
- **Community Outreach**
- **Innovative Programs**
- **The Paradigm Shift of Compost/ing as an Imperative Access to Making a Difference in Our Environment**

The Team

CEO	Allison Lee Forstmann
Assistant to CEO	Caro Anders
CFO	Allister McRae
Co-COO	Jennifer F. Porter
Co-COO	Gwen Merkin
Co-CTO	Janet Hawkes
Co-CTO	Gregg Twehues
Co-CTO	Jean Bonhotal
Assistant to CTO	Emma Pollack
Feedstock Sourcing	Zachary Clancy
Site Management	Shane Hardy
Chief Advocacy	Christiana Z. Peppard
Chief Communications	Christopher Burke
Technical Design	R. Scott Porter









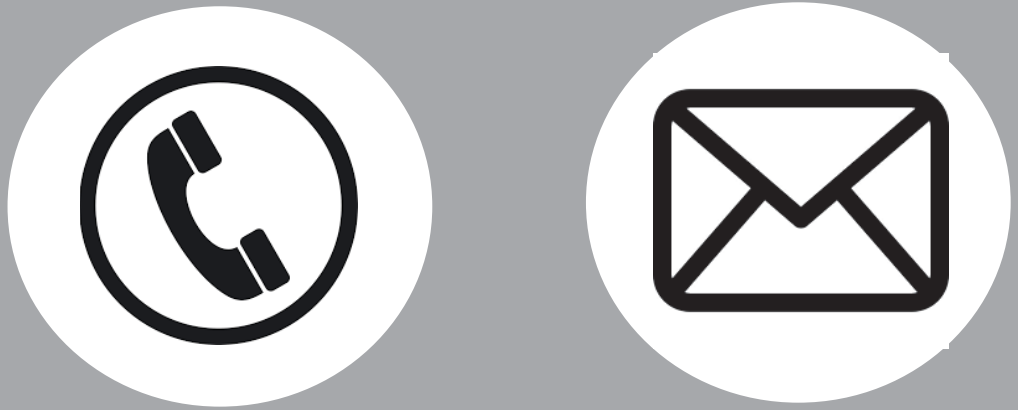





Contact

Rivertown Composting & Rivertown Composting Foundation
P.O. Box 632
Tarrytown, NY 10591

Allison Lee Forstmann
email: allison@rivertowncomposting.com
Cell: +1-917-209-6723
Conference line: +1-914-246-8488 (no PIN)



Executive Team Bios

Allison Lee Forstmann



Chief Executive Officer, Rivertown Composting
Co-Director, Rivertown Composting Foundation

Allison founded Rivertown Composting and Rivertown Composting Foundation to address the systemic opportunity of organic waste. She is a forward-looking entrepreneur with 20-year + record of identifying opportunity(s) and creating ground-breaking product and marketing strategies. She is especially adept at locating and solving business set-backs and developing top-caliber, high-collaborative workforces that include Apple Inc., Vera Wang, Monster Cable, Swarovski et al. Allison is also on the Stone Barns Center for Food and Agriculture's Farm Team.

Allister McRae

Chief Financial Officer

Before joining RtC's management, Allister was a seasoned finance professional with Credit Suisse, providing coverage role for D1 and Equity Flow groups within Prime Brokerage, and top hedge fund clients with industry expertise, onboarding and project management services. Allister supplied trade analysis & consultant services while serving to build and strengthen relationships on a macro account level. He was previously with Sterne, Agee & Leach and Keybank Capital Markets. Allister is a graduate of Aberdeen University, Scotland.

Jennifer F. Porter, City Planner (MURP), Notary Public

Co-Chief Operations Officer

Jennifer has more than 15 years' experience in sustainability and operations. She worked with the City of Portland, Oregon on implementation of a preeminent citywide recycling and composting initiative. She also spearheaded implementation of a federal grant for workforce development, resulting in the creation of the Wayne Pike Workforce Alliance. In NYC before joining RtC, Jennifer was Manager of Corporate Sustainability for Healthy Buildings, securing new clients and projects in the green building/energy efficiency realm. Jennifer has actively volunteered and held Board positions with many organizations, including the Association of Oregon Recyclers, the Columbia-Willamette Clean Cities Coalition, the Hollywood Farmers Market, and Sunnyside Gardens Community Association.

Gwen Merkin, City Planner (MURP), LEED AP

Co-Chief Operations Officer

Before joining RtC, Gwen was a Manager of Corporate Sustainability at Healthy Buildings where she managed sustainability contracts for real estate portfolios and established the company's waste audit and waste management service line. Gwen has more than 15 years of experience with city planning, waste management, energy efficiency, corporate sustainability, and green building. Gwen's previous professional positions include - Sustainability Strategist for Cushman & Wakefield where she developed policies and programs to integrate sustainability into the company's offerings, and coordinated the company's LEED EBOM Program. She was a Sustainability Manager at Steven Winter

Associates, where she coordinated an energy audit for Peter Cooper Village – Stuyvesant Town, a 11,232 unit residential complex in New York City, and developed the Global Sustainability Program for AIG Insurance. Gwen speaks Spanish and loves salsa music and dancing, as well as tennis and yoga. She is affectionately called a "garbologist" for her passion for waste reduction. She lives in the Rivertowns with her husband and two girls.

Janet Hawkes
Co-Chief Technical Officer

Janet consults with companies and NGOs on agriculture development and environmental issue in the US, and internationally. Recently she worked on sustainable food and agriculture production, greening, and bioenergy projects as Managing Director of an advisory firm. Hawkes taught, conducted research, and directed agriculture and environmental programs at Cornell University, College of Agriculture and Life Sciences, and the University of the South Pacific. She was Executive Director of an environmental and agricultural education center, where visitors experienced nature and farming first-hand, including a commercial-scale composting demonstration project. She serves on Advisory Boards for the United Nations Food and Agriculture Organization, USDA, US Department of Energy, and as a Director for Stone Barns Center for Food and Agriculture. Hawkes has a Doctorate from Cornell University College of Agriculture and Life Sciences. She has farmed and/or gardened organically her entire life.

Gregg Twehues
Co-Chief Technical Officer

Gregg Twehues brings 33 years of direct experience in the composting and agricultural sectors. Specializing in organic recycling operation start ups, Gregg has helped to advance the composting industry through his focus on quality, biology and feedstock management.

Jean Bonhotal
Co-Chief Technical Officer

Jean has worked at Cornell Waste Management Institute in solid waste education for more than 20 years, first working for Cornell Cooperative Extension in Broome County, then for the Cornell Waste Management Institute. Reducing, repurposing, recycling and composting solid and organic residuals to mine and redirect resources from our waste stream as a systematic way to manage our waste stream. Jean works on composting feedstock from food to manure to animal carcasses. Currently her time includes work on food scrap, manure and carcass & butcher waste composting education and research. Characterizing waste streams is important to be able to separate and determine value-added purposes for different residuals. Compost quality and consistency in the market place is also a high priority, as well as encouraging use to build healthy soils and redistribute nutrients. Previous experience includes working with different agencies including US Forest and National Park Service, US EPA, NYS DEC and the landscape and greenhouse industry.

Emma Pollock
Rivertown Composting Foundation, Education Director

As a seasoned educator at Cornell University Outdoor Education and Stone Barns Center for Food and Agriculture, Emma has taught hundreds of students about the environment, sustainable agriculture and food justice. She has worked and consulted on farms in the US, South America and Africa. While working at an HIV/AIDS research clinic in Uganda, she collaborated on a project to empower HIV-positive men and women by teaching them how to farm. She serves as the Sustainability Consultant for Matte Projects and Full Moon Festival. Emma is a graduate of Cornell University. She grew up with a compost bin in her kitchen.

Zachary Clancy
Feedstock Sourcing & Site Management Planning

Zach grew up and worked on his family farm in Southwest Kansas. Later he received a Bachelors from the University of Kansas in Biology & Psychology (focus on neuroscience). He is currently the Regional Farm manager for Project Eats, a non- profit organization focused on building and maintaining small urban farm plots in NYC for the purpose of boosting community involvement and connecting those communities to local food sources. Prior work experience includes: Mountain Gardens, a Chinese herb nursery in the North Carolina Appalachian Mountains; Obercreek Farm, a small NOFA certified organic farm in Hudson River Valley; GreeneryNYC, a NYC based garden design company that works with B corporations like Etsy.

Shane Hardy
Site Management Planning

Shane grew up in the Village of Nyack in New York's southern Hudson Valley. He explored and learned to love this place as he sailed the river, hiked and mountain biked in the hills and forests, and spent summer evenings on the water's edge. After graduating with a degree in philosophy and comparative religion from Ithaca College, Shane got a job on an organic grain and dry bean farm in the finger lakes region of New York, where he got hooked on farming, soil, wholesome food, and working to build healthy ecosystems that include humans. He has worked on organic vegetable farms in New York and Montana, managed Cropsey Community Farm in Rockland County, NY, and previously served as Farm Technician and Compost Manager at Stone Barns Center for Food and Agriculture. At Stone Barns, Shane worked with the organic materials that flow through the center—manure, leaves, food scraps and more—to create compost teeming with life to feed to the soil, while exploring other intermediate and complementary uses for these materials. He provided technical and mechanical support for the rest of the farm team and worked on technological and biological innovations for resilient farming.

Christiana Z. Peppard
Chief Advocacy Officer

Christiana Z. Peppard, Ph.D., is an expert on the ethics of fresh water and problems of climate change, social justice, and sustainability; a public intellectual; and a public/social media educator. An assistant professor of theology, science, and ethics at Fordham University, Dr. Peppard is the author of Just Water: Theology, Ethics, and the Global Water Crisis (2014), co-editor of two volumes including Just Sustainability: Ecology, Technology, and Resource Extraction, and the author of numerous peer-reviewed articles on environmental ethics in an era of economic globalization.

Her public media work includes venues such as TED-Ed, The New Republic, Public Radio International, The Washingon Post, MSNBC, and CNN.com. In 2013 she was named one of Microsoft's "Heroes in Education." Prof. Peppard holds a PhD in Ethics from Yale University, Department of Religious Studies, and a Bachelor's in Human Biology from Stanford University. Find her on Twitter: @profpeppard.

Christopher Burke
Chief Communications Officer

For more than 25 years, Christopher Burke has been refining photographic and filming techniques to help artists and arts professionals achieve the best possible renderings of their artworks and to create original films. Mr. Burke's ongoing mission is to work closely with artists and professionals to understand their experience and vision, and to capture these insights.

R. Scott Porter
Technical Design

Scott is a production manager, craftsperson, and fabricator with a fine arts background and 15 years problem-solving design/build proficiency. He was previously Associate Exhibitions Manager at Marian Goodman Gallery, coordinating closely with artists and institutional partners to realize new and recreate historical works, and was the on-site lead at worldwide art fairs. Scott was also a design installation consultant with the New York Public Library Exhibitions. He graduated from Pacific Northwest College of Art with a BFA in Sculpture.

Siobhan Hogan
Rivertown Composting Foundation, Co-Director

Siobhan has a proven track record working with and within non-profit organizations in London, committed to alleviating the consequences of poverty and promoting the rights of socially and economically disadvantaged communities. Through program development, capacity building support, training, evaluation and funding consultancy, Siobhan enabled community groups working in an increasing restrictive policy and competitive funding

environment to flourish; sustaining vital core services and developing new programs and partnerships to meet client need. Siobhan completed a Masters Degree in Poverty Reduction and Development Management from the University of Birmingham (UK) in 2013 following

her relocation to New York. Siobhan is a Volunteer Co-coordinator for the Volunteers Association of Bangladesh, which supports secondary education in rural Bangladesh.

Zachary Wolf
Rivertown Composting Foundation, Co-Director

Zach Wolf is a farmer, consultant and educator focusing mainly on soil fertility management for vegetable growers. He holds a degree in Biology from Columbia University and has consulted on Conservation Agriculture (ConAg) Master Plans throughout the United States with Nelson Byrd Woltz Landscape Architects. He is the former Field Manager and Director of the Growing Farmers Initiative at Stone Barns Center. He resides in Rhinebeck New York, overseeing the farm and educational operations at The Locusts on Hudson, where he manages a 75-acre diversified historic farm and works with the State of New York Department of Parks and Recreation to pioneer a program that reintegrates agriculture on public lands.

Advisory Board

Jock Herron
Harvard Graduate School of Design

Jock Herron is a Senior Research Associate at the Harvard Graduate School of Design where his primary focus is on regional food systems, in particular the Northeast. As a former chair of the Worcester Foundation for Biomedical Research (UMass Medical School) and having co-managed commercial family farms in southern Ohio for the past two decades, Jock considers the food system as the most natural link between both population and habitat health. He is a Steering Committee member of a regional food hub initiative in Worcester County (MA) that is co-led by a food justice organization and the chamber of commerce and funded by a local health foundation. A former Senior Managing Director at a global investment firm, Jock has lived in Tokyo for five years, London for two and New York for eighteen. Currently based in Cambridge, he holds a doctorate in design from Harvard and an MBA from the University of Chicago.

Kenneth L. Kaplan
Massachusetts Institute of Technology

Ken is an integrator. He identifies and engages people and groups with similar goals, but often-different perspectives or approaches, and brings them together to work toward larger solutions. His career as an academic and a strategic advisor in design includes 20 years of design teaching and research at Columbia, Harvard, and MIT. A recent project at MIT emphasized the integral link between food and health, and introduced him to a range of organizations involved with both. Building on this platform, he is developing projects that apply a systems-based approach to understanding and reintegrating the domains of food, health, the environment, and the economy. Currently, as the Senior Health Systems Advisor to the Sociotechnical Systems Research Center at MIT, Ken works on Post-Traumatic Stress Innovations, the Center's analysis of behavioral healthcare in the U.S. military. Ken is a member of the Leadership Board of the McGovern Institute for Brain Research at MIT and the Advisory Board of Feeding10Billion.com.

Edith Murnane
Food Systems Professional

From farm to farmers markets, from restaurant kitchens to food enterprises, from school food to city government, Edith Murnane has worked to develop food systems that support food businesses all along the food chain while creating food access for Massachusetts residents. Edith joined Mayor Thomas M Menino's administration in 2010 to establish the Office of Food Initiatives. Under her stewardship, various food programs were launched including the Restaurant Roadmap, the Food Truck Initiative, Boston's Micro Urban Farming Initiative, the City's Urban Agriculture Re-zoning work, launched the city's composting pilots and the city's Food System Resiliency Initiative. On the national stage,

Edith was integral in launching the US Conference of Mayors' Food Policy Task Force that successfully lobbied Congress, leveraging the voice of the entire US Conference of Mayors to affect policy changes in the US Farm Bill. These policies will generate a broad economic

impact on cities and towns across the United State while fostering better public health. Since leaving the Mayor's Office, Edith has been consulting on a number of statewide initiatives, including developing infrastructure for the grass-fed beef industry and developing a locally sourced, locally produced tomato-based product line that would create another revenue stream and market segment for local farmers. In addition to her work in at the City of Boston, Edith has worked at a variety of restaurants, catering, and food endeavors, was the chef/ owner of The Cantata in Jamaica Plain and sat on the Board of the now newly opened Boston Public Market.

Robert L. Culver
Yale University

For 15 years Bob has worked on various food related issues, farming and sustainable environments. While VP for Finance and Administration at Yale, he served as the administrator of the then new "Farm to School Movement" in which, with the help of Alice Waters and a team of interested students at Berkeley College, a cooperative/sustainable model for growing, procuring, preparing and recycling food was initiated. This model has been continuously improved in schools and other institutions throughout the Northeast and beyond with great success. As the President and CEO of the Massachusetts Development Finance Agency (the major agency for financing higher ed., healthcare and other not for profits), Bob continued to address "sustainability" through assisting in the establishment of financing strategies for farmers in the Commonwealth allowing them to have multi-year financial planning horizons...rather than living year to year/harvest to planting.

Bob has worked with various cities and towns to further understanding the economics of sustainable and nutritious food systems, contracting with food vendors to buy local and serve cooked food and support sustainability systems that go from procurement to recycling.

Edward J. Foley Jr., Esquire
Two Particular Acres

Since leaving his full-time law practice to follow his passion, Ned has been actively managing and operating a 100-acre crop farm cultivating corn, soybeans, wheat, oats and hay. He conceived, created, managed and operated an agricultural composting business integral to the farm operation. In 2003, he received the first On-Farm Compost Permit by the Department of Environmental Protection. He is a lecturer and writer on composting issues.

David Wang
HR Advisor

David began his professional career with Andersen Consulting specializing in change management. He was a senior HR/Organization Development Professional with more than 20 years of domestic and international consulting experiences involving a full range of organizational development, talent management and strategic human resources responsibilities. Most recently, David was the VP, Global Human Resources at Flextronics International.

David holds a B.A. in Psychology from the University of California, Riverside and M.A. in Organization Psychology from Columbia University (Teachers College).

Kelly Wenzel
Marketing Advisor

Kelly is the Chief Marketing Officer for Centro. She is passionate about creating and implementing purpose-driven brand strategies that create sustainable differentiation. She helped propel Centro from a locally recognized top employer to national acclaim, including recognition as one of Fortune's Top 10 places to work and Top 100 places to work for women.

A B2B software veteran, Kelly has more than 20 years' experience marketing high-growth firms in the enterprise software sector. Prior to Centro, Kelly spearheaded Undertone's brand re-launch as well as multiple successful acquisitions and product launches, helping the company significantly grow market share and revenue. Previous positions include CMO and senior management roles at Tideway, DataSynapse and Optum.

Kelly is passionate about brand strategy and implementation, conscious leadership, women leaders and mentorship. She is an executive member of Advertising Women of New York, serves on the board of Women Advancing and chairs The Impact Awards, celebrating mentorship in media. Kelly has been recognized as Working Mom of the Year by Working Mother Magazine and Best Executive, Stevie Awards for Women in International Business.

Kelly holds a bachelor's degree from the University of South Carolina. She and her husband Tony have twins, Andrew and Audra.

From: David Schroedel
To: Daniel Convissor
Cc: david.schroedel@sleepyhollowldc.org
Subject: Re: deis traffic counts
Date: Wednesday, September 7, 2016 1:13:27 PM

I'm forwarding this email to our planner, David Smith for inclusion as a public comment. It will, therefore get a formal response in the FEIS.

Sent from my iPhone

> On Sep 7, 2016, at 12:36 PM, Daniel Convissor <danielc@panix.com> wrote:
>
> Hi David:
>
>> I am told that Traffic volumes for both peak hour and daily volume are
>> found on pages 13 and 14 of the Traffic Appendix (Appendix E) in the
>> DEIS.
>
> Traffic Appendix page 14 (PDF page 124) has current daily volumes.
> Projected daily motor vehicle volumes does not exist.
>
> I'm still curious which event was used for the "saturday event"
> modeling.
>
> Thanks,
>
> --Dan
>
> --
> Follow me on Twitter at https://twitter.com/DanielConvissor
>
> The climate movement can learn from economic history:
> http://shout.lbo-talk.org/lbo/RadioArchive/2015/15_11_05.mp3 (@ 25:53)
>

III.D-10

From: Paula Mccarthy
To: Joan Bucci; david.schroedel@sleepyhollowldc.org; David Smith; AGiaccio@sleepyhollowny.gov
Subject: Fwd: East Parcel
Date: Sunday, September 11, 2016 4:51:28 PM

Please add to record

Paula McCarthy Tompkins
Village Clerk
Village of Sleepy Hollow

Sent from my Verizon Wireless 4G LTE Droid
---------- Forwarded message ----------
From: Ken Anderson <ken@anderhome.com>
Date: Sep 11, 2016 3:56 PM
Subject: East Parcel
To: Paula Mccarthy <pmccarthy@sleepyhollowny.org>
Cc:

Paula,

I plan on attending the meeting Monday evening, but in case I can't, I would like to offer up the idea of a skate park in the east parcel. I know a number of kids who would use it constantly, and it could bring people into the village, since there aren't enough skate parks around here (Matthew usually goes to Peekskill!). **II-5**

Thanks,
Ken

From:	Anthony Giaccio
To:	Ken Wray; Denise Scaglione MSN; Glenn Rosenbloom; Earthlink John Leavy; Rachelle and Darren Gebler (ddgebler@yahoo.com); Sandra Spiro; Sam Gonzalez; David Schroedel (david@finexmanagement.com); teresa.oeste@sleepyhollowldc.org; MICHAEL DAWLEY (dawley@mac.com); Anthony Scarpati (Ascarpati@sleepyhollowldc.org)
Cc:	Paula Mccarthy; Joan Bucci; David Smith (davidbsmith1992@gmail.com); "Clinton B. Smith" (csmith@MccarthyFingar.com); Daniel Pozin (dpozin@MccarthyFingar.com); David M. Rothman (DRothman@HarrisBeach.com)
Subject:	FW: EAST PARCEL
Date:	Monday, September 12, 2016 1:39:11 PM

All,

See below public hearing comments submitted by Lois Kyle.

Anthony

From: lois kyle [mailto:lois2464@gmail.com]
Sent: Monday, September 12, 2016 12:17 PM
To: Anthony Giaccio
Subject: EAST PARCEL

Dear Mr. Giaccio:

As I may be unable to attend tonight's meeting on the East Parcel I would like my comments to be made a part of the public comments.

1. I believe a public indoor pool for year round use is a good idea for the entire community. I believe it would be a positive move to unite the entire village and perhaps the school can help offset the cost for their swim team practices and meets. I believe this was discussed at one of the informal meetings about outside sponsorship. **II-10**

2. I am against the "bridge road" as the cost to build will far exceed the monies we are collecting for the entire development of the East Parcel. I also believe that the upkeep for this road will be a burden on the village budgets of the future. We definitely need a way to unite the West and East Parcels but I do not believe the "bridge road" is the way to go. An alternate plan of building a road closer to the Barnhart residents would probably be more cost effective and unite the existing recreation area with the new recreation areas. **III.D-6**

3. I believe we need a soccer or football length field in that area. As our town expands, we will need more recreational area for the residents as the school only has so much room for recreation activities that work around the school schedule. **II-24**

4. DPW needs a new home and has since they relocated to River Street. The current garage is not large enough to fulfill the needs. I believe it should be build on the Continental side of the East Parcel on the raised level, with noise barriers in place as well as proper foliage to block the view from the homes on Howard, Pleasant and Continental. I believe the garage should be built that will be pleasant to the eyes and not look like a cinder block garage or metal garage. If we are building a community center next to it, I believe they facade should be similar. **II-9**

5. A walkway to existing recreation areas is a must. **II-11**

6. Access and egress to DeVries Avenue should be considered. Continental, Howard and Beekman should not have the entire burden of traffic as all residents will benefit tax wise from the West Parcel development and the East Parcel will be for all village residents, not just the "village" people.

7. Historic Hudson overflow parking is a necessity during their peak times, however, I believe that a limit of 100 cars should be imposed. As stated by a resident of the manor, let them park on DeVries and Monroe as they did years ago. It would alleviate traffic in an already congested and parking deprived area. **III.D-19**

8. The skate park that was mentioned is a good idea but a costly one. Lake George opened one last summer but monies for the construction was grant monies and i believe our village needs to address the grants for any work done in the East Parcel to lessen the tax burden on already overtaxed homeowners (not saying village tax but our school taxes kill us). **II-5**

9. An outdoor amphitheater similar to the one in Pierson Park would be sufficient to meet the demands of outdoor summer concerts. We could alter it and include a way to show outdoor movies. The dance companies would then be able to use it as well with a small stipend to the village for the use. **II-3**

10. I believe we need access to Kingsland Point as well. I remember as a small child cutting through the Marsh, over the little cement "bridge" in what is now Memorial Park (DeVries to the newcomers) and up the stairs over the railroad tracks to get to the beach. I believe Metro North should be responsible for giving us access over the tracks as they do in every other community such as the H-bridge in Tarrytown which is solely their responsibility for cars and pedestrians. **II-12**

Lois Kyle
29 Elm Street
The village formally known as North Tarrytown.

David Smith

Subject: FW: FW: East Parcel--PMIA Board Recommendations

From: Philipse Manor Improvement Association [mailto:philipsemanor=gmail.com@mail72.atl31.mcdlv.net] **On Behalf Of** Philipse Manor Improvement Association
Sent: Friday, September 16, 2016 3:15 PM
To: Robinson, Prof. Nicholas A.
Subject: East Parcel--PMIA Board Recommendations

EAST PARCEL DEVELOPMENT

As you are aware, discussions have been happening regarding the development of the East Parcel. The PMIA board has been following the situation closely and below is our recommendations on how to protect our neighborhood interests and what would make the most sense with the space.

1. Prohibit any vehicular traffic between Devries Park & the East Parcel.
   - Support the creation of a pedestrian & bicycle path to connect Devries Park & the East Parcel. **III.D-8**

2. Install a buffer of trees between Devries Ave. and the East Parcel to enhance the beauty of the area and reduce the sound and light pollution to our neighborhood from the East Parcel. **II-13**

3. Replace the proposed athletic fields with open community park space. **II-14**
   - Maintenance over time would be much easier to manage.

4. Recommend the hiring of a certified landscape architect specializing in urban parks to design the East Parcel such that appropriate planting will thrive & require minimum care-taking. **II-15**

5. Implement a short-term & long-term maintenance plan to manage litter, garbage, green space & facility upkeep. II-15

The Board will be formally advocating for these positions on behalf of the Manor. We encourage our members to also make their individual voices and concerns heard by attending the Public Hearing at Village Hall on Tuesday, September 20th at 7pm, or by contacting Paula McCarthy at pmccarthy@sleepyhollowny.org.

This email was sent to nrobinson@law.pace.edu
why did I get this? unsubscribe from this list update subscription preferences
Philipse Manor Improvement Association · 21 Merlin Avenue · Sleepy hollow, NY 10591 · USA

--
Ken Wray

David Smith

Subject: FW: FW: East Parcel--PMIA Board Recommendations

From: Robinson, Prof. Nicholas A.
Sent: Friday, September 16, 2016 6:07 PM
To: 'philipsemanor@gmail.com'; 'pmccarthy@sleepyhollowny.org'
Cc: shelleyminerr@aol.com
Subject: RE: East Parcel--PMIA Board Recommendations

TO: PMIA

Dear Paula,

Thank you and PMIA for this intelligent set of comments. May I suggest a couple more. I share this with the Philipse Manor Garden Club officer also, as they should enter comments like your own. Thanks for your leadership. May I ask you to share this email with your Board, and ask the Garden Club also to do so.

1) Your recommendation for a landscape architect is excellent, and the development (GM) formerly had agreed to hire an arborist for the entire site, but never has done sol to date. As the successor to GM, on the East Parcel, the Village is already under a legal duty to hire an arborist, and should do so as ASAP. **II-16**

1) The State and Pocantico River Watershed Conservancy have been studying the restoration of the Pocantico River estuary, from the Hudson, by Philipse Manor and Devries Park, to the Historic Hudson Dam. The south side needs to be restored, and the river dredged to restore its original ecologial conditions. PMIA is the neighbor to the River and should advocate its restoration to a healthy ecological conditions. **III. E-1**

2) The East Parcel is nearly at sea level, and has a water table less than 2 feet below the surface. Storm water has no place to go, except to run off into the Pocantico, and Devries park already floods from heavy rainfall. The East Parcel needs top design a flood retention and storage area, or a pumping system to move sto4rm water across the railroad tracks into the Hudson. Any discharge into the Pocantico will flood DeVries Park, and the Historic Hudson Valley (HHV) historic site, and could eventually back up into the Manor itself (The DEC is under a state mandate to map this flooding area, but DEC has not yet released its maps. **III. C-1**

3) The Village proposes parking lots to be shared by HHV and the users of new Village athletic fields. The space needs to be set back from the Pocantico and a buffer of trees and natural wetlands established on the ends of the Pocantico shore. A biological survey need to be completed neither the Village nor the Developers, nor the Village Planning Board, have done one) of the Pocantico to ensure that the River will support native flora and fauna and ensure no alien species take hold or ensure that new physical storm water systems are designed to prevent the emergence of mosquito populations. **III.E-2**

4) The Village once had a municipal dump on the East Parcel and it needs to ensure that the methane gas now leaking into the air from this dump site is contained and detoxified (it is a potent greenhouse gas). **III.E-3**

5) In order to ensure no road connection is set up from Palmer Avenue via Kingsland Point Park, or DeVries Avenue, via DeVries Park, into the former GM site, the Village must provide for a vehicular crossing on the East Parcel to the GM site East Parcel. This crossing is allowed as the former GM overpass has preserved the right of way for a road to cross over the MetroNorth railroad tracks., However, the Village and the Development are no back-tracking and revising of the traffic plan for a cross-ever. This regressive breach of prior promises, made to the former Planning Board and the neighborhoods, needs to be reversed, and the second cross provided for public safety and traffic flows in and out of the GM West Parcel. If this new overpass is not provided, it is only a matter of time when the traffic will be routed through Philipse Manor. PMIA was strong on this issue 10 years ago, and needs to renew its concern and strong position in favor of the second cross south of the Pocantico River, NOW. If PMIA does not prevail on this issue, it will see the Manor, especially the areas between Palmer Avenue and DeVries Avenue, badly affected by a r alenr3eds with a new arterial road system. [Since Kingsland Point Park is dedicated Park Land, no new road can lawfully be put through the Park since this would alienate the park, and could only be done lawfully by an act of the legislature. To avoid such an illegality, East Parcel another road would be likely located through the Manor]. III.D-6

Many thanks for considering these proposals as part of the PMIA submission. I would be happy to answer any questions about these points.

With thanks again,

Nick

Prof. Nicholas A. Robinson

258 Kelbourne Avenue, Sleepy Hollow, NY

To: Planning Board
Village of Sleepy Hollow

From: The Philipse Manor Garden Club

Re: Development of the East Parcel

RECEIVED
SEP 19 2016
BUILDING DEPT.
VILLAGE OF SLEEPY HOLLOW

Date: September 19, 2016

The Philipse Manor Garden Club has been committed to the welfare and beautification of the Philipse Manor neighborhood of the Village of Sleepy Hollow for 90 years. We see the potential for a significant negative impact of the East Parcel development on our residential streets and quiet parks unless you, the Planning Board, take into serious consideration the following recommendations:

1. Prohibit any vehicular traffic between Philipse Manor streets, specifically Palmer Avenue and Devries Avenue, and the East Parcel or any part of the former GM site. **III.D-8**

2. Prohibit any vehicular access to the East Parcel from Kingsland Point Park and Devries Park. This includes emergency vehicle access. This stipulation was assured to residents by the Mayor and Trustees in the previous development plan.

3. Enlist the expertise of a certified urban landscape architect and certified arborist to design a buffer between the East Parcel and Devries and Kingsland Point Parks. **II-15**

4. Minimize sound and light pollution to the neighborhood by choosing passive park space over lighted playing fields. **II-13**

5. Support the recommendations of our sister organization, PMIA in their five-point memo of September 16, 2016 entitled "East Parcel Development."

Submitted by Co-Presidents MaryAnn Marshall and Shelley Robinson

Shelley Robinson 9/19/16

Letter 18

From:	Carl Aridas
To:	Anthony Giaccio
Cc:	Sean McCarthy; Anthony DelVecchio; Clinton B. Smith; David Smith; Ed McCarthy; Gordon Swartz; Hugh Jones; James Natarelli; Lisa Santo; Lisa Santo; Matthew Brennan
Subject:	Re: FW: SHLDC east parcel
Date:	Tuesday, September 20, 2016 10:19:24 AM

Hi Anthony,

Please do so, and please have it as myself - private citizen (Carl Aridas 5 Fremont Road) and not speaking on behalf of the Planning Board.

I would also ask that you add:

4) Currently residents on Devries Street and Munroe are inconvenienced during baseball season every May and June, culminating in the annual picnic in mid-June when the league championships are played and all league members attend a wonderful bbq with their family. The reason for the inconvenience is that there is not sufficient parking in Devries park, so parking spills out over the bridge into the surrounding streets. Every year the police get frequent calls during the baseball season about the situation, and tempers flare. A road with walking/bicycling would allow users of the Devries fields to park in the new parking lot on the east parcel and walk back into Devries park. **II-16**

5) The west parcel will have 10 acres of "passive parkland", limiting the need for additional "passive parkland" on the east parcel.

Thank you,
Carl

On Tue, Sep 20, 2016 at 9:39 AM, Anthony Giaccio <agiaccio@villageofsleepyhollow.org> wrote:

> Carl,
>
> Do you want me to enter this into the record for the East Parcel DEIS public hearing?
>
> Anthony
>
> **From:** Carl Aridas [mailto:carlaridas@gmail.com]
> **Sent:** Tuesday, September 20, 2016 9:20 AM
> **To:** Sean McCarthy
> **Cc:** Anthony DelVecchio; Anthony Giaccio; Clinton B. Smith; David Smith; Ed McCarthy; Gordon Swartz; Hugh Jones; James Natarelli; Lisa Santo; Lisa Santo; Matthew Brennan
> **Subject:** Re: FW: SHLDC east parcel

1) Ballfields are needed and were promised. **II-17**

2) The lack of vehicle access to the east site from Devries is short-sided and would hurt Philipse Manor residents/traffic several ways:

a) forcing them to drive around through the inner village to the other east side access roads. **III.D-11**

b) forcing inner-village residents to access Devries Park through Philipse Manor rather than driving/walking there via the east parcel.

3) Not allowing emergency access via east side access was never promised and frankly would be dangerous. Hope the writers of the letter don't have their house on fire when the fire trucks take longer to respond.

Regards,

Carl

On Tue, Sep 20, 2016 at 8:52 AM, Sean McCarthy <smccarthy@villageofsleepyhollow.org> wrote:

Attached please find a comment letter sent to the Planning Board regarding the East Parcel Development.

Sean E. McCarthy, RA
Village Architect

Village of Sleepy Hollow
28 Beekman Avenue
Sleepy Hollow, New York 10591
914-366-5124

-----Original Message-----
From: Xerox
Sent: Monday, September 19, 2016 2:49 PM
To: Sean McCarthy
Subject: Scanned from a Xerox Multifunction Printer

Please open the attached document. It was scanned and sent to you using a Xerox Multifunction Printer.

Attachment File Type: pdf, Multi-Page

Multifunction Printer Location:
Device Name: V3810

For more information on Xerox products and solutions, please visit http://www.xerox.com

From: David Schroedel
To: VSH-David Smith
Subject: Fwd: East Parcel
Date: Tuesday, September 20, 2016 9:37:29 PM

Sent from my iPhone

Begin forwarded message:

> **From:** Paula Mccarthy <pmccarthy@sleepyhollowny.org>
> **Date:** September 20, 2016 at 6:54:10 PM EDT
> **To:** Joan Bucci <jbucci@sleepyhollowny.org>, "david.schroedel@sleepyhollowldc.org" <david.schroedel@sleepyhollowldc.org>, "AGiaccio@sleepyhollowny.gov" <AGiaccio@sleepyhollowny.gov>
> **Subject: Fwd: East Parcel**
>
> See below
>
> Paula McCarthy Tompkins
> Village Clerk
> Village of Sleepy Hollow
>
> Sent from my Verizon Wireless 4G LTE Droid
> ---------- Forwarded message ----------
> From: Barbara Muldoon <irishey@optonline.net>
> Date: Sep 20, 2016 5:54 PM
> Subject: East Parcel
> To: Paula Mccarthy <pmccarthy@sleepyhollowny.org>
> Cc:
>
> Hi Paula, I cannot attend tonight. I would like to reiterate the need for a closed space multi use facility with parking for our village. An open air amphitheater is really inappropriate for our weather because it would have very limited usable time, and, one rainy season would most likely cancel activities.
>
> Thanks,
>
> Barbara Muldoon

_____
[Avast logo] <https://www.avast.com/antivirus>

This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/antivirus>

My Public Comments on the
"East Parcel Redevelopment, Draft Environmental Impact Statement"

by Daniel Convissor danielc@panix.com @DanielConvissor http://www.panix.com/~danielc/sleepy-hollow/
9/26/16

Supplemental DEIS Required

The sole focus of the "Traffic and Transportation" section was analyzing intersection "Levels of Service" during peak hours. It lacks examination of the negative impacts on air and noise pollution, traffic safety and social cohesion. These impacts will be significant for the residents of both Continental St and Pocantico St. **III.D-12**

The document does not specify what measures will be used to implement two-way traffic on Continental St. Which properties would be taken? Which homes would be demolished? Where would parking be eliminated? All of this needs to be laid out because implementing two-way traffic underpins the 700 new parking spaces and railroad overpass to Edge on Hudson that the LDC proposes. Unfortunately, some of the DEIS even obscures this situation by saying "primary access to the Project Site will be from Continental Street along its current configuration and alignment." (PDF p 46, DEIS) **III.D-3**

The "Construction" section lacks analysis of the air and noise pollution and safety risks of the dump trucks carrying fill along Pocantico and Continental Streets. It also doesn't cover the impacts of the Continental St expansion work. **III.G-2**

The "Trip Distribution and Assignment" subsection says Continental St will serve 72% of the entering trips and 59% of the exiting trips. (PDF p 196, DEIS) Those figures are likely underestimating the situation. Motorists heading to the Restoration's big events are largely from out of town and will be traveling on Route 9. Chances are nearly all event trips will use Continental St under the LDC's proposed plan. **III.D-15**

The "Transportation and Land Use" section only provides peak hour vehicle counts. It must clearly lay out a complete picture of expected traffic flows, including hourly counts for entire days, daily totals, ticket sales, occupancy, etc. While some of this is touched on in a footnote of the "Land Use and Zoning" section (PDF p 89, DEIS), that's no place for such essential information. On 2016's peak night, 10/29, I calculate there will be over 1,300 cars attending Historic Hudson Valley (HHV) events.[1] In addition, HHV anticipates the large, dedicated parking resources will let them expand programming, so the DEIS' event day traffic analysis needs to be based on even *bigger* projections. **III.D-16**

Widening Continental St and building the railroad overpass and/or the ramp to Beekman Ave will create a shortcut from the north to Tarrytown's train station area. These roadway expansions will also make driving easier, inducing new motor vehicle trips, not just redistributing the existing and projected ones. The DEIS must either account for this growth or put forth measures to limit through traffic. **III.D-17**

The Village is very interested in seeing the Beekman Ave connection built as part of the long-range, unified project. It therefore it needs to be in the core of the DEIS. **III.D-18**

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1 Horseman's Hollow has 9 slots of 325 attendees each. Irving's Legend has 4 slots that have at least 104 attendees each. (HHV's website) 3.75 people per party, 1.5 cars per party. (PDF page 89, DEIS) Math: (((9*325) + 4*104) / 3.75) * 1.5 = 1,336

The proposal includes 695 new parking spaces, but PDF page 11 of the DEIS mistakenly states that 585 spots will be constructed. The DEIS must clearly indicate that the total number of parking spaces in the area would be (an astounding) 818 and account for the vehicles they would draw. **III.D-19**

500	HHV
85	Park
45	Community Center
65	DPW
695	**Proposed New Parking Spaces**
78	Existing HHV Overflow Lot
45	Existing Devries Park
818	**Total Parking Spaces**

The DEIS fails to consider a variety of parking and access options that meet the LDC's objectives and have a better financial, social and environmental cost/benefit profiles.

- Rather than spending significant funds and squandering public land on new parking spaces, the majority of event parking should use existing paved areas. For example Old Broadway, Dell St, Bellwood Ave, Pierson Ave and Devries Ave (which has been done before). Plus the parking lots in Devries Park, Elm St, Morse School and the High School are available. To provide HHV the stability they desire, the Village could enter a long term commitment for providing these parking locations. HHV's website ticketing process can be upgraded to preallocate a parking area to each vehicle. **III.D-19**
- Implement the Beekman Ave connection. This route would bring The Restoration's attendees through downtown Sleepy Hollow, dramatically increasing potential patronage for our businesses. **III.D-18**
- Don't build the railroad overpass or just make it a path for people walking and biking. **III.D-10**
- Instead of widening Continental St, manage DPW and park traffic via signalization that alternates the street's direction between eastbound and westbound as needed. **III.D-21**
- Kendall Ave Extension can be made two way and/or used temporarily for exiting event vehicles by adjusting parking regulations on the 150' nearest Elm St. **III.D-22**
- Shift car parking to bicycle parking (see next section).

Slash Car Parking, Add Significant Bike Parking

Availability of (inexpensive) parking is a major factor people use when choosing how to travel somewhere. The reason so many people drive is because decades of public policy decisions have made it the easiest way to get around. It's time for a different public policy.

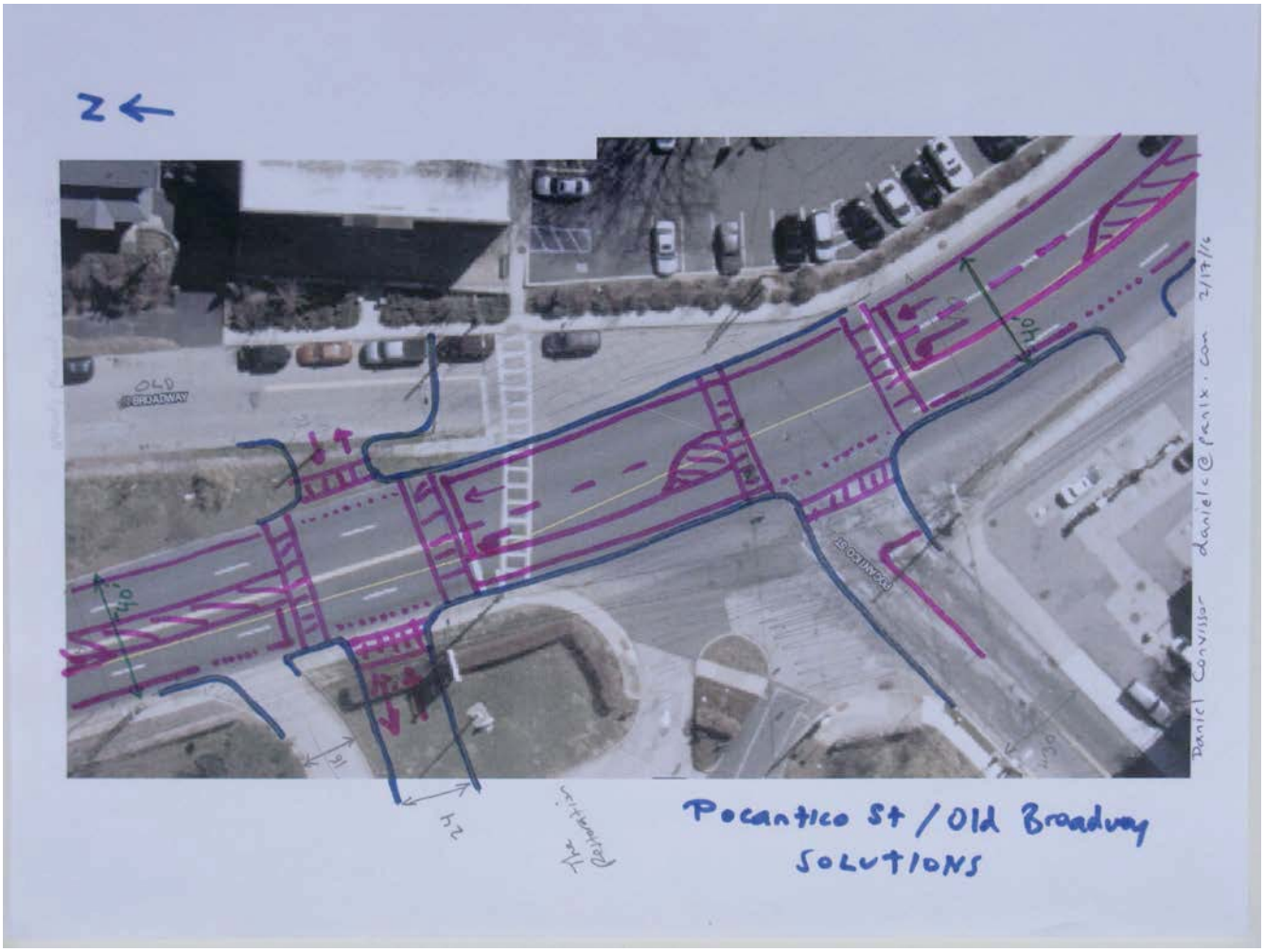
The proposal has *waaay* too much parking. The document itself wisely says 65 parking spots for DPW employees is "significantly more than needed." (PDF p 45, DEIS) All new parking for The Restoration should be dropped. Proposed car parking for the park, community center and DPW should be cut in half and be replaced by an equivalent number of bike parking spaces. (Cycling will be the quickest **III.D-19**

way to the East Parcel from a good chunk of The Manors.) All spaces, including those for DPW, need to be metered. These steps free up more area for recreation and encourage public health and engagement.

Back when GM, Roseland and the Village were in negotiations, The Restoration was an educational, interpretive facility. Donating 8 acres to them for a demonstration "farm"[2] seemed like a good thing and was intended to ameliorate the West Parcel's intensive land use. Since then The Restoration has become an amusement park and HHV wants to put parking on the land. So instead of mitigating the West Parcel development, the proposed 500 parking spaces will exacerbate it. If negotiations were happening now, would the parties have donated those 8 acres? **III.D-19**

Safety at Pocantico / North Broadway Intersection

Walking through the intersection of Pocantico St, North Broadway, Old Broadway and the Restoration entrance is already an unpleasant, death defying experience. The massive increase of motor vehicles the proposed action will bring to this location will make things significantly worse. Traffic calming this area must be a part of the proposed action and DEIS. Below is my proposed design. **III.D-23**



2 Farm is in quotes because everyone knew whatever was grown there could not be eaten.

Safety at Continental / Pocantico Intersection III.D-23

Continental St's crosswalk at Pocantico St is presently 39' long due to unusual angles. Traffic calming measures are needed here, even if no other changes are made to Continental St. The idea of widening Continental St at this intersection and adding a dedicated left turn lane would significantly exacerbate this problem. (PDF p 202, DEIS)

Parking Area Designs

If HHV parking is built, all of it should be grass. While "permeable" and "porous" paving treatments are preferable to asphalt, they're not much better. Grass does the best at reducing runoff and heat island effects. And it provides the most flexibility when not being used for parking. II-1

Other Points

- All new roadways must have dedicated bike lanes or a parallel bike path. We need to encourage people of all ages and abilities to ride to the East Parcel, and the village as a whole. III.D-7
- A large natural buffer area is needed along the Pocantico River (100'?) II-18
- The proposed walking/cycling path between Barnhard Park and the East Parcel along the existing ramp is a great idea II-19
- A skate park would be cool
- The idea of shoe horning thousands of cars per day through the low income Continental St neighborhood while leaving the wealthy Manors' wide streets without any parking on them is in very poor taste. III.D-24
- Any buffer along the train tracks should be natural and provide some visibility in both directions. People on the train should be able to see how nice Sleepy Hollow is. Some people in the park will like to watch passing trains. II-20
- A central plaza is a lovely idea. Alas, the concept is thwarted by it being divided into three pieces by the roads. II-21
- A "Community Needs Assessment" would be wise before moving forward on the community center and recreation fields. We already have a multitude of facilities for sports, recreation, arts, meetings, etc. Existing locations include our schools, Warner Library, Senior Center, Sleepy Hollow Performing Artists, United Methodist Church, other churches and temples, YMCA, On Track, Community Opportunity Center, EF, Kingsland Point Park, Barnhard Park, Sykes Park, Peabody Field, plus Tarrytown's Lagana Field, Losee Park, Patriot's Park, the field at the lakes and Pierson Park. The Salvation Army and the JCC are undergoing significant expansions. II-3
- The community center is a nice idea in the abstract, but will be expensive to build, operate and staff. Exact cost estimates need to be prepared and village residents need to openly discuss if the benefits gained (over the above mentioned facilities) are worth raising taxes by something like 1 or 2% or whatever it will be. II-10

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Matthew N. Steinberg, AICP

September 27, 2016

Mr. Anthony Giaccio, Village Administrator
Village of Sleepy Hollow
28 Beekman Avenue
Sleepy Hollow, New York 10591

Re: East Parcel Redevelopment
Sleepy Hollow, New York
Draft Environmental Impact Statement

Dear Mr. Giaccio:

On behalf of Lighthouse Landing Venture LLC, the owner and developer of Edge-On-Hudson, we would like to offer comments on the East Parcel Redevelopment Draft Environmental Impact Statement (DEIS) as follows:

1. **Site Grading and Drainage** – DEIS Section III.C.1.g describes a "two-dimensional hydrodynamic model" prepared by the Sleepy Hollow Local Development Corporation's consultant for the East Parcel site that calculates Base Flood Elevations for the East Parcel and adjoining areas different from those shown in the Preliminary Flood Insurance Rate Maps issued by the Federal Emergency Management Agency in 2014. Exhibit III.C-5 shows the results of the model, including an area of "Flood Inundation" extending over the Metro-North railroad tracks and nearly all of the Edge-On-Hudson (EOH) site. Please provide 1" = 50' grading plans for the East Parcel, and describe the flooding elevations that are projected over the tracks and EOH site under the model. **III.C-2**

2. **Site Utilities** – DEIS Section III.H.1 includes descriptions of the existing 18-inch water main and high-pressure 8-inch gas main that traverse the East Parcel from east to west to the EOH site. In Sections III.H.2 and III.H.3, please describe the measures to be taken to preserve and protect these mains during filling and construction operations on the East Parcel. **III.H-2**

3. **Continental Street Overpass** – DEIS Section III.B.2 describes anticipated impacts and proposed mitigation associated with the proposed Continental Street Overpass (Overpass) when viewed from the east but not from the west. The Overpass structure is shown to be located approximately 60 feet from the northeast corner of EOH Building I-1, which will house 40 senior affordable rental units. Please provide information on the design of the structure, including anticipated spot elevations and proposed architectural, lighting and landscape architectural treatments. **II-22**

4. **Traffic** – DEIS Section III.D includes a number of references to EOH and the Lighthouse Landing Final Environmental Impact Statement (FEIS):
   a. Planned Vicinity Developments (p. III.D-17) **III.D-25**
      i. The approved EOH program includes 1,177 residential units, not 1,077 units as stated.
      ii. Please provide specific page references and resulting calculations where anticipated EOH traffic volumes or distributions have been derived from the Lighthouse Landing FEIS or other sources.
   b. Trip Distribution and Assignment (p. III.D-25) **III.D-26**
      i. Unless previously explained, please provide references and calculations to explain how "traffic volumes generated by the proposed Edge on Hudson development were reallocated."
      ii. Expand the diagrams in Exhibits D-7 through D-10 to include the EOH site and proposed Overpass, and show the anticipated traffic volumes and distributions to and from EOH.

Thank you for your consideration.

Very truly yours,

DIVNEY TUNG SCHWALBE, LLP



Andrew V. Tung, ASLA, Esq., LEED AP
Partner

cc: Peter Johnson
Jonathan Stein
Mark Weingarten, Esq.

420 Lexington Avenue, 11th Floor
New York, NY 10170
www.mta.info

Joseph J. Giulietti
President

Metro-North Railroad

September 27, 2016

David Schroedel
Chairman
Sleepy Hollow Local Development Corporation
28 Beekman Avenue
Sleepy Hollow, NY 10591

RE: East Parcel Development DEIS, Sleepy Hollow, New York

Dear Mr. Schroedel:

MTA Metro-North Railroad (Metro-North) has received and reviewed the Draft Environmental Impact Statement (DEIS) for the proposed East Parcel Redevelopment in Sleepy Hollow, New York. Metro-North's primary concern is ensuring railroad operations and facilities are not negatively impacted during both the construction and operation of the proposed project. The proximity of the project to the Metro-North Hudson Line necessitates, for example, that adequate drainage measures are incorporated into the Sleepy Hollow Local Development Corporation's (SHLDC) plans so as not to result in flooding on Metro-North's right of way causing service disruptions. Therefore, it is important that the project sponsor consider any and all potential impacts to the adjacent active rail lines during the design, construction and operational stages of the proposed East Parcel Development project.

Our detailed comments on the DEIS are provided below:

I. Executive Summary

- Metro-North recommends that the last paragraph of "Section D. Proposed Action" in the Executive Summary (Page E-3) be revised to clarify that the sale of the approximately 1.3 acres of land to Metro-North is a separate and unrelated action that is not part of the East Parcel Development project, is not included as part of the scope of the environmental review put forth in the DEIS, and is subject to its own environmental review. In addition, please add that Metro-North is acquiring from SHLDC a non-exclusive access easement to enable access to the 1.3 acres of land, which must be preserved as part of the proposed action. III.A-1
- The second row of Table E-1 (Visual Resources) notes that the proposed vehicular overpass would be "consistent in height with the existing pedestrian overpass above the Metro North rail tracks." To be consistent with the existing overpass would require that a minimum of 24 feet of clearance beneath a new structure be provided. It should also be noted that the proposed vehicular overpass is not in the exact same location as the existing pedestrian overpass, and the vehicular overpass appears to be wider and longer. III.B-1

II. Description of the Proposed Action

II-2

- As detailed on Page II-6 of the DEIS, the project includes demolition of the existing viaduct and pedestrian overpass and the construction of a new vehicular overpass connecting the East and West Parcels. Please describe SHLDC's legal basis and real estate interest sufficient to construct a vehicular overpass over Metro-North's tracks and right-of-way. As the vehicular overpass would span the Hudson Line, permission must be obtained from MTA/Metro-North to allow the vehicular overpass and enter MTA/Metro-North's property for demolition and construction activities. Thus, it is important to note the following:

  - The demolition of the existing viaduct and pedestrian overpass and the construction and maintenance of the proposed overpass, if permitted, will be the sole responsibility of SHLDC. All associated construction and maintenance costs, including, but not limited to those associated with Metro-North supervision and flag protection, must be borne by SHLDC with no contribution from the MTA or Metro-North. All legal and MTA/Metro-North procedural requirements would need to be completed before any demolition or construction can proceed.

  - Metro-North's review and approval of design and construction plans would be necessary in order to proceed with the demolition of the existing viaduct and overpass and the construction of the proposed new overpass. Please contact Richard Ramkeesoon, Senior Construction Engineer, Capital Engineering, Metro-North Railroad (Ramkeesoon@mnr.org) when the project sponsor is ready to submit construction plans for review.

  - Work on or near Metro-North's right-of-way and tracks will require a Metro-North Entry Permit, approval of construction means/methods and proof of appropriate insurance. This requirement should be added to Sections I.E. and II.I. Associated costs, including, but not limited to, safety training, Metro-North supervision and flag protection, must be borne by SHLDC. Please contact Richard Webster, Assistant Director, Specifications & Standards, Operating Capital Projects, Metro-North Railroad (Rwebster@mnr.org) when SHLDC is ready to request a Metro-North Entry Permit.

  - Any property interest negotiations that may result from the project would require the explicit approval of the Metropolitan Transportation Authority (MTA) Board. This approval should be added to Sections I.E. and II.I. All contractors that will be working on or adjacent to Metro-North property must obtain an Entry Permit and the required insurance coverage. This requirement should also be added to Sections I.E. and II.I.

III.B. Visual Resources

- A proposed fence treatment along the western property line is referenced in "Section B. Visual Resources" (Page B-3). Metro-North recommends the fencing be eight feet in height and non-scalable (e.g., chain link with black vinyl cladding). Metro-North further recommends safety signage placed on the fence to warn against trespassing and the danger of active railroad tracks. SHLDC should also arrange to maintain the fence. An entry permit and approval by Metro-North for the fence design and construction must be obtained. **III.B-2**

III.C. Stormwater Management

- The DEIS states that the stormwater management plan proposed for the project would reduce impervious surfaces, divert offsite drainage around the project area and provide appropriate levels of volume reduction and treatment for stormwater runoff generated by the project. However, Metro-North seeks specific assurances and demonstration that, while the stormwater management plan would manage the drainage of the project area, it would not lead to a net increase in water draining onto the adjacent Metro-North right-of-way. Of particular concern is offsite drainage proposed to be diverted around the project area and conveyed directly to Discharge Point 2, which of the two discharge points (as shown in Exhibit C-1 of the DEIS), is located proximate to the railroad tracks.

III.E. Natural Resources

- Page III.E-5 of the DEIS states, "The Applicant proposes to create an approximately 0.84 acre wetland mitigation area located along the western edge of the East Parcel between the existing Metro-North rail lines and proposed interior pedestrian walkway that runs the length of the East Parcel." Similar to our concerns regarding the proposed stormwater management plan for the project site (as discussed above), the wetland mitigation site designed for the project area should not lead to a net increase in water draining onto the adjacent Metro-North right-of-way. **III.E-4**

III.G. Construction

- The DEIS indicates construction activities on the project site would include erosion controls and stormwater management practices. The proximity of the adjacent Metro-North right-of-way should be considered when designing and implementing techniques to control stormwater, erosion, etc., in order to ensure there is no net increase in water draining onto the rail line during construction. **III.G-1**

- As stated above, Metro-North must approve the means and methods of construction when construction is on or near the Metro-North right-of-way or side tracks. An entry permit from Metro-North is required.

III.H. Utilities

- The DEIS notes in in "Section H. Utilities" that existing utility lines (water supply, sanitary sewer and natural gas supply) are located near Metro-North railroad tracks. Any relocation or upgrade of existing utility lines that would require entry onto or near railroad property would necessitate Metro-North's review and approval and an entry permit as outlined in the third and fourth bullets in the comments in **II. Description of the Proposed Action** above. **III.H-3**

Thank you for the opportunity to provide comments on the East Parcel Development DEIS. Should you have any questions, or if you require any further information, please do not hesitate to contact me (shiffer@mnr.org) or David Cuff (cuff@mnr.org) of my staff.

Sincerely,

Michael J. Shiffer, Ph.D.
Vice President, Planning
MTA Metro-North Railroad

CC:

David Cuff (Metro-North)
Rich Gans (Metro-North)
Glen Hayden (Metro-North)
Robyn Hollander (Metro-North)
Neil Mastropietro (MTA Real Estate)
Terrance McCauley (Metro-North)
Richard Ramkeesoon (Metro-North)
Susan Sarch (Metro-North)
Kim Smith (Metro-North)
Karen Timko (Metro-North)
Richard Webster (Metro-North)

From: Ken Wray
To: Anthony Giaccio
Cc: David Smith; Paula McCarthy
Subject: Fwd: East Parcel
Date: Wednesday, September 28, 2016 1:38:54 PM

I forwarded this to the Trustees and to the LDC board members. copying David Smith and Paula here.

---------- Forwarded message ----------
From: **Patrick Munroe** <pjmunroe@yahoo.com>
Date: Wed, Sep 28, 2016 at 10:28 AM
Subject: East Parcel
To: "agiaccio@sleepyhollowny.org" <agiaccio@sleepyhollowny.org>
Cc: Ken Wray <kgwray@gmail.com>, "danielc@panix.com" <danielc@panix.com>

September 28, 2016
Dear Anthony,

The plan for the East Parcel must NOT include hundreds of parking spaces. Sleepy Hollow needs to preserve our green areas, not pave over what's left of them to please motorists.

This week Daniel Convissor sent the Village his recommendations for the parcel, specifically about pedestrians' and bicyclists' access to it through Philipse Manor. Again, our priority should be his: the safety of people on foot and on bikes, especially because they are already at such risk in so many places in Sleepy Hollow -- e.g., along Route 9 at its intersections with Route 448 and Beekman Avenue. It is there that I narrowly escaped injury or death several summers ago. A pickup truck was southbound on Route 9. At 35 to 40 miles an hour, it was approaching the top of the hill at New Broadway. As I stood ON THE CURB, waiting to enter the pedestrian crossing at Mickey's Auto, the huge side-view mirror of the truck nearly hit me. Luckily I happened to glance left, saw it coming, and

jumped back. Then I sent a letter to the Village about it, but the hazard remains.

Leadership in this village means bucking our nation's trend of the last 75 years. For too long, government has been inviting developers to build residential and commercial projects that make vehicle access and traffic flow the priority, rather than the safety and welfare of humans beings who WALK on the planet instead of sitting in cars. (Curiously, it is motor vehicles, not guns, that are the weapons of choice in the deaths of tens of thousands of people in this country, every year, year after year.)

In the summer of 1970, Trustee Anthony Capossela viewed the village from a helicopter. In spring 1971 I joined him on the board. He told us how he marveled at how much green we still had here, more than he thought there was during all the years he'd been seeing it from the ground. In 2016, there's now a lot less of it. It's unlikely that we'll unbuild or unpave any of the green we've destroyed since 1970, but we can certainly get our priorities right as we decide how livable, and how beautiful, the new part of Sleepy Hollow will be, there on the banks of the Hudson.

In the late '60s, I was among a handful of people who began the fight to save the river, to revitalize it. We succeeded in keeping our leaders in Albany from building an expressway all along the eastern shore. It would have decimated neighborhoods in Sleepy Hollow and Tarrytown. It would have further polluted the river and prevented access to it by people who walk. But we got Congress to pass the law that protects our waterways from that kind of abuse.

Now let's protect people who live here, walk here, and visit us to enjoy how green we are.

Patrick Munroe
63 New Broadway
Sleepy Hollow NY 10591-1723
914-631-1982

* * *

--
Ken Wray

From:	Joan Bucci
To:	David Smith (davidbsmith1992@gmail.com)
Subject:	FW: Comment on East Parcel
Date:	Thursday, September 29, 2016 8:59:53 AM

From: Anthony Giaccio
Sent: Wednesday, September 28, 2016 12:27 PM
To: Paula Mccarthy; Joan Bucci
Subject: FW: Comment on East Parcel

FYI

From: Carol Vinzant [mailto:carolvinzant@gmail.com]
Sent: Wednesday, September 28, 2016 12:04 PM
To: Anthony Giaccio
Cc: Daniel Convissor
Subject: Comment on East Parcel

Hello Mr. Glaccio--
I wanted to add my comments to the Sleepy Hollow's Local Development Corporation proposal for the East Parcel.

As a homeowner in Sleepy Hollow I was disappointed to see this valuable land being turned into just yet another parking lot, especially one that is of little use to residents.

As a parent in Webber Park, I think we need fewer cars heading to Philipsburg Manor, not more. I'm a member and frequent visitor of the historic site, but I see no need to give away valuable river property for a place that only has crowds on weekends. The local train stations have tons of commuter parking open at just that time.

We need more cars heading to Philipsburg Manor area like we need more gas stations and automotive businesses along that sorry adjacent stretch of Broadway. Broadway in that area is already really hard to cross as a pedestrian. Crossing Broadway to visit Philipsburg Manor with my five-year-old daughter, we've had many close calls with cars turning left from Pocantico Street onto Route 9 North. The residents of the area need a walk signal so we can safely walk to Philipsburg Manor (and all the attractions on that side of the road). **III.D-23**

Will residents get any value out of turning over the land to Historic Hudson? I don't see any. I'd rather hold the land open as an unpaved temporary parking lot until a better use can be found.

Carol Vinzant

Carol Vinzant
animaltourism.com
212-979-5327
41 New Broadway
Sleepy Hollow, NY 10591
animaltourism.com

HISTORIC HUDSON VALLEY

639 Bedford Road
Pocantico Hills, NY 10591
hudsonvalley.org

Sleepy Hollow Local Development Corporation
Attn: Mr. Anthony Giaccio, Chief Executive Officer
28 Beekman Avenue
Sleepy Hollow, NY 10591

Sept. 27, 2016

RE: DEIS on East Parcel Redevelopment

Dear Friends,

Historic Hudson Valley appreciates the opportunity to offer comments on the DEIS dated July 25, 2016, and to continue our dialogue with you about the future of the East Parcel. We respectfully request that the LDC address the comments below during its work toward the FEIS.

Where applicable, we have keyed our comments to the sections and page numbers of the DEIS.

A. Visual Resources [DEIS Section III.B]

1. Though the DEIS indicates on page III.B-3 that the Conceptual Landscape Plan (Exhibit III.B-9) proposes a landscape treatment along the eastern property line of the East Parcel adjacent to the Philipsburg Manor Restoration (PMR) site overflow parking lot, no new buffer plantings appear to be shown along the common property line between the two properties; only existing vegetation is clearly identified on that plan. The EIS should provide additional information on the proposed buffer plantings and include a conceptual planting plan depicting the proposed buffer treatment along the common property line between PMR site and the East Parcel. **III.B-3**

2. The DEIS does not include a proposed photometric plan that could be used to evaluate potential impacts from proposed site lighting to be installed on the East Parcel as part of development of the Riverfront Development Concept Plan (RDCP). Instead, it indicates on page III.B-3 that the proposed lighting plan will conform to Village Code requirements, with some examples of those requirements, but does not provide further detail. Historic Hudson Valley (HHV) supports the concept of lighting the Shared Parking area(s) but notes that the creation of light pollution directed towards the PMR site would have a significant adverse impact on HHV's efforts to preserve the 18th-century character of that National Historic Landmark. HHV would like the Shared Parking area(s) to be adequately but not excessively illuminated, and would like some assurance (a) that the proposed lighting plan will be designed to use shielded luminaires that are directed away from the PMR site; (2) that the source of any proposed lighting will not be visible from the PMR site; and (3) that the proposed luminaires to be installed in the Shared Parking area(s) will be mounted at heights that will minimize visual impacts on the PMR site while still producing a uniform level of illumination. **III.B-4**

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B. Stormwater Management [DEIS Section III.C]

1. The DEIS discussion of Stormwater Management does not clearly identify the amount of fill that is proposed to be added to the East Parcel north of the proposed Continental Street Overpass or describe how that fill will alter flooding conditions in that area of the East Parcel. The DEIS discussion of Grading and Erosion Control on page III.E-4 notes that approximately 100,000 cubic yards of fill material will be required and that proposed grades in the area south of the Continental Street Overpass will be raised by approximately 12 feet. In the area north of the proposed Continental Street Overpass, the DEIS suggests that existing grades would be raised by at least 2 feet, but does not address how the addition of fill in that location or elsewhere on the East Parcel would affect flooding conditions in areas that remain in the floodplain. While not directly stated, it would appear that the narrative on page III.C-10 indicating that recreational spaces "will be constructed in the floodplain below the BFE" would also be applicable to the proposed Shared Parking area(s) to be established on the East Parcel. Additional information is needed to understand the conclusion presented on page III.C-11 that proposed pervious material would "allow for maximum infiltration and minimum impact of flooding" in compliance with Village Code Chapter 220. III.C-3

2. In order to minimize flooding impacts on parking for HHV Programs and Village uses, the grading of the East Parcel north of the proposed Continental Street Overpass should be designed to prevent the creation of potential ponding areas in the Shared Parking area(s). Keeping the area well-drained and available to use for parking is consistent with longstanding agreements between the owners of the East Parcel and HHV since at least 1989. The proposed elevations in that area should be no lower than adjacent areas on the East Parcel. If those objectives are not already incorporated into the design of the proposed stormwater management plan for the East Parcel, then the following additional questions should be addressed: III.C-4

a. What is the anticipated frequency and duration of flooding in the Shared Parking area(s)? To best accommodate HHV parking requirements, runoff should be fully drained from the Shared Parking area(s) within no more than four (4) hours after any normal storm event (i.e., 10-year storm and those occurring with greater frequency). Can this objective be achieved by the proposed stormwater management plan?

b. If the proposed Shared Parking area(s) become flooded, it is possible that flood waters will carry silt and debris from other areas. In that event, what type of clean-up of the Shared Parking area(s) would be required to render them usable for parking again?

HISTORIC HUDSON VALLEY

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c. What type of additional mitigation measures can be incorporated into the Proposed Action to ensure that the Shared Parking area(s) are actually usable by HHV whenever any HHV Programs are scheduled?

C. Traffic and Transportation [DEIS Section III.D] **III.D-3**

1. The DEIS notes on page III.D-1 that Continental Street will be improved from Kendall Avenue to Pocantico Street to accommodate two-way traffic. However, the DEIS contains no narrative or graphic description of the planned improvements. In order to evaluate potential impacts and needed mitigation associated with that feature of the Proposed Action, the EIS should include a plan depicting the proposed improvements (e.g., proposed alignment and width of Continental Street and location of proposed sidewalks and/or shared bike/pedestrian paths in relation to the existing street right-of-way). That analysis should also identify the properties adjacent to the existing street right-of-way that may be affected by those improvements and the extent of any potential encroachment onto private property if the proposed improvements cannot be accommodated within the existing street right-of-way. Information should also be provided on the duration of the construction phase associated with the Continental Street improvements as well as the time of the year when that work is expected to be undertaken, particularly in relation to the schedule of Programs planned at the adjacent Philipsburg Manor Restoration site. There is no mention of this activity in DEIS Section III.G (Construction).

Thank you in advance for your ongoing careful consideration of the needs of neighboring Philipsburg Manor and the community surrounding the East Parcel as we work together to create the best future for the Village and its many visitors.

Sincerely,

Waddell W. Stillman
President

SLEEPY HOLLOW TARRYTOWN
CHAMBER OF COMMERCE
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Tarrytown, NY 10591-3660
Serving Tarrytown and Sleepy Hollow
☎: (914) 631.1705
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www.sleepyhollowchamber.com

THE CHARM OF YESTERDAY
THE SPIRIT OF TODAY

September 28, 2016

Village of Sleepy Hollow
28 Beekman Avenue
Sleepy Hollow, NY 10591

Attention: Village Board
Sleepy Hollow Local Development Board

RE: Public Hearings on East Parcel Re-Development Plan

The Sleepy Hollow Tarrytown Chamber of Commerce would like to express its support for the Village's efforts to accommodate the needs of the entire community with respect to the East Parcel re-development. In particular, our organization is in favor of appropriately configured parking to be utilized by Historic Hudson Valley (HHV). We believe additional parking will improve congestion during peak event season, as well as provide valuable parking for potential future events at or near the East Parcel.

III.D-19

The Sleepy Hollow Tarrytown Chamber of Commerce is a not-for-profit organization which promotes, supports and facilitates connectivity between our local business and professional members and the community at large.

Thank you in advance for your consideration.

Respectfully,

Kevin Kaye, co-President

Aniello Richiutti, co-President

September 27, 2016

Village of Sleepy Hollow Board of Trustees
28 Beekman Avenue
Sleepy Hollow, New York 10591

Re: East Parcel

Dear Mayor and Board:

With respect to the public hearing on the East Parcel of the GM property, I would once again like to state that our committee for the Continental, Howard and Pleasant Street area has met on several occasions and we feel that our once quiet neighborhood will be anything but quiet once the development starts or is in use. Our main issues are parking and traffic flow. We would very much appreciate if there can be several ways for egress and ingress other than Continental and Howard Streets. Beekman Avenue will also be a heavily traveled road so I believe we should look at alternatives to connect to the Manor station area, which would alleviate the need for the new residents to commute to the Manor station via Beekman Avenue , Continental or Howard Streets. Many will probably use the Tarrytown station to commute to work but as village residents they should be given the choice of rail stations. III.D-28

We also urge this board to meet with Historic Hudson with respect to the parking of visitors. The 500 parking spaces designated in the initial plan is excessive. We believe the parking should be marked with **signage** as to where the patrons park. Also, as stated by other members of the public, parking in other areas of the village may be an alternative. III.D-19

As to the DPW complex, we know that it will be built on the East Parcel. We are requesting that the building be insulated so that the noise factor will not effect our daily lives. Noise barriers and forestry to muffle the trucks would be a plus. II-9

We have a great opportunity to improve our village and I hope that this board listens to all of the village residents. Please keep our committe appraised of any and all meetings with respect to the final decisions.

Very truly yours,

Cheryl Cappello
Chairperson, Neighborhood Committee of
Continental, Pleasant and Howard Streets

From:	Paula Mccarthy
To:	Ken Wray (kgwray@gmail.com); glennrosenbloom@gmail.com; Earthlink John Leavy; ddgebler@yahoo.com; Sandra Spiro; marg44@aol.com; Denise Scaglione
Cc:	Anthony Giaccio; David Smith (davidbsmith1992@gmail.com); david.schroedel@sleepyhollowldc.org; Joan Bucci
Subject:	East Parcel Redevlopment Public Hearings
Date:	Thursday, September 29, 2016 4:06:17 PM

Please see below,
Paula

From: Jessica Goldberg [mailto:jessica@rivertowndanceacademy.org]
Sent: Thursday, September 29, 2016 2:42 PM
To: Rachelle and Darren Gebler; Rachel Pritzlaff
Cc: Paula Mccarthy
Subject: Re: East Parcel Redevlopment Public Hearings

Hello Rachelle, Paula, & the East Parcel development team,

As we've previously discussed, I feel that Tarrytown is lacking diverse performance venues. The Music Hall is prohibitively expensive and caters to a specific demographic and genre and the only other spaces are school auditoriums. In considering the East Parcel development, it's my hope that the organizers delve into the idea of a convertible theatre and performance space. A large dance floor (preferably marley) with focused lighting, a tech booth, and automatic roll-away graduated seating could be a real boon to our town and it's many performance artists. It would allow for smaller theatre and dance performances in a professional setting, as well as benefits or galas.

II-10

Best,
Jessica Goldberg
RDA Founding Co-Director
Rivertown Dance Academy

My Additional Public Comments on the "East Parcel Redevelopment, Draft Environmental Impact Statement"

by Daniel Convissor danielc@panix.com @DanielConvissor http://www.panix.com/~danielc/sleepy-hollow/
9/30/16

Below are extra comments on the DEIS, in addition to those I submitted on 9/26/16.

Feeder Network for People Walking and Cycling

The streets surrounding the East Parcel need dedicated facilities for people walking and cycling. This will encourage people of all ages and abilities to walk and ride to and through the East Parcel, keeping the number of people driving to and parking at the parks as low as possible.

III.D-7

The LDC's planning and/or implementing off-site transportation facilities is appropriate and doable, as the LDC's desires altering Continental St for two-way traffic.

Sidewalks are missing on the segments of Devries Ave and Munroe Ave closest to Devries Park. This drastically limits the number of people who will walk to the East Parcel from The Manors.

Key streets people will use for cycling to the East Parcel from The Manors include Devries Ave, Munroe Ave and Pierson / Bellwood Aves. These streets are wide enough to easily accommodate bicycle lanes.

We propose the following network of relatively easy to build segments.

III.D-31

Construct a shared bicycle/pedestrian path in the woods along the south side of Devries Ave, starting with a new bridge over the Pocantico River. The path should be close to the road and continue to where the existing sidewalk begins, at which point a protected on-street two-way bicycle lane should be constructed. At Bellwood Ave, the two-way protected bicycle lane should turn right, continuing along the west / south side of Bellwood to Broadway. This trail can serve as a permanent replacement route for the Horseman Trail.

Access to the Devries path from the north would be via Munroe Ave. Sidewalks should be built on the block of Munroe Ave between Merlin Ave and Devries Ave where they're missing. Crosswalks should be painted at the Munroe/Devries intersection. A two-way protected on-street bicycle lane should be built on one side of the entire length of Munroe Ave.

It can be argued that a separate path and bridge aren't necessary because the entrance to Devries Park generally has low volumes. While that's true, what's also true is there are surges of motor vehicles during events, which are exactly the times people want to get to those events by walking or cycling but are afraid to do so due to the large numbers of vehicles.

The bicycle lanes need to be "protected" because there are occasionally events that result in on-street parking. These peak-travel event times are also the times we need to most encourage cycling.

A bicycle lane network for accessing the East Parcel from the east and south is also needed. Planning such a system needs study and discussion due to those streets being narrower and having on-street motor vehicle parking.

III.D-31

From:	Paula Mccarthy
To:	Ken Wray (kgwray@gmail.com); glennrosenbloom@gmail.com; Earthlink John Leavy; ddgebler@yahoo.com; Denise Scaglione; marg44@aol.com; Sandra Spiro
Cc:	Anthony Giaccio; David Smith (davidbsmith1992@gmail.com); david.schroedel@sleepyhollowldc.org; Joan Bucci
Subject:	FW: Written Comments: East Parcel Redevelopment
Date:	Friday, September 30, 2016 10:17:28 AM

Please see letter below reg: East Parcel Redevelopment.

Paula A. McCarthy Tompkins
Village Clerk - Registrar

Village of Sleepy Hollow
28 Beekman Avenue
Sleepy Hollow NY 10591
O-914 366 5106
pmccarthy@sleepyhollowny.org

Stay Connected! Visit our website at: www.sleepyhollowny.gov & sign up for Blackboard Connect!

From: AOcone JNorwood [mailto:ocone.norwood1@verizon.net]
Sent: Thursday, September 29, 2016 7:48 PM
To: Paula Mccarthy
Subject: Written Comments: East Parcel Redevelopment

Please forward this to Sleepy Hollow Local Development Corporation and the Board of Trustees. Thank you.

To the Board of Trustees of the Village of Sleepy Hollow,
I am contacting you in reference to the plan for the development of the east parcel.
First and foremost, I am concerned about the inclusion of parking spaces for Historic Hudson Valley. There are more creative and environmentally friendly ways to address overflow parking for an event that occurs during one season a year. Similar to their arrangement for off-site parking with Kykuit tours, lots at train station or high school may be available, for example, as well as temporary street parking.

III.D-19

I would prefer to see more open green space: trees, open fields, and low maintenance amenities such as bicycle/pedestrian paths, par course and seating. In addition to being appropriate for the location adjacent to the Pocantico River, these areas would benefit the community with a variety of possible activities and not restrict activities to a specific sport. The design of this property allows for the creation of wonderful spaces to benefit the community. It would be a shame to designate so much of this parcel for unneeded parking spaces.

Thank you,
John Norwood
66 New Broadway
Sleepy Hollow NY

POCANTICO RIVER WATERSHED CONSERVANCY

Resident at Pace University, Aloysia Hall 100
78 North Broadway, White Plains, New York 10603
www.pocanticoconservancy.org

September 30, 2016

TO: The Village of Sleepy Hollow, Mayor and Board of Trustees
and
The Sleepy Hollow Local Development Corporation
Attention: Anthony Giaccio, Village Administrator
28 Beekman Avenue, Sleepy Hollow, New York 10591

RE: Draft Environmental Impact Statement for the Redevelopment of the "East Parcel"

This statement is submitted pursuant to the provisions of the New York State Environmental Quality Review Act (SEQRA) and the regulations thereto, and the Village of Sleepy Hollow's environmental impact assessment ordinance, and the Village of Sleepy Hollow's Local Waterfront Revitalization ordinance for the Village's NYS coastal zone planning ("LWRP"), on behalf of the Pocantico River Watershed Conservancy ("Pocantico Conservancy"), a not-for-profit corporation established for advancing the conservation and ecological study and stewardship of the Pocantico River and its watershed.

The Pocantico Conservancy submits both procedural and substantive comments for your consideration.

With preparation of this Draft Environmental Impact Statement, and the SEQRA procedures currently being pursued by both the Board of Trustees of the Village of Sleepy Hollow, and the Sleepy Hollow Local Development Corporation as the new developer of the "East Parcel," the Village turns it back on its environmental conservation responsibilities to protect both the Pocantico River, for itself and as a tributary of the Hudson River. These duties under State and Village environmental laws, and also under the federal Clean Water Act and Coastal Zone Management Act. The lands and waters east of the railroad tracks, between Beekman Avenue

III.A-11

and DeVries Avenue, are ecologically, aesthetically, historically and hydrologically all one place. The so-called "East Parcel" cannot be divorced from the Pocantico estuary. These are all parts of the same estuary watershed. The each shares in common the Pocantico River, which flows from the northeast into the Hudson River. Because each of these components is part and parcel of the Pocantico River's estuarine watershed, applicable environmental laws oblige the Village of Sleepy Hollow, and other governments, to manage this place in an integrated way, informed by sound scientific studies and knowledge.

The Draft Environmental Impact Statement is more than just a disappointment. The procedures that have produced it, and the DEIS itself, violate the spirit and letter of the environmental laws, as this statement explains. As a result of the extraordinary past services of citizens like Dr. Richard Sweet and Donald W. Stever, Jr., and a host of others, the Village of Sleepy Hollow developed a well-considered coastal zone management plan and process, and other local environmental ordinances. Today, however, with respect to the "East Parcel" the coastal zone management norms and procedures are ignored, and thereby violated. SEQRA, New York's Environmental Impact Assessment legislation, is designed to ensure that real estate development, and other actions, are reviewed by government objectively and holistically. This means the government must study the environmental impacts, avert adverse impacts or mitigate any unavoidable effects. The Village of Sleepy Hollow exercised this authority adequately for the development proposals of General Motors and Roseland Sleepy Hollow LLC on the General Motors Property (the so-called West and East Parcels were considered in their entirety). The Special Use Permit, governing the entire General Motors Property site complies with the law.

However, the process for the DEIS that the Sleepy Hollow Local Development Corporation ("LDC") and Village Board of Trustees have released for the "East Parcel" is not in compliance with the applicable environmental laws. Since the Village Board of Trustees enabled the Sleepy Hollow Local Development Corporation to take title to the "East Parcel," the Board appears to have abandoned its role as the governmental steward of the environment in the Pocantico estuary, as the regulator of the developer LDC, and conflates its governance duties with the mission of this new developer now responsible for one part of the General Motors Property. The public, in good faith relied on the Village Board to protect the Pocantico River estuary, in the General Motors/Roseland SEQRA proceedings. The LDC's new process, and its DEIS, have cherry-picked parts of the proposed projects and analysis that appear in the former GM/Roseland FEIS, and selectively ignored what the LDC chose to delete. This is a breach of faith with the public that participated in the over-all General Motors/Roseland SEQRA process for the whole GM Property. **III.A-11**

Observing due process of law requires that the Village annul this LDC SEQRA process and correct the deficiencies which the Pocantico Conservancy outlines here. We should begin with the initial **III.A-19**

public notice that the LDC and Village provided. It is more than an omission that the public notice for the DEIS was a rather selectively sent to only a handful of the 48 interested parties that appeared on the circulation list for the General Motors/Roseland FEIS process (See the GM/Roseland Positive Declaration of April 7, 2003). For example, the Pocantico Conservancy has ascertained that the Federated Conservationists of Westchester County (FCWC), a party to the Village's public comment process of the GM/Roseland SEQRA proceeding, has not received notice of this LDC SEQRA proceeding. Due notice would have required, at a minimum, that the Village send notice and the DEIS to all the parties that participated in the General Motors/Roseland SEQRA Process, since the LDC purports to change what was decided in that SEQRA proceeding. The duty on government to give proper notice is not just a technicality. Receiving notice is a fundamental right. The LDC notice is defective.

III.A-4

This combined public hearing and comment period on the LDC's DEIS, by the Village Board and LDC, could have been structured in a proper way, to conserve funds and time, had the procedure clearly and distinctly set forth the roles of the Village Board of Trustees and the roles of the Local Development Corporation. Their different roles should have been properly distinguished. Instead, this SEQRA proceeding appears to comingle the roles improperly.

III.A-5

The environmental harm that results is apparent in the DEIS itself. **To summarize the problem succinctly: this DEIS entirely ignores the Pocantico River estuary in all its aspects.** The DEIS does not take the requisite "hard look" at the environmental impacts of the new developer's proposals for the East Parcel. The Mayor and Trustees have permitted a practice of segmentation to take place, utilizing changes in the legal title to the real estate at the former General Motors Property to mask a disregard for the environmental impact assessments made regarding the development approvals for that property. This has happened twice, first with the transfer of title to the Sleepy Hollow Local Development Corporation, and second when the Local Development Authority sold to the Metro North Railroad Company its property rights in the railroad siding tracks adjacent to the former NY Central railroad right of way. While the transfer of these titles may not have warranted a separate environmental impact assessment (although the sales should perhaps have required issuance of a Negative Declaration under SEQRA), as a matter of law the transfer of title did not affect the Village's environmental decisions about the General Motors Property. The LDC took title subject to the prior Village permits and SEQRA decisions. All the new owners and developers are subject to the FEIS, the Board's SEQRA Findings, and the Special Use Permit, all of which apply and depend upon the applicable environmental statutes that they implement.

III.A-6

The Pocantico Conservancy requests that the Village of Sleepy Hollow take immediate measures to honor the applicable environmental laws, and take the requisite actions to consider, restore, enhance and protect the shared natural and cultural heritage of the Pocantico River estuary.

To amplify and clarify these points, please take into account the following:

Procedural Comments:

The Pocantico Conservancy requests that the Village of Sleepy Hollow reconsider its approach to this joint environmental impact assessment and development plan for the so-called East Parcel. This area is subject to a Special Use Permit granted to General Motors Corporation and Roseland/Sleepy Hollow LLC., for the development of the former General Motors North Tarrytown Assembly Plant property ("GM Property"). The SEQRA FEIS and the Village Trustees' Findings Statement, and the Special Use Permit for the GM/Roseland proceedings, provided conditions for the development of both the East and West Parcels of the GM property, which include provisions to observe LWRP norms and mandates to mitigate adverse environmental impacts on the Hudson River and the Pocantico River. The Village of Sleepy Hollow Planning Board is responsible, under State and Village law for the site plans of both parcels, including the protection of the Hudson and Pocantico Rivers. **III.A-7**

When the Village created the Sleepy Hollow Local Development Corporation ("LDC"), this act was unrelated to the Special Use Permit for the GM Property. Subsequently, around December 22, 2014, the LDC came to hold title to the some 28.5 acres that constitute the East Parcel of the GM Property. As the legal successor in interest with respect to the GM Property, as the LDC took title it was bound by the same provisions of the Special Use Permit that the Village had conferred upon General Motors, Roseland/Sleepy Hollow LLC, and their successor Lighthouse Landing Ventures LLC. **III.A-8**

It is improper under SEQRA for the Village of Sleepy Hollow Board of Trustees and the LDC to ignore the Special Use Permit for the GM Property as it applies to the East Parcel, simply because LDC is a new "owner" and new developer. The Special Use Permit and its conditions, studiously prepared over many years, still apply to and govern the East Parcel, and its owners. Until the LDC applies to the Village Board of Trustees to amend the Special Use Permit, it is bound by the terms of that Special Use Permit, and the attempt to launch an entirely new SEQRA process is at best improvident and at worse unlawful. It does not appear whether or not the Village Planning Board has been given formal notice of this proceeding, and the comments of the Planning Board should be sought and responded to. Many other parties who participated in the GM/Roseland SEQRA Process have not been given notice. The LDC could and should have requested amendment of the GM Property's Special Use Permit and the Trustees could have undertaken to prepare a Supplemental EIS to support any new plans, and alternatives, that the LDC proposes for the "East **III.A-9**

Parcel." For reasons not yet explained, the LDC chose not to do so and the Trustees have ignored the terms of the Special use Permit on the "East Parcel."

The Trustees should annul their participation in this SEQRA process and return to the terms of the Special Use Permit. The LDC should suspend this instant SEQRA exercise, and apply to the Trustees for an amendment of the Special Use Permit as it would apply to the "East Parcel" under a new developer's control. The SEQRA process should examine the entire Pocantico Estuary's watershed within the Village of Sleepy Hollow, and its relationship to the Hudson River and adjacent protected areas. A supplemental EUS would not pick and choose parts of the former GM/Roseland FEIS to repeat in the LDC's instant DEIS, but would build upon and update those prior submission in light of new facts and studies. That is what the "supplemental" process of SEQRA and its regulations contemplate and require. III.A-9

This is not a mere technicality. The prior GM/Roseland FEIS and Permit made special provisions for the relationship between the East Parcel on the Pocantico River and its flood plain. In particular, the redevelopment of the shore line with the participation of eight acres of lands that was allocated by GM to Historic Hudson Valley (HHV) to adapt and restore the River in line with an interpretation of colonial life at the 17th-18th century periods of life at the Upper Falls Philipsburg Mill site. Implementing these conditions of the Special Use Permit entails preparing and submitting a site plan to restore the banks of the Pocantico River and its bed between the dam at the HHV Upper Mills site and the DeVries Park, on the south side of the River. The dredged mud from the silted up river bottom would have been logically used to raise the lands on the restored bank of the River, where the GM parking lots now remains. Invasive species would be removed and native plants restored. This would have had to have been part of a site plan for the Planning Board to consider. If HHV wishes to propose other changes to the use of the eight acre, beyond the range of what the Village's Planning Board site plan approval permits, it would need to apply to the Village Board to amend the Special use Permit also. It does not appear that the LDC has as yet honored its obligation under the Special Use Permit to hand over the eight acres to HHV, so that HHV could pursue the options available to it. III.A-14

Moreover, the two intermittent streams that the NYS Department of Environmental Conservation (DEC) identifies as flowing from the GM parking lot into the Pocantico would have had to been (and still must be) restored and adapted to protect the Pocantico River, and Hudson River, from the run-off pollution and to cope with the storm waters from the rest of the East Parcel south of the Pocantico. The LLC in its DEIS now draws a straight line along its border south of the banks of the Pocantico and ignores the Pocantico River altogether. Furthermore, in its proposal the LDC indicates an intent to destroy about .23 acres of Pocantico estuary wetlands, which is contrary to the Village of Sleepy Hollow wetlands ordinance (adopted pursuant to Article iII.E-5

24 of the Environmental Conservation Law) and since this is an intertidal and brackish water zone, arguably implicates also the State Tidal Wetlands Act (which applies in the Tappan Zee south of the Bridge, and by the terms of the Tidal Wetlands Act should apply here, although admittedly until a wetlands determination is made, its scope is unclear as it applies to this site).

Similarly, the LDC's sale of the railroad track sidings to the Metro North Railroad Company did not excuse the Village Planning Board from considering how a site plan for development of the "East Parcel" should screen the view of those tracks from the recreational uses of the Pocantico River, DeVries Park, and the future uses of the "East Parcel." The Special Use Permit left those details to be determined by the Planning Board. Until and unless the Special Use Permit's terms are duly amended, in accordance with law, the fact that the LDC segmented the title of from the railroad siding tracks from its title for the "East Parcel," does not excuse the LDC from its duties under SEQRA to find ways to (a) prevent run-off from the railroad sidings from contaminating the Pocantico estuary, and (b) provide for planting trees or other natural screening to enhance the viewshed of the lower Pocantico estuary lands and waters from the railroad uses of the railway sidings, and (c) design systems to handle the flood water that can build up because the railroad sidings constitute an embankment that prevents the Pocantico waters from reaching the Hudson (the former bed of the Pocantico River runs next to DeVries Park and the East Parcel and the railway sidings and the River's former trestle is still buried under the MetroNorth tracks, from which the former bed ran next to Kingsland Point Park into the Hudson). All the environmental impacts associated with these conditions still exist, and under the Special Use Permit for the General Motors Property, the Village Planning Board is presently responsible for dealing with them. The LDC has ignored its responsibilities to the Planning Board, and the Village Board of Trustees appears to be supplanting or suppressing the roles that the law assigns to the Planning Board. This is a violation of due process of law with real world consequences, since the shared environment of one of America's most famous rivers, the Pocantico where the Headless Horseman "rides" each Halloween, is placed is jeopardy.

III.A-10

Equally problematic is the failure of the Board of Trustees to maintain its LWRP Waterfront Revitalization Advisory Committee, which had advised on the GM FEIS, and is an important part of the Village's compliance with LWRP State and Village law. The standards for the LWRP were reflected in the Special Use Permit process and decisions, but have thus far been ignored in this purported LDC and Village SEQRA process for the LDC's East Parcel proposals. The Trustees need to confer with the hold-over appointees of the Village's Waterfront Advisory Committee, and/or reconstitute the Committee and then actively examine the LWRP standards for the East Parcel and its relationship to the Pocantico River, and the West Parcel and its relationship to the Hudson River.

III.A-11

Furthermore, the LDC's proposal in the DEIS do not take into account the public trust doctrine in New York State law. The site is subject to the public trust doctrine, and provision must be made for public access to the Pocantico River from the East Parcel. The Village's land use plans do not adequately reflect the duties the Village has under the NY public trust doctrine. The Planning Board site plans for the Special Use Permit were to have ensured compliance with the Village's public trust duties, but since the Planning Board's role in the East Parcel is unlawfully ignored at present, it become apparent that the Village is not complying with its Public Trust Doctrine obligations. III.A-12

It is evident that the legal regulatory duties of the Village are distinct from the property interests of the LDC. To act as if these legal entities are congruent is to confuse their respective duties. The LDC is a developer, standing in the shoes of GM, Roseland, and Lighthouse Landing Ventures. The Village of Sleepy Hollow as a local government has fiduciary duties to the citizens and their environment, through the Trustees as legislators and regulators, and through the Village's Planning Board as land use regulators. The current SEQRA process muddied the waters and confuses these roles. The process needs to be clarified going forward. Because procedural due process has not been observed in this proceeding, we request that the Village correct the process and immediately consult about how to restore the Pocantico River estuary and adjacent parts of the "East Parcel," as a core component of any "East Parcel" plans or projects going forward. III.A-13

Substantive Comments

Without prejudice to the legal and procedural positions raised above, the Pocantico Conservancy makes the following points about the DEIS. The DEIS fails to take the required "hard look" at the environmental impacts of the proposal and the reasonable alternatives to mitigate and avert those impacts. It also impermissibly segments the so-called "East Parcel" from the associated "West Parcel" and other adjacent properties. The segmentation prevents study of the environmental issues associated with the East Parcel's location within the Pocantico River estuarine watershed, and any development's impacts associated with neighboring properties. The shared environments of the areas around the "East Parcel" include importantly the natural and cultural assets in the care of HHV, the interests of neighbors east along and beyond Continental Street and the neighbors north in Philipse Manor, as well as the shared and common public interests in the neighboring DeVries Park and Kingsland Point Park, and most significantly the flora and fauna of the Pocantico River. All these areas share the same hydrologic issues of a high water table and well known flooding problem. The DEIS analysis is defective in many ways, leaving an important set of issues deliberately unaddressed. One of the important functions of SEQRA is to consider the on-site and off-site impacts of any proposed activity. II-25

The Pocantico River watershed belongs to all the people of the State of New York and the nation, and is not just an asset of the Village. The Village of Sleepy Hollow has a duty to protect, restore and enhance the Pocantico River. This DEIS and SEQRA proceeding fails in its sacred duty to protect the environment. As we enter an age of dynamic environmental change, in large part due to the impacts of climate change and the grievous loss of biodiversity (we live in the 6th great extinction of species), it is impermissible for the Village of Sleepy Hollow to violate its legal duties to protect the Pocantico River.

Beyond the comment above, here is how the DEIS fails to consider the following thematic environmental issues:

The Pocantico Estuary is an ecological asset of great importance, biologically, hydrologically, and aesthetically

The Pocantico River estuary is among the most important natural features of the East Parcel, abutting its northern side. The East Parcel pollutes the Pocantico River in several ways at present, as in the recent past, and the Village has done nothing to abate this pollution. The DEIS ignores the pollution. Equally, the Pocantico is a major aesthetic and recreational asset to the Village and the lower Hudson River communities, and is an integral part of the 10 miles of the Pocantico River within adjacent communities. The estuary of the Pocantico is enjoyed by recreational kayakers, hikers on the "Horseman Trail," bird watchers, student of natural history (Pace University students discovered glass eels migrating inn the Pocantico estuary from the Sargasso Sea, as part of a DEC study of eel migration in the Hudson River Valley) history buffs and tourists at the nationally renowned Upper Philipsburg Falls on the Historic Hudson Valley site adjacent north and north east of the Parcel, and families enjoying the adjacent DeVries Park north east of the Parcel. The biodiversity values of the Pocantico estuary need to be assessed and enhanced in any SEQRA process. In addition, the East Parcel is situated in the flood plain of the Pocantico River, and it shares with DeVries Park and the HHV parcels the Pocantico River's seasonal flooding and periodic massive flooding (Hurricanes Floyd, Irene and Sandy). Since the water table of the East Parcel is nearly at the surface, being <u>always</u> the same depths (from 3-10 feet) at the surface of the land fill, there is no place for the water to go underground (dry wells are impossible since this site was once all a part of the Hudson River's Slapperin' Haven Bay, before being filled in). Rain water ponds regularly in the East Parcel, and flows into the Pocantico through sheet run-off and via two "ditch intermittent artificial streams," which are point sources for which DEC has never issued a SPDES Permit as required under State law and the federal Clean Water Act. It is imperative as a matter of both hydrology and ecology, as well as restoring and maintaining water quality standards, for the Village of Sleepy Hollow's government to treat the "East Parcel" and

III.E-6

III.E-7

III.C-8

the adjacent Pocantico estuary as one inter-related reality. The LDC's DEIS has "air brushed" the Pocantico out of all its presentations. This ecological illiteracy is contrary to the express obligations provided for the environmental impact assessment procedures and documentation required by SEQRA.

The Village has ignored its own prior studies of the Pocantico Estuary, which can be found in its own Village Planning Board and other Village files. It has ample data to draw upon in order to the examine alternatives for how to accommodate the natural values of the Pocantico River into its DEIS and East Parcel planning. For example, the HHV did studies when it secured permits needed to build a flood waters by-pass device around the historic dam at the Upper Mills. The Village Department of Public Works efforts, to contain storm waters and pollution from NYS Route 9 from entering the Pocantico River has produced ample data with which to inform this DEIS. The Village cannot, under SEQRA, simply pretend that its own knowledge of the Pocantico River estuary and its banks does not exist. The DEIS itself does admit that the "East Parcel" banks along the lower Pocantico Estuary are, since 1990, designated by Westchester County as a *Critical Environmental Area* (CEA) (in the full Environmental Assessment Form, E.3.d), but then the LDC's DEIS fails to evaluate how to avert any impacts on the CEA. The presence of a CEA triggers a duty to prepare a more thorough EIA, and the DEIS ignores this obligation. The East Parcel directly affects the Westchester County/Village Kingsland Point Park, the Village DeVries Park, HHV historic sites, and an important and historic tributary of the Hudson River.

III.E-8

The DEIS ignores other readily available public data about the Pocantico Estuary and its banks, including the East Parcel, and how it affects the Hudson River at its confluence at Kingsland Point Park. See for example, Robert Schmidt's "Reports to the Hudson Estuary Program,"(NYS DEC 2005 and 2006) on migratory and residential fish communities in the Pocantico at Sleepy Hollow, and also his earlier report on the "Tidal Pocantico" (2002, funded by the HRNERR through Hudsonia, Inc,.). While these studies need to be updated in the DEIS, they should not be ignored. See also the water quality reports of Hudson Riverkeeper for the Pocantico Estuary, which document current levels of pollution in the estuary (www.riverkeeper.org/water-quality). The LDC is in violation of the Clean Water Act, just as General Motors was before. The fact that the pollution is on-going does not excuse the LDC from compliance with the law, now that it owns the "East Parcel."

Many deficiencies in the DEIS flow from the apparent decisions - or acts of omission - by which the Board of Trustees and the uncritically perpetuate errors made in the long form of the Environmental Assessment Form (EAF). The LDC and Trustees seem to have done no independent inquiry as to the validity of the entries made in the draft EAF provided to them by the Village planning consultant. These authorities have a fiduciary duty to do more than blandly await a few

public comments during the Christmas 2015 holidays, and then rubber stamp such submissions, several of which are obviously and patently false even to any lay person familiar with this part of the Village of Sleepy Hollow. Elected or appointed officials have a duty to critically appraise the EAF for themselves, before adopting it. HHV did submit a letter (December 7, 2015) regarding the scoping that preceded this DEIS, and in that letter raised the importance of the eight acres that the General Motors final decisions (the FEIS, Findings and Special Use permit) allocated, as mitigation of adverse impacts, to HHV for enhancement of the Pocantico River estuary and adjacent banks, and noted the omission from the EAF. HHV wrote, in part, that "We note that a conceptual site plan for the East Parcel was not included with these [scoping] documents and neither includes any specific mention of Historic Hudson Valley's potential future use of a portion of the East Parcel." It is the obligation of the Planning Board, in site plan review, to determine how HHV would deal with the eight acres and plans to restore the Pocantico River. By ignoring this mitigation measure in the Special Permit, the LDC further segments the environmental analysis and impact decisions about real property allocations that remain integral considerations of the entire GM Property. At present, neither the LDC nor the Village Board of Trustees appear to have acknowledged that HHV letter or responded to it in the scoping (merely including the HHV letter as part of the public record for this DEIS). **III.A-14**

The deficiencies in the scoping process, including lack of adequate notice to all potentially affected and interested parties, renders the scoping process ineffectual as a matter of fact and law. The scoping and DEIS do not take the requisite "hard look." This is contrary to what is required of lead and cooperating agencies under the SEQRA regulations. Because the LDC and Trustees have neglected their critical study for approving the full EAF, they caused a faulty DEIS to be prepared. The Full EAF and thus the instant DEIS should have required examination, *inter alia,* of the following issues. Their omission in the DEIS should be remedied [section citations below are to the relevant sections of the Full EAF submitted by the LDC (October 26, 2016]. **III.A-29**

1) The full long EIA form errs in C.1 by stating no land use controls apply to the "East Parcel" and omitting any reference to the binding provisions of the Special Use Permit granted for the development of the East Parcel. **III.A-15**
2) The full EAF errs in not mentioning the Village Waterfront Committee, from which the LWRP requires review and render advise, and to have its advice heard and responded to. LWRP Norms are not referenced, although clearly binding. The CEA designation underscores the need to apply the LWRP norms. **III.A-16**
3) Full EA form errs in indicating that no excavation of the East Parcel is planned (D.2.a), when surface excavation is clearly contemplated, and as a result no mitigation measures **III.A-17**

are covered in the DEIS. The fact that a water table lays just below the surface makes the site preparation especially problematic.

4) The Demand for Water estimates (D.2.c) ignores the fact that there is a readily available daily supply of fresh water that could be tapped from the Pocantico above the estuary, and also ignores that fact that in order to do any development of the GM Property the Village is legally bound to build and supply new water supplies for the entire GM site (D,2.c), and makes no reference to the fact the clean drinking water will be used to wash village and school district vehicles and water athletic fields, when alternative supplies are at hand. III.H-4

5) The full EAF errs in stating that no run-off waters will impact any adjacent property, and that no alteration or encroachment on adjacent water bodies is to happen (D.2.b). III.C-9

6) The full EAF ignores the Pocantico River estuary in its listing of water bodies at the site (E.2.h), and ignores the contribution by the East Parcel to the water pollutants found in the lower Pocantico Estuary. III.E-9

7) The full EAF inaccurately describes the archeological importance of the lower Estuary, which is site of the first human settlement in Sleepy Hollow, an Indian village, and the importance of the Dutch and English colonial era piers at the end of Continental Street. (E.3.d and g). III.F-2

8) The Full EAF ignores the role of the NYS Hudson River Greenway and the federal designation of the Hudson River national heritage corridor, and the role of the Pocantico as an historic tributary of the Greenway and Corridor (famous via Washington Irving's Legend of Sleepy Hollow and other tales, and the Rockefeller restoration of the Upper Mills). II-26

9) The role of methane emission from the Village dump site on the East Parcel is not adequately explained as a major greenhouse gas, in the EAF or in the DEIS; ways to capture and avert release of the methane is required. III.E-3

Beyond completing the analysis that SEQRA requires on these 9 matters in the Environmental Impact Statement, there are several thematic issues that needs to be fully addressed in any EIS for the "East Parcel." The Village has a duty to require that the LDC mitigate the adverse environmental impacts of its East Parcel proposals.

Flooding & Public Safety - The Village has prepared, and offers on-line at its webpage, a "Multi-hazards Mitigation Plan" (September 2014), prepared by Cashin Associates. The DEIS ignores this study altogether, although it address the flooding affecting the "East Parcel" and the Pocantico estuary. The DEIS does not incorporate the many federal, State, County, and other studies of flooding in this area of the Pocantico estuary and Hudson River. The Village DEIS makes no reference to how it will anticipate implementing the *NYS Community Risk and Resilience Act,* III.C-10

adopted by the State legislature and signed into law by the Governor. The East Parcel is at risk to both flood surges and flood waters, and water inundation. No provision is made for either impounding flood waters or pumping them over or below the MetroNorth railway tracks and embankment, and on into the Hudson. To develop the East Parcel without designing and providing for such systems is to put residents and park users at risk of life and limb during hazardous weather conditions, not to mention costly damage to Village and other property interests. Designing way to cope with predictable flooding condition today will save the Village future expenses in emergency response costs, will enhance the property values in the areas along the East Parcel, above Continental Street, and also across the Pocantico in the neighborhood of Philipse Manor. Most significantly, since flood conditions in the Pocantico Estuary inextricably link the "East Parcel" with the Pocantico watershed, any flood management must be based on an entire hydrologic study of the area. The Village of Sleepy Hollow cannot "klick this can" down the road any further. This "East Parcel" development presents the opportunity to address flooding.

Archaeology & Village History – The past archaeological digs at the HHV site revealed a treasure trove of colonial and pre-colonial artifacts. The same conditions exist in the ground at the end of Continental Street and along what was once the shoreline of the Slapperin' Haven Bay. The DEIS ignores the rich history that Philipsburg Upper Mills, Beekman Town and the Village have at this "East Parcel" site, along the banks of what was the Hudson and still is the Pocantico. At a minimum, the DEIS should have required a critical updating of the Phase One literature review provided in the GM Property FEIS, and the LDC should have undertaken a phase two archaeological survey to determine where and at which are the locations are to be found sites for retrieving the Village's historical past. The LDC does not need to do the archaeological excavation now, but it does need to know where the sites are situated, so that development does not impact and damage any site sites, so that later excavations could be undertaken to unearth the Village's rich history.

III.F-1

Ecological Aesthetics and Recreation – The Pocantico Estuary is the Village's most important water body. It has a fabled history from colonial times. In literature, the Pocantico River became known nationally, and internationally, through Washington Irving's writings:

- **"The Pocantico, rising among woody hills, winds in many a wizard maze, through the sequestered haunts of Sleepy Hollow." Washington Irving, *Wolfert's Roost,* p. 16 (1854)**

Despite the Pocantico River's importance economically to the early colonial and federal periods of American history (it boasted three mills), and the later work of the Village's Historical Society and the Rockefeller family to save the Upper Mills in the 20th century, and the fine stewardship of the Sleepy Hollow Cemetery and adjacent Rockefeller State Park Preserve, the Village of Sleepy Hollow over the years has tended to neglect the Pocantico River estuary. General Motors and

Westchester County destroyed the Slapperin' Haven Bay and remnant river passage adjacent to Kingsland Point in an era before today's environmental laws existed. It is time for the Village of Sleepy Hollow to awake from its "Rip Van Winkle –Like" sleep, and act to emulate the good deeds of upstream riparian property stewards, to restore the Pocantico River. Today's laws require the Village to be a better steward of the River. The Village owns the banks on either side as the Pocantico passes into the Hudson, and yet has not been attending to its duties as a riparian owner. The Pocantico estuary has been degraded by floods, pollution from MetroNorth and GM, and the storm drains from NY State highway 9, as well as from the East Parcel. The Hudson Riverkeeper currently reports pollution exists in the Pocantico Estuary next to the East Parcel. The Village has a stewardship obligation to bring about the care and restoration of the Pocantico. The current Board of Trustees should not pretend that the 3,000 +/- new residents, soon to be living at the EDGE on Hudson, will ignore the Pocantico as it flows adjacent to Village Parks into the Hudson. The Pocantico River estuary is unique, and uniquely this responsibility of the Village of Sleep Hollow to care for. The Village should not put off the restoration of the Pocantico until a larger population lives next door and uses the "East Parcel." The Village created the Horseman Trail along the Pocantico Estuary through and past HHV, to link the access to the Hudson River at Kingsland Point Park to the Old Croton Aqueduct State Trailway (NY OPRHP), as part of the Hudson Valley Greenway system. The Village has let this hiking access to and from the Hudson River fall into disrepair. The Village has neglected its own trailway, and now in the DEIS fails to even mention of its existence, and all the significant work the Village provided (and taxpayers dollars funded) in building the trailway along the East Parcel and Pocantico. It is time to restore the estuary and its banks, as part of the East Parcel development.

III.E-10

Biodiversity - The Pocantico River Estuary is a unique – if somewhat degraded currently – natural resource and environmental asset of both the Hudson River corridor and the Pocantico River corridor. The Pocantico Conservancy, along with many others, is providing studies and encouraging stewardship of the upper reaches of the Pocantico Watershed, to the Towns of Ossining and New Castle. Remarkably, the private preserves and public parks within the Pocantico Watershed now protect nearly 40% of all natural areas and the biological diversity. This is an enormously important biological achievement, stretching over several generations. It is time for each municipal government in the Pocantico Watershed to protect the River and its tributaries. As they do so, upstream local governments and state agencies can contain up-river storm run-off and thereby protect Sleepy Hollow from flooding. But Sleepy Hollow needs to do its share too. If the Village hopes to benefit from upstream measures to protect the environment, it needs to protect the Hudson by caring for the health of the Pocantico. Sleepy Hollow deserves to be protected from inter-municipal flooding, but needs to do its share by restoring the bed and banks and wetlands and biotic communities of the Pocantico Estuary. Doing so, the Village's own restored wetlands can absorb flood waters and enhance the biological life of the estuary.

III.E-10

Students in the public schools of Sleepy Hollow and Tarrytown, and across Westchester and the Hudson River Valley today study ecology. When governments make ecologically uninformed decisions, their harm to nature is not invisible. The civic and moral fiber of democracy relies on observing the environmental rule of law. The next generations are better informed than in the past about the environmental footprint of new development. Please act so as to make both the current and the next generation proud of the decision you take today. What happens at the "East Parcel" within the Pocantico watershed will not go unnoticed by young people who expect better for the environment.

The Trustees of the Village owe it to the present and future generations, and to all the community of life, to plan now for the restoration of the Pocantico Estuary. Environmental Laws oblige the Village authorities to properly assess how to do so. But these laws also invite the Village's elected and appointed officials to be role models, especially for our students, in practicing environmental stewardship. That role begins by addressing the weakness of this DEIS and by demonstrating how the Pocantico can be maintained and restored.

Environmental Stewardship

All the assertions of fact in this statement of comments on the DEIS deserve to be studied independently by the LDC and the Board of Trustees. Hire what consultants may be needed, and make the environmental studies required in as competent and through a way as the environmental circumstance requires. This statement invites the Sleepy Hollow Village officials to provide the requisite environmental studies. " Ducking issues" is not an option under SEQRA.

Repeatedly, before this SEQRA proceeding began, The Pocantico Conservancy had conferred with, and explained the importance of the Pocantico River estuary to the Village Mayor and the Village Administrator and Chair of the Village Planning Board. The Board of the Pocantico Conservancy is aware that the Village knows better than to ignore the Pocantico River, as the LDC does in its DEIS. The substance of the comments made in this statement is not new, nor have these comments been made here for the first time; many such comments are found in the lengthy GM/Roseland SEQRA record of decision. The Conservancy is troubled that the Village's officials have chosen to pursue a path that ignores the Conservancy's advice and violates the Village's legal duties to ensure due process of law, observance of LWRP duties, strict adherence to SEQRA procedures, and compliance with other environmental legal duties. It is not too late to correct these failings and restore the trust that the people of the State of New York, and citizens of Sleepy Hollow, invest in this Village government.

The Pocantico Conservancy invites the Village of Sleepy Hollow to reset the course, and observe its duties to protect the environment. The Pocantico Conservancy may “speak” for the River and its community of life, but only the government can save, safeguard and enhance the Pocantico. A river runs through this Village, just as this Village shares the Hudson. Tributaries matter. Please act lawfully, and with ecological integrity, to protect the life of this unique Pocantico River. With care, we can all together sustain this shared tributary of our celebrated Hudson River.

Respectfully submitted,

Nicholas A. Robinson
Chairman, Pocantico River Watershed Conservancy

Mayor Ken Wray and Trustees

East Parcel Development

As the board of Philipse Manor Improvement Association, representing over 320 households in the village of Sleepy Hollow NY, we would like to formally address our concerns regarding the development of the East Parcel

Our community resides next to the area for development and would be impacted directly if not properly planned. As neighbors also to the Hudson and Pocantico Rivers, we wish to advocate on behalf of those two nature havens that add to beauty of our village and support the biodiversity in the face of a rapidly expanding population. Therefore we are requesting the following.

1. Prohibit any vehicular traffic between Devries Park & the East Parcel. Vehicular access from the East Parcel to Philipse Manor will negatively impact the wetlands surrounding the Pocantico River as well as the river itself. Instead we support the creation of a pedestrian & bicycle paths to connect Devries Park & the East Parcel by creating a non-vehicular access that will reduce the need of residents to drive from one location to the other. **III.D-8**

2. Install a buffer zone of vegetation and trees between Devries Ave. and the East Parcel to enhance the beauty of the area and reduce the sound and light pollution to our neighborhood from the East Parcel.

3. Recommend the hiring of a certified landscape architect specializing in urban parks to design the East Parcel such that appropriate planting will thrive & require minimum care-taking.

4. Implement a short-term & long-term maintenance plan to manage litter, garbage, green space & facility upkeep. **II-15**

In addition we support positions made by Nick Robinson and the Philipse Manor Garden Club. We are looking forward to finally being connected to the village in a natural setting that encourages walking and cycling.

We wish to thank the board for their work on this project and for the opportunity to voice our concerns.

Sincerely,

Catherine Golub, Eliot Martone, Susan Lewis, Christine Dyer, Allison Emmett, Rob Holliday, Jennifer Waltman, Rebecca Beaton, Jenny K Heater, Raul Moras, and Ray Endreny

The Board of the Philipse Manor Improvement Association

September 30, 2016

David Schroedel
Chairman
Sleepy Hollow LDC
28 Beekman Avenue
Sleepy Hollow, NY 10591
david.schroedel@sleepyhollowldc.org

Re: Riverkeeper Public Comments Regarding the July 25, 2016 Draft Environmental Impact Statement for the East Parcel Redevelopment, Sleepy Hollow, New York

Dear Mr. Schroedel:

Please accept the following comments on behalf of Riverkeeper, Inc. and its members and constituents regarding the July 25, 2016 Draft Environmental Impact Statement ("Draft EIS") for the proposed General Motors East Parcel ("Site") redevelopment project ("proposed project") by the Village of Sleepy Hollow Local Development Corporation, LLC ("Sleepy Hollow LDC") in the Village of Sleepy Hollow, New York. These comments address the Draft EIS prepared for the Sleepy Hollow LDC, who is the owner, developer of the Site, and the lead agency under the for State Environmental Quality Review Act ("SEQRA").

Riverkeeper has been engaged with developments on the former General Motors site in Sleepy Hollow for over a decade and has commented on previous redevelopment proposals for both the East and West Parcels, including, for example, the proposed Lighthouse Landing project. We have consistently advocated for meaningful public access to the Hudson and Pocantico Rivers, appropriate remediation of the site and the Hudson, and habitat restoration and stormwater mitigation that would increase the ecological, recreational, and aesthetic values of the site. Riverkeeper acknowledges that this is likely the final phase in a historic redevelopment on the Hudson River, and we support the redevelopment of this dilapidated industrial site.

Although there are many important issues that must be adequately considered by the lead agency, including, for example, traffic, noise, and community impacts (many of which have already been raised by a number of members of the public), we are focusing on issues related to water quality and water access issues.

SUMMARY OF COMMENTS

The re-use of this site presents a unique opportunity to increase the biological diversity and ecological integrity of this long-depleted industrial site. Improving the biological and hydraulic aspects of the Site would improve the water quality and provide ecological benefits to the Pocantico River, which, in turn, would improve the water quality of the Hudson River. And although Riverkeeper acknowledges that the proposed project will reduce the environmental impacts as compared to the current conditions of the Site,[1] due to the ecological significance of this site, its position amongst other natural areas in the landscape, and community interest in restoring the health of the Pocantico River, the Sleepy Hollow LDC should seek the maximum benefit possible from this redevelopment. Riverkeeper supports the redevelopment of the East Parcel if done in an environmentally protective manner.

Before a Final Environmental Impact Statement or final approval can be issued for the proposed project, the Sleepy Hollow LDC must, *at a minimum*, do the following:

- Evaluate and design a wetland buffer zone between the proposed project and the Pocantico River to the north of the Site to increase the ecological value, including flood mitigation, at the Site. **II-18**
- Analyze and develop alternatives or mitigation measures, as appropriate, to minimize and treat stormwater runoff on and from the Site, and to prevent water quality degradation in the Pocantico and Hudson Rivers. **III.C-7**
- Take a hard look at additional reasonably likely adverse environmental impacts from the proposed project, and develop alternatives and/or mitigation measures to avoid or reduce those impacts.
- Ensure consistency of the proposed project with Village of Sleepy Hollow Local Waterfront Revitalization Program, including proper consistency review with the Sleepy Hollow Waterfront Advisory Committee. **III.A-11**
- Consult with qualified experts, including but not limited to, hydrologists, wetland biologists, arborists, natural landscape designers/architects, wildlife and fisheries biologists, to ensure appropriate design that will be protective of water quality, habitat, and ecology, and will help reduce or eliminate stormwater impacts both on- and off-site. **II-15**
- Require monitoring of any stormwater mitigation or ecological enhancement efforts, including monitoring and removal, if necessary, of harmful invasive species. **III.E-11**

[1] Riverkeeper's comments recognize benefits to redeveloping the East Parcel but advocate for a more environmentally beneficial redevelopment of the Site, over-and-above what is currently being proposed, as we think is required by SEQRA.

Finally, the public comments may result in the need for a Supplemental Draft EIS, with related public comment. **III.A-9**

I. AN ECOLOGICALLY BENEFICIAL BUFFER ZONE MUST BE CONSTRUCTED ADJACENT TO THE POCANTICO RIVER

A final stormwater management plan is needed in order to fully determine what will need to be done for the Site (see, e.g., Section II), there are a number of considerations that the Sleepy Hollow LDC must incorporate into the SEQRA review process. The final design of the proposed project needs appropriate protections installed on-site that will increase the ecological value of the redevelopment of the East Parcel and protect the habitat and stormwater functions of the Pocantico River. **III.C-11**

Given that the Site is currently almost completely covered by concrete slab, any reduction in the impervious surface would provide at least some ecological benefit to the site. However, because the site and neighboring areas are subject to regular flooding, the redevelopment should be designed with the *explicit goal* of retaining storm and flood waters to the maximum extent possible. This would be compatible with recognition of the Pocantico River as a scenic, historic, and ecological asset. Yet the proposed project for the Site leaves almost no buffer zone – and no *ecologically or hydraulically meaningful* buffer zone – for the Pocantico River at the north end of the Site. **II-18**

The Sleepy Hollow LDC must consider all reasonable alternatives that will reduce the ecological value resulting from the construction of the proposal. For example, the area along the former channel of the Pocantico River should be set aside as open space, which should greatly improve the habitat value for the Site, as opposed to putting in active playing fields with surfaces that are either impermeable (e.g., basketball or tennis courts) or semi-permeable (e.g. baseball fields with dugouts and stands). The goal for this space should be the re-establishment of native and flood-tolerant vegetation to support a healthy ecosystem and contribute to stormwater management for the Site, as was envisioned and required in the Special Permit for the Site.[2] Similarly, any surfaces for the proposed path along the river should be permeable and naturalistic. These open spaces, whether passive recreational areas or open natural areas, should include native trees, shrubs, and other species planted in the soil to contribute to the ecological function of the space and the lower Pocantico watershed overall. **III.E-12**

Indeed, almost all of the prior visions for this parcel, including the Village's Waterfront Concept Plan and the Lighthouse Landing proposal, kept the area adjacent to the Pocantico River either as a wetland, open space, and/or passive recreation area, thereby providing the necessary buffer between the river and the proposed development on the site.[3] At various times in the past, **III.A-18**

[2] *See* Sleepy Hollow Resolution #01/06/2011, Resolution on Environmental Determination and Findings Revised Riverfront Development Concept Plan Pursuant to Section 62-5.1 of the Sleepy Hollow Code for the Lighthouse Landing Riverfront Development.

[3] *See, e.g.,* East Parcel Draft EIS, Exhibits I-3 to I-8.

there have been proposals to restore the wetlands on a 10-acre portion of the East Parcel, in the floodplains of the northeast corner of the GM Site, adjacent to the Historic Hudson Valley property. Past proposed redevelopment plans for this portion of the GM site included this area to be set aside as open space. The current proposed project, however, proposes this section of the Site to be parking for 500-plus spaces as well as active playing fields.

A wetland buffer zone for the Pocantico is needed, and we request that the Sleepy Hollow LDC modify its proposed project to include this critical area of wetland restoration on the Site. When Riverkeeper commented on the Draft EIS for the proposed "Lighthouse Landing" project in 2005,[4] we included our "vision" for the GM site. That vision included wetland restoration on a significant portion of the East Parcel immediately adjacent to the Pocantico River. This wetland restoration would assist with flood prevention on the Site, and was compatible with the Village's LWRP. **II-18**

Now, however, the proposed project envisions approximately 5 acres of parking in the northeast corner of the Site, abutting the Pocantico River.[5] The need for this 500 space parking lot is "so that [Historic Hudson Valley] could host selected special events,"[6] which appears to be almost exclusively for its once-a-year fall event (e.g., the Horseman's Hollow), as the East Parcel Draft EIS and comments made at the public Draft EIS hearings indicate.[7] Additionally, the remaining area adjacent to the Pocantico River will be utilized for "active recreation fields/facilities," which currently includes a full-sized baseball diamond, although other active recreational uses are being considered by the Sleepy Hollow LDC.[8] When compared to an appropriate ecological buffer zone for the Pocantico River, the proposal to include parking areas and active recreation fields/courts adjacent to the Pocantico River would likely *decrease* the water quality and ecological function of the river, even with the use of permeable pavers on the entire parking area. The stormwater runoff from these areas is still likely to negatively impact wildlife and aquatic populations and would likely facilitate the invasion of the area by non-native species, albeit to a much lesser degree. Therefore, the proposed parking area, regardless of the use of permeable pavers, should be located as far from the Pocantico River as possible to help foster the benefits of an open space buffer zone. **II-18**

Additionally, while the East Parcel Draft EIS states that a new wetland mitigation area, approximately 0.84 acres in size, is proposed to mitigate the loss of the existing (although "low functioning") 0.23 acres of wetlands on the site, the proposed project locates the wetland **III.E-5**

[4] See Riverkeeper's Comments on Draft EIS Lighthouse Landing (April 4, 2005).

[5] *See* East Parcel Draft EIS, at II-5.

[6] East Parcel Draft EIS, at II-5.

[7] Many community members also questioned the need and the legality of giving so many parking spaces on the East Parcel for this purpose.

[8] East Parcel Draft EIS, at II-7.

mitigation area to the west of the Site, along the boundary with the railroad tracks.[9] Wetland impacts should be avoided as a first option, which could be accomplished by reducing the number of parking spaces onsite and/or moving them away from the Pocantico River, thus allowing the current wetland areas to be incorporated into the wetland restoration/buffer zone herein proposed along the north portion of the Site. Alternatively, any wetland creation, mitigation, or enhancement on the Site would be better placed along the Pocantico River so as to enhance the ecological condition and water quality of the river. III.E-5

In conclusion, it has long been envisioned that the northern portion of the Site would be utilized for an ecological buffer zone to restore and protect the water quality and habitat value of the Pocantico River. The Sleepy Hollow LDC cannot ignore the environmental reviews and necessary mitigation requirements that were previously issued for the Site, such as those contained in the Special Permit. As has been called for and required in the past for the Site, the proposed project should include such a buffer zone for the Pocantico as a main priority for the redevelopment of the East Parcel. Only then should the Sleepy Hollow LDC implement additional stormwater protection measures, such as permeable pavers and other green infrastructure measures, to reduce stormwater issues and water quality degradation. II-18

II. STORMWATER RUNOFF MUST BE MINIMIZED AND TREATED PRIOR TO DISCHARGE IN ORDER TO MINIMIZE FLOODING AND WATER QUALITY DEGRADATION

The main priority is avoidance of stormwater runoff and the creation of a natural wetland buffer zone for the Pocantico River. Additionally, the East Parcel Draft EIS must also consider ways to minimize and treat stormwater runoff at the Site.

The Site is located in the floodplain of the Pocantico River, which regularly floods.[10] Currently, 71% of the Site (20.3 acres) is covered with impervious asphalt pavement.[11] Through the removal of the slab concrete, redevelopment of the Site, and use of permeable pavers for at least some of the proposed parking on Site,[12] the Draft EIS states that the proposed project will reduce the amount of impervious surfaces to 11.2 acres (39%) and will create 17.5 acres of new pervious area.[13] This would be a commendable reduction in pervious surfaces on the Site.

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[9] *See* East Parcel Draft EIS, at II-11.

[10] *See* East Parcel Draft EIS, at II-2.

[11] East Parcel Draft EIS, at III.C-3.

[12] Permeable pavers should be the *minimum* technology implemented for parking on the Site.

[13] The Environmental Assessment Form ("EAF"), Appendix A to the Draft EIS, at page 9 of 13, however, states that there is currently 24 acres of impervious surface on the Site and that the reduction after completion of the proposed project would only be 4 acres so that there would remain 20 acres of roads, buildings, and other paved or impervious surfaces on the Site. The Sleepy Hollow LDC must rectify these worrisome discrepancies between the Draft EIS and EAF before it issues the Final EIS for the proposed project.

However, impervious surface coverage is just one factor when considering stormwater management; it should not be the sole – or even the main – measure on which the Sleepy Hollow LDC relies for the necessary stormwater impacts of the proposed project. Instead, the Sleepy Hollow LDC must undertake a full evaluation of stormwater management *prior to* issuing the Final Environmental Impact Statement ("Final EIS") for the proposed project in order to comply with SEQRA. **III.C-7**

For example, it is unclear whether the Sleepy Hollow LDC evaluated the impact of the following on stormwater issues on the Site: cutting down trees on the southern portion of the Site (where the DPW building would go); raising only a portion of the Site above floodplain elevation (again, where the DPW building would go); and discharging collected stormwater into the Pocantico (which floods during major rain events); and likely storm surge impacts from the Pocantico. The "stormwater management plan" referred to in the East Parcel Draft EIS at III-C.6 does not contain the engineering plans, calculations, and other details required to adequately evaluate the planned stormwater treatment. Without more detailed runoff modeling and pollutant loading estimates, informed review of the proposed stormwater management is impossible and its level of performance cannot be predicted. The Sleepy Hollow LDC must take a "hard look" at these likely adverse environmental impacts *and* develop measures to avoid or mitigate those impacts as part of its SEQRA review. **III.C-12**

Additionally, application of project-wide site-specific green infrastructure and low-impact development measures via the SEQRA process would serve to partly address the many concerns raised with respect to flooding on the Site and with respect to water quality in the adjacent Pocantico River. Low impact development techniques are critical for the protection of the water quality and ecological functions of the Pocantico and Hudson Rivers. Stormwater management at the site must include treatment of runoff prior to discharge into the Pocantico River, to remove floatable debris, sediment, and chemical pollutants. Green infrastructure reduces runoff during and after storm events by allowing storm water to infiltrate where it falls. It also helps regulate stream flow by allowing ground water recharge. As a condition of its SEQRA review, the Sleepy Hollow LDC should require that all aspects of the overall project include site-specific green infrastructure measures. **III.C-12**

The bottom line is that we do not know what the effect of this proposed development will be on the stormwater, flooding, and water quality issues on the site or on the Pocantico River, and these adverse environmental impacts must be evaluated before this project a Final EIS is issued and the project approved. Without taking a hard look at the stormwater impacts from the proposed project – both on- and off-site – the Sleepy Hollow LDC cannot be said to have met the requirements of SEQRA.

III. THE DRAFT EIS FAILED TO TAKE A HARD LOOK AT NUMEROUS POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT AND ALSO FAILED TO CONSIDER REASONABLE ALTERNATIVES OR MITIGATION THAT COULD REDUCE THOSE IMPACTS

The Sleepy Hollow LDC is required to take a "hard look" at the potential adverse environmental impacts of the proposed project, and develop alternatives or mitigation that avoid or minimize those impacts to the maximum extent practical.[14] Additionally, the Final EIS must do more than just respond to comments submitted by the public (as was the oft-stated line used by the Village and the Sleepy Hollow LDC at the public hearings); the Final EIS must actually assemble all relevant and material facts upon which the Sleepy Hollow LDC's decision (as lead agency for SEQRA) will be made and "must analyze the significant adverse impacts and evaluate all reasonable alternatives."[15] The Draft EIS for the proposed project fails to meet these requirements for a number of potential adverse environmental impacts and SEQRA requires that they be addressed in the Final EIS for the project.

The Draft EIS must include, among other things, a statement and evaluation of the potential significant adverse environmental impacts (including impacts to the physical, chemical and biological parameters of water quality) at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence, and also identifies applicable and significant reasonably related short-term and long-term impacts, cumulative impacts, and other associated environmental impacts.[16] The current Draft EIS fails to do this. **III.C-13**

The portion of the Pocantico River adjacent to the East Parcel is classified as C(T), meaning that water quality must support fishing, must be suitable for fish, shellfish, and wildlife propagation and survival (including trout), and must be suitable for contact and non-contact recreation.[17] The Draft EIS does not evaluate potential impacts of the proposed project on these best usages of the Pocantico River. **III.C-13**

A Final EIS for the East Parcel redevelopment cannot be issued until a hard look is taken at these reasonably anticipated potential impacts *and* measures are developed to avoid or minimize to the maximum extent practicable[18] the following impacts:

- Potential adverse impacts to water quality, habitat, and ecological functions of the Pocantico River and the stormwater runoff of the proposed project, as discussed herein.

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[14] 6 NYCRR § 617.7(b)(3); *Merson v. McNally*, 90 N.Y.2d 742, 751 (1997).

[15] 6 NYCRR § 617.9(b)(1).

[16] *See* 6 NYCRR § 617.9(b)(5).

[17] 6 NYCRR §§ 864.6, Table 1, 701.8, 701.25(a).

[18] *See* 6 NYCRR §§ 617.9(b)(5)(iv), (v).

- Reasonably related short-term and long-term impacts, cumulative impacts, and other associated environmental impacts, including impacts from the new Edge-on-Hudson development project along the Hudson River.[19]
- Climate change, flood surge (known to occur from the Pocantico River), and/or sea-level rise impacts on the proposed project.[20]

Additionally, the lower Pocantico River has been designated as Critical Environmental Area ("CEA"), but the Sleepy Hollow LDC failed to evaluate the impacts on the CEA in its Draft EIS. The failure to address the CEA issues violations SEQRA. **III.E-8**

Finally, it is unclear whether the current design of the proposed project noticed for public comment will be the final iteration of the redevelopment of the Site. Some of the design proposals by the community – including those proposed by Riverkeeper – that the Sleepy Hollow LDC might include in the final design would lead to significant changes in the design of the proposed project. Additionally, if the Sleepy Hollow LDC appropriately considers the SEQRA required alternatives, it is likely to require changes to the final design of the proposed project. Should either public comment or additional SEQRA review result in significant changes to the design, the Sleepy Hollow LDC must prepare and circulate for public comment a Supplemental Draft EIS for the redesigned project.[21] **III.A-10**

IV. CONSISTENCY WITH SLEEPY HOLLOW LOCAL WATERFRONT REVITALIZATION PROGRAM

The proposed project fails to comply with applicable local laws, including Sleepy Hollow's Local Waterfront Revitalization Program ("LWRP") and attendance municipal ordinance. While the Draft EIS includes the Sleepy Hollow LDC's LWRP consistency review, Chapter 414 of Village Code requires review by the Sleepy Hollow Waterfront Advisory Committee ("WAC"). The WAC is the entity in Sleepy Hollow "primarily responsible" for implementing the policies, purposes, and project contained within Sleepy Hollow's LWRP.[22] Any agency determination of consistency with the LWRP, therefore, must be based, at least in large part, on the recommendations of the WAC.[23] That has not happened here. **III.A-11**

[19] 6 NYCRR § 617.9(b)(5)(iii)(a).

[20] *See also* New York State Community Risk and Resilience Act.

[21] 6 NYCRR § 617.9(a)(7).

[22] Sleepy Hollow Munc. Code § 414-4.B.

[23] *See* Sleepy Hollow Munc. Code § 414-5.E(2).

V. CONSULTATION WITH APPROPRIATE EXPERTS IS NECESSARY DURING THE DESIGNING OF THE SITE

As has been made clear by the Village and the Sleepy Hollow LDC, this proposed project may not be the final iteration of the redevelopment of the Site. Many community members have suggested various alternatives to the proposed design, including, for example, a skate park, a community center, and removal of the proposed baseball diamond.[24]

The Site has the potential to once again be a very important and functional ecological area, and care must be taken – with the appropriate expertise consulted – to ensure that this potential is protected. Any such restoration or redevelopment of the Site must include input from the relevant experts, including hydrologists, wetland biologists, arborists, natural landscape designers/architects, wildlife and fisheries biologists.

VI. MONITORING OF ANY STORMWATER MITIGATION OR ECOLOGICAL ENHANCEMENT EFFORTS MUST BE INCLUDED SO AS TO ENSURE LONG-TERM SUCCESS

After restoration of the wetland buffer zone for the Pocantico River is completed, it is likely that the *Phragmites* on the site will invade the area from nearby habitats where the invasive species is currently found. Although Riverkeeper is not, at this time, advocating for removal of the existing, established *Phragmites* in and around the Pocantico River, it is important to have proper monitoring of the *Phragmites* and additional invasive species on the Site as well as an invasive species management plan so that removal actions can take place to prevent the further spread of invasives along the river. All of this must be evaluated as part of the SEQRA review. III.E-11

CONCLUSION

There are several portions of the proposed redevelopment at the former GM Site East Parcel in Sleepy Hollow that require further study. SEQRA requires a "hard look" and consideration of alternatives and mitigation. These necessary components are not adequately addressed in the Draft EIS but must be for the proposed project can move forward. An ecological buffer zone between the proposed project and the Pocantico River is an important necessity of the redevelopment of the East Parcel. The stormwater impacts must also undergo additional analysis and mitigation to avoid any water quality degradation and to reduce flooding. The long-awaited opportunity to revitalize the ecological and hydraulic values of the Site is here, and we cannot let this opportunity slip through our hands.

Riverkeeper is a member-supported, not-for-profit environmental organization whose mission is to protect the environmental, recreational, and commercial integrity of the Hudson River and its tributaries and to safeguard the New York City drinking water supply. We carry out this mission through litigation, advocacy, and public education. Our members and constituents include

[24] Riverkeeper agrees that removal of the proposed baseball diamond and utilizing the area for open space or passive recreation fields that would promote habitat restoration, biological and ecological functions, and stormwater and water quality management.

a diverse array of Hudson Valley citizens: from urban dwellers in New York City, to local Hudson fisherman, to residents of Sleepy Hollow and surrounding municipalities many of whom may be adversely affected by the proposed redevelopment. Riverkeeper supports appropriate redevelopment of waterfront land, especially contaminated parcels, provided that such projects restore and protect the water quality of the Hudson River and its tributaries and provide adequate opportunity for public access.

Thank you for providing Riverkeeper this opportunity to submit comments on this proposed project and for your consideration of these comments. Please do not hesitate to contact us if you have any questions; we can be reached via phone at 914-478-4501.

Sincerely,

Abigail M. Jones, Esq.
Staff Attorney
ajones@riverkeeper.org

Jennifer Epstein
Water Quality Associate
jepstein@riverkeeper.org

cc: Anthony Giacco
Village of Sleepy Hollow Administrator
agiaccio@sleepyhollowny.org

Sleepy Hollow
Environmental Advisory Committee

sleepyholloweac.wordpress.com | sleepy.hollow.eac@gmail.com

September 28, 2016

Dear Mayor Wray,
Cc: Board of Trustees

After reviewing the Draft Environmental Impact Statement (DEIS) for the East Parcel Redevelopment, the Sleepy Hollow Environmental Advisory Committee (SHEAC) recommends further consideration and analysis of the following focus areas:

- **Impact on the surrounding community:** We encourage a closer look at the integration of this development with the surrounding community, including consideration of the aesthetic, auditory, and other impacts on residents and the natural environment.

- **Flexible use of space:** Whether for parking spaces or recreational use, we recommend minimizing permanent, impervious structures in favor of flexible, temporary additions. Instead of construction that will fulfill a specialized need for periodic events, we suggest considering how space can best be enjoyed by the community the majority of the time.

Throughout our recommendations, we prioritize not just sustainability, but also community safety. We recommend rethinking defaults; for instance, instead of designing with motor vehicle access as the standard and “accommodating” pedestrians and bicyclists, a more sustainable and inclusive approach would be designing with the assumption that community members will need safe space for walking and biking.

It is easier to incorporate these measures in a brand new development, instead of trying to retrofit improvements once buildings and roads are already built. Specific suggestions about the inclusion of these principles follow:

Impact on the surrounding community

Inclusion of buffer zones

Increased attention should be placed on preserving the native vegetation buffer between the project site and the Pocantico River. The need and importance of preserving areas adjacent to riverine systems is clearly identified in both state and federal environmental regulations. These areas provide important ecological services to the area's wildlife. It also provides unique aesthetic and nature observation opportunities for the public. II-18

The current preferred alternatives appear to site the playing fields/and or the parking lot at the northern end of the East Parcel, in close proximity to the Pocantico River. The DEIS should be amended to acknowledge the importance of protecting and enhancing the buffer between the East Parcel and the Pocantico River, and explore options that create a significant native species buffer between active use and the river.

The DEIS should focus more attention on exploring opportunities to create an aesthetic and noise barrier between the East Parcel and Metro North. While the document identifies the need to add plantings within this area, there needs to be a greater emphasis on the proposed extent of this buffer and on the importance of this action to enhance the East Parcel user experience. II-20

Expansion of access alternatives and traffic/transportation analyses in DEIS

The DEIS touches on converting Continental Street to two-way traffic as the primary, if not sole, access route to the East Parcel. Mention is made under Section IV. F. 6 - "Alternative Site Access" of the possibility of building an entrance road from Beekman Avenue at Clinton Street as an alternative access to the East Parcel. Additionally, a proposal to build an East-West Overpass between the East and West Parcels is mentioned under Proposed Actions in the Executive Summary. However, no mention is made of the E-W Overpass plan under the Alternative Site Access section. Moreover, Section III.D.2 - "Traffic and Transportation Anticipated Impacts" fails to cover the various potential ramifications of the several alternative access plans. IV-1

SHEAC recommends that the section covering Alternative Site Access be expanded to include any and ALL potential access points to the East Parcel -- motor vehicle, pedestrian and bicycle. Most importantly, this expanded alternative site access section should be linked closely to a thorough analysis of the impacts of each and every means of access under Traffic and Transportation Anticipated Impacts. Such analysis should take into account the full potential use of the site and its access via road/bike/walkways – by the local community, by Historic Hudson Valley visitors, by DPW work vehicles and by school buses, with an emphasis on the

best and safest way to provide greatest degree of bike and pedestrian access as an alternative to motor vehicle trips.

In furtherance of this objective, along with pedestrian and bike access through Barnhart and Devries Parks, analysis should include the ramifications of creating only a bike-pedestrian connection between the east and west parcels. Anticipated impacts should also include a more thorough analysis of the environmental, social, and land use impacts of heavy two-way traffic use, including daily use by DPW work vehicles, on abutting Continental Street properties with serious consideration given to the creation of several alternative access points, and greater emphasis on bike/pedestrian access as mitigation.

Pedestrian and bicycle access to the site

SHEAC recommends that all new roadways within the site include sidewalks and dedicated bike lanes (or parallel paths) for their entire lengths, and that this design requirement be incorporated into all alternatives within the DEIS. **III.D-7**

SHEAC further recommends the DEIS note that a supplementary planning document is needed to ensure that there are safe routes for pedestrians and cyclists from communities surrounding the East Parcel. It is important to encourage people of all ages and abilities to walk and bike to and through the East Parcel, thus keeping the number of people driving to and parking at the parks as low as possible. These measures will also improve Sleepy Hollow's general quality of life, environment and economy.

The membership of SHEAC has some ideas of what could be incorporated into this supplementary planning document.

Traffic calming at intersections leading to the site

Walking through the intersection of Pocantico St., North Broadway, Old Broadway and the Restoration entrance is already an unpleasant and unsafe experience. The increase of motor vehicles the proposed action will bring to this location will make things significantly worse. SHEAC recommends that the need for traffic calming in this area should be addressed in the DEIS. **III.D-23**

Expansion of geographical scope of DEIS

Under the DEIS section on LWRP Consistency Review, there is a reference to creating a public recreational buffer area through rehabilitation of the Horseman Trail that currently abuts the East Parcel and is in disrepair. There is also mention of the need to create interior pedestrian and bicycle connection(s) with Devries Park in compliance with LWRP policies. However, it is SHEAC's understanding that the scope of the flooding and stormwater management assessment for the DEIS was limited to the boundaries of the East Parcel. **III.C-14**

Stormwater run-off and floodplain conditions do not respect politically created boundaries and fences. Therefore, SHEAC recommends the expansion of the scope of DEIS to include the area of Devries Park abutting the East Parcel from the East Parcel boundary to the Pocantico River to better address flooding and stormwater run-off issues both affecting and impacted by East Parcel development. Such expanded analysis should also include a mitigation plan that addresses both sides of the fence, so to speak, all the way to the shoreline of the Pocantico River.

Inclusion of neighborhood composting

In addition to considering the access to and impacts on the neighboring community, we'd also like to consider potential educational and utilitarian opportunities. For instance, composting not only provides fertilizer for gardens and lawns, but it also reduces the amount of trash that needs to be collected and disposed of. II-27

Since the village already collects yard waste and the public is participating, the village has the necessary ingredients to start a village composting site on the proposed DPW site in the East Parcel. It is an inexpensive and easy way to make rich fertilizer for the public. Composting will produce multiple environmental and financial benefits and move the village towards a greener future.

Flexible use of space

Recreation

All of the proposed alternatives discussed in the DEIS identify the creation of new ballfields. SHEAC believes that prior to construction of a new field, a needs assessment should be done to determine if the community might benefit more from passive use open space than a specific type of ballfield. It might be possible to meet current and future needs using a model used by Croton-on-Hudson in developing Croton Landing (the riverside park).

In Croton Landing, there is a large meadow area used by the community for sunbathing, dog-walking, etc. When additional playing field space is needed, temporary posts, nets, or plates are put out. The field is marked with temporary whitewash, which disappears after a rainstorm. Teams are responsible for returning the equipment to a shed, inconspicuously located on the edge of the field near the railroad tracks. II-24

This model allows for both maximizing open space and accommodating sports as needed.

Parking

The alternatives within the DEIS identify the creation of 695 new parking spaces, in addition to the 123 already in the area. SHEAC recommends that the site be left as “green” as possible and that consideration should be given to greatly reducing the amount of additional parking. Also, bicycle parking should be identified within all alternatives. III.D-19

In addition the DEIS should clarify how it was determined that the Philipsburg Manor parking needs during their special events could not be met by utilizing the village's existing streets and parking lots.

Pervious vs. impervious parking options: If parking is constructed on the site to support special events at Philipsburg Manor, consideration should be given to making all or most of it grass instead of asphalt or concrete. While "permeable" and "porous" paving treatments might be preferable to asphalt, grass does the best at reducing runoff and heat island effects. It also provides the most flexibility when not being used for parking. II-1

Thank you for your time and consideration of the above recommendations.

Sincerely,
Sleepy Hollow Environmental Advisory Committee members:
Bhavya Reddy (Chair), Beverly Jansen, Claire Davis, Daniel Convissor, David Avrin, Francois Rjeili, Martin Smolin

Sleepy Hollow Local Development Corporation
28 Beekman Avenue
Sleepy Hollow, NY 10591

September 22, 2016

Re: Substantive Comments – East Parcel Redevelopment

To: David Smith, Planning & Development Advisors

From: David Schroedel, Chairman

The LDC has been able to participate in the three public hearings on the East Parcel Redevelopment Special Permit and Riverfront Development Concept Plan and have reviewed the various comments and listened to the public input. As part of the LDC meetings, separate from the public hearing process we have discussed various aspects of the Proposed Action, given changing conditions and public input. Accordingly, we offer the following comments that should be responded to in the Final EIS document.

1. The Village, separate from the LDC, commissioned a traffic evaluation for portions of the Route 9 roadway (the Route 9 Report), including the intersections of Broadway/Pocantico Street/Old Broadway and Broadway/Pierson/Old Broadway. This report was prepared after the adoption of the Scoping Outline. It would be helpful if a review the findings of the Route 9 Report could be conducted and some feedback provided as to whether it would affect the conclusions of the traffic analysis prepared for the DEIS. **III.D-1**

2. The LDC notes that the street direction for Howard Street was changed by the Village Board after the preparation of the traffic analysis for the East Parcel. It would be helpful if the traffic analysis could also be reviewed with this new condition and whether it substantially changes the conclusions. **III.D-2**

3. There has been a preliminary evaluation of the redevelopment of the existing DPW facility once that site is decommissioned. The DEIS provides for a range of development program, it would be helpful to know what incentives are provided for that would allow for development on the upper end of the range. **VII-1**

4. From a design standpoint, it would be helpful if WSP could provide, on a conceptual basis, the ability to provide a pedestrian connection from the Barnhart Park area with the proposed Community Center Building along with a connection to a potential future at-grade roadway connecting to Beekman Avenue, see also comment below. **II-4**

5. It would be helpful if WSP could provide some additional input as to how to advance the shared parking approach such that operational activities (e.g., use of valet) could accommodate the contemplated needs of HHV without necessarily providing for the contemplated number of individually dedicated parking spaces. There is some correlation as to how many regularly marked parking spaces could be converted into additional spaces through the use of valet **II-1**

service. In addition, HHV had noted in some of its initial comments about alternatives to the currently proposed grass-crete approach. While technically a site plan detail, it would be helpful for the LDC and the Village to better understand the different approaches and potential impacts with respect to stormwater management, construction, maintenance and cost resulting from low-impact development techniques. **III.D-18**

6. While conceptual level plans have been considered in the past with respect to a potential at-grade connection to Beekman Avenue, it would be helpful if WSP could prepared a layout that would allow for an at grade connection so as to better understand what, if any, properties may be involved other than those owned by the Village and or the LDC.

The LDC will continue monitor the public commentary and will advise if additional comments are forthcoming.

From:	Paula Mccarthy
To:	Ken Wray; glennrosenbloom@gmail.com; Earthlink John Leavy; ddgebler@yahoo.com; marg44@aol.com; Sandra Spiro; Denise Scaglione; Anthony Giaccio; David Smith (davidbsmith1992@gmail.com); david.schroedel@sleepyhollowldc.org; Joan Bucci
Subject:	FW: Suggestion to East Parcel Developers
Date:	Tuesday, October 4, 2016 11:11:01 AM
Attachments:	image001.png

Please see comment below reg: East Parcel Redevelopment,

Paula A. McCarthy Tompkins
Village Clerk-Registrar
Village of Sleepy Hollow
914 366 5106
pmccarthy@sleepyhollowny.org

From: Alfred Strasser [stras68@verizon.net]
Sent: Sunday, October 02, 2016 4:31 PM
To: Paula Mccarthy
Subject: Suggestion to East Parcel Developers

Dear Ms. McCarthy,

The current plan for the East Parcel includes a large area devoted to much needed parking which, however, detracts from useful space for public use . This is a suggestion on how to combine the parking area with one for public use, including perhaps recreational facilities. Going underground with a garage may not be desirable due to potential flooding and high cost as well. But as an alternative, the Austrian architect and painter, F. Hundertwasser, designed gas stations and garages that were built into artificial hills. The place for cars was on the level of the plots, but the roof was a hill with sloping sides, planted with grass and trees. The top of course can be flat and have recreational facilities such as your proposed open air auditorium, sports fields, etc. And of course this gives protection to the cars and drivers from rain, snow and ice and in the winter gives little kids facilities to do some sledding and sliding on gentle slopes. IV-2

You can find samples of this on the Internet if you Google “Hundertwasser gas stations” or do more sophisticated research in his publications and catalogues of his exhibits. Please let me know any thoughts you may have related to this suggestion.

With best regards,

Alfred Strasser, President
AQUARIUS SERVICES CORP.
17 Pokahoe Drive,
Sleepy Hollow, NY, 10591 USA
(914) 366-8875, (914) 631-5644
Stras68@verizon.net

Raul Moras
Sleepy Hollow, NY
raul.moras@gmail.com

September 30, 2016

Mayor and Board of Trustees, and Sleepy Hollow Local Development Corporation
c/o Paula A. McCarthy Tompkins, Village Clerk, Sleepy Hollow, NY
Village of Sleepy Hollow
28 Beekman Avenue
Sleepy Hollow, New York 10591

Dear Mayor, Board of Trustees, and LDC,

As a resident of Sleepy Hollow, I'm submitting my comments for the proposed redevelopment of the East Parcel lot located at the former GM site. I'd like to start by acknowledging all the hard work that has gone into the planning of the space and the Mayor's, Board's, and LDC's willingness to involve the community in the planning. I am confident the end result will be a great addition to our village and will be a good use of the space.

My first comment is in consideration of the proposed (approximately 500) parking spaces. Due to the festivities that occur in Philipsburg Manor and throughout the village (especially during the month of October) and its consequence on parking throughout the village and in Philipse Manor, I understand the need for off-street parking to lessen the burden on our residents. Although the quantity of spots does seem excessive, I understand it might be in line with the Master Plan for Beekman Ave improvements later on. However, the location of the spots are far from where people need to go. Visitors will continue to park where it is most convenient for them. Without adequate enforcement of parking rules this behavior will burden our residents in the area as they attempt to park near their homes. **III.D-19**

Please consider redistributing some of the parking spots to offset this focused parking area and make other areas of the site easier to access, especially for those with mobility impairments. Since not all spots will be used all the time, consider the use of permeable materials for the parking areas instead of macadam (blacktop). This would be more aesthetically pleasing than viewing a sea of blacktop. Moreover, as the neighbors to the East and North of the site will be impacted by the lights and noise generated from this proposed parking area, please consider environmental controls (e.g., trees, shrubs) or other buffers to minimize the overflow of the noise and light to the surrounding neighbors. These controls (if natural) should be native to the area and will have the added benefit of protecting the Pocantico River that abuts the property. **III.C-11** **II-13**

Further, although not specifically addressed in the plans but has been discussed in several meetings, ensure access into Devries Park be limited to pedestrian traffic. Understanding that access routes for emergency **III.D-8**

response vehicles may be needed, access should be controlled by a physical barrier for non-public use. Adequate signage and enforcement will be required to maintain a safe thoroughfare for those wanting to access Devries Park (or vice versa) and not increase vehicular traffic in Philipse Manor.

Lastly, I do not understand the purpose of another ballfield, as the existing ballfields are under-utilized by our athletic leagues. If the intent of the proposed ballfield is to attract out of town leagues for revenue generation, then I strongly oppose this design. This area should benefit the town, and a more suitable field (e.g., soccer and lacrosse) would be a better use for the space. If the proposed ballfield is to be permitted to adult leagues this will continue to attract visitors that speed through our streets, litter in our parks, publicly consume alcoholic beverages, and create other nuisances that are disturbing, unnecessary and unreasonable in our village (e.g., amplified music). Please consider substituting the ballfield with a convertible field or open space that would be a more beneficial use for the residents of our village. II-17

Thank you for your time and considerations. I look forward to enjoying the finished product with my family.

Sincerely,

Raul Moras

Hello my name is Thea Lazin,
I am here to support my friends.
As a kid I used to skate and
I'm starting to practice some more.
It would be exciting to have a
skate park to continue to improve
my skills and hang out with my
friends.
If I continue to practice skate boarding I feel that
I would blossom into a better skater.
I hope the next generation will carry
on having a skateboard park to
continue this tradition.

Gmail

Sandra Spiro <sandra.spiro@gmail.com>

Skate park

1 message

Tommy Dilorenzo <tdilorenzo@tufsd.org> Tue, Sep 20, 2016 at 5:55 PM
To: Sandra.spiro@gmail.com

I was asked by one of my students to share my thoughts on the addition of a skate park.

In my opinion, I think anything added to our community that will allow the children an opportunity to learn a new skill and increase physical activity is positive and should be considered.

Hope this helps. I'm sorry I couldn't be there. Good luck Carley.

Sent from FirstClass with my iPhone

Hello, my name is Carly and I would like a skateboard park in the East Parcel. I am starting to learn how to skateboard and I am improving. It would be a help to have a skateboard park to improve and challenge my skills. If we got a skateboard park ~~I would like it to~~ be a safe place to not skate on the street and not to be constantly watching for cars. These reasons are why I would like a skate park.

tremendous

it

that is fun and really cool

Also here is a note from My gym teacher Mr. Pilarenzo

Thank you

Ms. mayor and the board

Hi ~~everyone~~, my name is Juliana Largess and I am an avid skateboarder and so I am here on behalf of my peers and I. This is because we would like to have a skate park in the east parcel. First, a little bit about myself. I am a skateboarder for the following reasons. First of all, it keeps me in shape. Secondly, it physically challenges me. Last but not least, I feel free from all the stresses that any kid my age might have. So, it would be great to have something in the community that would allow kids to have fun engaging in an outdoor activity instead of rushing home to some sort of technology. Where we live, there are no nearby skate parks. The closest ones are in Yonkers, Brookly, and Nyack, but who would want to travel over the bridge anyways. The addition of a skateboard park, which would provide us with an enjoyable hobby, would be appreciated and used by kids of all ages. Thank you for listening to my presentation and I hope you will consider this idea.

From: Paula Mccarthy
To: David Smith (davidbsmith1992@gmail.com)
Subject: FW: East Parcel--PMIA Board Recommendations
Date: Wednesday, October 5, 2016 3:40:05 PM

See below
P

From: Chizuko Mitsumoto [mailto:chizuko.mitsumoto@gmail.com]
Sent: Saturday, September 17, 2016 1:35 PM
To: philipsemanor@gmail.com; Paula Mccarthy
Subject: Re: East Parcel--PMIA Board Recommendations

Dear PMIA board members,

We don't know exactly what "community park space" is, but we feel we have already enough public park around here.
We'd like to see tennis courts, swimming pools, pickle ball courts and other sports facilities available to villagers of all ages.

II-24

Hiroshi & Chizuko Mitsumoto
165 Hunter Ave.

On Fri, Sep 16, 2016 at 3:15 PM, Philipse Manor Improvement Association <philipsemanor@gmail.com> wrote:

EAST PARCEL DEVELOPMENT

As you are aware, discussions have been happening regarding the development of the East Parcel. The PMIA board has been following the situation closely and below is our recommendations on how to protect our neighborhood interests and what would make the most sense with the space.

1. Prohibit any vehicular traffic between Devries Park & the East Parcel.
   - Support the creation of a pedestrian & bicycle path to connect Devries Park & the East Parcel.

2. Install a buffer of trees between Devries Ave. and the East Parcel to enhance the beauty of the area and reduce the sound and light pollution to our neighborhood from the East Parcel.

3. Replace the proposed athletic fields with open community park space.
   - Maintenance over time would be much easier to manage.

4. Recommend the hiring of a certified landscape architect specializing in urban parks to design the East Parcel such that appropriate planting will thrive & require minimum care-taking.

5. Implement a short-term & long-term maintenance plan to manage litter, garbage, green space & facility upkeep.

The Board will be formally advocating for these positions on behalf of the Manor. We encourage our members to also make their individual voices and concerns heard by attending the Public Hearing at Village Hall on Tuesday, September 20th at 7pm, or by contacting Paula McCarthy at pmccarthy@sleepyhollowny.org.

This email was sent to chizuko.mitsumoto@gmail.com
why did I get this? unsubscribe from this list update subscription preferences
Philipse Manor Improvement Association · 21 Merlin Avenue · Sleepy hollow, NY 10591 · USA



From:	Paula Mccarthy
To:	David Smith (davidbsmith1992@gmail.com)
Subject:	FW: East Parcel
Date:	Wednesday, October 5, 2016 3:38:56 PM

See below-
P

From: Hal Muchnick [mailto:halmuchnick@gmail.com]
Sent: Saturday, September 17, 2016 5:03 PM
To: Paula Mccarthy
Subject: East Parcel

Paula

We are writing you to let you know we vehemently support the PMIA board recommendation regarding the development of the East Parcel.

Here they are:

1. Prohibit any vehicular traffic between Devries Park & the East Parcel. **III.D-8**
   - Support the creation of a pedestrian & bicycle path to connect Devries Park & the East Parcel.

2. Install a buffer of trees between Devries Ave. and the East Parcel to enhance the beauty of the area and reduce the sound and light pollution to our neighborhood from the East Parcel. **II-13**

3. Replace the proposed athletic fields with open community park space. **II-14**

4. Recommend the hiring of a certified landscape architect specializing in urban parks to design the East Parcel such that appropriate planting will thrive & require minimum care-taking.

5. Implement a short-term & long-term maintenance plan to manage litter, garbage, green space & facility upkeep. **II-15**

We are very concerned that we protect the viability of the Manor and all aspects of our neighborhood for which we pay so dearly in housing costs and taxes.

Hal and Ina Muchnick

169 Farrington Avenue

To: Village of Sleepy Hollow Board of Trustees
Sleepy Hollow Local Development Corporation
From: Village of Sleepy Hollow Waterfront Advisory Committee
Re: East Parcel Redevelopment Draft Environmental Impact Statement
Date: January 30, 2017

Village of Sleepy Hollow
Waterfront Advisory Committee
28 Beekman Avenue
Sleepy Hollow, NY 10591

PRELIMINARY CONSISTENCY FINDINGS
East Parcel Redevelopment DEIS

On July 25, 2016, the Village of Sleepy Hollow ("SH") received the East Parcel Redevelopment Draft Environmental Impact Statement ("DEIS") from the Sleepy Hollow Local Development Corporation ("LDC"). Pursuant to SH Code, on November 23, 2016, the DEIS was referred to the Village of Sleepy Hollow Waterfront Advisory Committee ("WAC") for a Village Local Waterfront Revitalization Program ("LWRP") consistency review. The WAC held its first meeting on November 30, 2016. See Appendix A for a full list of meeting dates and record of attendance for all WAC meetings related to this LWRP consistency review.

The Project

The East Parcel Redevelopment site consists of an approximately 28 acre parcel of land located at the terminus of Continental Street, east of the Metro-North rail lines, south of the Pocantico River, west of Barnhart Park and the residential neighborhood along Kendall Avenue and Howard Street, and north of Beekman Avenue. Proposed improvements include construction of a new 35,000 square foot DPW facility, a new bus garage repair facility for the Tarrytown Union Free School District, a 10,000 square foot community center, new recreation fields, new parking facilities and a new overpass connecting the East and West Parcels.

Consistency Findings

When performing the LWRP consistency review of the DEIS, the WAC considered the project plans as presented in the written DEIS received by SH on July 25, 2016 and as presented to the WAC by David B. Smith on November 30, 2016 and.on January 12, 2017. After reviewing the project as currently envisioned by the DEIS, the WAC found it to be generally consistent with the goals and policies of the LWRP but concluded that additional improvements and/or alternatives should be considered that would make the project better conform with those goals and policies. The WAC recommends that the LDC, the Village of Sleepy Hollow Board of Trustees ("BoT") and other village agencies, boards and committees having oversight responsibility with regard to the project (collectively Village of Sleepy Hollow or "VoSH"), evaluate the improvements recommended below and consider additional measures and/or mitigation as appropriate. The principal policies forming the basis for the WAC's findings and

recommendations are described below, in numerical sequence, as they appear in the LWRP.

The following is an assessment of findings from the WAC's LWRP consistency review, pursuant to SH Village Code Chapter 414, section 414-5(G):

1. **Revitalize the deteriorated and underutilized waterfront area (Policies 1, 1A, 1B, 1C, 1E, 1F, 1G, 1H, 1J and 1K).**
   - The DEIS is consistent with Policies 1, 1A, 1E and 1K.
   - Policies 1B, 1C, 1H and 1J are not applicable.
   - WAC recommends additional consideration for the remaining Policies:
     - Policy 1F: WAC recommends that VoSH and the LDC explore ways to provide pedestrian access to the East Parcel from Barnhardt Park and the adjacent residential neighborhood and discuss with the Historic Hudson Valley creating continuity of the Horseman Trail, providing public access from DeVries Park to Route 9.
     - Policy 1G: WAC recommends the LDC pursue plans for vehicular, pedestrian and bicycle connections from Beekman Avenue and/or access with Clinton St or another access point.

III.A-20

2. **Retain and promote commercial and recreational water-dependent use (Policies 2 and 2A).**
   - WAC recommends additional consideration for Policies:
     - Policy 2: WAC recommends that recreational activities provided on or near the East Parcel property include water-related activities, and that, wherever possible, improved pedestrian access be provided to water-related activities (including but not limited to fishing, swimming and kayaking) on the Pocantico River and/or along the waterfront within Kingsland Point Park.
     - Policy 2A: Pursuant to Explanation #9 within this policy, LDC should consider moving the proposed HHV overflow parking lot further away from the Pocantico River shoreline.

III.A-21

3. **Strengthen the economic base of Sleepy Hollow smaller harbor areas by encouraging traditional uses and activities (Policy 4).**
   - This consideration point is not applicable.

III.A-22

4. **Ensure that development occurs where adequate public infrastructure is available to reduce health and pollution hazards (Policies 5, 5A and 5B).**
   - The DEIS is consistent with Policies 5, 5A and 5B.

III.A-23

5. **Expedite local permit procedures and use performance standards for development within the waterfront area (Policy 6).**
   - This consideration point is satisfied in cooperation with VoSH.

III.A-24

6. **Protect significant and locally important fish and wildlife habitats from human disruption and chemical contamination (Policies 7, 7A, 7B, 7C, 8, 8A and 8B).** III.A-25
   - Policies 7, 7A, 7B, 7C, 8 and 8B are not applicable.
   - The DEIS is consistent with Policy 8A.
   - The WAC is concerned about run-off from the ball fields and parking lots over the course of time and strongly advises the LDC and VoSH to put in place controls and monitoring to ensure that pesticides and other chemicals or contaminants are not used in the maintenance of the East Parcel property and DeVries Park.

7. **Encourage and expand commercial fishing facilities to promote commercial and recreational fishing opportunities (Policies 9 and 10).** III.A-26
   - This consideration point is not applicable.

8. **Minimize flooding and erosion hazards through nonstructural means, carefully selected, long-term structural measures and appropriate siting of structures (Policies 11, 13, 13A, 13B, 14, 15, 16, 16A, 16B, 17 and 17A).** III.A-27
   - The DEIS is consistent with Policies 11, 13, 13A, 13B, 14, 15, 16, 16A, 16B, 17 and 17A.
   - While the LDC has taken considerable measures to minimize flooding and erosion hazards through non-structural means, the WAC is concerned that some of these efforts will exacerbate flooding in DeVries Park, an area already burdened with frequent flooded conditions. The WAC recommends that VoSH review the DEIS plans relative to this particular issue and explore additional measures to minimize the likelihood of increased flooding in DeVries Park resulting from raising the level of the East Parcel by two feet or more.

9. **Safeguard economic, social and environmental interests in the coastal area when major actions are undertaken (Policies 18, 18A, 18B and 18C).** III.A-28
   - The DEIS is consistent with Policies 18, 18A, 18B and 18C.
   - The WAC recognizes the benefits of widening Continental Street to accommodate two-way traffic and a sidewalk, but is concerned about the potential for negative impacts on Continental Street residents. We recommend that the LDC explore additional measures that might help to reduce the negative impacts of the street-widening. Mitigation measures that should be considered include: 1. reconfiguring the roadway alignment to minimize taking of private property; 2. replacing lost resident parking spaces; 3. providing alternative means of access to and from the East Parcel and the new DPW; and 4. assessing additional traffic mitigating alternatives.
   - The WAC notes that the proposed TUFSD bus repair facility is only consistent with Policy if SH obtains a direct or indirect economic benefit from the arrangement; the LDC, therefore, should seek an agreement with TUFSD to compensate SH for the goods and service that will be provided.

- Similarly, the WAC recommends that the Village seek an agreement with HHV to provide SH with a direct or indirect economic benefit in return for the overflow parking spaces to be provided on the East Parcel.

10. Maintain and improve public access to the shoreline and the water-related recreational facilities while protecting the environment (Policies 1, 1A, 1B, 1D, 1E 1F, 1H, 2, 2A, 4, 9, 19, 19A, 19B, 19C, 19D, 19E, 19F, 20, 20A, 20B, 21, 21A, 21B, 21C, 22 and 22A).

III.A-29

- As proposed in the DEIS, the East Parcel project is generally consistent with Policies 1, 1A, 1B, 1D, 1E 1F, 1H, 2, 2A, 4, 9, 19, 19A, 19B, 19C, 19D, 19E, 19F, 20, 20A, 20B, 21, 21A, 21B, 21C, 22 and 22A.
- The WAC notes that the East Parcel property itself contains no shoreline, but it abuts several other parks with existing, or potential future water-related activities, so it is important that the project be planned to maximize connectivity from the East Parcel and improve public access for village residents to adjacent parklands.
- As proposed in the DEIS, the project improves public access by extending Continental Street into and across the East Parcel and building a new bridge over the railroad tracks, providing access to the West Parcel and the Hudson River Greenway/Riverwalk and other water-related resources and activities.
- To be consistent with the Policies that relate to #10, the WAC considers it important that the proposed bridge over the railroad be designed to accommodate vehicular, pedestrian and bicycle traffic.
- Beyond the East Parcel Development Project proposed in the DEIS and overseen by the LDC, the WAC recommends that the LDC, the BoT and VOSH consider additional ways to connect and coordinate the East Parcel property with other parklands that include potential for water-related activities; the below is recommended for consideration:
    i. Restore the viaduct roadway to Beekman Ave for pedestrians and bicyclists only, providing needed southern access to and from Beekman Ave, the inner village, Hudson Harbor, Ichabods, Horan's Landing and the Tarrytown train station to the south.
    ii. Evaluate the viability of building a new vehicular roadway from the East Parcel to Beekman Avenue, as proposed in Section IV, #6 -- Alternative Access -- on page IV-5 in the DEIS; study the benefits vs. costs, including the purchase of the UAW property if necessary.
    iii. Evaluate the possibility of rehabilitating the Devries Park walking bridge to Kingsland Point Park[1].

[1] A few members of the WAC visited the walking bridge and were informed by Pace University researchers that Metro North had conducted a study on the safety and soundness of the pedestrian access bridge at DeVries Park and issued a DEC BUD report which indicated that the bridge is structurally sound and can easily and safely be rehabilitated. Those members of WAC recommend the BoT obtain copies of the report from Metro North for consideration.

iv. Provide kayak access and shoreline activity along the south bank of the Pocantico River.
v. Provide a link to the Hudson River Greenway/Riverwalk from the new Continental Street bridge over the railroad and open pedestrian and bicycle access from the West Parcel to Kingsland Point Park waterfront.
vi. Create continuous access through the Horseman Trail from DeVries Park to Route 9, which may require collaboration with the Historic Hudson Valley. Another alternative would be to connect the trail to the sidewalk on Continental Street.
vii. Develop a natural trail along the north bank of the Pocantico River, using the Devries Park bridge and exiting on Bellwood Avenue.
viii. Create a protected bicycle path along Bellwood and DeVries Avenues to provide access from Route 9 to DeVries Park and water-related activities along the Pocantico River. A protected bike path would also serve to calm traffic by narrowing the roadways, and could incorporate a planted median that would be in keeping with the character of the neighborhood.
ix. Additional connections could also be made from the Horseman Trail to:
    1. Old Croton Aqueduct (OCA)
    2. Rockefeller State Park
    3. North/South County Bike/Trailway and the Tarrytown-Kensico Trailway/Bikeway Plan (from the OCA to the BRP)

11. Protect and Restore historic and archeological resources (Policies 23, 23A, 23B and 23C). III.A-30

- This consideration point is not applicable.

12. Protect and upgrade scenic resources (Policies 25,25A and 25B). III.A-31

- The DEIS is consistent with Policies 25, 25A and 25B.
- To better comply with this consideration and associated policies, the LDC should consider additional foliage to screen the DPW and other structures on the upper level. Consideration should also be given to relocating the DPW and other buildings back closer to the cliff, and perhaps angling them East/West to reduce the impact on river views from above and on views from Edge on Hudson and recreation areas on the lower level.
- The LDC should create a physical 3D model of the proposed development and adjacent neighborhoods and parks to assist with public outreach and education efforts.

13. **Site and construct energy facilities in a manner which will be compatible with the environment and contingent upon the need for a waterfront or water location (Policies 27, 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39, 39A, 40, 40A, 41A, 42, 43 and 44).**

- This consideration point is not applicable. III.A-32

III.A-33

14. Protect surface water and groundwaters from direct and indirect discharge of pollutants and from overuse (Policies 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39A, 40, 40A, 41, 42, 43 and 44).

- The Policies related to this consideration are generally consistent or inapplicable. However, the WAC recommends that the BoT review the LDC's plan regarding catch-basins to determine whether the plan is sufficient. The WAC recommends that the BoT engage the Village Engineer and/or third party experts to review the LDC's plan with respect to this point and to determine whether additional mitigation is needed to ensure appropriate protection of surface and ground waters.

15. Perform dredging and dredge spoil in a manner protective of natural resources (Policies 15, 35, 35A, 35B, 35C, 35D and 35E).

III.A-34

- This consideration point is not applicable.

16. **Handle and dispose of solid and hazardous wastes and effluents in a manner which will not adversely affect the environment nor expand existing landfills (Policies 34, 34A, 35, 35A, 35B, 35C, 35D, 35E, 36, 39 and 39A).**

III.A-35

- The DEIS is consistent with Policies 34, 34A, 35, 35A, 35B, 35C, 35D, 35E, 36, 39 and 39A.

17. Protect air quality (Policies 41, 41A, 42 and 43).

III.A-36

- The DEIS is consistent with Policies 41, 41A, 42 and 43.
- The WAC urges the LDC and VoSH to consider controls and monitoring to ensure that the air quality is protected after construction, particularly when the DPW site is in use, e.g., enact policy to limit DPW engine idling and fumes from back-up generators.

18. **Protect freshwater wetlands (Policy 44).**

III.A-37

- The DEIS is consistent with Policy 44.
- The WAC is concerned about run-off from the ball fields and parking lots over the course of time and strongly advises the LDC and VoSH to consider controls and monitoring to ensure that pesticides and other chemicals or contaminants are not used in the maintenance of the recreation fields and parking lots.

APPENDIX A

Chair: Francois Rjeili
Members: Tom Caposella, Stella Garlick, Jennifer Lobato-Church, John Petry, Anne White

Meeting Dates and Attendees and Guests:

November 30, 2016

Present:	Stella Garlick, Jennifer Lobato-Church, John Petry, Francois Rjeili, Anne White
Apologies:	Tom Caposella
Guests:	Sean McCarthy, Village Architect Clinton Smith, Village Attorney David Smith, LDC Planning and Development Advisor

December 6, 2016

Present:	Jennifer Labato Church, Stella Garlick, John Petry, Francois Rjeili, Anne White
Guest:	Clinton Smith

December 19, 2016

Present:	Stella Garlick, John Petry, Francois Rjeili, Anne White
Guest:	Clinton Smith

January 4, 2017

Present:	Stella Garlick, John Petry, Francois Rieili, Anne White.
Guests:	None

January 12, 2017

Present:	John Petry, Francois Rjeili, Anne White
Guest:	David Smith

January 19, 2017

Present:	Stella Garlick, John Petry, Francois Rjeili, Anne White
Guests:	None

January 23, 2017

Present:	Jennifer Lobato-Church, John Petry, Francois Rjeili, Anne White
Guests:	Clinton Smith, David Smith (for a portion of the meeting)

Appendix C

Hydraulic Analysis

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1. Statement of purpose

The purpose of this calculation is to perform a hydraulic analysis of the Pocantico River Reach between U.S. Route 9 (Broadway) and the Hudson River to determine flooding conditions at the East Parcel location for the existing and proposed conditions. The flood events simulated in this study include the 100-year flood event and various climate risk projections of the 100-year flood event. Climate risks encompass sea-level rise and increase in precipitation over the design life of the East Parcel Redevelopment Project.

2. Project description, site inspections and surveys

Project description

The East Parcel Project consists of the redevelopment of the former General Motors North Tarrytown Assembly Plant Site. The main components of the project include new Department of Public Works (DPW) buildings, recreational facilities, a Community Center, an Amphitheater, and supporting vehicular and pedestrian facilities. The project site, approximately 28.7 acres, is located east of the Metropolitan Transportation Authority (MTA) Metro-North rail lines and south of the Pocantico River. According to the latest Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) published in December 8, 2014 (Map Number: 36119C0253G) (*Reference 8*), the entire site is categorized as an AE area (See Figure 1). AE areas correspond to the 100-year floodplain (1% probability of flooding every year) and are considered to be at a high risk of flooding under the FEMA National Flood Insurance Program (NFIP).

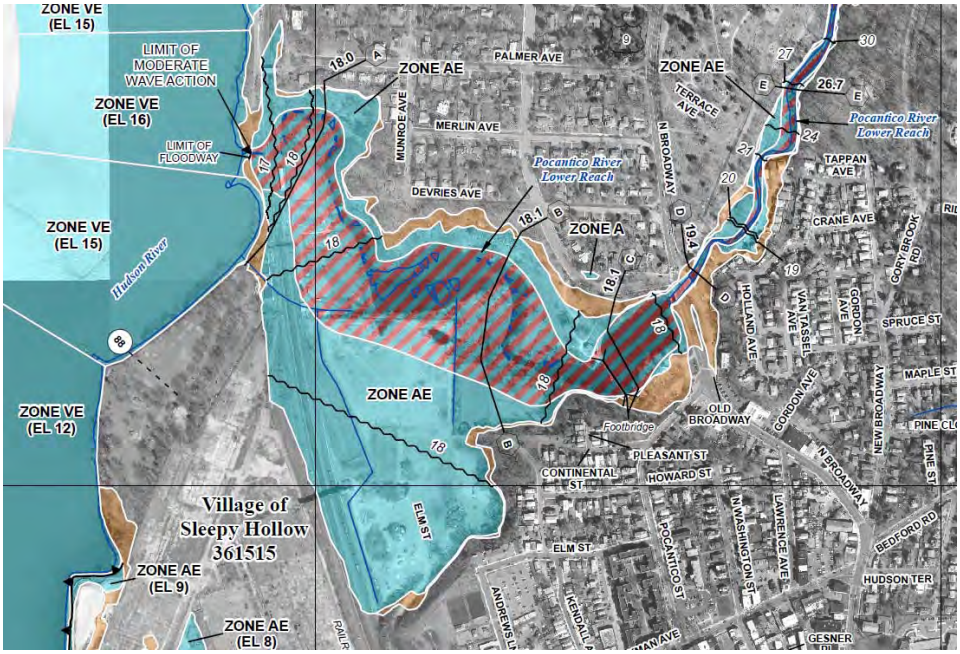


Figure 1: FEMA FIRM for the East Parcel Redevelopment Project Location.

Site inspections and Surveys

WSP | Parsons Brinckerhoff performed two sites inspections as well as topographic and bathymetric surveys for the Project.

The site inspections were completed On April 5 and June 15, 2016. During these visits, our hydraulic modelers verified the basic construction details, materials, and dimensions of the crossing structures along the Pocantico River, determined Manning's roughness coefficients for the different types of land use and land cover and inspect the Hudson River shorelines. Five structures were inspected including the US Route 9 Bridge, the Sleepy Hollow Dam, the Devries Road Bridge, the culvert underneath the Metro-North Railroad and the arch bridge under the road leading to the Kingsland Point County Park.

In addition to the site inspections, a bathymetric survey was performed for the hydraulic study needs. The survey extended from US Route 9 and ended in the Hudson River. A boat was used to perform the survey. The survey limits for this surveyed corridor extended to the top of riverbank and included any permanent structures that fell within the limits. Survey of structures was limited to the location of information need to display position and clearance. An approximate 50' grid was used for the location of topographic shots. To ensure accuracy; control was run the length of the site using doubled angles and GPS using high accuracy equipment (Leica GS15). All locations were performed from this control using a Leica robotic total station. Using the GPS values, the survey was placed into the following coordinate system: NAD83 NY EAST NAVD88.

3. Approach and Methodology

The hydraulic modeling was performed using the Hydrologic Engineering Center River Analysis System (HEC-RAS 5.0.1). A two-dimensional (2-D) hydrodynamic model was developed, capable of integrating complex channels and structures under dynamic hydrologic conditions. A 2-D unsteady-flow model solving the 2-D Saint-Venant equation (full momentum) was developed for this Project.

Several flood conditions were simulated including the 100-year flood event and various climate risk projections of the 100-year flood. These climate risks scenarios were assessed over the design life (50 years) of the East Parcel Redevelopment Project. For each flood event, water surface elevations, depths and velocities were computed.

The data and information used to develop the hydraulic model include FEMA data, the latest topographic and land use and land cover data for the region, the proposed East Parcel Site grading, as well as the survey and field reconnaissance data collected on site.

Manning's Roughness Coefficients

Manning's roughness coefficients (Manning's N), which represent the frictional resistance water experiences when passing over land, channel and structure features are critical parameters for hydraulic models. The Manning's N assigned to the study area were determined from the different land uses and land cover in the area. Orthoimageries (*Reference 9*) were used to determine the land use, vegetation type, and surface material of the study area (*Reference 3*). The range of possible Manning's N values were limited to the

coefficients used in the 2014 Preliminary Flood Insurance Study (PFIS) for the Lower Pocantico River, which are 0.04 to 0.12 for the channel

and overbank areas. In places where the study area is covered in an impervious surface, the typical Manning's N value of 0.016 was increased to 0.04 to satisfy the condition imposed in the FEMA analysis. Table 1 gives the Manning's N values for each land use present in the area.

Table 1: Manning's N Values

Land Cover	Manning's N value
Pocantico River channel	0.05
Dirt	0.04
Grass	0.04
Gravel	0.04
Hudson River channel	0.05
Impervious surface	0.04
Scrub	0.075
Tall Grass	0.05
Trees	0.12

Model's Boundary Conditions

Upstream Boundary Condition

Unsteady models require hydrographs to be used as upstream boundary conditions. For this analysis, we developed Pocantico River's unsteady hydrographs at the US Route 9 location. A ramp-up period and a sustained peak flow duration followed by a decrease in flow was used to approximate a synthetic discharge hydrograph.

Peak discharge flows provided in the FEMA 2014 PFIS (*Reference 7*) for the analyzed area was used for this model. Data from the last cross section of the hydraulic model (directly upstream from the Hudson River) was used. The peak flows used in this analysis are shown below in Table 2.

Table 2: Peak Flow

Flood Event	100-year flood	Climate Risk Low Projection	Climate Risk Med. Projection	Climate Risk High Projection
Peak Flow (cfs)	3041	3193.05	3345.1	3801.25

Downstream Boundary Condition

The model's downstream boundary conditions were determined in the Hudson River which is a tidal river subject to coastal effects. The FEMA coastal analysis available in the 2014 PFIS (Reference 7) gives significant wave heights and storm surge (stillwater) elevations for various storm return periods at different transects along the shore. FEMA coastal transects 88 and 89's stillwater elevation, located in the vicinity of the analyzed site, was used as boundary conditions (See Table 3).

Table 3: Downstream Boundary Condition Parameters

Flood event	100-year flood	Low	Medium	High
Stillwater elevation (ft.)	8.5	9.44	10.53	12.56

2D HEC-RAS Model Geometry and Meshing

After establishing the boundary conditions and roughness coefficients for the study area, the terrain and hydraulic structures were also incorporated into the hydraulic model. The terrain resulted from combining the bathymetric survey data from the Pocantico River channel (*Reference 2*) with a 1-meter resolution DEM using the Geographic Information System (GIS) Software (*Reference 10*). To model the impacts of the East Parcel Development Project, we integrated the proposed site grading to the existing terrain.

To perform the simulations, a 2-D computation mesh was generated across the area of study with face points evenly distributed throughout the mesh.

The hydraulic structures were added to the model geometry as 2-D Area Connections within the same 2-D Area. The terrains, 2D mesh, and connections are shown below in Figures 2 through 5 as they appear in the model geometry.

An unsteady computational time step of 3 seconds was selected for this study to fully capture flooding parameters over the analyzed storm durations. The mesh cell spacing was 30 ft. by 30 ft. except in regions near the connections, where a finer mesh size is used. The unsteady Saint Venant equations were used for the 2-D flow computation mesh and the hydraulic structure connections. The initial water surface elevation for the study area was the same as the constant stage elevation at the Hudson River for each flood event.

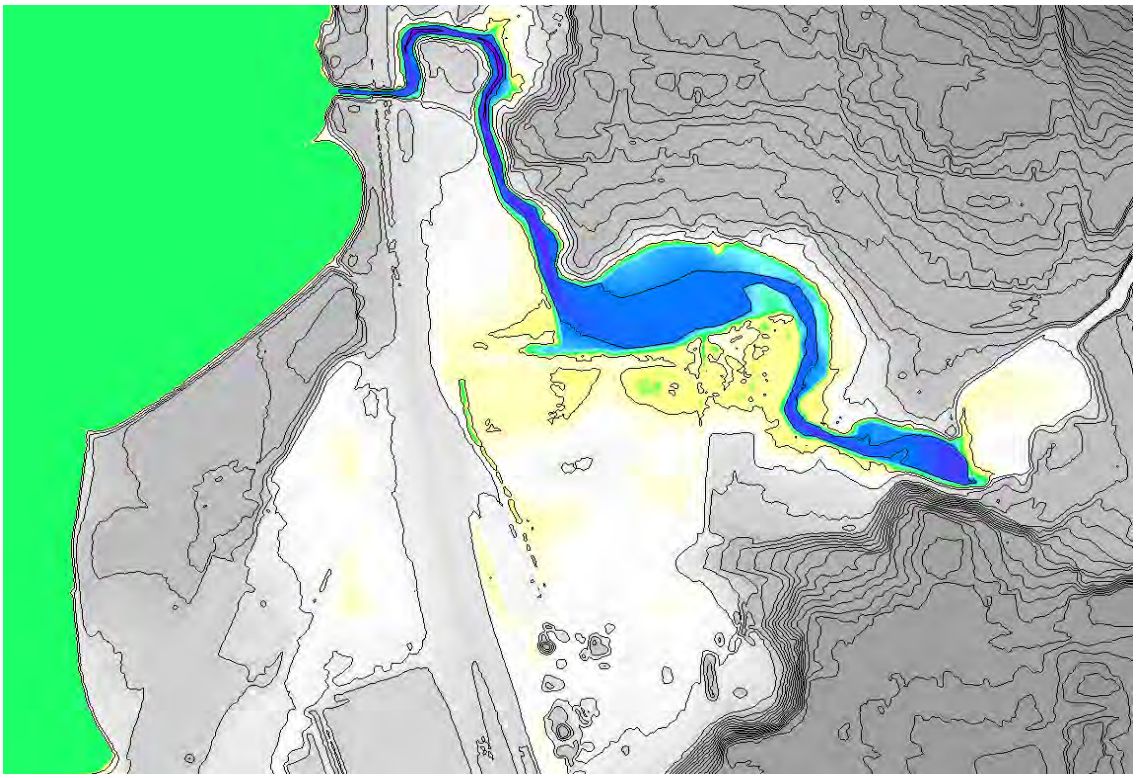


Figure 2: Terrain contour map representing the existing conditions. Contours are spaced 4 ft. apart.

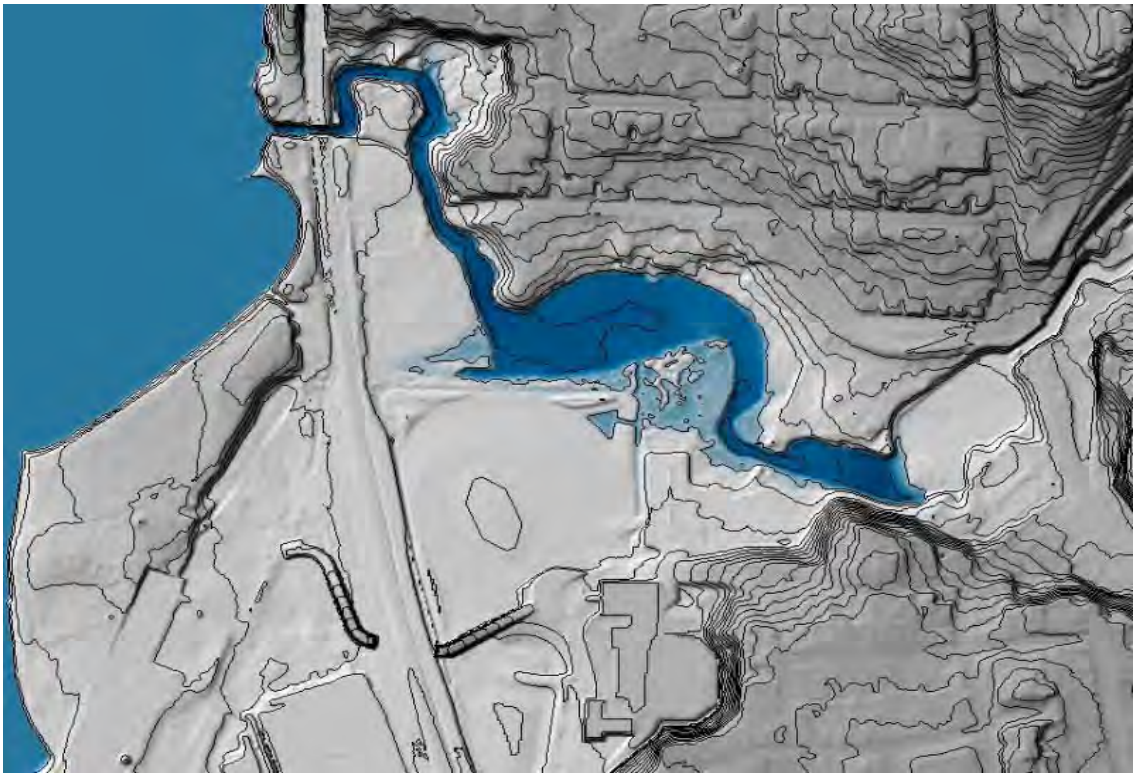


Figure 3: Terrain contour map representing the proposed grading for the East Parcel Redevelopment Site. Contours are spaced 4 ft. apart.

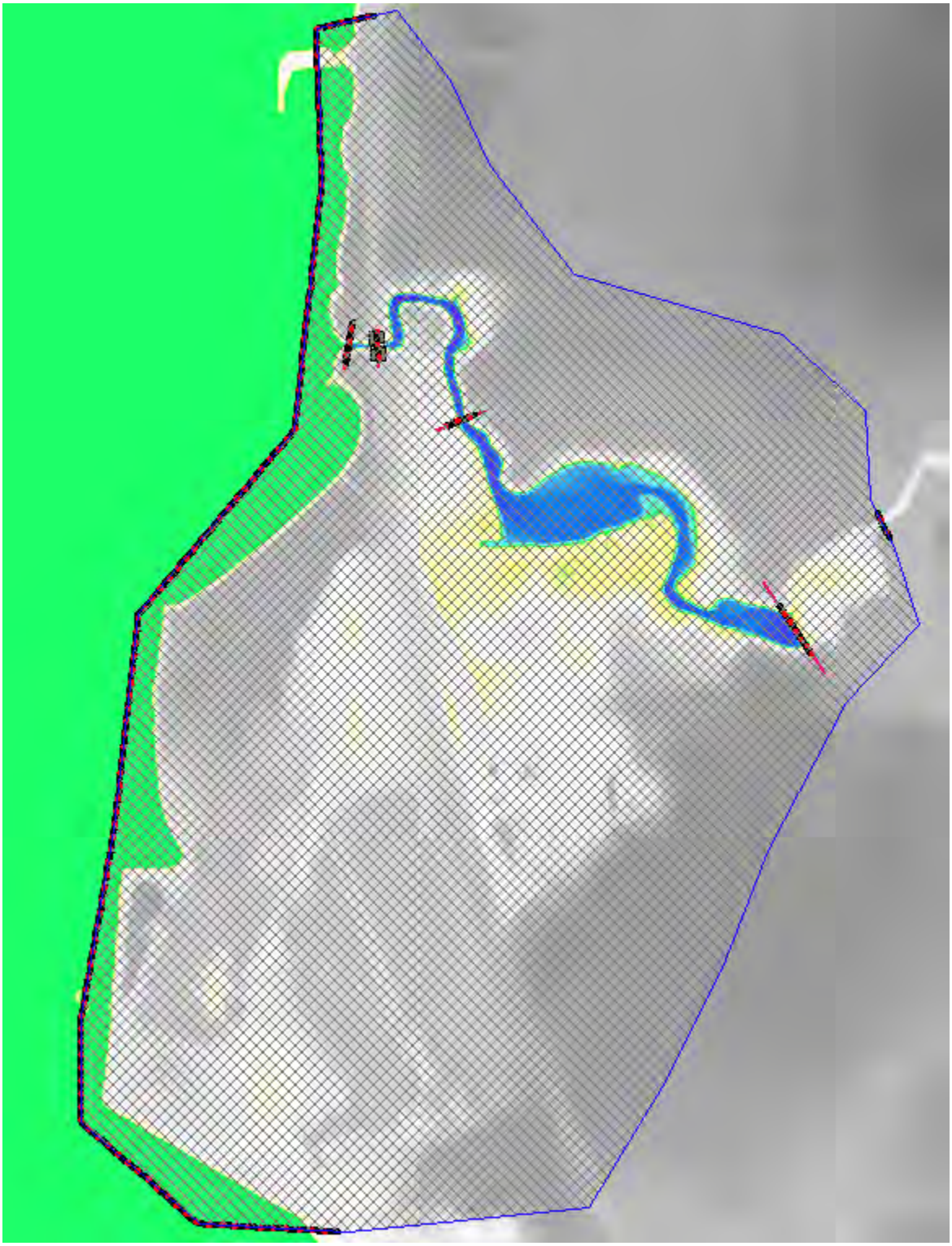


Figure 4: Hydraulic model's 2D meshing area. The dashed red and black lines represent mesh boundary and internal connections.

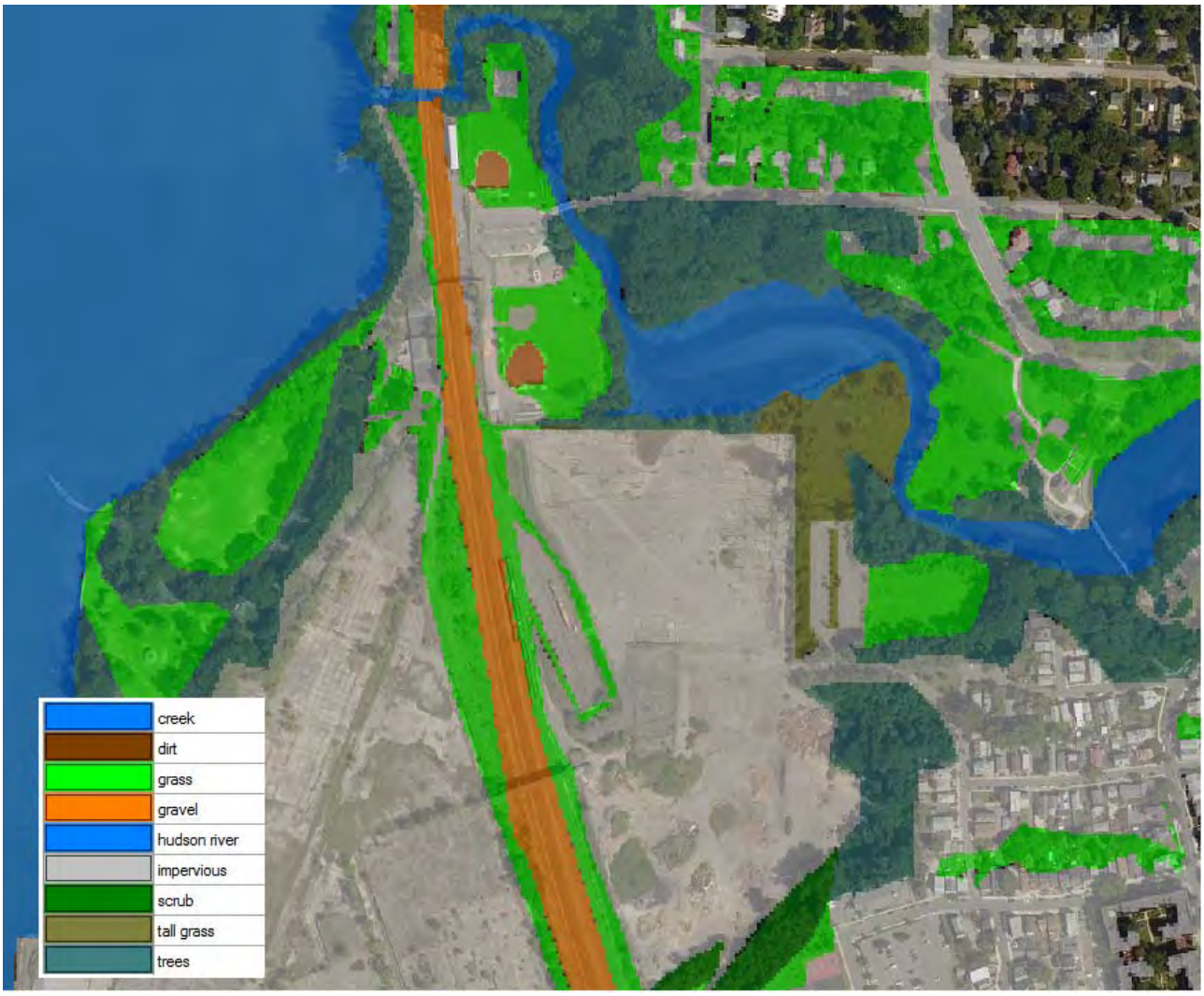


Figure 5: Land Use and Land Cover Data shown with Orthoimageries

Climate Change Risks

In accordance with the New York Community Risk and Resilience Act (CRRA) and associated Regulations entitled Chapter 6 of the New York Codes, Rules and Regulations (NYCRR) Part 490, Projected Sea-level Rise (Part 490), future physical climate risks caused by storm surges, sea level rise and flooding were determined in this study (*Reference 5*). The impacts of climate change on the study area were considered by increasing both the riverine flow in the Pocantico River and including sea level rise projections in the Hudson River. A project design life of 50 years is considered for the East Parcel Redevelopment Project. Consequently, the targeted projection year of 2070 was considered in this study. The sea level rise projections used are found in the ClimAID report developed by the New York State Energy Research and Development Authority (NYSERDA) (*Reference 4, Reference 6*). The effects of climate change on precipitation and storm patterns not as well understood, so for this analysis, the given peak discharge value was increased to simulate the unknown effects of climate change. In addition to the expected case for the 100 year flood event, the three additional flood events generated based on climate change projections are shown below in Table 4.

Table 4: Climate Change Parameters

Projected risk severity in 2070	Low	Medium	High
Sea level rise (inches)	11.3	24.3	48.7
Increase in Peak discharge	5%	10%	25%

4. Hydraulic Analysis Results

Table 5 provides a summary of results for the computed water elevations at key locations.

Table 5: Water Elevations at Project's Key Locations

	Proposed DPW facilities	Devries Park	Sleepy Hollow Dam
FEMA 100-year flood	18	18	18.1
Existing Conditions - Simulated flood events			
100-year flood	13.6	13.6	14.2
100-year flow + low climate risk projection	13.7	13.7	14.4
100-year flow + medium climate risk projection	13.8	13.8	14.5
100-year flow + high climate risk projection	14	14	14.8
Proposed Grading for the East Parcel Redevelopment Site - Simulated flood events			
100-year flood	-	13.7	14.3
100-year flow + low climate risk projection	-	13.7	14.4
100-year flow + medium climate risk projection	-	13.8	14.6
100-year flow + high climate risk projection	-	14.1	14.8

Inundation maps displaying inundation extents and associated hydraulic parameters (water depths, elevations and water velocities) for the different simulated cases are provided in Appendix B and C. Complete model output files are provided in Appendix D.

5. Conclusions and Recommendations

The water elevations obtained for the simulated flood scenarios are significantly lower than the ones provided in the latest FEMA Flood Insurance Rate Map for the region.

Our hydraulic model developed for the proposed East Parcel Site grading indicates no discernable differences in water surface elevation in adjacent areas within the floodplain during the model 100-year flood events as compared to existing conditions.

Based on these overall results, we believe that a Conditional Letter of Map Revision (Conditional LOMR) should be considered for the East Parcel Redevelopment Project. Conditional LOMR is the first step in the LOMR process which enable communities to revise existing FEMA regulatory floodway and Base Flood Elevations. Reducing the Base Flood Elevation (100-year flood) for the subject area could result in potential

cost savings and environmental benefits. Additionally, the incorporation of climate change adaptation provides an opportunity to capitalize on grant mechanisms currently available.

6. References

The following documents are used as sources of information or references:

1. WSP|Parsons Brinckerhoff, March 2017, East Parcel Redevelopment Project, Proposed Grading
2. WSP|Parsons Brinckerhoff, 2016, Survey Data for East Parcel Redevelopment Project
3. U.S. Army Corps of Engineers, Hydrologic Engineering Center, 2016, Hydraulic Reference Manual, Version 5.0
4. Horton, R., C. Little, V. Gornitz, D. Bader and M. Oppenheimer. 2015. New York City Panel on Climate Change 2015 Report: Sea level rise and coastal storms. Ann. New York Acad. Sci. 1336:36-44. doi:10.1111/nyas.12593
5. 6 NYCRR Part 490, 2015, Projected Sea-Level Rise (Statutory authority: Environmental Conservation Law)
6. New York State Energy Research and Development Association, 2014, Responding to Climate Change in New York State (ClimAID)
7. Federal Emergency Management Agency, 2014, Preliminary Flood Insurance Study for Westchester County, New York (All Jurisdictions)
8. Federal Emergency Management Agency, 2014, Flood Insurance Rate Map, Map Number 36119C0253G
9. Westchester County High Resolution Orthoimage 2013. Available URL: http://www.orthos.dhses.ny.gov/ [Accessed June 2016]
10. National Oceanic and Atmospheric Administration (NOAA), New York State Department of Environmental Conservation (NYS DEC), 2012, Coastal New York LiDAR (Hydro Flattened Raster DEM). Available URL: http://www.orthos.dhses.ny.gov/ [Accessed June 2016]
11. United States Department of Agriculture, Natural Resources Conservation Service, 2007, Part 630 Hydrology, National Engineering Handbook.
    Federal Emergency Management Agency, 2007, Flood Insurance Study for Westchester County, New York (All Jurisdictions)
12. Federal Emergency Management Agency, 2007, Flood Insurance Rate Map, Map Number 36119C0253F

APPENDICES

APPENDIX A:
PHOTOGRAPHS



Photograph 1: The wooden Sleepy Hollow Dam and bridge looking downstream. There are 20 wooden piers, each about 0.6 ft wide, above the dam crest, spaced approximately 10 ft. apart on center. In the gap to the middle left of the photo, there is a spillway which is 6 ft. wide. There are flashboards in place in the spillway which are removed when a storm is forecast, and have not been included in the model.



Photograph 2: Devries Ave. Bridge, looking upstream from the west bank of the Pocantico. The channel is lined with thick scrub. The deck of the bridge is lower on the west side, at an elevation of 7.7 ft., and higher on the east side at 9.4 ft. Though the bridge has an open bottom, it is modeled as a box culvert which is conservative because the cross section of the box is less than the cross section under the bridge, meaning it has less conveyance.

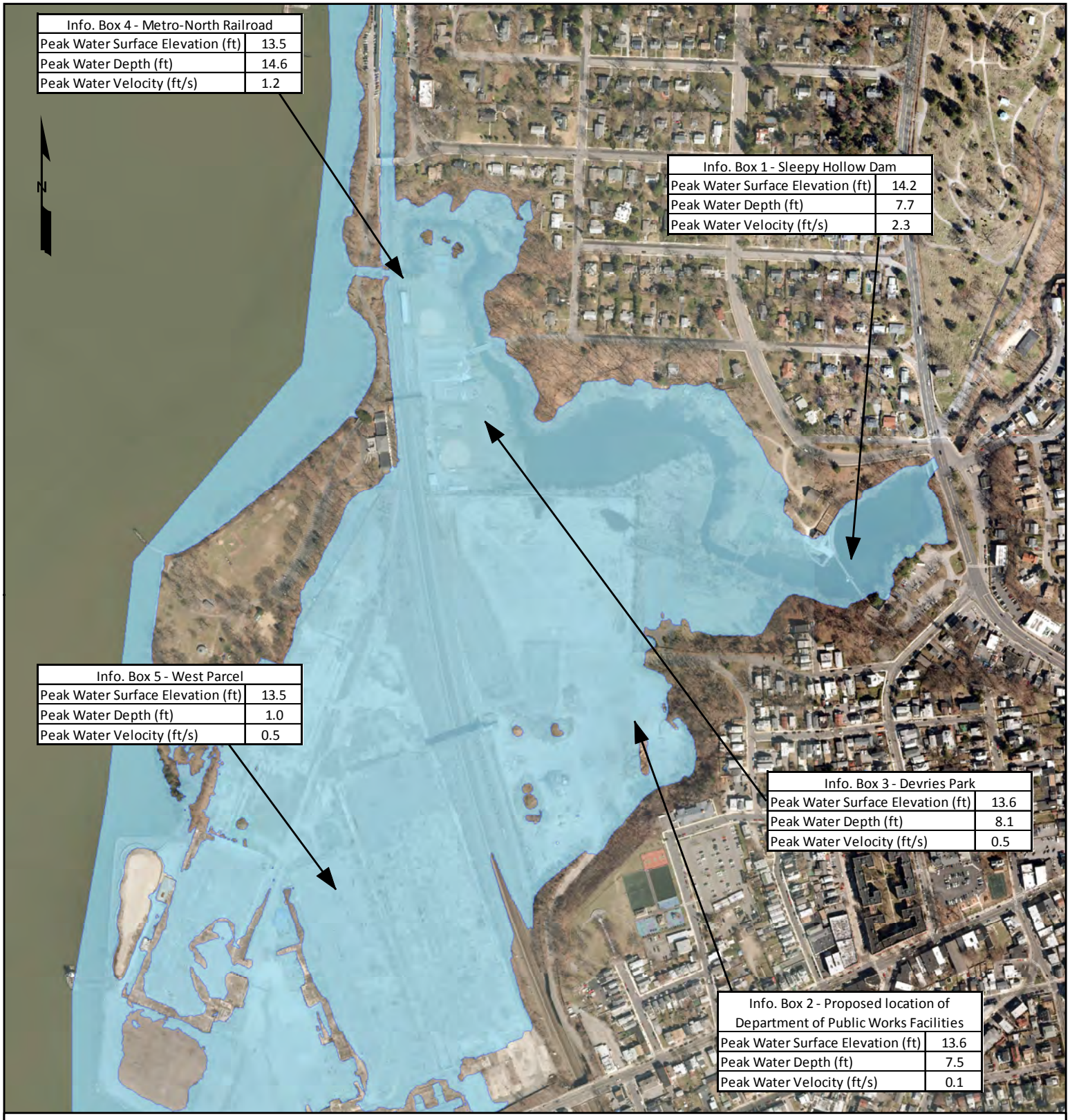


Photograph 3: The box culvert under the Metro-North railroad crossing, looking upstream. The top of the box is at an elevation of 7.4 ft. with an embankment elevation of 12.2 ft. The culvert is 60 ft. wide.



Photograph 4: The arch bridge at the most downstream crossing of the Pocantico River, looking downstream towards the Hudson River. The top of the arch is at an elevation of 13.7 ft. while the high point of the stone wall is at an elevation of 18 ft.

APPENDIX B:
INUNDATION MAPS FOR EXISTING CONDITIONS



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

Figure B-1

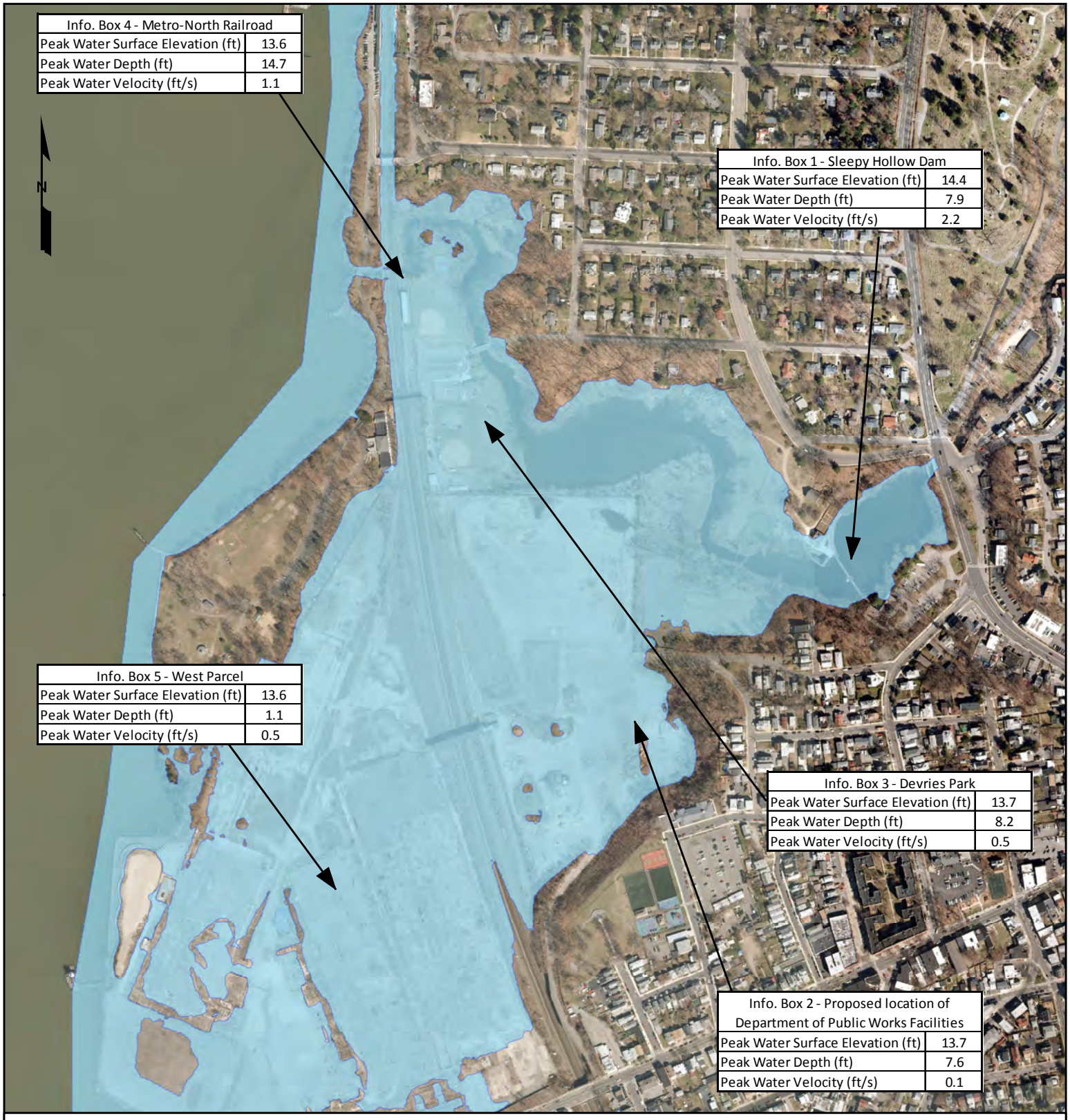
100-year Flood Event - Existing

Project: **Hydraulic Analysis for the East Parcel Redevelopment**

Prepared for: **Sleepy Hollow Local Development Corporation**

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

WSP | PARSONS BRINCKERHOFF



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

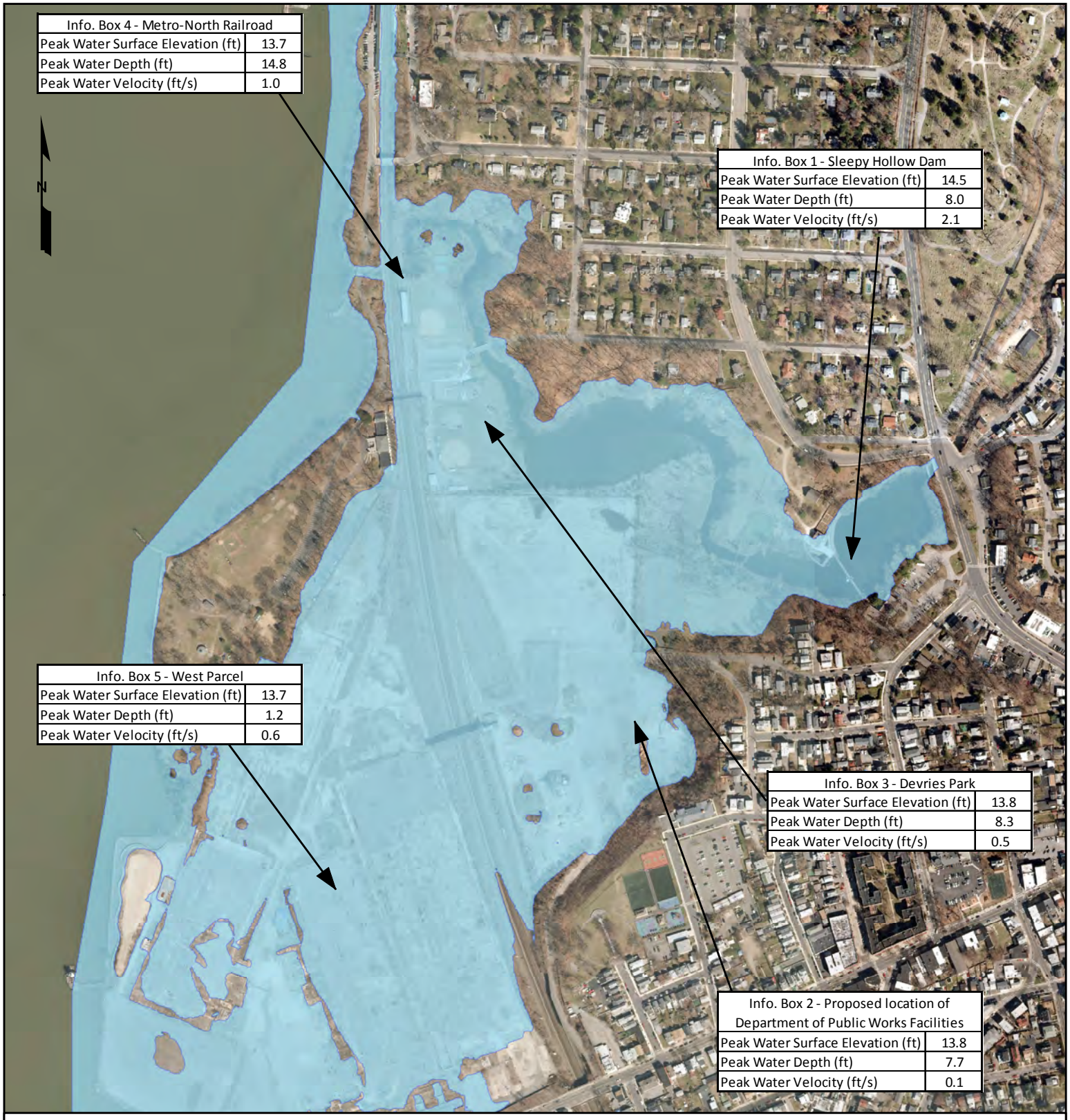
Figure B-2

100-year Flood Event - Existing including low climate risk projections

Project: Hydraulic Analysis for the East Parcel Redevelopment

Prepared for: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

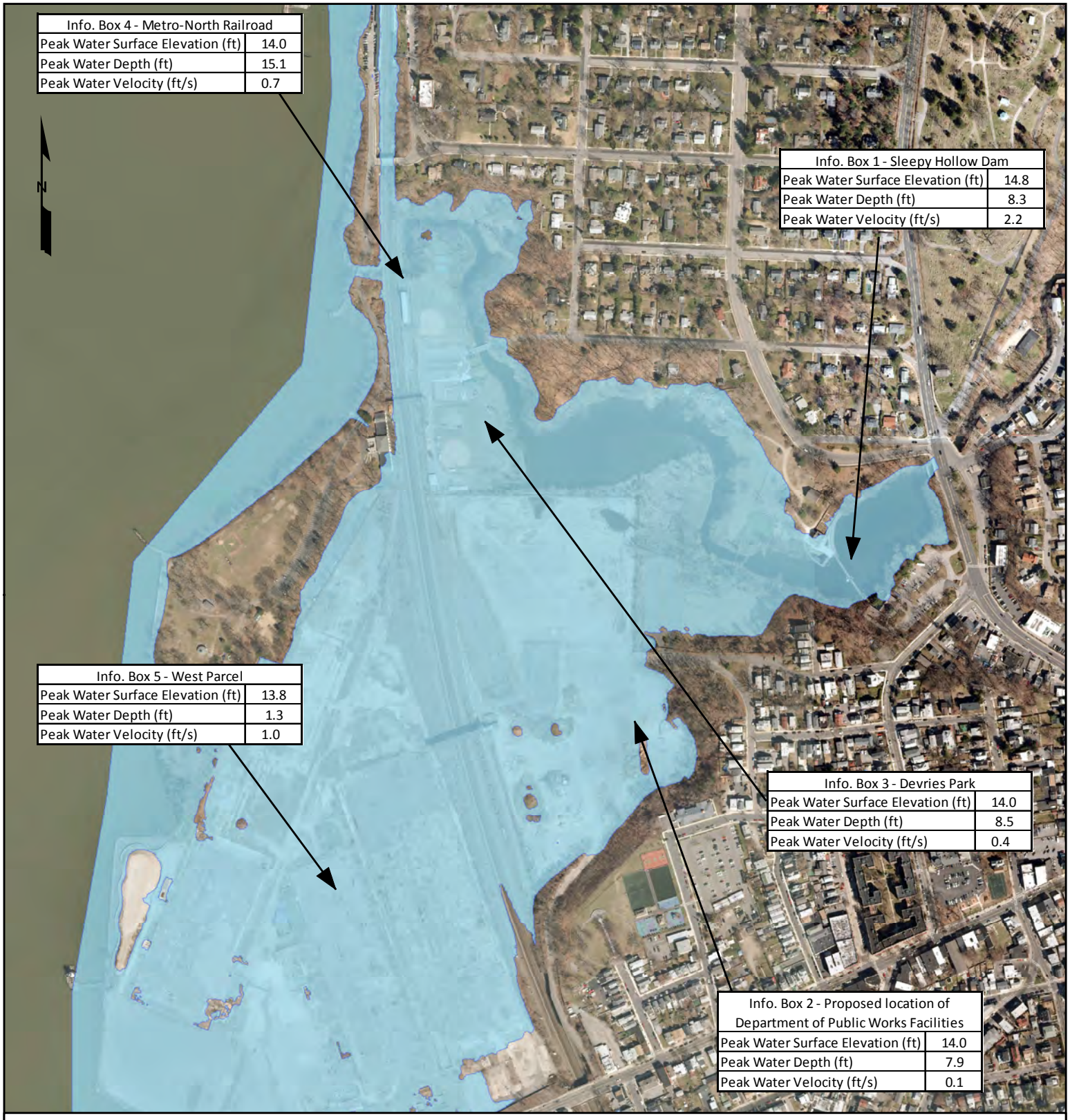
Figure B-3

100-year Flood Event - Existing including medium climate risk projections

Project: Hydraulic Analysis for the East Parcel Redevelopment

Prepared for: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

Figure B-4

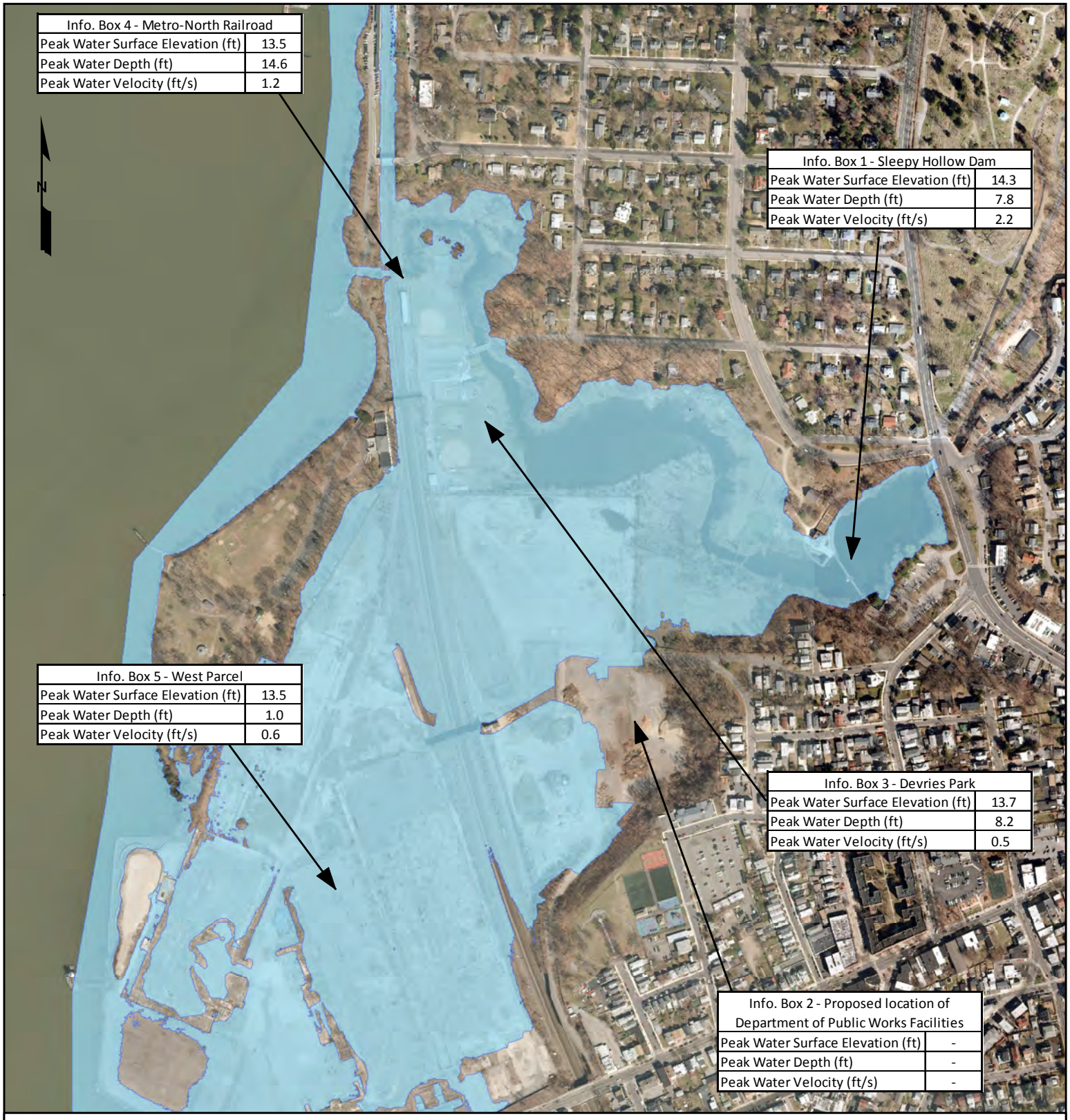
100-year Flood Event - Existing including high climate risk projections

Project: **Hydraulic Analysis for the East Parcel Redevelopment**

Prepared for: **Sleepy Hollow Local Development Corporation**

WSP | PARSONS BRINCKERHOFF

APPENDIX C:
INUNDATION MAPS FOR PROPOSED CONDITIONS



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

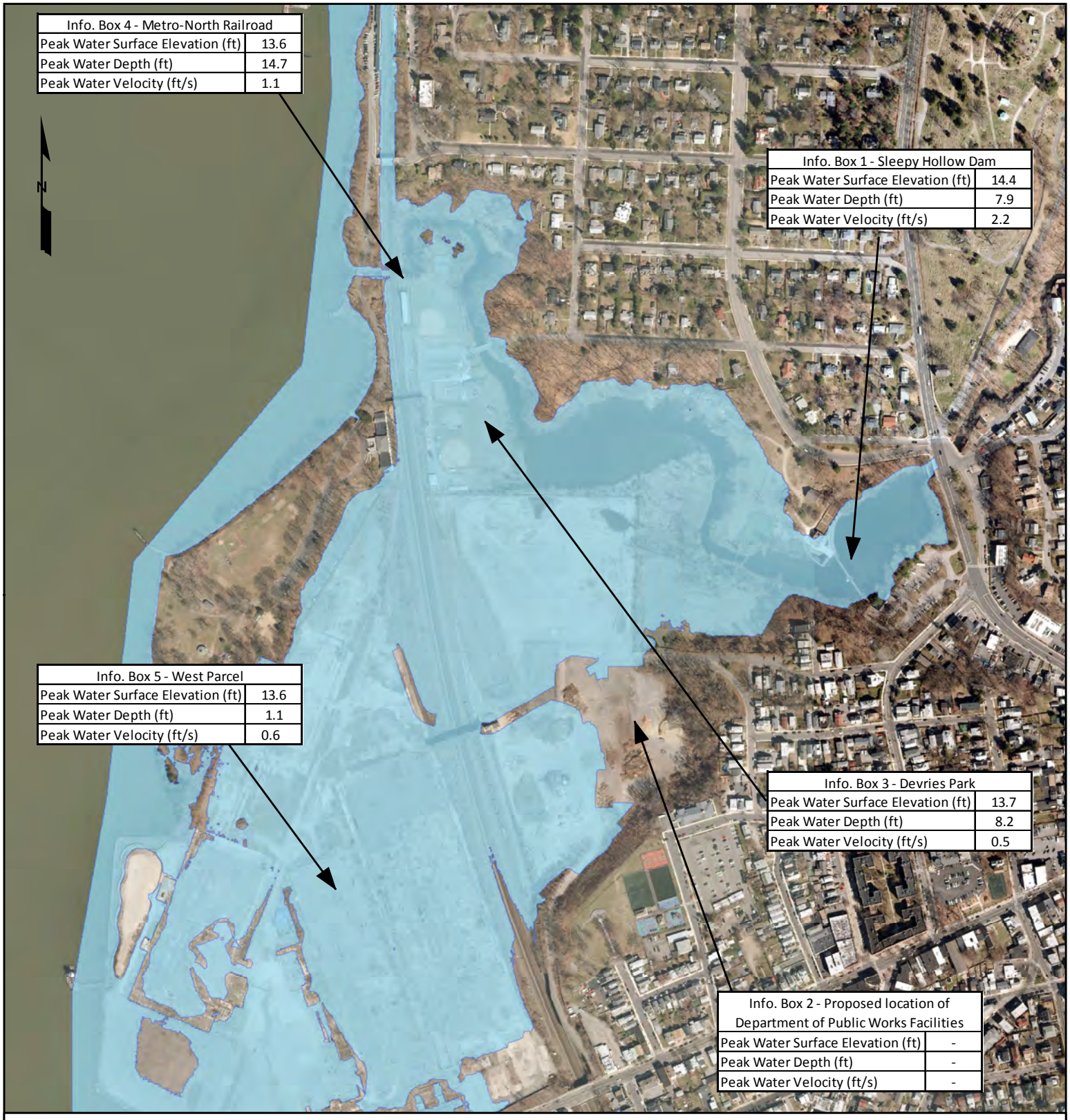
Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

Figure C-1
100-year Flood Event - Proposed

Project: Hydraulic Analysis for the East Parcel Redevelopment

Prepared for: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

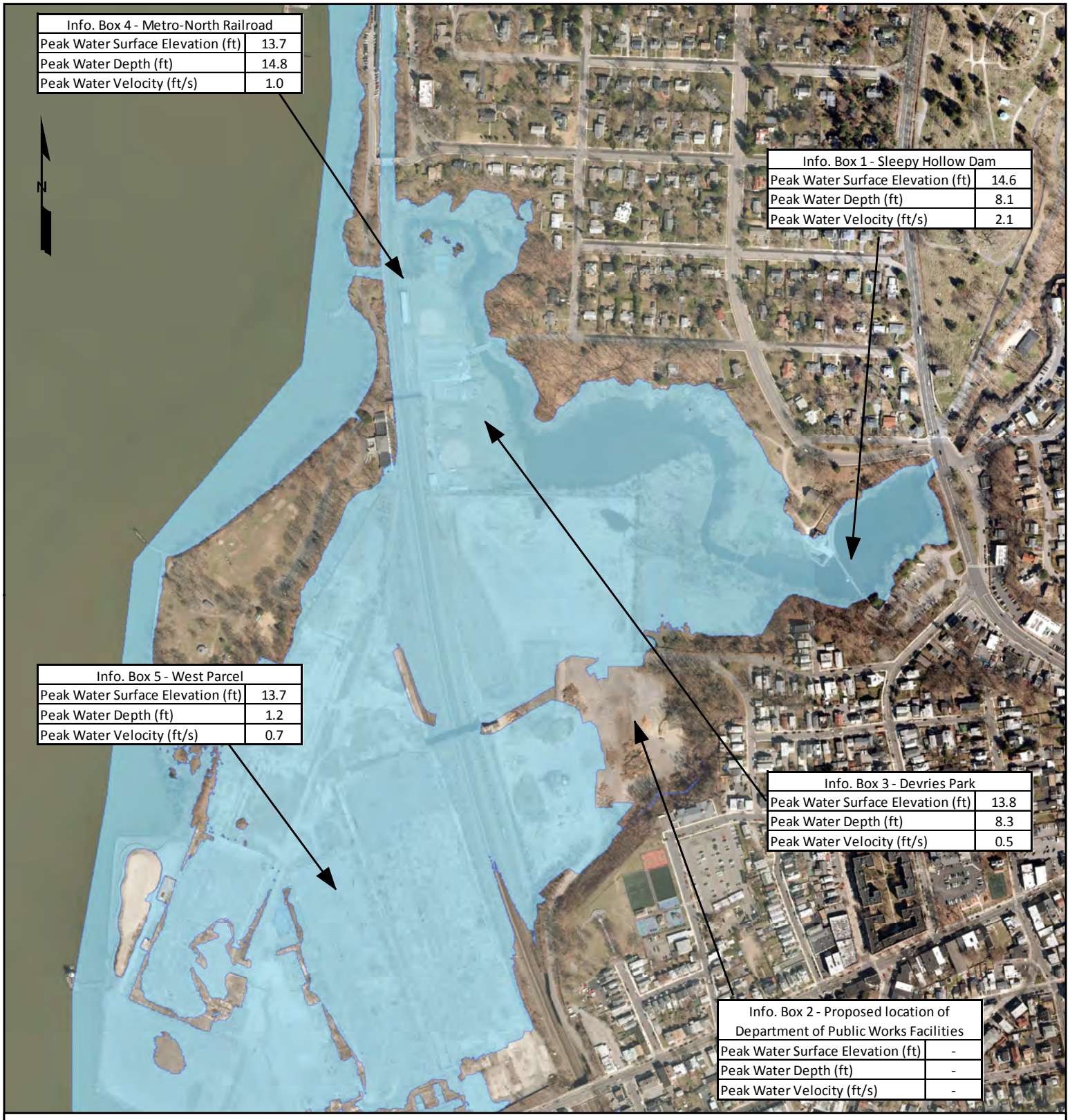
Figure C-2

100-year Flood Event - Proposed including low climate risk projections

Project: Hydraulic Analysis for the East Parcel Redevelopment

Prepared for: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

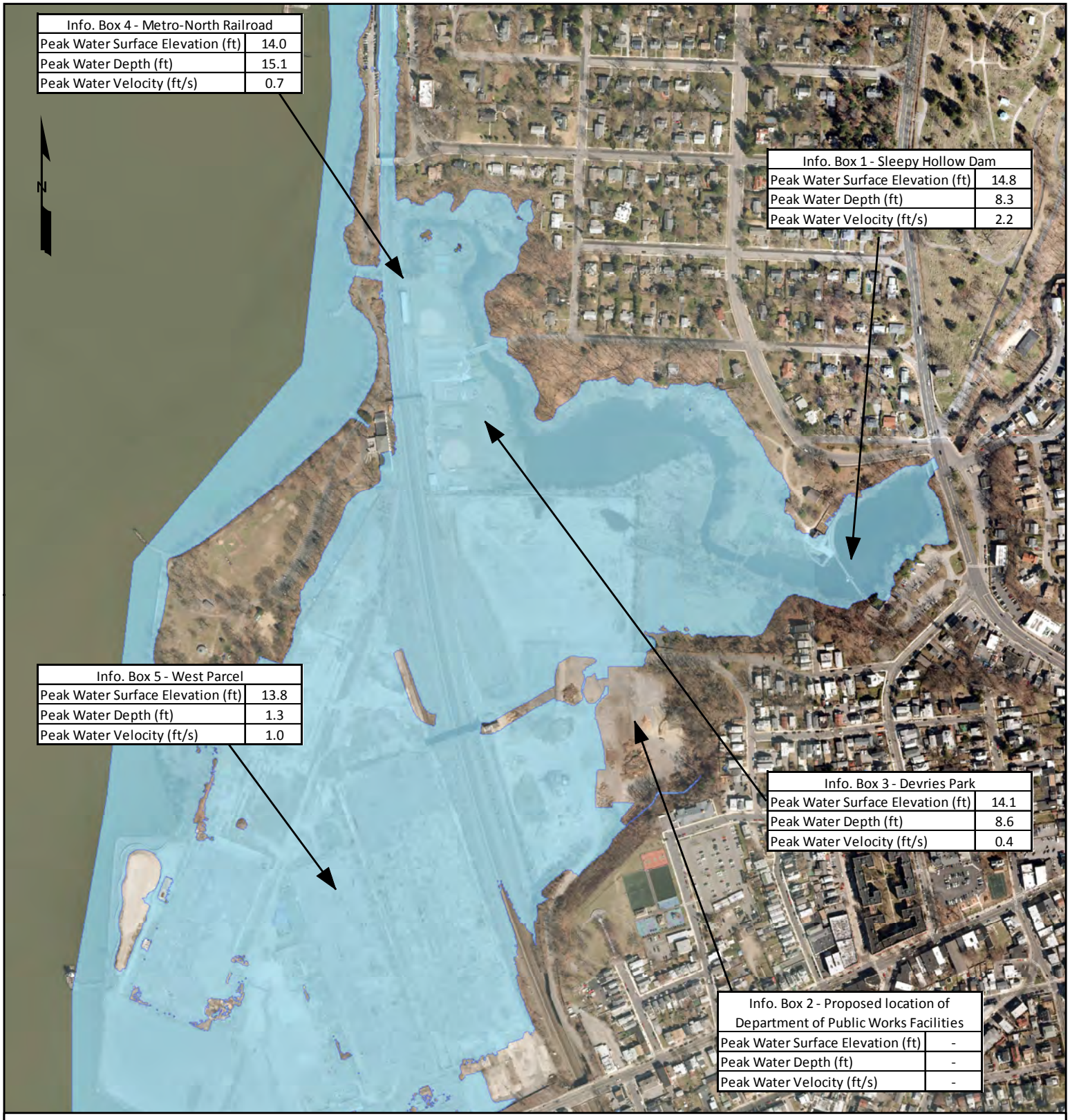
Figure C-3

100-year Flood Event - Proposed including medium climate risk projections

Project: Hydraulic Analysis for the East Parcel Redevelopment

Prepared for: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF



Legend

Flood Inundation Extent

0 225 450 900 1,350 Feet

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD 88
Orthophotography: NYS GIS Clearinghouse 2016

Figure C-4

100-year Flood Event - Proposed including high climate risk projections

Project: Hydraulic Analysis for the East Parcel Redevelopment

Prepared for: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF

APPENDIX D:
CD INCLUDING MODEL FILES
provided under separate cover

Appendix D
SEQRA/LWRP
Documentation

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The ENB SEQRA Notice Publication Form - *Please check all that apply*

Reset Form

Deadline: Notices must be received by **6 p.m. Wednesday** to appear in the following Wednesday's ENB

____ Negative Declaration - Type I

____ Conditioned Negative Declaration

____ Draft Negative Declaration

____ Positive Declaration
____ with Public Scoping Session

__✔__ Draft EIS
__✔__ with Public Hearing
____ Generic
____ Supplemental

_____ Final EIS
____ Generic
____ Supplemental

DEC Region # 3 County: Westchester Lead Agency: Sleepy Hollow LDC

Project Title: East Parcel Redevelopment

Brief Project Description: The action involves . . .

Redevelopment of approximately 28 acres of land for a new municipal Department of Public Works facility, municipal parking, active and passive recreations uses and a new proposed vehicular overpass spanning the existing Metro-North rail lines and connecting the project site to lands on the west side of the rail lines.

Project Location (include street address/municipality): 60 Continental Street, Sleepy Hollow, NY 10591

Contact Person: David Schroedel, Chairman

Address: 28 Beekman Avenue City: Sleepy Hollow State: NY Zip: 10591

Phone: (914) 366-5105 Fax: _____ E-mil: david.schroedel@sleepyhollowldc.org

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For Draft Negative Declaration / Draft EIS: Public Comment Period ends: 09 / 30 / 2016

For Public Hearing or Scoping Session: Date: 08 / 23` / 2016 Time: 07 : 00 PM am/pm

Location: Village Hall 28 Beekman Avenue Sleepy Hollow NY 10591

A hard copy of the DEIS/FEIS is available at the following locations:

Village Hall 28 Beekman Avenue, Sleepy Hollow; Warner Library 112 North Broadway Tarrytown, NY 10591

The online version of the DEIS/FEIS is available at the following publically accessible web site:

http://www.sleepyhollowny.gov/sleepy-hollow-local-development-corporation

For Conditioned Negative Declaration: In summary, conditions include:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

ENB - Region 3 Notices 8/3/2016

Public Notice

Shandaken State Pollutant Discharge Elimination System (SPDES) Semi-Annual Meeting

The New York City Department of Environmental Protection (NYC DEP) is pleased to announce that the next semi-annual public meeting, held per the Shandaken SPDES permit, will be on Tuesday, August 16, 2016 from 10:00 a.m. to 12:00 p.m. at the Schoharie Watershed Office, 6049 Main Street, Tannersville NY. NYC DEP will discuss the progress of activities conducted pursuant to the SPDES permit.

The meeting is open to the public and public input is welcome.

Contact: Kimberlee Kane, NYC DEP, 465 Columbus Avenue, Valhalla, NY 10595, Phone: (914) 773-4473, E-mail: kkane@dep.nyc.gov.

Pursuant to Title 3, Article 49 of the Environmental Conservation Law, the New York State Office of Parks, Recreation and Historic Preservation (NYS OPRHP) hereby gives public notice of the following:

Notice is hereby given, pursuant to Section 49-0305 (9) of the Environmental Conservation Law, of the NYS OPRHP's intent to acquire a Conservation Easement from Scenic Hudson Land Trust over certain lands located at Mott Farm Road in the Town of Stony Point, County of Rockland and the State of New York.

For further information, contact:

Sandra Burnell
NYS OPRHP - Real Property Bureau
625 Broadway
Albany, New York 12238
Phone: (518) 408-1964
E-mail: Sandra.Burnell@parks.ny.gov

Negative Declaration

Dutchess County - The Town of Hyde Park Planning Board, as lead agency, has determined that the proposed Mike's Auto Center will not have a significant adverse environmental impact. The action involves a proposal by the applicant to enlarge an existing building with a 16 x 24 foot addition for the purpose of adding a third repair bay, to increase the number of vehicles permitted on the site from 37 spaces to 67 vehicles, and to make other associated site improvements on a .78 acre lot in the Neighborhood Business District. The proposed improvements will increase the scale of the site by more than 50% and the proposed action also includes a variance to increase the maximum scale of the site to 11,860 square feet. The project is located at 3638 Albany Post Road (Route 9) in the Town of Hyde Park, New York.

Contact: Ann Marie Hampson, Town of Hyde Park, Town Hall, 4383 Albany Post Road, Hyde Park, NY 12538, Phone: (845) 229-5111 extension 2.

Orange County - The City of Middletown Common Council , as lead agency, has determined that the proposed Indigot Water Site Supplemental Supply Easement Agreement will not have a significant adverse environmental impact. The action involves the execution of an easement agreement between the City of Middletown and Orange

County for the establishment of permanent rights for water supply on County-owned lands within the existing Indigot watershed to convey to the City of Middletown's existing water distribution system using existing City or County diversion, impounding, transmission, wells or storage facilities and any such improvement necessary for long term use and functionality. The project is located on various county-owned parcels within the Town of Greenville and Mount Hope, New York.

Contact: Jacob S. Tawil, City of Middletown, 16 James Street, Middletown, NY 10940, Phone: (845) 343-3169, E-mail: jtawil14@yahoo.com.

Ulster County - The Marbletown Planning Board, as lead agency, has determined that the proposed Barking Dog Antiques, Ltd. / Suzanne Paterson LLA will not have a significant adverse environmental impact. The action involves a lot line adjustment to merge the 2 existing lots to create one lot with no disturbances proposed. Properties are located in the B-1 zoning district within the High Falls Historical District. The project is located at 5 and 7 Second Street in High Falls, Town of Marbletown, New York.

Contact: Richard Lanzarone. Town of Marbletown, P.O. Box 217, Stone Ridge, NY 12484, Phone: (845) 687-7500 extension 171, E-mail: planning @marbletown.net.

Ulster County - The Marbletown Planning Board, as lead agency, has determined that the proposed Gibbs LLA will not have a significant adverse environmental impact. The action involves a proposed Lot Line Adjustment to reconfigure two (2) existing lots into two (2) building lots. Proposed lot line adjustment would reconfigure Lot 39 (which currently includes a single family dwelling with barn and shed) to be comprised of 3.53 acres and Lot 49 would be comprised of 8.41 acres with the Ricci/Gibbs property line to be clearly established. The project is located at 1066 Berme Road in High Falls, Town of Marbletown, New York.

Contact: Richard Lanzarone. Town of Marbletown, P.O. Box 217, Stone Ridge, NY 12484, Phone: (845) 687-7500 extension 171, E-mail: planning @marbletown.net.

Westchester County - The Village of Irvington Board of Trustees, as lead agency, has determined that the proposed Local to Permit In-Law Apartments will not have a significant adverse environmental impact. The action involves an amendment of the Zoning Code to permit "in-law" apartments for family members or caretakers in one-family dwellings as an accessory use. The project is located throughout the Village of Irvington, New York.

Contact: Lawrence Schopfer, Village of Irvington, 85 Main Street, Irvington, NY 10533, Phone: (914) 591-4358, E-mail: lschopfer@irvingtonny.gov.

Westchester County - The New York City Department of Environmental Protection (NYC DEP), as lead agency, has determined that the proposed Kensico Shoreline Stabilization Project will not have a significant adverse environmental impact. In accordance with the Filtration Avoidance Determination (FAD), this proposed project would protect water quality by providing stabilization and protection against wind and wave action in the project area near Shaft 18 at Kensico Reservoir, in order to minimize erosion and turbidity levels. This would be accomplished through placement of riprap along two locations of shoreline (totaling approximately 1,200 linear feet) near Delaware Shaft 18 in the Kensico Reservoir in the Town of Mount Pleasant, New York.

Contact: Sangamithra Iyer, NYC DEP, Office of Water Supply Infrastructure and Watershed Assessment, 59-17 Junction Boulevard, Flushing, NY 11373, Phone: (718) 595 3585, E-mail: siyer@dep.nyc.gov.

Positive Declaration

Orange County - The Town of Goshen Planning Board, as lead agency, has determined that the proposed LEGOLAND New York may have a significant adverse impact on the environment and a Draft Environmental Impact

Statement must be prepared. The action involves a proposal by the project sponsor, Merlin Entertainments, to construct a commercial recreation facility on approximately 153 acres of a 524 acre site consisting of 13 total parcels located off Harriman Drive in the Town of Goshen, New York. The commercial recreation facility will consist of a LEGOLAND theme park including rides and attractions, an aquarium, theaters, restaurants, a hotel and various back of the house facilities, including offices and staff areas, as well as associated parking and drainage facilities. The project sponsor proposes to seek municipal water and sewer services.

Contact: Lee Bergus, Town of Goshen, Town Hall, 41 Webster Avenue, Goshen, NY 10924, Phone: (845) 294-6250.

Notice of Acceptance of Draft EIS and Public Hearing

Westchester County - The Sleepy Hollow Local Development Corporation (LDC), as lead agency, has accepted a Draft Environmental Impact Statement on the proposed East Parcel Redevelopment. **A public hearing on the Draft EIS will be held on August 23, 2016 at 7:00 p.m. at the Sleepy Hollow Village Hall, 28 Beekman Avenue, Sleepy Hollow NY 10591.** Written comments on the Draft EIS will be accepted until September 30, 2016. The Draft EIS is available from the Sleepy Hollow, Village Hall, 28 Beekman Avenue, Sleepy Hollow; the Warner Library 112 North Broadway, Tarrytown, NY 10591 and on line at: http://www.sleepyhollowny.gov/sleepy-hollow-local-development-corporation.

The action involves the redevelopment of approximately 28 acres of land for a new municipal Sleepy Hollow Department of Public Works facility, municipal parking, active and passive recreations uses and a new proposed vehicular overpass spanning the existing Metro-North rail lines and connecting the project site to lands on the west side of the rail lines. The project is located at 60 Continental Street in Sleepy Hollow, New York.

Contact: David Schroedel, Sleepy Hollow LDC, 28 Beekman Avenue, Sleepy Hollow, NY 10591, Phone: (914) 366-5105, E-mail: david.schroedel@sleepyhollowldc.com.

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Agency:

SLEEPY HOLLOW VILLAGE OF
SLEEPY HOLLOW VILLAGE OF
28 BEEKMAN AVE STE 1
SLEEPY HOLLOW NY 10591

Client:

SLEEPY HOLLOW VILLAGE OF
28 BEEKMAN AVE STE 1,
SLEEPY HOLLOW, NY 10591

Acct No: TJN-040203004

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LDC Meetings

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VILLAGE OF SLEEPY HOLLOW
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Public Hearing Notice ~Village of Sleepy Hollow
Please take notice that the Board of Trustees of the Village of Sleepy Hollow along with the Sleepy Hollow Local Development Corporation (SHLDC) has scheduled a public hearing to be held on August 23, 2016 at 7:00 pm or shortly thereafter, to be continued to September 12, 2016, and to be continued again to September 20, 2016, at 7:00 pm or shortly thereafter, at the Sleepy Hollow Village Hall, 28 Beekman Avenue, Sleepy Hollow, New York 10591, to hear and consider comments from the public on the application for a Special Permit and Riverfront Development Concept Plan approval presented by the SHLDC, as the Proposed Action in its Draft Environmental Impact Statement on the proposed redevelopment of the East Parcel of the former General Motors property located at the terminus of Continental Street.

A copy of the Draft Environmental Impact Statement is available for review in the Village Clerk's office and/or on the Village's Website, www.sleepyhollowny.gov

All taxpayers and residents are welcome to attend and be heard at said meetings.
Village Hall is accessible to all persons with disabilities.

By order of the Board of Trustees
July 26, 2016
Paula A. McCarthy Tompkins
Village Clerk
914 366 5106 1469523

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AFFIDAVIT OF PUBLICATION
FROM

State of New York
County of Westchester, ss.:

CECILIA HERNANDEZ
_____ being duly sworn says that he/she is the principal clerk of THE JOURNAL NEWS, a newspaper published in the County of Westchester and the State of New York, and the notice of which the annexed is a printed copy, was published in the newspaper area(s) on the date (s) below:

Zone:	Run Dates:
Westchester	08/01/16

Cecilia Hernandez
Signature

Sworn to before me, this 4th day of August 2016

Vilma Avelar
Notary Signature

Vilma Avelar
Notary Public State of New York
NO. 01AV6318411
Qualified in Westchester County
Commission Expires January 26, 2019

Legend:

WESTCHESTER:
Amawalk, Ardsley, Ardsley on Hudson, Armonk, Baldwin Place, Bedford, Bedford Hills, Brewster, Bnardiff Manor,Bronxville, Buchanan, Carmel, Chappaqua, Cold Spring, Crompond, Cross River, Croton Falls, Croton on Hudson, Dobbs Ferry, Eastchester, Elmsford, Garrison, Goldens Bridge, Granite Springs, Greenburg, Harrison, Hartsdale, Hastings, Hastings on Hudson, Hawthorne, Irvington, Jefferson Valley, Katonah, Lake Peekskill, Larchmont, Lincolndale, Mahopac, Mahopac Falls, Mamaroneck, Millwood, Mohegan Lake, Montrose, Mount Kisco,Mount Vernon, New Rochelle, North Salem, Ossining, Patterson, Peekskill, Pelham, Pleasantville, Port Chester, Pound Ridge, Purchase, Purdys, Putnam Valley, Rye, Scarsdale, Shenorock, Shrub Oak, Somers, South Salem, Tarrytown, Thornwood, Tuckahoe, Valhalla, Verplanck, Waccabuc, White Plains, Yorktown Heights, Yonkers

ROCKLAND:
Blauvelt, Congers, Garnerville, Haverstraw, Hillburn, Monsey, Nanuet, New City, Nyack, Orangeburg, Palisades, Pearl River, Piermont, Pomona, Sloatsburg, Sparkill, Spring Valley, Stony Point, Suffern, Tallman, Tappan, Thiells, Tomkins Cove, Valley Cottage, West Haverstraw, West Nyack

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Village of Sleepy Hollow Waterfront Advisory Committee

East Parcel Redevelopment DEIS Preliminary Consistency Review Material

1. Village Code Chapter 414 Waterfront Consistency Review
2. 2005 WAC Preliminary Consistency Review
3. 2007 WAC Final Consistency Review
4. 2011 Village Board Consistency Review
5. Coastal Assessment Form for East Parcel Redevelopment
6. East Parcel Redevelopment (provided under separate cover)

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Table of Contents

apter 414: Waterfront Consistency Review

ORY: Adopted by the Board of Trustees of the Village of Sleepy Hollow 1-28-1997 by L.L. No. 7-1997 (Ch. 59A o dments noted where applicable.]

RAL REFERENCES

ng construction — See Ch. **145**.
ation, filling and topsoil removal — See Ch. **190**.
damage prevention — See Ch. **220**.
water management and erosion and sediment control — See Ch. **358**.
nds and watercourses — See Ch. **418**.
vision of land — See Ch. **425**.
g — See Ch. **450**.

14-1 Title.

hapter will be known as the "Village of Sleepy Hollow Waterfront Consistency Review Law."

14-2 Authority and purpose.

his chapter is adopted under the authority of the Municipal Home Rule Law and the Waterfront Revitalization land Waterways Act of the State of New York (Article 42 of the Executive Law[1]).

] *Editor's Note: See Executive Law § 910 et seq.*

he purpose of this chapter is to provide a framework for agencies of the Village of Sleepy Hollow to consi urposes contained in the Local Waterfront Revitalization Program when reviewing applications for action or cated in the coastal area; and to assure that such actions and direct actions are consistent with said policies and

C. It is the intention of the Village of Sleepy Hollow that the preservation, enhancement and utilization of the na resources of the unique coastal area of the Village take place in a coordinated and comprehensive manner to ensure a proper balance between natural resources and the need to accommodate population growth and economic development. Accordingly, this chapter is intended to achieve such a balance, permitting the beneficial use of coastal resources while preventing loss of living estuarine resources and wildlife; diminution of open space areas or public access to the waterfront; erosion of shoreline; impairment to scenic beauty; losses due to flooding, erosion and sedimentation; or permanent adverse changes to ecological systems.

D. The substantive provisions of this chapter shall only apply while there is in existence a Village Local Waterfront Revitalization Program which has been adopted in accordance with Article 42 of the Executive Law of the State of New York.

§ 414-3 Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

ACTIONS

A. Type I or unlisted actions as defined in SEQRA regulations (6 NYCRR 617.2) which are undertaken by an agency and which include:

(1) Projects or physical activities, such as construction or other activities that may affect the environment by changing the use, appearance or condition of any natural resource or structure that:

(a) Are directly undertaken by an agency; or

(b) Involve funding by an agency; or

(c) Require one or more new or modified approvals from an agency or agencies;

(2) Agency planning and policy-making activities that may affect the environment and commit the agency to a definite course of future decisions;

(3) Adoption of agency rules, regulations and procedures, including local laws, codes, ordinances, executive orders and resolution that may affect the environment; and

(4) Any combinations of the above.

B. This chapter does not apply to Type II, excluded or exempt actions as defined in the SEQRA regulations, 6 NYCRR Part 617.

AGENCY

Any board, agency, department, office, other body or officer of the Village of Sleepy Hollow.

COASTAL AREA

That portion of New York State coastal waters and adjacent shorelands as defined in Article 42 of the Executive Law which is located within the boundaries of the Village of Sleepy Hollow as shown on the coastal area map on file in the office of the Secretary of State and as delineated in the Village of Sleepy Hollow Local Waterfront Revitalization Program.

COASTAL ASSESSMENT FORM (CAF)

The form used by an agency to assist it in determining the consistency of an action with the Local Waterfront Revitalization Program.

CONSISTENT

That the action will fully comply with the LWRP policy standard and conditions and, whenever practicable, will advance one or more of them.

DIRECT ACTION

An action planned and proposed for implementation by an agency, such as but not limited to a capital project, rule making, procedure making and policy making.

LOCAL WATERFRONT REVITALIZATION PROGRAM (LWRP)

The Local Waterfront Revitalization Program of the Village of Sleepy Hollow, approved by the Secretary of State pursuant to the Waterfront Revitalization and Coastal Resources Act (Executive Law Article 42), a copy of which is on file in the Office of the Clerk of the Village of Sleepy Hollow.

WATERFRONT ADVISORY COMMITTEE or COMMITTEE

The Waterfront Advisory Committee of the Village of Sleepy Hollow, as created by this chapter.

§ 414-4 Waterfront Advisory Committee.

A. The Committee is authorized to review and make recommendations to appropriate agencies regarding the consistency of proposed actions with the Sleepy Hollow Local Waterfront Revitalization Program policy standards and conditions.

B. The Committee will provide general oversight for the administration of the Village's LWRP and technical assistance in the form of advice. Such Committee will function as the Village entity that is primarily responsible, in an advisory capacity, for implementing the policies, purposes and projects contained within the Village's LWRP. The Committee will also function as the Village agency that makes recommendations for consistency of actions with the Village's LWRP as prescribed by this chapter.

C. The Committee shall consist of seven members, who shall serve without compensation. All members of the Committee shall be residents of the Village of Sleepy Hollow and shall be appointed by the Mayor, with the approval of the majority of the Trustees present and voting, for terms of three years, except that of the members first appointed, one shall hold office for a term of one year, two for terms of two years, two for terms of three years, and two for terms of four years from and after their appointments. Members of the Committee shall continue to hold office until their successors have been appointed and qualified. The Mayor shall appoint from among the members of the Committee a Chair and Acting Chair. The Village Clerk or Deputy Clerk shall act as the Clerk of the Committee. If a vacancy on the Committee shall occur otherwise than by unexpired term, it shall be filled by the Mayor for the unexpired term. The Board of Trustees shall have power to remove any members of the Committee for cause and after a public hearing. Members of the Committee shall be required to recuse themselves from voting on any project in which their own financial interests are directly involved.

D. Meetings of the Committee shall be open to the public and shall be held at the call of the Chair and at such times as the Committee may determine. Four members of the Committee shall constitute a quorum for the transaction of business. Action of the Committee may be taken by a vote of the majority of the members present and voting. The Committee shall keep minutes of its proceedings, showing the vote of each member upon each question or, if absent or failing to vote, indicating that fact, and shall also keep records of its examinations and other official actions. The Committee shall have power from time to time to adopt, amend and repeal rules

and regulations, not inconsistent with law or the provisions of this chapter, governing its procedure and the transaction of its business and for the purpose of carrying into effect the standards outlined herein. Every rule or regulation, every amendment or repeal thereof and every order, requirement, decision or determination of the Committee shall immediately be filed in the office of the Village Clerk and shall be a public record. The Committee shall have the power to employ consultants and to pay for their services and such other expenses that may be necessary and proper, not exceeding in all the appropriations that may be provided for such purposes by the Board of Trustees.

§ 414-5 **Review of actions.**

A. Whenever a proposed action is located in the Village's coastal area, an agency shall, prior to approving, funding or undertaking the action, make a determination that it is consistent with the LWRP policy standards and conditions set forth in Subsection **G** herein.

B. Whenever an agency receives an application for approval or funding of an action or as early as possible in the agency's formulation of a direct action to be located in the coastal area, the applicant, or in the case of a direct action, the agency, shall prepare a coastal assessment form (CAF) to assist in the consistency review of the proposed action.

C. The agency shall refer a copy of the completed CAF to the Committee within 10 days of its submission and, prior to making its determination, shall consider the recommendation of the Committee with reference to the consistency of the proposed action.

D. After referral from an agency, the Committee shall consider whether the proposed action is consistent with the LWRP policy standards and condition set forth in Subsection **G** herein. The Committee shall require the applicant to submit all completed applications, CAFs and any other information deemed to be necessary to its consistency recommendation.

E. Recommendation.
[Amended 10-18-2002 by L.L. No. 14-2002]

(1) Consistency reviews for environmental impact statements. In the event the agency is coordinating the review of an environmental impact statement (EIS), the agency shall refer a copy of the draft EIS to the Committee for its review. Before the end of the required comment period on the draft EIS, the Committee shall provide to the agency, in writing, a preliminary consistency review, which shall indicate to the agency whether, in the opinion of the Committee, the proposed action is consistent with or inconsistent with one or more of the LWRP policy standards or conditions. The preliminary consistency review shall detail the basis for the Committee's opinion. The Committee may also provide to the agency any suggestions concerning the modifications of the proposed action to make it consistent with LWRP policy standards and conditions or to better advance them. Upon acceptance of the final EIS by the agency, the agency shall refer the final EIS to the Committee for a final consistency review. The final consistency review shall be filed with the agency, in writing, prior to the adoption of an environmental findings statement concluding the environmental review process. The final consistency review shall indicate to the agency whether, in the opinion of the Committee, the proposed action is consistent with or inconsistent with one or more of the LWRP policy standards or conditions. The preliminary consistency review shall detail the basis for the Committee's opinion. The Committee may also provide to the agency any suggestions concerning the modification of the proposed action to make it consistent with LWRP policy standards and conditions or to greater advance them.

(2) Consistency review for actions not requiring an environmental impact statement. For actions not requiring an environmental impact statement, the Committee shall render its written recommendation to the agency within the time period requested by the agency unless such time period is extended by mutual agreement of the Committee and the applicant or, in the case of direct action, the agency. The recommendation shall indicate whether, in the opinion of the Committee, the proposed action is consistent with or inconsistent with one or more of the LWRP policy standards or conditions and shall elaborate in writing the basis for this opinion. The Committee shall, along with its consistency recommendation, make any suggestions to the agency concerning modifications of the proposed action to make it consistent with LWRP policy standards and conditions or to greater advance them.

F. The agency shall make the determination of consistency based on the CAF, the Committee recommendation and such other information as is deemed to be necessary in its determination. The agency shall issue its determination following receipt of the Committee's recommendation and submission by the applicant of any additional required information, and prior to its decision on the merits of the proposed action. The agency shall have the authority, in its findings of consistency, to impose practicable and reasonable conditions on an action to ensure that it is carried out in accordance with this chapter. In the event that the Committee's recommendation is not forthcoming within the specified time, the referring agency shall make its decision without the benefit of the Committee's recommendation.
[Amended 1-18-2002 by L.L. No. 14-2002]

G.

Actions to be undertaken within the Sleepy Hollow coastal area shall be evaluated for consistency in accordance with the following LWRP policy standards and conditions, which are derived from and further explained and described in Section III of the Village of Sleepy Hollow LWRP, a copy of which is on file in the Village Clerk's office and available for inspection during normal business hours. Agencies which undertake direct actions shall also consult with Section IV of the LWRP in making their consistency determination. The action shall be consistent with the policy to:

(1) Revitalize the deteriorated and underutilized waterfront area (Policies 1, 1A, 1B, 1C, 1E, 1F, 1G, 1H, 1J and 1K).

(2) Retain and promote commercial and recreational water-dependent use (Policies 2 and 2A).

(3) Strengthen the economic base of Sleepy Hollow smaller harbor areas by encouraging traditional uses and activities (Policy 4).

(4) Ensure that development occurs where adequate public infrastructure is available to reduce health and pollution hazards (Policies 5, 5A and 5B).

(5) Expedite local permit procedures and use performance standards for development within the waterfront area (Policy 6).

(6) Protect significant and locally important fish and wildlife habitats from human disruption and chemical contamination (Policies 7, 7A, 7B, 7C, 8, 8A and 8B).

(7) Encourage and expand commercial fishing facilities to promote commercial and recreational fishing opportunities (Policies 9 and 10).

(8) Minimize flooding and erosion hazards through nonstructural means, carefully selected, long-term structural measures and appropriate siting of structures (Policies 11, 13, 13A, 13B, 14, 15, 16, 16A, 16B, 17 and 17A).

(9) Safeguard economic, social and environmental interests in the coastal area when major actions are undertaken (Policies 18, 18A, 18B and 18C).

(10) Maintain and improve public access to the shoreline and the water-related recreational facilities while protecting the environment (Policies 1, 1A, 1B, 1D, 1E 1F, 1H, 2, 2A, 4, 9, 19, 19A, 19B, 19C, 19D, 19E, 19F, 20, 20A, 20B, 21, 21A, 21B, 21C, 22 and 22A).

(11) Protect and restore historic and archeological resources (Policies 23, 23A, 23B and 23C).

(12) Protect and upgrade scenic resources (Policies 25, 25A and 25B).

(13) Site and construct energy facilities in a manner which will be compatible with the environment and contingent upon the need for a waterfront or water location (Policies 27, 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39, 39A, 40, 40A, 41A, 42, 43 and 44).

(14) Protect surface water and groundwaters from direct and indirect discharge of pollutants and from overuse (Policies 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39A, 40, 40A, 41, 42, 43 and 44).

(15) Perform dredging and dredge spoil in a manner protective of natural resources (Policies 15, 35, 35A, 35B, 35C, 35D and 35E).

(16) Handle and dispose of solid and hazardous wastes and effluents in a manner which will not adversely affect the environment nor expand existing landfills (Policies 34, 34A, 35, 35A, 35B, 35C, 35D, 35E, 36, 39 and 39A).

(17) Protect air quality (Policies 41, 41A, 42 and 43).

(18) Protect freshwater wetlands (Policy 44).

H. Written findings.

(1) If the agency determines that the action would not be consistent with one or more of the LWRP policy standards and conditions, such action shall not be undertaken unless the agency makes a written finding with respect to the proposed action that:

(a) No reasonable alternatives exist which would permit the action to be undertaken in a manner which will not substantially hinder the achievement of such LWRP policy standards and conditions;

(b) The action would be undertaken in a manner which will minimize all adverse effects on such LWRP policy standards and conditions;

(c) The action will advance one or more of the other LWRP policy standards and conditions; and

(d) The action will result in an overriding Village, regional or statewide public benefit.

(2) Such a finding shall constitute a determination that the action is consistent with the LWRP policy standards and conditions.

I. Each agency shall maintain a file for each action made the subject of a consistency determination, including any recommendations received from the Committee. Such files shall be made available for public inspection upon request.

§ 414-6 **Enforcement.**

The Village Building Inspector shall be responsible for enforcing this chapter. No work or activity on a project in the coastal area which is subject to review under this chapter shall be commenced or undertaken until the Village Building Inspector has been presented with a written determination from an agency that the action is consistent with the Village's LWRP policy standards and conditions. In the event that an activity is not being performed in accordance with this chapter or any conditions imposed thereunder, the Village Building Inspector shall issue a stop-work order and all work shall immediately cease. No further work or activity shall be undertaken on the project so long as a stop-work order is in effect.

§ 414-7 **Penalties for offenses.**

A. A person who violates any of the provisions of or who fails to comply with any conditions imposed by this chapter shall have committed a violation, punishable by a fine not exceeding $500, 15 days' imprisonment, or both, for a conviction of a first offense; and punishable by a fine of $1,000, 15 days' imprisonment, or both, for a conviction of a second or subsequent offenses. For the purpose of conferring jurisdiction upon courts and judicial officers, each week of continuing violation shall constitute a separate additional offense.
[Amended 1-22-2013 by L.L. No. 1-2013]

B. The Village Attorney is authorized and directed to institute any and all actions and proceedings necessary to enforce this chapter. Upon the approval of the Board of Trustees any civil penalty shall be in addition to and not in lieu of any criminal prosecution and penalty. The Village may also enforce this chapter by injunction or other civil proceeding.

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COMMENT LETTER NO. 51

Village of Sleepy Hollow
Waterfront Advisory Committee
28 Beekman Avenue
Sleepy Hollow, New York, 10591

PRELIMINARY CONSISTENCY FINDINGS
Lighthouse Landing

At its meeting on March 2, 2005, which was continued on March 15, 2005, the Waterfront Advisory Committee of the Village of Sleepy Hollow (the "Committee") considered the Draft Environmental Impact Statement ("DEIS") for the proposed construction of the project designated as "Lighthouse Landing" (the "Project") at the former General Motors site in the Village of Sleepy Hollow (the "Village"). Mr. Jonathan Stein, representing the applicant, Roseland/Sleepy Hollow, LLC ("Applicant"), responded to questions from the Committee with respect to the Project.

The Project

The Project site consists of three parcels. The largest of the three would be developed to include approximately 1,562 residential units, approximately 180,000 square feet of retail space, approximately 50,200 square feet of office space, an inn with approximately 147 rooms, possibly a train station, and related parking. A portion of the second parcel would be donated to the Village for uses that would include parks expansion and a new Village Department of Public Works facility. The third parcel would contain a cinema/retail building. Approximately 30% of the 94.5-acre site would become publicly accessible open space, including waterfront parks and paths.

Consistency Findings

The Committee found the Project as currently envisioned by the DEIS to be consistent with some of the goals and policies of the Sleepy Hollow Local Waterfront Revitalization Plan ("LWRP") and inconsistent with others. The Committee determined that it would be advisable, in order to provide appropriate guidance to the Applicant, to the Lead Agency for the Project and to other Village agencies, boards and committees having oversight responsibility with respect to the Project, to consider whether the Project as presently contemplated by the DEIS was, on the whole, consistent or inconsistent with the LWRP. The Committee concluded that its concerns over elements of the Project that were found to be inconsistent with certain LWRP policies outweighed its findings of consistency with respect to other policies. The Committee advised that modifications to the Project would have to be made before the Committee could find it consistent with the LWRP. The principal policies forming the basis for the Committee's findings are described below, in numerical sequence as such policies appear in the LWRP. Findings explained below were unanimous, unless otherwise indicated below. 5101

POLICY 1 – RESTORE, REVITALIZE AND REDEVELOP DETERIORATED AND UNDERUTILIZED WATERFRONT AREAS FOR COMMERCIAL, INDUSTRIAL, 5102

COMMENT LETTER NO. 51 (continued)

5102 (continued)

CULTURAL, RECREATIONAL, AND OTHER COMPATIBLE USES.

POLICY 1A – RESTORE, REVITALIZE AND EXPAND RECREATIONAL USES OF KINGSLAND POINT PARK AND THE TARRYTOWN LIGHTHOUSE, INCLUDING THE UNDEVELOPED PARK LAND ADJACENT TO THE POCANTICO RIVER BETWEEN PHILIPSBURG MANOR AND THE RAILROAD.

POLICY 1F – DEVELOP A WATERFRONT PEDESTRIAN ACCESS TRAIL ALONG THE WATERFRONT PERIPHERY OF THE GENERAL MOTORS PROPERTY THAT CAN SERVE TO LINK WITH OTHER TRAILS WITHIN THE VILLAGE AND OF ADJOINING MUNICIPALITIES AND GOVERNMENTS.

POLICY 1G – RESTORE, REVITALIZE, AND REDEVELOP THE VILLAGE'S CENTRAL BUSINESS DISTRICT WITH EMPHASIS ON STABILIZING AND STRENGTHENING EXISTING BUSINESSES, FURTHERING A WATERFRONT IMAGE FOR THE VILLAGE, AND PRESERVING ITS HISTORIC COMMUNITY CHARACTER.

POLICY 1H – ANY REDEVELOPMENT OF THE GENERAL MOTORS PROPERTY, AND THE WATERFRONT AREA IMMEDIATELY SOUTH OF THE GENERAL MOTORS PROPERTY ALONG THE WATERFRONT AND ADJACENT TO RIVER STREET, SHOULD BE A COMPREHENSIVELY PLANNED DEVELOPMENT THAT INCLUDES A MIX OF LAND USES AND ACHIEVES A HIGH STANDARD OF SITE PLANNING, ARCHITECTURAL DESIGN AND IS IN KEEPING WITH THE EXISTING CHARACTER OF THE VILLAGE.

THE MIX OF LAND USES SHOULD INCLUDE, AS A PRIORITY, WATER DEPENDENT COMMERCIAL, WATER DEPENDENT AND WATER RELATED RECREATIONAL USES, AND WATERFRONT RELATED PUBLIC EDUCATION AND ENTERTAINMENT. THE MIX OF USES MAY ALSO INCORPORATE RESIDENTIAL AND COMMERCIAL (WITH PREFERENCE FOR SMALL-SCALE COMMERCIAL RETAIL USES WHICH ARE IN KEEPING WITH A WATERFRONT IMAGE).

The explanation of policies applicable to the **Policy 1** group of policies emphasizes that "The intent, especially for areas along the Hudson River and Pocantico River, is to enhance and make the best use of the valuable visual and water resources, and to increase physical and visual access, increase recreational use and attract people to the waterfront and Beekman Avenue businesses. Waterfront walkways, green areas, connecting trails, and multiple use parks (with orientation or primary uses to the water), are all strongly encouraged."

The site for the proposed development consists of a former industrial site that, for many years, has been paved over. The Project would create a significant residential and commercial use for this underutilized and deteriorated site. Significant waterfront park space and trails would link the site to Kingsland Point Park to the north and the Ichabod's Landing waterfront path to the

COMMENT LETTER NO. 51 (continued)

south and the siting of the Beekman Place main commercial street would provide visual and physical access to the Village's historic Lighthouse. For these and other such reasons, the Committee found the Project to be consistent with **Policies 1, 1A, 1F** and, since the Project presents an opportunity for an expanded customer base for Beekman Avenue businesses, **1G**. With respect to **Policy 1G**, it was proposed that the Applicant consider a shuttle or similar public transportation system to facilitate access between new commercial operations at the Project site and established business enterprises on Beekman Avenue.

5102 (continued)

The Committee was, however, unable to find the Project consistent with **Policy 1H**, one of the LWRP policies specifically addressing the General Motors property. While recognizing that the park areas included in the Project plan and the inclusion of a waterfront hotel facility would qualify as water related uses, the Committee was troubled by the failure of the Project to make water dependent commercial uses a priority as required by the policy. And although **Policy 1H** permits the incorporation of uses that are "residential and commercial", these are permissive uses, not the priority uses contemplated by the **LWRP**. Essentially, the "mix" of uses for the Project as described in the DEIS consists of a large-scale housing plan of substantial density and physical scale, with a significant overlay of retail and office space. The single water dependent use presently contemplated by the DEIS is a fishing pier of still-undetermined size at a still-undetermined location at the site. The Committee appreciated that the potential river access improvements to be afforded by the addition of riverside parkland would be a valuable water related use, but could not find that the principal land uses contained in the proposal would "maximize possible ties to the water", give priority to "uses which are dependent on a location adjacent to the water", concentrate "on a mix of land uses that would include as a priority, water dependent commercial, water dependent and water related public recreation, and waterfront related public education and entertainment activities that serve residents of Sleepy Hollow as well as the region, and also develop the Village's tourism potential" [Explanation of Policies]. The Committee also did not find that the scale and density of the proposed development would be "compatible with the character of the area" or would "foster and maintain the small scale historic character of the Village" [*id*], although the Committee was cognizant that the proposal did appear to comply with zoning requirements for the area.

POLICY 2 – FACILITATE THE SITING OF WATER-DEPENDENT USES AND FACILITIES ON OR ADJACENT TO COASTAL WATERS.

5103

POLICY 2A – DOCKS, BOAT RAMPS, MOORING FACILITIES, AND OTHER SIMILAR STRUCTURES OR FACILITIES WILL BE DESIGNED AND SITED TO PROTECT NAVIGATION, ASSURE ACCESS BETWEEN WATER AND SHORE, AND MINIMIZE VISUAL AND ENVIRONMENTAL IMPACTS.

The Committee found the Project to be inconsistent with **Policies 2** and **2A**, due to the failure of the Project to include, to any material extent, significant water-dependent uses adjacent to the Hudson River and the lack of any designs for docks, boat ramps, mooring facilities, and other similar structures or facilities.

POLICY 5 – ENCOURAGE THE LOCATION OF DEVELOPMENT IN AREAS WHERE

5104

COMMENT LETTER NO. 51 (continued)

PUBLIC SERVICES AND FACILITIES ESSENTIAL TO SUCH DEVELOPMENT ARE ADEQUATE.

5104 (continued)

POLICY 5A – DISCOURAGE THE DEVELOPMENT OF USES WHICH, BY REASON OF THEIR DEMAND FOR NEW COMMUNITY SERVICES AND FACILITIES OR THEIR IMPOSITION OF BURDENS ON EXISTING SERVICES AND FACILITIES, WOULD REQUIRE DISPROPORTIONATE PUBLIC COST IN COMPARISON TO PUBLIC BENEFIT.

The Committee gave careful consideration to the impact of the proposed Project on existing services and facilities in the Village. The Committee was satisfied that sewer and gas and electric needs of the Project components could be adequately served by available facilities. The Committee noted, however, that points to be "considered in assessing the adequacy of an area's infrastructure and public services" included the following: "Streets and highways serving the proposed site can safely accommodate the peak traffic generated by the proposed land development" and "Development's water needs (consumptive and fire fighting) can be met by the existing water supply system". One member of the Committee observed that the adequacy of water resources for the site might be dependent on the Village's still-unresolved efforts to find an appropriate location for the additional water storage facility recently mandated by the State of New York. Of still greater concern to the Committee was the fact that it could not find that, given the size and scale and resulting density of the proposed uses at the Project site, the existing Village streets would be adequate to serve the resulting demand if the Project were developed as outlined in the DEIS. The Committee was not convinced that the traffic studies conducted by or on behalf of the Applicant presented a realistic view of the likely impact of the Project on existing roadway facilities.

5105

POLICY 7A – THE PHILIPSBURG MANOR AND DEVRIES FIELD WETLAND/WATERCOURSE AREAS OF THE POCANTICO RIVER SHALL BE PROTECTED, PRESERVED, AND, WHERE PRACTICAL, RESTORED SO AS TO MAINTAIN ITS VIABILITY AS A LOCALLY SIGNIFICANT HABITAT.

POLICY 7D – THE HUDSON RIVER IMMEDIATELY ADJACENT AND WITHIN 1000 FEET OF THE VILLAGE'S SHORELINE SHALL BE PROTECTED, PRESERVED AND, WHERE PRACTICAL, RESTORED SO AS TO MAINTAIN ITS VIABILITY AS A LOCALLY SIGNIFICANT HABITAT.

Policy 7D was found by the Committee to be relevant to a limited extent and the Project to be consistent with this policy in that the existing riprap along the edge of the Hudson River would be restored where necessary, with potential benefit to marine life in the River. The Committee did not find any inconsistency of the Project with Policy 7A since the Project as presently designed would not affect the Pocantico River. However, certain parties have suggested that the original course of the Pocantico River could be restored. The Committee urged the Applicant to continue to study this possibility, which would have the potential to re-create a locally significant habitat.

POLICY 8 – PROTECT FISH AND WILDLIFE RESOURCES IN THE COASTAL AREA FROM THE INTRODUCTION OF HAZARDOUS WASTES AND OTHER POLLUTANTS WHICH BIO-ACCUMULATE IN THE FOOD CHAIN OR WHICH CAUSE SIGNIFICANT SUB LETHAL OR LETHAL EFFECT ON THOSE RESOURCES. 5106

POLICY 8A – CONTROL THE INTRODUCTION OF NEW INDUSTRIES OR TECHNOLOGY WHICH COULD INCREASE THE PRESENCE OF HAZARDOUS MATERIALS WITHIN THE SLEEPY HOLLOW WATERFRONT AREA.

The Committee found that the reduction of the current impermeable surface at the site would reduce run-off to the River from the site and would tend to protect fish and wildlife resources. The Applicant has also undertaken to remove lead present at the site and to cap contaminated soil. The Committee found these actions to be consistent with Policies 8 and 8A.

POLICY 9 – EXPAND RECREATIONAL USE OF FISH AND WILDLIFE RESOURCES IN COASTAL AREAS BY INCREASING ACCESS TO EXISTING RESOURCES, SUPPLEMENTING EXISTING STOCK, AND DEVELOPING NEW RESOURCES. 5107

The Committee observed that the proposed inclusion of a fishing pier as part of the Project would constitute expansion of recreational use of fish resources in the coastal area. It was the recommendation of the Committee that the pier should be made as capacious as possible.

POLICY 11 – BUILDINGS AND OTHER STRUCTURES WILL BE SITED IN THE COASTAL AREA SO AS TO MINIMIZE DAMAGE TO PROPERTY AND THE ENDANGERING OF HUMAN LIFE CAUSED BY FLOODING AND EROSION. 5108

The Committee believed that the setbacks from the Hudson River and the elevations of the structures on the site were consistent with Policy 11.

POLICY 13A – THE EXISTING BULKHEADS ALONG THE HUDSON RIVER SHALL BE MAINTAINED IN GOOD CONDITION. NEW OR EXPANDED WATERFRONT DEVELOPMENT SHALL BE REQUIRED TO RESTORE AND MAINTAIN EROSION AND FLOOD CONTROL STRUCTURES ALONG THEIR RIVER FRONTAGE. 5109

POLICY 13B – THE CONSTRUCTION OR RECONSTRUCTION OF DOCKS, BOATHOUSES, BOAT HOISTS, PUBLIC ACCESS FACILITIES AND OTHER SHORELINE STRUCTURES SHALL BE UNDERTAKEN IN A MANNER WHICH WILL, TO THE MAXIMUM EXTENT PRACTICABLE, PROTECT AGAINST OR WITHSTAND THE DESTRUCTIVE FORCES OF WAVE ACTION AND ICE MOVEMENT.

POLICY 14 – ACTIVITIES AND DEVELOPMENT, INCLUDING THE CONSTRUCTION OR RECONSTRUCTION OF EROSION PROTECTION STRUCTURES, SHALL BE UNDERTAKEN SO THAT THERE WILL BE NO

COMMENT LETTER NO. 51 (continued)

MEASURABLE INCREASE IN EROSION OR FLOODING AT THE SITE OF SUCH ACTIVITIES OR DEVELOPMENT, OR AT OTHER LOCATIONS.

5109 (continued))

It was noted that most riprap along the River was in good condition and that the Applicant would makes repairs where necessary, making the Project consistent with **Policy 13A.** The placement of the proposed pier at the site has not been decided and other shoreline structures have not been proposed in the DEIS. The Committee therefore found that the Project was conditionally consistent with **Policies 13B and 14** subject to the Applicant's use of appropriate construction materials and the placement of the pier and any other shoreline structure at appropriate locations.

POLICY 17 – NON-STRUCTURAL MEASURES TO MINIMIZE DAMAGE TO NATURAL RESOURCES AND PROPERTY FROM FLOODING AND EROSION SHALL BE USED WHENEVER POSSIBLE.

5110

POLICY 17A – PROTECT THE STEEP SLOPES AND HILLSIDES THROUGHOUT THE VILLAGE THROUGH THE USE OF NONSTRUCTURAL MEASURES, WHERE PRACTICAL, TO PREVENT EROSION, ESPECIALLY THROUGH THE RETENTION OF VEGETATIVE COVERS.

The Committee noted that these policies were marginally applicable to the Project and found that the proposed use of vegetation to stabilize soil and mitigate run-off would make the Project consistent with Policies **Policy 17** and **17A**, conditional on Applicant's installation of appropriate vegetative cover at appropriate locations on the site.

POLICY 18 – TO SAFEGUARD THE VITAL ECONOMIC, SOCIAL AND ENVIRONMENTAL INTERESTS OF THE STATE AND OF ITS CITIZENS, PROPOSED MAJOR ACTIONS IN THE COASTAL AREA MUST GIVE FULL CONSIDERATION TO THOSE INTERESTS, AND TO THE SAFEGUARDS WHICH THE STATE HAS ESTABLISHED TO PROTECT VALUABLE COASTAL RESOURCE AREAS.

5111

POLICY 18A – PROTECT THE VITAL ECONOMIC, SOCIAL, CULTURAL, AND ENVIRONMENTAL INTERESTS OF THE VILLAGE IN THE EVALUATION OF ANY PROPOSAL FOR NEW ROADS, ROAD WIDENING OR INFRASTRUCTURE.

POLICY 18B – TO PROTECT THE SOCIAL INTERESTS OF THE VILLAGE, PROPOSED ACTIONS MUST GIVE FULL CONSIDERATION TO THE IMPACTS OF SUCH ACTIONS ON THE COMMUNITY AND CULTURAL RESOURCES OF THE VILLAGE AND THE QUALITY OF LIFE SUCH RESOURCES SUPPORT.

POLICY 18C – TO PROTECT THE ENVIRONMENTAL INTERESTS OF THE VILLAGE, PROPOSED ACTIONS MUST GIVE FULL CONSIDERATION TO THE IMPACTS OF SUCH ACTIONS ON VALUABLE AND SENSITIVE NATURAL RESOURCES OF THE VILLAGE.

COMMENT LETTER NO. 51 (continued)

The Committee found no inconsistency between the Project and these policies and noted, in particular, that the improved recreational access provided by the plan, including playing fields and public open spaces, and the reservation of part of the site for a new Village Department of Public Works facility were protective of the Village's social and environmental interests and quality of life. The Committee's findings on these policies were unanimous, except that the finding of consistency with respect to **Policy 18B** had one dissenting vote, based on the member's view that the Project's adverse impact on roads and traffic (see findings with respect to **Policy 5 and 5A)** would have an unacceptably adverse effect on the quality of life in the Village.

5111 (continued)

POLICY 19 – PROTECT, MAINTAIN, AND INCREASE THE LEVELS AND TYPES OF ACCESS TO PUBLIC WATER-RELATED RECREATION RESOURCES AND FACILITIES SO THAT THESE RESOURCES AND FACILITIES MAY BE FULLY UTILIZED BY ALL THE PUBLIC IN ACCORDANCE WITH REASONABLY ANTICIPATED PUBLIC RECREATION NEEDS AND THE PROTECTION OF HISTORIC AND NATURAL RESOURCES. IN PROVIDING SUCH ACCESS, PRIORITY SHALL BE GIVEN TO PUBLIC BEACHES, BOATING FACILITIES, FISHING AREAS, AND WATERFRONT PARKS.

5112

POLICY 19A – PROTECT, MAINTAIN, AND INCREASE THE LEVEL AND TYPES OF ACCESS TO THE PUBLIC WATER-RELATED RECREATION RESOURCES AND FACILITIES OF KINGSLAND POINT PARK AND ENCOURAGE THEIR INCREASED UTILIZATION AND DEVELOPMENT.

POLICY 19B – RECOGNIZE THE REGIONAL AND STATE-WIDE HISTORIC IMPORTANCE OF PHILIPSBURG MANOR, SLEEPY HOLLOW CEMETERY, THE OLD CROTON AQUEDUCT, THE OLD DUTCH CHURCH, PATRIOTS PARK, AND KINGSLAND POINT LIGHTHOUSE AND ENCOURAGE PROTECTION AND PUBLIC UTILIZATION OF THESE PROPERTIES AND RESOURCES.

POLICY 19C – ENCOURAGE, DEVELOP, PROTECT, AND MAINTAIN LINEAR PEDESTRIAN WATERFRONT ACCESS TO AND LINKAGES BETWEEN THE VILLAGE'S RIVERFRONT PARK ON RIVER STREET TO KINGSLAND POINT LIGHTHOUSE AND KINGSLAND POINT PARK.

POLICY 19D – ENCOURAGE, DEVELOP, PROTECT, AND MAINTAIN APPROPRIATE PUBLIC ACCESS TO AND LINKAGES BETWEEN KINGSLAND POINT PARK, DEVRIES FIELD, PHILIPSBURG MANOR, DOUGLAS PARK, SLEEPY HOLLOW CEMETERY, THE OLD CROTON AQUEDUCT, THE ROCKEFELLER STATE PARK PRESERVE LANDS, AND ALONG THE HUDSON RIVER AND RIVERSIDE DRIVE NORTH OF THE MOUTH OF THE POCANTICO RIVER.

POLICY 19E – THE CURRENTLY UNDERUTILIZED VILLAGE RIVERFRONT PARK PROPERTY ALONG RIVER STREET SHOULD REMAIN PUBLICLY OWNED WITH FUTURE IMPROVEMENTS PROVIDING FOR PUBLIC ACCESS TO THE RIVER AND WATER-RELATED RECREATION.

COMMENT LETTER NO. 51 (continued)

POLICY 20 – ACCESS TO THE PUBLICLY-OWNED FORESHORE AND TO LANDS IMMEDIATELY ADJACENT TO THE FORESHORE OR THE WATER'S EDGE THAT ARE PUBLICLY OWNED SHALL BE PROVIDED AND IT SHALL BE PROVIDED IN A MANNER COMPATIBLE WITH ADJOINING USES.

5112 (continued)

At present, the General Motors site is fenced and there is no public access to the Hudson River from this property. The Project would include public parklands and walkways along the River with a possible opportunity to touch the River using a pedestrian stairway to the water's edge. New access to Kingsland Point Part would be afforded by a new approach to the park from through the Lighthouse Landing site, with parking made available for Kingsland Point Park visitors. Access to the Kingsland Point Lighthouse would also be facilitated, with the new Beekman Place artery leading directly to the Lighthouse. The pedestrian access provided along the shoreline portion of the site would effectively provide linkages between the Village's park at Horan's Landing and the Ichabod's Landing development to the south of the Project site and Kingsland Point Park to the north of the site. The Committee recognized that, since the Project site is not publicly-owned, the Project would not itself provide access to publicly-owned foreshore or water's edge points, but noted that the improved access to the Kingsland Point Park, which is publicly-owned, would give better access to the waterside at that location.

POLICY 21 – WATER-DEPENDENT AND WATER-ENHANCED RECREATION WILL BE ENCOURAGED AND FACILITATED, AND WILL BE GIVEN PRIORITY OVER NON-WATER RELATED USES ALONG THE COAST PROVIDED IT IS CONSISTENT WITH THE PRESERVATION AND ENHANCEMENT OF OTHER COASTAL RESOURCES AND TAKES INTO ACCOUNT DEMAND FOR SUCH FACILITIES. IN FACILITATING SUCH ACTIVITIES, PRIORITY SHALL BE GIVEN TO AREAS WHERE ACCESS TO THE RECREATION OPPORTUNITIES OF THE COAST CAN BE PROVIDED BY NEW OR EXISTING PUBLIC TRANSPORTATION SERVICES AND TO THOSE AREAS WHERE THE USE OF THE SHORE IS SEVERELY RESTRICTED BY EXISTING DEVELOPMENT.

5113

POLICY 21A – WATER-DEPENDENT AND WATER-ENHANCED RECREATION SHALL BE ENCOURAGED AND SHALL BE GIVEN PRIORITY OVER NON-WATER RELATED USES AT THE FOLLOWING PUBLICLY-OWNED SITES:

- **THE VILLAGE'S RIVERFRONT PARK PROPERTY ON RIVER STREET; AND**
- **KINGSLAND POINT PARK AND LIGHTHOUSE.**

POLICY 21B – ENCOURAGE THE DEVELOPMENT OF ADDITIONAL SUPPORT FACILITIES, AND MAINTENANCE OF EXISTING FACILITIES, AT KINGSLAND POINT PARK TO INCREASE ITS ATTRACTIVENESS AND ITS CAPACITY AS A WATERFRONT PARK FOR PASSIVE AND ACTIVE RECREATIONAL USES, INCLUDING BOATING, SWIMMING, AND FISHING.

COMMENT LETTER NO. 51 (continued)

POLICY 21C – IN ASSOCIATION WITH ANY REDEVELOPMENT OF THE GENERAL MOTORS PROPERTY AND THE WATERFRONT AREA IMMEDIATELY SOUTH OF THE GENERAL MOTORS PROPERTY, WATER-DEPENDENT AND WATER-ENHANCED RECREATIONAL USES SHALL BE ENCOURAGED AND SHALL BE GIVEN PRIORITY OVER NON WATER-RELATED USES.

5113 (continued)

PURSUE ESTABLISHMENT OF A SYSTEM OF PUBLIC ACCESS RECREATIONAL TRAIL LINKAGES FROM AND BETWEEN THE TARRYTOWN/SLEEPY HOLLOW VILLAGE BOUNDARY, THE VILLAGE'S RIVERFRONT PARK PROPERTY ON RIVER STREET, KINGSLAND POINT PARK, DEVRIES FIELD, PHILIPSBURG MANOR, DOUGLAS PARK, SLEEPY HOLLOW CEMETERY, THE OLD CROTON AQUEDUCT, THE ROCKEFELLER STATE PARK PRESERVE LANDS, AND ALONG THE HUDSON RIVER AND RIVERSIDE DRIVE NORTH OF THE MOUTH OF THE POCANTICO RIVER.

POLICY 22 – DEVELOPMENT, WHEN LOCATED ADJACENT TO THE SHORE, WILL PROVIDE FOR WATER-RELATED RECREATION, WHENEVER SUCH RECREATIONAL USE IS COMPATIBLE WITH REASONABLY ANTICIPATED DEMAND FOR SUCH ACTIVITIES AND THE PRIMARY PURPOSE OF THE DEVELOPMENT.

POLICY 22A – IN ASSOCIATION WITH ANY REDEVELOPMENT OF THE GENERAL MOTORS PROPERTY AND THE WATERFRONT AREA IMMEDIATELY SOUTH OF THE GENERAL MOTORS PROPERTY, WATER-RELATED RECREATION SHALL BE PROVIDED AS A MIXED USE, PROVIDED SUCH RECREATIONAL USE(S) IS (ARE) COMPATIBLE WITH THE PRIMARY PURPOSE OF THE DEVELOPMENT.

The impact of the Project in creating linkage trails as contemplated by **Policy 21C** has been noted in connection with the Committee's findings under prior policies. The Committee also noted that parks and fishing piers, as well as pedestrian trials and scenic overlooks (all part of the Project), are specifically recognized in the applicable Explanation of Policies for **Policy 21** and its sub-policies as water-related recreational facilities. In general, the Committee found the Project consistent with the foregoing policies and **Policies 22** and **22A** because these policies did not explicitly create a hierarchy giving water-dependent uses priority over water-related uses but, rather, gave both types of use priority over non water-related uses. Nevertheless, several members of the Committee found that the Project paid insufficient attention to water-dependent recreation, such as "adequate boating services", "launch sites" and "docking facilities". Accordingly, the Project was found to be consistent with **Policies 21, 21A** and **21C** with two dissenting votes.

POLICY 23 – PROTECT, ENHANCE AND RESTORE STRUCTURES, DISTRICTS, AREAS OR SITES THAT ARE OF SIGNIFICANCE IN THE HISTORY, ARCHITECTURE, ARCHAEOLOGY OR CULTURE OF THE STATE, ITS COMMUNITIES OR THE NATION.

5114

POLICY 23A – PRESERVE AND ENHANCE THE STRUCTURES, AREAS, OR SITES WITHIN THE VILLAGE OF SLEEPY HOLLOW THAT ARE CURRENTLY LISTED ON THE STATE AND/OR NATIONAL REGISTER OF HISTORIC PLACES.

5114 (continued)

The Committee took note of the fact that the Kingsland Point Lighthouse is listed on the National Register of Historic Places and is considered to be of significance to the history of the Village. Although the Lighthouse lies outside the boundaries of the Project site and is not within the scope of the Project, so that the Applicant cannot take steps to protect, preserve or enhance the site, the Committee observed that the site configuration would direct public attention to the Lighthouse, which would be the focal point of the Beekman Place "main street". It was observed that the prominence thus given to the Lighthouse might encourage the public authorities responsible for the Lighthouse site to take steps to protect, preserve and enhance the Lighthouse and its site.

POLICY 25 – PROTECT, RESTORE OR ENHANCE NATURAL AND MAN-MADE RESOURCES WHICH ARE NOT IDENTIFIED AS BEING OF STATEWIDE SIGNIFICANCE, BUT WHICH CONTRIBUTE TO THE OVERALL SCENIC QUALITY OF THE COASTAL AREA.

5115

POLICY 25A – PROTECT OR ENHANCE VIEWS OF THE HUDSON RIVER, THE HUDSON RIVER VALLEY, AND THE OPPOSITE SHORE FROM THE IMMEDIATE RIVERFRONT AS VIEWED FROM PUBLICLY OWNED PROPERTY.

POLICY 25B – PROTECT OR ENHANCE THE FOLLOWING IDENTIFIED SCENIC RESOURCES AS AREAS AND VIEWSHEDS [citing the General Motors Plant Complex and Property as one of nine identified scenic landscape subunits and the Hudson River from the corner of Beekman Avenue and Hudson Street as one of twenty-three viewsheds of local importance].

The Committee acknowledged that, although the Project site has, since the demolition of the General Motors plant structures, afforded open views of the Hudson River, at the time of the adoption of the LRWP, the identified scenic resources and Hudson River views were significantly (and adversely) impacted by the then-existing plant structures. The Committee understood that any construction at the site will interrupt the current open views and, consequently, "diminish the scenic quality of an identified scenic resource [Explanation of Policies], but also recognized that the protection of River views and identified viewsheds contemplated by the LWRP was not intended totally prohibit development. The Committee noted the efforts of the Applicant to preserve and frame River views by use of the street layout developed for the site. In addition, the "scales, forms, and materials" proposed by Applicant for its Beekman Place development seemed "compatible with and [seemed to] add interest to the landscape" [*id.*]. The Committee concluded that the Project would be consistent with Policies 25, 25A and 25B, but encouraged the Applicant to consider alternative designs – both with respect to size and placement of structures – that would more fully provide visual protection for views of the River, the Hudson River Valley and the opposite shore and would more effectively

5115 (continued)

enhance identified scenic resources.

POLICY 32A – FUTURE DEVELOPMENT IN THE VILLAGE SHALL BE REQUIRED TO USE STATE OF THE ART LOW FLOW WATER FIXTURES AND WATER SAVING DEVICES TO REDUCE THE DEMAND FOR WATER AND REDUCE THE FLOW TO THE SEWAGE TREATMENT FACILITIES. WHERE PRACTICABLE, THE GUIDELINES IN THE NEW YORK STATE MUNICIPAL MODEL WATER CONSERVATION PLAN SHOULD BE FOLLOWED.

5116

POLICY 33 – BEST MANAGEMENT PRACTICES WILL BE USED TO ENSURE THE CONTROL OF STORM WATER RUNOFF AND COMBINED SEWER OVERFLOWS DRAINING INTO COASTAL WATERS.

POLICY 37 – BEST MANAGEMENT PRACTICES WILL BE UTILIZED TO MINIMIZE THE NON-POINT DISCHARGE OF EXCESS NUTRIENTS, ORGANICS AND ERODED SOILS INTO COASTAL WATERS.

POLICY 39 – THE TRANSPORT, STORAGE, TREATMENT AND DISPOSAL OF SOLID WASTES, PARTICULARLY HAZARDOUS WASTES, WITHIN COASTAL AREAS WILL BE CONDUCTED IN SUCH A MANNER SO AS TO PROTECT GROUNDWATER AND SURFACE WATER SUPPLIES, RECREATION AREAS, AND SCENIC RESOURCES.

POLICY 41 – LAND USE OR DEVELOPMENT IN THE COASTAL AREA WILL NOT CAUSE FEDERAL OR STATE AIR QUALITY STANDARDS TO BE VIOLATED.

POLICY 41A – LAND USE AND DEVELOPMENT IN SLEEPY HOLLOW SHALL NOT DEGRADE EXISTING AIR QUALITY OR CONTRIBUTE TO AN INABILITY TO MAINTAIN OR ATTAIN NATIONAL AMBIENT AIR QUALITY STANDARDS AND SHALL NOT GENERATE OR CAUSE MORE THAN ONE TON PER YEAR OF TOXIC AIR POLLUTANTS TO BE EMITTED INTO THE ATMOSPHERE.

The Committee recognized that, as a matter of law, the Applicant will be legally required to comply with **Policies 32A, 37, 41** and **41A**. With respect to **Policy 33**, it was noted that the Project will result in the replacement of part of the site's current impervious surface with green spaces containing permeable vegetation. Storm water will be adequately handled by use of the three existing General Motors outfalls. The Committee observed that waste collection and disposal is handled by the Village. However, the Committee noted that solid wastes, including hazardous wastes, could be generated during the Project's construction phase. The Applicant was advised that, in order to comply with **Policy 39**, it should give strict instructions to its construction contractors that no wastes are to be dumped in the Hudson River.

POLICY 44 – PRESERVE AND PROTECT TIDAL AND FRESHWATER WETLANDS AND WETLAND/WATERCOURSE COMPLEXES AND PRESERVE THE BENEFITS DERIVED FROM THESE AREAS.

5117

COMMENT LETTER NO. 51 (continued)

The Committee noted that the Pocantico River constitutes a tidal wetlands/watercourse and that the replacement of paved areas adjacent to the River with green open space would be beneficial for the area. The Committee observed, however, that the anticipated construction of a new Village Department of Public Works facility by the Village on the so-called "East Parcel" as part of the Project can affect the Pocantico River wetlands. Accordingly, the Committee's finding that the Project is consistent with **Policy 44** is conditional with respect to the Department of Public Works portion of the Project and the Committee will retain jurisdiction to consider the Village's proposal for that construction when it is developed.

5117 (continued)

On the basis of its consistency review, the Committee found that the Project, as currently proposed in the DEIS, was consistent with some of the policies of the **LWRP** and inconsistent with other policies. The Committee, therefore, considered whether the elements of the Project as outlined in the DEIS were, in the aggregate, consistent or inconsistent with the policies and goals of the **LWRP**. The Committee determined, by a vote of 6-0 with one abstention, that the Project, as a whole, was not consistent with the **LWRP**. The Committee recommended to the Applicant that it modify its proposal by incorporating additional water-dependent uses and by reducing the size and density of the Project, in order to achieve consistency with critical **LWRP** goals and policies. The Committee emphasized that its current findings were *preliminary* based on a *draft* environmental impact statement and that final consistency findings would be made by the Committee on the basis of a final environmental impact statement that might differ significantly from the DEIS. Mr. Stever abstained from the vote and signified his intention to submit a dissenting consistency finding.

5118

Richard D. Weiss, Chairman

Village of Sleepy Hollow
Waterfront Advisory Committee

Separate Statement of Donald W. Stever
Dissenting in Part and Concurring in Part With Preliminary Consistency Findings
Lighthouse Landing

5119

There Should Not Have Been a Straw Vote on
Consistency with the Local Waterfront Revitalization Plan

I abstained from participating in the Committee's straw vote on Lighthouse Landing because I do not believe that taking a straw vote at such an early stage of review of the project is either necessary or in the best interests of the Village. Procedurally, the purpose of early stage review is for the Committee to provide specific comments to the Applicant on the Applicant's initial proposal. In the case of a large scale development project such as Lighthouse Landing it is a given that the scope and design of the project that emerges after completion of the State Environmental Quality Review Act (SEQRA) process will differ, in many ways materially differ, from the initial proposal. The Committee was asked to review and comment on the initial proposal, with respect to which the Board of Trustees, as the Lead Agency under SEQRA, has authorized the circulation of a Draft Environmental Impact Statement for comment. It is not necessary for the Waterfront Advisory Committee to make formal LWRP Consistency Findings in connection with review of a draft EIS. Neither SEQRA nor Village law require any such action and it amounts to nothing more than an academic exercise that is unfortunately subject to misuse.

Formal findings at this early stage of the project are likely to be misinterpreted or, worse, misused by opponents or supporters of the project, members of the public and the press. The straw vote is not legally binding because the project has not yet been submitted to the WAC by the Board of Trustees for a consistency recommendation. I am very concerned, moreover, that members of the Committee may consider themselves "locked in" to a position by a preliminary straw vote, which will have the effect of clouding their judgment later when the project, as reconfigured as the result of SEQRA review, is submitted for formal consideration.

What is most helpful to an applicant and the Village in the preliminary review exercise is the back and forth discussion concerning the initial proposal and the LWRP policies. This discussion provides guidance to the applicant as to those policies with which the Committee thinks the proposal might not be consistent, and ways for the project to be reconfigured or otherwise changed to make it consistent with the LWRP policies. That information can be communicated, and in fact was communicated in this case, without a vote on overall project consistency.

I believe that the Committee acted well outside of its mandate when the majority voted on the proposition, as stated on the first and last pages of the "Preliminary Consistency Findings" that "its concerns over elements of the Project that were found to be inconsistent with certain LWRP policies outweighed its findings of consistency with respect to other policies." Such a sweeping

COMMENT LETTER NO. 51 (continued)

generalization is not the role of the Waterfront Advisory Committee. The Committee's task, at the appropriate time, is to provide specific recommendations concerning consistency with the various policies contained in the LWRP to the lead agency. It is the lead agency's job to balance the pluses and minuses and determine, overall, whether special circumstances outweigh any inconsistencies and whether the project must be modified or rejected based on LWRP consistency issues. Finally, I would not reach the same conclusion the majority of the Committee appears to have reached on the "balancing" issue for this project. I would strike the balance differently, weighing several policies the Committee appears to discount to be more important, and placing less weight on several policies the Committee seems to have relied upon heavily. Moreover, except for one, the policies with which the Committee seems to have placed the greatest emphasis on are, in my opinion, trumped by the Riverfront Zoning District law, which was adopted in conjunction with the Local Waterfront Revitalization Plan and allows development on the subject property as of right, based on development guidelines that are themselves not "consistent with" certain of the policies on which the majority of the Committee seems to place great stock.

Notwithstanding the foregoing criticism, it is not my intention to criticize the Committee members nor to suggest that the Committee is in any way not performing its civic function in an admirable and straightforward manner. The Waterfront Advisory Committee is one of the most effectively functioning, hard-working volunteer municipal bodies on which I have ever had the privilege of serving, and I have nothing but praise for the Committee and its chairman, Richard Weiss. The Committee is a model for citizen participation in local government. My comments, to the extent they represent disagreement with the Committee's actions, simply reflect a substantive or in some cases a legal disagreement with the majority's views, much as the dissenting opinion of a member of an appellate court, even if harshly worded, is intended to enlighten or shapen the debate rather than criticize. It is in this spirit that I offer this set of largely concurring and partly dissenting views.

Comment on Specific Preliminary Policy Determinations

Policies 1-1A, 1F, 1G, and 1H

5120

I would concur in part and dissent in part with the Committee's view on these policies. I am in agreement with the Committee's views concerning policies 1, 1A, 1F and 1G. With respect to Policy 1H, I would concur with the Committee's sentiment that the development, as proposed, provides inadequate water dependent use. There are significant opportunities for water dependent uses since the site is adjacent to Hudson River and a portion of the shoreline runs parallel to and not far from a federally maintained navigation channel. Commitment by the developer to construct a public pier providing access to the site from the vessels would satisfy this policy.

I dissent, however, from the Committee's statement that the "scale and density of the proposed development" would not be "compatible with the character of the area" or would "foster and maintain the small scale historic character of the Village." The development is large, to be sure, but so is the site and the developer is not utilizing the entirety of the site, but is in effect leaving

COMMENT LETTER NO. 51 (continued)

more than 30% of the site undeveloped. The developer has carefully designed the streetscape to Village proportions and aesthetics. Finally, it is very important to understand that the proposal, except as noted above, precisely tracks the *mandate* of the Riverfront Zoning District development standards and guidelines. It is less dense than those standards and guidelines provide, and the guidelines were adopted in conjunction with, and must be viewed as inextricably tied to, the Village's LWRP. As such, the specific development guidelines trump inconsistent, more general provisions, of the LWRP Policies. 5120 (continued)

Policies 2, 2A 5121

I would generally concur with the Committee's sentiment concerning the Project's consistency with these policies, as discussed in connection with Policy 1H above.

Policies 5 & 5A 5122

For the same basic reasoning behind my dissent from the Committee's conclusions regarding Policy 1H, I would dissent from the Committee's conclusions concerning Policy 5. The Riverfront Development District standards and density guidelines of necessity assume that traffic generated by a development that meets those standards can be assimilated by the available roadway capacity. The Committee possesses no traffic management expertise and is not in any position to criticize the Applicant's traffic analyses. At the time the LWRP and the accompanying rezoning of the parcel in question by the Riverfront Development District impacts of traffic that resulted from multi-shift operation of a 3.5 million square foot automobile assembly plant employing more than 2,000 workers was considered the relevant comparison for future re-use traffic impacts. The impacts from the proposal are far less than those that resulted from the prior use. It is certainly the case that traffic impacts from this Project will have to be carefully studied, and that the SEQRA process may result in the imposition of some sort of mitigation requirement. However, that fact does not translate into a lack of consistency with Policies 5 and 5A.

The Committee's brief mention of the Village's water supply is simply premised on an erroneous set of factual assumption on the part of Committee members.

Policies 7A and 7D 5123

I would generally concur with the Committee's view, except that it is not the responsibility of the private developer Applicant to study creation of a new outlet for the Pocantico River. The proposal that is referred to suggest that the Project set aside additional open space southeast of Kingsland Point Park between the Hudson River and the railroad right-of-way so that land would be available for future creation of an additional outlet for the Pocantico River should further studies *by third parties* and funding (presumably by some Government entity) make that feasible. Thus, I would clarify the statement.

COMMENT LETTER NO. 51 (continued)

Policies 8, 8A, 9, 11, 13A, 13B, 14, 17, 17A, 18, 18A, 18B, 18C, 19, 19A, 19B, 19C, 19D and 19E 5124

I would concur with the Committee's sentiment on these policies.

Policies 20, 21, 21A, 21B, 21C, 22 and 22A 5125

These are highly significant policies to the site of the Proposal, and in my view the majority of the Committee, while finding the Project consistent with these policies, gives them far too little weight in the overall scheme of things. It is extremely beneficial to the public that the Project will restore full public access to the foreshore of the Hudson River. This policy should carry significantly more weight than the policies the majority of the Committee relied upon in its misguided attempt to balance the weight of consistency vs. inconsistency.

Policies 23 and 23A 5126

I would concur with the Committee's views with respect to these policies.

Policies 25, 25A, and 25B 5127

I would concur with the Committee's sentiment with respect to these policies.

Policies 32A, 33, 37, 39, 41, 41A 5128

I would concur with the Committee's sentiment with respect to these policies.

Policy 44 5129

I would concur with the Committee's sentiment with respect to this policy.

Donald W. Stever

VILLAGE OF SLEEPY HOLLOW
WATERFRONT ADVISORY COMMITTEE
January 10, 2007

The meeting was called to order by Richard Weiss, Chair at 8:03 p.m. The Chair noted that a quorum was present.

Present: Richard Weiss, Chairman
Karin Adir
Doug Maass
Terence McGlynn
Ralph Gunderman

Absent: None

Also Present: Anthony DelVecchio (Recording Secretary)
Sean McCarthy (Building Inspector, Village of Sleepy Hollow)
Dave Smith (Saccardi & Schiff/Village Planner)

APPROVED

Announcements:

None.

Agenda:

1) **Minutes for December 13, 2006**
2) **Membership**
3) **Lighthouse Landing**
4) **Other**

1) Minutes -

The minutes from the December 13, 2006 meeting will be reviewed at the next meeting.

2) Membership-

Ralph Gunderman wanted to offer a note of thanks to a client that went out of his way so that he could attend the meeting this evening. He stated that the Committee has been operating for the last 10 months with a short staff.

The Chair stated that there was a meeting of the Council of Committees last week. He asked if there were any persons added to the Waterfront Advisory Committee.
Sean McCarthy responded no.

3) Lighthouse Landing -

Ralph Gunderman asked if a 3-D model was available.
Jon Stein responded that the model is being fabricated but is not ready as of yet.

Jon Stein presented the FEIS alternative plan. He stated that the zoning allows for 1862 residential units and the new plan is proposing 1250 residential units. He reviewed some of the major changes. He spoke about the new fishing pier and belvedere. He stated that a new bulkhead is proposed near the hotel.
Dave Smith stated that the bulkhead is proposed to accommodate a large vessel like the Clearwater.

Jon Stein reviewed some of the revisions to the Ichabod's Landing/Beekman Ave roundabout. He stated that this was a change that was proposed post-FEIS. He also referred to the Village's Waterfront Master Plan. He stated that every element of the Master Plan has been incorporated into the FEIS.

Andy Tung reviewed the LWRP Policies that the Committee found inconsistent with the DEIS. They were policies 1(h), 2, 2(a), 5 and 5(a). He reviewed the increased open space areas. He also spoke about the water-dependent uses that were added. He spoke about the fishing pier, the belvederes, the floating dock, possible bulkhead or belvedere at the point and the boathouse near the lighthouse.

Jon Stein stated that there would be an additional 800 sf that is specifically planned for boat storage. He stated that this space is separate from the 3000 sf interpretative center.

Andy Tung spoke about the dock-and-dine concept. He also spoke about other possible ways to have boats enter the water. He stated that this concept is still under development. He also spoke about the balance of retail and residential space. He spoke about the interior park land. He stated that the amount of park land has increased from 33 acres to 39 acres. He also stated that all of the waterfront recreational uses will be built at Roseland's expense.

The Chair referred to Policy 1(h) on waterfront water-dependent uses.

Doug Maass stated that he would like to see a larger commitment to the waterfront. He referred to a former Chrysler plant in Wisconsin that was converted into a waterfront focused development. He stated that the proposed boathouse space is small and will limit the uses. He stated that the boathouse should be triple the size of what is proposed. He stated that some sort of wave attenuation near the boat launch areas should also be investigated. He also stated that if materials are brought onto the site by barge, he requested that the barge loading set-up be made available to the Village after the property is developed.

The Chair stated that the water-dependent uses are not well-integrated into the site. He stated that the water needs to be brought into the development. He stated that the water-dependent uses seem to be merely stuck onto the site.

APPROVED

Karin Adir asked why a marina was not proposed.
Jon Stein reviewed the proposed water-dependent uses. He stated that the marina was evaluated in the early stages. He stated that the Federal Navigation channel limits some of the uses on the site. He also stated that the required parking for a marina cannot be supported in the area. He stated that all of the proposed amenities are for public use.

Ralph Gunderman stated that in his opinion, the revisions made by the applicant are consistent with policy 1(h).

The Chair referred to policy 2 and 2(a).

Doug Maass asked what would be the largest commercial space.
Jon Stein responded that an 18,000sf cinema and a 24,000sf specialty grocery store are proposed. He spoke about the traffic impacts on the site. He stated that the retail traffic will bring the largest traffic impacts to the site. He stated that the traffic impacts have been reduced by 30% by reducing the retail space from the DEIS to the FEIS.

The Chair referred to policy 5 and 5(a). He referred to the Committee's findings from March 2005. He stated that the traffic and on-site water needs were the main issues. He stated that the number of units was reduced to address the traffic impacts. He also stated that at the December 2006 meeting, the Committee reviewed the Village's plans to increase the Village's water storage supply.

Ralph Gunderman stated that at previous meetings, he requested the applicant to produce a development of this scale which has two choked entrance points. He reviewed the Village code with regards to the density of the site. He stated that the law is internally inconsistent. He stated that a jitney system has been discussed at previous meetings as a method to relieve some of the traffic impacts. He stated that the applicant should make a commitment to the jitney system. He stated that the public jitney or trolley system would satisfy his concerns on traffic.

Dave Smith asked if the applicant was going to contribute towards a municipal transportation route.
Andy Tung responded that the applicant is investigating which method is best. He stated that a traffic study is being evaluated between Tarrytown and Sleepy Hollow.

Dave Smith stated that a proposed inter-municipal transit system was discussed. He stated that the discussions involved a system from Beekman Ave to the GM site to Tarrytown.

Mark Weingarten spoke about the park-like experience that the site would provide. He also stated that the application is only in the conceptual planning stages. He stated that the plan is not perfect. He stated that the Committee should look at the plan for its consistency with the conceptual plan to date. He stated that the Committee could make recommendations along with their consistency findings.

APPROVED

Doug Maass asked who was building the DPW facilities.
Jon Stein responded that the applicant was building the facilities.

Ralph Gunderman made a motion to find the application consistent with policy 1(h). Karin Adir seconded.
Doug Maass stated that more emphasis should be placed on the boathouse and interpretative center. He stated that the boathouse should be larger. He also stated that if the water-dependent uses are not properly designed, they will not be used and will eventually fall into disrepair. He stated that the amenities should be further reviewed by the Committee once they are further developed.
Terence McGlynn stated that there is great potential opportunity to increase the size of the beach for recreational swimming.
Karin Adir stated that another footbridge over the railroad tracks would help access the fields.
The Chair stated that the water-dependent uses should be integrated with the rest of the site.

Doug Maass stated that the waterfront master plan is only in draft form.
Dave Smith responded that the document is available for public review and comment.

The Committee unanimously agreed that the application is consistent with policy 1(h) with the recommendations as previously stated (5-0).

The Chair referred to policies 2 and 2(a). Ralph Gunderman made a motion to find the application consistent with policy 2 and 2(a). The Chair seconded. It was unanimous with the same recommendations from policy 1(h) are applied (5-0).

The Chair referred to policies 5 and 5(a). Ralph Gunderman stated that the inner-Village transportation study should be performed. He stated that the traffic study and proposed jitney system would help support policy 1(g). Ralph Gunderman made a motion to find the application consistent with policy 5 and 5(a) on the condition that the footbridge over the railroad tracks is further explored along with the jitney service. Doug Maass seconded. It was unanimous (5-0).

This was adjourned to the next meeting.

Adjourned at 9:56 pm.

APPROVED

Meeting Date: 06/07/2011
Resolution Number: 06/67/2011

VILLAGE OF SLEEPY HOLLOW
MAYOR AND BOARD OF TRUSTEES
CONSISTENCY FINDINGS
LIGHTHOUSE LANDING

WHEREAS, on or about February 11, 2003 a formal application for a Riverfront Development Concept Plan and Special Permit approval was submitted by Roseland/Sleepy Hollow, LLC (Roseland) and General Motors Corporation (Old GM), to the Mayor and Board of Trustees of the Village of Sleepy Hollow, New York ("the Village Board") with related approvals from other Village agencies for the construction of a mixed use waterfront project to be known as Lighthouse Landing on approximately 94.5 acres also known and designed on the tax assessment map of the Village of Sleepy Hollow as parcels 115.10-1-1, 115.11-1-1, and 115.15-1-1 ("the Site"); and

WHEREAS, said application did include, among other items, a site plan application form, site plan application checklist, coastal assessment form, full environmental assessment form, a project description and a preliminary Riverfront Development Concept Plan (RDCP) conceptual site plan; and

WHEREAS, the Mayor and Board of Trustees have acted as the Lead Agency under the State Environmental Quality Review Act (SEQR) for the purposes of conducting an environmental review for the Proposed Action; and

WHEREAS, the Proposed Action must also be reviewed under Chapter 59A, the Waterfront Consistency Review Law, of the Sleepy Hollow Village Code, and the Waterfront Advisory Committee (WAC) is the duly authorized body to provide recommendations to the Village Board with respect to the consistency of the Proposed Action with the goals and policies of the Village's Local Waterfront Revitalization Program (LWRP); and

WHEREAS, during the course of the SEQR review, the Applicant did appear before the WAC to solicit comments on a preliminary version of the proposed RDCP; and

WHEREAS, on March 2, 2005 and March 15, 2005 the WAC considered the Draft Environmental Impact Statement ("DEIS") for the proposed project which consisted, at that time, of approximately 1,562 residential units; approximately 180,000 s.f. of retail space, approximately 50,000 s.f. of office space; an inn with approximately 147 rooms; land for a train station, related parking; and, approximately 30 percent of the site reserved as public open space or for public use; and

WHEREAS, the WAC reviewed each of the applicable goals and policies of the Village's LWRP and individual members of the WAC did provide comments which were responded to during the course of the environmental review, and did cause there to be modifications made to preliminary RDCP; and

WHEREAS, at its meeting on January 10, 2007, the WAC considered the Final Environmental Impact Statement (FEIS) for a revised RDCP that was reduced to 1,250 residential units; 132,000 s.f. of retail; 35,000 s.f. of office use; a 140 room hotel; and, approximately 39 acres, or 41%, of the site reserved as public open space or for public use; and

WHEREAS, the WAC did deliberate and find the Proposed Action as described in the FEIS to be consistent with the Village's LWRP with the following conditions: the right to review and participate in the decisions as to the size, construction and design of water dependent project elements; inclusion of a footbridge over the Metro-North tracks in order to facilitate pedestrian traffic to the Project Site; that the Village and Applicant vigorously pursue a public transportation system; use of appropriate construction materials and the placement of the pier and any other shoreline structures at appropriate locations; installation of appropriate vegetative cover at appropriate locations on the Site; and, the right to consider the DPW portion of the East Parcel proposal when it is developed; and

WHEREAS, the Village Board acted as Lead Agency for the environmental review of the Project conducted under SEQR and did determine in the Environmental Findings Statement

adopted July 24, 2007 (the "Findings Statement"), that the proposed Project, with the mitigation measures identified therein, would minimize or avoid adverse environmental effects to the maximum extent practicable; and

WHEREAS, General Motors LLC ("Applicant") acquired substantially all of the assets of Old GM on July 10, 2009 in a transaction executed under the jurisdiction of, and subject to the approval of, the United States Bankruptcy Court for the Southern District of New York, and Applicant has acquired equitable title to the Site: and

WHEREAS, Roseland is no longer the proposed developer of the Site and Applicant has advised the Village that it intends to secure, after consultation with the Village, a new developer for the Site ("Developer"), and that after such designation, Developer will assume the position and all obligations of the Applicant; and

WHEREAS, in November 2007 Old GM commenced an Article 78 proceeding challenging certain conditions imposed on it and Roseland in the Findings Statement, which proceeding resulted in a January 8, 2010 Decision, Order and Judgment sustaining some conditions and amending or striking others; and

WHEREAS, the Applicant has asked the Village Board to resume processing the Application on behalf of the Applicant, and the Village Board believes it is in the best interests of the Village to do so, although the Applicant has advised the Village of its intention to convey its interests in the Project to Developer and not to develop the Project itself or in a joint venture or partnership with the Developer; and

WHEREAS, the application including the RDCP has been further revised to conform to the Findings Statement, the January 8, 2010 Decision, Order and Judgment and as a result of discussions with the Village and GM; and

WHEREAS, the Applicant has submitted an Environmental Assessment Narrative describing the amendments and changes and their potential impacts on the environment compared to those described in the Findings Statement and, after a public meeting held on January 25, 2011, the Village Board adopted additional findings ("2011 Amended Findings") that the implementation of the Project as now described and proposed will not result in adverse environmental impacts significantly different than those that were addressed in the Findings Statement; and

WHEREAS, the revised RDCP now consists of the following: 1,177 residential units in a mixture of townhouse, condominium and apartment configurations; approximately 135,000 s.f. of commercial space, 35,000 s.f. of office space; 140 room hotel; reconfiguration of the site entrance with River Street and Beekman Avenue; reconfiguration of Building M to bring more commercial space down to the waterfront; reconfiguration of Road One to provide for a minimum buffer area of 100 feet along the boundary with Kingsland Point Park; an increase in the overall public open space and public use area from 39± to 44.6± acres inclusive of an 16.1± acre waterfront and central park open space with 2,300± linear feet of Hudson River shoreline; water related and water dependent uses including interpretive center/boat house, enhanced waterfront access area, fishing pier, belvederes, dock and dine transient boat access, small craft boat tie up; and, incorporation of Design Guidelines to assist the various Village boards during the more detailed site plan and architectural review process; and

WHEREAS, the Village enacted Local Law No. 7 in 1997 that established a process to review proposed actions against the Village's adopted LWRP and that Section 59A-5.G identifies eighteen specific policy items for a reviewing agency's consideration; and

NOW, THEREFORE, BE IT RESOLVED, that the Village Board does hereby make the following determinations with respect to the following policy guidelines outlined in Chapter 59A-5.G. of the Village Code:

Waterfront Consistency Review Item 1: Revitalize the deteriorated and underutilized waterfront area (LWRP Policies 1, 1A, 1B, 1C, 1E, 1F, 1G, 1H, 1J and 1K)

The Project, as now proposed, calls for a mixed-use development that will revitalize a significant unused portion of the Village's waterfront and replace an existing deteriorated land use consisting of an abandoned industrial site. It will generate significant economic benefits to the Village including employment and net fiscal revenues. While portions of the Project appear as a dense development pattern, it is recognized that approximately 46% of the overall site area is devoted to public open space or public use, including approximately 16.1 acres of open space on the West Parcel. The Project is compliant with the Village's RF-Riverfront Development zoning district regulations and is consistent with respect to density with Westchester County's **Patterns** comprehensive planning document.

The West Parcel open space includes approximately 2,300 linear feet of frontage along the Hudson River with proposed fishing pier, belvederes, transient boat tie ups, interpretive center and boat house with enhanced waterfront access area.

With respect to the proposed development pattern, the Village has relied upon the Waterfront Linkage Study and the Design Guidelines manual included in the FEIS to assist it in evaluating how the RDCP achieves the design goal of an "old Hudson River waterfront community" image called out in the LWRP and Village's RF Riverfront Development zoning district. The scale of the buildings, in context to their surroundings, and the ability to preserve approximately 47.6% of the site as open space or public use area combined with the commitment to the use of natural materials (e.g., stone, brick, wood, iron) helps to achieve this goal. Further, there is a commitment to have the entire project reach the Certified level under the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Neighborhood Development program, to have a LEED accredited architect certify that the larger buildings (>90,000 s.f.) would meet the Certified level under the LEED for New Construction program and that the proposed townhouses would be designed using the Energy Star program design criteria.

Although the WAC recommended that a footbridge be included as part of the RDCP to address LWRP Policies 5 and 5A, Policy 1F also addresses this issue. The Village Board notes that the RDCP reserves a right of way for potential future development of an accessway connecting the East and West Parcels.

The Village Board finds that the Project will revitalize the deteriorated and underused waterfront area of the Site and thus is consistent with Waterfront Consistency Review Policy Standard and Condition (1) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 2: Retain and promote commercial and recreational water dependent uses (LWRP Policies 2 and 2A).

As indicated previously, the RDCP currently calls for approximately 16.1 acres of open space on the West Parcel. Components include 2,300± linear feet of Hudson River shoreline accessible to the public, fishing pier, transient boat access and small craft docks, belvederes, proposed bulkhead at the point in front of the hotel, interpretive center and boat house and enhanced waterfront access suitable for hand launching small craft (e.g., canoes and kayaks).

The Village Board finds that the Project will promote and thereafter retain commercial and recreational water-dependent uses and thus is consistent with Waterfront Consistency Review Standard and Condition (2) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 3: Strengthen the economic base of Sleepy Hollow smaller harbor areas by encouraging traditional uses and activities (LWRP Policy 4).

The LWRP notes that this policy is not applicable to Sleepy Hollow as the Village's waterfront does not contain a small harbor.

Waterfront Consistency Review Item 4: Ensure that development occurs where adequate public infrastructure is available to reduce health and pollution hazards (LWRP Policies 5, 5A and 5B).

In assessing the Project and its location with respect to impacts to the municipal infrastructure, the Village Board has evaluated the adequacy of the following: street and local highway systems; water supply; sewage disposal; energy needs; stormwater runoff; and, community facilities (e.g., schools, fire, and police).

The Village Board required an extensive evaluation of the local roadway network including the analysis of approximately 37 different intersections, the majority number of which were in the neighboring Village of Tarrytown. The traffic impact analysis utilized conservative methodology and identified specific traffic mitigation measures to address identified impacts. This includes the

establishment of a bond to cover the cost of fair share improvements in areas outside of the Village of Sleepy Hollow. The Developer is obligated to provide a jitney shuttle service during the peak travel hours to take Lighthouse Landing residents back and forth to the Tarrytown Train Station.

The RDCP includes foot paths and bike paths, connecting the riverfront open space along Ichabod's Landing in the south with Kingsland Point Park in the north. The interior streets will have sidewalks to promote pedestrian circulation.

The Village is in the process of concluding an environmental review process regarding the expansion of its reservoir supply capacity. The Village has identified a location for a new facility. The Special Permit for the Project contains a condition requiring the Developer to make a payment towards the cost of the new facility. Therefore, there will be sufficient water storage capacity to service the Project without impairing the water supply to the remainder of the Village.

Westchester County Department of Environmental Facilities has indicated that they have sufficient capacity in the sewage treatment system to accommodate the Project. Similarly the other utility service providers - electric, gas, cable and telephone - have indicated an ability to accommodate the Project.

As indicated previously, there has been a commitment that the Project, as a whole, would meet the LEED certified level for Neighborhood Development, that the larger buildings (>90,000 s.f.) would be verified as meeting the LEED certified level by an accredited LEED architect and that the townhomes would be constructed under the Energy Star criteria.

The proposed stormwater management plan has been designed to accommodate a variety of storm events. The Project has also been designed to comply with the Village's Flood Damage Prevention Law.

Finally, the FEIS analyzed the potential impacts on community facilities including fire, police, ambulance, recreation and schools. While impacts have been identified to each of the

aforementioned services, mitigation in the form of land donations, physical improvements and a monetary payment from the Developer to fund infrastructure items will be required. Further the fiscal analysis prepared as part of the FEIS notes that there is anticipated to be a net fiscal surplus resulting from the Project, specifically for the Village and the School District. As indicated in the Environmental Assessment Narrative the percentage of for sale units has been increased to a minimum of 60 percent compared to approximately 50 percent as part of the FEIS. Given that a greater majority of the proposed units would now be for sale there would be a projected increase in additional tax revenue from that projected as part of the FEIS.

Based on its review, the Village Board finds that the Project is located where adequate public infrastructure is available to reduce health and pollution hazards and thus is consistent with the Waterfront Consistency Review Standard and Condition (4) of Section 59A-5.G of the Code .

Waterfront Consistency Review Item 5: Expedite local permit procedures and use performance standards for development within the waterfront area (LWRP Policy 6).

The Village Board has coordinated its review efforts with those of other Village entities such as the WAC and Planning Board, well as outside agencies like NYSDEC.

The Village has coordinated the Waterfront Linkage study and participated in the creation of Design Guidelines to provide standards for items such as architectural treatment and scale, materials, building orientation, streetscapes and open spaces that the Village could rely upon as it moves to the more detailed level of review and analysis.

The Village Board finds that the Project has been designed and approved in a manner which will allow for the expediting of future local permit procedures and use performance standards and thus is consistent with Waterfront Consistency Review Standard and Condition (5) of Section 59A-5.G of the Code.

Waterfront Consistency Review Policy 6: Protect significant and locally important fish and wildlife habitats from human disruption and chemical contamination. (LWRP Policies 7, 7A, 7B, 7C, 8, 8a and 8B).

This policy, to a limited extent, is relevant in that the existing riprap along the edge of the Hudson River would be restored where necessary, with potential benefit to marine life. As noted in the WAC recommendations, the Project would not affect the Pocantico River. The Developer will be required to implement, a stormwater management plan that, under New York State law must be adequate to minimize any impacts resulting from stormwater runoff.

The WAC in their recommendations noted that the Project will result in a reduction of the current impervious surfaces at the site and reduce runoff from the site and would tend to protect fish and wildlife resources. As a long-used and now abandoned paved industrial property, the Site contains no upland wildlife habitats of any significance.

The Village Board finds that the Project protects significant and locally important fish and wildlife habitats from human disruption and chemical contamination and thus is consistent with Waterfront Consistency Review Standard and Condition (6) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 7: Encourage and expand commercial fishing facilities to promote commercial and recreational fishing opportunities (LWRP Policies 9, 10).

The WAC noted in their recommendations that the proposed inclusion of a fishing pier as part of the Project would constitute expansion of recreational use of fishing resources in the coastal area.

The Village Board finds that the Project will encourage and expand recreational fishing opportunities and thus is consistent with Waterfront Consistency Review Standard and Condition (7) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 8: Minimize flooding and erosion hazards through

nonstructural means, carefully selected, long-term structural measures and appropriate siting of structures (LWRP Polices 11, 13, 13A, 13B, 14, 15, 16, 16A, 16B, 17 and 17A).

Consistent with the recommendation from the WAC, the Village Board notes that the elevations and locations of structures address LWRP Policy 11 relative to minimizing damage to property and effects caused by flooding and erosion. The Project has been designed to comply with the Village's Flood Damage Prevention Law. It is noted that the Developer will be required to make repairs to the riprap along the River, where necessary, making the Project consistent with LWRP Policy 13A. The specific design of the proposed pier and other shoreline structures will be evaluated as part of the forthcoming waterfront open space planning process with the Village Board. The Village Board confirms the WAC's recommendation that LWRP Policies 13B and 14 are conditionally consistent subject to the Developer's use of appropriate construction materials and placement of the pier and any other shoreline structure at appropriate locations.

The Project's incorporation of stringent soil erosion and sediment control measures and its erosion and sediment control plan includes a variety of mechanisms to attain those goals including: sediment traps, silt fence barriers and straw bale barriers. A vegetative cover is proposed in the form of a comprehensive landscaping and restoration program for the balance of the property.

The Village Board finds that the proposed Project will employ both non-structural and structural measures to minimize flooding and erosion hazards and the RCDP contains setbacks and buffers as part of the siting layout to achieve the same and thus is consistent with Waterfront Consistency Review Standard and Condition 8 of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 9: Safeguard economic, social and environmental interests in the coastal area when major actions are undertaken (LWRP Policies 18, 18A, 18B and 18C).

The WAC made a recommendation that there was no inconsistency between the Project and LWRP Policy referenced above, noting that the provision of land area for public use by the Village were

protective of the Village's social and environmental interests and quality of life.

The Village Board affirms the WAC's recommendation and finds the Project will safeguard economic, social and environmental interests along the Hudson River coastal area and thus is consistent with Waterfront Consistency Review Standard and Condition (9) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 10: Maintain and improve public access to the shoreline and the water related recreational facilities while protecting the environment. (LWRP Policies 1, 1A, 1B, 1D, 1E, 1F, 1H, 2, 2A, 4, 9, 19, 19A, 19B, 19C, 19D, 19E, 19F, 20 20A 20B, 21, 21A 21B, 21C 22 and 22A).

At present, the General Motors site is fenced and there is no public access to the Hudson River other than an existing easement to gain access to the historic 1883 Lighthouse. The Project would include opening the entire, approximately 2,300 linear feet of Hudson River shoreline to the public. The Project includes approximately 16.1 acres of public open space as part of the West Parcel including the area along the Hudson, inclusive of public walkways and opportunities to get to the waters edge. The pedestrian access provided along the shoreline would effectively provide linkages between the Village's park at Horan's Landing and the waterfront associated with Ichabod's Landing to the south of the Project site with Kingsland Point Park to the north of the site.

The impact of the Project in creating linkage trails as contemplated by LWRP Policy 21 has been noted in connection with the Village Board's findings under prior policies. The Village Board also noted that the parks, fishing piers, transient boat access and enhanced waterfront access, as well as pedestrian trails and scenic overlooks are specifically recognized in the applicable Explanation of Policies for Policy 21 and its sub-policies as water-related recreational facilities.

The Village Board finds that the proposed Project improves public access to the shoreline and water-related recreational activities through the provision and improvement of waterfront open space to the Village with adequate environmental protection measures and thus is consistent with Waterfront

Consistency Review Standard and Condition (10) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 11: Protect and restore historic and archaeological resources (Policies 23, 23A, 23B and 23C).

The WAC noted the fact that the 1883 Lighthouse is listed on the National Register of Historic Places and is considered to be of significance to the history of the Village. Although the Lighthouse lies outside of the boundaries of the Project site and is not within the scope of the Project, the site configuration would direct attention to the Lighthouse, which would be the focal point of the proposed Beekman Place "main street" corridor.

A Stage 1A Literature Review and Sensitivity Analysis was prepared as part of the EIS, the recommendation of which noted that no further investigation of prehistoric archeological potential or historic potential is recommended. The New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) concurred with those recommendations. The Village Board further notes that correspondence received from the NYSOPRHP that the Project would have no impact on historic properties in or eligible for inclusion on the National Register of Historic Places. As part of the anticipated expansion of the Historic Hudson Valley (HHV) Philipsburg Manor Restoration facility the Village would likely require the preparation of a Phase 1B report. This will be a determination to be made by the Planning Board as part of the site plan review for that contemplated use.

The Village Board finds that the Project would not adversely affect the protection and restoration of historic and archeological resources and thus is consistent with Waterfront Consistency Review Standard and Condition (11) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 12: Protect and upgrade scenic resources (LWRP Policies 25, 25A and 25B).

The WAC noted that, at the time of adoption of the LWRP, the identified scenic resources and

Hudson River views were significantly (and adversely) impacted by the then-existing GM plant structures. Since the demolition of the General Motors plant structures, open views of the Hudson River have been afforded to the community, although over a deteriorated and unsightly foreground. The WAC noted that any construction at the Site will interrupt the current open views and, consequently, "diminish the scenic quality of an identified scenic resource "Explanation of Policies", but also recognized that the protection of river views and identified view sheds contemplated by the LWRP was not intended to totally prohibit development.

The Village Board notes that the RDCP attempts to preserve and frame river views by the use of street and building layout. In addition, the Village Board further notes that the provision of waterfront open space provides and enhances views of the River from new publicly accessible property. The utilization of natural materials (e.g., wood, stone, metal, and brick) and the use of the proposed Design Guidelines prepared as part of the EIS process contribute to the overall compatibility of the site in relation to its environs.

The Village Board concludes that the Project upgrades the scenic foreground and provides, with future protection, scenic views of the Hudson River and thus is consistent with Waterfront Consistency Review Standard and Condition (12) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 13: Site and construct energy facilities in a manner in which will be compatible with the environment and contingent upon the need for a waterfront or water location (LWRP Policies 27, 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39, 39A, 40, 40A, 41, 42, 43, and 44).

The Village Board finds Waterfront Consistency Review Standard and Condition 13 is not applicable as the Project does not contemplate an energy facility.

Waterfront Consistency Review Item 14: Protect surface and groundwater's from direct and indirect discharge of pollutants and from overuse (LWRP Policies 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39, 39A, 40, 40A, 41A, 42, 43, and 44).

The Developer will be legally required to use best management practices for stormwater management, use low flow fixtures and abide by air quality standards. With respect to the policy discussion regarding stormwater runoff, the Project will result in the replacement of part of the Site's current impervious surface with green spaces containing vegetation. Sewage will go to the County publicly owned treatment works. No usage of the Site is proposed that would generate other pollutants likely to run-off into surface waters or infiltrate ground waters or use unusually large quantities of water.

The Village Board finds that the Project will protect surface and groundwaters from direct and indirect discharge of pollutants and from overuse and thus is consistent with Waterfront Consistency Review Standard and Condition (14) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 15: Perform dredging and dredge spoil in a manner protective of the environment (LWRP Policies 15, 35, 35A, 35B, 35C, 35D and 35E).

Any future dredging related to prior activities of GM will be conducted with oversight from NYSDEC and NYDOS. The Project itself does not include dredging. Thus the Village Board finds that Waterfront Consistency Review Standard and Condition (15) is not applicable.

Waterfront Consistency Review Item 16: Handle and dispose of solid and hazardous wastes and effluents in a manner, which will not adversely affect the environment nor expand existing landfills (LWRP Policies 34, 34A, 35, 35A, 35B, 35C, 35D, 35E, 36, 39 and 39A).

As part of its deliberations, the WAC made a recommendation that the Applicant, during the construction phase, give strict instructions to its construction contractors that no wastes are to be dumped in the Hudson River. The Project will generate solid wastes and sewage typical of mixed-use residential and commercial developments. These will be managed using the lawful and compliant services and facilities available in the Village.

The Village Board finds that the Project will not result in the generation of solid and hazardous wastes and effluents in a quantity or of a type which will adversely affect the environment or require the expansion of existing landfills and thus is consistent with Waterfront Consistency Review Standard and Condition (16) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 17: Protect air quality (LWRP Policies 41, 41A, 42 and 43).

The WAC noted in its consistency review that, as a matter of law, the Applicant will be legally required to comply with LWRP policies of 41 and 41A as they relate to the National Ambient Air Quality (NAAQ) standards. The Environmental Findings noted that the Proposed Action would not violate the NAAQ standards. No industrial air emissions will result from the Project, and any air emissions will be in an amount and of the type typically arising from a mixed-use residential and commercial development, which will not have a material adverse effect on ambient air quality.

The Village Board finds that the Project will protect air quality and thus is consistent with Waterfront Consistency Review Standard and Condition (17) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 18: Protect freshwater wetlands (LWRP Policy 44).

The WAC noted that the Pocantico River constitutes a tidal wetlands/watercourse and that the replacement of paved areas adjacent to the River with green open space would be beneficial for the area. The Project does not include the disturbance of freshwater wetlands.

The Village Board finds that the Project will protect freshwater wetlands and thus is consistent with Waterfront Consistency Review Standard and Condition (18) of Section 59A-5.G of the Code; and be it further

RESOLVED, on the basis of its consideration of the consistency of the proposed Lighthouse Landing project with the foregoing LWRP Policies as outlined in Chapter 59A-5.G.(1)- (18), and

upon due consideration of the consistency recommendation provided by the WAC, the Mayor and Board of Trustees finds that the Project will be consistent with the policies and purposes of the LWRP and will advance many of them.

Moved: Trustee Campbell **Seconded:** Trustee Stupel **Vote:** 7-0

I, Paula A. McCarthy the undersigned Clerk/Deputy Clerk, do hereby certify that the foregoing is a true copy of an extract duly adopted by the Board of Trustees of the Village of Sleepy Hollow, on the 7th day of June, 2011 and of the whole thereof, and I further certify that the same was entered into the minutes of the meeting of said Board of Trustees held on said date.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 8th day of June, 2011.

Paula A. McCarthy
Clerk/Deputy Clerk

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM

Coastal Assessment Form

A. INSTRUCTIONS (Please print or type all answers)

1. State agencies shall complete this CAF for proposed actions which are subject to Part 600 of Title 19 of the NYCRR. This assessment is intended to supplement other information used by a state agency in making a determination of significance pursuant to the State Environmental Quality Review Act (see 6 NYCRR, Part 617). If it is determined that a proposed action will not have a significant effect on the environment, this assessment is intended to assist a state agency in complying with the certification requirements of 19 NYCRR Section 600.4.

2. If any question in Section C on this form is answered "yes", then the proposed action may affect the achievement of the coastal policies contained in Article 42 of the Executive Law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to either (a) making a certification of consistency pursuant to 19 NYCRR Part 600 or, (b) making the findings required under SEQR, 6 NYCRR, Section 617.11, if the action is one for which an environmental impact statement is being prepared. If an action cannot be certified as consistent with the coastal policies, it shall not be undertaken.

3. Before answering the questions in Section C, the preparer of this form should review the coastal policies contained in 19 NYCRR Section 600.5. A proposed action should be evaluated as to its significant beneficial and adverse effects upon the coastal area.

B. DESCRIPTION OF PROPOSED ACTION

1. Type of state agency action (check appropriate response):

   (a) Directly undertaken (e.g. capital construction, planning activity, agency regulation, land transaction) _X___
   (b) Financial assistance (e.g. grant, loan, subsidy) ____
   (c) Permit, license, certification ____

2. Describe nature and extent of action: Preparation of riverfront development concept plan for the redevelopment of the East Parcel for DPW, recreation, parking and community uses

3. Location of action:

Westchester	Sleepy Hollow	Continental Street
County	City, Town or Village	Street or Site Description

4. If an application for the proposed action has been filed with the state agency, the following information shall be provided:

(a) Name of applicant: Sleepy Hollow LDC

(b) Mailing address: 28 Beekman Avenue

(c) Telephone Number: Area Code (914) 366-5105

(d) State agency application number: _____

5. Will the action be directly undertaken, require funding, or approval by a federal agency?

Yes X No _____ If yes, which federal agency? FEMA, ACOE

C. COASTAL ASSESSMENT (Check either "YES" or "NO" for each of the following questions)

1. Will the proposed activity be located in, or contiguous to, or have a significant effect upon any of the resource areas identified on the coastal area map:

		YES	NO
(a)	Significant fish or wildlife habitats?	X	
(b)	Scenic resources of statewide significance?		X
(c)	Important agricultural lands?		X

2. Will the proposed activity have a significant effect upon:

(a)	Commercial or recreational use of fish and wildlife resources?		X
(b)	Scenic quality of the coastal environment?		X
(c)	Development of future, or existing water dependent uses?		X
(d)	Operation of the State's major ports?		X
(e)	Land and water uses within the State's small harbors?		X
(f)	Existing or potential public recreation opportunities?		X
(g)	Structures, sites or districts of historic, archeological or cultural significance to the State or nation?		X

3. Will the proposed activity involve or result in any of the following:

(a)	Physical alteration of two (2) acres or more of land along the shoreline, land under water or coastal waters?		X
(b)	Physical alteration of five (5) acres or more of land located elsewhere in the coastal area?	X	
(c)	Expansion of existing public services of infrastructure in undeveloped or low density areas of the coastal area?		X
(d)	Energy facility not subject to Article VII or VIII of the Public Service Law?		X
(e)	Mining, excavation, filling or dredging in coastal waters?		X
(f)	Reduction of existing or potential public access to or along the shore?		X
(g)	Sale or change in use of state-owned lands located on the shoreline or under water?		X
(h)	Development within a designated flood or erosion hazard area?	X	
(i)	Development on a beach, dune, barrier island or other natural feature that provides protection against flooding or erosion?		X

4. Will the proposed action be located in or have a significant effect upon an area included in an approved Local Waterfront Revitalization Program? X

D. SUBMISSION REQUIREMENTS

If any question in Section C is answered "Yes", AND either of the following two conditions is met:

Section B.1(a) or B.1(b) is checked; or
Section B.1(c) is checked AND B.5 is answered "Yes",

THEN one copy of the Completed Coastal Assessment Form shall be submitted to:

New York State Department of State
Division of Coastal Resources
41 State Street, 8th Floor
Albany, New York 12231

If assistance of further information is needed to complete this form, please call the Department of State at (518) 474-6000.

E. REMARKS OR ADDITIONAL INFORMATION

See accompanying DEIS document

Preparer's Name: David Smith
(Please print)

Title: Planning & Development Advisors Agency: on behalf of the LDC

Telephone Number: (914) 552-8413 Date: 11/17/18

Appendix E
Traffic Impact Calculations

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Synchro Level of Service Analysis Worksheets

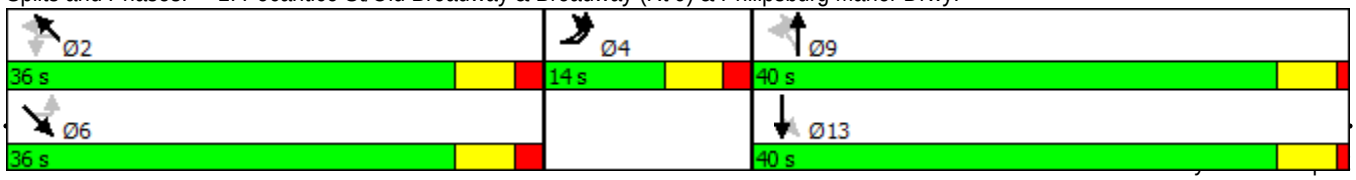
- Analysis of Concept Plans from Village's Route 9 Report

Lane Group	EBL2	EBL	EBR	EBR2	NBL2	NBL	NBT	NBR	SBL	SBT	SEL	SET
Lane Configurations												
Traffic Volume (vph)	1	0	4	4	5	209	26	55	9	6	1	443
Future Volume (vph)	1	0	4	4	5	209	26	55	9	6	1	443
Satd. Flow (prot)	0	1721	0	0	0	0	1825	0	0	1809	0	3054
Flt Permitted		0.994					0.777			0.817		0.955
Satd. Flow (perm)	0	1716	0	0	0	0	1436	0	0	1520	0	2917
Satd. Flow (RTOR)							15					
Confl. Peds. (#/hr)	6	4	2	7	13	6		2	2		4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	0	0	304	0	0	15	0	636
Turn Type	Prot	Prot			Perm	Perm	NA		Perm	NA	Perm	NA
Protected Phases	4	4					9			13		6
Permitted Phases	4	4			9	9	9		13		6	6
Total Split (s)	14.0	14.0			40.0	40.0	40.0		40.0	40.0	36.0	36.0
Total Lost Time (s)		6.0					5.0			5.0		6.0
Act Effct Green (s)		6.1					17.8			17.8		31.4
Actuated g/C Ratio		0.10					0.28			0.28		0.50
v/c Ratio		0.05					0.72			0.03		0.43
Control Delay		31.3					29.7			16.2		13.6
Queue Delay		0.0					0.0			0.0		0.0
Total Delay		31.3					29.7			16.2		13.6
LOS		C					C			B		B
Approach Delay		31.3					29.7			16.2		13.6
Approach LOS		C					C			B		B
Queue Length 50th (ft)		3					88			4		64
Queue Length 95th (ft)		19					205			17		202
Internal Link Dist (ft)		217					397			375		586
Turn Bay Length (ft)												
Base Capacity (vph)		226					833			875		1466
Starvation Cap Reductn		0					0			0		0
Spillback Cap Reductn		0					0			0		0
Storage Cap Reductn		0					0			0		0
Reduced v/c Ratio		0.04					0.36			0.02		0.43

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 62.5
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 16.6 Intersection LOS: B
Intersection Capacity Utilization 70.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Pocantico St/Old Broadway & Broadway (Rt 9) & Philipsburg Manor Drwy.





Lane Group	SER	NWL2	NWL	NWT	NWR
Lane Configurations					
Traffic Volume (vph)	173	18	6	379	26
Future Volume (vph)	173	18	6	379	26
Satd. Flow (prot)	0	0	0	3625	0
Flt Permitted				0.901	
Satd. Flow (perm)	0	0	0	3272	0
Satd. Flow (RTOR)				8	
Confl. Peds. (#/hr)	7	7	13		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	2%	2%	2%	2%
Shared Lane Traffic (%)					
Lane Group Flow (vph)	0	0	0	443	0
Turn Type		Perm	Perm	NA	
Protected Phases				2	
Permitted Phases		2	2	2	
Total Split (s)		36.0	36.0	36.0	
Total Lost Time (s)				6.0	
Act Effct Green (s)				31.4	
Actuated g/C Ratio				0.50	
v/c Ratio				0.27	
Control Delay				11.8	
Queue Delay				0.0	
Total Delay				11.8	
LOS				B	
Approach Delay				11.8	
Approach LOS				B	
Queue Length 50th (ft)				39	
Queue Length 95th (ft)				130	
Internal Link Dist (ft)				146	
Turn Bay Length (ft)					
Base Capacity (vph)				1649	
Starvation Cap Reductn				0	
Spillback Cap Reductn				0	
Storage Cap Reductn				0	
Reduced v/c Ratio				0.27	

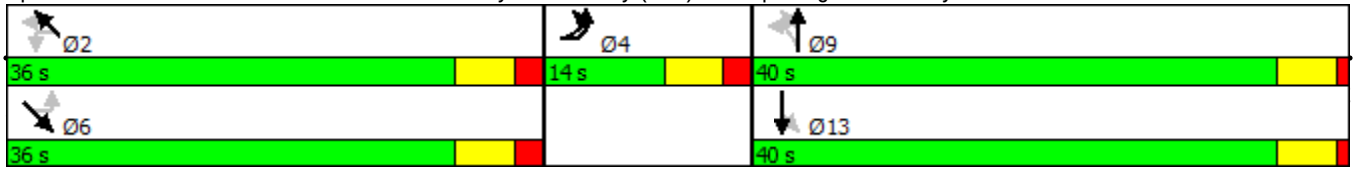
Intersection Summary

Lane Group	EBL2	EBL	EBR	EBR2	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SEL
Lane Configurations												
Traffic Volume (vph)	2	0	2	2	3	306	51	36	10	29	30	3
Future Volume (vph)	2	0	2	2	3	306	51	36	10	29	30	3
Satd. Flow (prot)	0	1780	0	0	0	0	1846	0	0	1698	0	0
Flt Permitted		0.984					0.726			0.937		
Satd. Flow (perm)	0	1763	0	0	0	0	1361	0	0	1602	0	0
Satd. Flow (RTOR)							7					
Confl. Peds. (#/hr)	6	4	2	7	13	6		2	2		13	4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	0	0	408	0	0	71	0	0
Turn Type	Prot	Prot			Perm	Perm	NA		Perm	NA		Perm
Protected Phases	4	4					9			13		
Permitted Phases	4	4			9	9	9		13			6
Total Split (s)	14.0	14.0			40.0	40.0	40.0		40.0	40.0		36.0
Total Lost Time (s)		6.0					5.0			5.0		
Act Effct Green (s)		6.0					24.8			24.8		
Actuated g/C Ratio		0.09					0.36			0.36		
v/c Ratio		0.04					0.82			0.12		
Control Delay		34.8					35.1			15.4		
Queue Delay		0.0					0.0			0.0		
Total Delay		34.8					35.1			15.4		
LOS		C					D			B		
Approach Delay		34.8					35.1			15.4		
Approach LOS		C					D			B		
Queue Length 50th (ft)		2					139			18		
Queue Length 95th (ft)		16					#336			52		
Internal Link Dist (ft)		217					397			375		
Turn Bay Length (ft)												
Base Capacity (vph)		212					712			834		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.03					0.57			0.09		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 68.8
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Pocantico St/Old Broadway & Broadway (Rt 9) & Philipsburg Manor Drwy.



Lane Group	SET	SER	SER2	NWL2	NWL	NWT	NWR
Lane Configurations							
Traffic Volume (vph)	150	334	3	133	2	197	25
Future Volume (vph)	150	334	3	133	2	197	25
Satd. Flow (prot)	2743	0	0	0	0	3558	0
Flt Permitted	0.953					0.648	
Satd. Flow (perm)	2614	0	0	0	0	2329	0
Satd. Flow (RTOR)	1					9	
Confl. Peds. (#/hr)		7	13	7	13		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)							
Lane Group Flow (vph)	505	0	0	0	0	368	0
Turn Type	NA			Perm	Perm	NA	
Protected Phases	6					2	
Permitted Phases	6			2	2	2	
Total Split (s)	36.0			36.0	36.0	36.0	
Total Lost Time (s)	6.0					6.0	
Act Effct Green (s)	30.7					30.7	
Actuated g/C Ratio	0.45					0.45	
v/c Ratio	0.43					0.35	
Control Delay	17.0					16.0	
Queue Delay	0.0					0.0	
Total Delay	17.0					16.0	
LOS	B					B	
Approach Delay	17.0					16.0	
Approach LOS	B					B	
Queue Length 50th (ft)	67					46	
Queue Length 95th (ft)	172					123	
Internal Link Dist (ft)	586					146	
Turn Bay Length (ft)							
Base Capacity (vph)	1167					1044	
Starvation Cap Reductn	0					0	
Spillback Cap Reductn	0					0	
Storage Cap Reductn	0					0	
Reduced v/c Ratio	0.43					0.35	

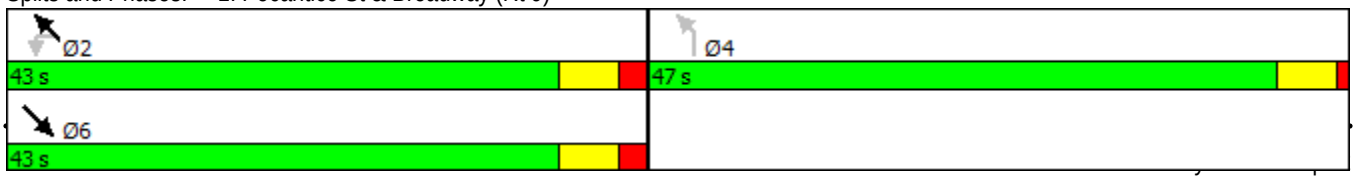
Intersection Summary

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	433	127	473	395	103	410
Future Volume (vph)	433	127	473	395	103	410
Satd. Flow (prot)	1749	0	2951	0	0	3639
Flt Permitted	0.963					0.611
Satd. Flow (perm)	1736	0	2951	0	0	2244
Satd. Flow (RTOR)	22		285			
Confl. Peds. (#/hr)	6	2		7	7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	577	0	895	0	0	529
Turn Type	Perm		NA		Perm	NA
Protected Phases			6			2
Permitted Phases	4		6		2	2
Total Split (s)	47.0		43.0		43.0	43.0
Total Lost Time (s)	5.0		6.0			6.0
Act Effct Green (s)	29.6		37.4			37.4
Actuated g/C Ratio	0.38		0.48			0.48
v/c Ratio	0.86		0.57			0.49
Control Delay	34.8		12.5			17.6
Queue Delay	0.0		0.0			0.0
Total Delay	34.8		12.5			17.6
LOS	C		B			B
Approach Delay	34.8		12.5			17.6
Approach LOS	C		B			B
Queue Length 50th (ft)	241		101			87
Queue Length 95th (ft)	367		207			171
Internal Link Dist (ft)	397		586			146
Turn Bay Length (ft)						
Base Capacity (vph)	953		1561			1074
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.61		0.57			0.49

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 78.1
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 20.3 — Intersection LOS: C
Intersection Capacity Utilization 86.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Pocantico St & Broadway (Rt 9)

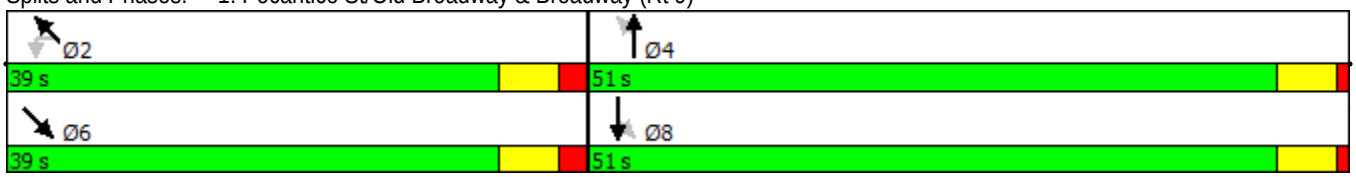


Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	433	0	127	23	10	0	0	450	384	103	410	0
Future Volume (vph)	433	0	127	23	10	0	0	450	384	103	410	0
Satd. Flow (prot)	0	1808	0	0	1799	0	0	2947	0	0	3639	0
Flt Permitted		0.752			0.704						0.586	
Satd. Flow (perm)	0	1401	0	0	1311	0	0	2947	0	0	2152	0
Satd. Flow (RTOR)		36						272				
Confl. Peds. (#/hr)	6		2	2		6	4		7	7		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	4%	4%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	577	0	0	34	0	0	860	0	0	529	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4	4		8				6		2	2	
Total Split (s)	51.0	51.0		51.0	51.0			39.0		39.0	39.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Act Effct Green (s)		36.0			36.0			33.4			33.4	
Actuated g/C Ratio		0.45			0.45			0.41			0.41	
v/c Ratio		0.89			0.06			0.62			0.59	
Control Delay		36.7			11.8			16.0			23.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		36.7			11.8			16.0			23.8	
LOS		D			B			B			C	
Approach Delay		36.7			11.8			16.0			23.8	
Approach LOS		D			B			B			C	
Queue Length 50th (ft)		240			9			122			110	
Queue Length 95th (ft)		#409			24			215			190	
Internal Link Dist (ft)		397			375			586			146	
Turn Bay Length (ft)												
Base Capacity (vph)		825			758			1381			893	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.70			0.04			0.62			0.59	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 80.6
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 23.9 — Intersection LOS: C
Intersection Capacity Utilization 91.3% — ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Pocantico St/Old Broadway & Broadway (Rt 9)

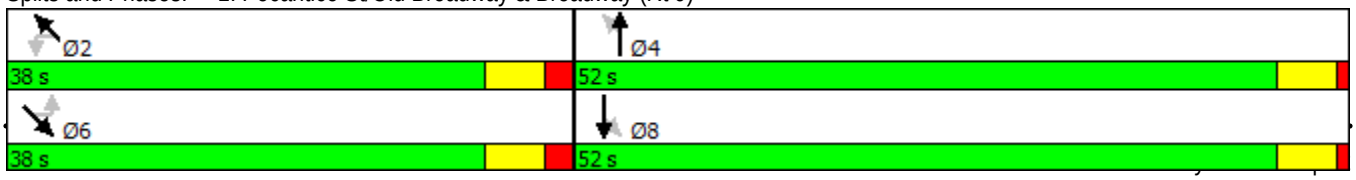


Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	410	23	127	23	10	0	0	450	384	103	388	22
Future Volume (vph)	410	23	127	23	10	0	0	450	384	103	388	22
Satd. Flow (prot)	0	1812	0	0	1799	0	0	2947	0	0	3608	0
Flt Permitted		0.762			0.705						0.584	
Satd. Flow (perm)	0	1420	0	0	1312	0	0	2947	0	0	2127	0
Satd. Flow (RTOR)		25						267			6	
Confl. Peds. (#/hr)	6		2	2		6	4		7	7		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	4%	4%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	578	0	0	34	0	0	860	0	0	529	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4	4		8			6	6		2	2	
Total Split (s)	52.0	52.0		52.0	52.0		38.0	38.0		38.0	38.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Act Effct Green (s)		35.6			35.6			32.5			32.5	
Actuated g/C Ratio		0.45			0.45			0.41			0.41	
v/c Ratio		0.89			0.06			0.63			0.61	
Control Delay		35.5			11.4			16.4			24.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		35.5			11.4			16.4			24.0	
LOS		D			B			B			C	
Approach Delay		35.5			11.4			16.4			24.0	
Approach LOS		D			B			B			C	
Queue Length 50th (ft)		238			9			120			106	
Queue Length 95th (ft)		388			24			222			192	
Internal Link Dist (ft)		397			375			586			146	
Turn Bay Length (ft)												
Base Capacity (vph)		864			789			1364			874	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.67			0.04			0.63			0.61	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 79.3
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 23.8 — Intersection LOS: C
Intersection Capacity Utilization 90.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Pocantico St/Old Broadway & Broadway (Rt 9)



Continental Street Concept Plan

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NOTE: CONCEPT NOT BASED ON AN ACTUAL SURVEY



Antique Street Light 11/16

N.T.S. Source: Town Streetscape



In-street Tree Placement 11/16

N.T.S. Source: Town Streetscape



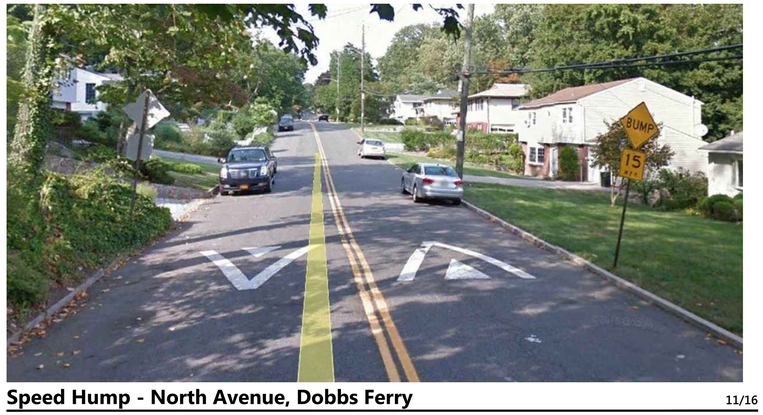
Raised Crosswalk 11/16

N.T.S. Source: Town Streetscape



Raised Intersection 11/16

N.T.S. Source: Town Streetscape



Speed Hump - North Avenue, Dobbs Ferry 11/16

N.T.S. Source: Town Streetscape

vhb.com

vhb

Engineering, Surveying & Landscape Architecture, PC
50 Main Street
Suite 360
White Plains, NY 10606
914.467.6600

East Parcel Redevelopment

Village of Sleepy Hollow
Westchester County, NY

No.	Revision	Date	Appvd.

Designed by JC | Checked by JC

Issued for

Date: December, 2015

Not Approved for Construction

Drawing Title: Concept Plan

Drawing Number: CP-1

Progress Print For Review Only December 29, 2016

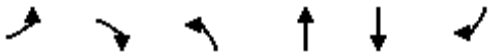
Sheet 1 of 1

Project Number: 29694.00

Saved Tuesday, December 13, 2016 8:07:43 PM AMOLDOVEANU Plotted Thursday, December 29, 2016 2:55:37 PM Moldoveanu, Alina

Synchro Level of Service Analysis Worksheets

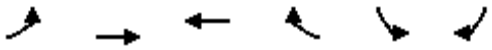
- Howard Street with One-Way Circulation
  - Pocantico Street & Continental Street
  - Continental Street & Pleasant Street
  - Continental Street & Kendall Avenue



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	4	21	275	179	41
Future Volume (Veh/h)	6	4	21	275	179	41
Sign Control	Stop			Free	Free	
Grade	-6%			-6%	6%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	6	4	22	286	186	43
Pedestrians	7					
Lane Width (ft)	10.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					477	
pX, platoon unblocked						
vC, conflicting volume	544	214	236			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	544	214	236			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	98			
cM capacity (veh/h)	490	822	1325			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	10	308	229
Volume Left	6	22	0
Volume Right	4	0	43
cSH	584	1325	1700
Volume to Capacity	0.02	0.02	0.13
Queue Length 95th (ft)	1	1	0
Control Delay (s)	11.3	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	11.3	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	53	9	10	0
Future Volume (Veh/h)	0	0	53	9	10	0
Sign Control		Free	Free		Stop	
Grade		5%	2%		1%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	62	10	12	0
Pedestrians			1		1	
Lane Width (ft)			9.0		10.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	73				69	68
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73				69	68
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1526				934	995

Direction, Lane #	WB 1	SB 1
Volume Total	72	12
Volume Left	0	12
Volume Right	10	0
cSH	1700	934
Volume to Capacity	0.04	0.01
Queue Length 95th (ft)	0	1
Control Delay (s)	0.0	8.9
Lane LOS		A
Approach Delay (s)	0.0	8.9
Approach LOS		A

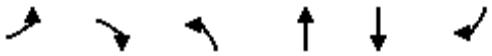
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	13.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	1	48	5	0	0
Future Volume (Veh/h)	0	1	48	5	0	0
Sign Control	Free			Free	Stop	
Grade	5%			-5%	0%	
Peak Hour Factor	0.55	0.50	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	0	2	87	9	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1		184	1
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1		184	1
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		100	100
cM capacity (veh/h)			1622		762	1084

Direction, Lane #	EB 1	WB 1
Volume Total	2	96
Volume Left	0	87
Volume Right	2	0
cSH	1700	1622
Volume to Capacity	0.00	0.05
Queue Length 95th (ft)	0	4
Control Delay (s)	0.0	6.7
Lane LOS		A
Approach Delay (s)	0.0	6.7
Approach LOS		

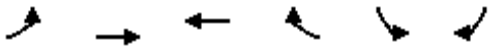
Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	13.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	4	21	335	248	41
Future Volume (Veh/h)	7	4	21	335	248	41
Sign Control	Stop			Free	Free	
Grade	-6%			-6%	6%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	7	4	22	349	258	43
Pedestrians	7					
Lane Width (ft)	10.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					477	
pX, platoon unblocked						
vC, conflicting volume	680	286	308			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	680	286	308			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	98			
cM capacity (veh/h)	408	749	1247			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	11	371	301
Volume Left	7	22	0
Volume Right	4	0	43
cSH	489	1247	1700
Volume to Capacity	0.02	0.02	0.18
Queue Length 95th (ft)	2	1	0
Control Delay (s)	12.5	0.6	0.0
Lane LOS	B	A	
Approach Delay (s)	12.5	0.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	53	9	10	0
Future Volume (Veh/h)	0	0	53	9	10	0
Sign Control		Free	Free		Stop	
Grade		5%	2%		1%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	62	10	12	0
Pedestrians			1		1	
Lane Width (ft)			9.0		10.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	73				69	68
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73				69	68
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1526				934	995

Direction, Lane #	WB 1	SB 1
Volume Total	72	12
Volume Left	0	12
Volume Right	10	0
cSH	1700	934
Volume to Capacity	0.04	0.01
Queue Length 95th (ft)	0	1
Control Delay (s)	0.0	8.9
Lane LOS		A
Approach Delay (s)	0.0	8.9
Approach LOS		A

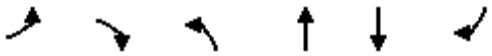
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	13.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	1	49	5	0	0
Future Volume (Veh/h)	0	1	49	5	0	0
Sign Control	Free			Free	Stop	
Grade	5%			-5%	0%	
Peak Hour Factor	0.55	0.50	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	0	2	89	9	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1		188	1
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1		188	1
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		100	100
cM capacity (veh/h)			1622		757	1084

Direction, Lane #	EB 1	WB 1
Volume Total	2	98
Volume Left	0	89
Volume Right	2	0
cSH	1700	1622
Volume to Capacity	0.00	0.05
Queue Length 95th (ft)	0	4
Control Delay (s)	0.0	6.7
Lane LOS		A
Approach Delay (s)	0.0	6.7
Approach LOS		

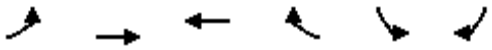
Intersection Summary				
Average Delay	6.6			
Intersection Capacity Utilization	13.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	95	35	67	291	195	151
Future Volume (Veh/h)	95	35	67	291	195	151
Sign Control	Stop			Free	Free	
Grade	-6%			-6%	6%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	99	36	70	303	203	157
Pedestrians	7					
Lane Width (ft)	10.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					477	
pX, platoon unblocked						
vC, conflicting volume	732	288	367			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	732	288	367			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	73	95	94			
cM capacity (veh/h)	365	747	1186			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	135	373	360
Volume Left	99	70	0
Volume Right	36	0	157
cSH	422	1186	1700
Volume to Capacity	0.32	0.06	0.21
Queue Length 95th (ft)	34	5	0
Control Delay (s)	17.5	2.0	0.0
Lane LOS	C	A	
Approach Delay (s)	17.5	2.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	119	210	9	10	0
Future Volume (Veh/h)	0	119	210	9	10	0
Sign Control		Free	Free		Stop	
Grade		5%	2%		1%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	138	244	10	12	0
Pedestrians			1		1	
Lane Width (ft)			11.0		10.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	255				389	250
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	255				389	250
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1309				614	788

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	138	254	12
Volume Left	0	0	12
Volume Right	0	10	0
cSH	1309	1700	614
Volume to Capacity	0.00	0.15	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	11.0
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.0
Approach LOS			B

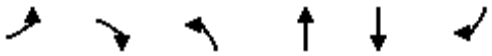
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	119	0	49	162	0	0
Future Volume (Veh/h)	119	0	49	162	0	0
Sign Control	Free			Free	Stop	
Grade	5%			-5%	0%	
Peak Hour Factor	0.55	0.50	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	216	0	89	295	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			217		690	217
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			217		690	217
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			1353		384	823

Direction, Lane #	EB 1	EB 2	WB 1
Volume Total	216	0	384
Volume Left	0	0	89
Volume Right	0	0	0
cSH	1700	1700	1353
Volume to Capacity	0.13	0.00	0.07
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.0	2.3
Lane LOS			A
Approach Delay (s)	0.0		2.3
Approach LOS			

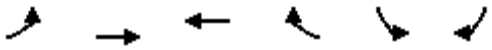
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	3	16	214	123	25
Future Volume (Veh/h)	5	3	16	214	123	25
Sign Control	Stop			Free	Free	
Grade	-6%			-6%	6%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	3	17	225	129	26
Pedestrians	6					
Lane Width (ft)	10.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					477	
pX, platoon unblocked						
vC, conflicting volume	407	148	161			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	407	148	161			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	99			
cM capacity (veh/h)	591	895	1412			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	8	242	155
Volume Left	5	17	0
Volume Right	3	0	26
cSH	678	1412	1700
Volume to Capacity	0.01	0.01	0.09
Queue Length 95th (ft)	1	1	0
Control Delay (s)	10.4	0.6	0.0
Lane LOS	B	A	
Approach Delay (s)	10.4	0.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	36	5	8	0
Future Volume (Veh/h)	0	0	36	5	8	0
Sign Control		Free	Free		Stop	
Grade		5%	2%		1%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	0	0	46	6	10	0
Pedestrians			1		1	
Lane Width (ft)			9.0		10.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	53				51	50
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	53				51	50
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1552				957	1018

Direction, Lane #	WB 1	SB 1
Volume Total	52	10
Volume Left	0	10
Volume Right	6	0
cSH	1700	957
Volume to Capacity	0.03	0.01
Queue Length 95th (ft)	0	1
Control Delay (s)	0.0	8.8
Lane LOS		A
Approach Delay (s)	0.0	8.8
Approach LOS		A

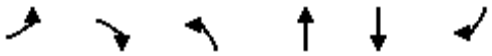
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	13.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	4	31	5	0	0
Future Volume (Veh/h)	0	4	31	5	0	0
Sign Control	Free			Free	Stop	
Grade	5%			-5%	0%	
Peak Hour Factor	0.56	0.56	0.56	0.56	0.56	0.56
Hourly flow rate (vph)	0	7	55	9	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1		120	1
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1		120	1
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	100
cM capacity (veh/h)			1622		846	1084

Direction, Lane #	EB 1	WB 1
Volume Total	7	64
Volume Left	0	55
Volume Right	7	0
cSH	1700	1622
Volume to Capacity	0.00	0.03
Queue Length 95th (ft)	0	3
Control Delay (s)	0.0	6.3
Lane LOS		A
Approach Delay (s)	0.0	6.3
Approach LOS		

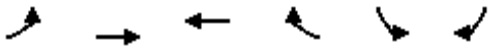
Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	3	16	292	206	25
Future Volume (Veh/h)	5	3	16	292	206	25
Sign Control	Stop			Free	Free	
Grade	-6%			-6%	6%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	3	17	307	217	26
Pedestrians	6					
Lane Width (ft)	10.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					477	
pX, platoon unblocked						
vC, conflicting volume	577	236	249			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	577	236	249			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	99			
cM capacity (veh/h)	471	800	1311			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	8	324	243
Volume Left	5	17	0
Volume Right	3	0	26
cSH	557	1311	1700
Volume to Capacity	0.01	0.01	0.14
Queue Length 95th (ft)	1	1	0
Control Delay (s)	11.6	0.5	0.0
Lane LOS	B	A	
Approach Delay (s)	11.6	0.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	36	6	8	0
Future Volume (Veh/h)	0	0	36	6	8	0
Sign Control		Free	Free		Stop	
Grade		5%	2%		1%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	0	0	46	8	10	0
Pedestrians			1		1	
Lane Width (ft)			9.0		10.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	55				52	51
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55				52	51
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1549				955	1016

Direction, Lane #	WB 1	SB 1
Volume Total	54	10
Volume Left	0	10
Volume Right	8	0
cSH	1700	955
Volume to Capacity	0.03	0.01
Queue Length 95th (ft)	0	1
Control Delay (s)	0.0	8.8
Lane LOS		A
Approach Delay (s)	0.0	8.8
Approach LOS		A

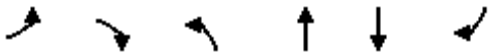
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	13.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	4	31	6	0	0
Future Volume (Veh/h)	0	4	31	6	0	0
Sign Control	Free			Free	Stop	
Grade	5%			-5%	0%	
Peak Hour Factor	0.56	0.56	0.56	0.56	0.56	0.56
Hourly flow rate (vph)	0	7	55	11	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1		122	1
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1		122	1
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	100
cM capacity (veh/h)			1622		844	1084

Direction, Lane #	EB 1	WB 1
Volume Total	7	66
Volume Left	0	55
Volume Right	7	0
cSH	1700	1622
Volume to Capacity	0.00	0.03
Queue Length 95th (ft)	0	3
Control Delay (s)	0.0	6.1
Lane LOS		A
Approach Delay (s)	0.0	6.1
Approach LOS		

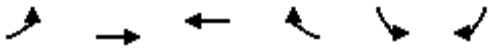
Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	13.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	317	172	260	228	139	342
Future Volume (Veh/h)	317	172	260	228	139	342
Sign Control	Stop			Free	Free	
Grade	-6%			-6%	6%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	334	181	274	240	146	360
Pedestrians	6					
Lane Width (ft)	10.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					477	
pX, platoon unblocked						
vC, conflicting volume	1120	332	512			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1120	332	512			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	74	74			
cM capacity (veh/h)	169	707	1049			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	515	514	506
Volume Left	334	274	0
Volume Right	181	0	360
cSH	230	1049	1700
Volume to Capacity	2.24	0.26	0.30
Queue Length 95th (ft)	1009	26	0
Control Delay (s)	603.7	6.5	0.0
Lane LOS	F	A	
Approach Delay (s)	603.7	6.5	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	204.7		
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	481	598	6	8	0
Future Volume (Veh/h)	0	481	598	6	8	0
Sign Control		Free	Free		Stop	
Grade		5%	2%		1%	
Peak Hour Factor	0.95	0.95	0.95	0.78	0.78	0.78
Hourly flow rate (vph)	0	506	629	8	10	0
Pedestrians			1		1	
Lane Width (ft)			11.0		10.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	638				1141	634
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	638				1141	634
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	945				221	479

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	506	637	10
Volume Left	0	0	10
Volume Right	0	8	0
cSH	945	1700	221
Volume to Capacity	0.00	0.37	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.0	0.0	22.0
Lane LOS			C
Approach Delay (s)	0.0	0.0	22.0
Approach LOS			C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	481	4	31	567	0	0
Future Volume (Veh/h)	481	4	31	567	0	0
Sign Control	Free			Free	Stop	
Grade	5%			-5%	0%	
Peak Hour Factor	0.95	0.56	0.56	0.95	0.56	0.56
Hourly flow rate (vph)	506	7	55	597	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			507		1214	507
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			507		1214	507
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		100	100
cM capacity (veh/h)			1058		190	566

Direction, Lane #	EB 1	EB 2	WB 1
Volume Total	506	7	652
Volume Left	0	0	55
Volume Right	0	7	0
cSH	1700	1700	1058
Volume to Capacity	0.30	0.00	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.0	0.0	1.4
Lane LOS			A
Approach Delay (s)	0.0		1.4
Approach LOS			

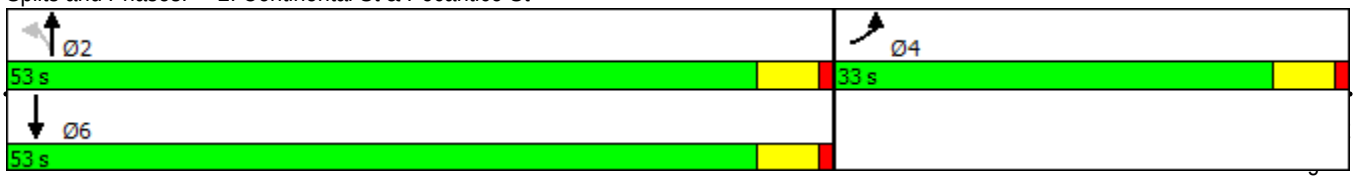
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

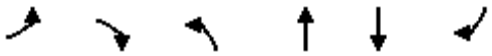
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	317	172	260	228	139	342
Future Volume (vph)	317	172	260	228	139	342
Satd. Flow (prot)	1654	0	0	1931	1539	0
Flt Permitted	0.969			0.473		
Satd. Flow (perm)	1654	0	0	935	1539	0
Satd. Flow (RTOR)	34				234	
Confl. Peds. (#/hr)			6			6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	515	0	0	514	506	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	33.0		53.0	53.0	53.0	
Total Lost Time (s)	5.0			5.0	5.0	
Act Effct Green (s)	27.0			48.0	48.0	
Actuated g/C Ratio	0.32			0.56	0.56	
v/c Ratio	0.94			0.97	0.52	
Control Delay	54.4			54.6	8.1	
Queue Delay	0.0			0.0	0.4	
Total Delay	54.4			54.6	8.5	
LOS	D			D	A	
Approach Delay	54.4			54.6	8.5	
Approach LOS	D			D	A	
Queue Length 50th (ft)	250			254	76	
Queue Length 95th (ft)	#446			#478	155	
Internal Link Dist (ft)	209			121	397	
Turn Bay Length (ft)						
Base Capacity (vph)	568			528	971	
Starvation Cap Reductn	0			0	145	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.91			0.97	0.61	

Intersection Summary	
Cycle Length: 86	
Actuated Cycle Length: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 39.3	Intersection LOS: D
Intersection Capacity Utilization 95.8%	ICU Level of Service F
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Continental St & Pocantico St





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	317	172	260	228	139	342
Future Volume (vph)	317	172	260	228	139	342
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	334	181	274	240	146	360

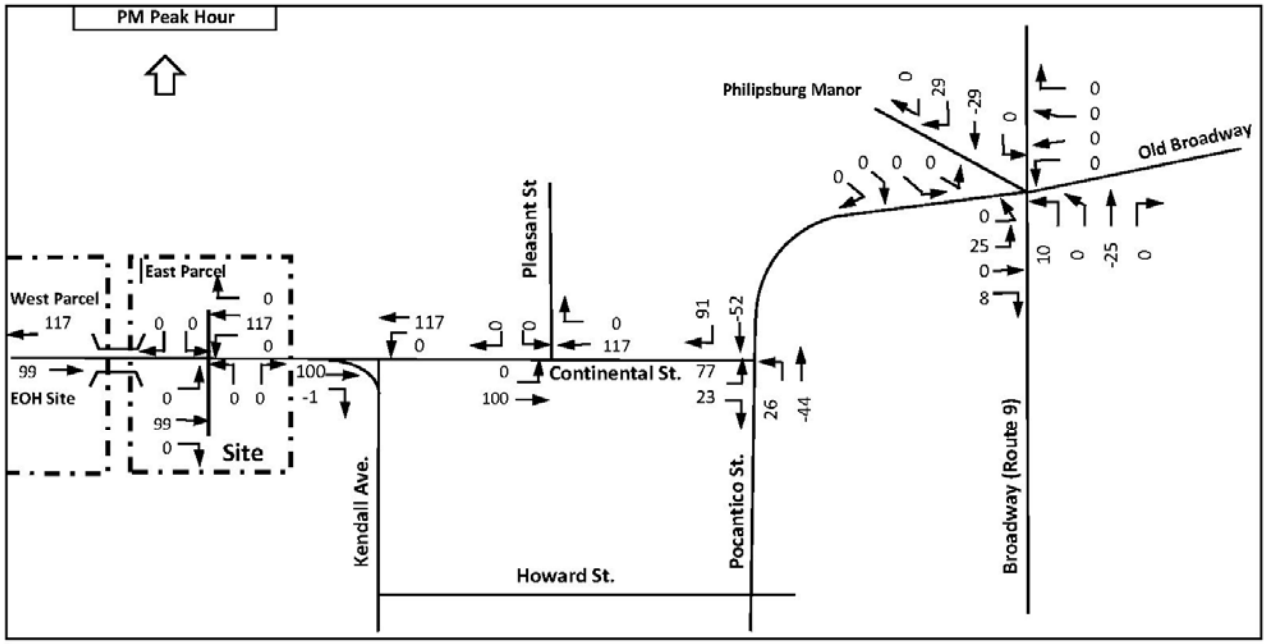
Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total (vph)	334	181	514	506
Volume Left (vph)	334	0	274	0
Volume Right (vph)	0	181	0	360
Hadj (s)	0.53	-0.67	0.14	-0.39
Departure Headway (s)	8.1	6.8	6.7	6.3
Degree Utilization, x	0.75	0.34	0.96	0.88
Capacity (veh/h)	439	521	531	567
Control Delay (s)	30.1	12.1	54.9	38.8
Approach Delay (s)	23.8		54.9	38.8
Approach LOS	C		F	E

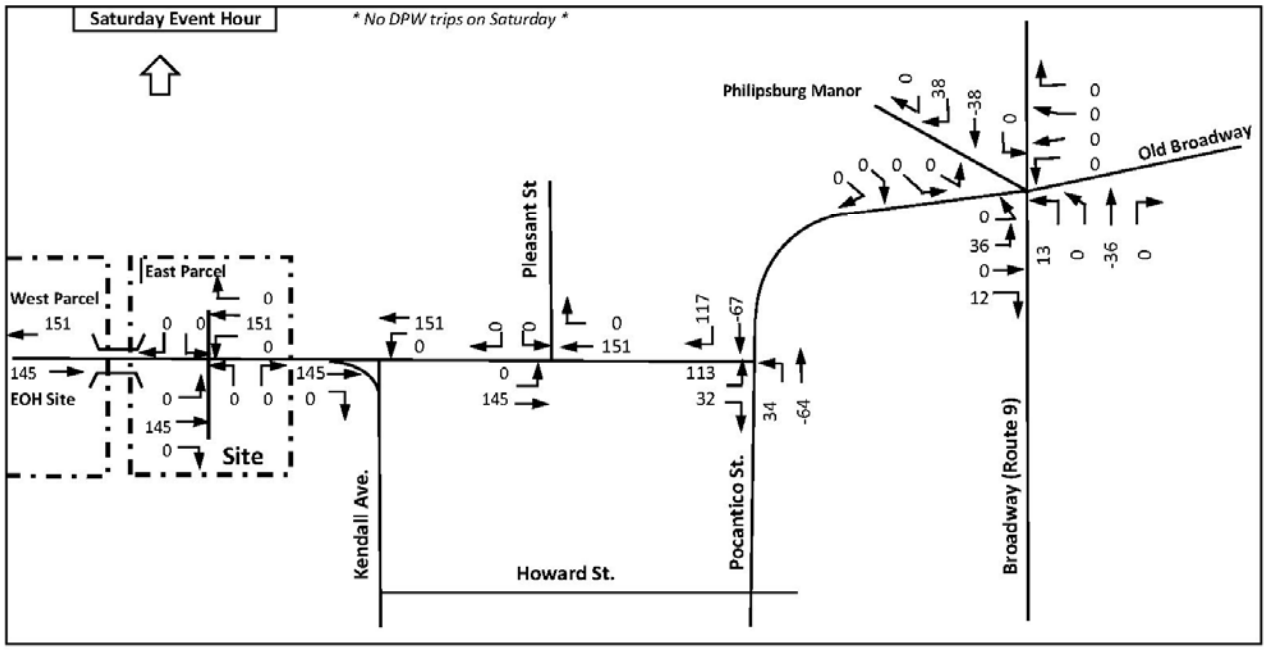
Intersection Summary			
Delay	39.1		
Level of Service	E		
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

Revised Traffic Volume Exhibits

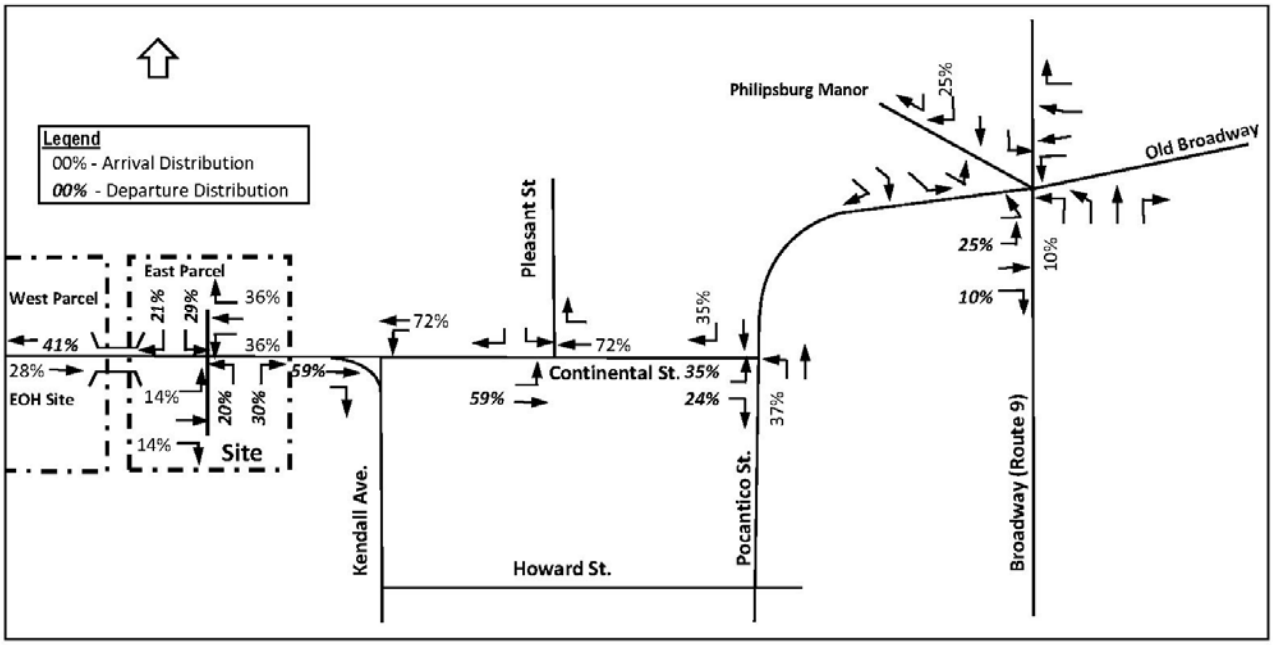
- Revised Exhibit D-7 - Reallocated Edge-on-Hudson and DPW Trips
- Revised Exhibit D-8 – Arrival and Departure Distributions
- Revised Exhibit D-9 - East Parcel Redevelopment – Project Trips
- Revised Exhibit D-10 – Build Traffic Volumes

Revised Exhibit D-7 – Reallocated Edge-on-Hudson and DPW Trips

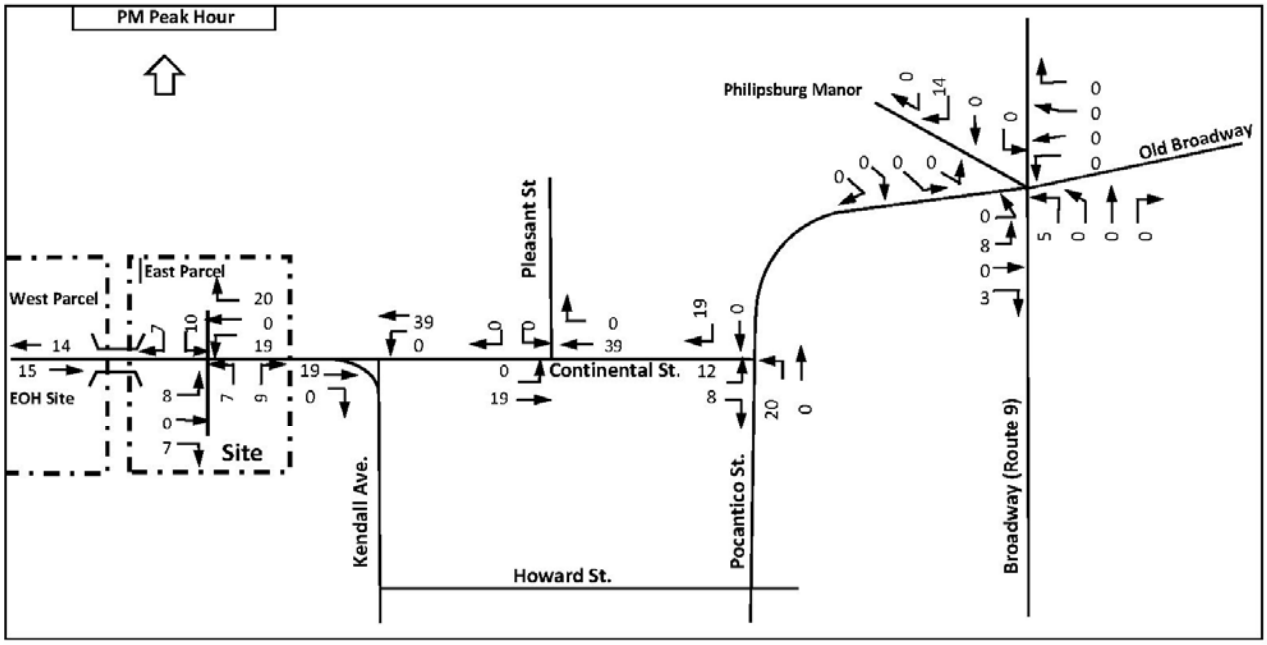


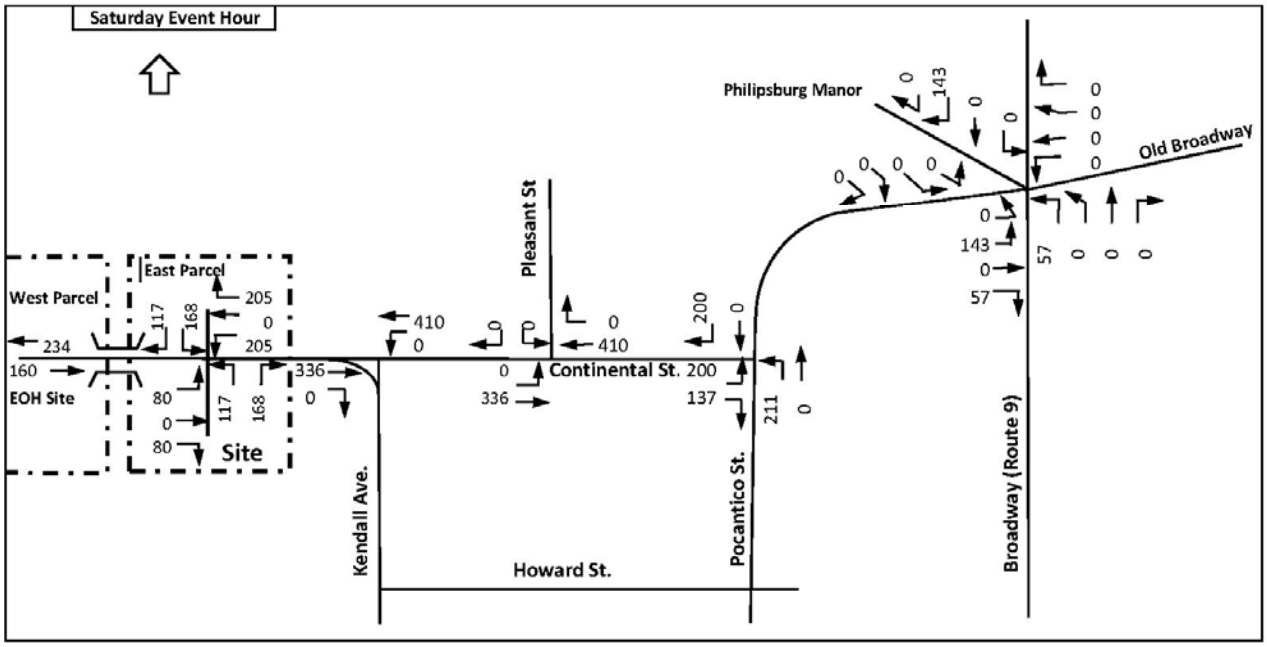


Revised Exhibit D-8 – Arrival and Departure Distributions

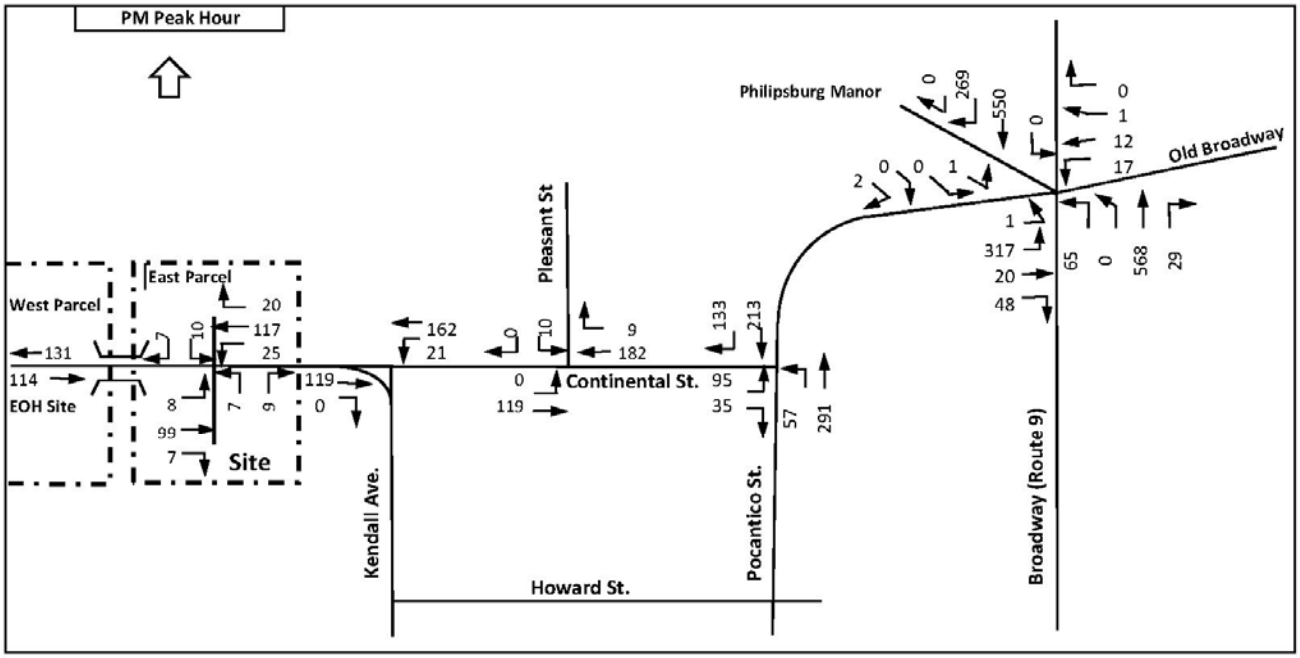


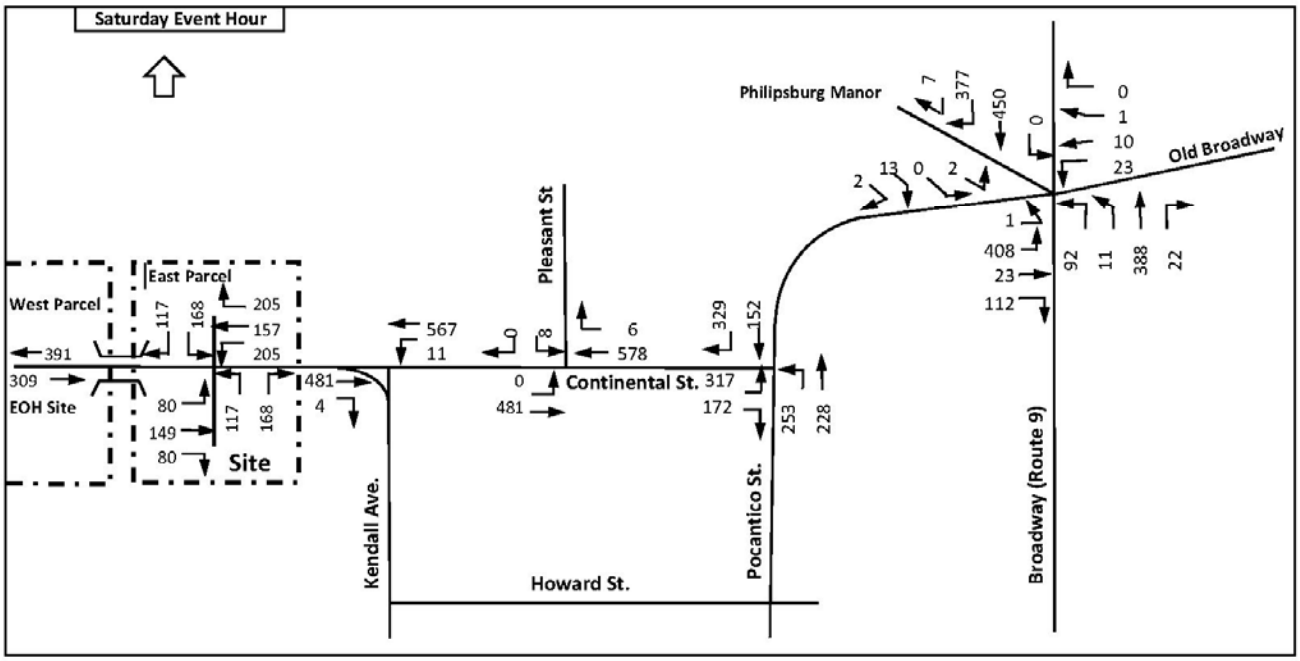
Revised Exhibit D-9 – East Parcel Redevelopment – Project Trips





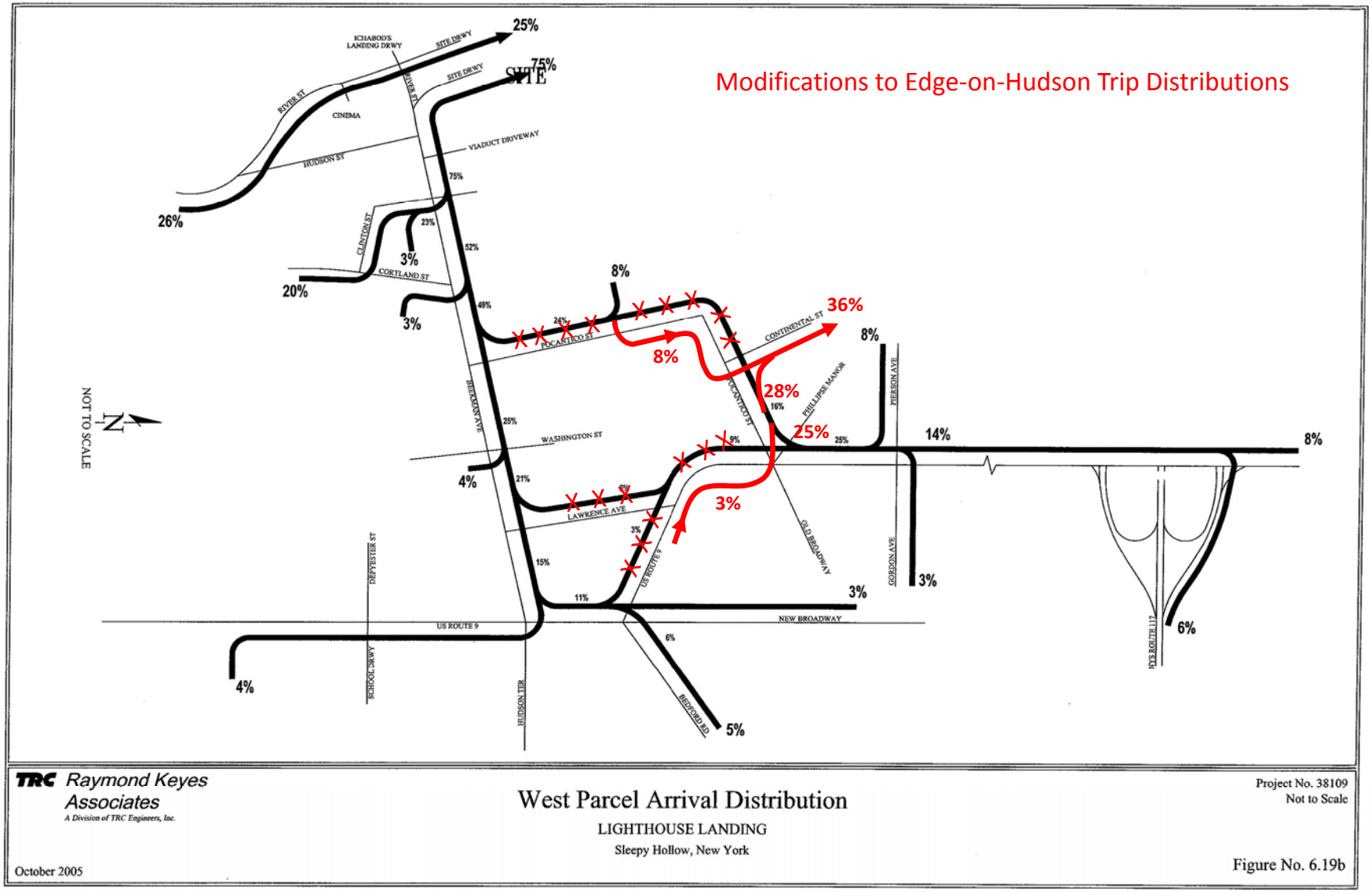
Revised Exhibit D-10 – Build Traffic Volumes





Modifications to Edge-on-Hudson Trip Distributions

- West Parcel Arrival Distribution (Figure No. 6.19b, Lighthouse Landing FEIS)
- West Parcel Departure Distribution (Figure No. 6.20b, Lighthouse Landing FEIS)



TRC Raymond Keyes Associates
A Division of TRC Engineers, Inc.

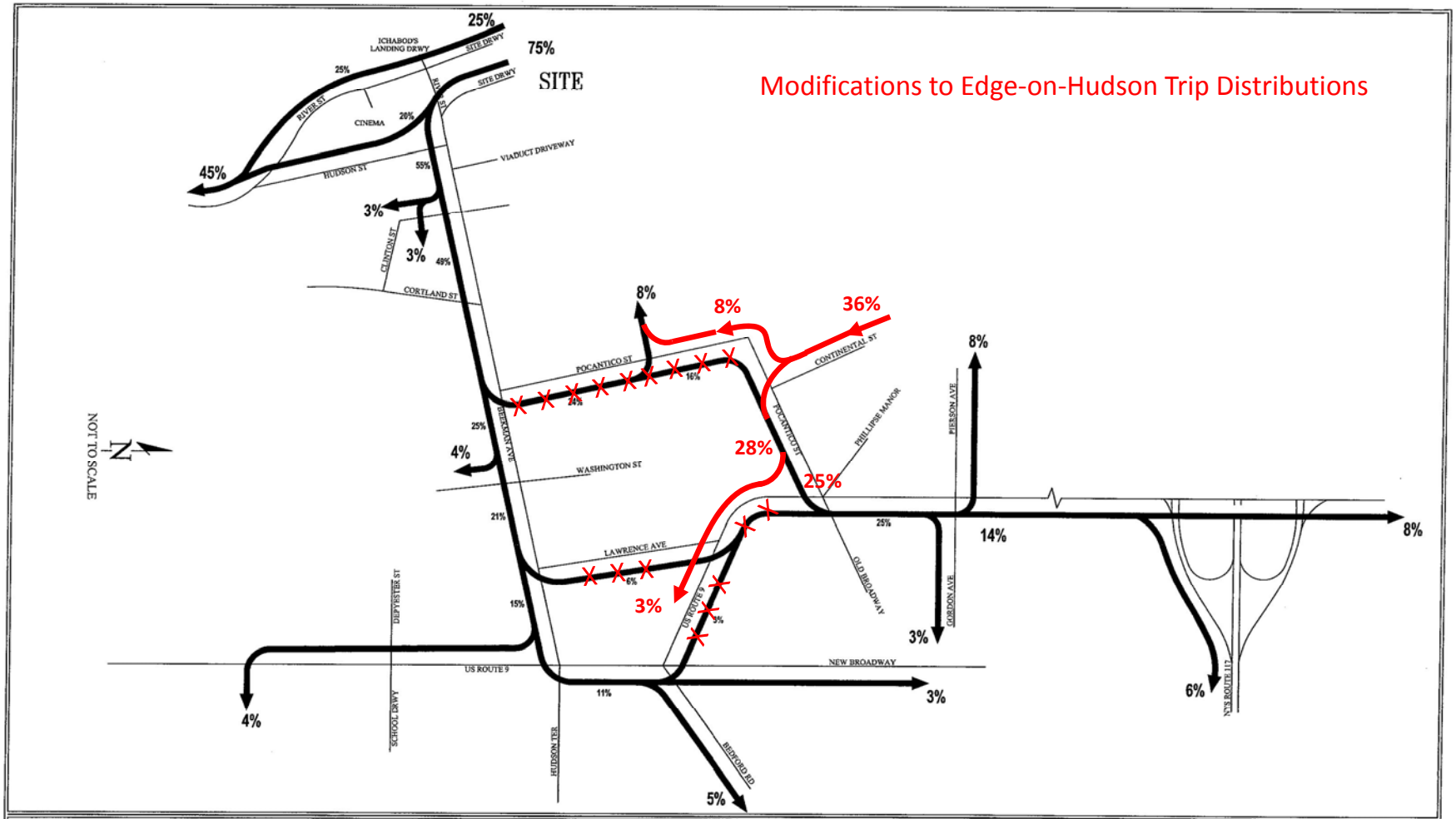
West Parcel Arrival Distribution

LIGHTHOUSE LANDING
Sleepy Hollow, New York

Project No. 38109
Not to Scale

October 2005

Figure No. 6.19b



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West Parcel Departure Distribution

LIGHTHOUSE LANDING

Sleepy Hollow, New York

Project No. 38109
Not to Scale

October 2005

Figure No. 6.20b

PEDESTRIAN AND VEHICULAR TRAFFIC SUMMARY REPORT

BROADWAY (US ROUTE 9)
@ POCANTICO STREET/OLD BROADWAY
@ PIERSON AVENUE/OLD BROADWAY
SLEEPY HOLLOW, NEW YORK

Prepared for

VILLAGE OF SLEEPY HOLLOW

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Prepared by

TRC ENGINEERS, INC.
Hawthorne, New York

January 15, 2016
TRC Project No. 242686

Pedestrian and Vehicular Traffic Summary Report

Broadway (Route 9)
@ Pocantico Street/Old Broadway
@ Pierson Avenue/Old Broadway
Village of Sleepy Hollow

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INTRODUCTION

TRC Engineers, Inc. (TRC) has prepared this Traffic Summary Report to outline preliminary findings with respect to analysis at the intersections of Broadway (Route 9) & Pocantico Street/Old Broadway and Broadway & Pierson Avenue/Old Broadway, in the Village of Sleepy Hollow, New York. The purpose of this Memorandum is to outline the methodology and findings of the preliminary intersection analysis in conjunction with the Village and then with the New York State Department of Transportation (NYSDOT), who has jurisdiction over Broadway (Route 9).

In preparation of this Memorandum, TRC met with representatives of the Village at the Site as well as held discussions with representatives of the NYSDOT, who are also reviewing potential modifications to the subject intersections. The NYSDOT currently estimates that any improvements that they would perform here would be several years away. TRC then conducted vehicular and pedestrian traffic counts at the intersections including during the Halloween events that occurred in the area during October. During these event periods, there are hundreds of pedestrians hourly. TRC also performed additional observations of the intersections at other times of the day and during other months. The peak periods for vehicles as well as for the pedestrians were summarized. Capacity analyses were performed with these vehicular and pedestrian traffic volumes.

TRC performed field observations of the existing roadway geometry and operations. Based upon our observations and analysis, the intersections operate appropriately from a capacity standpoint but have issues from a vehicular and pedestrian traffic safety standpoint. The existing geometry and traffic control are confusing to some drivers which leads to improper vehicular movements as well as potential pedestrian safety issues. TRC has developed preliminary conceptual improvement plans to help alleviate these conditions. Because of the existing geometry and topography as well as the adjacent land uses, modifications to the area are limited.

STUDY LOCATIONS

The two key intersections in this Study are the intersection of Broadway & Pierson Avenue/Old Broadway and the intersection of Broadway & Pocantico Street/Old Broadway. Just south of the intersection of Broadway & Pierson Avenue/Old Broadway, the speed limit along Broadway becomes 30 mph in the southbound direction and becomes 40 mph in the northbound direction. The lane widths on Broadway are approximately 10 - 11 feet wide and the pavement is generally in appropriate condition.

Broadway & Pierson Avenue/Old Broadway

The intersection of Broadway & Pierson Avenue/Old Broadway is a four-legged signalized intersection. The northbound and southbound Broadway approaches provide one shared left-turn/through lane and one shared through/right-turn lane. The eastbound Pierson Avenue and westbound Old Broadway approaches both provide one shared left-turn/through/right-turn lane. Old Broadway intersects Broadway at a very sharp angle with a wide opening which leads to the majority of the confusion at this intersection. Adding to the confusion, Dell Street and Gordon Street intersect with Old Broadway adjacent to its intersection with Broadway.

Observations of the intersection operation indicated that some drivers are confused on what to do at this location. For example, while a car traveling on northbound Broadway planning to take a left turn onto Pierson Avenue was stopped at the intersection waiting for the opposing traffic to pass, one southbound vehicle turned left in front of the northbound vehicle while another southbound vehicle turned left behind the northbound vehicle.

In addition, the driveway for the Old Dutch Church and the adjacent cemetery essentially connects with Broadway at a 45 degree angle at this intersection, although it is not controlled by the traffic signal.

There are currently crosswalks on two of the approaches of the intersection. There are Westchester County Bee-Line bus stops in both directions just south of the intersection.

The intersection is partially constructed on a bridge that takes Broadway over the Pocantico River.

Broadway & Pocantico Street/Old Broadway

The intersection of Broadway & Pocantico Street/Old Broadway is a five-legged signalized intersection. The northbound and southbound Broadway approaches provide one shared left-turn/through lane and on shared through/right-turn lane. The eastbound Pocantico Street and westbound Old Broadway approaches both provide one shared left-turn/through/right-turn lane. The Philipsburg Manor Driveway creates the fifth approach and it provides one shared left-turn/through/right-turn lane.

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TRAFFIC COUNTS

TRC performed various Traffic Counts and made various observations throughout the three weekends, the dates are listed below:

- Friday, October 9th 2015 from 4:00 pm – 10:00 pm
- Saturday, October 10th, 2015 from 4:00 pm – 10:00 pm
- Sunday, October 11th 2015 from 4:00 pm – 10:00 pm
- Thursday, October 15th 2015 from 3:45 pm – 6:15 pm
- Friday, October 16th 2015 from 3:45 pm – 6:15 pm
- Friday, October 23rd 2015 from 5:00 pm – 9:00 pm
- Saturday, October 24th 2015 from 5:00 pm – 9:00 pm
- Sunday, October 25th 2015 from 5:00 pm – 9:00 pm

During these weekends, there were various Halloween activities being held in the surrounding area which resulted in additional traffic and pedestrians. The Thursday October 15th count was during a time of limited extra activity in the area and thus forms a base control condition.

In addition there were several reoccurring observations that were made which are listed below:

- Sleepy Hollow Police Department set up traffic cones along Rt. 9 at approximately 6:00 pm. Route 9 is reduced to one lane in each direction between the two traffic survey locations.
- Sleepy Hollow Police Officer used to cross pedestrians across Route 9 at northern survey location (on scene from approximately 6:00 pm to 9:00 pm)
- There was a lot of confusion from the drivers crossing the intersection from the Old Broadway approach. Specifically, crossing occurred between cars merging between Dell St./Gordon Ave./Old Broadway
- Pedestrians crossing the southbound approach on Broadway were generally confused about when to cross because of the northbound lagging green signal phase which cannot see from their position
- Sleepy Hollow Police Department starts to break down traffic cones along Route 9 at approximately 8:45 pm; finishes around 9:00 pm.

  * The times referred to in the observations have some slight variations between each day but in general they are consistent.

In addition to the manual vehicular and pedestrian traffic counts performed, TRC also conducted Automatic Traffic Recorder (ATR) machine counts along Route 9 from October 8th, 2015 through October 19th, 2015. A comparison of the manual and ATR counts indicate that the traffic volumes utilized from the manual counts are appropriate. The ATR data shows expected traffic patterns where there are peaks in the morning around 7:00 AM – 8:30 AM and in the afternoon around 4:30 PM – 6:00 PM. The ATR data shows the hourly peak for the northbound traffic occurring on October 16th, 2015 between 5:15 PM and 6:15 PM and for the southbound traffic on October 10th, 2015 between 4:00 PM and 5:00 PM. Vehicular speed data for the study period

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demonstrated that the 85th percentile speed in the northbound direction was 31 mph and was 35 mph in the southbound direction. The likely reason southbound traffic has a higher speed is because the area of the traffic study is a point of transition where the speed limit reduces from 40 mph to 30 mph in the southbound direction. The speeds are also partially influenced by the traffic signals.

The ATR data also provides information on the type of vehicle that travels through the study area. In this case it demonstrates that more than 95% were passenger cars (or two axle vehicles) in the northbound direction and more than 90% in the southbound direction. The ATR data is contained in Attachment D.

EXISTING TRAFFIC ANALYSIS

The existing vehicular and pedestrian movements were obtained from the traffic counts for each of the count periods and the peak conditions are illustrated on Figures 2 through 10 (see Attachment A). Figures 2 through 4 illustrate the Peak Hour Traffic Volumes at the two intersections for each day during the three weekends. Figures 5 through 10 illustrate the pedestrian traffic volumes for all three weekends. The pedestrian traffic volumes are summarized for the respective Vehicle Peak Hours (Figures 5, 7, 9) and the Pedestrian Peak Hours (Figures 6, 8, 10).

As illustrated on the Figures, during the special events, there are several hundred pedestrians in an hour.

EXISTING TRAFFIC ANALYSIS AND LEVELS OF SERVICE

In addition to the vehicular and pedestrian traffic counts, traffic signal timings were obtained from the NYSDOT and from field observations for this Study. Based upon the vehicular and pedestrian traffic volumes as well as the existing geometry and traffic control, traffic analyses were conducted and the results are shown in the tables below (A detailed Level of Service Summary for each movement can be found in Attachment B):

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TABLE NO. 1

PEAK HOUR LEVEL OF SERVICE (LOS)/AVERAGE DELAY SUMMARY TABLE

APPROACH	October 9th - October 11th			October 15th - October 16th		October 23rd - October 25th		
	FRIDAY	**SATURDAY**	**SUNDAY**	**THURSDAY**	**FRIDAY**	**FRIDAY**	**SATURDAY**	**SUNDAY**
	4:00pm-5:00pm	**6:00pm-7:00pm**	**4:00pm-5:00pm**	**4:30pm-5:30pm**	**5:00pm-6:00pm**	**5:00pm-6:00pm**	**6:15pm-7:15pm**	**5:15pm-6:15pm**
	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Broadway & Pierson Avenue/Old Broadway	**A 4.2**	**A 5.6**	**A 4.5**	**A 4.2**	**A 4.9**	**A 5.3**	**A 6.7**	**A 4.8**
Broadway & Pocantico Street/Old Broadway/Driveway	**C 20.8**	**B 19.0**	**B 19.2**	**B 18.2**	**C 26.5**	**C 24.1**	**C 33.8**	**B 16.6**

As illustrated in the Table above, the overall Level of Service (LOS) for both intersections during all three weekends was a LOS C or better. This signifies that, in general, the intersections are operating at acceptable Levels of Service. However, the issues described above do not get completely accounted for in the capacity analyses. The eastbound approach of Pocantico Street experienced a LOS D or E throughout the conducted traffic study.

The above analyses were performed with the existing roadway geometry and traffic control. However, it should be noted that during the peak pedestrian periods when the events are occurring, the Police Department cones off one through lane in each direction along Broadway between the two intersections. The Police also assist pedestrians crossing at Pierson Avenue. When this is factored into the capacity analyses for the Saturday October 24th 6:15 – 7:15 PM condition, the overall intersection at Broadway and Pierson only changes Levels of Service/Delays slightly but the intersection of Broadway and Pocantico drops from a Level Service C of 33.8 seconds per vehicle to Level of Service E of 73.0 seconds per vehicle, with the southbound Broadway approach and the eastbound Pocantico approach becoming Level of Service F. This is shown in more detail in Tables A and B in Attachment B. Thus, when the lanes are restricted, there is a degradation in the Level of Service.

IMPROVEMENT LIMITATIONS

The two signalized intersections are only approximately 550 feet apart, and even less when measuring between the opposing stop bars. Because of the existing geometry and topography as well as the surrounding land uses, potential modifications to the area are limited. The Pocantico River travels under Broadway just south of Pierson Avenue. The historic bridge that carries Broadway is at a non-standard angle on the east side.

Old Broadway also intersects the two intersections at non-standard angles. The location of Dell Street and Gordon Avenue as they intersect Old Broadway further limits the improvements, as do the gas station driveways.

Also, both intersections have a driveway forming a fifth leg to the intersection, the Old Dutch Church driveway at Pierson Avenue and the Philipsburg Manor parking lot driveway adjacent to Pocantico Street. In addition, there is the Philipsburg Manor property itself as well as the parkland on the east side of Broadway.

CONCEPTUAL DRAWINGS

Based upon the traffic and pedestrian volumes, the capacity analyses and the field observations, TRC has prepared preliminary five Conceptual Drawings identifying possible measures that could be taken to make both intersections operate more efficiently and safely (see Attachment C). These five Conceptual Plans are described briefly below. A sixth different concept, developed by the NYSDOT is also described below and attached in Attachment B.

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Conceptual Plan 1

In Conceptual Plan 1, crosswalks would be added to both intersections, curb extensions and sidewalks would be added to the intersection of Broadway & Pierson /Old Broadway, and sidewalks would be added along the edge of the park adjacent to Old Broadway. In addition, Gordon Avenue would be made into a one-way street going eastbound to remove any conflicts with Dell Street while the Stop Bar on Dell Street would be moved closer to Old Broadway. Lastly, striping would be added along Old Broadway and Dell Street in order to better delineate the lanes. Old Broadway would remain two-way.

Conceptual Plan 2

In Conceptual Plan 2, crosswalks and curb extensions/islands would be added to both intersections, and a sidewalk along the edge of the park adjacent to Old Broadway. In this case the curb extensions on Broadway & Pocantico Street/Old Broadway would turn Broadway & Pocantico Street into a signalized three-legged intersection and Broadway & Old Broadway into an unsignalized three-legged intersection. In addition, Old Broadway would be turned into a one-way street going southbound and striping would once again be added to delineate lanes. Lastly, the Philipsburg Manor Driveway currently intersecting Broadway & Pocantico/Old Broadway would be moved westbound onto Pocantico Street creating an unsignalized three-legged intersection.

Conceptual Plan 3

In Conceptual Plan 3, crosswalks and curb extensions/islands would be added to both intersections, and a sidewalk along the edge of the park adjacent to Old Broadway. In this case the curb extensions on Broadway & Pocantico Street/Old Broadway would turn Broadway & Pocantico Street into a signalized four-legged intersection. In addition, Old Broadway would be turned into a one-way street going southbound and striping would once again be added to delineate lanes. Lastly, the Philipsburg Manor Driveway currently intersecting Broadway & Pocantico/Old Broadway would be moved westbound onto Pocantico Street creating an unsignalized three-legged intersection.

Conceptual Plan 4

Conceptual Plan 4 is similar to Conceptual Plan 3 but Old Broadway would remain two-way.

Conceptual Plan 5

Conceptual Plan 4 is similar to Conceptual Plan 3 but with some additional modifications to the intersection of Broadway & Pocantico Street/North Broadway.

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Conceptual Plan DOT 1

Conceptual Plan DOT 1 was developed by the NYSDOT. It converts Old Broadway to one-way southbound, but states that this was converted by the Village. The NYSDOT creates a curbed island on the bridge and provides an offset of Old Broadway from Pierson Avenue. The access for Philipsburg Manor remains the same.

Converting Old Broadway or one of the side streets to one-way will have some impacts on the people who will be diverted. The relocation of the Philipsburg Manor driveway is also a consideration.

After Village review, the Conceptual Plans can be discussed with the NYSDOT to improve conditions at the two locations.

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APPENDIX A

TRAFFIC AND PEDESTRIAN VOLUME FIGURES

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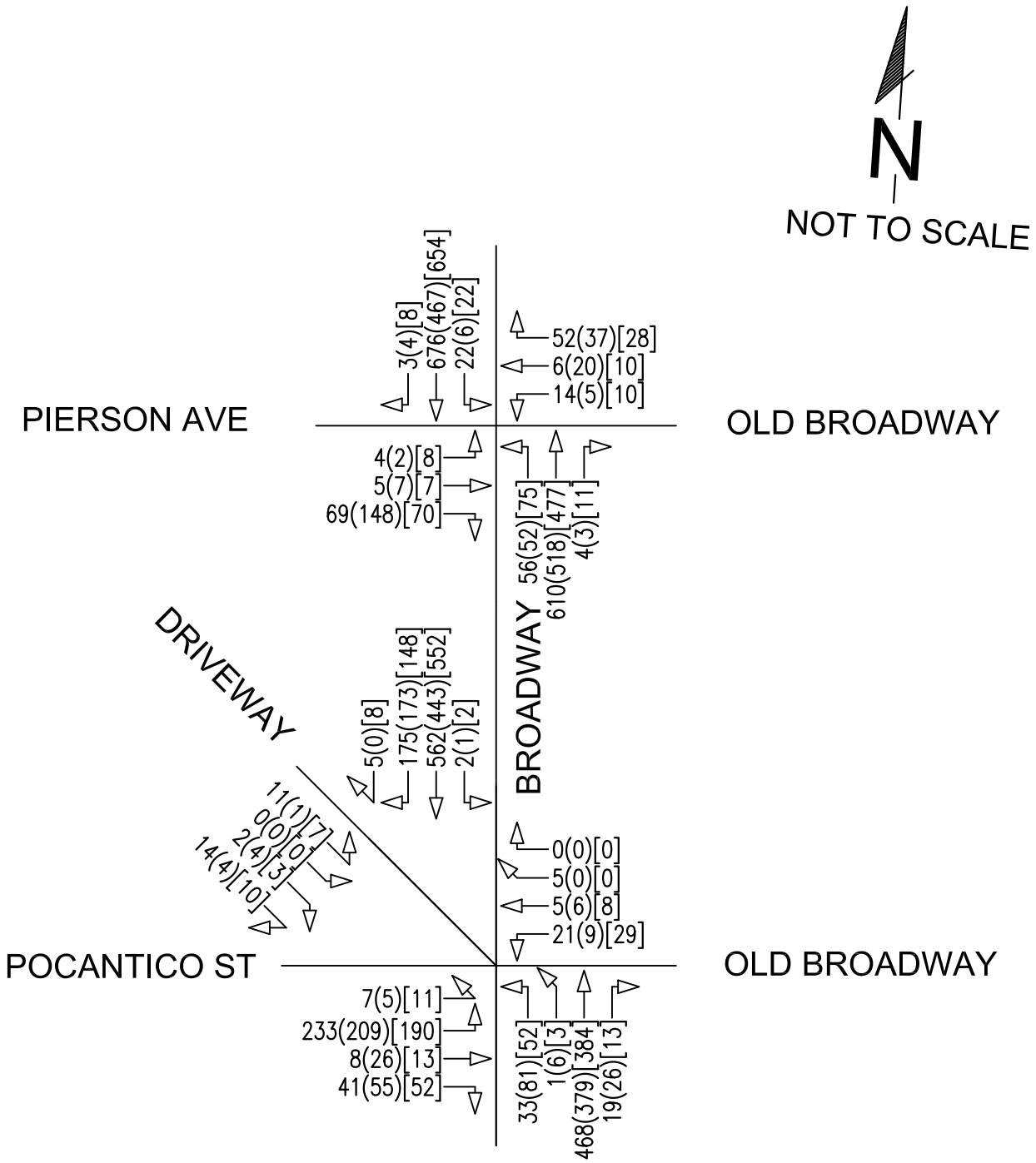
Site Location
Sleepy Hollow, NY

Project No. 242686
Not to Scale
January 2016

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Figure No. 1

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LEGEND

00 - VPH-PEAK FRI HOUR (4:00-5:00PM)

(00) - VPH-PEAK SAT HOUR (6:00-7:00PM)

[00] - VPH-PEAK SUN HOUR (4:00-5:00PM)

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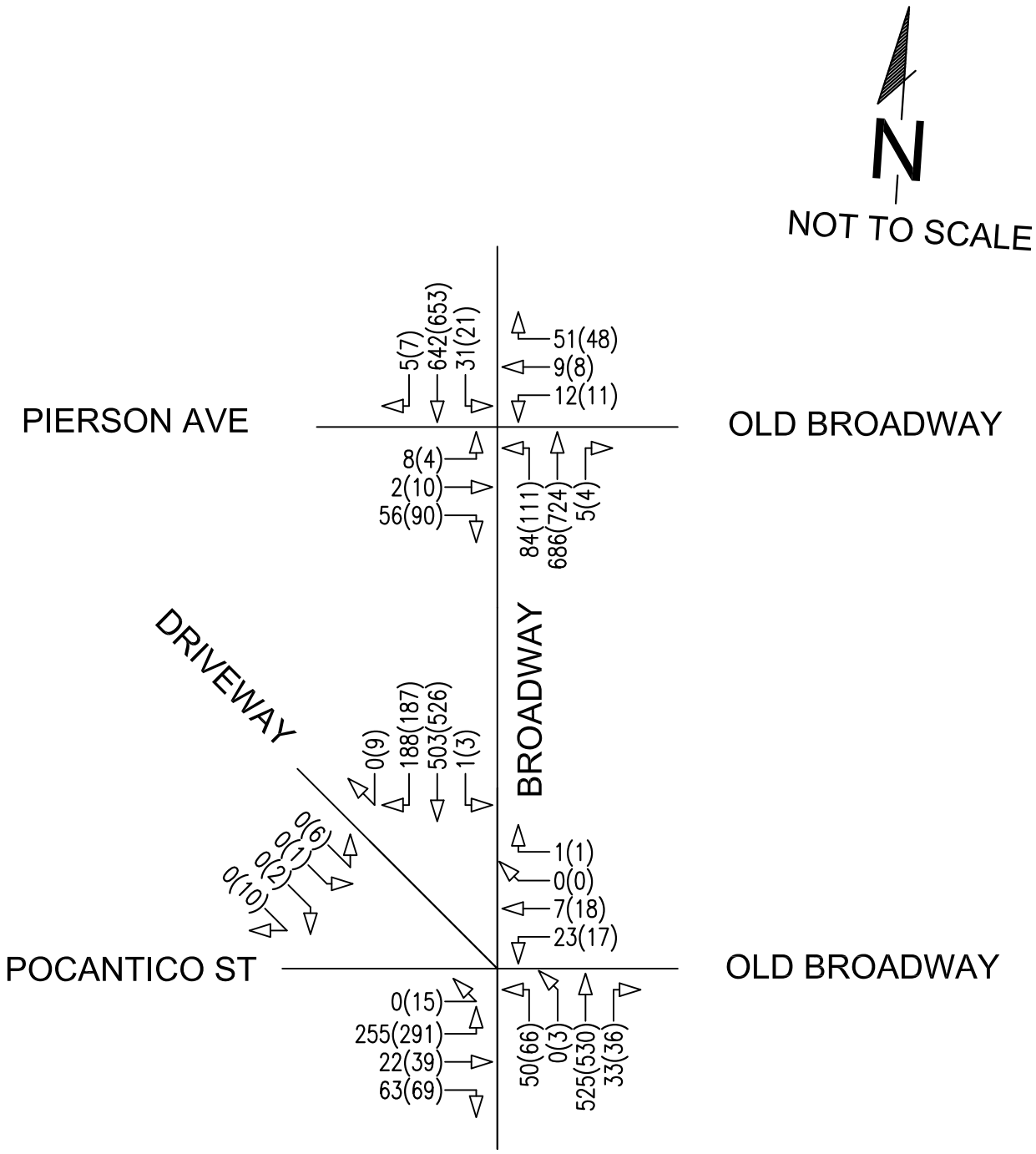
Existing Traffic Volumes
10/09/15 - 10/11/15
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Figure No. 2

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(00) - VPH-PEAK FRI HOUR (5:00-6:00PM)

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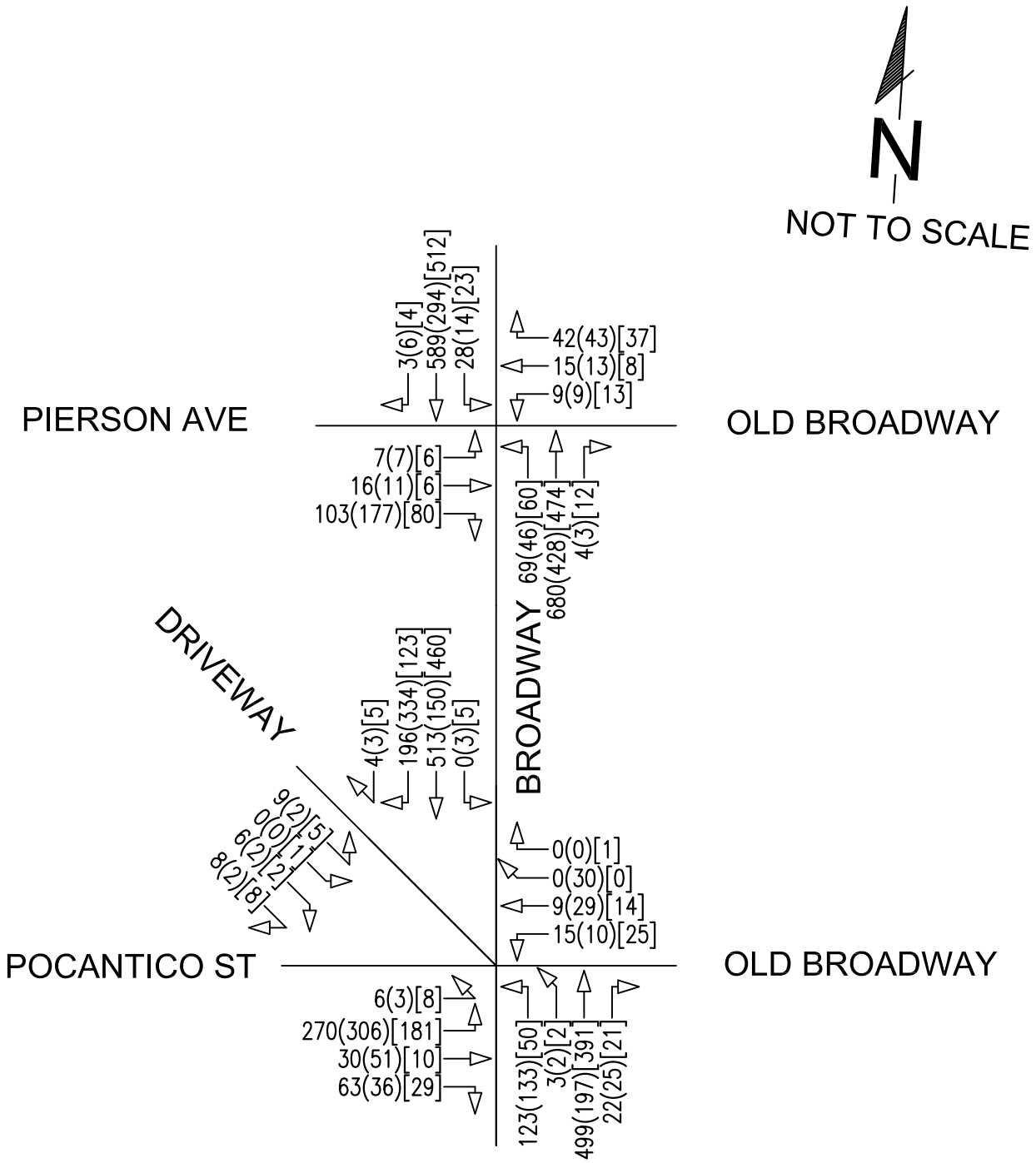
Existing Traffic Volumes
10/15/15 - 10/16/15
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Figure No. 3

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LEGEND

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(00) - VPH-PEAK SAT HOUR (6:15-7:15PM)
[00] - VPH-PEAK SUN HOUR (5:15-6:15PM)

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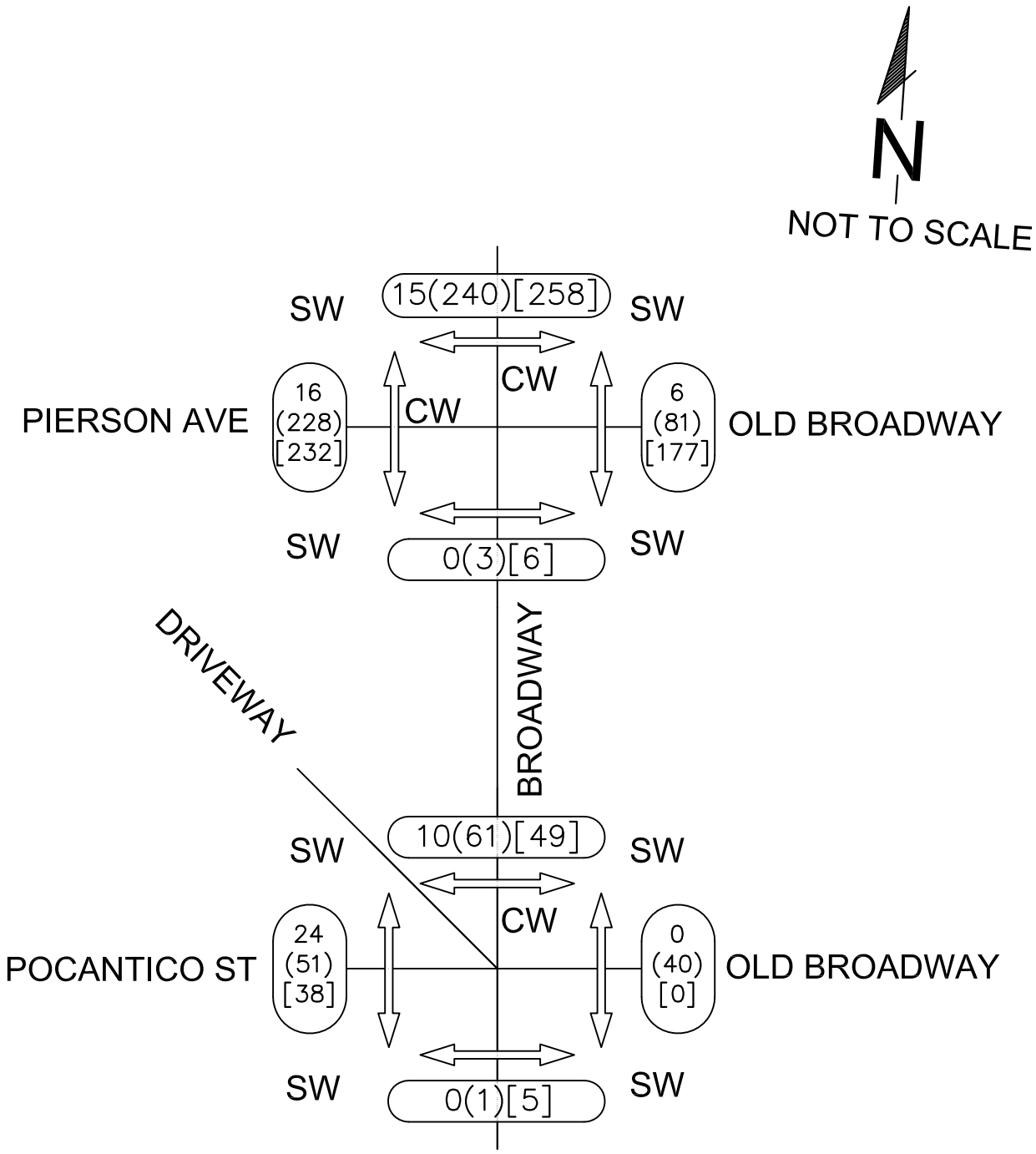
Existing Traffic Volumes
10/23/15 - 10/25/15
Sleepy Hollow, NY

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Figure No. 4

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LEGEND

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(00) - VPH-PEAK SAT HOUR (6:00-7:00PM)
[00] - VPH-PEAK SUN HOUR (4:00-5:00PM)

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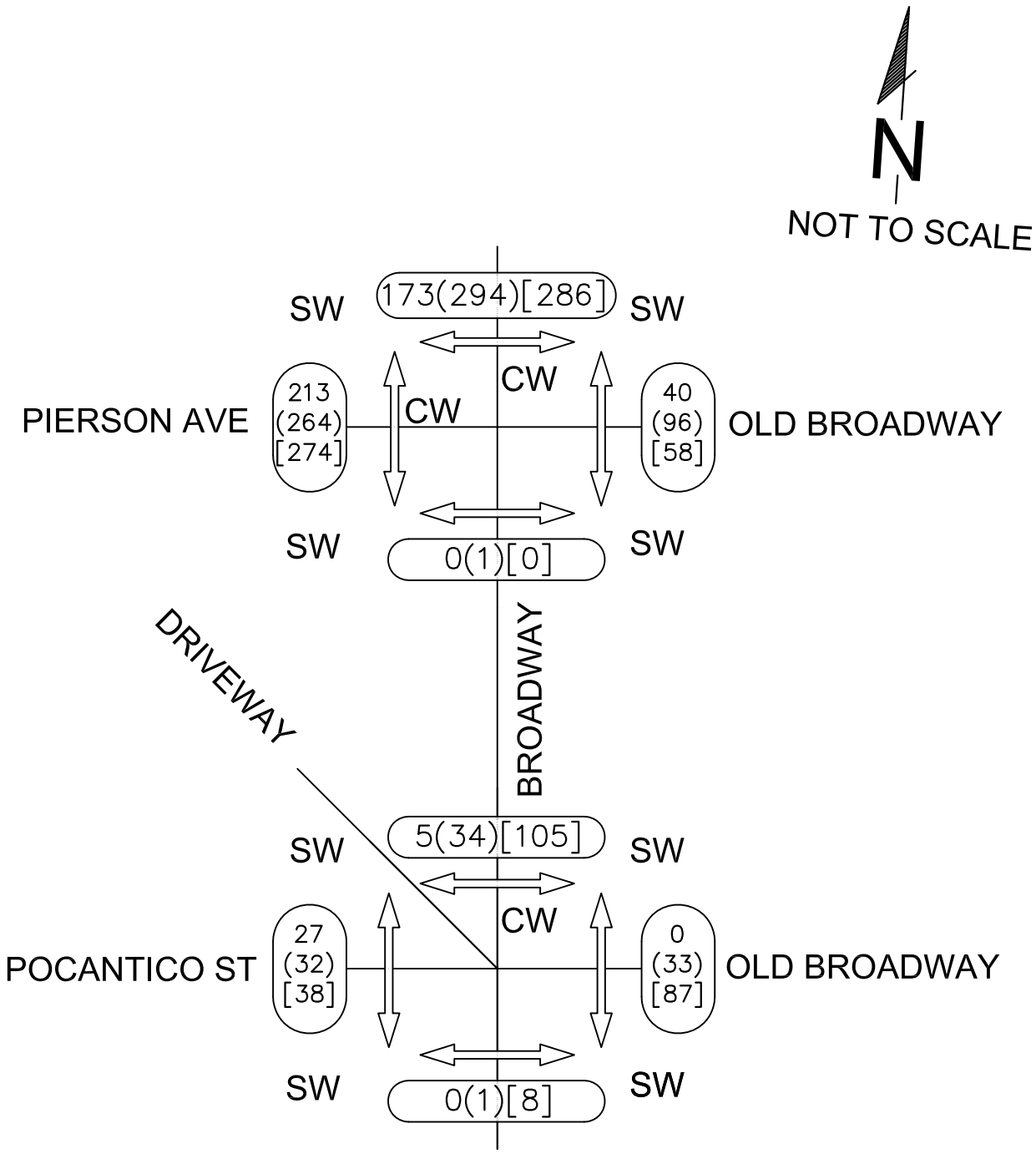
Existing Pedestrian Volumes
(Vehicle Peak Hour)
10/09/15 - 10/11/15
Sleepy Hollow, NY

Project No. 242686
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January 2016

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Figure No. 5

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LEGEND

00 - VPH-PEAK FRI HOUR (7:45-8:45PM)
(00) - VPH-PEAK SAT HOUR (5:30-6:30PM)
[00] - VPH-PEAK SUN HOUR (6:45-7:45PM)

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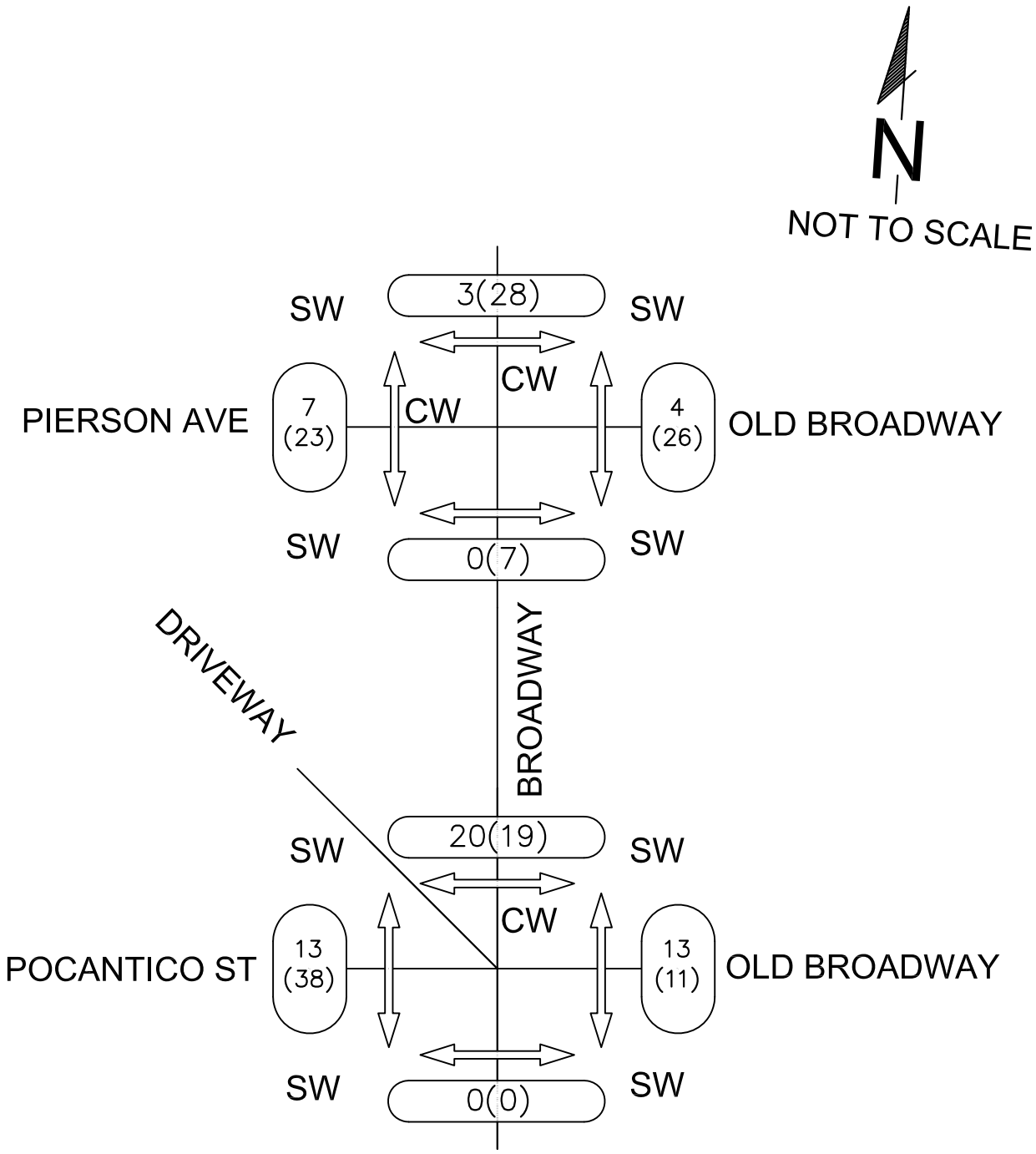
Existing Pedestrian Volumes
(Pedestrian Peak Hour)
10/09/15 - 10/11/15
Sleepy Hollow, NY

Project No. 242686
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January 2016

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Figure No. 6

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LEGEND

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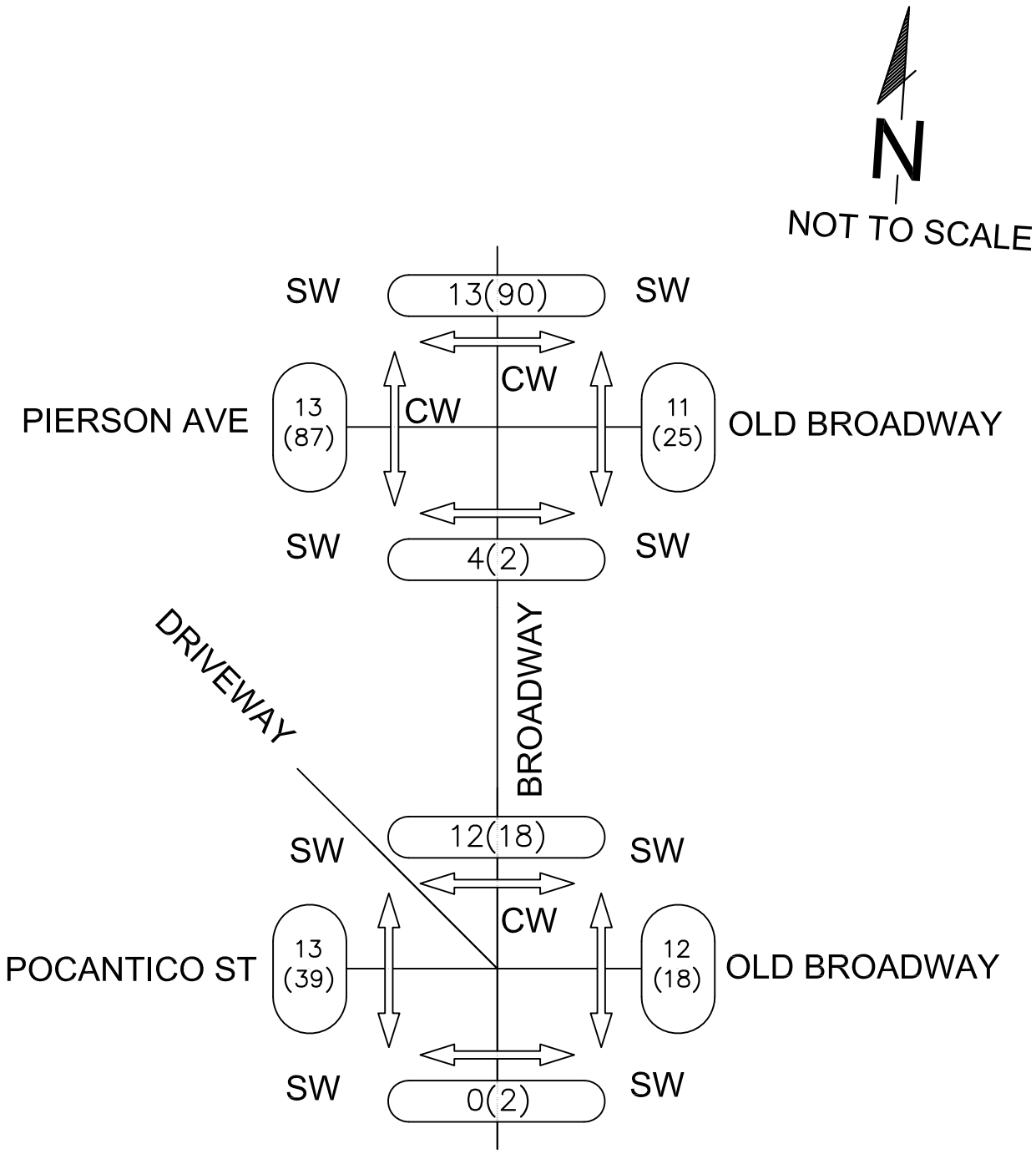
Existing Pedestrian Volumes
(Vehicle Peak Hour)
10/15/15 - 10/16/15
Sleepy Hollow, NY

Project No. 242686
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January 2016

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Figure No. 7

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LEGEND

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(00) - VPH-PEAK FRI HOUR (5:15-6:15PM)

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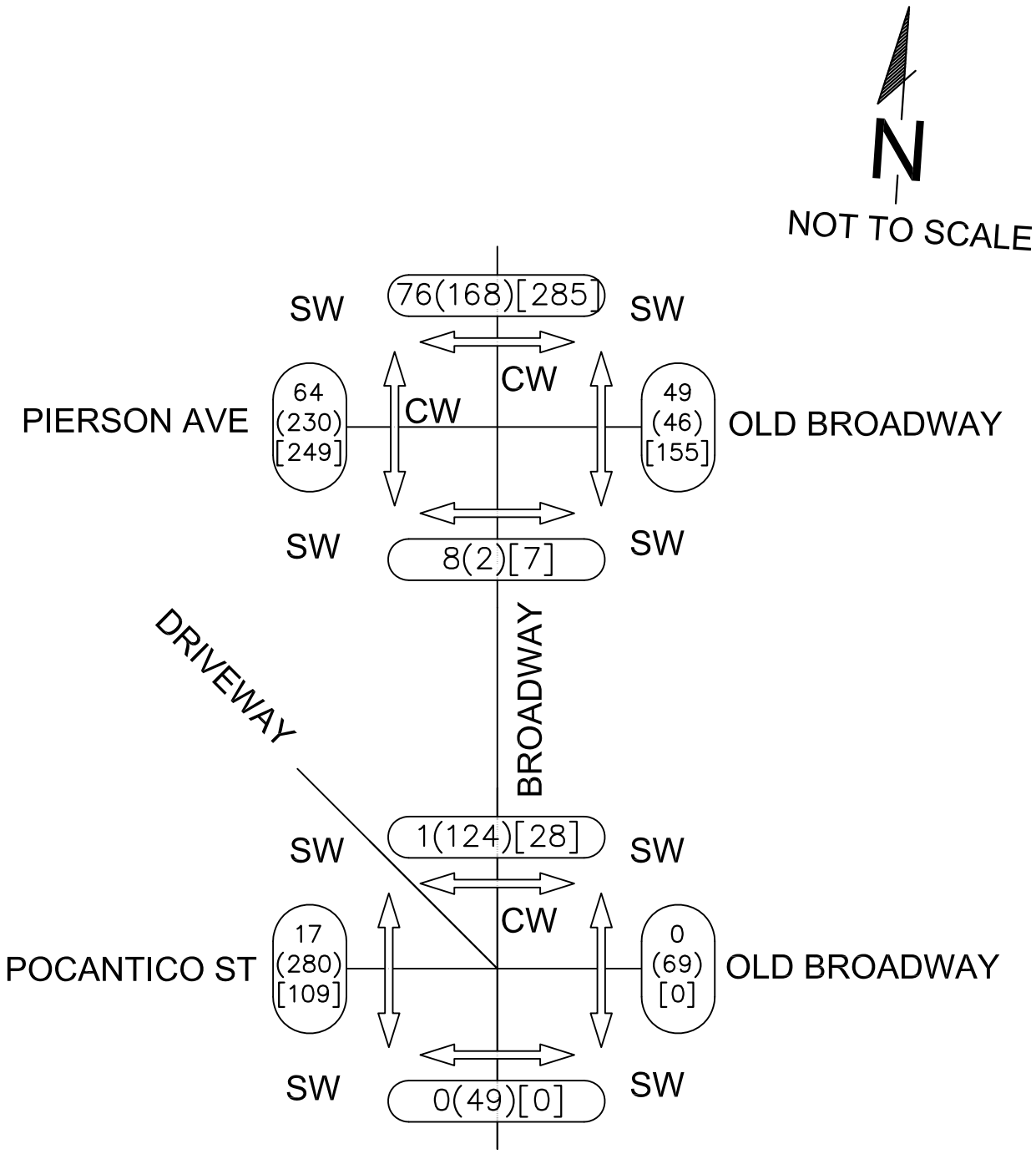
Existing Pedestrian Volumes
(Pedestrian Peak Hour)
10/15/15 - 10/16/15
Sleepy Hollow, NY

Project No. 242686
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January 2016

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Figure No. 8

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LEGEND

00 - VPH-PEAK FRI HOUR (5:00-6:00PM)
(00) - VPH-PEAK SAT HOUR (6:15-7:15PM)
[00] - VPH-PEAK SUN HOUR (5:15-6:15PM)

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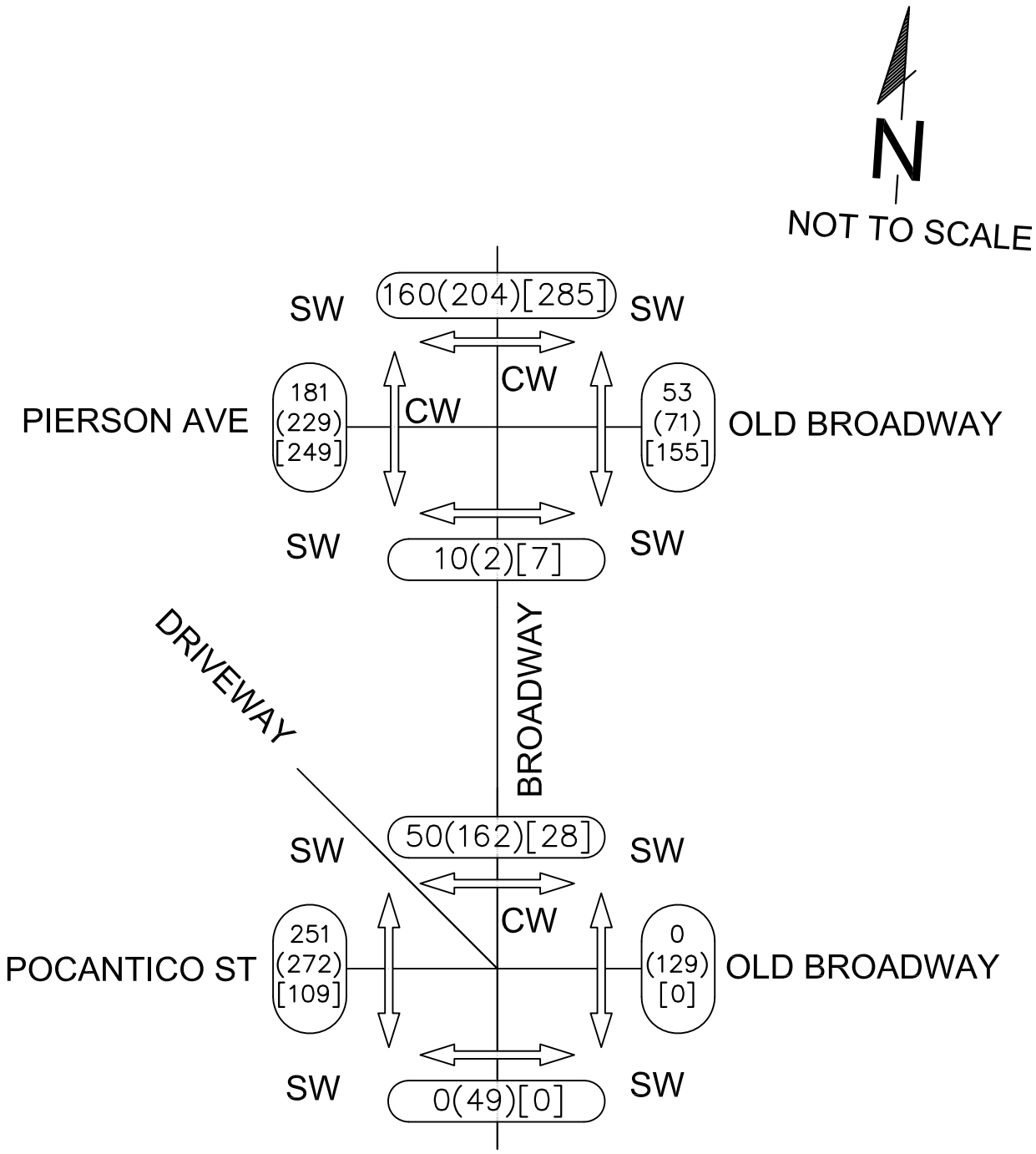
Existing Pedestrian Volumes
(Vehicle Peak Hour)
10/23/15 - 10/25/15
Sleepy Hollow, NY

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LEGEND

00 - VPH-PEAK FRI HOUR (8:15-9:15PM)
(00) - VPH-PEAK SAT HOUR (6:45-7:45PM)
[00] - VPH-PEAK SUN HOUR (5:15-6:15PM)

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Figure No. 10

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APPENDIX B

DETAILED LEVEL OF SERVICE TABLES

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Project #: 242686
Project: Sleepy Hollow
Location: Sleepy Hollow, Westchester County, NY

TABLE NO. A

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Broadway & Pierson Avenue/Old Broadway

APPROACH		October 9th - October 11th			October 15th - October 16th		October 23rd - October 25th			
		FRIDAY 4:00pm-5:00pm	**SATURDAY 6:00pm-7:00pm**	**SUNDAY 4:00pm-5:00pm**	**THURSDAY 4:30pm-5:30pm**	**FRIDAY 5:00pm-6:00pm**	**FRIDAY 5:00pm-6:00pm**	**SATURDAY 6:15pm-7:15pm**	**SATURDAY* 6:15pm-7:15pm**	**SUNDAY 5:15pm-6:15pm**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Broadway										
NB	LTR	A 2.5	A 2.7	A 2.5	A 2.8	A 3.6	A 3.1	A 2.6	A 4.3	A 2.4
	OVERALL	***A 2.5***	***A 2.7***	***A 2.5***	***A 2.8***	***A 3.6***	***A 3.1***	***A 2.6***	***A 4.3***	***A 2.4***
SB	LTR	A 2.5	A 2.6	A 2.5	A 2.5	A 2.7	A 2.9	A 2.5	A 3.1	A 2.4
	OVERALL	***A 2.5***	***A 2.6***	***A 2.5***	***A 2.5***	***A 2.7***	***A 2.9***	***A 2.5***	***A 3.1***	***A 2.4***
Pierson Avenue/Old Broadway										
EB	LTR	B 17.2	B 16.0	C 20.2	B 18.7	B 18.4	B 19.8	B 17.3	B 17.3	B 18.2
	OVERALL	***B 17.2***	***B 16.0***	***C 20.2***	***B 18.7***	***B 18.4***	***B 19.8***	***B 17.3***	***B 17.3***	***B 18.2***
WB	LTR	C 22.8	C 28.6	C 28.6	C 22.8	C 24.0	C 26.1	C 24.8	C 24.8	C 28.6
	OVERALL	***C 22.8***	***C 28.6***	***C 28.6***	***C 22.8***	***C 24.0***	***C 26.1***	***C 24.8***	***C 24.8***	***C 28.6***
INTERSECTION		**A 4.2**	**A 5.6**	**A 4.5**	**A 4.2**	**A 4.9**	**A 5.3**	**A 6.7**	**A 7.6**	**A 4.8**

*** During the traffic counts police set up cones that reduced the number of lanes on Broadway. Therefore one scenario was also analyzed with the reduced lanes.**

Project #: 242686
Project: Sleepy Hollow
Location: Sleepy Hollow, Westchester County, NY

TABLE NO. B

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Broadway & Pocantico Street/Old Broadway/Philipsburg Driveway

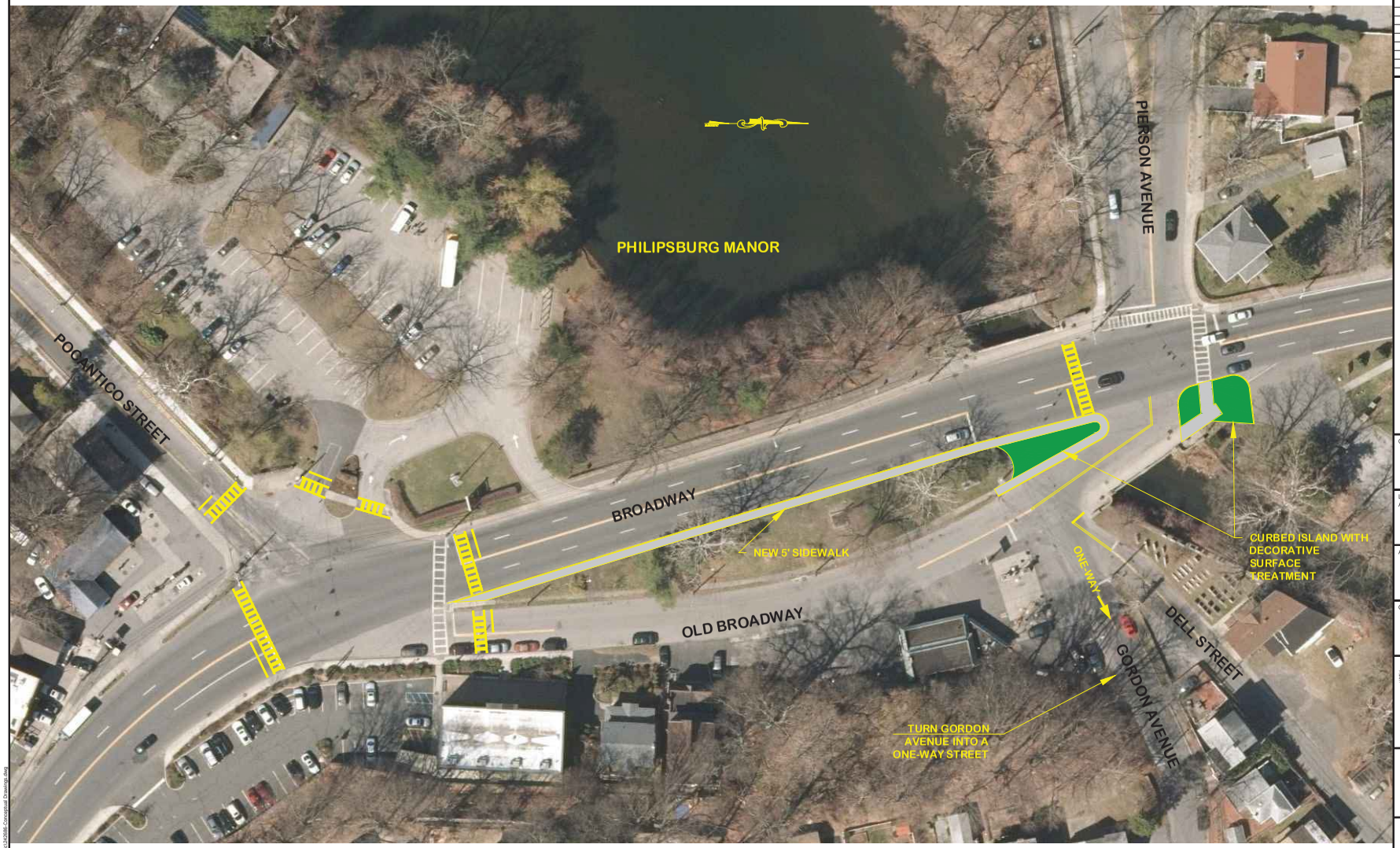
APPROACH		October 9th - October 11th			October 15th - October 16th		October 23rd - October 25th			
		FRIDAY 4:00pm-5:00pm	**SATURDAY 6:00pm-7:00pm**	**SUNDAY 4:00pm-5:00pm**	**THURSDAY 4:30pm-5:30pm**	**FRIDAY 5:00pm-6:00pm**	**FRIDAY 5:00pm-6:00pm**	**SATURDAY 6:15pm-7:15pm**	**SATURDAY * 6:15pm-7:15pm**	**SUNDAY 5:15pm-6:15pm**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Broadway										
NB	LTR	B 14.8	B 13.4	B 13.3	B 14.0	C 20.4	C 22.8	B 16.7	B 16.4	B 11.2
	OVERALL	***B 14.8***	***B 13.4***	***B 13.3***	***B 14.0***	***C 20.4***	***C 22.8***	***B 16.7***	***B 16.4***	***B 11.2***
SB	LTR	B 16.7	B 13.4	B 14.7	B 14.4	B 19.8	B 18.0	C 21.3	F 90.9	B 12.0
	OVERALL	***B 16.7***	***B 13.4***	***B 14.7***	***B 14.4***	***B 19.8***	***B 18.0***	***C 21.3***	***F 90.9***	***B 12.0***
Pocantico Street/Old Broadway/Philipsburg Driveway										
SEB	LTR	A 4.0	A 0.6	A 1.6	- 0.0	A 1.7	A 2.5	A 0.5	A 0.5	A 1.1
	OVERALL	***A 4.0***	***A 0.6***	***A 1.6***	***- 0.0***	***A 1.7***	***A 2.5***	***A 0.5***	***A 0.5***	***A 1.1***
EB	LTR	D 43.7	D 40.8	D 42.4	D 35.1	D 50.9	D 40.0	E 67.9	F 112.7	D 42.9
	OVERALL	***D 43.7***	***D 40.8***	***D 42.4***	***D 35.1***	***D 50.9***	***D 40.0***	***E 67.9***	***F 112.7***	***D 42.9***
WB	LTR	C 23.2	C 20.4	C 22.8	A 2.3	A 2.7	C 21.1	C 20.2	C 20.2	A 3.7
	OVERALL	***C 23.2***	***C 20.4***	***C 22.8***	***A 2.3***	***A 2.7***	***C 21.1***	***C 20.2***	***C 20.2***	***A 3.7***
INTERSECTION		**C 20.8**	**B 19.0**	**B 19.2**	**B 18.2**	**C 26.5**	**C 24.1**	**C 33.8**	**E 73.0**	**B 16.6**

*** During the traffic counts police set up cones that reduced the number of lanes on Broadway. Therefore one scenario was also analyzed with the reduced lanes.**

APPENDIX C

CONCEPTUAL PLANS

DRAFT



NO.	REVISION	DATE

Consultant: Company Name
Address
City, State zip code
Tel:
Fax:

Landscape Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Owner: Company Name
Address
City, State zip code
Tel:
Fax:

TRC Engineers, Inc.
7 Skyline Drive
Hawthorne, New York 10532
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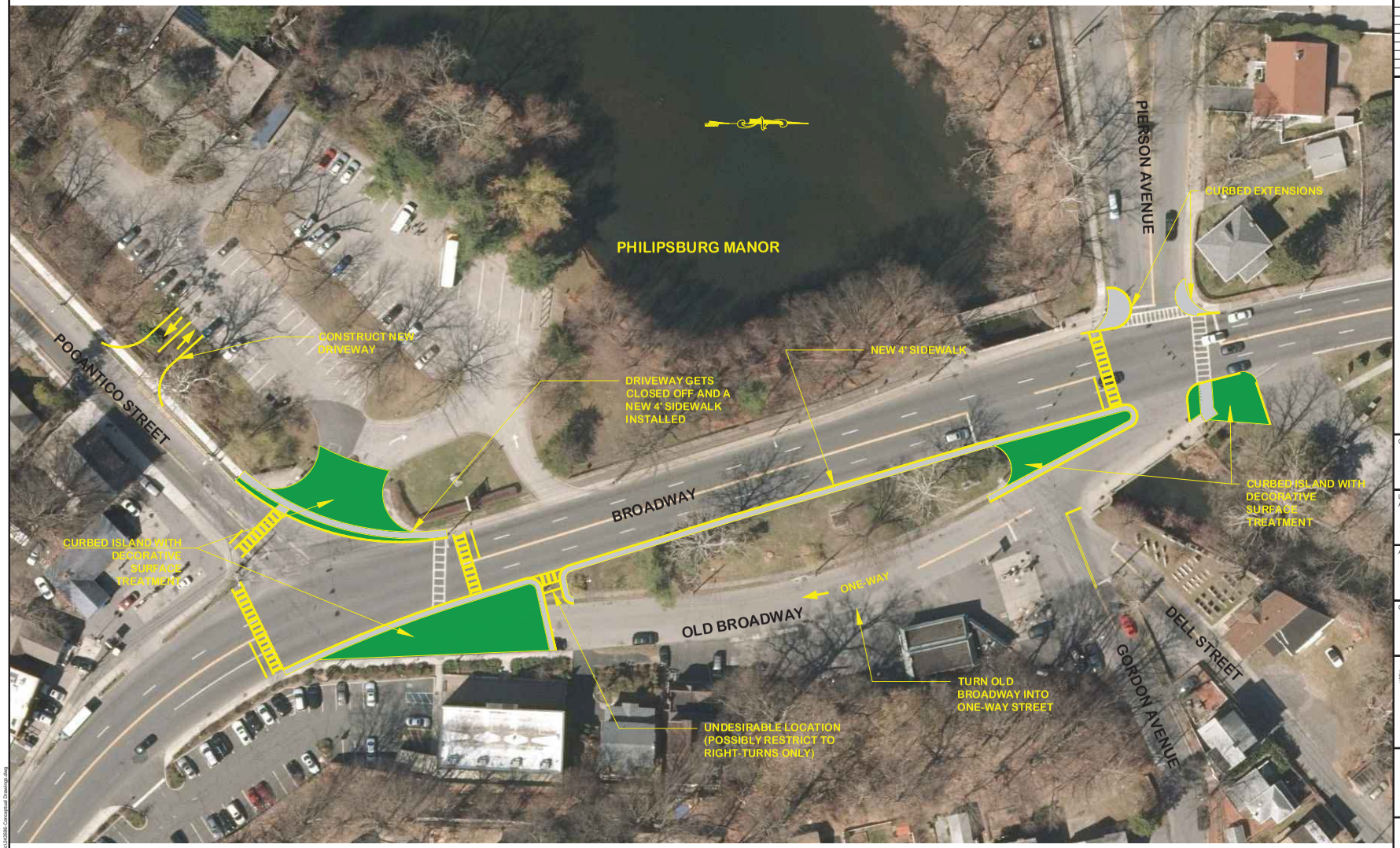
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Roadway Improvements
Route 9 (Broadway)
Village of Sleepy Hollow, NY 10591

TITLE:
Conceptual Roadway Improvement Plan

SCALE:	1" = 30'
DATE:	01/29/2016
DRAWN BY:	ST
CHECKED BY:	JAM
PROJECT:	242686
DRAWING NO.:	CP-1

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NO.	REVISION	DATE

Consultant: Company Name
Address
City, State zip code
Tel:
Fax:

Landscape Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Owner: Company Name
Address
City, State zip code
Tel:
Fax:

TRC Engineers, Inc.
7 Skyline Drive
Hawthorne, New York 10532
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www.trcsolutions.com

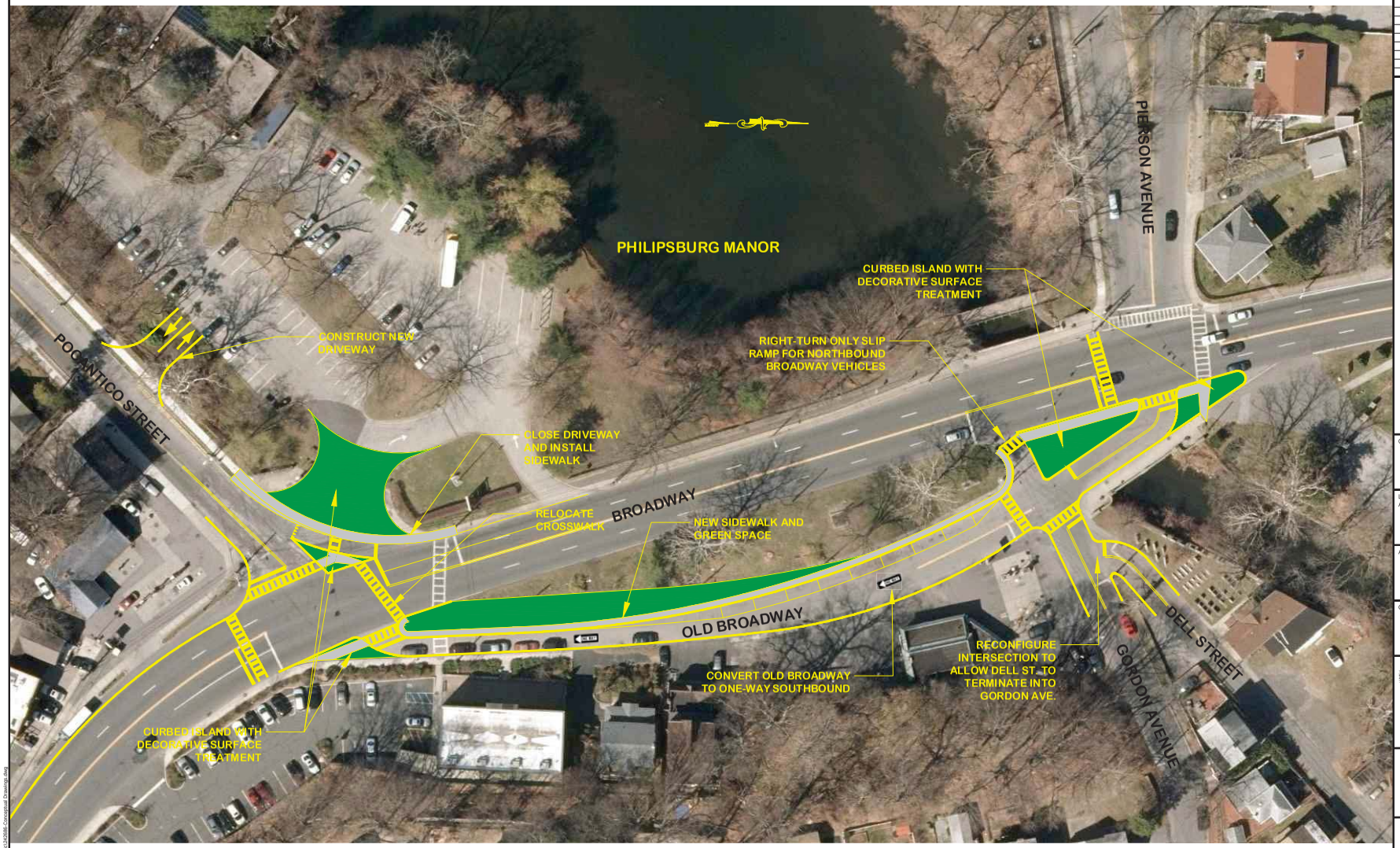
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Roadway Improvements
Route 9 (Broadway)
Village of Sleepy Hollow, NY 10591

TITLE:
Conceptual Roadway Improvement Plan

SCALE:	1" = 30'
DATE:	01/29/2016
DRAWN BY:	ST
CHECKED BY:	JAM
PROJECT:	242686
DRAWING NO.:	CP-2

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NO.	REVISION	DATE

Consultant: Company Name
Address
City, State zip code
Tel:
Fax:

Landscape Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Owner: Company Name
Address
City, State zip code
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TRC Engineers, Inc.
7 Skyline Drive
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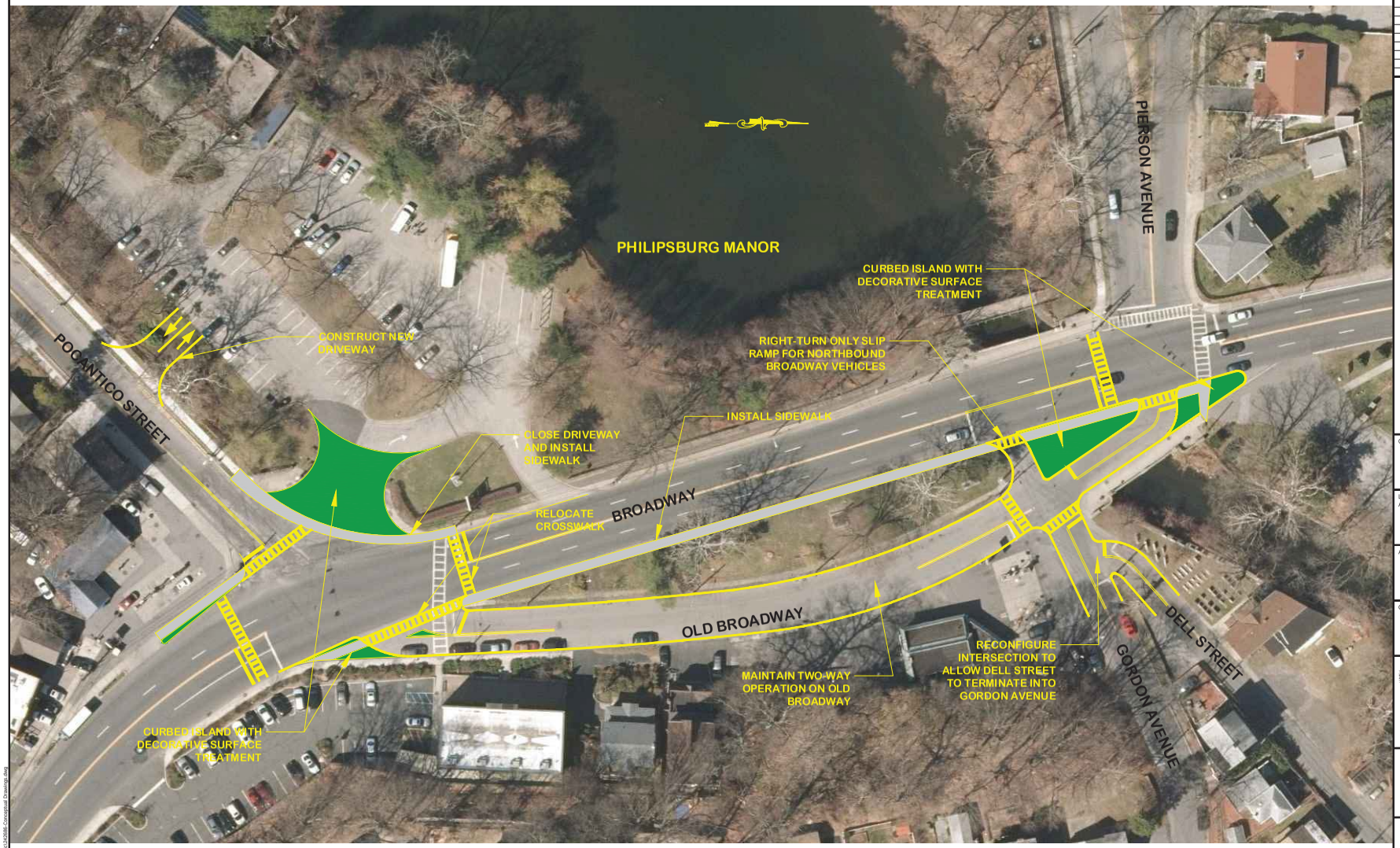
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Roadway Improvements
Route 9 (Broadway)
Village of Sleepy Hollow, NY 10591

TITLE:
Conceptual Roadway Improvement Plan

SCALE:	1" = 30'
DATE:	01/29/2016
DRAWN BY:	ST
CHECKED BY:	JAM
PROJECT:	242686
DRAWING NO.:	CP-3

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NO.	REVISION	DATE

Consultant: Company Name
Address
City, State zip code
Tel:
Fax:

Landscape Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Owner: Company Name
Address
City, State zip code
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Fax:

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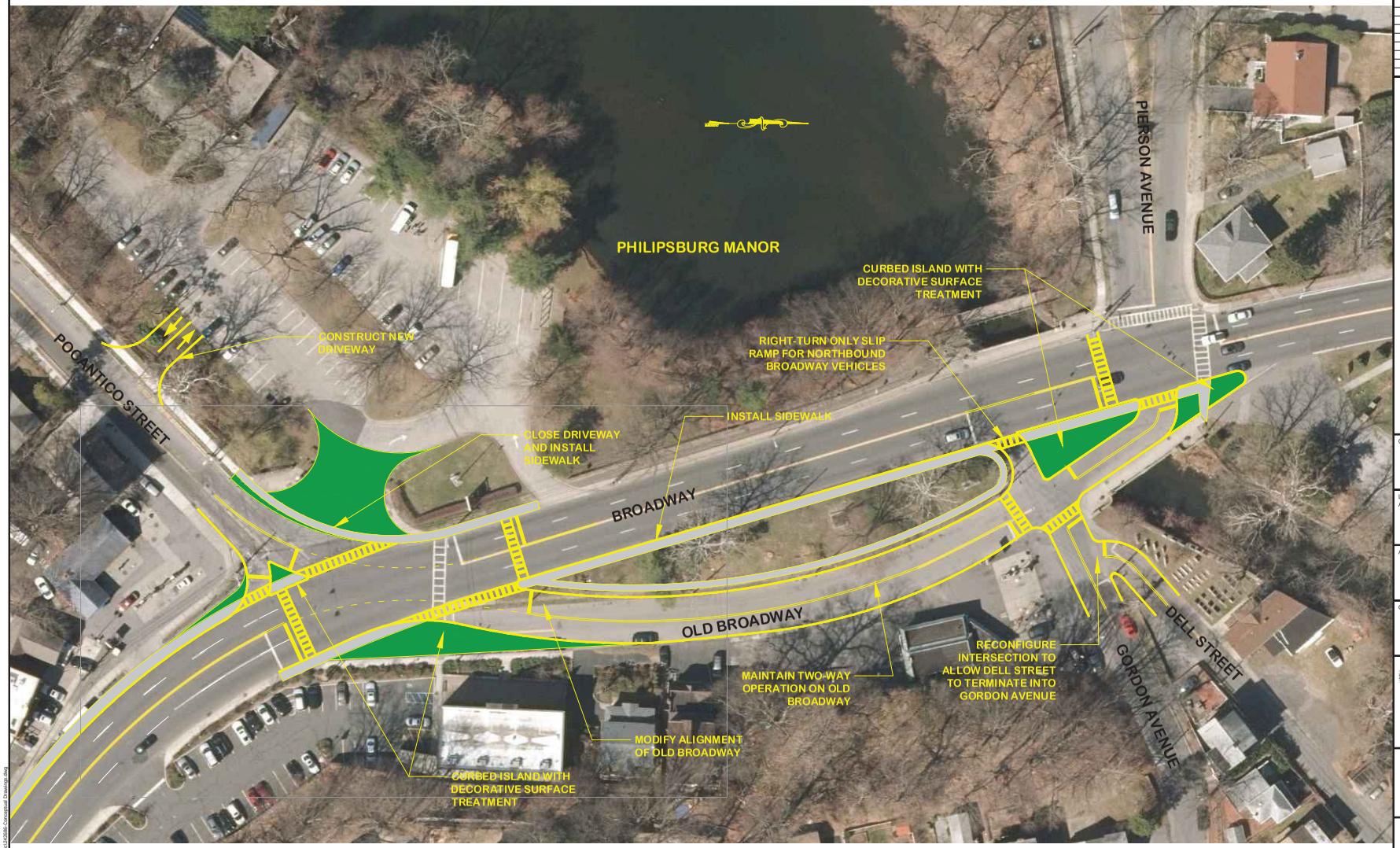
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Roadway Improvements
Route 9 (Broadway)
Village of Sleepy Hollow, NY 10591

TITLE:
Conceptual Roadway Improvement Plan

SCALE:	1" = 30'
DATE:	01/29/2016
DRAWN BY:	ST
CHECKED BY:	JAM
PROJECT:	242686
DRAWING NO.:	CP-4

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NO.	REVISION	DATE

Consultant: Company Name
Address
City, State zip code
Tel:
Fax:

Landscape Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Owner: Company Name
Address
City, State zip code
Tel:
Fax:

TRC Engineers, Inc.
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Roadway Improvements
Route 9 (Broadway)
Village of Sleepy Hollow, NY 10591

TITLE:
Conceptual Roadway Improvement Plan

SCALE:	1" = 30'
DATE:	01/29/2016
DRAWN BY:	ST
CHECKED BY:	JAM
PROJECT:	242686
DRAWING NO.:	CP-5

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NO.	REVISION	DATE

Consultant: Company Name
Address
City, State zip code
Tel:
Fax:

Landscape Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Owner: Company Name
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Roadway Improvements
Route 9 (Broadway)
Village of Sleepy Hollow, NY 10591

TITLE:
NYSDOT Conceptual Roadway Improvement Plan

SCALE:	1" = 30'
DATE:	01/29/2016
DRAWN BY:	ST
CHECKED BY:	JAM
PROJECT:	242686
DRAWING NO.:	DOT-1

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APPENDIX D

AUTOMATIC TRAFFIC RECORDER COUNTS

DRAFT

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/08/15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	4	591	65	1	12	2	0	8	4	0	1	0	1	0	689
17:00	4	684	58	1	7	1	0	2	0	1	1	0	0	0	759
18:00	3	560	37	0	7	1	0	3	1	0	0	0	1	0	613
19:00	1	441	24	1	2	1	0	2	0	1	0	0	0	0	473
20:00	0	348	15	1	0	0	0	2	1	0	0	0	0	0	367
21:00	0	284	17	0	2	0	0	0	2	0	0	0	0	0	305
22:00	0	225	7	1	0	0	0	0	0	0	0	0	0	0	233
23:00	1	113	1	1	1	0	0	0	1	0	0	0	0	0	118
Total	13	3246	224	6	31	5	0	17	9	2	2	0	2	0	3557
Percent	0.4%	91.3%	6.3%	0.2%	0.9%	0.1%	0.0%	0.5%	0.3%	0.1%	0.1%	0.0%	0.1%	0.0%	
AM Peak Vol.															
PM Peak Vol.	16:00 4	17:00 684	16:00 65	16:00 1	16:00 12	16:00 2		16:00 8	16:00 4	17:00 1	16:00 1		16:00 1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/09/15	0	58	0	0	0	0	0	0	1	0	0	0	0	0	59
01:00	0	30	2	0	0	0	0	1	1	0	0	0	0	0	34
02:00	0	24	2	0	3	0	0	3	1	0	0	0	0	0	33
03:00	0	16	1	0	3	0	0	2	0	0	0	0	0	0	22
04:00	1	22	4	3	0	0	0	4	1	0	0	0	0	0	35
05:00	2	89	11	2	0	2	0	2	2	0	0	0	0	0	110
06:00	2	305	28	3	9	4	0	3	4	0	0	0	0	0	358
07:00	1	453	50	3	15	1	0	5	1	0	0	0	0	0	529
08:00	0	473	43	5	21	0	0	5	2	0	0	0	0	0	549
09:00	1	365	47	4	16	6	1	4	3	0	1	0	0	0	448
10:00	1	316	55	2	12	2	0	2	1	0	1	0	0	0	392
11:00	3	391	41	1	9	5	1	5	0	0	0	0	0	0	456
12 PM	2	414	48	1	10	4	0	3	1	0	0	0	0	0	483
13:00	0	453	54	4	14	4	2	6	1	0	1	0	1	0	540
14:00	0	501	41	6	14	2	0	5	1	0	0	0	0	0	570
15:00	1	541	57	2	8	3	0	6	2	0	1	1	0	0	622
16:00	3	602	39	0	7	1	0	3	0	0	1	0	0	0	656
17:00	1	690	41	1	5	2	0	4	0	0	1	0	0	0	745
18:00	15	600	31	1	3	1	0	1	1	1	1	0	0	0	655
19:00	10	442	27	2	1	3	0	2	1	0	0	0	0	0	488
20:00	2	344	15	0	3	0	0	1	1	0	0	0	0	0	366
21:00	1	340	14	1	2	0	0	3	0	0	0	0	0	0	361
22:00	1	317	14	1	0	2	0	0	2	0	0	0	0	0	337
23:00	0	195	8	0	3	0	0	0	0	0	0	0	0	0	206
Total	47	7981	673	42	158	42	4	70	27	1	7	1	1	0	9054
Percent	0.5%	88.1%	7.4%	0.5%	1.7%	0.5%	0.0%	0.8%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	10:00	08:00	08:00	09:00	09:00	07:00	06:00		09:00				
Vol.	3	473	55	5	21	6	1	5	4		1				
PM Peak	18:00	17:00	15:00	14:00	13:00	12:00	13:00	13:00	15:00	18:00	13:00	15:00	13:00		
Vol.	15	690	57	6	14	4	2	6	2	1	1	1	1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/10/15	1	104	7	0	2	0	0	0	0	0	0	0	0	0	114
01:00	1	64	6	0	1	2	0	0	0	0	0	0	0	0	74
02:00	0	33	0	0	0	0	0	0	1	0	0	0	0	0	34
03:00	2	36	2	1	2	0	0	0	0	0	0	0	0	0	43
04:00	0	24	2	1	1	0	0	0	0	0	0	0	0	0	28
05:00	1	57	8	0	2	1	0	2	2	0	0	0	0	0	73
06:00	1	142	12	1	6	0	0	1	0	0	0	0	0	0	163
07:00	1	213	34	3	6	1	0	2	1	0	0	0	1	0	262
08:00	1	290	35	3	5	4	0	2	0	0	0	0	1	0	341
09:00	2	402	37	0	4	2	0	3	5	0	0	0	0	0	455
10:00	1	454	28	0	4	1	0	4	0	0	0	0	0	0	492
11:00	2	539	34	3	9	4	0	2	0	0	0	1	0	0	594
12 PM	3	559	30	5	7	0	0	0	1	0	0	0	0	0	605
13:00	6	613	43	3	3	2	1	3	0	0	0	0	0	0	674
14:00	3	571	32	1	5	0	0	2	1	0	0	0	0	0	615
15:00	5	590	44	2	7	1	0	4	4	0	1	0	0	0	658
16:00	15	618	46	1	8	1	0	3	0	0	0	0	0	0	692
17:00	14	597	34	1	10	0	0	2	1	0	1	0	2	0	662
18:00	39	590	23	2	4	3	0	0	0	0	0	0	0	0	661
19:00	68	526	25	0	3	2	0	1	1	0	0	0	0	0	626
20:00	8	424	18	1	4	0	0	1	0	0	0	0	0	0	456
21:00	0	407	18	0	1	1	0	1	0	0	1	0	0	0	429
22:00	0	364	13	0	5	0	0	0	0	0	0	0	0	0	382
23:00	1	234	11	1	0	0	0	1	0	0	0	0	0	0	248
Total	175	8451	542	29	99	25	1	34	17	0	3	1	4	0	9381
Percent	1.9%	90.1%	5.8%	0.3%	1.1%	0.3%	0.0%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	03:00	11:00	09:00	07:00	11:00	08:00		10:00	09:00			11:00	07:00		
Vol.	2	539	37	3	9	4		4	5			1	1		
PM Peak	19:00	16:00	16:00	12:00	17:00	18:00	13:00	15:00	15:00		15:00		17:00		
Vol.	68	618	46	5	10	3	1	4	4		1		2		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/11/15	1	144	7	1	2	0	0	0	0	0	0	0	0	0	155
01:00	0	79	2	0	1	1	0	0	0	0	0	0	0	0	83
02:00	0	45	3	0	1	0	0	0	0	0	0	0	0	0	49
03:00	0	38	5	1	0	0	0	1	1	0	0	0	0	0	46
04:00	0	33	2	1	1	0	0	0	0	0	0	0	0	0	37
05:00	0	38	3	0	1	2	0	0	0	0	0	0	0	0	44
06:00	1	95	2	0	0	0	0	0	0	0	0	0	0	0	98
07:00	0	128	12	1	0	0	0	0	0	0	0	0	0	0	141
08:00	1	181	9	0	1	0	0	2	0	0	0	0	0	0	194
09:00	4	300	18	0	3	1	0	0	0	0	0	0	0	0	326
10:00	4	366	17	0	2	0	0	1	0	0	0	0	0	0	390
11:00	4	491	22	0	0	1	0	1	0	0	1	0	0	0	520
12 PM	4	555	33	2	5	1	0	1	1	0	1	0	0	0	603
13:00	1	499	22	1	5	0	0	4	0	0	0	0	0	0	532
14:00	1	585	18	2	1	0	0	0	0	0	0	0	0	0	607
15:00	4	537	18	1	5	0	0	4	0	0	0	0	0	0	569
16:00	6	539	22	3	1	2	0	2	0	0	0	0	0	0	575
17:00	6	498	25	0	2	0	0	1	0	0	0	0	0	0	532
18:00	3	534	21	1	3	0	0	3	0	0	0	0	0	0	565
19:00	9	451	18	1	3	0	0	0	1	0	0	0	0	0	483
20:00	6	414	17	1	2	0	0	1	0	0	0	0	0	0	441
21:00	1	367	15	0	2	0	0	0	0	0	0	0	0	0	385
22:00	2	227	9	0	2	0	0	1	0	0	0	0	0	0	241
23:00	1	143	5	0	0	1	0	0	0	0	0	0	0	0	150
Total	59	7287	325	16	43	9	0	22	3	0	2	0	0	0	7766
Percent	0.8%	93.8%	4.2%	0.2%	0.6%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	11:00	00:00	09:00	05:00		08:00	03:00		11:00				
Vol.	4	491	22	1	3	2		2	1		1				
PM Peak	19:00	14:00	12:00	16:00	12:00	16:00		13:00	12:00		12:00				
Vol.	9	585	33	3	5	2		4	1		1				

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/12/15	0	108	2	0	1	0	0	0	0	0	0	0	0	0	111
01:00	0	53	3	0	1	1	0	0	0	0	0	0	0	0	58
02:00	1	21	0	0	0	0	0	0	0	0	0	0	0	0	22
03:00	0	16	0	0	2	0	0	0	1	0	0	0	0	0	19
04:00	0	26	4	1	2	1	0	1	0	0	0	0	2	0	37
05:00	1	82	9	1	5	1	0	2	0	0	0	0	0	0	101
06:00	1	244	21	5	1	4	0	2	1	1	0	0	0	0	280
07:00	0	302	45	2	12	6	0	2	2	1	1	0	0	0	373
08:00	2	373	44	0	21	2	0	9	1	1	0	0	0	0	453
09:00	2	342	33	5	15	7	2	6	3	0	0	0	0	0	415
10:00	2	385	42	1	10	2	1	2	3	0	0	0	0	0	448
11:00	3	416	51	3	9	3	0	3	5	0	0	0	0	0	493
12 PM	2	462	32	5	11	7	0	7	1	1	0	0	0	0	528
13:00	2	486	38	3	8	5	0	6	1	0	0	0	1	0	550
14:00	3	562	38	3	14	3	0	3	2	0	0	0	0	0	628
15:00	3	557	50	1	9	2	1	3	2	0	0	0	0	0	628
16:00	4	583	47	0	4	4	0	4	0	0	0	0	0	0	646
17:00	12	686	44	3	1	1	0	6	2	0	0	0	0	0	755
18:00	5	538	39	0	9	2	0	2	0	0	0	0	0	0	595
19:00	2	459	23	1	1	1	0	0	1	0	0	0	0	0	488
20:00	0	313	17	0	3	0	0	1	0	0	0	0	0	0	334
21:00	0	239	14	0	2	0	0	0	0	0	0	0	0	0	255
22:00	2	169	4	0	1	1	0	0	0	0	0	0	0	0	177
23:00	0	113	6	0	1	0	0	0	0	0	0	0	0	0	120
Total	47	7535	606	34	143	53	4	59	25	4	1	0	3	0	8514
Percent	0.6%	88.5%	7.1%	0.4%	1.7%	0.6%	0.0%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00	06:00	08:00	09:00	09:00	08:00	11:00	06:00	07:00		04:00		
Vol.	3	416	51	5	21	7	2	9	5	1	1		2		
PM Peak	17:00	17:00	15:00	12:00	14:00	12:00	15:00	12:00	14:00	12:00			13:00		
Vol.	12	686	50	5	14	7	1	7	2	1			1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/13/15	1	36	5	0	0	0	0	0	0	0	0	0	0	0	42
01:00	0	30	2	0	2	0	0	0	0	0	0	0	0	0	34
02:00	0	13	1	0	1	0	0	1	0	0	0	0	0	0	16
03:00	0	23	1	1	2	1	0	0	0	0	0	0	0	0	28
04:00	1	19	5	0	3	3	0	0	2	0	0	0	0	0	33
05:00	1	99	10	0	3	1	0	2	0	1	0	0	0	0	117
06:00	1	303	31	3	5	6	0	2	0	1	0	0	3	0	355
07:00	1	408	55	5	11	7	0	2	1	0	0	0	0	0	490
08:00	4	539	71	5	21	3	0	9	1	0	0	0	0	0	653
09:00	5	413	54	3	10	5	0	6	1	0	0	0	0	0	497
10:00	2	387	36	3	9	5	1	1	2	0	0	0	0	0	446
11:00	2	379	41	6	20	6	2	3	3	0	0	0	0	0	462
12 PM	2	379	52	6	16	3	0	6	7	2	0	0	0	0	473
13:00	4	395	65	0	11	5	0	4	5	1	0	0	0	0	490
14:00	1	418	54	3	12	3	0	5	3	0	1	0	0	0	500
15:00	1	499	62	8	10	2	0	4	2	0	0	0	0	0	588
16:00	2	600	64	3	10	4	0	2	5	0	0	0	0	0	690
17:00	2	677	53	4	6	0	0	2	2	0	0	0	1	0	747
18:00	3	533	29	2	1	3	0	3	5	1	0	0	1	0	581
19:00	4	411	15	1	1	0	0	1	0	0	0	0	0	0	433
20:00	0	308	9	2	1	0	0	0	1	0	0	0	0	0	321
21:00	1	256	14	1	1	0	0	0	0	0	0	0	0	0	273
22:00	0	184	8	0	3	1	0	0	0	0	0	0	0	0	196
23:00	0	113	5	0	0	0	0	0	0	0	0	0	0	0	118
Total	38	7422	742	56	159	58	3	53	40	6	1	0	5	0	8583
Percent	0.4%	86.5%	8.6%	0.7%	1.9%	0.7%	0.0%	0.6%	0.5%	0.1%	0.0%	0.0%	0.1%	0.0%	
AM Peak	09:00	08:00	08:00	11:00	08:00	07:00	11:00	08:00	11:00	05:00			06:00		
Vol.	5	539	71	6	21	7	2	9	3	1			3		
PM Peak	13:00	17:00	13:00	15:00	12:00	13:00		12:00	12:00	12:00	14:00		17:00		
Vol.	4	677	65	8	16	5		6	7	2	1		1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/14/15	0	47	1	0	1	0	0	0	1	0	0	0	0	0	50
01:00	0	24	5	0	2	0	0	2	2	0	0	0	0	0	35
02:00	1	11	2	0	4	1	0	1	0	0	0	0	0	0	20
03:00	0	20	3	1	3	0	0	2	1	0	0	0	0	0	30
04:00	1	26	3	1	1	0	0	1	1	0	0	0	0	0	34
05:00	0	81	10	3	6	1	0	3	5	1	0	0	0	0	110
06:00	1	293	40	4	13	4	0	3	2	0	0	0	1	0	361
07:00	9	424	53	6	13	5	0	8	3	0	1	0	0	0	522
08:00	1	529	76	3	18	5	0	4	3	0	1	0	0	0	640
09:00	3	371	61	7	19	6	0	3	2	0	0	0	0	0	472
10:00	6	336	53	10	14	6	0	7	8	0	0	0	0	0	440
11:00	4	366	54	15	11	8	1	1	6	0	0	0	0	0	466
12 PM	1	395	47	3	12	3	1	4	5	0	1	0	0	0	472
13:00	3	406	67	5	11	6	0	2	3	0	0	0	0	0	503
14:00	2	448	56	4	9	2	0	6	2	0	0	0	0	0	529
15:00	3	530	64	9	9	8	1	3	1	1	0	0	0	0	629
16:00	4	598	59	2	17	1	0	6	5	2	1	0	0	0	695
17:00	6	698	57	4	11	2	0	3	1	1	0	0	0	0	783
18:00	3	553	32	3	1	0	0	1	2	1	1	1	0	0	598
19:00	1	443	18	3	0	1	0	1	2	0	0	1	0	0	470
20:00	1	342	20	2	5	1	0	0	0	0	0	0	0	0	371
21:00	0	261	18	0	1	0	0	0	0	0	0	0	0	0	280
22:00	0	172	8	1	1	0	0	0	0	0	0	0	0	0	182
23:00	0	100	3	1	1	0	0	0	0	0	0	0	0	0	105
Total	50	7474	810	87	183	60	3	61	55	6	5	2	1	0	8797
Percent	0.6%	85.0%	9.2%	1.0%	2.1%	0.7%	0.0%	0.7%	0.6%	0.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	08:00	11:00	09:00	11:00	11:00	07:00	10:00	05:00	07:00		06:00		
Vol.	9	529	76	15	19	8	1	8	8	1	1		1		
PM Peak	17:00	17:00	13:00	15:00	16:00	15:00	12:00	14:00	12:00	16:00	12:00	18:00			
Vol.	6	698	67	9	17	8	1	6	5	2	1	1			

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/15/15	0	58	3	0	1	0	0	0	0	0	0	0	0	0	62
01:00	0	33	2	0	1	0	0	0	0	0	0	0	0	0	36
02:00	0	18	3	0	3	0	0	2	0	0	0	0	0	0	26
03:00	0	19	2	0	3	0	0	0	0	0	0	0	0	0	24
04:00	0	16	1	2	2	0	0	2	0	0	0	0	0	0	23
05:00	0	77	8	1	5	0	0	3	2	1	0	0	0	0	97
06:00	0	297	35	8	9	1	0	5	3	0	0	0	0	0	358
07:00	5	421	63	7	12	4	0	4	3	1	2	0	1	0	523
08:00	7	526	47	8	17	4	0	8	2	2	0	0	0	0	621
09:00	4	403	44	11	21	9	0	3	5	1	0	0	0	0	501
10:00	1	373	46	9	17	7	1	4	4	0	0	0	0	0	462
11:00	3	371	62	8	14	2	0	10	3	1	0	0	0	0	474
12 PM	2	418	42	5	15	11	0	3	2	0	1	0	0	0	499
13:00	2	452	57	7	12	4	0	3	2	1	0	0	0	0	540
14:00	2	419	72	6	8	3	0	2	1	1	0	0	1	0	515
15:00	3	519	45	3	10	1	1	3	1	1	0	0	1	0	588
16:00	6	623	67	4	13	2	0	2	1	1	0	0	0	0	719
17:00	5	719	60	2	9	1	0	3	2	0	0	0	2	0	803
18:00	5	647	34	2	5	2	0	2	2	0	0	1	0	0	700
19:00	0	469	18	2	7	0	0	0	2	0	0	0	1	0	499
20:00	0	364	20	3	3	0	0	1	1	0	0	0	0	0	392
21:00	1	373	18	0	1	1	0	0	0	0	0	0	0	0	394
22:00	0	204	10	0	1	0	0	0	0	0	0	0	0	0	215
23:00	1	123	3	1	1	0	0	1	0	0	0	0	0	0	130
Total	47	7942	762	89	190	52	2	61	36	10	3	1	6	0	9201
Percent	0.5%	86.3%	8.3%	1.0%	2.1%	0.6%	0.0%	0.7%	0.4%	0.1%	0.0%	0.0%	0.1%	0.0%	
AM Peak	08:00	08:00	07:00	09:00	09:00	09:00	10:00	11:00	09:00	08:00	07:00		07:00		
Vol.	7	526	63	11	21	9	1	10	5	2	2		1		
PM Peak	16:00	17:00	14:00	13:00	12:00	12:00	15:00	12:00	12:00	13:00	12:00	18:00	17:00		
Vol.	6	719	72	7	15	11	1	3	2	1	1	1	2		

Traffic Databank

716 S Sixth Ave
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SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/16/15	0	57	1	0	1	0	0	1	0	0	0	0	0	0	60
01:00	0	23	0	0	2	0	0	0	1	0	0	0	0	0	26
02:00	0	21	0	0	1	0	0	4	1	0	0	0	0	0	27
03:00	0	18	3	1	3	0	0	2	1	0	0	0	0	0	28
04:00	0	22	2	2	3	1	0	3	0	0	0	0	0	0	33
05:00	2	99	11	1	10	1	0	3	3	1	0	0	0	0	131
06:00	6	284	33	4	7	3	0	4	2	0	0	1	0	0	344
07:00	13	438	56	8	18	3	0	5	4	0	1	0	1	0	547
08:00	5	497	55	5	18	7	0	7	5	2	0	0	0	0	601
09:00	5	394	57	13	21	7	1	12	5	2	0	0	0	0	517
10:00	4	389	43	6	18	4	1	9	9	0	0	0	0	0	483
11:00	4	421	54	5	19	8	0	11	4	1	0	1	0	0	528
12 PM	7	469	57	3	10	4	0	5	2	1	0	0	0	0	558
13:00	6	445	63	6	15	4	1	6	2	1	0	0	1	0	550
14:00	6	481	69	5	11	4	0	7	2	1	0	0	0	0	586
15:00	1	536	67	8	12	3	0	7	1	1	0	0	1	0	637
16:00	11	639	71	0	17	3	0	8	0	0	0	0	1	0	750
17:00	11	750	56	4	7	1	0	1	1	0	0	0	0	0	831
18:00	42	629	42	1	5	2	0	1	0	0	0	0	0	0	722
19:00	49	495	28	2	4	2	0	0	1	0	0	0	0	0	581
20:00	28	485	21	1	4	1	0	3	0	0	0	0	0	0	543
21:00	3	397	22	0	5	0	0	1	1	0	0	0	0	0	429
22:00	1	387	14	2	4	0	0	1	0	0	0	0	0	0	409
23:00	0	287	7	2	4	0	0	0	1	0	1	0	0	0	302
Total	204	8663	832	79	219	58	3	101	46	10	2	2	4	0	10223
Percent	2.0%	84.7%	8.1%	0.8%	2.1%	0.6%	0.0%	1.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	09:00	09:00	09:00	11:00	09:00	09:00	10:00	08:00	07:00	06:00	07:00		
Vol.	13	497	57	13	21	8	1	12	9	2	1	1	1		
PM Peak	19:00	17:00	16:00	15:00	16:00	12:00	13:00	16:00	12:00	12:00	23:00		13:00		
Vol.	49	750	71	8	17	4	1	8	2	1	1		1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/17/15	0	132	2	0	1	0	0	0	1	0	0	0	0	0	136
01:00	0	64	5	0	2	0	0	0	1	0	0	0	0	0	72
02:00	0	36	3	0	0	0	0	1	0	0	0	0	0	0	40
03:00	0	32	3	1	2	0	0	0	0	0	0	0	0	0	38
04:00	0	25	6	4	1	0	0	3	2	0	0	0	0	0	41
05:00	0	45	7	0	5	0	0	1	1	0	0	0	0	0	59
06:00	0	136	10	2	8	0	0	2	1	0	0	0	0	0	159
07:00	0	276	45	5	5	1	0	3	2	0	0	0	0	0	337
08:00	3	343	41	4	9	2	0	1	1	0	0	0	0	0	404
09:00	5	351	25	2	5	2	0	3	3	1	0	1	0	0	398
10:00	8	408	30	3	3	2	0	1	0	1	0	0	0	0	456
11:00	2	528	28	2	8	1	0	2	1	1	0	0	0	0	573
12 PM	6	524	32	5	6	2	0	1	1	0	0	0	0	0	577
13:00	12	584	29	3	5	5	0	1	1	0	0	0	0	0	640
14:00	9	561	38	2	9	1	0	1	2	0	0	0	0	0	623
15:00	4	553	45	3	7	1	0	3	2	1	0	0	1	0	620
16:00	84	520	12	0	1	3	0	3	0	0	0	0	0	0	623
17:00	63	551	21	1	4	0	0	2	2	0	0	0	0	0	644
18:00	59	554	18	1	5	1	0	5	0	0	1	0	0	0	644
19:00	32	504	14	1	3	2	0	0	2	0	0	0	0	0	558
20:00	4	405	26	1	6	2	0	1	1	0	0	0	0	0	446
21:00	5	413	19	0	0	0	0	2	1	0	0	0	0	0	440
22:00	0	340	13	0	2	0	0	1	0	0	0	0	0	0	356
23:00	2	243	14	0	0	0	0	1	1	0	0	0	0	0	261
Total	298	8128	486	40	97	25	0	38	26	4	1	1	1	0	9145
Percent	3.3%	88.9%	5.3%	0.4%	1.1%	0.3%	0.0%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	07:00	07:00	08:00	08:00		04:00	09:00	09:00		09:00			
Vol.	8	528	45	5	9	2		3	3	1		1			
PM Peak	16:00	13:00	15:00	12:00	14:00	13:00		18:00	14:00	15:00	18:00		15:00		
Vol.	84	584	45	5	9	5		5	2	1	1		1		

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10/18/15	0	160	7	0	3	0	0	1	0	0	0	0	0	0	171
01:00	0	85	1	0	0	1	0	0	0	0	0	0	0	0	87
02:00	0	51	5	0	0	0	0	0	0	0	0	0	0	0	56
03:00	0	42	5	1	2	0	0	0	0	0	0	0	0	0	50
04:00	0	32	4	0	1	0	0	0	1	0	0	0	0	0	38
05:00	0	35	1	0	0	0	0	2	1	0	0	0	0	0	39
06:00	0	98	4	0	0	0	0	1	0	0	0	0	0	0	103
07:00	1	138	8	0	3	0	0	0	0	0	0	0	0	0	150
08:00	0	189	13	1	1	0	0	1	1	0	0	0	0	0	206
09:00	8	320	22	0	1	1	0	3	1	0	0	0	0	0	356
10:00	5	387	13	2	3	2	0	2	1	0	0	0	0	0	415
11:00	5	445	16	3	0	3	0	4	0	0	0	0	0	0	476
12 PM	9	523	20	0	3	1	0	0	0	1	0	0	0	0	557
13:00	4	637	27	1	2	2	0	1	1	0	0	0	1	0	676
14:00	6	596	24	3	3	3	0	0	0	0	0	0	0	0	635
15:00	3	581	26	1	4	1	0	3	0	0	0	0	0	0	619
16:00	32	553	16	1	0	1	0	2	1	0	0	0	0	0	606
17:00	14	458	15	2	1	1	0	6	0	0	0	0	0	0	497
18:00	19	456	20	1	2	0	0	2	2	0	0	0	0	0	502
19:00	18	454	12	1	2	0	0	2	0	0	0	0	0	0	489
20:00	5	384	12	0	1	0	0	1	0	0	0	0	0	0	403
21:00	1	237	7	1	2	0	0	0	0	1	0	0	0	0	249
22:00	0	157	1	0	1	0	0	1	1	0	0	0	0	0	161
23:00	0	96	5	0	2	0	0	0	1	0	0	0	0	0	104
Total	130	7114	284	18	37	16	0	32	11	2	0	0	1	0	7645
Percent	1.7%	93.1%	3.7%	0.2%	0.5%	0.2%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	09:00	11:00	00:00	11:00		11:00	04:00						
Vol.	8	445	22	3	3	3		4	1						
PM Peak	16:00	13:00	13:00	14:00	15:00	14:00		17:00	18:00	12:00			13:00		
Vol.	32	637	27	3	4	3		6	2	1			1		

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10/19/15	0	52	1	1	2	0	0	0	1	0	0	0	0	0	57
01:00	0	22	4	0	0	0	0	0	0	0	0	0	0	0	26
02:00	0	14	0	0	1	0	0	0	0	0	0	0	0	0	15
03:00	0	7	1	0	3	0	0	1	3	0	0	0	0	0	15
04:00	1	16	2	1	2	1	0	4	0	0	0	0	0	0	27
05:00	0	74	7	2	1	0	0	2	0	0	0	0	1	0	87
06:00	2	291	26	6	8	3	0	1	2	0	0	0	0	0	339
07:00	0	411	54	2	16	7	0	3	1	1	0	0	0	0	495
08:00	2	473	56	8	12	7	1	4	2	0	0	0	0	0	565
09:00	3	373	61	7	21	7	0	6	3	0	0	0	0	0	481
10:00	2	333	53	6	14	4	0	4	4	0	0	1	0	0	421
11:00	5	395	66	5	15	7	0	2	1	2	0	0	0	0	498
12 PM	2	381	50	3	12	7	0	1	3	2	0	0	0	0	461
13:00	1	409	56	4	11	11	1	6	3	0	0	0	0	0	502
14:00	3	460	53	5	13	8	0	8	2	0	0	0	0	0	552
15:00	4	545	66	3	10	4	0	5	2	1	0	0	0	0	640
16:00	7	636	47	3	9	1	0	4	2	1	0	1	2	0	713
17:00	3	652	59	4	6	0	0	3	0	0	0	0	0	0	727
18:00	3	562	31	2	4	1	0	0	0	0	0	0	0	0	603
19:00	0	377	17	2	4	1	0	0	1	0	0	0	0	0	402
20:00	1	254	14	1	1	0	0	2	1	0	0	0	0	0	274
21:00	0	205	13	0	1	0	0	1	2	0	1	0	0	0	223
22:00	1	45	1	0	0	0	0	0	0	0	0	0	0	0	47
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	40	6987	738	65	166	69	2	57	33	7	1	2	3	0	8170
Percent	0.5%	85.5%	9.0%	0.8%	2.0%	0.8%	0.0%	0.7%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	11:00	08:00	09:00	07:00	08:00	09:00	10:00	11:00		10:00	05:00		
Vol.	5	473	66	8	21	7	1	6	4	2		1	1		
PM Peak	16:00	17:00	15:00	14:00	14:00	13:00	13:00	14:00	12:00	12:00	21:00	16:00	16:00		
Vol.	7	652	66	5	13	11	1	8	3	2	1	1	2		

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10/20/15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
12 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Percent	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		11:00													
Vol.		4													
PM Peak		12:00													
Vol.		2													
Grand Total	1148	88237	7024	561	1525	472	22	605	328	52	28	10	31	0	100043
Percent	1.1%	88.2%	7.0%	0.6%	1.5%	0.5%	0.0%	0.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/08/15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	9	427	89	3	22	0	0	8	1	1	3	0	0	0	563
17:00	6	492	92	4	14	2	0	5	0	1	0	0	0	0	616
18:00	6	455	84	2	17	1	0	5	2	0	0	0	0	0	572
19:00	2	320	73	1	10	2	0	4	1	0	0	0	1	0	414
20:00	1	222	58	1	6	1	0	3	1	0	0	0	0	0	293
21:00	0	155	41	1	6	0	0	0	2	0	0	0	0	0	205
22:00	1	131	38	1	3	1	0	1	0	1	0	0	0	0	177
23:00	0	69	27	0	1	0	0	1	0	0	0	0	0	0	98
Total	25	2271	502	13	79	7	0	27	7	3	3	0	1	0	2938
Percent	0.9%	77.3%	17.1%	0.4%	2.7%	0.2%	0.0%	0.9%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak Vol.															
PM Peak Vol.	16:00 9	17:00 492	17:00 92	17:00 4	16:00 22	17:00 2		16:00 8	18:00 2	16:00 1	16:00 3		19:00 1		

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10/09/15	1	25	16	1	4	1	0	0	0	0	0	0	0	0	48
01:00	0	13	8	1	1	0	0	0	1	0	0	0	0	0	24
02:00	0	15	7	1	2	0	0	3	0	0	0	0	0	0	28
03:00	2	10	5	1	2	2	0	3	1	0	0	0	0	0	26
04:00	1	23	15	1	3	1	0	0	0	0	0	0	0	0	44
05:00	0	86	31	0	23	0	0	2	1	0	0	0	0	0	143
06:00	0	189	76	4	24	3	0	4	2	0	0	0	0	0	302
07:00	12	445	107	7	22	3	0	13	1	1	2	0	1	0	614
08:00	6	446	110	6	30	4	0	4	2	1	1	0	2	0	612
09:00	6	344	104	9	24	3	0	0	5	1	0	0	0	0	496
10:00	3	298	109	6	27	5	0	9	1	0	1	0	0	0	459
11:00	3	313	90	6	30	3	0	8	3	1	0	0	0	0	457
12 PM	3	392	99	9	30	3	1	4	1	0	0	0	1	0	543
13:00	3	301	91	7	20	2	0	6	1	1	0	0	0	0	432
14:00	1	374	91	6	35	3	0	6	2	2	0	0	1	0	521
15:00	2	454	100	8	26	4	0	9	1	0	0	0	0	0	604
16:00	30	550	113	3	23	1	1	8	0	3	0	0	0	0	732
17:00	19	457	80	3	14	0	0	10	0	2	0	0	0	0	585
18:00	8	463	107	3	17	0	0	1	0	0	0	0	0	0	599
19:00	3	385	115	3	9	0	0	2	0	0	0	0	0	0	517
20:00	0	247	71	3	3	0	0	1	0	1	0	0	0	0	326
21:00	0	198	63	3	10	0	0	1	1	0	0	0	0	0	276
22:00	0	127	44	0	8	0	0	0	0	0	0	0	0	0	179
23:00	1	119	40	0	2	0	0	0	1	0	0	0	0	0	163
Total	104	6274	1692	91	389	38	2	94	24	13	4	0	5	0	8730
Percent	1.2%	71.9%	19.4%	1.0%	4.5%	0.4%	0.0%	1.1%	0.3%	0.1%	0.0%	0.0%	0.1%	0.0%	
AM Peak	07:00	08:00	08:00	09:00	08:00	10:00		07:00	09:00	07:00	07:00		08:00		
Vol.	12	446	110	9	30	5		13	5	1	2		2		
PM Peak	16:00	16:00	19:00	12:00	14:00	15:00	12:00	17:00	14:00	16:00			12:00		
Vol.	30	550	115	9	35	4	1	10	2	3			1		

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10/10/15	0	75	21	0	3	1	0	1	0	0	0	0	0	0	101
01:00	0	32	17	0	1	0	0	0	0	0	0	0	0	0	50
02:00	0	18	10	1	3	0	0	0	0	0	0	0	0	0	32
03:00	0	20	8	1	1	0	0	1	0	0	0	0	0	0	31
04:00	0	24	13	0	1	0	0	0	1	0	0	0	0	0	39
05:00	0	44	18	2	18	0	0	1	0	0	0	0	0	0	83
06:00	0	75	42	1	11	1	0	1	1	0	0	0	0	0	132
07:00	2	192	83	5	22	0	0	5	0	0	0	0	0	0	309
08:00	3	267	83	1	24	2	0	7	3	0	0	0	0	0	390
09:00	4	328	123	4	12	1	0	4	1	0	1	0	0	0	478
10:00	20	418	107	4	17	2	0	5	2	0	0	0	1	0	576
11:00	28	408	102	2	14	1	0	6	0	2	1	0	0	0	564
12 PM	17	453	103	3	15	1	0	10	2	1	0	0	0	0	605
13:00	29	466	87	2	13	0	0	3	1	0	0	0	0	0	601
14:00	28	469	96	4	20	2	0	7	1	0	0	0	0	0	627
15:00	44	521	105	3	10	1	2	5	0	0	0	0	0	0	691
16:00	113	622	77	2	9	1	0	3	0	1	1	0	0	0	829
17:00	26	467	83	5	9	0	0	1	0	0	0	0	0	0	591
18:00	52	581	65	2	7	0	0	0	0	0	0	0	0	0	707
19:00	15	484	67	3	7	0	0	0	0	0	0	0	0	0	576
20:00	10	378	52	0	9	0	0	1	0	0	0	0	0	0	450
21:00	8	283	56	0	8	0	0	6	0	1	0	0	0	0	362
22:00	7	209	64	1	4	0	0	1	2	0	0	0	0	0	288
23:00	2	216	70	0	1	1	0	1	0	0	0	0	0	0	291
Total	408	7050	1552	46	239	14	2	69	14	5	3	0	1	0	9403
Percent	4.3%	75.0%	16.5%	0.5%	2.5%	0.1%	0.0%	0.7%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	10:00	09:00	07:00	08:00	08:00		08:00	08:00	11:00	09:00		10:00		
Vol.	28	418	123	5	24	2		7	3	2	1		1		
PM Peak	16:00	16:00	15:00	17:00	14:00	14:00	15:00	12:00	12:00	12:00	16:00				
Vol.	113	622	105	5	20	2	2	10	2	1	1				

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDIAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/11/15	1	136	47	0	4	0	0	2	1	0	0	0	0	0	191
01:00	0	45	14	0	1	0	0	0	0	0	0	0	0	0	60
02:00	0	30	12	0	1	0	0	0	0	0	0	0	0	0	43
03:00	0	16	14	1	2	0	0	0	0	0	0	0	0	0	33
04:00	0	14	11	0	1	0	0	1	0	0	0	0	0	0	27
05:00	0	17	8	1	0	0	0	0	0	0	0	0	0	0	26
06:00	2	37	19	0	1	1	0	0	0	0	0	0	0	0	60
07:00	1	151	45	3	6	1	0	0	1	0	1	0	0	0	209
08:00	1	155	68	1	6	0	0	3	0	0	0	0	0	0	234
09:00	2	251	102	1	12	1	0	4	0	0	0	0	0	0	373
10:00	5	324	72	2	7	0	0	6	0	0	0	0	0	0	416
11:00	14	348	93	2	5	1	1	7	0	0	1	0	0	0	472
12 PM	23	414	83	0	12	0	0	3	1	0	1	0	0	0	537
13:00	37	493	82	2	12	0	0	5	0	0	0	0	0	0	631
14:00	48	485	71	0	14	0	0	5	0	0	1	0	0	0	624
15:00	39	477	87	3	5	0	0	2	1	0	0	0	0	0	614
16:00	49	582	80	1	9	1	0	9	0	0	0	0	1	0	732
17:00	25	468	89	2	7	0	0	1	0	0	0	0	0	0	592
18:00	16	423	95	1	4	0	0	1	0	0	0	0	0	0	540
19:00	10	392	88	2	12	1	0	2	0	0	0	0	0	0	507
20:00	4	282	87	1	5	1	0	5	0	0	0	0	0	0	385
21:00	6	209	65	1	5	0	0	3	0	0	0	0	0	0	289
22:00	1	173	85	0	2	0	0	2	0	0	0	0	0	0	263
23:00	3	139	44	1	2	0	0	2	1	1	0	0	0	0	193
Total	287	6061	1461	25	135	7	1	63	5	1	4	0	1	0	8051
Percent	3.6%	75.3%	18.1%	0.3%	1.7%	0.1%	0.0%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	09:00	07:00	09:00	06:00	11:00	11:00	00:00		07:00				
Vol.	14	348	102	3	12	1	1	7	1		1				
PM Peak	16:00	16:00	18:00	15:00	14:00	16:00		16:00	12:00	23:00	12:00		16:00		
Vol.	49	582	95	3	14	1		9	1	1	1		1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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BROADWAY BTWN POCANTICO ST AND GORDIAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/12/15	0	72	30	0	1	0	0	1	0	0	0	0	0	0	104
01:00	0	21	7	1	0	0	0	0	0	0	0	0	0	0	29
02:00	0	9	4	0	2	0	0	0	0	0	0	0	0	0	15
03:00	0	6	7	0	1	0	0	0	0	0	0	0	0	0	14
04:00	0	23	10	1	4	0	0	1	0	0	0	0	0	0	39
05:00	0	62	34	1	26	0	0	2	0	1	0	0	0	0	126
06:00	3	142	64	1	17	2	0	2	0	0	0	0	1	0	232
07:00	3	285	96	3	33	2	0	4	0	2	0	0	0	0	428
08:00	13	342	98	6	31	5	0	4	2	1	0	0	0	0	502
09:00	7	300	95	7	32	4	0	5	1	0	0	0	0	0	451
10:00	12	331	104	8	33	1	0	4	1	1	0	0	0	0	495
11:00	32	356	88	4	28	4	0	8	3	2	1	0	0	0	526
12 PM	24	392	116	6	17	3	0	5	0	1	1	0	0	0	565
13:00	27	442	92	6	16	5	0	5	1	1	0	0	0	0	595
14:00	44	475	68	2	21	6	0	2	3	1	1	0	0	0	623
15:00	43	507	103	6	14	2	0	10	0	1	1	0	0	0	687
16:00	53	558	99	2	14	3	0	6	2	0	0	0	1	0	738
17:00	29	491	107	2	17	2	0	4	0	1	1	1	0	0	655
18:00	22	455	98	3	16	0	0	7	0	2	0	0	0	0	603
19:00	8	322	90	2	9	0	0	3	1	0	0	0	0	0	435
20:00	1	184	70	3	7	0	0	3	0	0	0	0	0	0	268
21:00	3	166	59	1	9	1	0	0	0	0	0	0	0	0	239
22:00	0	104	45	0	4	0	0	1	1	0	0	0	0	0	155
23:00	1	64	22	1	1	0	0	3	1	0	0	0	0	0	93
Total	325	6109	1606	66	353	40	0	80	16	14	5	1	2	0	8617
Percent	3.8%	70.9%	18.6%	0.8%	4.1%	0.5%	0.0%	0.9%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00	10:00	07:00	08:00		11:00	11:00	07:00	11:00		06:00		
Vol.	32	356	104	8	33	5		8	3	2	1		1		
PM Peak	16:00	16:00	12:00	12:00	14:00	14:00		15:00	14:00	18:00	12:00	17:00	16:00		
Vol.	53	558	116	6	21	6		10	3	2	1	1	1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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BROADWAY BTWN POCANTICO ST AND GORDIAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/13/15	0	19	17	0	3	0	0	0	0	0	0	0	0	0	39
01:00	0	13	7	2	1	0	0	0	0	0	0	0	0	0	23
02:00	0	8	6	0	0	1	0	0	0	0	0	0	0	0	15
03:00	0	7	5	0	0	0	0	0	0	0	0	0	0	0	12
04:00	1	22	14	0	6	2	0	0	0	0	0	0	0	0	45
05:00	2	84	36	2	29	2	0	3	0	1	0	0	0	0	159
06:00	1	205	83	2	34	4	0	4	1	0	0	0	0	0	334
07:00	9	414	126	10	35	0	0	5	0	5	1	1	1	0	607
08:00	19	471	130	7	25	7	0	6	2	1	0	0	0	0	668
09:00	11	331	109	9	36	4	0	9	3	0	0	0	0	0	512
10:00	13	313	109	7	28	6	0	5	6	0	0	0	2	0	489
11:00	12	320	92	19	27	2	0	11	8	0	1	0	0	0	492
12 PM	8	294	117	12	34	3	0	10	2	1	0	0	0	0	481
13:00	5	316	107	5	33	4	0	9	1	1	0	0	0	0	481
14:00	21	331	103	13	26	5	0	11	1	0	0	0	0	0	511
15:00	25	418	124	13	38	1	0	7	0	2	1	0	0	0	629
16:00	18	442	143	6	24	1	0	6	2	0	0	0	0	0	642
17:00	25	451	92	3	17	2	0	8	0	0	2	0	1	0	601
18:00	14	441	102	5	16	1	0	7	1	0	0	0	0	0	587
19:00	10	264	85	0	10	1	0	3	0	2	0	0	0	0	375
20:00	0	189	57	1	6	0	0	0	1	0	0	0	0	0	254
21:00	1	150	36	1	7	2	0	2	0	0	0	0	0	0	199
22:00	0	99	37	1	6	0	0	1	0	0	0	0	0	0	144
23:00	1	73	32	1	3	0	0	0	0	0	0	0	0	0	110
Total	196	5675	1769	119	444	48	0	107	28	13	5	1	4	0	8409
Percent	2.3%	67.5%	21.0%	1.4%	5.3%	0.6%	0.0%	1.3%	0.3%	0.2%	0.1%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00	11:00	09:00	08:00		11:00	11:00	07:00	07:00	07:00	10:00		
Vol.	19	471	130	19	36	7		11	8	5	1	1	2		
PM Peak	15:00	17:00	16:00	14:00	15:00	14:00		14:00	12:00	15:00	17:00		17:00		
Vol.	25	451	143	13	38	5		11	2	2	2		1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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BROADWAY BTWN POCANTICO ST AND GORDIAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/14/15	0	24	17	0	0	0	0	1	0	0	0	0	0	0	42
01:00	0	10	5	0	1	0	0	0	0	0	0	0	0	0	16
02:00	0	6	7	0	3	1	0	0	1	0	0	0	0	0	18
03:00	0	11	8	0	0	0	0	0	0	0	0	0	0	0	19
04:00	0	20	6	1	5	0	0	1	0	0	0	0	0	0	33
05:00	0	94	32	0	27	2	1	3	1	0	0	0	0	0	160
06:00	0	196	80	5	36	2	0	10	0	0	0	0	0	0	329
07:00	24	424	128	5	29	2	0	11	1	2	0	0	1	0	627
08:00	15	480	145	5	23	5	0	16	2	1	1	0	0	0	693
09:00	20	385	104	14	35	5	0	16	3	2	1	0	2	0	587
10:00	4	273	118	7	31	2	0	8	1	0	0	0	1	0	445
11:00	20	306	105	7	35	7	0	7	6	1	0	0	0	0	494
12 PM	16	345	82	9	32	5	0	8	3	0	0	0	1	0	501
13:00	16	346	97	12	28	6	0	9	0	0	0	0	0	0	514
14:00	12	344	111	7	32	3	0	3	1	0	1	0	0	0	514
15:00	26	444	110	5	25	1	0	5	2	2	1	0	0	0	621
16:00	26	473	86	5	34	1	0	7	1	1	3	0	0	0	637
17:00	20	495	102	7	15	0	0	9	0	1	0	0	0	0	649
18:00	11	418	120	1	17	2	0	8	2	0	0	0	0	0	579
19:00	3	278	91	2	12	0	0	1	0	0	0	0	0	0	387
20:00	3	206	58	3	9	0	0	5	0	0	0	0	0	0	284
21:00	1	139	43	1	1	1	0	0	0	0	0	0	0	0	186
22:00	0	126	39	0	6	0	0	0	1	0	1	0	0	0	173
23:00	0	80	42	2	2	0	0	1	0	0	0	0	0	0	127
Total	217	5923	1736	98	438	45	1	129	25	10	8	0	5	0	8635
Percent	2.5%	68.6%	20.1%	1.1%	5.1%	0.5%	0.0%	1.5%	0.3%	0.1%	0.1%	0.0%	0.1%	0.0%	
AM Peak	07:00	08:00	08:00	09:00	06:00	11:00	05:00	08:00	11:00	07:00	08:00		09:00		
Vol.	24	480	145	14	36	7	1	16	6	2	1		2		
PM Peak	15:00	17:00	18:00	13:00	16:00	13:00		13:00	12:00	15:00	16:00		12:00		
Vol.	26	495	120	12	34	6		9	3	2	3		1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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BROADWAY BTWN POCANTICO ST AND GORDIAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/15/15	0	23	13	0	1	0	0	0	0	0	0	0	0	0	37
01:00	0	13	11	0	0	0	0	0	0	0	0	0	0	0	24
02:00	0	10	4	1	1	0	0	0	0	0	0	0	0	0	16
03:00	0	8	7	0	3	0	0	0	0	0	0	0	0	0	18
04:00	0	17	7	2	3	0	0	1	0	0	0	0	0	0	30
05:00	1	86	31	5	31	1	0	0	1	0	0	0	0	0	156
06:00	4	199	81	4	37	3	1	6	0	0	0	0	0	0	335
07:00	9	414	129	6	34	2	0	21	2	2	2	1	0	0	622
08:00	15	428	140	6	39	2	3	10	3	0	0	0	0	0	646
09:00	12	347	130	6	37	3	0	11	3	1	0	0	0	0	550
10:00	9	267	106	9	32	5	0	5	0	2	0	0	0	0	435
11:00	2	302	104	8	31	4	0	6	5	0	0	0	0	0	462
12 PM	11	329	100	10	31	2	0	6	4	0	0	0	0	0	493
13:00	20	340	106	7	28	4	1	3	0	0	0	0	0	0	509
14:00	19	375	114	10	33	2	0	6	0	1	0	1	0	0	561
15:00	24	436	137	4	34	0	1	3	1	1	1	0	0	0	642
16:00	23	548	123	8	26	1	0	9	1	0	0	0	0	0	739
17:00	28	475	119	4	20	2	0	5	0	0	0	0	0	0	653
18:00	23	462	104	1	13	0	0	3	2	3	0	0	0	0	611
19:00	4	347	98	2	13	1	0	2	1	0	1	0	0	0	469
20:00	1	201	83	3	15	0	0	3	0	0	0	1	0	0	307
21:00	1	192	46	2	7	0	0	1	0	0	0	0	0	0	249
22:00	2	140	55	1	3	1	0	3	0	0	0	0	1	0	206
23:00	1	89	33	2	4	2	0	3	0	0	0	0	0	0	134
Total	209	6048	1881	101	476	35	6	107	23	10	4	3	1	0	8904
Percent	2.3%	67.9%	21.1%	1.1%	5.3%	0.4%	0.1%	1.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00	10:00	08:00	10:00	08:00	07:00	11:00	07:00	07:00	07:00			
Vol.	15	428	140	9	39	5	3	21	5	2	2	1			
PM Peak	17:00	16:00	15:00	12:00	15:00	13:00	13:00	16:00	12:00	18:00	15:00	14:00	22:00		
Vol.	28	548	137	10	34	4	1	9	4	3	1	1	1		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/16/15	0	36	15	0	3	0	0	0	1	0	0	0	0	0	55
01:00	0	18	5	0	3	0	0	0	0	0	0	0	0	0	26
02:00	0	9	5	0	1	1	0	1	0	0	0	0	0	0	17
03:00	0	3	4	0	2	0	0	0	1	0	0	0	0	0	10
04:00	0	22	8	2	1	0	0	0	0	0	0	0	1	0	34
05:00	0	81	35	0	24	0	0	1	2	0	0	0	1	0	144
06:00	5	176	78	3	32	4	1	5	1	1	1	0	0	0	307
07:00	17	407	134	8	36	0	1	5	1	2	0	0	0	0	611
08:00	16	409	123	4	24	4	0	16	3	1	0	0	1	0	601
09:00	13	332	120	8	32	2	0	15	4	2	0	0	1	0	529
10:00	5	319	113	5	27	2	0	12	2	1	0	0	0	0	486
11:00	16	330	100	7	31	2	0	5	6	1	1	0	1	0	500
12 PM	19	411	104	7	28	4	2	10	0	2	0	0	2	0	589
13:00	25	380	99	11	43	4	0	9	2	2	0	0	0	0	575
14:00	20	364	110	11	29	5	0	12	2	0	0	0	0	0	553
15:00	31	442	118	9	35	4	0	10	0	1	0	0	0	0	650
16:00	48	534	90	5	26	2	0	7	1	1	1	0	0	0	715
17:00	39	537	115	7	21	1	0	6	0	2	0	0	0	0	728
18:00	27	531	126	4	19	0	0	2	0	0	0	0	0	0	709
19:00	24	531	86	1	9	0	0	2	2	1	0	0	0	0	656
20:00	15	378	80	2	7	0	0	0	1	0	0	0	0	0	483
21:00	14	258	74	3	9	0	0	0	0	0	0	0	0	0	358
22:00	7	219	74	3	11	1	0	1	1	1	0	0	0	0	318
23:00	3	162	50	1	5	2	0	4	1	0	0	0	0	0	228
Total	344	6889	1866	101	458	38	4	123	31	18	3	0	7	0	9882
Percent	3.5%	69.7%	18.9%	1.0%	4.6%	0.4%	0.0%	1.2%	0.3%	0.2%	0.0%	0.0%	0.1%	0.0%	
AM Peak	07:00	08:00	07:00	07:00	07:00	06:00	06:00	08:00	11:00	07:00	06:00		04:00		
Vol.	17	409	134	8	36	4	1	16	6	2	1		1		
PM Peak	16:00	17:00	18:00	13:00	13:00	14:00	12:00	14:00	13:00	12:00	16:00		12:00		
Vol.	48	537	126	11	43	5	2	12	2	2	1		2		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDIAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/17/15	0	101	28	1	2	0	0	0	0	0	0	0	0	0	132
01:00	0	32	18	0	0	0	0	0	0	0	0	0	0	0	50
02:00	0	20	15	0	1	0	0	2	1	0	0	0	0	0	39
03:00	0	8	6	0	1	0	0	0	0	0	0	0	0	0	15
04:00	0	22	14	0	1	0	0	1	0	0	0	0	0	0	38
05:00	0	50	24	2	21	0	0	0	0	0	0	0	0	0	97
06:00	1	77	46	1	13	0	0	0	0	0	0	0	0	0	138
07:00	0	234	77	5	26	0	0	1	1	1	0	0	0	0	345
08:00	5	447	81	0	23	1	0	4	1	0	0	0	0	0	562
09:00	9	465	71	0	10	0	0	1	0	0	0	0	0	0	556
10:00	13	467	56	4	9	1	0	1	0	0	0	0	0	0	551
11:00	13	495	65	3	8	0	0	1	0	0	0	0	0	0	585
12 PM	7	462	82	2	8	0	0	0	0	1	0	0	0	0	562
13:00	16	519	73	1	16	0	0	0	0	0	0	0	0	0	625
14:00	20	532	84	3	17	1	0	0	0	0	0	0	0	0	657
15:00	15	527	74	4	13	1	0	2	0	0	0	0	0	0	636
16:00	23	553	56	1	6	0	0	0	0	0	0	0	0	0	639
17:00	24	534	82	0	7	0	0	3	0	0	0	0	0	0	650
18:00	24	501	80	1	13	1	0	1	0	0	0	0	0	0	621
19:00	6	435	75	2	9	0	0	0	0	0	0	0	0	0	527
20:00	6	361	64	0	6	0	0	0	0	0	0	0	0	0	437
21:00	2	251	93	1	5	0	0	3	1	0	0	0	0	0	356
22:00	4	231	81	0	4	0	0	1	1	0	1	0	0	0	323
23:00	1	182	68	0	3	0	0	1	0	0	0	0	0	0	255
Total	189	7506	1413	31	222	5	0	22	5	2	1	0	0	0	9396
Percent	2.0%	79.9%	15.0%	0.3%	2.4%	0.1%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	08:00	07:00	07:00	08:00		08:00	02:00	07:00					
Vol.	13	495	81	5	26	1		4	1	1					
PM Peak	17:00	16:00	21:00	15:00	14:00	14:00		17:00	21:00	12:00	22:00				
Vol.	24	553	93	4	17	1		3	1	1	1				

Traffic Databank

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SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/18/15	1	99	36	0	5	1	0	1	0	0	0	0	0	0	143
01:00	1	46	15	0	3	0	0	0	0	0	0	0	0	0	65
02:00	0	20	14	0	1	0	0	0	0	0	0	0	0	0	35
03:00	0	14	16	0	3	0	0	0	0	0	0	0	0	0	33
04:00	0	20	9	0	0	0	0	0	0	0	0	0	0	0	29
05:00	0	21	10	1	1	0	0	0	0	0	0	0	0	0	33
06:00	0	40	22	0	4	0	0	0	0	0	0	0	0	0	66
07:00	0	117	39	0	6	0	0	2	0	0	0	0	0	0	164
08:00	0	178	65	2	13	0	0	4	0	0	0	0	0	0	262
09:00	5	260	92	2	14	0	0	2	0	0	1	0	1	0	377
10:00	6	318	112	1	4	1	0	4	0	1	0	0	1	0	448
11:00	12	369	109	4	9	0	0	10	2	0	0	0	0	0	515
12 PM	32	496	94	0	8	1	0	1	0	0	0	0	0	0	632
13:00	25	435	76	1	13	1	0	5	1	0	0	0	0	0	557
14:00	65	509	86	2	7	0	0	1	1	0	0	0	0	0	671
15:00	21	465	86	2	7	3	0	7	0	1	0	0	0	0	592
16:00	28	545	78	1	4	1	0	1	0	0	0	0	0	0	658
17:00	7	410	67	0	6	0	0	1	0	0	0	0	0	0	491
18:00	3	392	73	2	8	0	0	2	0	0	0	0	0	0	480
19:00	0	294	80	1	8	0	0	0	2	0	0	0	0	0	385
20:00	4	259	64	0	4	0	0	2	0	0	0	0	0	0	333
21:00	1	172	65	0	4	0	0	1	0	0	0	0	1	0	244
22:00	0	121	46	0	1	0	0	1	0	1	0	0	0	0	170
23:00	1	98	34	0	1	1	0	0	0	0	0	0	0	0	135
Total	212	5698	1388	19	134	9	0	45	6	3	1	0	3	0	7518
Percent	2.8%	75.8%	18.5%	0.3%	1.8%	0.1%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00	11:00	09:00	00:00		11:00	11:00	10:00	09:00		09:00		
Vol.	12	369	112	4	14	1		10	2	1	1		1		
PM Peak	14:00	16:00	12:00	14:00	13:00	15:00		15:00	19:00	15:00			21:00		
Vol.	65	545	94	2	13	3		7	2	1			1		

Traffic Databank

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SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/19/15	0	25	15	0	4	0	0	1	0	0	0	0	0	0	45
01:00	0	10	4	0	1	0	0	0	0	0	0	0	0	0	15
02:00	0	8	4	0	1	0	0	0	0	0	0	0	0	0	13
03:00	0	12	2	0	1	0	0	0	1	0	0	0	0	0	16
04:00	2	26	8	2	1	2	0	0	0	0	0	0	0	0	41
05:00	0	74	36	3	20	0	1	1	0	0	0	0	0	0	135
06:00	0	187	76	2	29	3	0	3	0	0	0	0	0	0	300
07:00	14	405	147	4	30	3	0	9	3	0	2	0	0	0	617
08:00	14	439	140	2	33	7	2	8	0	2	0	0	0	0	647
09:00	12	372	109	12	37	4	0	13	2	2	0	0	1	0	564
10:00	11	275	111	12	33	10	0	4	1	1	0	0	0	0	458
11:00	3	272	117	7	31	6	0	5	1	1	0	0	0	0	443
12 PM	10	306	113	10	41	4	0	3	3	1	0	0	1	0	492
13:00	9	313	95	9	26	6	3	5	1	1	0	0	0	0	468
14:00	12	369	123	11	24	6	0	4	0	1	0	0	0	0	550
15:00	20	472	108	12	38	2	0	10	3	0	0	0	1	0	666
16:00	24	471	94	6	24	1	0	12	0	1	0	0	0	0	633
17:00	19	445	106	2	13	2	0	10	1	0	0	0	0	0	598
18:00	10	379	99	4	19	2	0	3	0	0	1	0	0	0	517
19:00	3	257	80	1	5	0	0	3	0	0	0	0	0	0	349
20:00	0	152	49	1	7	0	0	0	0	0	0	0	0	0	209
21:00	0	114	33	3	8	0	0	0	0	0	0	0	0	0	158
22:00	0	26	5	0	1	0	0	0	0	0	0	0	0	0	32
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	163	5409	1674	103	427	58	6	94	16	10	3	0	3	0	7966
Percent	2.0%	67.9%	21.0%	1.3%	5.4%	0.7%	0.1%	1.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	07:00	09:00	09:00	10:00	08:00	09:00	07:00	08:00	07:00		09:00		
Vol.	14	439	147	12	37	10	2	13	3	2	2		1		
PM Peak	16:00	15:00	14:00	15:00	12:00	13:00	13:00	16:00	12:00	12:00	18:00		12:00		
Vol.	24	472	123	12	41	6	3	12	3	1	1		1		

Traffic Databank

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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/20/15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Percent	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.															
PM Peak Vol.		12:00 2													
Grand Total	2679	70915	18540	813	3794	344	22	960	200	102	44	5	33	0	98451
Percent	2.7%	72.0%	18.8%	0.8%	3.9%	0.3%	0.0%	1.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BETWEEN POCANTICO ST-GORDAN AV
SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/08/15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	43	**97**	189	256	88	12	4	0	0	0	0	0	0	0	689	21-30	445
17:00	**55**	54	**239**	**278**	110	22	1	0	0	0	0	0	0	0	**759**	21-30	517
18:00	20	32	145	263	**124**	25	3	**1**	0	0	0	0	0	0	613	21-30	408
19:00	12	26	115	184	106	25	5	0	0	0	0	0	0	0	473	21-30	299
20:00	9	16	78	136	94	**29**	4	1	0	0	0	0	0	0	367	26-35	230
21:00	3	3	54	134	87	21	2	1	0	0	0	0	0	0	305	26-35	221
22:00	3	3	32	81	85	25	3	1	0	0	0	0	0	0	233	26-35	166
23:00	1	0	18	51	29	12	**6**	0	**1**	0	0	0	0	0	118	26-35	80
Total	146	231	870	1383	723	171	28	4	1	0	0	0	0	0	3557		
Percent	4.1%	6.5%	24.5%	38.9%	20.3%	4.8%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00 55	16:00 97	17:00 239	17:00 278	18:00 124	20:00 29	23:00 6	18:00 1	23:00 1						17:00 759		

Traffic Databank

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Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/09/15	0	3	4	19	17	12	4	0	0	0	0	0	0	0	59	26-35	36
01:00	0	0	0	11	12	9	2	0	0	0	0	0	0	0	34	26-35	23
02:00	1	1	4	13	9	4	1	0	0	0	0	0	0	0	33	26-35	22
03:00	0	0	1	8	8	3	2	0	0	0	0	0	0	0	22	26-35	16
04:00	0	0	1	12	12	10	0	0	0	0	0	0	0	0	35	26-35	24
05:00	0	5	9	28	34	21	**7**	**6**	0	0	0	0	0	0	110	26-35	62
06:00	24	6	44	142	87	**45**	6	4	0	0	0	0	0	0	358	26-35	229
07:00	31	36	121	**212**	**98**	25	5	1	0	0	0	0	0	0	529	21-30	333
08:00	**49**	54	120	208	92	19	6	1	0	0	0	0	0	0	**549**	21-30	328
09:00	25	**60**	124	152	64	20	3	0	0	0	0	0	0	0	448	21-30	276
10:00	21	24	78	163	88	15	3	0	0	0	0	0	0	0	392	26-35	251
11:00	39	32	**129**	169	72	11	4	0	0	0	0	0	0	0	456	21-30	298
12 PM	44	41	139	172	81	6	0	0	0	0	0	0	0	0	483	21-30	311
13:00	47	43	134	200	100	13	3	0	0	0	0	0	0	0	540	21-30	334
14:00	36	43	150	242	83	14	2	0	0	0	0	0	0	0	570	21-30	392
15:00	42	33	185	232	**106**	**23**	1	0	0	0	0	0	0	0	622	21-30	417
16:00	60	69	207	236	72	10	2	0	0	0	0	0	0	0	656	21-30	443
17:00	51	70	**255**	**267**	90	11	1	0	0	0	0	0	0	0	**745**	21-30	522
18:00	**247**	**167**	177	59	4	1	0	0	0	0	0	0	0	0	655	16-25	344
19:00	146	139	158	39	6	0	0	0	0	0	0	0	0	0	488	16-25	297
20:00	50	101	144	64	7	0	0	0	0	0	0	0	0	0	366	16-25	245
21:00	31	76	168	77	8	1	0	0	0	0	0	0	0	0	361	19-28	245
22:00	11	14	71	134	82	23	2	0	0	0	0	0	0	0	337	26-35	216
23:00	3	5	21	85	71	16	**5**	0	0	0	0	0	0	0	206	26-35	156
Total	958	1022	2444	2944	1303	312	59	12	0	0	0	0	0	0	9054		
Percent	10.6%	11.3%	27.0%	32.5%	14.4%	3.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	11:00	07:00	07:00	06:00	05:00	05:00							08:00		
Vol.	49	60	129	212	98	45	7	6							549		
PM Peak	18:00	18:00	17:00	17:00	15:00	15:00	23:00								17:00		
Vol.	247	167	255	267	106	23	5								745		

Traffic Databank

716 S Sixth Ave
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SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/10/15	4	1	17	36	38	15	3	0	0	0	0	0	0	0	114	26-35	74
01:00	5	2	5	24	21	12	5	0	0	0	0	0	0	0	74	26-35	45
02:00	1	0	3	13	12	3	0	**2**	0	0	0	0	0	0	34	26-35	25
03:00	4	3	4	9	12	7	3	1	0	0	0	0	0	0	43	26-35	21
04:00	2	0	2	9	13	1	1	0	0	0	0	0	0	0	28	26-35	22
05:00	0	2	9	24	24	10	4	0	0	0	0	0	0	0	73	26-35	48
06:00	5	1	21	45	57	18	**14**	2	0	0	0	0	0	0	163	26-35	102
07:00	7	8	43	96	77	21	7	2	**1**	0	0	0	0	0	262	26-35	173
08:00	10	6	53	157	83	**30**	2	0	0	0	0	0	0	0	341	26-35	240
09:00	17	25	125	188	**87**	12	1	0	0	0	0	0	0	0	455	21-30	313
10:00	22	37	135	190	87	17	4	0	0	0	0	0	0	0	492	21-30	325
11:00	**37**	**61**	**194**	**206**	79	14	3	0	0	0	0	0	0	0	**594**	21-30	400
12 PM	30	70	195	**211**	**88**	9	2	0	0	0	0	0	0	0	605	21-30	406
13:00	34	84	280	207	60	8	1	0	0	0	0	0	0	0	674	21-30	487
14:00	44	99	236	180	47	9	0	0	0	0	0	0	0	0	615	21-30	416
15:00	49	130	**283**	149	39	5	**3**	0	0	0	0	0	0	0	658	21-30	432
16:00	179	153	223	111	24	2	0	0	0	0	0	0	0	0	**692**	16-25	376
17:00	601	52	7	2	0	0	0	0	0	0	0	0	0	0	662	1-10	401
18:00	**640**	18	3	0	0	0	0	0	0	0	0	0	0	0	661	1-10	427
19:00	481	100	37	8	0	0	0	0	0	0	0	0	0	0	626	1-10	321
20:00	155	**174**	112	14	1	0	0	0	0	0	0	0	0	0	456	16-25	286
21:00	9	40	169	168	36	7	0	0	0	0	0	0	0	0	429	21-30	337
22:00	8	42	118	164	43	7	0	0	0	0	0	0	0	0	382	21-30	282
23:00	2	15	54	100	52	**23**	2	0	0	0	0	0	0	0	248	21-30	154
Total	2346	1123	2328	2311	980	230	55	7	1	0	0	0	0	0	9381		
Percent	25.0%	12.0%	24.8%	24.6%	10.4%	2.5%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	09:00	08:00	06:00	02:00	07:00						11:00		
Vol.	37	61	194	206	87	30	14	2	1						594		
PM Peak	18:00	20:00	15:00	12:00	12:00	23:00	15:00								16:00		
Vol.	640	174	283	211	88	23	3								692		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BETWEEN POCANTICO ST-GORDAN AV
SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/11/15	0	1	21	67	46	17	2	1	0	0	0	0	0	0	155	26-35	113
01:00	3	0	5	30	34	9	2	0	0	0	0	0	0	0	83	26-35	64
02:00	1	1	2	12	24	8	1	0	0	0	0	0	0	0	49	26-35	36
03:00	0	0	7	14	18	5	0	1	**1**	0	0	0	0	0	46	26-35	32
04:00	0	0	5	10	11	8	2	1	0	0	0	0	0	0	37	26-35	21
05:00	2	0	2	16	14	5	5	0	0	0	0	0	0	0	44	26-35	30
06:00	5	4	8	20	29	**21**	**8**	**3**	0	0	0	0	0	0	98	31-40	50
07:00	1	1	24	50	51	9	4	1	0	0	0	0	0	0	141	26-35	101
08:00	3	5	36	75	56	17	0	2	0	0	0	0	0	0	194	26-35	131
09:00	5	15	88	125	**74**	17	1	1	0	0	0	0	0	0	326	21-30	213
10:00	24	29	129	137	57	13	1	0	0	0	0	0	0	0	390	21-30	266
11:00	**41**	**46**	**203**	**170**	48	12	0	0	0	0	0	0	0	0	**520**	21-30	373
12 PM	28	64	235	**198**	**68**	10	0	0	0	0	0	0	0	0	603	21-30	433
13:00	30	85	190	170	46	9	2	0	0	0	0	0	0	0	532	21-30	360
14:00	29	79	**238**	194	52	**13**	2	0	0	0	0	0	0	0	**607**	21-30	432
15:00	47	108	177	176	45	13	**3**	0	0	0	0	0	0	0	569	21-30	353
16:00	177	131	154	89	20	3	1	0	0	0	0	0	0	0	575	16-25	285
17:00	**212**	159	102	44	14	1	0	0	0	0	0	0	0	0	532	16-25	261
18:00	145	**187**	158	69	6	0	0	0	0	0	0	0	0	0	565	16-25	345
19:00	115	141	175	51	1	0	0	0	0	0	0	0	0	0	483	16-25	316
20:00	104	155	144	33	5	0	0	0	0	0	0	0	0	0	441	16-25	299
21:00	3	32	171	136	34	9	0	0	0	0	0	0	0	0	385	21-30	307
22:00	4	9	87	91	42	7	0	**1**	0	0	0	0	0	0	241	21-30	178
23:00	1	3	23	63	46	13	1	0	0	0	0	0	0	0	150	26-35	109
Total	980	1255	2384	2040	841	219	35	11	1	0	0	0	0	0	7766		
Percent	12.6%	16.2%	30.7%	26.3%	10.8%	2.8%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	09:00	06:00	06:00	06:00	03:00						11:00		
Vol.	41	46	203	170	74	21	8	3	1						520		
PM Peak	17:00	18:00	14:00	12:00	12:00	14:00	15:00	22:00							14:00		
Vol.	212	187	238	198	68	13	3	1							607		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BETWEEN POCANTICO ST-GORDAN AV
SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/12/15	1	0	9	41	34	23	3	0	0	0	0	0	0	0	111	26-35	75
01:00	1	1	4	16	24	11	1	0	0	0	0	0	0	0	58	26-35	40
02:00	1	0	3	7	6	2	3	0	0	0	0	0	0	0	22	26-35	13
03:00	1	0	2	5	7	2	1	1	0	0	0	0	0	0	19	26-35	12
04:00	6	1	1	7	15	4	3	0	0	0	0	0	0	0	37	26-35	22
05:00	4	1	11	31	23	24	5	2	0	0	0	0	0	0	101	26-35	54
06:00	21	10	48	74	85	31	8	**3**	0	0	0	0	0	0	280	26-35	159
07:00	15	20	78	130	77	**39**	**10**	2	**2**	0	0	0	0	0	373	21-30	208
08:00	39	13	97	177	**92**	30	4	1	0	0	0	0	0	0	453	21-30	274
09:00	19	**35**	88	156	84	30	3	0	0	0	0	0	0	0	415	21-30	244
10:00	**59**	32	130	158	59	6	3	1	0	0	0	0	0	0	448	21-30	288
11:00	21	32	**144**	**201**	75	18	2	0	0	0	0	0	0	0	**493**	21-30	345
12 PM	12	35	154	211	97	17	2	0	0	0	0	0	0	0	528	21-30	365
13:00	28	37	144	229	85	**25**	2	0	0	0	0	0	0	0	550	21-30	373
14:00	40	59	204	218	88	18	1	0	0	0	0	0	0	0	628	21-30	422
15:00	22	52	181	242	**110**	18	3	0	0	0	0	0	0	0	628	21-30	423
16:00	52	67	**221**	225	71	9	1	0	0	0	0	0	0	0	646	21-30	446
17:00	**99**	**100**	199	233	102	19	3	0	0	0	0	0	0	0	**755**	21-30	432
18:00	52	34	166	**246**	71	22	3	**1**	0	0	0	0	0	0	595	21-30	412
19:00	21	20	126	204	98	16	3	0	0	0	0	0	0	0	488	21-30	330
20:00	10	6	55	131	100	25	7	0	0	0	0	0	0	0	334	26-35	231
21:00	4	6	39	102	77	22	5	0	0	0	0	0	0	0	255	26-35	179
22:00	2	2	22	71	55	17	8	0	0	0	0	0	0	0	177	26-35	126
23:00	1	1	18	32	38	18	**11**	1	0	0	0	0	0	0	120	26-35	70
Total	531	564	2144	3147	1573	446	95	12	2	0	0	0	0	0	8514		
Percent	6.2%	6.6%	25.2%	37.0%	18.5%	5.2%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	09:00	11:00	11:00	08:00	07:00	07:00	06:00	07:00						11:00		
Vol.	59	35	144	201	92	39	10	3	2						493		
PM Peak	17:00	17:00	16:00	18:00	15:00	13:00	23:00	18:00							17:00		
Vol.	99	100	221	246	110	25	11	1							755		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BETWEEN POCANTICO ST-GORDAN AV
SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/13/15	1	0	4	10	15	10	2	0	0	0	0	0	0	0	42	26-35	25
01:00	1	0	4	12	11	6	0	0	0	0	0	0	0	0	34	26-35	23
02:00	0	0	4	5	4	3	0	0	0	0	0	0	0	0	16	21-30	9
03:00	3	0	3	12	6	3	0	1	0	0	0	0	0	0	28	26-35	18
04:00	2	0	4	10	10	4	2	1	0	0	0	0	0	0	33	26-35	20
05:00	3	4	9	34	43	16	6	**2**	0	0	0	0	0	0	117	26-35	77
06:00	23	13	78	145	69	22	5	0	0	0	0	0	0	0	355	21-30	223
07:00	37	24	109	177	104	**30**	**8**	1	0	0	0	0	0	0	490	21-30	286
08:00	**67**	**56**	**151**	**211**	**135**	26	6	0	**1**	0	0	0	0	0	**653**	21-30	362
09:00	50	26	83	190	118	22	6	2	0	0	0	0	0	0	497	26-35	308
10:00	50	27	110	166	79	13	0	1	0	0	0	0	0	0	446	21-30	276
11:00	26	29	140	166	80	18	3	0	0	0	0	0	0	0	462	21-30	306
12 PM	25	29	108	213	76	21	1	0	0	0	0	0	0	0	473	21-30	321
13:00	22	**42**	138	187	78	22	1	0	0	0	0	0	0	0	490	21-30	325
14:00	18	23	131	218	93	16	0	**1**	0	0	0	0	0	0	500	21-30	349
15:00	32	33	155	229	107	28	4	0	0	0	0	0	0	0	588	21-30	384
16:00	27	31	165	295	138	31	3	0	0	0	0	0	0	0	690	21-30	460
17:00	**43**	40	**171**	**315**	**152**	24	2	0	0	0	0	0	0	0	**747**	21-30	486
18:00	16	30	153	251	99	30	0	1	**1**	0	0	0	0	0	581	21-30	404
19:00	11	18	99	183	91	31	0	0	0	0	0	0	0	0	433	21-30	282
20:00	4	4	60	123	98	29	3	0	0	0	0	0	0	0	321	26-35	221
21:00	2	1	59	102	80	26	2	1	0	0	0	0	0	0	273	26-35	182
22:00	4	0	19	88	65	18	2	0	0	0	0	0	0	0	196	26-35	153
23:00	1	0	12	32	35	**32**	**5**	1	0	0	0	0	0	0	118	31-40	67
Total	468	430	1969	3374	1786	481	61	12	2	0	0	0	0	0	8583		
Percent	5.5%	5.0%	22.9%	39.3%	20.8%	5.6%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	08:00	07:00	07:00	05:00	08:00						08:00		
Vol.	67	56	151	211	135	30	8	2	1						653		
PM Peak	17:00	13:00	17:00	17:00	17:00	23:00	23:00	14:00	18:00						17:00		
Vol.	43	42	171	315	152	32	5	1	1						747		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BETWEEN POCANTICO ST-GORDAN AV
SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/14/15	0	0	3	13	20	13	1	0	0	0	0	0	0	0	50	31-40	33
01:00	1	0	3	12	13	5	1	0	0	0	0	0	0	0	35	26-35	25
02:00	1	1	4	8	2	3	0	1	0	0	0	0	0	0	20	21-30	12
03:00	0	0	2	13	12	3	0	0	0	0	0	0	0	0	30	26-35	25
04:00	0	0	0	12	13	7	2	0	0	0	0	0	0	0	34	26-35	25
05:00	2	1	12	41	35	12	5	2	0	0	0	0	0	0	110	26-35	76
06:00	11	11	47	118	102	**61**	8	**3**	0	0	0	0	0	0	361	26-35	220
07:00	**50**	**45**	116	159	112	30	8	2	0	0	0	0	0	0	522	21-30	275
08:00	42	38	**148**	**239**	**126**	35	**11**	1	0	0	0	0	0	0	**640**	21-30	387
09:00	25	25	113	179	98	22	10	0	0	0	0	0	0	0	472	21-30	292
10:00	19	26	113	167	89	23	3	0	0	0	0	0	0	0	440	21-30	280
11:00	28	21	119	185	87	25	1	0	0	0	0	0	0	0	466	21-30	304
12 PM	43	38	116	179	74	18	4	0	0	0	0	0	0	0	472	21-30	295
13:00	11	25	126	225	91	25	0	0	0	0	0	0	0	0	503	21-30	351
14:00	39	35	114	224	90	24	3	0	0	0	0	0	0	0	529	21-30	338
15:00	33	45	178	243	100	28	0	2	0	0	0	0	0	0	629	21-30	421
16:00	46	33	167	**324**	103	20	2	0	0	0	0	0	0	0	695	21-30	491
17:00	**90**	**73**	**185**	287	**126**	17	3	1	**1**	0	0	0	0	0	**783**	21-30	472
18:00	26	24	157	260	108	23	0	0	0	0	0	0	0	0	598	21-30	417
19:00	15	14	86	220	109	24	1	1	0	0	0	0	0	0	470	26-35	329
20:00	5	10	75	155	106	17	2	1	0	0	0	0	0	0	371	26-35	261
21:00	3	5	46	97	91	**34**	3	1	0	0	0	0	0	0	280	26-35	188
22:00	1	2	18	68	54	32	4	**3**	0	0	0	0	0	0	182	26-35	122
23:00	1	0	6	31	45	16	**6**	0	0	0	0	0	0	0	105	26-35	76
Total	492	472	1954	3459	1806	517	78	18	1	0	0	0	0	0	8797		
Percent	5.6%	5.4%	22.2%	39.3%	20.5%	5.9%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	08:00	08:00	08:00	06:00	08:00	06:00							08:00		
Vol.	50	45	148	239	126	61	11	3							640		
PM Peak	17:00	17:00	17:00	16:00	17:00	21:00	23:00	22:00	17:00						17:00		
Vol.	90	73	185	324	126	34	6	3	1						783		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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SLEEPY HOLLOW NY
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Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/15/15	0	0	3	15	30	10	4	0	0	0	0	0	0	0	62	26-35	45
01:00	0	1	4	12	11	8	0	0	0	0	0	0	0	0	36	26-35	23
02:00	0	0	1	7	10	6	2	0	0	0	0	0	0	0	26	26-35	17
03:00	0	0	1	12	8	3	0	0	0	0	0	0	0	0	24	26-35	20
04:00	0	0	0	3	12	3	4	0	0	**1**	0	0	0	0	23	31-40	15
05:00	2	0	9	28	30	23	3	2	0	0	0	0	0	0	97	26-35	58
06:00	12	5	61	120	80	**63**	**13**	**3**	**1**	0	0	0	0	0	358	26-35	200
07:00	44	38	99	173	119	44	5	1	0	0	0	0	0	0	523	26-35	292
08:00	**60**	**56**	118	**218**	**135**	31	3	0	0	0	0	0	0	0	**621**	26-35	353
09:00	27	15	117	206	107	23	6	0	0	0	0	0	0	0	501	21-30	323
10:00	31	35	105	173	77	39	2	0	0	0	0	0	0	0	462	21-30	278
11:00	32	44	**128**	172	75	19	4	0	0	0	0	0	0	0	474	21-30	300
12 PM	19	32	141	179	99	26	3	0	0	0	0	0	0	0	499	21-30	320
13:00	30	37	136	194	112	29	2	0	0	0	0	0	0	0	540	21-30	330
14:00	32	33	132	194	104	17	3	0	0	0	0	0	0	0	515	21-30	326
15:00	28	44	145	225	115	22	**9**	0	0	0	0	0	0	0	588	21-30	370
16:00	47	47	192	278	**119**	34	2	0	0	0	0	0	0	0	719	21-30	470
17:00	**76**	**71**	**210**	**306**	106	30	4	0	0	0	0	0	0	0	**803**	21-30	516
18:00	49	66	201	236	116	29	2	1	0	0	0	0	0	0	700	21-30	437
19:00	14	26	109	220	102	22	5	1	0	0	0	0	0	0	499	21-30	329
20:00	7	15	80	152	109	25	4	0	0	0	0	0	0	0	392	26-35	261
21:00	4	12	76	162	99	**35**	5	1	0	0	0	0	0	0	394	26-35	261
22:00	4	5	28	72	73	30	3	0	0	0	0	0	0	0	215	26-35	145
23:00	3	1	11	47	37	23	6	**2**	0	0	0	0	0	0	130	26-35	84
Total	521	583	2107	3404	1885	594	94	11	1	1	0	0	0	0	9201		
Percent	5.7%	6.3%	22.9%	37.0%	20.5%	6.5%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	11:00	08:00	08:00	06:00	06:00	06:00	06:00	04:00					08:00		
Vol.	60	56	128	218	135	63	13	3	1	1					621		
PM Peak	17:00	17:00	17:00	17:00	16:00	21:00	15:00	23:00							17:00		
Vol.	76	71	210	306	119	35	9	2							803		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BETWEEN POCANTICO ST-GORDAN AV
SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/16/15	1	0	3	21	23	8	2	2	0	0	0	0	0	0	60	26-35	44
01:00	0	0	2	6	7	10	1	0	0	0	0	0	0	0	26	31-40	17
02:00	0	0	0	7	14	6	0	0	0	0	0	0	0	0	27	26-35	21
03:00	0	0	4	6	14	3	1	0	0	0	0	0	0	0	28	26-35	20
04:00	0	0	6	8	13	3	1	1	**1**	0	0	0	0	0	33	26-35	21
05:00	3	2	14	39	39	23	4	**7**	0	0	0	0	0	0	131	26-35	78
06:00	20	9	60	124	79	**42**	9	1	0	0	0	0	0	0	344	26-35	203
07:00	**49**	41	125	170	113	39	**10**	0	0	0	0	0	0	0	547	21-30	295
08:00	36	34	**141**	214	**132**	35	8	1	0	0	0	0	0	0	**601**	21-30	355
09:00	23	39	131	191	97	33	3	0	0	0	0	0	0	0	517	21-30	322
10:00	35	45	138	180	73	12	0	0	0	0	0	0	0	0	483	21-30	318
11:00	36	**56**	135	**215**	72	13	1	0	0	0	0	0	0	0	528	21-30	350
12 PM	52	54	165	189	78	18	1	**1**	0	0	0	0	0	0	558	21-30	354
13:00	43	51	153	204	77	20	2	0	0	0	0	0	0	0	550	21-30	357
14:00	52	32	175	201	100	**24**	2	0	0	0	0	0	0	0	586	21-30	376
15:00	34	51	194	224	**109**	20	**5**	0	0	0	0	0	0	0	637	21-30	418
16:00	84	88	213	**267**	80	16	2	0	0	0	0	0	0	0	750	21-30	480
17:00	101	97	**316**	244	63	10	0	0	0	0	0	0	0	0	**831**	21-30	560
18:00	406	141	95	66	13	0	1	0	0	0	0	0	0	0	722	11-20	276
19:00	**441**	114	22	3	1	0	0	0	0	0	0	0	0	0	581	6-15	294
20:00	242	**148**	124	28	1	0	0	0	0	0	0	0	0	0	543	16-25	272
21:00	21	59	178	142	27	2	0	0	0	0	0	0	0	0	429	21-30	320
22:00	13	37	174	136	38	10	0	1	0	0	0	0	0	0	409	21-30	310
23:00	8	12	97	125	47	12	1	0	0	0	0	0	0	0	302	21-30	222
Total	1700	1110	2665	3010	1310	359	54	14	1	0	0	0	0	0	10223		
Percent	16.6%	10.9%	26.1%	29.4%	12.8%	3.5%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	11:00	08:00	11:00	08:00	06:00	07:00	05:00	04:00						08:00		
Vol.	49	56	141	215	132	42	10	7	1						601		
PM Peak	19:00	20:00	17:00	16:00	15:00	14:00	15:00	12:00							17:00		
Vol.	441	148	316	267	109	24	5	1							831		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BETWEEN POCANTICO ST-GORDAN AV
SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/17/15	1	2	19	51	40	19	3	0	**1**	0	0	0	0	0	136	26-35	91
01:00	0	1	9	26	22	10	3	1	0	0	0	0	0	0	72	26-35	48
02:00	1	2	3	18	7	7	2	0	0	0	0	0	0	0	40	26-35	25
03:00	2	0	5	12	10	9	0	0	0	0	0	0	0	0	38	26-35	22
04:00	0	0	5	12	17	3	4	0	0	0	0	0	0	0	41	26-35	29
05:00	0	0	10	13	22	9	4	1	0	0	0	0	0	0	59	26-35	35
06:00	5	2	13	57	51	21	**8**	**2**	0	0	0	0	0	0	159	26-35	108
07:00	14	9	70	122	**93**	**22**	5	2	0	0	0	0	0	0	337	26-35	215
08:00	32	16	124	**164**	57	9	2	0	0	0	0	0	0	0	404	21-30	288
09:00	51	75	135	103	28	5	1	0	0	0	0	0	0	0	398	21-30	238
10:00	**96**	104	150	89	16	1	0	0	0	0	0	0	0	0	456	16-25	254
11:00	62	**119**	**206**	151	28	5	2	0	0	0	0	0	0	0	**573**	21-30	357
12 PM	56	82	245	172	18	4	0	0	0	0	0	0	0	0	577	21-30	417
13:00	79	111	242	**175**	29	3	1	0	0	0	0	0	0	0	640	21-30	417
14:00	72	113	**248**	155	29	2	**3**	1	0	0	0	0	0	0	623	21-30	403
15:00	62	138	241	146	28	2	3	0	0	0	0	0	0	0	620	21-30	387
16:00	**486**	69	48	18	2	0	0	0	0	0	0	0	0	0	623	6-15	324
17:00	448	112	65	19	0	0	0	0	0	0	0	0	0	0	**644**	1-10	299
18:00	436	119	80	7	2	0	0	0	0	0	0	0	0	0	644	1-10	291
19:00	245	155	127	30	1	0	0	0	0	0	0	0	0	0	558	16-25	282
20:00	114	**187**	103	41	1	0	0	0	0	0	0	0	0	0	446	16-25	290
21:00	41	60	192	122	22	1	0	**2**	0	0	0	0	0	0	440	21-30	314
22:00	8	24	110	147	**56**	**9**	2	0	0	0	0	0	0	0	356	21-30	257
23:00	6	10	77	115	44	7	2	0	0	0	0	0	0	0	261	21-30	192
Total	2317	1510	2527	1965	623	148	45	9	1	0	0	0	0	0	9145		
Percent	25.3%	16.5%	27.6%	21.5%	6.8%	1.6%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	11:00	11:00	08:00	07:00	07:00	06:00	06:00	00:00						11:00		
Vol.	96	119	206	164	93	22	8	2	1						573		
PM Peak	16:00	20:00	14:00	13:00	22:00	22:00	14:00	21:00							17:00		
Vol.	486	187	248	175	56	9	3	2							644		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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SLEEPY HOLLOW NY
Latitude: 0' 0.0000 Undefined

Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/18/15	1	3	32	58	54	18	4	1	0	0	0	0	0	0	171	26-35	112
01:00	4	0	14	26	32	7	4	0	0	0	0	0	0	0	87	26-35	58
02:00	0	0	9	26	16	4	1	0	0	0	0	0	0	0	56	26-35	42
03:00	1	0	8	15	16	6	4	0	0	0	0	0	0	0	50	26-35	31
04:00	1	0	8	9	12	6	2	0	0	0	0	0	0	0	38	26-35	21
05:00	1	0	7	3	11	13	4	0	0	0	0	0	0	0	39	31-40	24
06:00	2	2	10	26	33	19	6	**4**	**1**	0	0	0	0	0	103	26-35	59
07:00	2	2	24	49	42	18	**10**	3	0	0	0	0	0	0	150	26-35	91
08:00	7	3	40	70	57	24	4	1	0	0	0	0	0	0	206	26-35	127
09:00	**36**	13	79	**134**	**67**	**25**	2	0	0	0	0	0	0	0	356	21-30	213
10:00	19	44	151	131	52	18	0	0	0	0	0	0	0	0	415	21-30	282
11:00	34	**115**	**189**	114	24	0	0	0	0	0	0	0	0	0	**476**	16-25	304
12 PM	62	144	240	98	11	2	0	0	0	0	0	0	0	0	557	16-25	384
13:00	103	**183**	248	130	12	0	0	0	0	0	0	0	0	0	**676**	16-25	431
14:00	86	154	243	134	17	0	1	0	0	0	0	0	0	0	635	16-25	397
15:00	55	63	**250**	**205**	39	5	**2**	0	0	0	0	0	0	0	619	21-30	455
16:00	**221**	132	157	75	20	1	0	0	0	0	0	0	0	0	606	16-25	289
17:00	150	144	126	66	9	2	0	0	0	0	0	0	0	0	497	16-25	270
18:00	145	169	132	52	4	0	0	0	0	0	0	0	0	0	502	16-25	301
19:00	134	158	141	53	3	0	0	0	0	0	0	0	0	0	489	16-25	299
20:00	63	102	151	70	14	3	0	0	0	0	0	0	0	0	403	16-25	253
21:00	5	9	69	110	**46**	9	1	0	0	0	0	0	0	0	249	21-30	179
22:00	3	9	29	56	44	**18**	2	0	0	0	0	0	0	0	161	26-35	100
23:00	1	2	9	41	40	8	2	**1**	0	0	0	0	0	0	104	26-35	81
Total	1136	1451	2366	1751	675	206	49	10	1	0	0	0	0	0	7645		
Percent	14.9%	19.0%	30.9%	22.9%	8.8%	2.7%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	11:00	11:00	09:00	09:00	09:00	07:00	06:00	06:00						11:00		
Vol.	36	115	189	134	67	25	10	4	1						476		
PM Peak	16:00	13:00	15:00	15:00	21:00	22:00	15:00	23:00							13:00		
Vol.	221	183	250	205	46	18	2	1							676		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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SLEEPY HOLLOW NY
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Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/19/15	0	0	8	16	19	11	2	1	0	0	0	0	0	0	57	26-35	35
01:00	0	0	1	7	8	8	2	0	0	0	0	0	0	0	26	29-38	16
02:00	0	0	1	4	7	3	0	0	0	0	0	0	0	0	15	26-35	11
03:00	0	0	2	5	4	3	1	0	0	0	0	0	0	0	15	25-34	9
04:00	1	0	2	5	10	6	3	0	0	0	0	0	0	0	27	29-38	16
05:00	1	0	9	23	27	19	4	**4**	0	0	0	0	0	0	87	26-35	50
06:00	12	11	38	121	98	**46**	11	2	0	0	0	0	0	0	339	26-35	219
07:00	28	41	**127**	151	101	34	**12**	1	0	0	0	0	0	0	495	21-30	278
08:00	28	24	127	**211**	**137**	34	4	0	0	0	0	0	0	0	**565**	26-35	348
09:00	17	22	99	194	114	32	3	0	0	0	0	0	0	0	481	26-35	308
10:00	21	16	100	174	91	14	4	0	**1**	0	0	0	0	0	421	21-30	274
11:00	**37**	**52**	99	180	94	33	1	2	0	0	0	0	0	0	498	21-30	279
12 PM	27	30	109	173	98	18	3	**3**	0	0	0	0	0	0	461	21-30	282
13:00	35	42	149	158	98	16	4	0	0	0	0	0	0	0	502	21-30	307
14:00	24	25	156	226	99	19	3	0	0	0	0	0	0	0	552	21-30	382
15:00	49	**54**	135	246	124	25	**6**	1	0	0	0	0	0	0	640	21-30	381
16:00	**81**	50	**181**	274	107	19	0	1	0	0	0	0	0	0	713	21-30	455
17:00	27	39	178	**310**	**139**	**30**	4	0	0	0	0	0	0	0	**727**	21-30	488
18:00	25	24	154	244	132	21	3	0	0	0	0	0	0	0	603	21-30	398
19:00	15	11	79	163	106	25	3	0	0	0	0	0	0	0	402	26-35	269
20:00	13	0	49	124	66	19	3	0	0	0	0	0	0	0	274	26-35	190
21:00	3	2	25	81	82	21	6	3	0	0	0	0	0	0	223	26-35	163
22:00	18	1	10	12	5	1	0	0	0	0	0	0	0	0	47	21-30	22
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Total	462	444	1838	3102	1766	457	82	18	1	0	0	0	0	0	8170		
Percent	5.7%	5.4%	22.5%	38.0%	21.6%	5.6%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	07:00	08:00	08:00	06:00	07:00	05:00	10:00						08:00		
Vol.	37	52	127	211	137	46	12	4	1						565		
PM Peak	16:00	15:00	16:00	17:00	17:00	17:00	15:00	12:00							17:00		
Vol.	81	54	181	310	139	30	6	3							727		

Traffic Databank

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Direction 1

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/20/15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
11:00	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**	1-10	3
12 PM	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	8-17	1
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7		
Percent	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00														11:00		
Vol.	4														4		
PM Peak	12:00														12:00		
Vol.	2														2		
Total	12064	10195	25596	31890	15271	4140	735	138	13	1	0	0	0	0	100043		
Percent	12.1%	10.2%	25.6%	31.9%	15.3%	4.1%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

	15th Percentile :	16 MPH
	50th Percentile :	25 MPH
	85th Percentile :	31 MPH
	95th Percentile :	35 MPH
Stats	10 MPH Pace Speed :	21-30 MPH
	Number in Pace :	57486
	Percent in Pace :	57.5%
	Number of Vehicles > 35 MPH :	5027
	Percent of Vehicles > 35 MPH :	5.0%
	Mean Speed(Average) :	25 MPH

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/08/15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	**122**	75	101	128	89	35	11	2	0	0	0	0	0	0	563	21-30	229
17:00	108	**81**	**105**	147	117	38	14	4	1	**1**	0	0	0	0	**616**	26-35	264
18:00	70	60	98	**155**	**121**	**58**	7	1	1	1	0	0	0	0	572	26-35	276
19:00	30	30	70	120	104	40	**19**	1	0	0	0	0	0	0	414	26-35	224
20:00	13	9	36	65	96	51	18	0	**3**	1	**1**	0	0	0	293	26-35	161
21:00	2	3	22	40	65	53	17	2	0	0	0	0	**1**	0	205	31-40	118
22:00	3	4	25	32	45	42	13	**11**	1	1	0	0	0	0	177	31-40	87
23:00	2	4	4	17	30	22	11	5	1	1	0	**1**	0	0	98	31-40	52
Total	350	266	461	704	667	339	110	26	7	5	1	1	1	0	2938		
Percent	11.9%	9.1%	15.7%	24.0%	22.7%	11.5%	3.7%	0.9%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	16:00 122	17:00 81	17:00 105	18:00 155	18:00 121	18:00 58	19:00 19	22:00 11	20:00 3	17:00 1	20:00 1	23:00 1	21:00 1		17:00 616		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/09/15	1	0	5	6	10	15	5	4	0	1	**1**	0	0	0	48	31-40	25
01:00	1	0	0	3	11	4	4	1	0	0	0	0	0	0	24	31-40	15
02:00	1	0	0	2	7	6	11	1	0	0	0	0	0	0	28	36-45	17
03:00	0	1	4	3	8	4	3	2	1	0	0	0	0	0	26	31-40	12
04:00	1	0	0	5	11	13	7	6	0	1	0	0	0	0	44	31-40	24
05:00	5	0	4	18	27	39	27	12	**8**	**2**	1	0	0	0	143	36-45	66
06:00	18	7	26	58	79	55	**34**	**17**	8	0	0	0	0	0	302	26-35	137
07:00	**93**	47	73	134	**131**	**85**	33	13	3	1	1	0	0	0	**614**	26-35	265
08:00	92	**67**	**102**	**157**	105	56	26	6	1	0	0	0	0	0	612	26-35	262
09:00	60	44	71	138	111	43	25	3	1	0	0	0	0	0	496	26-35	249
10:00	36	33	72	127	106	60	19	5	1	0	0	0	0	0	459	26-35	233
11:00	31	32	78	139	109	37	28	3	0	0	0	0	0	0	457	26-35	248
12 PM	52	55	116	137	99	**58**	21	2	**2**	1	0	0	0	0	543	21-30	253
13:00	55	41	77	111	91	45	9	3	0	0	0	0	0	0	432	26-35	202
14:00	57	36	99	149	**110**	46	19	4	1	0	0	0	0	0	521	26-35	259
15:00	103	54	138	162	90	35	**22**	0	0	0	0	0	0	0	604	21-30	300
16:00	**171**	102	149	160	107	28	13	2	0	0	0	0	0	0	**732**	21-30	309
17:00	101	55	122	151	100	42	10	2	2	0	0	0	0	0	585	21-30	273
18:00	76	**106**	**182**	**176**	50	9	0	0	0	0	0	0	0	0	599	21-30	358
19:00	72	63	161	159	55	7	0	0	0	0	0	0	0	0	517	21-30	320
20:00	16	23	109	129	41	8	0	0	0	0	0	0	0	0	326	21-30	238
21:00	5	15	62	108	72	12	2	0	0	0	0	0	0	0	276	26-35	180
22:00	2	2	20	43	58	36	13	3	2	0	0	0	0	0	179	26-35	101
23:00	4	3	11	29	49	36	18	**9**	2	**2**	0	0	0	0	163	31-40	85
Total	1053	786	1681	2304	1637	779	349	98	32	8	3	0	0	0	8730		
Percent	12.1%	9.0%	19.3%	26.4%	18.8%	8.9%	4.0%	1.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	08:00	07:00	07:00	06:00	06:00	05:00	05:00	00:00				07:00		
Vol.	93	67	102	157	131	85	34	17	8	2	1				614		
PM Peak	16:00	18:00	18:00	18:00	14:00	12:00	15:00	23:00	12:00	23:00					16:00		
Vol.	171	106	182	176	110	58	22	9	2	2					732		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/10/15	4	3	8	15	28	19	14	5	3	0	1	**1**	0	0	101	31-40	47
01:00	1	1	2	12	12	10	7	2	2	1	0	0	0	0	50	26-35	24
02:00	0	0	1	4	10	3	7	1	2	**2**	**2**	0	0	0	32	26-35	14
03:00	8	0	2	3	4	8	3	1	1	0	1	0	0	0	31	31-40	12
04:00	1	0	0	3	11	9	9	3	2	0	1	0	0	0	39	31-40	20
05:00	4	0	4	6	25	23	10	8	3	0	0	0	0	0	83	31-40	48
06:00	6	0	6	20	35	35	16	5	**5**	2	2	0	0	0	132	31-40	70
07:00	23	7	16	58	86	65	**36**	**13**	4	1	0	0	0	0	309	31-40	151
08:00	29	16	46	87	89	70	36	11	4	2	0	0	0	0	390	26-35	176
09:00	65	36	67	105	114	50	31	5	4	1	0	0	0	0	478	26-35	219
10:00	84	30	74	**140**	**149**	**73**	18	7	1	0	0	0	0	0	**576**	26-35	289
11:00	**117**	**56**	**114**	138	83	30	21	4	1	0	0	0	0	0	564	21-30	252
12 PM	120	64	131	**142**	**85**	**43**	**20**	0	0	0	0	0	0	0	605	21-30	273
13:00	138	84	146	116	70	39	6	2	0	0	0	0	0	0	601	21-30	262
14:00	143	117	138	122	78	25	4	0	0	0	0	0	0	0	627	21-30	260
15:00	203	118	**188**	110	51	17	3	1	0	0	0	0	0	0	691	16-25	306
16:00	421	**157**	160	67	19	5	0	0	0	0	0	0	0	0	**829**	16-25	317
17:00	339	143	84	20	5	0	0	0	0	0	0	0	0	0	591	11-20	256
18:00	**521**	137	47	2	0	0	0	0	0	0	0	0	0	0	707	6-15	347
19:00	311	135	87	33	7	3	0	0	0	0	0	0	0	0	576	11-20	239
20:00	156	145	109	35	5	0	0	0	0	0	0	0	0	0	450	16-25	254
21:00	45	59	77	97	47	30	6	1	0	0	0	0	0	0	362	21-30	174
22:00	29	17	40	78	69	32	13	**9**	0	**1**	0	0	0	0	288	26-35	147
23:00	10	11	37	96	80	35	16	2	**4**	0	0	0	0	0	291	26-35	176
Total	2778	1336	1584	1509	1162	624	276	80	36	10	7	1	0	0	9403		
Percent	29.5%	14.2%	16.8%	16.0%	12.4%	6.6%	2.9%	0.9%	0.4%	0.1%	0.1%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	10:00	10:00	10:00	07:00	07:00	06:00	02:00	02:00	00:00			10:00		
Vol.	117	56	114	140	149	73	36	13	5	2	2	1			576		
PM Peak	18:00	16:00	15:00	12:00	12:00	12:00	12:00	22:00	23:00	22:00					16:00		
Vol.	521	157	188	142	85	43	20	9	4	1					829		

Traffic Databank

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Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/11/15	5	6	17	40	64	37	12	8	1	**1**	0	0	0	0	191	26-35	104
01:00	1	2	2	11	13	12	11	3	2	0	**3**	0	0	0	60	29-38	25
02:00	1	0	8	5	13	6	5	4	1	0	0	0	0	0	43	29-38	19
03:00	1	1	1	4	9	9	4	2	1	0	1	0	0	0	33	31-40	18
04:00	0	0	0	2	5	7	7	2	4	0	0	0	0	0	27	36-45	14
05:00	1	0	0	2	6	8	3	5	0	0	1	0	0	0	26	31-40	14
06:00	0	0	6	6	21	14	7	4	1	1	0	0	0	0	60	31-40	35
07:00	7	2	20	36	67	41	22	11	2	0	1	0	0	0	209	31-40	108
08:00	8	6	25	48	60	48	22	**13**	4	0	0	0	0	0	234	26-35	108
09:00	21	14	51	84	96	55	**35**	10	**5**	1	1	0	0	0	373	26-35	180
10:00	46	25	62	99	**112**	48	15	7	2	0	0	0	0	0	416	26-35	211
11:00	**54**	**31**	**70**	**126**	97	**67**	23	3	0	1	0	0	0	0	**472**	26-35	223
12 PM	89	72	120	119	**91**	30	14	1	0	**1**	0	0	0	0	537	21-30	239
13:00	160	103	145	128	54	32	7	2	0	0	0	0	0	0	631	21-30	273
14:00	186	120	115	120	61	16	3	1	1	1	0	0	0	0	624	16-25	235
15:00	148	113	159	117	46	22	7	1	1	0	0	0	0	0	614	21-30	276
16:00	**244**	**170**	135	126	51	6	0	0	0	0	0	0	0	0	**732**	16-25	305
17:00	104	126	**192**	125	33	12	0	0	0	0	0	0	0	0	592	16-25	318
18:00	78	91	178	**136**	51	6	0	0	0	0	0	0	0	0	540	21-30	314
19:00	68	104	174	119	35	7	0	0	0	0	0	0	0	0	507	21-30	293
20:00	32	67	100	109	62	14	1	0	0	0	0	0	0	0	385	21-30	209
21:00	42	32	64	63	53	27	6	2	0	0	0	0	0	0	289	21-30	127
22:00	8	24	41	55	53	**44**	**30**	**6**	1	1	0	0	0	0	263	26-35	108
23:00	8	4	29	46	45	39	16	4	**2**	0	0	0	0	0	193	26-35	91
Total	1312	1113	1714	1726	1198	607	250	89	28	7	7	0	0	0	8051		
Percent	16.3%	13.8%	21.3%	21.4%	14.9%	7.5%	3.1%	1.1%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	10:00	11:00	09:00	08:00	09:00	00:00	01:00				11:00		
Vol.	54	31	70	126	112	67	35	13	5	1	3				472		
PM Peak	16:00	16:00	17:00	18:00	12:00	22:00	22:00	22:00	23:00	12:00					16:00		
Vol.	244	170	192	136	91	44	30	6	2	1					732		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

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SLEEPY HOLLOW, NY
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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/12/15	0	1	6	29	35	19	5	6	2	1	0	0	0	0	104	26-35	64
01:00	2	0	0	5	10	4	3	2	1	0	**1**	**1**	0	0	29	26-35	15
02:00	0	0	1	3	2	3	4	1	0	0	1	0	0	0	15	36-45	7
03:00	0	0	0	1	4	5	3	0	0	0	0	1	0	0	14	31-40	9
04:00	0	0	0	0	6	17	8	3	4	1	0	0	0	0	39	36-45	25
05:00	6	1	1	12	30	24	20	**24**	3	**2**	1	1	**1**	0	126	31-40	54
06:00	10	8	24	45	43	46	41	11	3	0	0	1	0	0	232	29-38	89
07:00	42	18	52	106	82	68	36	15	**7**	2	0	0	0	0	428	26-35	188
08:00	66	32	57	94	112	**74**	**48**	15	4	0	0	0	0	0	502	26-35	206
09:00	44	15	31	108	**126**	71	37	17	2	0	0	0	0	0	451	26-35	234
10:00	85	**45**	71	**118**	91	67	14	4	0	0	0	0	0	0	495	26-35	209
11:00	**117**	41	**92**	107	105	40	15	7	2	0	0	0	0	0	**526**	26-35	212
12 PM	101	67	105	115	91	55	**25**	5	1	0	0	0	0	0	565	21-30	220
13:00	150	75	114	135	84	27	9	0	0	1	0	0	0	0	595	21-30	249
14:00	171	92	122	130	77	23	5	3	0	0	0	0	0	0	623	21-30	252
15:00	163	90	119	148	108	44	13	2	0	0	0	0	0	0	687	21-30	267
16:00	**187**	**123**	**162**	153	75	33	3	1	1	0	0	0	0	0	**738**	21-30	315
17:00	157	68	103	**170**	**109**	36	10	2	0	0	0	0	0	0	655	26-35	279
18:00	98	63	127	170	101	38	5	1	0	0	0	0	0	0	603	21-30	297
19:00	32	18	66	114	109	**66**	19	**9**	1	1	0	0	0	0	435	26-35	223
20:00	14	7	29	74	80	40	19	5	0	0	0	0	0	0	268	26-35	154
21:00	7	6	14	61	75	55	13	5	1	**2**	0	0	0	0	239	26-35	136
22:00	1	0	7	30	54	40	14	8	1	0	0	0	0	0	155	31-40	94
23:00	1	1	8	15	26	19	13	5	**5**	0	0	0	0	0	93	31-40	45
Total	1454	771	1311	1943	1635	914	382	151	38	10	3	4	1	0	8617		
Percent	16.9%	8.9%	15.2%	22.5%	19.0%	10.6%	4.4%	1.8%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	10:00	11:00	10:00	09:00	08:00	08:00	05:00	07:00	05:00	01:00	01:00	05:00		11:00		
Vol.	117	45	92	118	126	74	48	24	7	2	1	1	1		526		
PM Peak	16:00	16:00	16:00	17:00	17:00	19:00	12:00	19:00	23:00	21:00					16:00		
Vol.	187	123	162	170	109	66	25	9	5	2					738		

Traffic Databank

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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/13/15	0	1	0	4	13	7	5	5	3	1	0	0	0	0	39	31-40	20
01:00	0	0	0	4	7	4	3	3	1	1	0	0	0	0	23	26-35	11
02:00	0	0	0	1	5	3	4	2	0	0	0	0	0	0	15	30-39	8
03:00	0	0	1	1	4	1	3	2	0	0	0	0	0	0	12	41-50	5
04:00	1	0	2	8	12	7	7	6	0	1	0	**1**	0	0	45	26-35	20
05:00	2	0	6	17	31	43	31	**18**	**6**	**4**	**1**	0	0	0	159	31-40	74
06:00	11	12	27	64	82	83	36	15	4	0	0	0	0	0	334	31-40	165
07:00	100	40	68	128	**120**	**95**	41	13	2	0	0	0	0	0	607	26-35	248
08:00	**107**	**44**	69	**158**	113	95	**58**	17	5	2	0	0	0	0	**668**	26-35	271
09:00	64	26	48	131	116	81	32	12	1	0	1	0	0	0	512	26-35	247
10:00	50	34	76	130	108	56	24	10	1	0	0	0	0	0	489	26-35	238
11:00	55	36	**80**	114	104	56	32	13	2	0	0	0	0	0	492	26-35	218
12 PM	50	25	70	116	118	**73**	18	11	0	0	0	0	0	0	481	26-35	234
13:00	51	47	74	118	113	60	15	3	0	0	0	0	0	0	481	26-35	231
14:00	99	40	85	105	79	70	25	6	**2**	0	0	0	0	0	511	21-30	190
15:00	110	**71**	107	120	124	63	**29**	5	0	0	0	0	0	0	629	26-35	244
16:00	92	71	70	**165**	**159**	61	13	10	0	**1**	0	0	0	0	**642**	26-35	324
17:00	**122**	57	**113**	136	101	45	18	6	1	1	**1**	0	0	0	601	21-30	249
18:00	78	51	112	153	116	54	19	3	1	0	0	0	0	0	587	26-35	269
19:00	23	16	35	105	106	56	26	7	1	0	0	0	0	0	375	26-35	211
20:00	4	6	28	51	81	59	18	7	0	0	0	0	0	0	254	31-40	140
21:00	5	1	10	55	71	31	22	2	1	0	1	0	0	0	199	26-35	126
22:00	2	0	9	32	48	43	8	2	0	0	0	0	0	0	144	31-40	91
23:00	3	1	2	19	36	22	11	**13**	2	1	0	0	0	0	110	31-40	58
Total	1029	579	1092	1935	1867	1168	498	191	33	12	4	1	0	0	8409		
Percent	12.2%	6.9%	13.0%	23.0%	22.2%	13.9%	5.9%	2.3%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	11:00	08:00	07:00	07:00	08:00	05:00	05:00	05:00	05:00	04:00			08:00		
Vol.	107	44	80	158	120	95	58	18	6	4	1	1			668		
PM Peak	17:00	15:00	17:00	16:00	16:00	12:00	15:00	23:00	14:00	16:00	17:00				16:00		
Vol.	122	71	113	165	159	73	29	13	2	1	1				642		

Traffic Databank

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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/14/15	2	0	1	7	12	7	9	1	3	0	0	0	0	0	42	31-40	19
01:00	0	1	0	3	6	3	2	1	0	0	0	0	0	0	16	31-40	9
02:00	1	0	4	5	2	3	2	0	0	1	0	0	0	0	18	21-30	9
03:00	1	0	0	1	7	8	1	1	0	0	0	0	0	0	19	31-40	15
04:00	1	1	1	2	6	9	7	1	5	0	0	0	0	0	33	34-43	16
05:00	8	3	4	11	32	36	41	**17**	**7**	0	**1**	0	0	0	160	36-45	77
06:00	16	8	29	48	80	**86**	37	17	7	0	1	0	0	0	329	31-40	166
07:00	93	**57**	71	132	**136**	73	**48**	12	4	1	0	0	0	0	627	26-35	268
08:00	**112**	52	**110**	**148**	135	82	41	9	2	**2**	0	0	0	0	**693**	26-35	283
09:00	100	49	107	118	106	74	24	5	3	0	1	0	0	0	587	21-30	225
10:00	35	42	55	130	106	45	23	6	2	1	0	0	0	0	445	26-35	236
11:00	69	34	86	114	94	58	28	10	1	0	0	0	0	0	494	26-35	208
12 PM	66	29	80	123	**123**	59	15	6	0	0	0	0	0	0	501	26-35	246
13:00	75	42	82	130	96	60	20	**8**	1	0	0	0	0	0	514	26-35	226
14:00	74	47	93	132	88	62	14	2	2	0	0	0	0	0	514	21-30	225
15:00	127	**70**	107	131	108	55	13	6	**4**	0	0	0	0	0	621	26-35	239
16:00	**159**	67	104	137	100	45	20	3	1	**1**	0	0	0	0	637	21-30	241
17:00	139	66	**115**	161	103	50	12	2	1	0	0	0	0	0	**649**	21-30	276
18:00	70	42	95	**168**	122	53	23	5	1	0	0	0	0	0	579	26-35	290
19:00	21	13	31	103	117	**70**	27	5	0	0	0	0	0	0	387	26-35	220
20:00	19	13	15	69	83	48	**30**	5	2	0	0	0	0	0	284	26-35	152
21:00	4	3	23	41	56	39	14	5	1	0	0	0	0	0	186	26-35	97
22:00	3	2	9	50	52	32	18	4	3	0	0	0	0	0	173	26-35	102
23:00	1	1	4	24	41	30	15	7	1	1	**1**	0	**1**	0	127	31-40	71
Total	1196	642	1226	1988	1811	1087	484	138	51	7	4	0	1	0	8635		
Percent	13.9%	7.4%	14.2%	23.0%	21.0%	12.6%	5.6%	1.6%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	07:00	08:00	08:00	07:00	06:00	07:00	05:00	05:00	08:00	05:00				08:00		
Vol.	112	57	110	148	136	86	48	17	7	2	1				693		
PM Peak	16:00	15:00	17:00	18:00	12:00	19:00	20:00	13:00	15:00	16:00	23:00		23:00		17:00		
Vol.	159	70	115	168	123	70	30	8	4	1	1		1		649		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/15/15	0	0	2	2	10	12	6	3	1	0	**1**	0	0	0	37	31-40	22
01:00	0	0	0	6	5	10	1	1	1	0	0	0	0	0	24	31-40	15
02:00	1	1	1	0	3	4	5	0	1	0	0	0	0	0	16	35-44	9
03:00	0	0	0	0	3	5	7	2	1	0	0	0	0	0	18	36-45	12
04:00	1	0	0	0	8	9	6	6	0	0	0	0	0	0	30	31-40	17
05:00	7	1	8	5	32	37	42	16	**5**	2	0	**1**	0	0	156	36-45	79
06:00	23	6	16	64	95	65	41	**19**	5	1	0	0	0	0	335	29-38	160
07:00	68	46	**89**	117	**153**	86	**47**	12	1	**3**	0	0	0	0	622	26-35	270
08:00	**87**	**54**	84	**143**	150	**89**	27	8	4	0	0	0	0	0	**646**	26-35	293
09:00	82	41	75	107	119	89	24	11	2	0	0	0	0	0	550	26-35	226
10:00	48	33	59	85	106	71	17	13	3	0	0	0	0	0	435	26-35	191
11:00	41	16	59	118	114	79	25	8	0	0	1	1	0	0	462	26-35	232
12 PM	69	35	62	118	122	67	17	2	1	0	0	0	0	0	493	26-35	240
13:00	89	37	82	87	109	68	26	7	3	**1**	0	0	0	0	509	26-35	196
14:00	97	53	99	138	97	41	26	**8**	1	1	0	0	0	0	561	21-30	237
15:00	106	53	113	154	130	64	20	1	0	1	0	0	0	0	642	26-35	284
16:00	**168**	**84**	**150**	**156**	106	56	15	3	1	0	0	0	0	0	**739**	21-30	306
17:00	121	78	121	135	**134**	45	13	2	**4**	0	0	0	0	0	653	26-35	269
18:00	130	82	121	144	85	34	14	0	1	0	0	0	0	0	611	21-30	265
19:00	39	29	71	130	102	**69**	22	5	1	1	0	0	0	0	469	26-35	232
20:00	5	10	27	80	95	50	**34**	5	0	1	0	0	0	0	307	26-35	175
21:00	10	10	32	56	76	44	19	2	0	0	0	0	0	0	249	26-35	132
22:00	5	0	9	40	70	52	19	8	2	1	0	0	0	0	206	31-40	122
23:00	1	0	8	23	37	31	21	8	4	0	**1**	0	0	0	134	31-40	68
Total	1198	669	1288	1908	1961	1177	494	150	42	12	3	2	0	0	8904		
Percent	13.5%	7.5%	14.5%	21.4%	22.0%	13.2%	5.5%	1.7%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	07:00	08:00	07:00	08:00	07:00	06:00	05:00	07:00	00:00	05:00			08:00		
Vol.	87	54	89	143	153	89	47	19	5	3	1	1			646		
PM Peak	16:00	16:00	16:00	16:00	17:00	19:00	20:00	14:00	17:00	13:00	23:00				16:00		
Vol.	168	84	150	156	134	69	34	8	4	1	1				739		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
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SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/16/15	2	1	2	2	14	16	12	2	2	2	0	0	0	0	55	31-40	30
01:00	1	1	1	2	7	5	2	3	1	1	0	**2**	0	0	26	31-40	12
02:00	1	0	1	1	6	3	1	2	2	0	0	0	0	0	17	31-40	9
03:00	0	0	2	0	2	1	3	1	1	0	0	0	0	0	10	41-50	4
04:00	1	0	1	4	8	12	6	1	0	0	1	0	0	0	34	31-40	20
05:00	4	0	2	10	26	44	27	**20**	**8**	1	**2**	0	0	0	144	36-45	71
06:00	18	5	22	60	71	64	**37**	18	8	**4**	0	0	0	0	307	31-40	135
07:00	91	51	77	119	**146**	**83**	34	9	1	0	0	0	0	0	**611**	26-35	265
08:00	**112**	**57**	75	131	130	69	18	7	2	0	0	0	0	0	601	26-35	261
09:00	65	40	**87**	117	126	60	27	7	0	0	0	0	0	0	529	26-35	243
10:00	40	24	73	**142**	107	67	27	6	0	0	0	0	0	0	486	26-35	249
11:00	55	39	85	127	123	51	13	7	0	0	0	0	0	0	500	26-35	250
12 PM	108	49	105	138	102	59	20	6	1	1	0	0	0	0	589	21-30	243
13:00	104	45	119	153	104	35	9	5	1	0	0	0	0	0	575	21-30	272
14:00	85	56	84	130	**121**	51	22	4	0	0	0	0	0	0	553	26-35	251
15:00	140	69	116	145	99	**60**	14	7	0	0	0	0	0	0	650	21-30	261
16:00	236	119	135	119	72	28	6	0	0	0	0	0	0	0	715	21-30	254
17:00	220	96	135	147	91	32	6	1	0	0	0	0	0	0	**728**	21-30	282
18:00	191	114	**159**	**166**	69	9	1	0	0	0	0	0	0	0	709	21-30	325
19:00	**407**	**170**	60	16	3	0	0	0	0	0	0	0	0	0	656	11-20	306
20:00	149	102	128	81	22	1	0	0	0	0	0	0	0	0	483	16-25	230
21:00	46	44	99	77	58	26	8	0	0	0	0	0	0	0	358	21-30	176
22:00	33	38	72	64	59	38	9	5	0	0	0	0	0	0	318	21-30	136
23:00	13	10	25	53	62	23	**24**	**14**	**2**	**2**	0	0	0	0	228	26-35	115
Total	2122	1130	1665	2004	1628	837	326	125	29	11	3	2	0	0	9882		
Percent	21.5%	11.4%	16.8%	20.3%	16.5%	8.5%	3.3%	1.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	09:00	10:00	07:00	07:00	06:00	05:00	05:00	06:00	05:00	01:00			07:00		
Vol.	112	57	87	142	146	83	37	20	8	4	2	2			611		
PM Peak	19:00	19:00	18:00	18:00	14:00	15:00	23:00	23:00	23:00	23:00					17:00		
Vol.	407	170	159	166	121	60	24	14	2	2					728		

Traffic Databank

716 S Sixth Ave
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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/17/15	4	1	14	32	43	18	17	3	0	0	0	0	0	0	132	26-35	75
01:00	1	0	4	5	14	15	7	3	0	0	0	0	0	**1**	50	31-40	29
02:00	0	0	2	7	10	4	6	6	3	1	0	0	0	0	39	26-35	17
03:00	1	0	1	2	5	4	1	1	0	0	0	0	0	0	15	31-40	9
04:00	1	0	1	5	13	7	2	2	4	1	**1**	0	**1**	0	38	30-39	20
05:00	2	0	3	18	20	22	16	**9**	5	**2**	0	0	0	0	97	31-40	42
06:00	4	0	5	29	39	31	15	8	**7**	0	0	0	0	0	138	31-40	70
07:00	54	42	64	65	**59**	**32**	**18**	5	3	1	1	**1**	0	0	345	21-30	129
08:00	169	106	127	**100**	48	11	1	0	0	0	0	0	0	0	562	16-25	233
09:00	307	110	79	40	15	4	1	0	0	0	0	0	0	0	556	11-20	212
10:00	236	122	**133**	49	10	1	0	0	0	0	0	0	0	0	551	16-25	255
11:00	**313**	**153**	93	22	4	0	0	0	0	0	0	0	0	0	**585**	11-20	257
12 PM	206	147	130	64	12	3	0	0	0	0	0	0	0	0	562	16-25	277
13:00	378	164	59	17	4	2	1	0	0	0	0	0	0	0	625	11-20	290
14:00	446	144	53	13	1	0	0	0	0	0	0	0	0	0	**657**	6-15	297
15:00	391	159	57	22	6	1	0	0	0	0	0	0	0	0	636	11-20	289
16:00	**530**	98	11	0	0	0	0	0	0	0	0	0	0	0	639	6-15	353
17:00	450	131	56	10	3	0	0	0	0	0	0	0	0	0	650	1-10	300
18:00	373	**166**	60	20	1	1	0	0	0	0	0	0	0	0	621	11-20	290
19:00	181	152	**141**	44	8	1	0	0	0	0	0	0	0	0	527	16-25	293
20:00	133	111	101	65	17	6	3	1	0	0	0	0	0	0	437	16-25	212
21:00	30	45	84	**111**	53	23	7	2	1	0	0	0	0	0	356	21-30	195
22:00	35	26	62	85	**73**	**26**	**11**	**4**	1	0	0	0	0	0	323	26-35	158
23:00	9	12	53	70	65	26	11	4	**3**	**2**	0	0	0	0	255	26-35	135
Total	4254	1889	1393	895	523	238	117	48	27	7	2	1	1	1	9396		
Percent	45.3%	20.1%	14.8%	9.5%	5.6%	2.5%	1.2%	0.5%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	10:00	08:00	07:00	07:00	07:00	05:00	06:00	05:00	04:00	07:00	04:00	01:00	11:00		
Vol.	313	153	133	100	59	32	18	9	7	2	1	1	1	1	585		
PM Peak	16:00	18:00	19:00	21:00	22:00	22:00	22:00	22:00	23:00	23:00					14:00		
Vol.	530	166	141	111	73	26	11	4	3	2					657		

Traffic Databank

716 S Sixth Ave
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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/18/15	1	2	13	37	34	33	12	9	1	1	0	0	0	0	143	26-35	71
01:00	2	1	9	7	14	21	9	2	0	0	0	0	0	0	65	31-40	35
02:00	0	0	6	6	8	8	5	2	0	0	0	0	0	0	35	30-39	16
03:00	0	0	0	9	6	10	3	3	1	0	0	**1**	0	0	33	29-38	16
04:00	0	0	2	3	5	7	10	1	1	0	0	0	0	0	29	36-45	17
05:00	1	0	1	5	6	9	6	4	0	1	0	0	0	0	33	32-41	15
06:00	1	0	2	11	14	14	15	7	2	0	0	0	0	0	66	34-43	29
07:00	4	1	4	26	43	39	22	**14**	**8**	**3**	0	0	0	0	164	31-40	82
08:00	2	3	35	40	68	63	**37**	13	1	0	0	0	0	0	262	31-40	131
09:00	17	14	56	94	**107**	**65**	21	3	0	0	0	0	0	0	377	26-35	201
10:00	39	27	77	118	96	61	18	10	2	0	0	0	0	0	448	26-35	214
11:00	**73**	**59**	**121**	**157**	85	19	1	0	0	0	0	0	0	0	**515**	21-30	278
12 PM	119	130	177	**147**	47	9	3	0	0	0	0	0	0	0	632	21-30	324
13:00	112	123	**179**	101	37	3	2	0	0	0	0	0	0	0	557	16-25	302
14:00	**228**	156	160	94	25	6	2	0	0	0	0	0	0	0	**671**	16-25	316
15:00	138	93	152	121	**64**	19	4	1	0	0	0	0	0	0	592	21-30	273
16:00	221	**177**	148	84	23	3	2	0	0	0	0	0	0	0	658	16-25	325
17:00	140	106	149	78	17	1	0	0	0	0	0	0	0	0	491	16-25	255
18:00	97	135	169	57	21	1	0	0	0	0	0	0	0	0	480	16-25	304
19:00	30	86	152	94	21	2	0	0	0	0	0	0	0	0	385	21-30	246
20:00	34	50	104	101	34	7	2	1	0	0	0	0	0	0	333	21-30	205
21:00	18	26	55	55	55	21	10	4	0	0	0	0	0	0	244	21-30	110
22:00	4	6	21	41	45	30	14	**7**	**2**	0	0	0	0	0	170	26-35	86
23:00	0	1	8	34	30	**34**	**17**	7	2	**1**	**1**	0	0	0	135	31-40	64
Total	1281	1196	1800	1520	905	485	215	88	20	6	1	1	0	0	7518		
Percent	17.0%	15.9%	23.9%	20.2%	12.0%	6.5%	2.9%	1.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	09:00	09:00	08:00	07:00	07:00	07:00		03:00			11:00		
Vol.	73	59	121	157	107	65	37	14	8	3		1			515		
PM Peak	14:00	16:00	13:00	12:00	15:00	23:00	23:00	22:00	22:00	23:00	23:00				14:00		
Vol.	228	177	179	147	64	34	17	7	2	1	1				671		

Traffic Databank

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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/19/15	0	0	2	9	15	6	6	4	2	0	**1**	0	0	0	45	26-35	24
01:00	1	0	0	2	6	1	3	0	0	**2**	0	0	0	0	15	26-35	8
02:00	0	1	0	2	4	2	4	0	0	0	0	0	0	0	13	26-35	6
03:00	0	0	0	3	4	4	4	1	0	0	0	0	0	0	16	29-38	8
04:00	3	0	3	1	10	11	9	2	2	0	0	0	0	0	41	31-40	21
05:00	3	0	2	11	25	41	30	15	**6**	1	0	**1**	0	0	135	36-45	71
06:00	9	6	22	45	78	82	37	**19**	1	1	0	0	0	0	300	31-40	160
07:00	92	42	64	131	**147**	**87**	**44**	9	0	1	0	0	0	0	617	26-35	278
08:00	**112**	**70**	**99**	118	142	71	29	6	0	0	0	0	0	0	**647**	26-35	260
09:00	70	34	82	**139**	122	80	29	8	0	0	0	0	0	0	564	26-35	261
10:00	49	16	74	127	92	63	23	9	3	1	0	0	**1**	0	458	26-35	219
11:00	32	32	58	111	101	77	24	8	0	0	0	0	0	0	443	26-35	212
12 PM	50	30	85	115	105	**76**	21	8	2	0	0	0	0	0	492	26-35	220
13:00	61	30	78	136	92	47	18	3	3	0	0	0	0	0	468	26-35	228
14:00	71	35	92	141	121	54	**28**	6	2	0	0	0	0	0	550	26-35	262
15:00	108	**76**	103	**180**	112	58	21	7	1	0	0	0	0	0	**666**	26-35	292
16:00	**132**	76	97	144	118	52	10	4	0	0	0	0	0	0	633	26-35	262
17:00	90	60	**106**	140	113	57	24	7	0	1	0	0	0	0	598	26-35	253
18:00	63	44	81	115	**126**	57	25	5	1	0	0	0	0	0	517	26-35	241
19:00	14	10	54	96	98	51	14	**9**	1	**2**	0	0	0	0	349	26-35	194
20:00	2	6	27	61	62	34	10	3	**4**	0	0	0	0	0	209	26-35	123
21:00	3	0	27	37	36	31	17	4	3	0	0	0	0	0	158	26-35	73
22:00	7	0	5	13	4	3	0	0	0	0	0	0	0	0	32	21-30	18
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Total	972	568	1161	1877	1733	1045	430	137	31	9	1	1	1	0	7966		
Percent	12.2%	7.1%	14.6%	23.6%	21.8%	13.1%	5.4%	1.7%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	07:00	07:00	07:00	06:00	05:00	01:00	00:00	05:00	10:00		08:00		
Vol.	112	70	99	139	147	87	44	19	6	2	1	1	1		647		
PM Peak	16:00	15:00	17:00	15:00	18:00	12:00	14:00	19:00	20:00	19:00					15:00		
Vol.	132	76	106	180	126	76	28	9	4	2					666		

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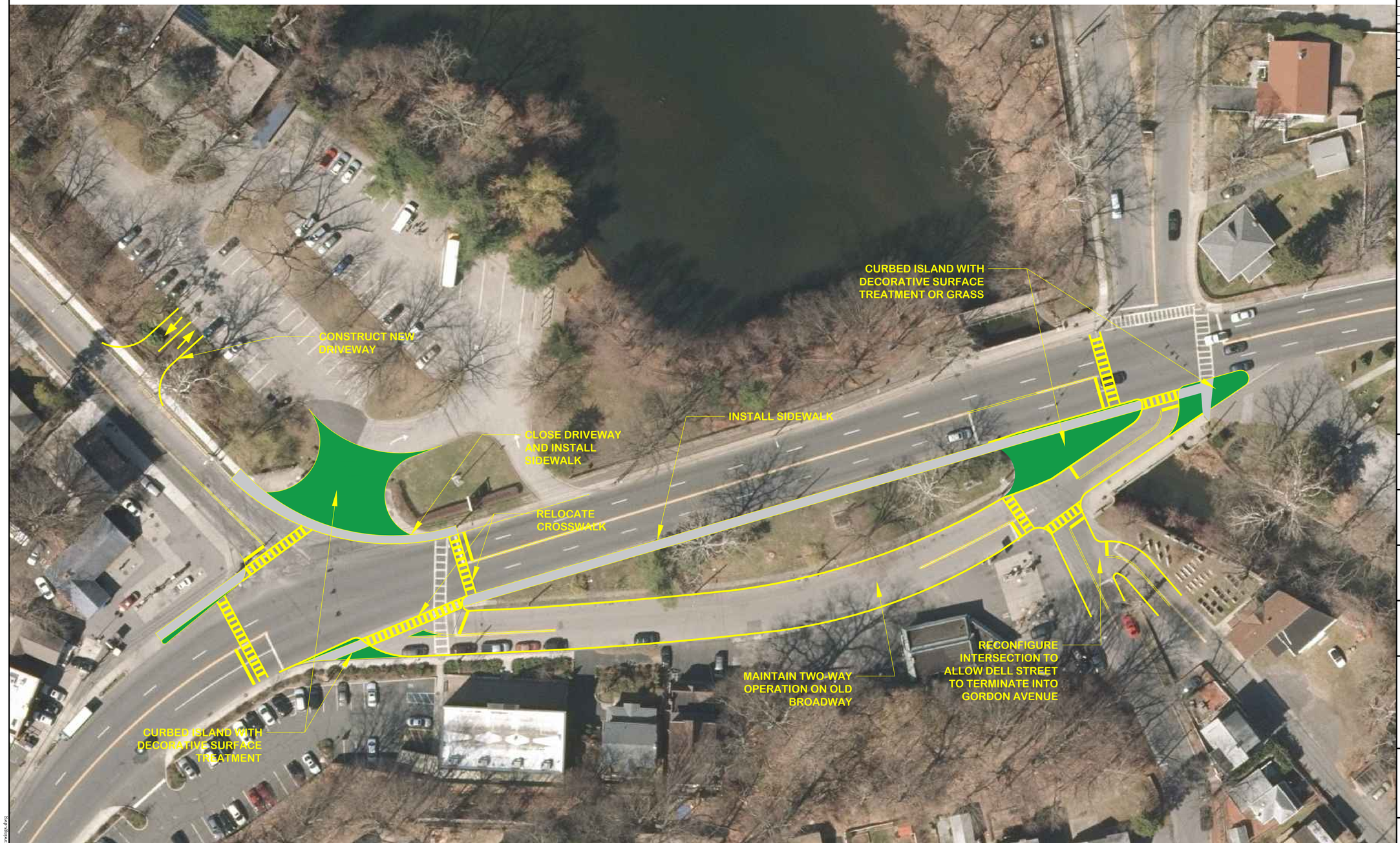
716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
BROADWAY BTWN POCANTICO ST AND GORDAN
SLEEPY HOLLOW, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
10/20/15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
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11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
12 PM	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	8-17	1
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Percent	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak																	
Vol.																	
PM Peak	12:00														12:00		
Vol.	2														2		
Total	19001	10945	16376	20313	16727	9300	3931	1321	374	104	39	14	5	1	98451		
Percent	19.3%	11.1%	16.6%	20.6%	17.0%	9.4%	4.0%	1.3%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%			

	15th Percentile :	11 MPH
	50th Percentile :	25 MPH
	85th Percentile :	35 MPH
	95th Percentile :	41 MPH
Stats	10 MPH Pace Speed :	26-35 MPH
	Number in Pace :	37040
	Percent in Pace :	37.6%
	Number of Vehicles > 35 MPH :	15089
	Percent of Vehicles > 35 MPH :	15.3%
	Mean Speed(Average) :	25 MPH



NO.	REVISION	DATE

Consultant: Company Name
Address
City, State zip code
Tel:
Fax:

Landscape Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Architect: Company Name
Address
City, State zip code
Tel:
Fax:

Owner: Company Name
Address
City, State zip code
Tel:
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UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THIS LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

Roadway Improvements
Route 9 (Broadway)
Village of Sleepy Hollow, NY 10591

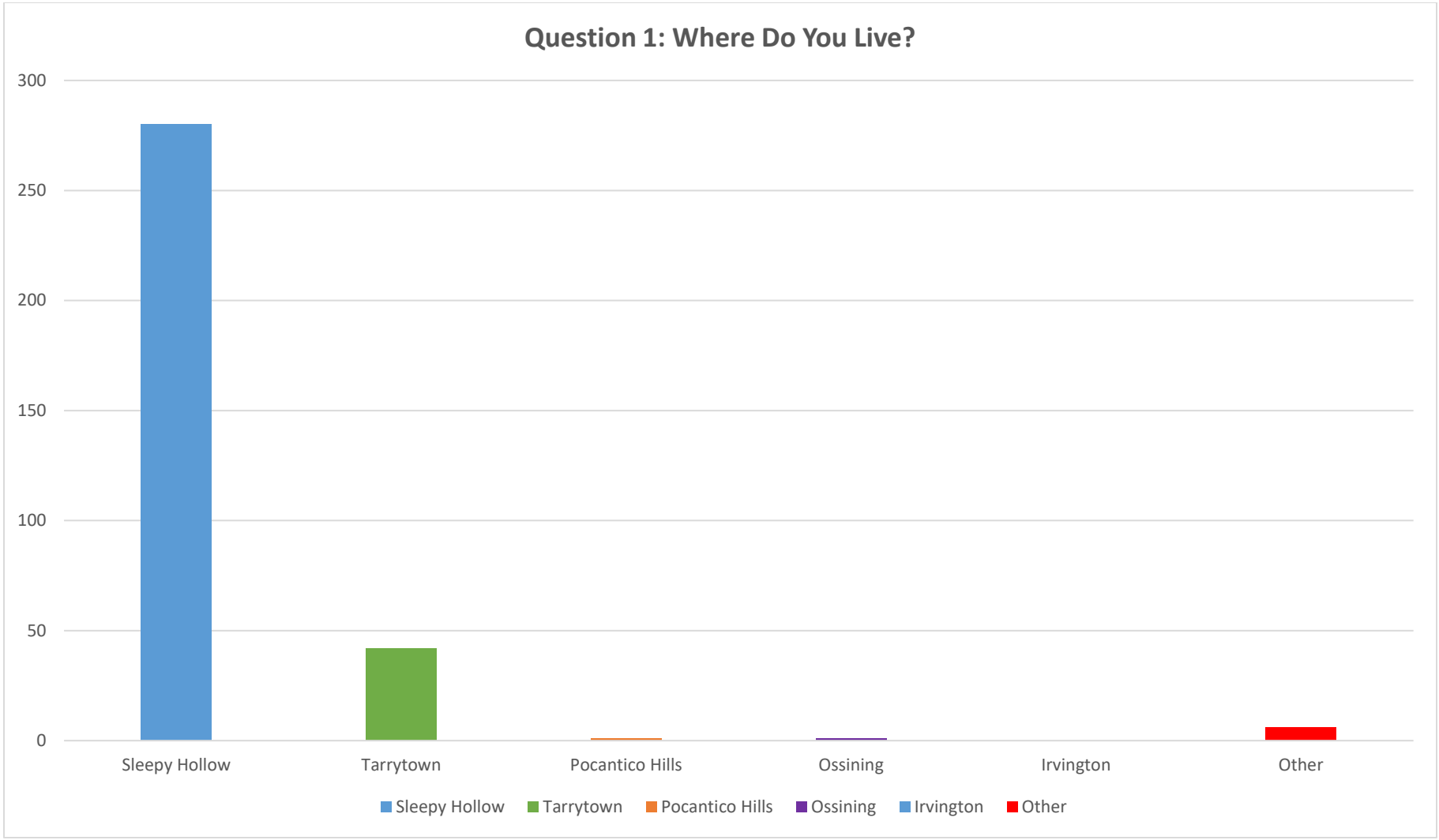
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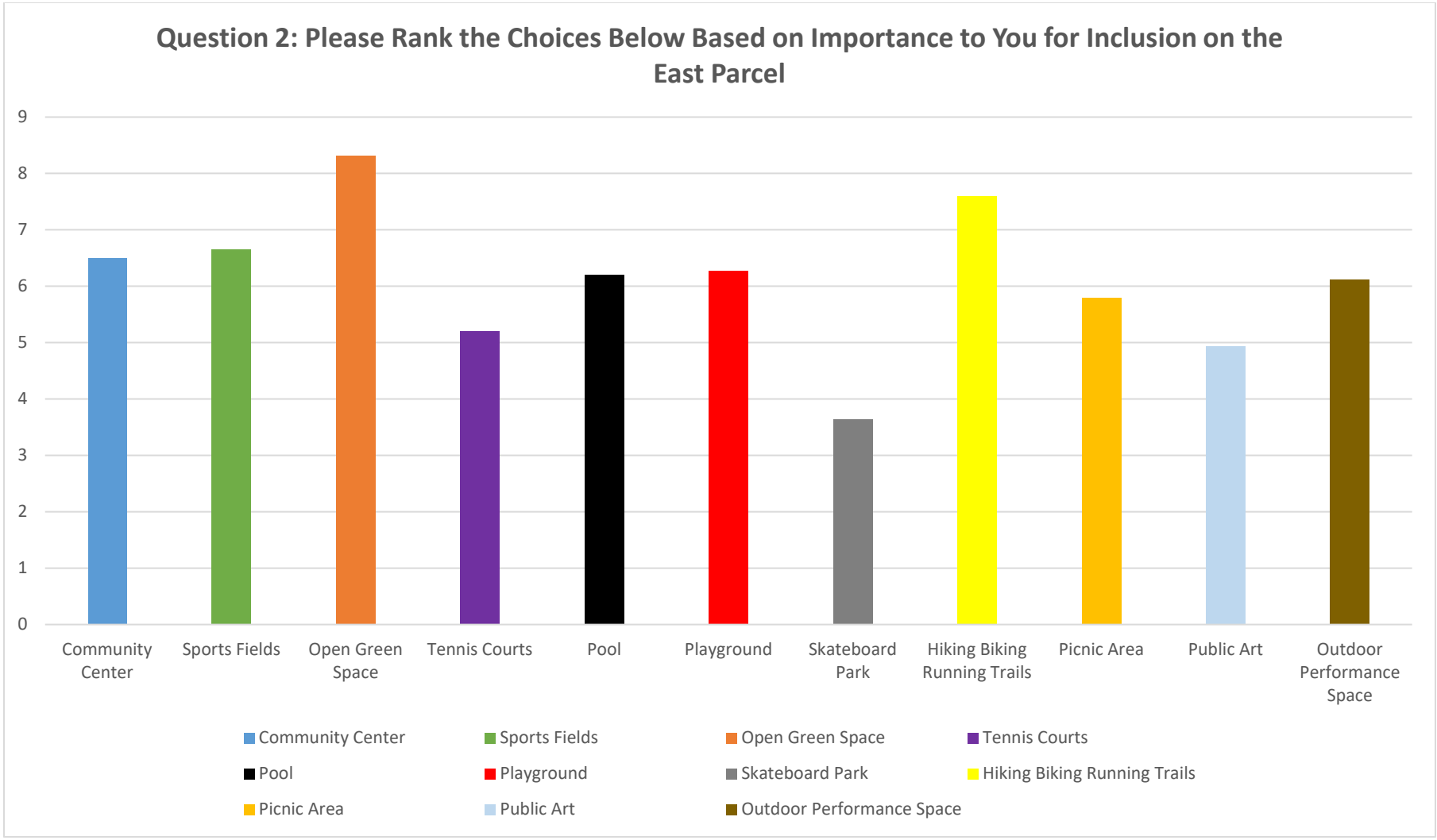
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DATE:	01/29/2016
DRAWN BY:	ST
CHECKED BY:	JAM
PROJECT:	242686
DRAWING NO.:	CP-6

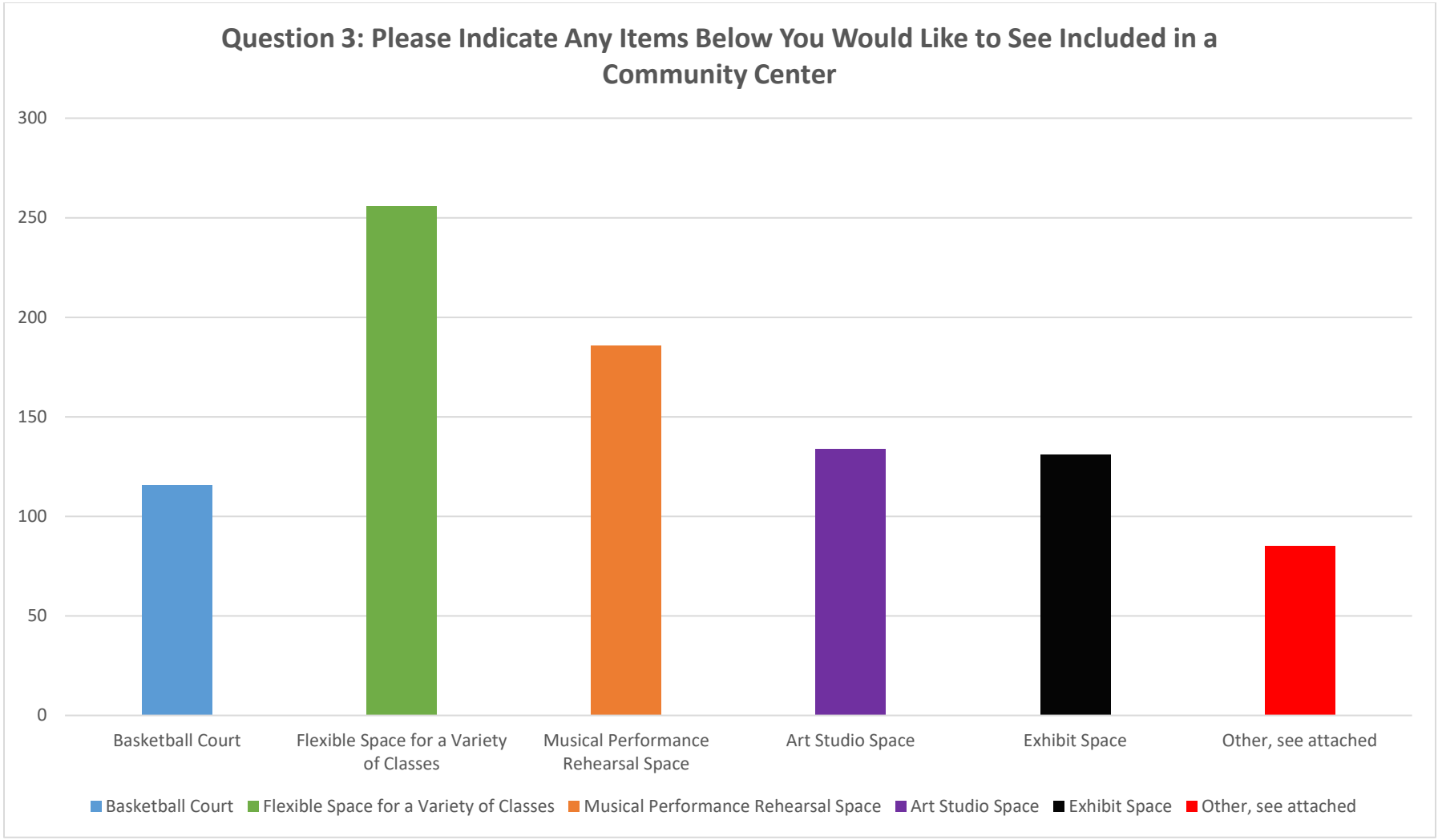
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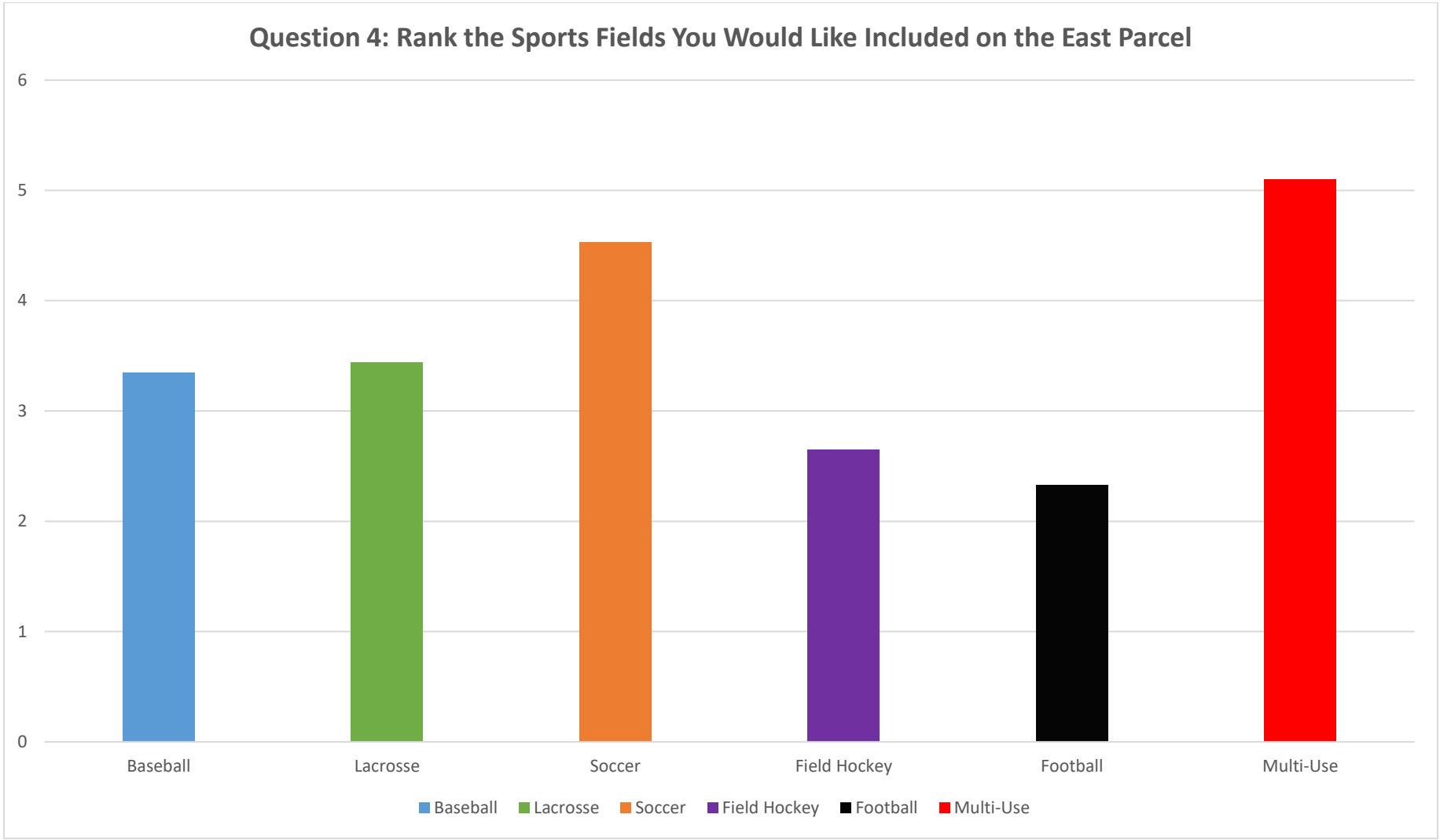
Appendix F
On-Line Survey Results

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Question 1: Where Do You Live?
300
250
200
150
100
50
0
Sleepy Hollow
Tarrytown
Pocantico Hills
Ossining
Irvington
Other
Sleepy Hollow
Tarrytown
Pocantico Hills
Ossining
Irvington
Other


Question 2: Please Rank the Choices Below Based on Importance to You for Inclusion on the East Parcel
9
8
7
6
5
4
3
2
1
0
Community Center
Sports Fields
Open Green Space
Tennis Courts
Pool
Playground
Skateboard Park
Hiking Biking Running Trails
Picnic Area
Public Art
Outdoor Performance Space
Community Center
Sports Fields
Open Green Space
Tennis Courts
Pool
Playground
Skateboard Park
Hiking Biking Running Trails
Picnic Area
Public Art
Outdoor Performance Space


Question 3: Please Indicate Any Items Below You Would Like to See Included in a Community Center
300
250
200
150
100
50
0
Basketball Court
Flexible Space for a Variety of Classes
Musical Performance Rehearsal Space
Art Studio Space
Exhibit Space
Other, see attached
Basketball Court
Flexible Space for a Variety of Classes
Musical Performance Rehearsal Space
Art Studio Space
Exhibit Space
Other, see attached


Question 4: Rank the Sports Fields You Would Like Included on the East Parcel
6
5
4
3
2
1
0
Baseball
Lacrosse
Soccer
Field Hockey
Football
Multi-Use
Baseball
Lacrosse
Soccer
Field Hockey
Football
Multi-Use

Question 5: Please Tell Us What Items You Would Like to See Included in the East Parcel Redevelopment That Have Not Been Addressed in This Survey

- Fitness Center (3)
- Family Movie Nights science activities for children in elementary schools
- Daycare, Basketball Court
- Restaurants, Coffee Shops
- Green space for community gardening, green space/eco zone for environmental activities & programs, dog park where dogs can run & play off leash. Garden space is most important – low & middle income families can supplement their nutrition at a low cost.
- I loved seeing the parking lot with a permeable surface (see Dia Beacon). It is attractive, innovative and avoids masses of tarmac/concrete which we see too much of all over Westchester.
- Walking trails connected to the Riverwalk
- Walking and biking facilities from the inner village, Barnhart Park, Beekman Avenue and Continental Street into the East Parcel and beyond, connecting to DeVries Park, the Pocantico River, Kingsland Point Park and the Hudson River. Bridges over the railroad tracks on Beekman and from Continental Street to Edge on Hudson accommodate pedestrians, bicycles and vehicles. Additional street access from Beekman Street to East Parcel, and from DeVries Park and Street into the East Parcel.
- nature/river museum
- It always helps to state what the township already has. Many of us don't realize what is already in Place. Dog area, kayak launching and racks, educational village garden, environmental science test area and sustainable plant exposition, benches and walk area Along River front. Make it accessible. And Simple
- Rental pavilion for community events and parties.
- Current concepts seem to favor DPW over other resident uses.
- There needs to adequate tress and greenery sheltering the development to the neighborhoods. We also need to make sure there is no car access to Kingsland Point Park and Philipse Manor.
- As noted above, any discussion of the East Parcel must include a discussion of how to integrate Barnhardt Park and the Senior Center into the East Parcel or how those sites will be redone after completion of sites in the East Parcel.

- I would like to see a walking and bicycling pathway. Ideally, it would connect to the Tarrytown waterfront and to Devries and Kingsland parks.
- Outdoor exercise and stretching equipment on a measured mile trail. Bike path connection to NYC and Albany.
- Hudson River and environmental education of the Hudson Valley
- enough room for parking at whatever is built
- This may be impractical, but think it would be really cool if there was a way to incorporate an outdoor climbing wall into the landscape.
- indoor/outdoor adjustable Volleyball courts
- Indoor sports place.
- 1. Security - making it a safe environment 2. Ensuring that the voice of the Hispanic community is heard commensurate with it's share of population. Apart from soccer I note that Equaball is extremely popular in that community but is not listed here. What else is missing ?.
- Swimming pool. Necessary for sleepy hollow.
- MUSEUM
- I completed survey previously and forgot to mention a couple of items. Consider putting a games section someplace. We were at a park where there was a bocce court, croquet, horseshoes, chess. Many people were playing and using the games. It didn't take up much room. The compact design of the area was very pretty and included a spectator area. Could have Village games tournaments, kid/teen leagues, etc. Looking for some different things to put in our lovely community.
- Dont do a skate park or a community center
- restored marshland with walk-through paths leading to the bridge to Kingsland Point
- Community garden.
- (The answers to question 4 would seem to bias the results toward a baseball field.)
- Preserved wetlands area for wild native animals to enjoy.
- Trees, greenery, walking paths
- No through traffic from Philipse Manor
- Pool should be both indoor and outdoor

- Increase depth and density of green space buffer between East Parcel Redevelopment and Pocantico River or Devries Park areas. Bike and walking trail ONLY from Devries Park into East Parcel Zone but NO Motor Vehicle Traffic to pass into Devries Park or Philipse Manor. No roadway into Devries Park or Philipse Manor. Only bike/walking paths.
- A new public garage
- Does Historic Hudson Valley have to contribute financially to the village in return for parking space? How much will this be an amenity for the Edge? Should they pay as well?
- fitness center and pool
- Less Parking areas and more green areas
- An nice focal point, for example a fountain (or the amphitheater)
- PARKING! No new roads that add traffic to Phillips Manor!!!
- food truck parking??
- Public Gardens; Community Gardens
- Headless Horseman hiking trail restored. Kayak access to Pocantico River.
- 1. New Fire Station & EMS facility 2. Police Sub-station 3. Youth Center
- Park area- green space with trees are crucial. Our villages already have 10 ball fields and 4 community centers. Please do not add any more cement to this last remaining park area. L
- A large, fenced dog park. Much, much larger than the one in Kingsland Point Park. Or, an open multi-use space could be created similar to Prospect Park in Brooklyn where every day, before 9am and after 9pm it is an off-leash area for dogs.
- Greenery is a must so the land around the tracks doesn't look so overdeveloped as to ruin the bucolic setting we should be defending and preserving.
- New EIS survey per Riverkeeper
- - no vehicle travel between the east parcel and Philipse manor. We should have bike paths and walking paths but please reduce vehicle traffic as a long term vision on sustainable growth for the community - avoid usage of nice riverside location for storage, department of works, busses etc, this is in essence low value add for an area that should be prime
- Outdoor amphitheater Pavilion/gazebo Benches
- I am against ANY vehicular traffic in Philipse Manor!!!!
- An open air bandshell, or performance space. Something like the NJPAC or Tanglewood.

- Event space should be outdoor (concerts) as well as a very nice indoor space that can be rented or used by the community for sports banquets etc.
- beautiful landscaping, pond with walking paths, benches, gardens
- Fitness center / exercise machines and weights
- Parking, connecting path from kingsland to Tarrytown
- Trees, natural habitat. Possible access to the pond (paddle boats/kayaks/row boats?) near the parcel. Pedestrian access and connectors.
- Green Space
- How connected is this parcel to other trails. It would be really nice to have connected trails that can bring you all the way down the Hudson River by running, biking or rollerblading.
- Soccer field could also be used for Ultimate Frisbee fields
- Sufficient parking for these recreational items.
- Bathroom Facilities Ability to have concession stand during games
- no road (for cars) between east parcel and devries / Philips manor - planting of lots of trees
- Water feature (fountain), Outdoor Ice Skating, as the Tarrytown lakes don't freeze over consistently anymore.
- landscaping? --protection from the river (air currents are sometimes very strong)-- seating for visitors? -- berms?
- Camping site
- Green space!!!
- Special needs playground.
- I've voiced this a fair amount, but here's another plea for Tennis! Sports fields take up a ton of space and we have plenty of them; I feel our field sports and their players are very well-served in the Tarrytowns. Tennis however is very limited. The mere four public courts in Tarrytown are often full and people are turned away. Sleepy Hollow has zero public courts which somehow gives the message that soccer and such big team sports are more important. I'd love to raise my daughters to play tennis - a great lifelong accessible sport where you only need a racket and a partner to play - but this requires courts ample enough to play around in. I grew up in a small non-affluent town with about 60 (!) public courts which certainly made it attractive and possible for many people to learn tennis. Maybe people don't play as much tennis here because we can't! There should be lights that people can turn on and off up to a certain hour at night. There should also be an open big wall on the side of the parking garage or rec. dept. or somewhere in this development for people to hit a ball against. This is a key

part of tennis practice - just learning to hit a ball when you are alone again and again. (I did this growing up against the back of the local high school... I don't believe we have such a blank big wall in town.) And, bonus - the courts could offer flex-space for flea markets and fairs, etc. In the winter, there the types of tennis courts you can install that double as ice rinks for skating. It would be amazing to have such easy and safe ice-skating available in town (when so often the lake skating option never opens.) Old-timers remember fondly skating in Fremont Pond - it would be incredible to have a reliable/regular place for our kids to learn to skate in Sleepy Hollow in a beautiful setting. Lastly, it would be really neat to have a regular ongoing monthly flea market in town. Residents are often having their individual tag sales with limited degrees of success but imagine if we could pull this together into a community event, pulling in other unique vendors, local orgs and activities. "The Sleepy Hollow Flea" or something. Very cheap fee to borrow a small table. I would happily make it my business to run this venture that supports the environment (repurposing/sharing items rather than discarding) and community!

- It has been included, but bears emphasizing: GREEN SPACE
- walkway from Barnhart Park to East Parcel
- Ice Rink
- Pool
- A calm and quiet space. This is a noisy village, including Phillips Manor and Sleepy Hollow Manor.
- Given that SH residents are excluded from joining the tarrytown pool, having our own town pool would be a wonderful addition.
- A designated room in the new community center for a Village of Sleepy Hollow, historical society annex.
- Well designed Dog park
- Parking lots under artificial grassy hills as I suggested (Al Strasser by e-mail)
- Nature center focused on the Hudson River ecosystem
- A coffee/snack spot/truck Secure & clean public bathrooms security cameras
- I think we need sports fields, but not baseball fields. I have personally witnessed less and less kids participate - they're putting their efforts elsewhere, and so should we.
- Landscaped gardens with sitting areas, trails, gazebos,
- The EPR should become an integrated development plan with Devries and Kingsland Point Park. Ideally creating a large connected space that together with the existing other spaces (incl Horran's Landing) addresses all needs comprehensively instead of potentially dublicating them. That would make West Sleepy Hollow a real 'developed activity space'

complementing the OCA and Rockefeller State Preserve as 'undeveloped activity space' - surrounding the urban development of the village.

- Passive park space. Natural buffers for light and sound (especially if parking and/or sports fields are included in the plans).
- environmentally safe for people to use regularly; chemicals cleaned up or minimized.
- Would love to see this kept as close to park land as possible with paths and trails. My dream would be that it would be a kind of southern bookend to Rockwood. I realize that's probably completely unrealistic.
- Restaurants, retail shops
- Outdoor art exhibition space
- Composting facility Fenced dog run like the one in Kingsland Point Park
- The theme should match the name of our town: Sleepy Hollow
- Flea market A multi-story parking garage on which artists are invited (commissioned) to do murals. A hub for a trolly or trollies? Integrate the skate park & traffic circle into this architecture. If traffic remained elevated from entrances over the tacks & Beekman, except for entry to parking garage or DPW, traffic would flow, the lower areas would be safer, quieter & free of cars.
- For me -- I'd love a bike trail connecting the manors to the parcel -- we'd love to ride down to Lighthouse ice cream or to use the tennis courts, etc at the train station, but there is no real safe way to do that on a bike with kids.
- More natural landscaping, trails and trees
- rock climbing wall, other ways out of the East Parcel possible into the manor. In case of an emergency there should be more than one way out of the development
- community gardens
- Scenic areas nice for taking pictures or planning community events like Halloween festivities carnivals etc.
- Investigate trends for outside space. What are the new up and coming things? Don't just be another nice park on the Hudson River. What's the draw? The differentiator? What will make people come to sleepy hollow to spend money rather than other Hudson River spots that are "nice"? Will a food vendor space be included? If we are having events how will we make it easy for vendors to come in and provide food and beverages so that they wNt to come back?
- Gardens and landscaping - native species - from top tier designer/artist. Expand wetland boundary. Has any consideration been given to birds and wildlife?
- Sprinklers in a playground.

- A putting green and/or driving range
- Recycling of garden waste at the DPW for community use.
- Benches and sitting space along the water were not mentioned and should be considered strongly as it would be able to be used by everyone, unlike some of the ideas in this survey. Think of the Highline in Manhattan as a successful and cost effective alternative to more expensive ideas that would not benefit the entire community.
- Park - flower say rose garden
- Where possible the facilities should be used year round and would need to be staffed and or policed.
- The environmental impact study which has not been fully discussed at he meeting.
- Connectivity to the Philipsburg Manor (Historic Hudson Valley) & the Pocantic River. Access to Hudson riverfront, Devries, & Beekman avenue. Keep it as open, simple, easy to maintain and green as possible.
- Pleasing landscape design
- Water Fountain
- Housing fire volunteer firefighters
- Conservation of the pocantico river and reduced amount of parking spots
- It's disappointing that a school can't be built on that property. If a new school were to be built there it would free up space to Develop and add parking on Beekman Ave by closing Morse. Also would improve reputation of school district.
- I am not clear on what a community center is - my preference would be less buildings and more space. Open buildings for community events are not utilized.
- Ensure that the environmental impact statement addresses concerns for run-off to the Hudson River and surrounding areas.
- Athletic field or space for seniors, such as pickleball court, bocce, etc.
- Access to the space and parking while using the new facilities.
- It would be great if the space was thematically based on the Legend of Sleepy Hollow story. Does not have to be "in your face", but some visual elements or pieces of art.
- I think a waterfront outdoor pool would greatly ad to the value of our homes in sleepy hollow. Other areas that have good , quality town pools benefit greatly
- Shuttle to allow for visitors to access site without the need for extra parking Public Wifi available in open areas
- Ecologically beneficial open space, including native plants/natural habitats.
- Parking

Question 6: Please Share Any Concerns You May Have Regarding the East Parcel Redevelopment

- I am concerned about traffic coming into the area. How are you going to handle all the cars.
- I am concerned that there be adequate connectivity to and through the East Parcel, so that it becomes a community connector as well as providing additional resources for the village.
- Toxic waste
- not addressing the pocantico river
- TRAFFIC
- How much sound will echo to the neighbourhoods ..we can hear loud music from kingsland park and devries field.
- Height of structures must be limited, so as not to impede views. Parking.
- Public safety is my number one concern, followed by the lack (I believe) of the resident's intent on conserving the appearance of such a LUXURY for this area. We should have permits GIVEN to RESIDENTS and GUEST PASSES that can be PURCHASED.
- NO TRAFFIC IN PHIlLIPs MANOR. No exploitation of Halloween.
- I am not in favor of having DPW vehicles share the same access roads that residents and visitors would utilize for events at the various venues that are being developed. If separate access points can be developed for DPW vehicles at various parts of the East and West Parcel it would enhance and provide safe access to all the future amenities.
- TRAFFIC! Rt 9 is already a nightmare to get through town.
- I do not want vehicular traffic through the manor to the east parcel. A walking path or biking path would be nice. Parking would be nice but I have heard that we will offer free parking to historic Hudson. They should have to pay for any parking. Period.
- the current plan devotes too much space to parking. Overflow parking is not often needed and should not be such a major portion of the plan.
- Do we really want all village trucks and equipment in a flood plain? I'm against the stone crushing plan to dismantle the TZB. Float it to exiting facilities at Haverstraw and float back the fill we need. There are currently lawsuits being filed due to dust and vibration near a cement crushing plant across the river. Turf would be a waste in a flood zone. How is this zone going to be administered vs.. Kingsland, i.e. village vs. county park? How to control parking/access? Provide maintenance? I'm concerned at the legal issues raised in Nick Robinson's and colleague's papers.
- I'm concerned about traffic in Philipse Manor. I would like to see biking, running & walking trails, but no car traffic. The streets are filled with kids playing and outside traffic could be dangerous.

- Concerned about we do not want cars/traffic coming into Kingsland which in turn would bring them into Phillips Manor we should not be offering free parking capabilities to Historic Hudson Valley or for anyone else that does not reside in our neighborhood
- I am concerned that the village may be offering Historic Hudson valley parking for when they have events. The East parcel should have parking but not designated for HHV they should have to pay to use any of the town parking.
- do not like this format, no way to insert other comments, do not find it useful. Also why are we asking other villages their opinion? I would appreciate a phone call.
- One of the key problems with the East Parcel is access. Access to Beekman Ave is important in order for the site to be used. Continental Ave will not do (unless a new road is created providing high volume access to the East Parcel). Most village residents (except those in the East Parcel or in downtown areas) will drive to the site and not walk. In other words, if the modes of access are not inviting, no one will take the time to go down to the somewhat inaccessible East Parcel. Another important consideration is whether residents will visit the site on a regular basis. The current proposals are for recreation, which means residents will visit the site when needed to use the fields. It does not make sense to plan for events, when you can hold events on the Hudons River in Kingsland Point Park. The Pocantico River is a stagnant river that is more like a swamp than a river. Any development plans should address how the river can be fixed to prevent infestations of insects and geese, which already plague Devries park. Overall, the concept plan does not take into account the other parks and sites surrounding the East Parcel. The East Parcel can not be viewed in a vacuum, which is what the concept plan does. In order for the East Parcel development to succeed, a plan must be developed in conjunction with the surrounding sites.
- It is important to me that no vehicular traffic pass through Philipse Manor. There should be no access for cars between the East Parcel and Devries Park or Kingsland Park.
- No vehicular traffic through Philipse Manor
- I feel parking is the most important. The village cannot have thriving shops if there is no place to park.
- Traffic, brownfield contamination ... odd that you can't store a personal vehicle but you can install fields and playgrounds for children, access for all.
- Primary focus should be outdoor recreation and nature.
- Security
- I don't want something that's going to cost lots of money for maintenance and therefore increase my tax burden.
- The only reason baseball is being considered is because a few loud voices are speaking out. Look to the Latino communities, look to the data. Plan for the whole community.
- Traffic Loitering
- Preservation of natural space I don't want every inch developed

- Toxicity Isn't there toxic waste in the ground?
- Traffic
- I think an outdoor performance space would be great, but it may be impractical due to train noise pollution. How many times might an hour-long performance be interrupted? Would there be any way to reduce noise pollution from trains for such space? Although I don't think this parcel needs its own running trails, I do think it's important to ensure it provides a link from town to Kingsland Point Park and any waterfront walkways and/or trails that will be included in the larger development. We should create a community that is walkable and not have any parts that are isolated or difficult to access.
- if plan is to include community gathering, design plan must somehow include food options.
- This plan will not help the community and residents
- Parking
- Soccer is the No 1 sport by participation by a long ways (pls check the records) and deserves more dedicated space
- Excessive traffic and density
- Nothing that can be unfair to the people in the community. Want to see ways to keep us urban and green, but communal
- INCREASE TRAFFIC
- I am very concerned about increased vehicular traffic in Phillipse Manor.
- I would be opposed to any increase in vehicular travel through the Philipse Manor neighborhood.
- not too much space devoted to surface parking lots
- no traffic into the manors
- Worried about accessing the parcel thru Philipse Manor.
- Overbuilding
- Any plan should provide for no new vehicle traffic in Philipse Manor.
- One concern that I have is that the East Parcel Redevelopment will increase traffic through Philipse Manor. I live in that area and I have a substantial interest in the safety of our children and in maintaining property values. Already, people speed down Palmer Avenue on weekends going to and from Kingsland Point Park. I am concerned that the redevelopment plan will result in the same situation on Devries Avenue or elsewhere within the neighborhood. I am also concerned with the parking lots included in proposals that I have seen. One thing that jumped out at me from my review of the DEIS was the statement on page E-8 that "[t]he current RDCP includes parking for approximately 500 vehicles which is more in keeping with the stated goals and objectives of Historic Hudson Valley." While I generally support HHV, I do not believe that this land should be used to serve its commercial interests especially given that it neither pays taxes nor votes. The development plan should be entirely in line with the interests of the residents. I would prefer that the land be used as park space or hiking trails. Most of

the hudson waterfront is getting built up, including the site of the old GM plant, and in a few years green space on the river will be in short supply.

- We are against any vehicular traffic in Philipse Manor neighborhood. No vehicular route between the East Parcel and the manor.
- I AM AGAINST ANY CONCEPT THAT RESULTS IN INCREASED VEHICULAR TRAFFIC IN PHILIPSE MANOR !!!!!
- I'm just excited it's finally getting fixed up!
- No vehicular access from the east parcel to Philipse Manor.
- Do not have any road way that needs to run through philipse manor! We pay extreme property taxes and do not want any road way through the manor leading to east parcel.
- Too much pavement - there needs to be a buffer between what already exist Restoration and house on continental...
- I am apposed to any roadway connecting the east parcel to the Manors. I do not want to create any vehicular traffic through the streets of the manors where our children play.
- No through vehicular traffic from Philipse Maanor
- It should be multi-generational
- NO Motor Vehicle Traffic to pass into Devries Park or Philipse Manor. No roadway into Devries Park or Philipse Manor. Bike/walking paths ONLY. Increase depth and density of green space buffer between East Parcel and Pocantico River or Devries Park areas.
- I do not want traffic to flow into Philipse Manor from any part of this development. For over 100 years, Philipse Manor been an independent geographic entity with no through traffic. Earlier SH administrations going back to the 1990s have stated there would be no through traffic into Philipse Manor from the GM site. I feel very strongly about this.
- parking and traffic problems must be considered.
- Strongly oppose any vehicle traffic through Philipse Manor.
- Ensure there is NO vehicular traffic through Philipse Manor. My family and neighbors are against any access to the site from Philipse Manor.
- No additional traffic volume in Phillips Manor!
- I am AGAINST any VEHICULAR traffic in Philipse Manor!
- My biggest concerns are with regards to noise pollution and vehicular traffic in Philipse Manor. Please work to limit both of these issues.
- congestion. Traffic through Phillipse Manor
- Construction/vehicular traffic through Phillipse Manor should be prohibited. After construction is complete, traffic should still be diverted away from Phillipse Manor.

- NO Traffic - pedestrian friendly uses only. No parking
- traffic on Devries
- Prohibit ANY vehicular traffic being routed through the manors from the East Parecl.
- I am against any vehicular traffic in the manor.
- no vehicular traffic should be permitted.
- I am very concerned about Not having vehicular access through Philipse Manor- We already have the only Kingsland park, Devries ball fields and train station access streets in our village. Please Do Not Allow vehicular access through Phillipse Manor! Thank you very much!
- It seems so much open space near the waterfront is highly managed. There is no place that feels a bit more wild. Would be great to avoid turning the entire space into ball fields or high maintenance parkland.
- It needs to be maintained and monitored better than, say, Barnhart Park, which has tons of potential but is sometimes unsafe loitering grounds.
- no vehicle travel between the east parcel and Philipse manor. We should have bike paths and walking paths but please reduce vehicle traffic as a long term vision on sustainable growth for the community
- Absolutely do not want to increase vehicular traffic in Philipse Manor. It is a peaceful residential area that already suffers from people speeding through it to get to the train station and to Devries Park for baseball games. Having vehicular access go through the manor would drastically change the character and atmosphere of the neighborhood.
- I am against ANY vehicular traffic in Philipse Manor!!!!!
- Traffic in Sleepy Hollow
- It will look terrible and not provide for adequate parking
- concerned about traffic safety and congestion. Therefore, object to any increase in vehicular traffic in Philipse Manor.
- we are strongly opposed to traffic being routed though Philipse Manor.
- I am against any additional vehicular traffic in the manor. Traffic to and from these newly developed areas should not be through Philips Manor.
- I am in support for any community development/improvement in the East parcel but most importantly - to prohibit any vehicular traffic and/or parking in Philips Manor due to the East Parcel development and/or the GM development.
- Please keep motorized vehicles access away from Philippse Manor.
- I am strongly against any vehicular traffic through Devries or Kingsland and into Philipse Manor.
- Over development
- Over development

- Parking
- Need to have adequate parking and would like the area to be reserved for sleepy hollow/tarrytown residents
- Concerned about area becoming a hang out for people up to no good. Want to ensure it's regulated and maintained by local authorities and park closes timely. Don't want nefarious activities taking place all hours of the night which lead to no good. Already have some of that with Devries in Philipse Manor and other parks locally.
- trains getting too crowded due to new housing - flow of traffic into Philips Manor
- Please research what forward looking municipalities have been doing. Make it for people, not what architects think people should be.
- Items that will require high maintenance and high insurance costs will add to towns yearly budget.
- Mix of pedestrian and vehicle traffic (safety).
- I would like to see another survey with more information
- Anyone with any knowledge of construction must understand that the developer sun cal did not want to have any part of this site there is a reason for that ! Cost is a humongous factor where is the money going to come from and how will it be paid back that is a question no one has asked or received any information on ! Are the tax payers going to foot that bill !!!!
- My concerns is the LDC
- Traffic
- Traffic!!!!!!!!
- Do not put a DPW facility here. The riverfront should not be clogged up with more buildings.
- Traffic. All of these plans only work if there are at least three points of entrance and exit available. People need to be encouraged to walk or bike to the parcel - otherwise Sleepy Hollow will suffocate in traffic! And we need to make sure to leave plenty of open space with trees and greenery - otherwise it will get too busy in that area with all the activities (on sport fields, community Center etc) going on.
- I don't like the idea of a skate park as i think it will be used solely by a specific demographic and has little wider appeal. I think a pool is a fantastic idea, particularly given the restricted use of the new tarrytown pool.
- I am concerned of course that you can't please everyone and some may be upset if items are left out of this development. But I do feel strongly that we need to cater to DIFFERENT groups of people not otherwise served in our existing public spaces - artists, musicians, teens, tennis players, ice skaters, etc. Alternative sports and activities. Appreciating our beautiful landscapes and not just plowing them flat into acres and acres of blank turf. We have plenty of ball fields! Let's do something more unique and creative!
- Litter, SAFTEY,
- Traffic on Continental and Howard Streets will be overwhelmed at the end of activities, need to have exit to manor.

- I am very concerned about the proposal to route traffic down DeVries Ave. We already have dangerous traffic situations after ball games at the park and there are no sidewalks on this street.
- Do not want through traffic nin Philipse Manor.
- Traffic coming thru Phillips Manor there is already too many people speeding thru these streets
- I am concerned about noise pollution and possible increased traffic through Philipse Manor. Also the environmental impact on the Pocantico.
- Main concern; the 500 parking spaces for HHV, as per the original plan. They can address their parking in more creative ways such as off site parking. The parcel should not be dedicated to parking. Also the concern about ongoing costs for items such as the community center or skateboard park.
- I hope there will not be any traffic through devries park and that only a biking and footpath with lead through devries park to this area
- That it will be another Beekman Avenue.
- If a playground is added, having the turf be rubber vs. wood chips would be a huge benefit (similar to Pierson park) so that crawlers and early walkers aren't injured.
- I feel it is valuable to create a flexible architectural model for residents and the Village to input and envision the future concept plan.
- Noise
- my main concerns are with regards to noise pollution, both with construction and once the parcel has been developed. ultimately i'm thrilled this is happening, and I think it will be really good for our community.
- My family and I live near the East Parcel in Philipse Manor. Our primary concern would be increased traffic through our neighborhood. Kids here are accustomed to playing in the streets, etc. and routing more people through our neighborhood may have a negative impact on crime and safety. I know these concerns have been raised by others, so hopefully this is being considered when entrance/exit routes are planned. Noise of construction and environmental impacts are concerns as well.
- The lease to Metro North starting in 2017 should preferably be cancelled, but if not should be meticulously reviewed to leave no potential disadvantages to the Village, as per some of my written comments (Al Strasser).
- A community pool is very important. An after school youth center for teens would be very good. Once my kids hit age 12, there was very little for them offered by the community. This site is walkable for most village kids. Keep them occupied and out of trouble.
- Keep traffic through Philips Manor to a minimum.
- I do not want vehicular access from Philipse Manor.
- Traffic and outside tourism in the manors

- I'm concerned about traffic and parking, especially through residential areas.
- Access point NOT from Philipse Manor
- It should be accessible to rich ad poor.
- Until the West Parcel with taxable businesses and residences are completed and on the tax rolls, ensuring tax reductions for the residents of Sleepy Hollow, who have assumed a high tax burden over almost two decades since the closing of the GM manufacturing facility, any more projects requiring tax payer money, should not be initiated. All the great ideas, basketball courts, skating rinks, community centers, etc. should be financed by private donations and not by taxpayer money.
- Projects being short changed due to lack of planning or finances.
- Restore space to a natural setting. We should avoid more concrete and blacktop.
- we don't need more sports fields
- See 5: that is becomes disconnected, repeating and underused
- Absolutely no car access through Philipse Manor
- I am very concerned about the proposed parking for Historic Hudson Valley. Unfortunately, all business are restricted by the resources they have available. I don't believe Historic Hudson Valley has any ownership rights to the East Parcel land and, as a resident, I would much prefer to see that property used for the community, and not for tourism. I would strongly encourage HHV to look consider other alternatives, including capping their event capacity relative to their parking restrictions, and opening up parking (instead of bussing) at some of their other properties. While HHV does some great things for the community, at this juncture, the best way for them to be good community partners is to encourage the use of this land for the community.
- Cost, environmental liability, ongoing maintenance due to flooding and other weather concerns
- Devries and Kingsland are overrun in the summer with loud bar-b-cues and music. This new space should be more of an oasis, less of a destination for noise, congestion and rowdiness.
- No need to enlarge Continental Street, excepting at its narrowest point. Take away parking and give affected residents free parking permits at nearby present or future parking facility.
- Access to the East Parcel seems the most important. Road access from Beekman Ave is a MUST. Pedestrian access from Barnhart park is a MUST.
- If the land is unsafe for residential use, should children really be playing on it?
- Don't overdevelop it. Leave most of the space green and undefined.
- Coordination of space with West Parcel, Kingsland and Devries. These spaces should be developed as part of a comprehensive plan so that all the space are optomized and redundant uses are limited.
- Traffic flow.

- Reduce car parking, increase bike parking, make most of the parking for motor vehicles be grass/lawn and have multi-pupose use like they do at Lyndhurst.
- Safety on collocating heavy duty trucks (DPW) and high public pedestrian traffic in the same general area
- Is baseball in such demand as to justify another field? We'll never have such a blank slate to integrate creative solutions to the impending congestion. Regulate speed of traffic to/from new development but keep it moving.
- if there is road access through the redevelopment to Philipse Manor Metro North Station, it will overwhelm available parking
- Over developed
- the impact on children's health. do we know for sure that spending a few hours a day on a brownfield won't impact our health?
- marking sure there is enough parking; lighting, security, trees, sound barriers
- Too much emphasis on sports
- Blocking car access to a Philipse Manor. Afraid of thru traffic in area of kids playing in street. Also need to be well lit and safe, monitored and with low cost options on landscaping etc for minimal cost to taxpayers for upkeep. Don't want this to become a burden for tax payers.
- Need to plan for the future needs of the community not the present needs. Go big or go home thinking needed. What is going to make sleepy hollow different and the premier destination on the Hudson? I'm an arts proponent and feel somehow show casing all arts in this development could be a differentiator. How many sports fields do we really need in addition to what's been done in recent years? How will we make money from sports fields?
- Please be sure that the Village has the money, staff and resources to maintain it.
- Community Center would be a waste. Galgano Center underused.
- Safety and ability to grown as needs change
- I am most concerned about heavier traffic patterns, both into and out of Philipse Manor. The neighborhood is a walk-centric one with many children out and about at all times of the year. Creating an artery for vehicles between the East Parcel & the Manor would be dangerous. We already have problems with drivers who speed as it is.
- Excessive costs borne by the community. Green space is cheap to maintain.
- If it does not appeal to enough people it wont be used.
- Very concerned about making sure there is NO THOROUGHFARE for vehicles to drive through to the PM train station, which is already overwhelmed.
- How long will it take and who benefits from the use of the land.
- I strongly feel you should not start routing traffic and parking into the Manors I understand it feels bad for the town residents but the homeowners pay substantial amounts to buy homes, and pay ridiculous ly high taxes in no small part for the safe and

clear streets in Philips Manor. You would risk destroying one of the clear character attributes that allow you to even be able to call PM a manor, and the manor residents already subsidize a good part of the Village

- There should not be access to the parcel from Devries Park.
- How will the development of the parcel be financed? The village should not take on additional debt - develop within the Village's means.
- Maintenance of the site
- Historic Hudson should not get any of the East Parcel
- Adequate number of parking spaces, crosswalks, speed limits, safety call boxes
- The possible hazardous materials that may still be present in the grounds. If this is to become a place for residents to use, then the town must ensure that there is no possibility that these can make their way to the surface, or be aggravated when construction commences. It must also ensure that there is no risk of any hazardous air or water contaminants will affect the quality of life of those in the vicinity, nor that it will affect wildlife (even if that wildlife is urban).
- We have too many sports fields already. I really don't want my tax dollars paying for a field that will be used by outside adult "leagues"
- traffic and parking.
- I want to make sure that this area is accessible to all community members, especially those who are lower income. That means not only being physically accessible but marketed and actively encouraging toward those residents.
- Don't want it to be too snobby
- Density on access roads, noise and garbage from picnic areas, sufficient parking.
- Don't get too ambitious. Leave enough green space. Still I'd like to see a swimming pool for children of the village who cannot join a private club.
- Traffic into the manors and at the Philips Manor train station.
- Traffic control and safety of residents is of the utmost importance
- I support Riverkeeper's comments submitted to the village re buffers around the Pocantico and storm water runoff management.
- Traffic
- Traffic
- That it not become the province of wealthy Edge residents. I want it to serve the local established population of Sleepy Hollow – middle to low income families – the heart of Sleepy Hollow.
- Traffic throughout the village.

Question #3: Additional Comments on What Residents Would Like Included in a Community Center

- In Pound Ridge, where I lived before, there never seemed to be the right space for yoga classes. Also, when it rained, the town constantly was seeking space for its summer camp program. I don't know if Sleepy Hollow has such a program, but if it does, the Community Center might be crucial on rainy days.
- Environmental reclamation
- Classes for teenagers so they can learn a trade
- Exercise classes
- A swimming pool – for swim lessons, lifeguard training so residents can train and get jobs, for fitness classes. Wood shop.
- Gym Pool
- Before any decisions are made about what should be included in the East Parcel and the community center, it will be important to seek additional input from our Spanish speaking residents who live in the inner village. Once we know how many Spanish surveys are completed, we will have a better idea about the level of engagement from our Spanish speaking neighbors, and therefore, can better determine what additional steps should be taken. But in any case, greater efforts should be made to reach out to the organizations and institutions that serve the Sleepy Hollow Spanish speaking community to let them know about the opportunity presented by the East Parcel to provide recreational resources, and to build better walking, biking and driving connections to Kingsland Point Park and the Hudson River waterfront.
- Make sure it multigenerational.
- An indoor gym
- An INDOOR AREA for our SENIORS to use as a WALKING SPACE, to REMAIN ACTIVE, SAFELY!
- How about a yoga studio
- Not a restaurant but commercial kitchen & vending space for community events inside and outside the center. Public restrooms for events inside & outside the center. Theater/performance and/or catering space that can be affordably rented out for non-school related programs. Really help promote the arts in our community.
- I'm concerned about the cost of maintaining the community center, staffing, and utilities.
- Don't think the community should have to provide art studio space. That's a private venture. Class space can help with art classes.
- I think the community center should be available for a wide variety of uses.
- Flexible enough to be used for any purpose, events, exhibits, meeting, rental space, musical, performances of all types.

- I do and do not understand the need for a community center. The village already built the Senior Center which acts as a community center. In addition, the village already built Barnhardt park. None of the East Parcel discussion takes those two sites into account. Any discussion of a community center needs to include a discussion of the existing park and senior center, which are up the hill from the East Parcel. For example, should a connection up and down the hill be made? Should an amphitheater (which I don't think is needed) be built into the hillside or be built up in Barnhardt park (which would provide greater views of the river)?
- English language classes
- The needs of the community extend well beyond just a single basketball court.
- More children play soccer in Tarrytown and Sleepy Hollow than any other sport--by far. And the number is growing year to year. It will only increase. Yet soccer fields are often difficult to schedule in TT/SH. More dedicated soccer space is needed. The days of a football and baseball-centric field system are over. It's time to recognize where we're headed and and plan and field appropriately. Re: #4, you need to look at the data, both in town and nationally. Plenty of it out there.
- 1. A pool!!!! 2. Badminton, bocce and shuffleboard courts(outside)
- More interested in arts and culture than sports which dominate many of the schools property
- Conference room and meeting space for presentations, hosting guest speaking space
- Indoor/outdoor Volleyball courts
- space dedicated for community groups
- Increased parking
- fitness center
- Community centers are a drain on tax payers. Just make it an outdoor performance space.
- None
- Anything that will keep young people entertained and safe.
- Pottery studio
- Indoor Pool
- More space for exercise. Basketball would be great for school age kids who need to have a gym or space during inclement weather.
- Indoor sports field (multi-use)
- a community pool and fitness center is a must, if residents are not allowed to join the Tarrytown pool computer center which may be used for both teaching classes and individual use
- Dont like this idea of a Community Center
- Green space- Garden, arboretum

- I am absolutely against any additional vehicular traffic in the manor. It's a residential neighborhood, and as it is, we have cars racing down Palmer Ave going into and out of Kingsland Point Park.
- An indoor swimming pool
- pool, rec room, cafeteria, quiet room for reading/napping/nursing, internet lounge, fitness center
- fitness center / exercise machines and weights
- Space/seating for group meetings
- Do not over develop
- Tennis
- Local history of towns and river.
- Collections of cultural artifacts representing the diversity of the community. Negotiation to share sleepy hollow resources and tarrytown resources without redundancy unless required by population.
- I am pretty upset that you have included three "before you take this survey" steps -- without making them easy links to the survey -- the instructions are very vague -- East Parcel Memo -- come on -- is that under a tab? Is that a heading? is that a link? "Engineers Concept plan"? - why not include it here before the survey questions -- why not put a survey at the end of the post -- survey monkey is great when you are given a lot of information --- if it is a flood plain how can you consider a "community center" or other structures? Why put DPW there without some sort of detail -- will there be mountains of road salt? heavy equipment? I think that you should put out another survey monkey with more information -- and a summary of the engineers concept plan –
- Bathrooms Pin pong
- I assume this is also going to be the home also of the Rec Dept since the seniors are looking forward to having their building to themselves. Therefore it should have room for children/teens to lounge around in, play games and be in a safe space after school or after hours. (Ping pong tables, tables for homework/games, foosball, comfy chairs/cushions, screen for film screenings, etc.) and an office for the Rec Dept staff. (Unless I'm mistaken here about the Rec Dept?) It would be nice to have a flexible room that is available to any nonprofit org in town who needs to use the room for free, on a first-come sign-up basis or whatever is most fair to the most amount of groups and manageable to whomever is coordinating this. (For example, I am a Girl Scout leader and we often have no place to meet; it would be amazing to have access occasionally in such a setting where we could explore nature and come inside in inclement weather or for indoor activities...). We also could use a space for GS leader meetings... There are many such groups who serve the community but scramble regularly for places to meet.
- Kitchen Room that can be converted to/from indoor picnic area Lecture Hall/Movie theater with comfortable seating and no blocked views

- indoor pool
- Ice rink or roller hockey rink (Ice rinks make a ton of money)
- Any community center should be geared more towards children/teens. We need space for them to gather.
- Pool Tennis Courts
- If a community center is to be in this village Police must be present. Do not forget that a teenager was deliberately murdered by another teenage. Gangs are a problem and cannot be denied. The reality of this village has been overlooked for too long. There are people with bad intentions in this village. I have witnessed vagrancy, people drunk, rude behavior and litter…community center? What do you really mean?
- Space to house meetings and gatherings for community groups.
- The paddleball courts that were demolished in Tarrytown to use as "open space" were NEVER restored, although we were given a ton of "lip service." There are many many regular and devoted players who have limited choices as to where to go now. The courts that were by the river used to get far more use than the basketball and tennis courts that WERE rebuilt. I never could see the justification for tearing down the courts which were used regularly and never rebuilding them. I feel very strongly that a paddleball/handball court needs to be built on this property.
- Office for a Sleepy Hollow historical society annex -Kitchen to be used for catering and community groups. -Performance space -Public Access shared community resources
- Space to rent for special events
- Pool
- Until the West Parcel with taxable businesses and residences are completed and on the tax rolls, ensuring tax reductions for the residents of Sleepy Hollow, who have assumed a high tax burden over almost two decades since the closing of the GM manufacturing facility, any more projects requiring tax payer money, should not be initiated. All the great ideas, basketball courts, skating rinks, community centers, etc. should be financed by private donations and not by taxpayer money.
- We have basketball courts at Sykes and barnhardt we don't need more courts. There are fields for soccer and baseball already in our community, don't need more. We need a community center that is designed for events like the performing arts.. so floors/stage appropriate for dancing, music, etc. Where we could invite professionals to play as well, that will draw people from neighboring towns to come , hopefully visit a local restaurant or coffee shop before seeing a performance. We need something that will not only bring our community together but draw in visitors from other communities who will spend money in our town. We don't need more sports fields -- we spend so much money on maintaining fields and it brings nothing into our town but trash people leave behind that we need to pick up.
- Volleyball court Martial arts class room (dojo) (padded floors, mirror walls, changing rooms) Fitness center with freeweights, treadmills, and nautilus equipment Movie screenings Exhibit space for antique shows, garage sales, mini-GameCons, mini-

conferences Tool library Exercise classes (kickboxing, zumba, yoga, dancing) Childcare while the parent exercises Craft classes (beaded jewelry, knitting, sewing, etc) Cooking classes

- Lots of easy parking.
- Outdoor and indoor play space for kids. Outdoor water space, such as at Pierson Park.
- flexible space for performances must have a wood sprung floor not concrete.
- ping pong tables pool tables fooz ball tables carpet ball tables
- Performance space for live theater (not just musical performance)
- ping pong, foosball &/or air hockey
- gym and yoga studio
- More than one indoor basketball court (that can accommodate volleyball) should be considered.
- possibly of residents to use the space for a party or meeting
- A community center would be great. Especially as a meeting place for new moms. Stroller Strides exercise class is in Pierson park in nice weather but has few options in winter months as a place for stroller moms to work out. Would also be great to have open play space for toddlers or to have qualified people run classes for kids. Right now the community center in SH is centered on seniors and not the new families moving here. Space could also be reserved in evenings for special interest groups (eg book clubs, etc) possibly for a nominal fee. There are a lot of meeting places in the area. A small cafe could also be nice for coffee and ice cream.
- Space to rent for indoor/outdoor parties/celebrations/events with capacity 150+. Future growth will require more space for functions. Especially given the income bracket most of the new housing will attract.
- Dance studios; large room for community gatherings; This is not going to be like the Senior Center? That facility doesn't seem cared for enough. It feels like a church basement.
- There already is a barely used community center that cost millions on Elm Street. Senior center terribly underused.
- An indoor swimming pool that can be used year round. Children could learn to swim and we could perhaps produce the next Michael Phelps. Adults could keep fit or take up scuba.
- A space for screening movies and documentaries.
- Pool, tennis courts as part of community center
- It is vital to a healthy community to have a safe place for both children and adults to congregate and play in all seasons. Currently, Sleepy Hollow has no place to play indoor basketball and no place for any type of swim program. I think it is a missed opportunity to not incorporate these activities into a community center.
- Pool, we need a pool please.
- Community Resource Information Center

- Rentals for parties

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APPENDIX G
PRIOR DECISION DOCUMENTS

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Meeting Date: 01/25/2011

Resolution #: 01/06/2011

RESOLUTION ON ENVIRONMENTAL DETERMINATION AND FINDINGS REVISED RIVERFRONT DEVELOPMENT CONCEPT PLAN PURSUANT TO SECTION 62-5.1 OF THE SLEEPY HOLLOW CODE FOR THE LIGHTHOUSE LANDING RIVERFRONT DEVELOPMENT

Whereas, in February 2003 the General Motors Corporation (the "GM Corp."), the beneficial owner of an approximately 94.5-acre parcel of property located on the site of the former General Motors Automotive Assembly Plant at 199 Beekman Avenue, Sleepy Hollow, New York (the "Site"), and Roseland/Sleepy Hollow LLC, a designated redeveloper (collectively, the "Applicants"), submitted an application to the Board of Trustees of the Village of Sleepy Hollow (the "Board of Trustees"), for a Special Permit and Riverfront Development Concept Plan (RDCP) approval pursuant to Section 62-5.1 of the Zoning Code of the Village of Sleepy Hollow (the "RF Zone") in order to construct a mixed-use development project on the Site (the "Project"); and,

Whereas, the Board of Trustees, acting as the Lead Agency, in accordance with the New York State Environmental Quality Review Act and the rules and regulations promulgated thereunder ("SEQRA"), conducted a thorough and comprehensive review of the Project and its environmental impacts, holding over fifty public hearings and meetings and receiving input from local and state agencies, consultants, environmental organizations and the public; and

Whereas, during the EIS review period, the Applicants agreed to make certain design changes to the Project, contribute substantial financial resources, increase the size of the parkland and open space, and reduce the density of the residential component of the Project; and

Whereas, these design changes were described in the Applicants' Final Environmental Impact Statement ("FEIS") and the accompanying FEIS Alternative Plan which in part: reduced the number of residential units from 1,562 to 1,250, reduced the retail space from 180,000 square feet to 132,000 square feet, reduced the size of the hotel, increased the open space provided for along the Hudson River and within the interior of the Site, and, created an enhanced landscaped buffer area between Kingsland Point Park and the Project; and

Whereas, after more than four years of study and analysis, on July 24, 2007, the Board of Trustees pursuant to SEQRA, adopted a Findings Statement for the Project (the "2007 Findings") containing detailed reviews of the potential impacts of the Project on land use, zoning and public policy, ecological resources, economic conditions, cultural and archaeological resources, open space, utilities, traffic and mass transit, and parking conditions, among other matters; and

Whereas, incorporated as part of the 2007 Findings, the Board of Trustees imposed numerous conditions and required changes to the Project; and

Whereas, following the adoption of the 2007 Findings, GM Corp. commenced an Article 78 proceeding seeking to set aside many of the various conditions imposed by the Board of Trustees; and

Whereas, subsequently, Roseland/Sleepy Hollow LLC terminated its agreement with GM Corp. and is no longer the designated redeveloper of the Project; and,

Whereas, the current Applicant for the Project is the General Motors Company LLC ("GM") which acquired substantially all of the assets of GM Corp. on July 10, 2009 in a transaction executed under the jurisdiction and pursuant to the approval of the United States Bankruptcy Court for the Southern District of the State of New York.

Whereas, on January 8, 2010, the Westchester Supreme Court (Hubert, J.) ruled that "GM's petition seeking to annul various requirements is granted in part, and denied in part"; and,

Whereas, discussions have occurred between members of the Board of Trustees and GM in an effort to resolve outstanding legal issues and still satisfy and meet the requirements of the RF Zone and the intended goals of the Village of Sleepy Hollow; and,

Whereas, GM, in furtherance of this purpose, has revised its Riverfront Development Concept Plan (the "RDCP") to reflect the required changes as set forth in the 2007 Findings, the Hubert Decision and the discussions referenced above; and,

Whereas, the major components of the revised RDCP are summarized below:

- A total of 1,177 condominium, apartment and townhouse residences, of which the apartments will include 40 affordable senior units and 21 affordable Village workforce units;

- Non-residential space consisting of approximately 132,000 square feet of retail space (including ±25,000-square foot market, 18,000-square foot cinema, ±89,000 square feet of shops and restaurants); ±35,000 square feet of office space; a 140-room hotel with meeting space and a ±5,000-square foot restaurant; and the potential for an additional 6,000 square feet of retail/restaurant space along Road A;

- The Village Green, the Waterfront Park and improvements (including any required repairs to the existing riprap shoreline), the Expanded Buffer Area (including an emergency access to Kingsland Point Park), and the Central Park, totalling approximately 16.1 acres of public open space, to

be constructed by GM's designated developer on the West Parcel and dedicated to the Village following its acceptance of same;

- Approximately 28.7 acres of land to be donated by GM to the Village for public use, consisting of 28.3 acres on the East Parcel and 0.4 acres on the South Parcel;

- Roads and utilities within roads on the West Parcel to be constructed by GM's designated developer and dedicated to the Village following its acceptance of same; and

- The reconstruction or upgrade of the Beekman Avenue Bridge to a minimum HS 25 structural standard by GM's designated developer.

Whereas, on or about December 14, 2010, a representative of GM did make a detailed public presentation to the Board of Trustees outlining the proposed revisions to the RDCP; and

Whereas, on or about December 16, 2010, GM did submit to the Board of Trustees an Environmental Assessment Narrative consisting of a detailed description of revisions to the RDCP, a revised set of RDCP drawings dated 12/03/10, a building tabulation table indicating unit distribution by proposed building and including a notation that as many as 70 percent of the units could be owner occupied, a public open space and public use diagram, a series of conceptual studies and building elevations prepared to provide a visual depiction of building treatments (the Lessard Plans), and a graphic depicting the anticipated changes in the view from Barnhart Park; and

Whereas, the Board of Trustees did cause to be circulated the above referenced Environmental Assessment Narrative to all Interested and Involved Agencies and did request that comments be submitted to the Village by January 4, 2011; and

Whereas, the Village did receive written correspondence from several Interested and Involved Agencies on the Environmental Assessment Narrative; and

Whereas, the Board of Trustees were provided a review of the Environmental Assessment Narrative and process on January 4, 2011 and did discuss the contents of the Environmental Assessment Narrative and comments received with respect to it at a public work session on January 11, 2011; and

Whereas, the proposed architectural character of the Project buildings as shown in the Lessard Plans has not changed since submissions made to the Board of Trustees during its deliberations prior to the issuance of the 2007 Findings; and

Whereas, the DEIS, FEIS and all other SEQRA documents previously reviewed by the Board of Trustees were incorporated into the Environmental Narrative by reference; and

Whereas, the RDCP has been revised from the FEIS Alternative Plan as follows:

A. To comply with operative provisions of the 2007 Findings,

1. Beekman Avenue and its intersection with River Street and the proposed Beekman Place have been changed to "accommodate a roundabout..., an associated green space, and a slight reconfiguration of Building H to provide more building frontage along the aforementioned green space."

   a. Building H has been reconfigured to remove the driveway opposite the "Village Green"

   b. Street trees have been added along Beekman Avenue to "visually connect the upgraded Beekman Avenue bridge with the Beekman Avenue/Beekman Place intersection and the Hudson River beyond."

2. Building M has been reconfigured to include an extension of approximately 3,000 square feet of commercial space, with the possibility for an additional 6,000 square feet of commercial space fronting onto Road A and the waterfront open space.

3. The alignment of Road One has been adjusted to accommodate an increase in the minimum building setback to 150 feet and an increase in the width of the Kingsland Point Park buffer area to a minimum of 100 feet.

4. The townhomes along Road One include more of a mix of three - and four-story building heights.

5. Buildings along the Metro-North railroad tracks will have a maximum height of 42 feet.

6. The total public open space and public use areas have been increased from ±39 to ±44.6 acres, inclusive of an 11.1-acre waterfront open space.

7. The plan has been revised to show the elimination of Building N and the reconfiguration of the site layout along the tracks. This proposed modification has increased the length of Building I. In coordination with these revisions, and to comply with the reduction of 73 residential units required by the 2007 Findings, the heights, layouts, and/or unit counts have been revised in Buildings E and K.

B. To comply with the Hubert Decision,

1. No additional open space is to be reserved for any future extension or estuary of the Pocantico River but the expanded buffer between the

Project and Kingsland Point Park approved by the Hubert Decision is provided;

2. No additional parking is to be provided beyond what was shown in the FEIS Alternative Plan;

3. Public access to the waterfront will be provided as early as practicable in coordination with overall Project construction activities;

4. The Applicant will not provide indemnification to the Village related to any potential residual soil contamination below lands to be dedicated or donated to the Village for public use; and

5. Fee title to the donated waterfront open space will be transferred to the Village from the Applicant.

C. To reflect recent discussions between GM and the Village and still meet the intended goals of the RF Zone,

1. Dependent on future market conditions, GM's future designated developer will endeavor to offer 70 percent of the Project's residential units for sale as condominium units or townhouses and 30 percent as rental units. However, without the consent of the Board of Trustees not less than 60 percent of the units will be offered for sale, and not more than 40 percent will be rental units. To facilitate this increase in the percentage of "for-sale" units from the approximately 50% proposed in the FEIS Alternative Plan, Building E has been divided into Building E1 (to remain as rental) and E2 (to become for-sale) and Building N (formerly rental) has been eliminated, with some of its units being transferred to a larger Building I. Minor adjustments have also been made in the number of units proposed for the other planned residential buildings. This allocation of units between buildings is proposed to be illustrative within the overall total of 1,177 and the for-sale/rental percentages described above, with the exact unit count to be finalized at the time of Site Plan Approval for each building.

2. All roads and utilities within roads on the West Parcel shall be dedicated to the Village following construction by GM's designated developer and acceptance by the Village.

3. The waterfront park and improvements (including an expanded buffer between the Project and Kingsland Point Park), the Central Park, and the Village Green will be constructed by GM's designated developer and dedicated to the Village following its acceptance of same.

4. So as to provide the Board of Trustees with maximum control and flexibility in the expenditure of resources to supply and support public infrastructure and public services directly or indirectly required by or benefiting the Project and its occupants, GM's designated developer will make payments to the Village totaling $11,500,000. These payments shall be made in accordance with a schedule to be set out in the Special Permit to finance infrastructure, mitigation measures and amenities identified in the FEIS or Findings (or subsequently found by the Board of Trustees to be appropriate to provide public services on account of the Project's development), and shall not be used to pay for any ordinary operating expenses of the Village or the salaries and benefits of the Village employees or to reduce real property taxes.

   Such payments are specifically intended to be utilized by the Village to complete the repair or demolition of the East Parcel viaduct, the construction of the DPW and fire/ambulance facilities, and the provision of a low-profile fire-fighting vehicle (or other acceptable fire-fighting measure for the proposed below-grade parking levels). The Village may, at its discretion, fund these actions in whole or in part from other sources. Such payments shall also be made in lieu of GM or its designated developer designing, constructing, or providing the following improvements:

   a. All East Parcel improvements shown on the FEIS Alternative Plan, including, but not limited to,

      i. the extension of Continental Street,
      ii. the 150-car parking lot,
      iii. any and all Recreational facilities,
      iv. the DPW facility,
      v. the viaduct repair or demolition,
      vi. the methane mitigation involving asphalt scarification,
      vii. the New York State Department of Environmental Conservation ("NYSDEC") approved cap,

   b. Repairs to lighthouse,
   c. Flooding study,
   d. Inter-municipal transit study or funding for an inter-municipal traffic district,
   e. Security camera system,
   f. Downtown Revitalization Corporation contribution,
   g. Pocantico River/estuary watershed study,
   h. Rte. 9 / New Broadway traffic study,
   i. Traffic Signal upgrades, including any at Beekman and Pocantico intersection,
   j. Firehouse/ambulance facility,

k. Purchase of a low-profile fire-fighting vehicle,
l. Extension of Continental Street,
m. Arborist for Village

5. In addition to the payments totaling $11,500,000, a contribution of $650,000 shall be made by GM's designated developer to the Village for design and construction of the water system upgrades in accordance with a schedule to be set out in the Special Permit; and

Now Therefore Be It Resolved that the Village Board has determined that the informational and procedural requirements of SEQR applicable to the revised RDCP Environmental Assessment Narrative have been met, as evidenced by the recitals above, enabling the Village Board to take a hard look at the potential adverse environmental impacts of the Project described in the revised RDCP when compared to the potential adverse impacts of the Project which was the subject of the 2007 Findings; and

Be it Further Resolved that having reviewed the DEIS, the FEIS, the Environmental Assessment Narrative, comments received from the public, Interested and Involved Agencies, Village staff and consultants, and upon the entire record of the Proposed Action, the Village Board makes the following findings and determinations pursuant to SEQR and 6 NYCRR, Sections 617.7 and 617.11.

1. All revisions to the RDCP made in response to the 2007 Findings, except potentially one, were made to specifically satisfy the conditions of, or to mitigate impacts described in, the 2007 Findings, and so would not have additional environmental impacts not previously considered by the Board of Trustees. The single revision potentially not associated with a mitigating measure was the change in building heights along the east side of the West Parcel. To reflect the 2007 Findings directive that the buildings along the railroad tracks be set at a maximum height of 42 feet to comply with RF District zoning requirements, Buildings A, I, and E (now E1 and E2) were lowered from five to four stories. As a result of modifying the overall mix of owner occupied versus rental units, Building K was raised from four to five stories to accommodate the typically larger sizes of ownership units.

   Figure No. 4 provided in the Environmental Assessment Narrative illustrates the proposed changes to FEIS Section II.F "Visual Resources" View #2 based on the building height adjustments in the revised RDCP. Similar to the FEIS Alternative

Plan, the view from Barnhart Park over the Metro-North railroad tracks will encompass a mixture of four - to five-story buildings visible within the interior of the Site with views of the Tappan Zee Bridge and Hudson River beyond. Buildings A, E (now E1 and E2), and I remain in the foreground and will be reduced in height from five stories to four stories. The rooflines and profiles of the revised buildings are represented by dashed white lines with accompanying annotations. Building I has been lengthened by approximately 122 feet and shifted northward, while Building N is no longer proposed. Building K, located beyond Buildings E1/E2, is proposed to be raised from four to five stories, which is consistent with nearby Buildings F, G, and L which will remain at five stories, or a combination of four and five stories in height. The architectural character and landscape treatment of the revised RDCP has not changed from the FEIS Alternative Plan.

Overall, the view from Barnhart Park of the revised RDCP is similar to that of the FEIS Alternative Plan, and will therefore have no different or greater visual impact than the FEIS Alternative Plan that was the subject of the 2007 Findings.

2. As described above, the Hubert Decision resulted in the annulment of certain conditions imposed in the 2007 Findings. The court after an in-depth analysis of the 2007 Findings concluded that these conditions were not required to mitigate adverse environmental impacts caused by the Project. Consequently, based upon the court's determinations, the changes in the RDCP required by its decision have been judicially found not to have a significant adverse impact on the environment and thus require no further environmental assessment.

3. The revisions to the RDCP resulting from discussions between GM and the Village generally have similar or lesser potential environmental impacts than the Project elements which were the subject of the 2007 Findings:

   a. Due to the Village's status as an approved assessing unit, GM's proposal to increase the percentage of for-sale units compared to rental units from 50% to 60-70% will have the effect of increasing the Village tax revenue from the additional for-sale units. Based upon the analysis provided in the FEIS Appendix 4, Fiscal Impacts of the Lighthouse Landing Development, the Village-assessed valuation of a for-sale condominium unit was estimated to be approximately double that of a comparably sized rental apartment unit. Village taxes for for-sale units were similarly estimated at approximately double that of rental units. There will be no additional costs to the Village associated with the proposed increase in for-sale units and resultant increase in Village tax revenues. The proposed increase in percentage of for-sale units under the RDCP will therefore have a beneficial fiscal impact on the Village when compared to the FEIS Alternative Plan that was the subject of the 2007 Findings.

A review of the most conservative school age multiplier presented in the EIS indicates that there would be no increase in the number of public school age children as a result of the change in the ownership distribution, and so this proposed change will have no different or greater environmental impact on public school enrolment than the FEIS Alternative Plan that was the subject of the 2007 Findings.

b. The minor changes to the West Parcel layout to accommodate a right of way easement for unlimited access from the traffic circle at the west end of Road One to the Metro-North railroad tracks consist of the adjustment of the location of Building I and associated site improvements, all of which have been previously reviewed by the Board of Trustees and would not have any different or additional environmental impacts than those previously considered.

c. The change in the Applicant's obligations from providing or contributing towards certain infrastructure, mitigation measures and amenities identified in the FEIS or 2007 Findings to making a series of payments to the Village to be applied by the Village towards these mitigation measures and amenities as and when needed as the Project progresses does not itself significantly change the extent and nature of the public features to be provided at the Applicant's expense. As this change will provide the Village with more direct control over and flexibility in the design and timing of such features, the corresponding mitigative measures described in the 2007 Findings will be enhanced, and the environmental impacts from the Project will not be significantly different from or greater than those previously considered.

Therefore, Be it Further Resolved, that consistent with the categories outlined in the 2007 Findings, the Village Board has evaluated the proposed revisions to the RDCP and makes the following findings: Land Use and Zoning – no change in the potential environmental impacts addressed in the 2007 Findings; Land, Water and Ecological Resources – no change in the potential environmental impacts addressed in the 2007 Findings; Environmental Remediation – the Hubert decision found that the requirement of hold harmless condition and the creation of an estuary/reconnected Pocantico River were not valid mitigation measures, no other changes in the potential environmental impacts addressed in the the 2007 Findings; Socio-economic Conditions – the commitment to change the mix of ownership and rental for residential units is anticipated to increase the projected tax revenue to the Village over that projected in the FEIS; Community Facilities and Services – a comparison of projected public school age children resulting from the revised unit ownership mix reveals that the number of students is consistent with those projected in the FEIS, no other changes in the potential environmental impacts addressed in the 2007 Findings; Historic, Cultural and Archaeological Resources – no change in the potential environmental impacts addressed in the the 2007 Findings; Open Space, Pedestrian Circulation and Visual

Resources – Revised RDCP includes additional open space between Kingsland Point Park and the proposed projects, the change in the mix of units to include a greater mix of ownership units requires Building K to go from 4 stories to 5 stories and was evaluated in paragraph 1 above; Utilities – no change in the potential environmental impacts addressed in the 2007 Findings; Mass Transit – no change in the potential environmental impacts addressed in the 2007 Findings; Traffic and Parking – no change in the potential environmental impacts addressed in the 2007 Findings; Air Quality and Noise – no change in the potential environmental impacts addressed in the 2007 Findings; Construction Impacts – Hubert decision does not require the Applicant to construct recreational facilities as part of Phase 1, no other changes in the potential environmental impacts addressed in the 2007 Findings; Alternatives – no changes in the potential environmental impacts addressed in the 2007 Findings; and,

Be It Further Resolved, that the 2007 Findings be, and they hereby are, amended to conform to the Hubert Decision and the recent discussions between GM and the Village as described in the forgoing recitations and as depicted in the revised RDCP, and as so amended be, and they hereby are, confirmed; and

Be it Further Resolved, that the proposed revisions to the Project as depicted in the revised RDCP and described in the Environmental Assessment Narrative do not present significant adverse environmental impacts not addressed or inadequately addressed in the DEIS and FEIS, and there are no changes in circumstances or newly discovered information presenting such potential impacts; and,

Be it Further Resolved, that the Findings described in this Resolution and the 2007 Findings as amended together be read together, with the Findings in this Resolution to govern should there be a conflict or discrepancy, and confirmed as the 2011 Amended Findings for the Project; and,

Be it Further Resolved, that having fully considered the Environmental Record and the Environmental Assessment Narrative, and having considered the preceding written facts and conclusions relied upon to meet the requirements of 6 NYCRR 617.7 and 617.11, the Village Board confirms and restates its previous certifications that:

1. The requirements of 6 NYCRR Part 617 have been met and fully satisfied;
2. Consistent with social, economic and other essential considerations, from among the reasonable alternatives available, the proposed Project is one which minimizes or avoids adverse environmental effects to the maximum extent practicable; including the effects disclosed in the environmental impact statements; and
3. Consistent with social, economic and other essential considerations, to the maximum extent practicable, adverse environmental effects revealed in the

environmental impact statement process will be minimized or avoided by incorporating as conditions to the decision those mitigative measures that were identified as practicable.

Moved: Trustee Schroedel Seconded: Trustee Wompa Vote: 6-0

I, Paula A. McCarthy the undersigned Clerk/~~Deputy~~ Clerk, do hereby certify that the foregoing is a true copy of an extract duly adopted by the Board of Trustees of the Village of Sleepy Hollow, on the 25th day of January, 2011 and of the whole thereof, and I further certify that the same was entered into the minutes of the meeting of said Board of Trustees held on said date.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 26 day of January, 2011.

Paula A. McCarthy

Clerk/~~Deputy~~ Clerk

MEETING DATE: 06/07/2011
RESOLUTION #: 06/66/2011

VILLAGE OF SLEEPY HOLLOW
MAYOR AND BOARD OF TRUSTEES
RESOLUTION GRANTING SPECIAL PERMIT AND APPROVING THE RIVERFRONT DEVELOPMENT CONCEPT PLAN FOR THE LIGHTHOUSE LANDING RIVERFRONT DEVELOPMENT

WHEREAS, an application to grant a Special Permit and approve a Riverfront Development Concept Plan for the construction of a mixed-use riverfront development project ("Project") was made by Roseland/Sleepy Hollow, LLC ("Roseland") and General Motors Corporation, ("Old GM") to the Mayor and Board of Trustees (the "Village Board") of the Village of Sleepy Hollow ("Village"); and

WHEREAS, on or about December 13, 2007 Old GM advised the Village that Roseland had withdrawn as a co-applicant; and

WHEREAS, Old GM filed for bankruptcy on June 1, 2009 under Chapter 11 of the United States Bankruptcy Code, and on or about June 15, 2009 Old GM informed the Village of its intention to assign its interests in the Project to a purchaser in a "363 Transaction" under the Bankruptcy Code; and

WHEREAS General Motors LLC ("Applicant"), a Delaware limited liability company, has advised the Village that it is the successor to Old GM to the interests of Old GM in the Project, the application, and the real estate and agreements with the Village which are the subject of the application;

WHEREAS, the Project is proposed to be located on the Site of the former General Motors automotive assembly plant located at 199 Beekman Avenue, Sleepy Hollow, New York, and which consists of three parcels: 115.10-1-1, 115.11-1-1; and 115.15-1-1, collectively totaling approximately ±94.5 acres (the "Site"); and

WHEREAS, the Project to be known as "Lighthouse Landing" consists of (a) 1,177 residential units; (b) approximately 135,000 square feet ("sf") of retail space (including a ±25,000 sf market, ±18,000 sf cinema, ±89,000 sf of shops/restaurants principally along Beekman Place, and a ±5,000 sf restaurant located within a proposed hotel); (c) ±35,000 sf of office space; and a 140-room hotel; (d) the potential for the addition of 6,000 sf of retail/restaurant space; (e) approximately 45 acres for public open space, public interest or public use (e.g., roads, sidewalks and utility access), including an approximately 16.1 acre public waterfront open space which includes the approximately 13.1 acres of waterfront open space, expanded buffer area and Village Green and approximately 3 acres for the Central Park Green (collectively "The Waterfront Open Space") to be conveyed to the Village as permanent public open space, a portion of which abuts and potentially enhances Kingsland Point Park; (f) all roads and utilities to be constructed on the West Parcel (excluding the water system upgrades to be constructed by the Village off the Site); (g) rip rap repairs; (h) Kingsland Point Park Buffer and an emergency access to Kingsland Point Park; (i) removal of the existing overpass connecting the East and West Parcels; and (j) the reconstruction and upgrade of the Beekman Avenue bridge to a minimum HS 25 structural standard; and

WHEREAS, the Village Board acted as Lead Agency for the environmental review of the Project conducted under the State Environmental Quality Review Act (SEQR) and did determine in the Environmental Findings Statement adopted July 24, 2007 (the "Findings Statement"), that the proposed Project, with the mitigation measures identified therein, would minimize or avoid adverse environmental effects to the maximum extent practicable; and

WHEREAS, in November 2007 Old GM commenced an Article 78 proceeding challenging certain conditions imposed on it and Roseland in the Findings Statement, which

proceeding resulted in a January 8, 2010 Court Decision, Order and Judgment sustaining some conditions and amending or striking others; and

WHEREAS, the Applicant has asked the Village Board to resume processing the Application on behalf of the Applicant, and the Village Board believes it is in the best interests of the Village to do so, although the Applicant has advised the Village of its intention to convey its interests in the Project to an unknown third party ("Developer") and not to develop the Project itself or in a joint venture or partnership with the Developer; and

WHEREAS, the application including the Riverfront Development Concept Plan (RDCP) has been amended to conform to the Findings Statement, the January 8, 2010 Decision, Order and Judgment and as a result of discussions with the Village and GM; and

WHEREAS, the Applicant has submitted an Environmental Assessment Narrative describing the amendments and changes and their potential impacts on the environment compared to those described in the Findings Statement and, after a public meeting held on January 25, 2011, the Village Board has made additional findings (the "2011 Amended Findings") and a written determination that the implementation of the Project as now described and proposed will not result in adverse environmental impacts significantly different than those that were addressed in the Findings Statement; and

WHEREAS, the Village Board held a public hearing on the Special Permit and Concept Plan application on February 15, 2011 and June 7, 2011, during which all persons interested in commenting on the Special Permit and Riverfront Development Concept Plan application were provided an opportunity to be heard; and

WHEREAS, in support of the Special Permit and Concept Plan Approval Application the Applicant has submitted the following large-scale plans prepared by Divney Tung Schwalbe generally entitled:

	Title	Scale	Issue Date
	Cover Sheet	As noted	12/3/10
SP-1.0	Master Site Plan	1" = 100'	12/3/10
SP-1.1	Site Geometry Plan	1" = 50'	12/3/10
SP-1.2	Site Geometry Plan	1" = 50'	12/3/10
SP-1.3	Site Geometry Plan	1" = 50'	12/3/10
SP-1.4	Site Geometry Plan	1" = 50'	12/3/10
SP-2.1	Site Grading & Utility Plan	1" = 50'	12/3/10
SP-2.2	Site Grading & Utility Plan	1" = 50'	12/3/10
SP-2.3	Site Grading & Utility Plan	1" = 50'	12/3/10
SP-2.4	Site Grading & Utility Plan	1" = 50'	12/3/10
SP-3.1	Conceptual Landscape Plan	1" = 50'	12/3/10
SP-3.2	Conceptual Landscape Plan	1" = 50'	12/3/10
SP-3.3	Conceptual Landscape Plan	1" = 50'	12/3/10
SP-3.4	Conceptual Landscape Plan	1" = 50'	12/3/10
SP-4.0	Conceptual Erosion & Sediment Control Plan	1" = 100'	12/3/10
EX-1.0	Existing Conditions Plan	1" = 100'	12/3/10

In addition to the above, Divney Tung Schwalbe also submitted a further amended Riverfront Development Concept Plan dated November 29, 2010 (together, the "Concept Plan"). In support of the Concept Plan, Applicant also submitted a set of preliminary architectural drawings prepared by the Lessard Group, Inc. essentially illustrating selected buildings of the project dated May 15, 2007 (the "Lessard Plans").

	Title	Scale	Issue Date
00a	Overall Site Plan	1" = 40'	5/15/07
00b	Overall Tabulation	-	5/15/07
00c	Parking Diagram	1" = 40'	5/15/07
01a	Building A	1" = 40'	5/15/07
01b	Building A	1/16" = 1'	5/15/07
02a	Building B	1" = 40'	5/15/07
02b	Building B	1/16" = 1'	5/15/07
03a	Building C	1" = 40'	5/15/07
03b	Building C	1/16" = 1'	5/15/07

05a	Buildings F and G	1" = 40'	5/15/07
05b	Building F	1/16" = 1'	5/15/07
05c	Building G	1/16" = 1'	5/15/07
06a	Building H	1" = 40'	5/15/07
06b	Building H	1/16" =1'	5/15/07
08a	Buildings K & L	1" = 40'	5/15/07
08b	Building K	1/16" =1'	5/15/07
08c	Building L	1/16" = 1'	5/15/07
08d	Buildings K & L	1/16" =1'	5/15/07
09a	Building M	1"= 40'	5/15/07
09b	Building M	1/16" = 1'	5/15/07
09c	Building M	1/16" = 1'	5/15/07
011a	Building R	1" = 40'	5/15/07
011b	Building R	1/16" = 1'	5/15/07
011c	Building R	1/16" = 1'	5/15/07
12a	Block Q	1/8" = 1'	5/15/07
12b	Block Q	1/16"= 1'	5/15/07
12c	Block Q	1/16" = 1'	5/15/07
12d	Block Q	1/16" = 1'	5/15/07

WHEREAS, the above referenced plans, as modified, are hereinafter collectively referred to as the "Riverfront Development Concept Plan"; and

WHEREAS, the record of the Project's approval process is fully described in the Draft Environmental Impact Statement accepted as complete on January 11, 2005 ("DEIS"), the Final Environmental Impact Statement accepted as complete on December 19, 2006 ("FEIS"), the Environmental Assessment Narrative accepted as complete on December 14, 2010, the Findings Statement, the 2011 Amended Findings, and the application materials referenced above; and

WHEREAS, the Village Board has reviewed the application for Special Permit and Concept Plan Approval in accordance with Section 62-5.1.N.(2)(a-c) and (3)(a-g) of the Zoning Code of the Village of Sleepy Hollow; and

NOW, THEREFORE, BE IT RESOLVED, that pursuant to Section 62.5.1.N (2) (a-c) and (3)(a-g) of the Zoning Code, the Village Board determines that the Project, as described

above and modified by the conditions enumerated in this Special Permit and Riverfront Development Concept Plan Approval, meets the following standards:

I. Conformance of the Concept Plan with the Requirements of the Riverfront Development District - §62-5.1.N(2)

a. The Concept Plan will substantially fulfill all of the purposes of the Riverfront Development Zoning (RF) District.

a.1. The overall purpose of the RF District is to promote the policies and purposes of the Local Waterfront Revitalization Program (the "LWRP"), including positive development and revitalization of the waterfront area, while ensuring such revitalization is sensitive to the Village's coastal and community resources. The proposed Lighthouse Landing Riverfront Development Concept Plan revitalizes a significant unused portion of the Village's waterfront and replaces an existing incompatible land use, consisting almost entirely of impervious concrete slab and asphalt parking lot, with a mixed-use neighborhood including commercial, residential, recreational, and public uses. This is consistent with the RF District purposes of providing residential and waterfront commercial uses to serve as a catalyst for the economic revitalization of the Village core area. The Project is anticipated to result in an annual net fiscal surplus to the Village, and Tarrytown Union Free School District. In addition, the improved quality of the Site, and additional residents, employees and visitors is expected to spur additional business activity in the Inner Village and encourage revitalization.

a.2. The RF District purposes also stress achieving public access to the coastal area, providing further opportunities for permanent public views and visual access to the Hudson River, and increasing pedestrian public access to the waterfront, and

integrating that access with existing and anticipated pedestrian access opportunities on adjacent lands. The Project incorporates uses that are waterfront-compatible and achieves full unobstructed public access along its entire ±2,300 linear foot shoreline, where there was none before. The Project's configuration and extensive public open space (including approximately 16.1 acres of waterfront parkland and open space) provide for numerous and significant permanent public views of the Hudson River, and prevent the loss of existing significant public views of the Hudson River and opposite shore. The open space components have also been designed to connect with neighboring open space resources such as Kingsland Point Park, and Horan's Landing and includes pedestrian and bike paths through the open space that allow for the extension of the Hudson River Greenway Trail.

a.3. In addition, the Applicant has developed, in coordination with Village staff and design consultants, a comprehensive Design Guidelines document that establishes design principles for, among others, architectural treatment and scale, materials, building orientation, streetscapes, and open spaces. The Design Guidelines responds to the RF District purpose of encouraging a mix of uses on the waterfront with a consistent set of design standards.

a.4. The RF District also includes several purposes related to natural resources, including protecting sensitive environmental areas, to prevent soil erosion, sedimentation, and slope failure, and to prevent water and air pollution. To minimize the erosion and sedimentation from both construction activities and post-development conditions, a detailed erosion and sediment control plan will be

prepared during Site Plan review by the Developer. The plan will outline the structural measures to be provided during all activities, the amount of soil exposure that can be properly managed, the location of access, storage of materials and inspection and maintenance requirements. The Project also will comply with the NYSDEC General Permit for Stormwater Discharges From Construction Activities. The Project will result in a substantial reduction in the total amount of impervious coverage and shall include a series of structural measures, such as sediment traps and hydrodynamic separators, which will provide sediment and nutrient removal.

a.5. The Project also incorporates significant landscaping (the Conceptual Landscape Plan (SP.3.1-SP3.4 noted above) indicates over 3,000 trees and shrubs), which would replace currently impervious surface area, thereby reducing potential stormwater runoff.

b. The Concept Plan will be in harmony with the appropriate and orderly development of the Village's waterfront area

b.1. The area surrounding the Site is characterized by a mix of retail and commercial uses, a number of residential areas, Historic Hudson Valley's (HHV) Philipsburg Manor Restoration, public uses (e.g., DPW garage) and park and open spaces (e.g., Horan's Landing, Kingsland Point Park). The Project would transform the Site from an almost entirely concrete slab and asphalt parking lot into a mixed-use neighborhood including condominium, apartment and townhouse residences, retail space, office space, a hotel and cinema building. These types of uses are commonly found in a mixed-use setting, are consistent with the permitted uses in

the RF district, and are compatible with surrounding development patterns and land uses.

b.2. The Project provides for a total of approximately 45 acres (approximately 47.6% of the Site area) for open space, public interest, or public use (e.g., roads, sidewalks and utility access). The open space includes approximately 16.1 acres on the waterfront that will allow for the construction of the Village's Waterfront Open Space recreational components. These provide a variety of water-dependent recreational uses within a substantial waterfront park environment. The inclusion of this substantial open space along the Hudson River and Kingsland Point Park improves the relationship between the Site and surrounding public property.

c. The Concept Plan is consistent with the policies and purposes of the Village's LWRP.

The proposed Project has been reviewed by the Village's WAC for consistency with the goals and objectives outlined in the Village's LWRP. On January 10, 2007 the WAC issued a consistency recommendation that the Project was consistent with LWRP goals and objectives. The Village Board, as required under Chapter 59-A-5.H. of the Village Code has completed its own consistency determination and has found that the Project, with modifications set forth therein, meets the specific requirements for promoting water compatible/water-enhanced uses and is consistent with the goals and policies of the Village's LWRP.

II. Conformance of the Project with the Conditions and Standards for Issuance of a Special Permit - §62-5.1.N(3)

a. The Project will fulfill all of the purposes of the Riverfront Development Zoning (RF) District.

The overall purpose of the RF District is to promote the policies and purposes of the LWRP, including positive development and revitalization of the waterfront area, while ensuring such revitalization is sensitive to the Village's coastal and community resources. For the reasons stated above, the Project fulfills this purpose. The Village Board, after due consideration of the record, including the WAC's consistency recommendation, also finds the Project to be consistent with the goals and objectives of the Village's LWRP.

b. *The Project meets the riverfront development design standards set forth in Section 62-5.1V, to the extent applicable at the Special Permit stage.*

Riverfront Development Design Standards - 62-5.1(V)

1. Comprehensive design (a-d)

The mix of residential and commercial uses complement each other by providing a built-in market for the new businesses, and the services provided by these businesses will help to meet the needs of the new residents for goods and services, without necessarily requiring them to leave the Site or take a private automobile. As described above, the improvement of the Site, and the new residents, employees and visitors are expected to serve as a catalyst for the economic revitalization of the Village's core area. Suitable provision for ingress/egress, circulation and utility service have been provided. The Design Guidelines included in the Project FEIS will be used as a standard of design for the creation of a distinct waterfront district in the spirit of an "old Hudson River community," as defined in the Village's LWRP and RF district regulations. The Project substantially increases access to the Hudson River waterfront, providing public access along the complete length of the Project's shoreline, and connecting

with adjacent public open spaces. The Project also expands the opportunities for public views of the Hudson River.

2. Relationship to uses on surrounding public property

The Riverfront Open Space and the buffer area adjacent to Kingsland Point Park will serve as the central portion of a "green crescent" concept of publicly accessible open space linking Kingsland Point Park, DeVries Park, the Village's Headless Horseman Trail, Horan's Landing, HHV's Philipsburg Manor Restoration, Sleepy Hollow Cemetery, Douglas Park and the Rockefeller State Park Preserve. The Project open space will also accommodate continuation of the Westchester County Riverwalk as it connects to the existing portion along Ichabod's Landing site and eventually through to Kingsland Point Park. The uses and site plan configuration proposed near the Project's entrances are compatible with surrounding development, and the Project will also involve the donation of approximately 20 acres on the East Parcel (not including approximately 8 acres identified to be for the benefit of Historic Hudson Valley for the enhancement of the Philipsburg Manor Upper Mill Historic Site) and 17± acres on the West and South Parcels to the Village for public use, including the recreational facilities, parking and space to support the provision of enhanced public services and uses.

3. Relationship to the Hudson River

The layout of the streets, buildings, and open spaces functions to maximize physical and visual access to the Hudson River for both residents and non-residents. The opportunities for direct physical access to the water include

fishing from the pier at the end of Beekman Avenue, boat access at the "dock and dine" pier, and small craft launching from the floating pier and expanded waterfront access area in the cove near Kingsland Point Park. The Project also includes a stormwater management system and will result in a substantial reduction in impervious surfaces as compared to the existing remnants of the former industrial use, which is anticipated to improve the quality of water being discharged to the Hudson River. The Project design therefore appropriately appreciates and addresses the Site's important relationship to the Hudson River.

4. Provision of view corridors and protecting views to the Hudson River

The Project's street system has been laid out so that all primary streets and the riverfront roadways lead to the Hudson River, so as to utilize the River as an organizing focus for the community and to provide view corridors that maximize views of the water. Several of the streets also flare towards their ends, providing for wider public view corridors to the Hudson River. The Project design also includes continuous open space along the Project's entire shoreline, providing significant new view opportunities at the River's edge. This perimeter open space requires that new buildings be located further away from the River's edge, minimizing perception of building scale on views towards the Village from the water. The DEIS, FEIS and Environmental Assessment Narrative provided graphics depicting expected visual conditions from multiple vantage points throughout the Village, including viewsheds identified by the Village's LWRP, and indicated that the significant existing public views of the River and the far shore will not be blocked.

5. Architectural design standards (a-h)

The Applicant, Village staff and design consultants have prepared a comprehensive Design Guidelines document that establishes design principles for, among others, architectural treatment and scale, materials, building orientation, streetscapes, and open spaces. The Design Guidelines will integrate cohesive design, maintain an appropriate Hudson River waterfront community image, and provide visual interest consistent with the framework found acceptable by the Village Board. A set of preliminary architectural drawings for certain of the proposed West Parcel buildings, prepared by the Lessard Architectural Group and dated May 15, 2007 (Lessard Plans), are intended to illustrate the concepts expressed in the Design Guidelines. The Village Board and Village staff and consultants have preliminarily reviewed these drawings and the Village Board finds that they advance the Village Board's design objectives, are generally consistent with the Design Guidelines, and will serve as the basis for the architectural design of the Project during the Site plan approval process. The Village Board accepts the Design Guidelines as a policy document to guide the Village in matters of Site Plan and architectural design.

6. Landscaping, screening and buffering (a-c)

6.a. The Developer will be required to commit to retaining a duly qualified landscape architect to assist in the more detailed design of the street tree planting and landscaping of the Project.

6.b. The Project will incorporate appropriate street tree planting and landscaping along street right-of-ways, within pocket parks and in building courtyards, as part of the Comprehensive Landscape Plan to be included as part of the Site Plan Application.

7. Lighting

The Project includes the potential for utilizing the decorative style streetlight fixtures installed on Beekman Avenue or similar decorative style lighting along the new roadways in order to encourage pedestrian use and provide an attractive and compatible appearance.

8. Signage

Signage for the Project will be designed to complement the character of the architecture and will be prepared for Planning Board review and approval as part of the site plan review process. All signage shall be in accordance with a comprehensive signage plan and sized and scaled appropriately for its purpose.

9. Vehicular circulation system and traffic access

9.a. In order to be capable of handling the delivery of construction materials to the site, the Beekman Avenue Bridge needs to be upgraded to a minimum HS25 standard. To reduce commuter use of automobiles, the Developer will provide a jitney/shuttle service during Metro-North peak hours that will run through the Site and transport commuters to the nearby Tarrytown Metro-North station.

9.b. As described in the Design Guidelines, most of the Project's streets will have parking on both sides of the roadway and traffic lanes widths of 11-12 feet. This approach is consistent with traditional neighborhood design techniques designed to provide for traffic calming and a more pedestrian friendly streetscape.

10. Public access (a-c)

The Project provides pedestrian access along the entire length of its Hudson River shoreline. This open space has also been designed with connections to surrounding open spaces such as Kingsland Point Park, and Horan's Landing, facilitating a continuous riverfront pedestrian path system. The waterfront open space far exceeds the minimum width standards of the RF-district. Access into the Park shall be provided across the buffer from the Project to the Park, although there shall be no provision for traffic through Kingsland Point Park, other than for emergency, park maintenance and pedestrian access.

11. Off-street parking and loading (a-g)

The Project includes a number of parking and loading facilities that have generally been designed in coordination with the proposed uses, street system, and open space network. The spaces are proposed in off-street lots, garages, below-grade structures and on-street locations. The bulk of the parking spaces are provided in below-grade structures, garages or in lots that are effectively screened by buildings. The remaining open lots will receive suitable landscaping to screen and minimize visual impact of the parking areas. Overall, the Project provides

approximately 3,150 spaces on the west and South Parcels directly associated with its residential and commercial uses. The parking is distributed appropriately and in coordination with the street system. As documented in the Findings Statement, and the 2011 Amended Findings given that the Site has a transit and pedestrian orientation, and in consideration of the alternative parking methods incorporated into the project, including shared parking, parking incorporated within buildings, and valet parking, the Project will provide adequate parking. As authorized in §62-5.1(V)(12)(g)(2), the Village Board finds that the alternative parking methods are acceptable and that in accordance with the provisions of 62-5.1(R) the off-street parking requirements of the Zoning Ordinance have been satisfied.

12. On-site utilities and services (1-6)

All new utilities within the Project will be located underground. As described during the environmental review, the Project will be served by public water and sewer systems, which will have, following the Village's completion of planned water systems improvements, adequate capacity to serve the new uses. The Project also incorporates a stormwater management system that will provide water quality treatment of surface runoff from buildings and pavement areas prior to discharge to the Hudson River.

c. *The proposed riverfront development or special-use project will be in harmony with the appropriate and orderly development of the Village's waterfront area.*

c.1. The Project is the second Riverfront Development project to be constructed along Sleepy Hollow's waterfront and the centerpiece of the RF-Riverfront Development District. The area surrounding the Site is characterized by a mix of retail and commercial uses, a number of residential areas, historic properties,

public uses (e.g., DPW garage) and park and open spaces (e.g., Horan's Landing, Kingsland Point Park). The Project would transform the Site from an almost entirely concrete slab and asphalt parking lot into a mixed-use neighborhood including condominium, apartment and townhouse residences, retail space, office space, a hotel and cinema building. These types of uses proposed are commonly found in a mixed-use setting, are consistent with the permitted uses in the RF district, and are compatible with surrounding development patterns and land uses.

c.2. The Project also provides for a total of approximately 45 acres (approximately 47.6% of the Site area) for open space, public interest, or public use, including the approximately 16.1 acre Waterfront Open Space which will allow for the installation of the Village's Waterfront Use Master Plan recreational components. These provide a variety of water-dependent recreational uses within a substantial waterfront park environment. The inclusion of this substantial open space along the Hudson River and Kingsland Point Park improves the relationship between the Site and surrounding public property.

d. The proposed riverfront development or special use project will not hinder or discourage the appropriate development and use of adjacent lands.

As noted above, the Project will transform an almost entirely concrete slab and asphalt parking lot into an active mixed-use community. The existing condition of the Site discourages development and investment in adjacent lands; the redevelopment of the Site is expected to create a more favorable environment for surrounding properties. The Project also includes a substantial buffer between Kingsland Point Park and the

nearest development, protecting and expanding the recreational usage of that public resource.

e. *The proposed land uses of the project will be in accordance with the approved riverfront development concept plan.*

The current Riverfront Development Concept Plan which was the subject of the 2011 Amended Findings has been prepared taking into account the requirements set forth in the Village's Zoning Code, LWRP and other applicable Village, and County, and State regulations. All proposed land uses are compliant with the RF-District's use regulations.

f. *The proposed riverfront development or special use project is consistent with the policies and purposes of the Village's LWRP.*

The Project has been reviewed by the Village's WAC for consistency with the goals and objectives outlined in the Village's LWRP. The WAC issued a consistency recommendation that the proposed Project was consistent with LWRP goals and objectives. The Village Board, as required under Chapter 59-A-5.H. of the Village Code has completed its own consistency determination and found that the proposed Project, with modifications set forth herein, meets the specific requirements for promoting water compatible/water-enhanced uses and is consistent with the goals and policies of the LWRP.

g. *The proposed project is otherwise in the public interest.*

The Project replaces a currently incompatible and under-used land use and provides for meaningful permanent public access to the Hudson River where none existed previously since the 19th century. The Project also designates approximately 47.6% of the Site for open space or other public uses. The Project is also anticipated to provide an annual net fiscal surplus to the Village and to the Tarrytown Union Free

School District. All of these items have significant value to the Village and help advance the public interest.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Mayor and Board of Trustees hereby approves the issuance of a Special Permit to the Applicant, and this Resolution shall be such Special Permit, and grants Riverfront Development Concept Plan Approval to the Applicant to construct the Project conditioned upon the full compliance with the following:

1. This Special Permit is issued and the Riverfront Development Concept Plan Approval is granted to the Applicant on the conditions set forth in this Resolution. The Permit may only be assigned to a Developer who provides to the Village in form and substance reasonably satisfactory to the Village Attorney a statement that it will (a) assume and be subject to the obligations of the Applicant as described in the application, the FEIS, the Findings Statement as amended, and this Resolution and (b) that neither the Developer nor any of its controlling shareholders or parties (or, if a subsidiary or affiliate of another entity, the controlling shareholders or partners of such entity) or principal officers and employers have within the past 10 years been convicted of a felony, or debarred from contracting with the United States, any state, or any municipal subdivisions or agency of any state.

The Applicant shall use its commercially reasonable efforts to expeditiously select a Developer. Within 30 days following the date of the adoption of this Resolution, the Applicant shall issue a Request for Proposals ("RFP") the terms of which shall be at Applicant's sole discretion, but which shall include the applicable terms of this Resolution, to a list of potential Developers whom the Applicant deems to be qualified, who will have

60 days to respond. Applicant will attempt to choose a Successor Developer within 60 days after the last timely response is received and attempt to close title within 120 days after the choice has been made. GM will be considered the applicant for the approvals until it has conveyed the property to a Successor Developer, at which time the Successor Developer will assume all of the obligations of the Applicant. In the event closing of title is deferred for any reason, but the Developer is given possession of the Project Site in advance of title closing, the Project Site shall be deemed to have been restored to fully taxable status. If the Project Site is restored to fully taxable status after the commencement of a tax year, then the taxes for that year should be pro-rated so that full tax shall not relate back, but shall only be adjusted for the future (the remainder of the particular tax year). Applicant will consult with the Village on the choice of the Developer, but such choice will be solely within the discretion of Applicant who has the right not to select any of the proposals should it determine that none of the proposals are acceptable to it.

2. These conditions will apply to whichever of the Applicant or Developer is carrying forth the Project from time to time, and the term "Developer" in the succeeding conditions shall mean the entity carrying forth the Project at the time the condition is applicable.

3. The Project shall be constructed as described and detailed in the Riverfront Development Concept Plan, by the Findings Statement, 2011 Amended Findings Statement and this Resolution.

4. The residential portion of the Project shall be designed and planned to provide that 70% of the dwelling units will be offered for sale as condominium units or townhouses and 30% for lease; provided, however, that up to 40% of such units may be rented if the market

conditions existing when units are completed make sale of such units not reasonably profitable.

5. The Developer shall diligently pursue all required local, state and federal permits/ approvals and the performance of all necessary design work to allow for the reconstruction and upgrade of the Beekman Avenue Bridge to a minimum HS25 standard and the removal of the existing connector between the East and West Parcels. In this regard,

   A. No building permit for any Project building (other than buildings that will be used for sales models that may be constructed on the South Parcel) will be issued prior to improvement of the Beekman Avenue Bridge to an HS 25 standard to accomplish the objectives set forth in Paragraph F below and removal of the existing connector. No temporary or permanent certificate of occupancy for any Project building will be issued prior to completion of the reconstruction and repair work on the Beekman Avenue Bridge and removal of the existing connector.

   B. Prior to the Beekman Avenue Bridge reconstruction being commenced the Developer shall commence working with a Village established design working group described above on the surface streetscape design for the bridge.

   C. The Developer shall submit designs for the Beekman Avenue Bridge surface streetscape and other above-grade components to the Village Board for review and approval.

D. Permit applications shall be submitted to the other relevant permitting agencies for reconstruction of the Beekman Avenue Bridge in accordance with acceptable engineering standards.

E. If the permit approvals from these other agencies result in substantive changes to the surface streetscape design, the Developer will be required to return to the Village Board for their review and approval.

F. During the construction of the Beekman Avenue Bridge, the Developer will use its commercially reasonable efforts to make continuous pedestrian and vehicular access provided at all times, including but not limited to the replacement of the bridge in sections. The Developer will be required to provide emergency access over the Beekman Avenue Bridge throughout the repair and reconstruction process.

6. To address East Parcel access issues and the unsatisfactory condition of the viaduct from Beekman Avenue to the East Parcel, the Village may provide for either reconstruction and upgrade of the viaduct to a minimum H15 standard or demolition of the viaduct ("Viaduct Work"). The Developer shall cooperate with the Village to allow the Viaduct Work to be performed concurrently with the reconstruction of the Beekman Avenue Bridge and to permit the Village to avail itself at no cost to it of flagman and other rail and traffic control mechanisms employed by the Developer during such reconstruction; provided, however, if the Village is not ready to use such flagman and other rail and traffic control mechanisms employed by the Developer at the time of such reconstruction, then the Developer's obligation to allow such use shall cease, and the lack of readiness shall not affect the Developer's schedule.

7. In order to provide for the Project's water supply needs, the Developer shall make a contribution of $650,000 to the Village to be used for design and construction of water system upgrades with such payment to be made on the earlier of 120 days after the closing of title to the Successor Developer, or 120 days after the Project Site shall have been deemed to have been restored to fully taxable status under Paragraph 1 of this Resolution, or 30 days after the approval by the Village Planning Board of preliminary subdivision approval and site plan approval for the first phase of the Project ("Approvals"). The funds will be deposited in escrow and not released until the occurrence of the following:

a. The plans for the water system have been approved by all appropriate governmental agencies with respect to capacity to serve the Project and consistency with the Approvals;

b. A contractor has been selected to construct the improvements and has entered into a construction contract; and

c. The Village has actually issued bonds and/or bond anticipation notes for the purpose of financing all or part of the improvements.

If the $650,000 has not been paid on or before the expiration of one year after the Village has granted the Approvals ("Trigger Date"), then such amount shall be adjusted to account for changes in the cost of living as follows: Starting on the Trigger Date, the $650,000 shall be increased by the percentage increase from the Trigger Date to the date of payment in the Consumer Price Index – All Urban Consumers (New York – Northern New Jersey – Long Island) of the Bureau of Labor Statistics.

8. To fund infrastructure, mitigation measures and amenities identified in the FEIS or the Findings Statement as amended or determined by the Village reasonably to be needed to alleviate impacts related to the Project, in lieu of any requirement that the Developer design and construct infrastructure, mitigation measures and amenities beyond those expressly stated in the 2011 Amended Findings to be the responsibility of the Developer, the Developer shall pay $11.5 million ("Developer's Maximum Contribution" or "DMC") to the Village as follows:

a. 15% within 30 days after any Permittee receives both preliminary subdivision approval and site plan approval for the first section of the Project to be developed;

b. 40% within 30 days after any Permittee receives Certificates of Occupancy for the first 587 residential units or the first 65,000 square feet of non-residential space;

c. 35% within 30 days after any Permittee receives Certificates of Occupancy for the next 350 residential units or the next 30,000 square feet of non-residential space; and

d. 10% within 30 days after any Permittee receives Certificates of Occupancy for any residential units or non-residential space in addition to those with respect to which the prior two DMC payments were made.

Such payments are specifically intended to be utilized by the Village, among other infrastructure, mitigation measures and amenities, to complete the repair or demolition of the East Parcel viaduct, the construction of the DPW and fire/ambulance facilities, and the provision of a low-profile fire-fighting vehicle (or other acceptable fire-fighting measure for the proposed below-grade parking levels) and shall not be used to pay for any ordinary operating expenses of the Village or the salaries and benefits of the Village employees or to reduce real property taxes

The required amenities/mitigation measures intended to be funded by the DMC will be available as necessary to service the Project, but the repair or demolition of the East Parcel viaduct, the construction of the DPW and fire/ambulance facilities, and the provision of a low-profile fire-fighting vehicle (or other acceptable fire-fighting measure for the proposed below-grade parking levels) must all be completed prior to the release of the final payment. The Village may, at its discretion, fund these actions in whole or in part from other sources. Such payments shall also be made in lieu of the Developer designing, constructing, or providing the following improvements:

a. All East Parcel improvements, including, but not limited to,
    i. the extension of Continental Street,
    ii. the 150-car parking lot,
    iii. any and all Recreational facilities,
    iv. the DPW facility,
    v. the viaduct repair or demolition,
    vi. the methane mitigation involving asphalt scarification,
    vii. the New York State Department of Environmental Conservation ("NYSDEC") approved cap,
b. Repairs to lighthouse,
c. Flooding study,
d. Inter-municipal transit study or funding for an inter-municipal traffic district,
e. Security camera system,
f. Downtown Revitalization Corporation contribution,
g. Pocantico River/estuary watershed study,
h. Rte. 9 / New Broadway traffic study,
i. Traffic Signal upgrades, including any at Beekman and Pocantico intersection,
j. Firehouse/ambulance facility,
k. Purchase of a low-profile fire-fighting vehicle,
l. Arborist for Village

9. To provide open space, public waterfront access, recreational facilities, areas to the Village to use to provide public services in view of the additional demand on the same to be generated by the Project, the Developer shall convey, without any cost to the Village

approximately 45 acres of the Project site as depicted on Figure No.2 Public Open Space and Public Use Diagram submitted as part of the Environmental Assessment Narrative as follows:

a. The Developer shall at no cost to the Village, design and construct, substantially in accordance with the drawings and specifications set forth on Conceptual Landscape Plan SP-3.1 through SP-3.3, the Waterfront Open Space and associated waterfront improvements (including, without limitation, rip rap repair substantially in accordance with the description in the Responses to DEIS Comments on p. FEIS II. B-117 of the FEIS), the West Parcel Central Park, the West Parcel Village Green consistent with the Balsley concept plan relative to the topographic relationship between the Village Green and Ichabod's Landing, the Expanded Buffer Area, and a new emergency and pedestrian access to serve Kingsland Point Park. The Developer shall provide design and construction plans described above with the Village and consult on a timely basis to the Village with respect to the same to the end that upon the completion of construction, such lands and improvements thereon shall be conveyed to and accepted by the Village at no cost to it, and the Village shall take the dedication of such property for public recreation purposes in lieu of the payment with respect to the Project of any recreation fee under Section 19B-5 of the Sleepy Hollow Code .

The Village Green and Block H Waterfront

Upon the installation of adjacent Roadway A, the Village Green and waterfront open space up to the first belvedere (the Block H Waterfront) will be improved with the hardscape elements installed and the areas to be landscaped temporarily sodded or

otherwise stabilized. No temporary or permanent Certificate of Occupancy will be issued for Building H until completion of the landside landscape treatments for the Village Green and Block H Waterfront area, exclusive of in-water improvements. Permitting for the in-water improvements for the Block H Waterfront, including but not limited to the pier, rip rap repair and belvedere, shall be diligently pursued by the developer concurrent with site plan application to the Village associated with Building H.

Block M Waterfront

No temporary or permanent certificate of occupancy for Building M shall be issued until completion of the waterfront open space area between the first and second belvedere (the Block M Waterfront). Permitting for the in-water improvements for the Block M Waterfront, including, but not limited to, the rip rap repair, and belvedere, shall be diligently pursued by the developer concurrent with site plan application with the Village for Building M.

Block R Waterfront

In the event that the building identified as Building R on the RDCP gets built sequentially after Building M, then no temporary or permanent certificate of occupancy shall be issued until the waterfront open space adjacent to Building R (the Block R Waterfront) is completed. In the event that Building R is not built and the Building M and Block Q Waterfronts have been completed, an interim pedestrian access with a minimum of 20 feet of width shall be provided across the Future Block R Waterfront to connect the two completed Waterfront areas. At the time a building

permit is issued for Building R, the interim pedestrian access may be rerouted along the street sidewalks fronting on Block R to facilitate construction of Building R and the Block R Waterfront. No temporary or permanent certificate of occupancy for Building R shall be issued until the Block R Waterfront is finished. Permitting for the in-water improvements for the Block R Waterfront, including but not limited to the rip rap repair, bulkhead and dock and dine dock, shall be diligently pursued by the developer concurrent with site plan application to the Village associated with Block R.

Block Q Waterfront

No temporary or permanent certificate of occupancy shall be issued for any building in Block Q until completion of the waterfront open space area adjacent to said block between the terminus of Beekman Place and beginning of the Expanded Buffer Area adjacent to Kingsland Point Park is completed (the Block Q Waterfront) including the proposed boathouse/interpretive center. Permitting for the in-water improvements for the Block Q Waterfront, including but not limited to the rip rap repair, boat launch and dock and walk-in boat access shall be diligently pursued by the developer concurrent with site plan application to the Village associated with Block Q.

The Expanded Buffer Area

No temporary or permanent certificate of occupancy for any unit in Block P or O facing the Expanded Buffer area shall be issued until said Expanded Buffer Area adjacent to said Blocks is completed.

Central Park

Any unit requiring a temporary or permanent certificate of occupancy from Buildings F, E1 or E2 shall require the adjacent Central Park Block to be completed.

No temporary or permanent certificate of occupancy will be issued for any unit facing the Central Park from Block J will be issued until the adjacent Central Park block is completed.

No temporary or permanent certificate of occupancy will be issued for any unit facing the Central Park from Block P will be issued until the adjacent Central Park block is completed.

The Village shall cooperate with the Applicant and the Developer regarding implementation of any off-site remediation or related monitoring required by NYSDEC including the granting of temporary access across any open space areas that may be controlled by the Village in the future.

b. Without payment or other consideration to the Applicant or the Developer, portions of the Site as identified to be conveyed on Environmental Assessment Narrative Figure 2, Public Open Space and Public Use Diagram shall be conveyed to the Village or its designee as follows: (*i*) within 90 days after the later of (x) issuance by the New York State Department of Environmental Conservation ("DEC") of a Certificate of Completion (or equivalent document acknowledging that remedial action is complete, final remedy has been constructed, or no further remedial action is required) to the Applicant for the remediation of the West Parcel (y) the completion of the parks and improvements described in Condition 9.a of this Resolution and (z) the obtainment of

all subdivision approvals needed to make such conveyance, the Developer shall convey the areas noted as "To Be Dedicated to the Village of Sleepy Hollow for Public Use" on the Concept Plan (along with the easement shown on the Concept Plan for unlimited access from the traffic circle at the west end of Road One to the Metro-North railroad tracks) to the Village or its designee; (ii) within 90 days after the later of the issuance by DEC of a Certificate of Completion (or equivalent document acknowledging that remedial action is complete, final remedy has been constructed, or no further remedial action is required) to the Applicant for the remediation of the South Parcel, and the obtainment of all subdivision approvals needed to make such conveyance, the Developer shall convey the identified portions of such parcel to the Village or its designee; and (*iii*) within 90 days after the later of the issuance by DEC of a Certificate of Completion (or equivalent document acknowledging that remedial action is complete, final remedy has been constructed, or no further remedial action is required) to the Applicant for the remediation of the East Parcel exclusive of methane mitigation and placement of the final cap and the obtainment of all subdivision approvals needed to make such conveyance, the Developer shall, to the extent each transferee agrees to accept it, convey approximately eight acres of the East Parcel for the benefit of Historic Hudson Valley for enhancement of the Philipsburg Manor Upper Mills historic site and the balance of the East Parcel to the Village or its designee. Nothing in this Resolution is intended to control or limit the terms and conditions of any such transfer to Historic Hudson Valley.

10. To protect the public from exposure to hazardous substances or petroleum products (collectively, "Contaminants") on the Project Site, the Developer shall comply with the

remedial requirements of Federal and State law and DEC applicable to releases of Contaminants and to respond within a reasonable period of time to reasonable inquiries from the Village about site conditions and such compliance. At the completion of each principal phase of remediation and construction, the Developer will have the Site surveyed to identify the location of remedial and related development components, including the boundaries of all remedial excavations, demarcation barrier, the cap, and the location of utility trenches. The survey will provide GPS coordinates for incorporation into a final site plan.

11. The Project site shall be the subject of an environmental easement granted by the Developer to the DEC under Title 36 of Article 71 of the Environmental Conservation Law. If such easement does not also run to the benefit of the Village, then the Developer shall grant a like easement to the Village in form and substance acceptable to the Village Attorney. Such easement or easements shall be filed with the Land Records Division of the Westchester County Clerk's Office and will be binding upon all future owners of the portions of the Project site covered by the easement.

12. The Developer shall provide insurance to the Village to cover it for third party claims for injuries or damages arising from residual Contaminants on the Project site and (to the extent commercially available) for the costs of additional remediation required by either NYSDEC or the United States Environmental Protection Agency. Such insurance shall be written by carriers with an A.M. Best's rating of B+ or better, with a deductible or self-insured retention no greater than $1,000,000, an aggregate limit of not less than $10,000,000, and a policy term of at least 10 years (except the term for Coverages B and E may be limited to five years). The form of such insurance shall be for Coverages A, B, C,

D, E, F, G,. H, and I as defined in AIG's standard Pollution Legal Liability Insurance Policy (or equivalent policy if the insurer is not AIG), plus coverage, if commercially available, for regulatory reopeners.

13. In accordance with the milestones set forth in Paragraph 4 of the Agreement made August 29, 2002 between Old GM and the Village, the Developer shall submit a Phase 1 site plan and subdivision application to the Village Planning Board and shall diligently process such applications. The subdivision application shall include, at a minimum, separate parcels for The Waterfront Open Space, the portion of the East Parcel intended to be for the benefit of Historic Hudson Valley for enhancement of the Philipsburg Manor Upper Mills historic site, the portion of the East Parcel intended to be for public uses by the Village, the portion of the South Parcel intended to be for public uses by the Village, and that portion of the West Parcel associated with the first phase of development.

14. Prior to the issuance of any building permits:

a. A performance bond shall be submitted by the Developer in a sum determined by the Village's Consulting Engineer and Building Inspector and shall be furnished to and accepted by the Village, to guarantee the satisfactory and complete installation of all Phase 1 Site Development public infrastructure and public improvements including public open space, as determined appropriate by the Village's Consulting Engineer and Building Inspector in consultation with the Developer, including, but not limited to sewage, water, drainage, roads, sediment and erosion control measures, and approved as to form to the satisfaction of the Village Attorney. A separate bond shall also be furnished in a sum determined by the Building Inspector, Village's Consulting

Engineer and Administrator in consultation with the Developer to guarantee repair of any damage to Beekman Avenue or other Village roads caused by Project construction traffic activity in an amount equal to the reasonably anticipated cost of repair. Bonds for all public improvements associated with further phases of Site Development shall be determined as set forth above. Notwithstanding the foregoing, the Developer will not be required to post bonds for public improvements beyond the extent that the same may have been required by the provisions of the Village Code in existence as of January 1, 2010.

15. Construction activities on the Project Site shall be conducted in conformance with the Village of Sleepy Hollow Noise Ordinance. With respect to construction related activities associated with pile driving, slab removal, blasting activities and slab crushing, those activities shall not be permitted on Saturdays within 500 feet of a residence currently existing at the time of issuance of this Special Permit. The Developer, for good cause, may petition the Village Board for relief from this requirement and the Village Noise Ordinance relative to construction related activities described above.

16. In order to provide for efficient mass transit utilization and minimization of potential traffic generation, the Developer shall provide a shuttle service from the Project to the Tarrytown train station. The Developer shall provide, at its cost, three 20-25 seat shuttle buses at full build-out. A deed restriction or other similar instrument assuring the operation of the shuttle service as long as deemed necessary by the Village Board, or until such time as a new train station may be constructed on-site shall be provided by the Developer. The shuttle service may be implemented incrementally as the Project is constructed. However, the operation of a minimum of one shuttle bus must commence

before, or upon the issuance of, the certificate of occupancy for the 100th dwelling unit. The shuttle service will be required to operate during the Metro-North peak AM and PM weekday service hours and shall continue until such time as there may be a new rail station at Lighthouse Landing. The shuttle shall be made available to all Project residents and employees at no fare to these riders.

17. The Developer shall provide a detailed landscape maintenance plan to the Village Board and post appropriate landscape maintenance bonds to remain in effect for two years to ensure that landscape plantings on the Project Site, including the waterfront park and open space, are established and maintained in a healthy and vigorous growing condition. The bonds shall be in a reasonable amount equal to a portion of the cost of the landscaping as determined by the Village Building Inspector and Village Administrator, in consultation with the Developer, and in a form satisfactory to the Village Attorney.

18. The Developer shall obtain certification of the Project under the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) for Neighborhood Development (LEED-ND) program. Further the Village Board shall require that the larger buildings (above 90,000 square feet) be designed in such a way that, in the professional opinion of the Applicant's LEED Accredited Professional, the building could qualify for LEED Certification using the LEED for New Construction rating system, Version 2.2, as defined by the US Green Building Council, or as may be amended from time to time, or superseded with more state of the art specifications. The Developer shall be encouraged to achieve LEED Silver level certifiability, but in no case less than Certified Level. Similar qualification of the townhomes for the Energy Star Qualified Attached Homes National Builder Option Package (Energy Star) shall be submitted by the

Developer during the applicable phase of Site Plan review. When an application for a building permit has been filed for a particular building, the Developer shall be required to utilize the then current standard as set forth in the US Green Buildings Council for LEED New Construction Certification Level and the Energy Star program as appropriate.

19. If requested by the Village, the Developer shall work cooperatively and in a timely manner with the Village to apply to Westchester County and such other funding agencies as may have funds available for the purpose of implementing the Village's Waterfront/Open Space Master Plan, including those proposed at the Project.

20. The Developer shall provide at least 40 affordable senior rental units and 21 workforce affordable housing rental units, both in conformance with Westchester County affordability guidelines, (a maximum household income of 80 percent of the County median income). The administration of the affordable housing units will be determined by the Village Board.

21. In connection with roadway infrastructure improvements within the Village of Sleepy Hollow identified in the Findings Statement, the Developer shall either replace or pay $20,000 for each on-street parking space removed up to a maximum of $320,000. These funds shall be paid to the Village prior to the issuance of the certificate of occupancy for the 300,000th square foot of new development. Other roadway infrastructure improvements within the Village of Sleepy Hollow shall be completed by the Developer prior to the issuance of the certificate of occupancy covering the 300,000th square foot of new development.

22. The Developer shall contribute its fair share for traffic calming measures in the Miller Park area in the neighboring Village of Tarrytown. In addition, the Developer shall contribute towards its fair share of an emergency signal preemptive system. The New York State Department of Transportation could consider an emergency signal pre-emptive system in its long-range regional improvement plan.

23. The Developer shall use diligent, good faith efforts to cause all of the required traffic mitigation measures outside Sleepy Hollow which are described above to be implemented by all applicable jurisdictions, including the NYS Department of Transportation and the Village of Tarrytown. However, the Developer's financial responsibility for such improvements shall be limited to its "fair share" of the costs of such improvements which are not required solely due to the project. The Developer's fair share shall be determined by an independent traffic engineer to be selected jointly by the Village of Sleepy Hollow and the Developer. In the event that the Developer's good faith offer to pay its fair share of any improvement is not accepted by the applicable jurisdiction and/or such jurisdiction declines to make the improvement, the Developer shall post a bond or other reasonable security for its fair share of the cost of those traffic improvements, as defined above. Such bond shall be maintained by the Village of Sleepy Hollow for the benefit of the other jurisdictions for a period of five years after site plan approval of Phase I is granted. Each jurisdiction shall have a period of five years after site plan approval of Phase 1 to accept the Developer's fair share and implement the improvements for which the fair share was offered. Upon the expiration of this period, any remaining security shall be returned to the Developer, and thereafter the Developer shall not have any further obligation with respect to the improvements.

24. As provided for in Section 62-5.1.O of the Village Code, this Special Permit will expire one year from the date of the adoption of this Resolution; provided, however, if the Project Site is restored to fully taxable state, or deemed to be so restored pursuant to Paragraph 1 of this Resolution, within such year, then this Special Permit shall not expire until one year from the issuance of Site Plan approval (as evidenced by the signature of the Chairman of the Planning Board on the approved Site Plan) for Phase 1 Site Development if a building permit is not applied for from the Village of Sleepy Hollow, with a 3 month extension for good cause available from the Building Inspector. The times set forth herein shall be tolled during the pendency of any litigation by a party other than the Applicant or any entity acting on behalf of the Applicant or of any moratorium affecting the Project adopted by any legislative body having jurisdiction over it. This Resolution and the Special Permit are based upon years of study, public meetings, environmental reviews, lawsuits, negotiations, bankruptcy proceedings and other activities which have lead to the drafting of a balanced document in which carefully prepared authorizations, limitations, conditions, land transfers and payment obligations have been woven into an integrated whole in which each part is interdependent upon every other part and inextricably bound to each other. Therefore, if any part of this Resolution or the Special Permit is found by a court of law in response to litigation instituted by the Applicant or any entity acting on behalf of the Applicant to be illegal, unenforceable, ultra vires, arbitrary or capricious, or requiring modification, then the remaining provisions of this Resolution and the Special Permit shall cease to be effective, it being the finding of the Village Board that the provisions are not severable nor separable.

25. On or before 10 days from the date of the adoption of this Resolution granting the Special Permit and approving the Riverfront Development Concept Plan, the Applicant shall:

a. Pay $125,000 to the Village representing all fees due to the Village under SEQRA and Section 19B of the Village Code with respect to the Project for application and other fees incurred prior to the date of such adoption (except for those incurred during the preparation of the environmental review for the Environmental Assessment Narrative and Special Permit); and

b. Simultaneously deliver to the Village Stipulations of Discontinuance executed by Old GM or the Applicant, as the case may be, for all lawsuits pending against the Village brought by Old GM or the Applicant, except that there is no obligation on the part of the Applicant to obtain the signature of Roseland on such stipulations,

and the Special Permit shall not be deemed to have been granted, nor be effective, until such payment and delivery has been completed including all escrow fees and other fees incurred during the preparation of the environmental review for the Environmental Assessment Narrative and Special Permit owed to the Village by the Applicant; and be it further

RESOLVED, that all requirements, conditions, and mitigation measures related to the Project as set forth herein shall constitute express conditions of this special permit and shall constitute obligations and are binding upon the heirs, successors and assigns of the Applicant and Developer, respectively, and shall be enforceable by the Village Board or its designated representative; and be it further

RESOLVED, that the Village is hereby authorized and directed to settle all pending litigation it has with Old GM and the applicant on the terms set forth in these resolutions, and the Village Attorney and Keane & Beane, P.C., acting singly, are each authorized and directed simultaneously with the receipt of the $125,000 and the Stipulations of Discontinuances referred

to above from Old GM and the Applicant to deliver executed Stipulations of Discontinuances from the Village in all pending litigation involving the Village and Old GM and/or the Applicant: and be it further

RESOLVED, that a certified copy of these Resolutions be transmitted to the Village of Sleepy Hollow Planning Board.

Moved: Trustee Campbell **Seconded**: Trustee Stupel **Vote:** Motion Carried 7-0

I, Paula A. McCarthy the undersigned Clerk/Deputy Clerk, do hereby certify that the foregoing is a true copy of an extract duly adopted by the Board of Trustees of the Village of Sleepy Hollow, on the 7th day of June, 2011 and of the whole thereof, and I further certify that the same was entered into the minutes of the meeting of said Board of Trustees held on said date.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 8th day of June, 2011.

Paula A. McCarthy

Clerk/Deputy Clerk

Meeting Date: 06/07/2011
Resolution Number: 06/67/2011

VILLAGE OF SLEEPY HOLLOW
MAYOR AND BOARD OF TRUSTEES
CONSISTENCY FINDINGS
LIGHTHOUSE LANDING

WHEREAS, on or about February 11, 2003 a formal application for a Riverfront Development Concept Plan and Special Permit approval was submitted by Roseland/Sleepy Hollow, LLC (Roseland) and General Motors Corporation (Old GM), to the Mayor and Board of Trustees of the Village of Sleepy Hollow, New York ("the Village Board") with related approvals from other Village agencies for the construction of a mixed use waterfront project to be known as Lighthouse Landing on approximately 94.5 acres also known and designed on the tax assessment map of the Village of Sleepy Hollow as parcels 115.10-1-1, 115.11-1-1, and 115.15-1-1 ("the Site"); and

WHEREAS, said application did include, among other items, a site plan application form, site plan application checklist, coastal assessment form, full environmental assessment form, a project description and a preliminary Riverfront Development Concept Plan (RDCP) conceptual site plan; and

WHEREAS, the Mayor and Board of Trustees have acted as the Lead Agency under the State Environmental Quality Review Act (SEQR) for the purposes of conducting an environmental review for the Proposed Action; and

WHEREAS, the Proposed Action must also be reviewed under Chapter 59A, the Waterfront Consistency Review Law, of the Sleepy Hollow Village Code, and the Waterfront Advisory Committee (WAC) is the duly authorized body to provide recommendations to the Village Board with respect to the consistency of the Proposed Action with the goals and policies of the Village's Local Waterfront Revitalization Program (LWRP); and

WHEREAS, during the course of the SEQR review, the Applicant did appear before the WAC to solicit comments on a preliminary version of the proposed RDCP; and

WHEREAS, on March 2, 2005 and March 15, 2005 the WAC considered the Draft Environmental Impact Statement ("DEIS") for the proposed project which consisted, at that time, of approximately 1,562 residential units; approximately 180,000 s.f. of retail space, approximately 50,000 s.f. of office space; an inn with approximately 147 rooms; land for a train station, related parking; and, approximately 30 percent of the site reserved as public open space or for public use; and

WHEREAS, the WAC reviewed each of the applicable goals and policies of the Village's LWRP and individual members of the WAC did provide comments which were responded to during the course of the environmental review, and did cause there to be modifications made to preliminary RDCP; and

WHEREAS, at its meeting on January 10, 2007, the WAC considered the Final Environmental Impact Statement (FEIS) for a revised RDCP that was reduced to 1,250 residential units; 132,000 s.f. of retail; 35,000 s.f. of office use; a 140 room hotel; and, approximately 39 acres, or 41%, of the site reserved as public open space or for public use; and

WHEREAS, the WAC did deliberate and find the Proposed Action as described in the FEIS to be consistent with the Village's LWRP with the following conditions: the right to review and participate in the decisions as to the size, construction and design of water dependent project elements; inclusion of a footbridge over the Metro-North tracks in order to facilitate pedestrian traffic to the Project Site; that the Village and Applicant vigorously pursue a public transportation system; use of appropriate construction materials and the placement of the pier and any other shoreline structures at appropriate locations; installation of appropriate vegetative cover at appropriate locations on the Site; and, the right to consider the DPW portion of the East Parcel proposal when it is developed; and

WHEREAS, the Village Board acted as Lead Agency for the environmental review of the Project conducted under SEQR and did determine in the Environmental Findings Statement

adopted July 24, 2007 (the "Findings Statement"), that the proposed Project, with the mitigation measures identified therein, would minimize or avoid adverse environmental effects to the maximum extent practicable; and

WHEREAS, General Motors LLC ("Applicant") acquired substantially all of the assets of Old GM on July 10, 2009 in a transaction executed under the jurisdiction of, and subject to the approval of, the United States Bankruptcy Court for the Southern District of New York, and Applicant has acquired equitable title to the Site: and

WHEREAS, Roseland is no longer the proposed developer of the Site and Applicant has advised the Village that it intends to secure, after consultation with the Village, a new developer for the Site ("Developer"), and that after such designation, Developer will assume the position and all obligations of the Applicant; and

WHEREAS, in November 2007 Old GM commenced an Article 78 proceeding challenging certain conditions imposed on it and Roseland in the Findings Statement, which proceeding resulted in a January 8, 2010 Decision, Order and Judgment sustaining some conditions and amending or striking others; and

WHEREAS, the Applicant has asked the Village Board to resume processing the Application on behalf of the Applicant, and the Village Board believes it is in the best interests of the Village to do so, although the Applicant has advised the Village of its intention to convey its interests in the Project to Developer and not to develop the Project itself or in a joint venture or partnership with the Developer; and

WHEREAS, the application including the RDCP has been further revised to conform to the Findings Statement, the January 8, 2010 Decision, Order and Judgment and as a result of discussions with the Village and GM; and

WHEREAS, the Applicant has submitted an Environmental Assessment Narrative describing the amendments and changes and their potential impacts on the environment compared to those described in the Findings Statement and, after a public meeting held on January 25, 2011, the Village Board adopted additional findings ("2011 Amended Findings") that the implementation of the Project as now described and proposed will not result in adverse environmental impacts significantly different than those that were addressed in the Findings Statement; and

WHEREAS, the revised RDCP now consists of the following: 1,177 residential units in a mixture of townhouse, condominium and apartment configurations; approximately 135,000 s.f. of commercial space, 35,000 s.f. of office space; 140 room hotel; reconfiguration of the site entrance with River Street and Beekman Avenue; reconfiguration of Building M to bring more commercial space down to the waterfront; reconfiguration of Road One to provide for a minimum buffer area of 100 feet along the boundary with Kingsland Point Park; an increase in the overall public open space and public use area from 39± to 44.6± acres inclusive of an 16.1± acre waterfront and central park open space with 2,300± linear feet of Hudson River shoreline; water related and water dependent uses including interpretive center/boat house, enhanced waterfront access area, fishing pier, belvederes, dock and dine transient boat access, small craft boat tie up; and, incorporation of Design Guidelines to assist the various Village boards during the more detailed site plan and architectural review process; and

WHEREAS, the Village enacted Local Law No. 7 in 1997 that established a process to review proposed actions against the Village's adopted LWRP and that Section 59A-5.G identifies eighteen specific policy items for a reviewing agency's consideration; and

NOW, THEREFORE, BE IT RESOLVED, that the Village Board does hereby make the following determinations with respect to the following policy guidelines outlined in Chapter 59A-5.G. of the Village Code:

Waterfront Consistency Review Item 1: Revitalize the deteriorated and underutilized waterfront area (LWRP Policies 1, 1A, 1B, 1C, 1E, 1F, 1G, 1H, 1J and 1K)

The Project, as now proposed, calls for a mixed-use development that will revitalize a significant unused portion of the Village's waterfront and replace an existing deteriorated land use consisting of an abandoned industrial site. It will generate significant economic benefits to the Village including employment and net fiscal revenues. While portions of the Project appear as a dense development pattern, it is recognized that approximately 46% of the overall site area is devoted to public open space or public use, including approximately 16.1 acres of open space on the West Parcel. The Project is compliant with the Village's RF-Riverfront Development zoning district regulations and is consistent with respect to density with Westchester County's **Patterns** comprehensive planning document.

The West Parcel open space includes approximately 2,300 linear feet of frontage along the Hudson River with proposed fishing pier, belvederes, transient boat tie ups, interpretive center and boat house with enhanced waterfront access area.

With respect to the proposed development pattern, the Village has relied upon the Waterfront Linkage Study and the Design Guidelines manual included in the FEIS to assist it in evaluating how the RDCP achieves the design goal of an "old Hudson River waterfront community" image called out in the LWRP and Village's RF Riverfront Development zoning district. The scale of the buildings, in context to their surroundings, and the ability to preserve approximately 47.6% of the site as open space or public use area combined with the commitment to the use of natural materials (e.g., stone, brick, wood, iron) helps to achieve this goal. Further, there is a commitment to have the entire project reach the Certified level under the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Neighborhood Development program, to have a LEED accredited architect certify that the larger buildings (>90,000 s.f.) would meet the Certified level under the LEED for New Construction program and that the proposed townhouses would be designed using the Energy Star program design criteria.

Although the WAC recommended that a footbridge be included as part of the RDCP to address LWRP Policies 5 and 5A, Policy 1F also addresses this issue. The Village Board notes that the RDCP reserves a right of way for potential future development of an accessway connecting the East and West Parcels.

The Village Board finds that the Project will revitalize the deteriorated and underused waterfront area of the Site and thus is consistent with Waterfront Consistency Review Policy Standard and Condition (1) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 2: Retain and promote commercial and recreational water dependent uses (LWRP Policies 2 and 2A).

As indicated previously, the RDCP currently calls for approximately 16.1 acres of open space on the West Parcel. Components include 2,300± linear feet of Hudson River shoreline accessible to the public, fishing pier, transient boat access and small craft docks, belvederes, proposed bulkhead at the point in front of the hotel, interpretive center and boat house and enhanced waterfront access suitable for hand launching small craft (e.g., canoes and kayaks).

The Village Board finds that the Project will promote and thereafter retain commercial and recreational water-dependent uses and thus is consistent with Waterfront Consistency Review Standard and Condition (2) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 3: Strengthen the economic base of Sleepy Hollow smaller harbor areas by encouraging traditional uses and activities (LWRP Policy 4).

The LWRP notes that this policy is not applicable to Sleepy Hollow as the Village's waterfront does not contain a small harbor.

Waterfront Consistency Review Item 4: Ensure that development occurs where adequate public infrastructure is available to reduce health and pollution hazards (LWRP Policies 5, 5A and 5B).

In assessing the Project and its location with respect to impacts to the municipal infrastructure, the Village Board has evaluated the adequacy of the following: street and local highway systems; water supply; sewage disposal; energy needs; stormwater runoff; and, community facilities (e.g., schools, fire, and police).

The Village Board required an extensive evaluation of the local roadway network including the analysis of approximately 37 different intersections, the majority number of which were in the neighboring Village of Tarrytown. The traffic impact analysis utilized conservative methodology and identified specific traffic mitigation measures to address identified impacts. This includes the

establishment of a bond to cover the cost of fair share improvements in areas outside of the Village of Sleepy Hollow. The Developer is obligated to provide a jitney shuttle service during the peak travel hours to take Lighthouse Landing residents back and forth to the Tarrytown Train Station.

The RDCP includes foot paths and bike paths, connecting the riverfront open space along Ichabod's Landing in the south with Kingsland Point Park in the north. The interior streets will have sidewalks to promote pedestrian circulation.

The Village is in the process of concluding an environmental review process regarding the expansion of its reservoir supply capacity. The Village has identified a location for a new facility. The Special Permit for the Project contains a condition requiring the Developer to make a payment towards the cost of the new facility. Therefore, there will be sufficient water storage capacity to service the Project without impairing the water supply to the remainder of the Village.

Westchester County Department of Environmental Facilities has indicated that they have sufficient capacity in the sewage treatment system to accommodate the Project. Similarly the other utility service providers - electric, gas, cable and telephone - have indicated an ability to accommodate the Project.

As indicated previously, there has been a commitment that the Project, as a whole, would meet the LEED certified level for Neighborhood Development, that the larger buildings (>90,000 s.f.) would be verified as meeting the LEED certified level by an accredited LEED architect and that the townhomes would be constructed under the Energy Star criteria.

The proposed stormwater management plan has been designed to accommodate a variety of storm events. The Project has also been designed to comply with the Village's Flood Damage Prevention Law.

Finally, the FEIS analyzed the potential impacts on community facilities including fire, police, ambulance, recreation and schools. While impacts have been identified to each of the

aforementioned services, mitigation in the form of land donations, physical improvements and a monetary payment from the Developer to fund infrastructure items will be required. Further the fiscal analysis prepared as part of the FEIS notes that there is anticipated to be a net fiscal surplus resulting from the Project, specifically for the Village and the School District. As indicated in the Environmental Assessment Narrative the percentage of for sale units has been increased to a minimum of 60 percent compared to approximately 50 percent as part of the FEIS. Given that a greater majority of the proposed units would now be for sale there would be a projected increase in additional tax revenue from that projected as part of the FEIS.

Based on its review, the Village Board finds that the Project is located where adequate public infrastructure is available to reduce health and pollution hazards and thus is consistent with the Waterfront Consistency Review Standard and Condition (4) of Section 59A-5.G of the Code .

Waterfront Consistency Review Item 5: Expedite local permit procedures and use performance standards for development within the waterfront area (LWRP Policy 6).

The Village Board has coordinated its review efforts with those of other Village entities such as the WAC and Planning Board, well as outside agencies like NYSDEC.

The Village has coordinated the Waterfront Linkage study and participated in the creation of Design Guidelines to provide standards for items such as architectural treatment and scale, materials, building orientation, streetscapes and open spaces that the Village could rely upon as it moves to the more detailed level of review and analysis.

The Village Board finds that the Project has been designed and approved in a manner which will allow for the expediting of future local permit procedures and use performance standards and thus is consistent with Waterfront Consistency Review Standard and Condition (5) of Section 59A-5.G of the Code.

Waterfront Consistency Review Policy 6: Protect significant and locally important fish and wildlife habitats from human disruption and chemical contamination. (LWRP Policies 7, 7A, 7B, 7C, 8, 8a and 8B).

This policy, to a limited extent, is relevant in that the existing riprap along the edge of the Hudson River would be restored where necessary, with potential benefit to marine life. As noted in the WAC recommendations, the Project would not affect the Pocantico River. The Developer will be required to implement, a stormwater management plan that, under New York State law must be adequate to minimize any impacts resulting from stormwater runoff.

The WAC in their recommendations noted that the Project will result in a reduction of the current impervious surfaces at the site and reduce runoff from the site and would tend to protect fish and wildlife resources. As a long-used and now abandoned paved industrial property, the Site contains no upland wildlife habitats of any significance.

The Village Board finds that the Project protects significant and locally important fish and wildlife habitats from human disruption and chemical contamination and thus is consistent with Waterfront Consistency Review Standard and Condition (6) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 7: Encourage and expand commercial fishing facilities to promote commercial and recreational fishing opportunities (LWRP Policies 9, 10).

The WAC noted in their recommendations that the proposed inclusion of a fishing pier as part of the Project would constitute expansion of recreational use of fishing resources in the coastal area.

The Village Board finds that the Project will encourage and expand recreational fishing opportunities and thus is consistent with Waterfront Consistency Review Standard and Condition (7) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 8: Minimize flooding and erosion hazards through

nonstructural means, carefully selected, long-term structural measures and appropriate siting of structures (LWRP Polices 11, 13, 13A, 13B, 14, 15, 16, 16A, 16B, 17 and 17A).

Consistent with the recommendation from the WAC, the Village Board notes that the elevations and locations of structures address LWRP Policy 11 relative to minimizing damage to property and effects caused by flooding and erosion. The Project has been designed to comply with the Village's Flood Damage Prevention Law. It is noted that the Developer will be required to make repairs to the riprap along the River, where necessary, making the Project consistent with LWRP Policy 13A. The specific design of the proposed pier and other shoreline structures will be evaluated as part of the forthcoming waterfront open space planning process with the Village Board. The Village Board confirms the WAC's recommendation that LWRP Policies 13B and 14 are conditionally consistent subject to the Developer's use of appropriate construction materials and placement of the pier and any other shoreline structure at appropriate locations.

The Project's incorporation of stringent soil erosion and sediment control measures and its erosion and sediment control plan includes a variety of mechanisms to attain those goals including: sediment traps, silt fence barriers and straw bale barriers. A vegetative cover is proposed in the form of a comprehensive landscaping and restoration program for the balance of the property.

The Village Board finds that the proposed Project will employ both non-structural and structural measures to minimize flooding and erosion hazards and the RCDP contains setbacks and buffers as part of the siting layout to achieve the same and thus is consistent with Waterfront Consistency Review Standard and Condition 8 of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 9: Safeguard economic, social and environmental interests in the coastal area when major actions are undertaken (LWRP Policies 18, 18A, 18B and 18C).

The WAC made a recommendation that there was no inconsistency between the Project and LWRP Policy referenced above, noting that the provision of land area for public use by the Village were

protective of the Village's social and environmental interests and quality of life.

The Village Board affirms the WAC's recommendation and finds the Project will safeguard economic, social and environmental interests along the Hudson River coastal area and thus is consistent with Waterfront Consistency Review Standard and Condition (9) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 10: Maintain and improve public access to the shoreline and the water related recreational facilities while protecting the environment. (LWRP Policies 1, 1A, 1B, 1D, 1E, 1F, 1H, 2, 2A, 4, 9, 19, 19A, 19B, 19C, 19D, 19E, 19F, 20 20A 20B, 21, 21A 21B, 21C 22 and 22A).

At present, the General Motors site is fenced and there is no public access to the Hudson River other than an existing easement to gain access to the historic 1883 Lighthouse. The Project would include opening the entire, approximately 2,300 linear feet of Hudson River shoreline to the public. The Project includes approximately 16.1 acres of public open space as part of the West Parcel including the area along the Hudson, inclusive of public walkways and opportunities to get to the waters edge. The pedestrian access provided along the shoreline would effectively provide linkages between the Village's park at Horan's Landing and the waterfront associated with Ichabod's Landing to the south of the Project site with Kingsland Point Park to the north of the site.

The impact of the Project in creating linkage trails as contemplated by LWRP Policy 21 has been noted in connection with the Village Board's findings under prior policies. The Village Board also noted that the parks, fishing piers, transient boat access and enhanced waterfront access, as well as pedestrian trails and scenic overlooks are specifically recognized in the applicable Explanation of Policies for Policy 21 and its sub-policies as water-related recreational facilities.

The Village Board finds that the proposed Project improves public access to the shoreline and water-related recreational activities through the provision and improvement of waterfront open space to the Village with adequate environmental protection measures and thus is consistent with Waterfront

Consistency Review Standard and Condition (10) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 11: Protect and restore historic and archaeological resources (Policies 23, 23A, 23B and 23C).

The WAC noted the fact that the 1883 Lighthouse is listed on the National Register of Historic Places and is considered to be of significance to the history of the Village. Although the Lighthouse lies outside of the boundaries of the Project site and is not within the scope of the Project, the site configuration would direct attention to the Lighthouse, which would be the focal point of the proposed Beekman Place "main street" corridor.

A Stage 1A Literature Review and Sensitivity Analysis was prepared as part of the EIS, the recommendation of which noted that no further investigation of prehistoric archeological potential or historic potential is recommended. The New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) concurred with those recommendations. The Village Board further notes that correspondence received from the NYSOPRHP that the Project would have no impact on historic properties in or eligible for inclusion on the National Register of Historic Places. As part of the anticipated expansion of the Historic Hudson Valley (HHV) Philipsburg Manor Restoration facility the Village would likely require the preparation of a Phase 1B report. This will be a determination to be made by the Planning Board as part of the site plan review for that contemplated use.

The Village Board finds that the Project would not adversely affect the protection and restoration of historic and archeological resources and thus is consistent with Waterfront Consistency Review Standard and Condition (11) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 12: Protect and upgrade scenic resources (LWRP Policies 25, 25A and 25B).

The WAC noted that, at the time of adoption of the LWRP, the identified scenic resources and

Hudson River views were significantly (and adversely) impacted by the then-existing GM plant structures. Since the demolition of the General Motors plant structures, open views of the Hudson River have been afforded to the community, although over a deteriorated and unsightly foreground. The WAC noted that any construction at the Site will interrupt the current open views and, consequently, "diminish the scenic quality of an identified scenic resource "Explanation of Policies", but also recognized that the protection of river views and identified view sheds contemplated by the LWRP was not intended to totally prohibit development.

The Village Board notes that the RDCP attempts to preserve and frame river views by the use of street and building layout. In addition, the Village Board further notes that the provision of waterfront open space provides and enhances views of the River from new publicly accessible property. The utilization of natural materials (e.g., wood, stone, metal, and brick) and the use of the proposed Design Guidelines prepared as part of the EIS process contribute to the overall compatibility of the site in relation to its environs.

The Village Board concludes that the Project upgrades the scenic foreground and provides, with future protection, scenic views of the Hudson River and thus is consistent with Waterfront Consistency Review Standard and Condition (12) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 13: Site and construct energy facilities in a manner in which will be compatible with the environment and contingent upon the need for a waterfront or water location (LWRP Policies 27, 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39, 39A, 40, 40A, 41, 42, 43, and 44).

The Village Board finds Waterfront Consistency Review Standard and Condition 13 is not applicable as the Project does not contemplate an energy facility.

Waterfront Consistency Review Item 14: Protect surface and groundwater's from direct and indirect discharge of pollutants and from overuse (LWRP Policies 30, 31, 33, 35, 35A, 35B, 35C, 35D, 35E, 36, 37, 38, 39, 39A, 40, 40A, 41A, 42, 43, and 44).

The Developer will be legally required to use best management practices for stormwater management, use low flow fixtures and abide by air quality standards. With respect to the policy discussion regarding stormwater runoff, the Project will result in the replacement of part of the Site's current impervious surface with green spaces containing vegetation. Sewage will go to the County publicly owned treatment works. No usage of the Site is proposed that would generate other pollutants likely to run-off into surface waters or infiltrate ground waters or use unusually large quantities of water.

The Village Board finds that the Project will protect surface and groundwaters from direct and indirect discharge of pollutants and from overuse and thus is consistent with Waterfront Consistency Review Standard and Condition (14) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 15: Perform dredging and dredge spoil in a manner protective of the environment (LWRP Policies 15, 35, 35A, 35B, 35C, 35D and 35E).

Any future dredging related to prior activities of GM will be conducted with oversight from NYSDEC and NYDOS. The Project itself does not include dredging. Thus the Village Board finds that Waterfront Consistency Review Standard and Condition (15) is not applicable.

Waterfront Consistency Review Item 16: Handle and dispose of solid and hazardous wastes and effluents in a manner, which will not adversely affect the environment nor expand existing landfills (LWRP Policies 34, 34A, 35, 35A, 35B, 35C, 35D, 35E, 36, 39 and 39A).

As part of its deliberations, the WAC made a recommendation that the Applicant, during the construction phase, give strict instructions to its construction contractors that no wastes are to be dumped in the Hudson River. The Project will generate solid wastes and sewage typical of mixed-use residential and commercial developments. These will be managed using the lawful and compliant services and facilities available in the Village.

The Village Board finds that the Project will not result in the generation of solid and hazardous wastes and effluents in a quantity or of a type which will adversely affect the environment or require the expansion of existing landfills and thus is consistent with Waterfront Consistency Review Standard and Condition (16) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 17: Protect air quality (LWRP Policies 41, 41A, 42 and 43).

The WAC noted in its consistency review that, as a matter of law, the Applicant will be legally required to comply with LWRP policies of 41 and 41A as they relate to the National Ambient Air Quality (NAAQ) standards. The Environmental Findings noted that the Proposed Action would not violate the NAAQ standards. No industrial air emissions will result from the Project, and any air emissions will be in an amount and of the type typically arising from a mixed-use residential and commercial development, which will not have a material adverse effect on ambient air quality.

The Village Board finds that the Project will protect air quality and thus is consistent with Waterfront Consistency Review Standard and Condition (17) of Section 59A-5.G of the Code.

Waterfront Consistency Review Item 18: Protect freshwater wetlands (LWRP Policy 44).

The WAC noted that the Pocantico River constitutes a tidal wetlands/watercourse and that the replacement of paved areas adjacent to the River with green open space would be beneficial for the area. The Project does not include the disturbance of freshwater wetlands.

The Village Board finds that the Project will protect freshwater wetlands and thus is consistent with Waterfront Consistency Review Standard and Condition (18) of Section 59A-5.G of the Code; and be it further

RESOLVED, on the basis of its consideration of the consistency of the proposed Lighthouse Landing project with the foregoing LWRP Policies as outlined in Chapter 59A-5.G.(1)- (18), and

upon due consideration of the consistency recommendation provided by the WAC, the Mayor and Board of Trustees finds that the Project will be consistent with the policies and purposes of the LWRP and will advance many of them.

Moved: Trustee Campbell **Seconded:** Trustee Stupel **Vote:** 7-0

I, Paula A. McCarthy the undersigned Clerk/Deputy Clerk, do hereby certify that the foregoing is a true copy of an extract duly adopted by the Board of Trustees of the Village of Sleepy Hollow, on the 7th day of June, 2011 and of the whole thereof, and I further certify that the same was entered into the minutes of the meeting of said Board of Trustees held on said date.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 8th day of June, 2011.

Paula A. McCarthy
Clerk/Deputy Clerk

Meeting Date: 06/07/2011
Resolution #: 06/68/2011

MAYOR AND BOARD OF TRUSTEES
RESOLUTION ACCEPTING
DESIGN GUIDELINES
FOR LIGHTHOUSE LANDING
RIVERFRONT DEVELOPMENT

WHEREAS, concurrently with the adoption of this Resolution, the Mayor and Board of Trustees of the Village of Sleepy Hollow (the "Village Board") are approving a Riverfront Development Concept Plan ("RDCP") for a proposed riverfront development called Lighthouse Landing on the former General Motors Site ("Project"); and

WHEREAS, both the Village's Local Waterfront Revitalization Program (LWRP) and RF-Riverfront Redevelopment Zoning District language call for the creation of a distinct waterfront district in the spirit of an old Hudson River waterfront community image; and

WHEREAS, as part of the planning process for the reuse of the former General Motors site the Village conducted a Waterfront Linkage Study which analyzed that area within the Village-zoned Riverfront Development District; and

WHEREAS, one of the goals of the Waterfront Linkage Study was to assist the Village in better visualizing what future development would look like; and

WHEREAS, on February 11, 2003 a formal application for RCDP Approval and a Special Permit for the Project was submitted to the Village; and

WHEREAS, during the course of the environmental review of the Project the then applicant, working with the Village and its design and planning consultants, did prepare a Design Guidelines manual to assist the Village which included: design principles for urban district and public realm, street design and typology, architectural design and open space design intent; and

WHEREAS, the Design Guidelines manual was included as part of the Project's Final Environmental Impact Statement ("FEIS") which was the subject of a public hearing and was duly circulated to all interested and involved agencies and made available for public review and comment; and

WHEREAS, General Motors LLC is the current applicant ("Applicant") for the Project, and has advised the Village Board that it intends to secure, after consultation with the Village Board, a new developer for the Site ("Developer"), and that after such designation, Developer will assume the position and all obligations of the Applicant; and

WHEREAS, on or about December 14, 2010, the Applicant did submit to the Village Board a revised RDCP (prepared by Divney Tung Schwalbe, LLP) as identified in the Resolution approving the RDCP and granting a Special Permit for the project, which included a

set of preliminary architectural drawings (prepared by the Lessard Architectectural Group dated May 15, 2007) that advance the Village Board's design objectives and are generally consistent with the Design Guidelines; and

NOW, THEREFORE, BE IT RESOLVED, that the Village Board does hereby accept the Design Guidelines document included in the FEIS and as modified by the 2011 Amended Findings; and, be it further

RESOLVED, that the Village Board intends that the Design Guidelines document shall be utilized by the Planning Board and other boards and committees serving the Village in subsequent reviews to ensure that the Project elements will be integrated by cohesive design, maintain an appropriate Hudson River waterfront community image, and provide visual interest; and, be it further,

RESOLVED, that the Design Guidelines are intended to provide a flexible framework, as the Village moves forward with more specific approvals; and, be it further

RESOLVED, in the event that the Board of Trustees approves future revisions to the RDCP, the Design Guidelines manual will be accordingly updated to reflect the revised plan, and that from time to time, as is deemed necessary by the Project Developer(s), or the Planning Board, or any of the aforementioned parties may petition the Board of Trustees to revise the design principles contained in the Design Guidelines manual.

Moved: Trustee Capossela **Seconded**: Trustee Carr **Vote:** 7-0

I, Paula A. McCarthy the undersigned Clerk/Deputy Clerk, do hereby certify that the foregoing is a true copy of an extract duly adopted by the Board of Trustees of the Village of Sleepy Hollow, on the 7th day of JUNE, 2011 and of the whole thereof, and I further certify that the same was entered into the minutes of the meeting of said Board of Trustees held on said date.
IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 8th day of JUNE, 2011.

Paula A. McCarthy
Clerk/Deputy Clerk

FILED
AND
ENTERED
ON
January 8, 2010

WESTCHESTER
COUNTY CLERK

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF WESTCHESTER
----------x

In the Matter of the Application of the GENERAL MOTORS CORPORATION,

Petitioner,

For a Judgment Pursuant to Article 78 of the Civil Practice Law and Rules

-against-

THE VILLAGE OF SLEEPY HOLLOW; THE BOARD OF TRUSTEES OF THE VILLAGE OF SLEEPY HOLLOW; MAYOR PHILIP E. ZEGARELLI, MARIA R. DeMILIA-POWERS, MARIO DiFELICE, KAY BROWN GRALA, SANDRA MORALES, ANDREW MURRAY and KENNEITH G. WRAY, as and constituting THE BOARD OF TRUSTEES OF THE VILLAGE OF SLEEPY HOLLOW,

Respondents.

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DECISION, ORDER AND JUDGMENT

Index No. 23984/07

Hubert, J.

This is an Article 78 proceeding filed by Petitioner General Motors Corporation ("GM") seeking a judgment setting aside various conditions imposed by the Board of Trustees of the Village of Sleepy Hollow ("the Board") in a Findings Statement it adopted pursuant to the New York State Environmental Quality Review Act ("SEQRA"). The Findings Statement arose from GM's efforts to develop a 94.5 acre parcel of property it owns along the Hudson River

waterfront in Sleepy Hollow, New York ("the Site").[1] The property is the site of a former GM automotive assembly plant which played a significant role in the local economy for over seventy years. After closing the plant in1996, GM embarked on the long process of dismantling the industrial plant, cleaning up the Site, and securing a developer to redevelop the property.

In February 2003, GM and its developer submitted an application to the Board for approval to build a large scale waterfront development project named Lighthouse Landing ("the Project"), consisting of residential apartments, condominium units, townhouses, retail space, office space, and open space and parks. Pursuant to the SEQRA environmental review process,[2] the Board conducted a thorough and comprehensive review of the Project and its environmental impacts, holding over 50 public meetings and hearings, and receiving input from dozens of local and state agencies, consultants, environmental organizations, and the public. During the review period, GM agreed to make design changes to the Project, contribute financial resources to various aspects of the Project, increase the size of parkland and open space, and reduce the density of the residential component of the Project.

After more than four years of careful study and analysis, the Board issued a Findings Statement on July 24, 2007. The 129-page document contains detailed review of the potential impacts of the Project on land use, zoning and public policy, ecological resources, economic conditions, cultural and archeological resources, open space, utilities, traffic and mass transit, and parking conditions, among other matters.

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[1]GM is the beneficial owner of the Site; GM conveyed the property to the Town of Mount Pleasant Development Agency in 1985 pursuant to an industrial revenue bond financing transaction.

[2]Article 8 of the Environmental Conservation Law of the State of New York ("ECL") and 6 NYCRR Part 617.

GM does not contest the environmental review process, or whether the lead agency took the requisite "hard look" at the environmental impacts of the Project. Instead, GM contends that many of the conditions set forth in the Findings Statement are arbitrary and capricious because they are either disproportionate to the impacts caused by the Project, or will not mitigate any environmental impacts at all. For the reasons explained more fully below, the Court agrees that a number of the conditions imposed by the Board will not serve to mitigate any environmental impacts, or alternatively were not agreed to by GM as a result of the SEQRA review process. Thus, GM's petition seeking to annul various requirements is granted in part, and denied in part.

LEGAL AND FACTUAL BACKGROUND

In order to permit redevelopment of GM's site, the Village of Sleepy Hollow ("the Village" or "Sleepy Hollow") adopted a Local Waterfront Revitalization Program in 1996. The Board also adopted several amendments to Sleepy Hollow's zoning ordinance in order to create a new zoning district, the RF-Riverfront Development Zoning District (the "RF District"). Among the stated purposes of the RF District were to "promote . . . the revitalization of the waterfront area, while ensuring that such revitalization takes place in a manner which is sensitive to the Village's coastal and community resources [. .]." The text of the RF District includes general parameters for development of the land, including permitted uses, design criteria, and maximum building height and density, all of which were based on a broad, "generic" SEQRA review that had been conducted previously by the Village. *See* 6 NYCRR § 617.10 (a)(4).

In or about 2002, GM entered into a contract with a subsidiary of Roseland Property Company, a developer experienced in urban waterfront projects, to redevelop the Site. The subsidiary, Roseland/Sleepy Hollow LLC ("Roseland"), was a co-applicant of the Project. Both

companies are listed on all relevant documents in connection with the SEQRA review process.[3] On February 11, 2003, Roseland and GM (collectively, "the Applicants") submitted a "Concept Plan" and application for a Special Permit in order to develop the Site.[4] The design plans contemplated a mixed-use development consisting of 1,562 rental and ownership units, 185,000 square feet of retail space, 95,000 square feet of office space, a hotel, a waterfront park, open space, and many other amenities.

After declaring its intent to serve as Lead Agency, the Board issued a positive declaration for the Project under 6 NYCRR § 617.2, thereby requiring a full environmental review process. On April 14, 2004, the Applicants submitted a preliminary Draft Environmental Impact Statement ("DEIS") to the Board. The Applicants submitted a revised preliminary DEIS to the Board on November 19, 2004, and subsequently a third DEIS, all in response to comments that the Board made on each draft. Finally, by resolution dated January 11, 2005, the Board declared the DEIS to be complete with respect to its scope, content and adequacy under SEQRA.

On October 4, 2005, the Applicants submitted their preliminary Final Environmental Impact Statement ("FEIS"). The document included an "Alternative Plan" that reduced the number of residential units from 1,562 to 1,250; reduced the retail space from 180,000 square feet to 132,000 square feet; reduced the size of the hotel; increased the open space provided for along the Hudson river and within the interior of the Site; and created a landscaped buffer area between Kingsland Point Park (an existing park) and the Project. In response to requests made by

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[3]Roseland and General Motors have since terminated their development agreement. GM is in the process of seeking a new developer for the Site.

[4]The Sleepy Hollow Code provides that two land use approvals are required before development of property in the RF District is permitted: (1) a developer must submit a "Concept Plan" for approval; and (2) a developer must apply for a Special Permit. The approval of a Concept Plan and Special Permit is considered to be an "action" under SEQRA.

the Board, the Applicants then submitted four subsequent versions of the preliminary FEIS. Over one year later, on December 19, 2006, the Applicants submitted their final FEIS to the Board, advising that they would use the Alternative Plan as their final Concept Plan.

Simultaneously, GM requested an amendment to the zoning code. The Project was designed to include rental and condominium ownership units in three, four, and five-story buildings, but existing zoning restrictions precluded a fifth floor on four such buildings.[5] The proposed zoning amendment was not approved, but on July 24, 2007, the Board adopted the Findings Statement at issue here.

DISCUSSION

Judicial review of a lead agency's SEQRA determination is limited to whether the determination was made in accordance with lawful procedure and whether the determination was affected by an error of law, lacked a rational basis, or was an abuse of discretion. *Jackson v. New York State Urban Development Corp.*, 67 N.Y.2d 400, 503 N.Y.S.2d 298 (1986). A lead agency's determination will be annulled only where the court finds it was arbitrary and capricious or unsupported by the record. Thus, judicial review of an agency determination under SEQRA is limited to "whether the agency identified the relevant areas of environmental concern, took a 'hard look' at them, and made a 'reasoned elaboration' of the basis for its determination." *Id.* at 417; *Chase Partners LLC v. Incorporated Village of Rockville Centre*, 43 A.D.3d 1053, 843 N.Y.S.2d 114 (2d Dep't 2007).

[5] Pursuant to Section 62-5.1.X(2)(e) of the Village Zoning Code, the height of four buildings included in GM's Alternative Plan cannot exceed 42 feet in height, thereby precluding a fifth floor. GM requested that the Code be amended in order to increase the building height to a maximum of 60 feet.

GM does not contest the environmental process or whether the Board took the requisite "hard look" at the environmental impact of the Project. GM argues that nine of the conditions imposed on GM in the Findings Statement are arbitrary and capricious because they are either disproportionate to the impacts caused by the Project, or will not mitigate any environmental impacts at all. GM claims that the Board imposed these conditions in some cases to appease community groups, and in others to shift municipal costs onto GM. The principal conditions that GM challenges are:

1. The requirement that GM reduce the density of the Project from 1,250 to 1,177 residential units;

2. The requirement that GM contribute land and money for a new Village Department of Public Works facility and fire/ambulance station;

3. The requirement that GM expand a buffer area between the Project and Kingsland Point Park;

4. The requirement that GM "reserve" open space for a potential future extension or estuary of the Pocantico River;

5. The requirement that GM provide an additional 150 to 160 parking spaces in designated locations;

6. The requirement that GM make changes to its construction schedule;

7. The requirement that GM potentially grant an environmental easement in favor of the Village;

8. The requirement that GM hold the Village harmless from any injury or damage to persons or property arising out of the presence of any residual soil contamination below the public roads and public spaces; and

9. The requirement that GM grant easements to the Village over public roads, public parks and public open spaces that it intends to dedicate to the Village.

In the context of planning board approval, municipalities may impose restrictions and conditions on developers, but any such conditions must have a "sufficient nexus to and [be]

reasonably expected to alleviate the identified adverse environmental problem[s]." *Ginsburg Dev. Corp. v. Town Bd. of Cortlandt*, 150 Misc.2d 24, 32, 565 N.Y.S.2d 371 (Sup. Ct. Westchester Co. 1990); *Castle Properties Co. v. Ackerson*, 163 A.D.2d 785, 558 N.Y.S.2d 334 (3d Dep't 1990)(planning boards can impose reasonable conditions, but do not have unlimited authority to impose conditions that are not reasonably designed to mitigate any demonstrable defects); *Clinton v. Sommers Ill*, 144 A.D.2d 145,147, 534 N.Y.S.2d 473 (3d Dep't 1988)(planning boards do not have unlimited authority to impose conditions that are not reasonably designed to mitigate any demonstrable impacts); *also see Dolan v. City of Tigard*, 512 U.S. 374, 114 S.Ct. 2309, 129 L.Ed.2d 304 (1994)(government cannot, without just compensation, condition approval of building permit on the grant of a public easement when the condition had no essential nexus to government's interest in the development); *Nollan v. California Coastal Commission*, 483 U.S. 825, 107 S. Ct. 3141, 97 L. Ed. 2d 677 (1987)(land use condition must bear an "essential nexus" between the legitimate state interest sought to be advanced by the condition and the impacts of the proposed project).

Similarly, zoning boards may only impose restrictions that are "reasonable" and directly related to the proposed use of the property. *St. Onge v. Donovan*, 71 N.Y.2d 507, 527 N.Y.S.2d 721 (1988)(restrictions are permissible only if they relate directly to the use of the land in question, and are corrective measures designed to protect neighboring properties against the possible adverse effects of that use). Conditions must be invalidated where they do not seek to ameliorate the effects of the land use at issue. *Id.* at 517.

This Court finds that several of the requirements that GM contests in the instant case are reasonably designed to mitigate environmental impacts, or were otherwise agreed to by GM,

including the reduction in density, certain contributions of land and money, the expansion of the buffer area, various changes to the construction schedule, and the requirement to grant an environmental easement. However, the Court finds that other conditions, including the requirement that GM set aside land for a potential estuary, provide additional parking spaces, grant easements to the Village (as opposed to fee title transfer), and indemnify the Village for damages will not mitigate any environmental impacts, or alternatively were not agreed to by the parties during the SEQRA process.

Reduction in Residential Units

With respect to the density reduction, GM contends that the Board impermissibly reduced the number of residential units permitted on the Site from 1,250 (as set forth in the FEIS Alternative Plan) to 1,177. GM argues that this reduction is simply the result of community pressure and is inconsistent with the density calculations set forth in the RF District, which GM contends permit construction of up to approximately 1,870 units on the Site. Respondents counter that GM effectively agreed to reduce the residential component of the Project to 1,177 units as a result of design modifications.

The Court is not persuaded that GM either expressly or implicitly agreed to reduce the number of residential units to 1,177. Nonetheless, evidence in the record supports the conclusion that a combination of factors, including the Village's decision not to approve the zoning amendment proposed by the Applicants (seeking an increase in building height) effectively resulted in the loss of the 73 units.[6]

[6]According to the record, an increase in the size of a buffer adjacent to Kingsland Point Park resulted in the loss of 8 townhouses; the Board's directive to extend restaurant/retail space to a riverfront building resulted in the loss of 12 townhouses; and 54 additional residential units were added to the building plans. The net loss was therefore 73 units.

GM alleges it was told by the Board that GM "had" to reduce the number of residential units due to community pressure, and that GM needed to create a "design justification" for reducing the number to 1,177. However, GM fails to cite to any specific evidence in the record tending to show that the Board bowed to community pressure to reduce the number of residential units to 1,177, and it is not the Court's responsibility to sift through the testimony and exhibits to find support for this argument. Moreover, since the zoning amendment was not approved, and GM cannot build a fifth floor on four of its proposed buildings, there is, per force, a resulting loss of residential units.

GM argues that the density calculations in the RF District that permit up to 1,870 residential units on the Site is tantamount to a legislative finding that such density "is in harmony with the general zoning plan and will not adversely affect the local community." *WEOK Broadcasting Corp. v. Planning Bd. of the Town of Lloyd*, 79 N.Y.2d 373, 583 N.Y.S.2d 170 (1992)(existing zoning provisions are relevant and "tantamount to a legislative finding that the permitted use is in harmony with the general zoning plan and will not adversely affect the local community"). The fact that a specific *use* is permitted within a zoning district strongly suggests that a legislative determination has already been made that such use will not be detrimental to the surrounding area. *Taylor y. Foley*, 122 A.D.2d 205, 207, 505 N.Y.S.2d 166 (2d Dep't 1986); *RPM Motors. Inc. v. Gulotta*, 88 A.D.2d 658, 450 N.Y.S.2d 525 (2d Dep't 1982). However, the fact that the zoning district permits a maximum of 1,870 units does not mean that the maximum number of units is per se permissible. *Ernalex Constr. Realty Corp. v. Bellissimo*, 256 A.D.2d 338, 681 N.Y.S.2d 298 (2d Dep't 1998). The number of residential units that may be accommodated on a particular lot necessarily depends on the layout of the buildings, existing

zoning restrictions, and specific design and environmental factors. A generic environmental review process, like the one conducted by the Village that led to the maximum density in the RF District, is broader and more general than project-specific environmental review. *See* 6 NYCRR § 617.10 (a). For all of these reasons, the Board's determination to permit construction of only 1,177 residential units is neither arbitrary nor capricious.

Contributions to Fire, Ambulance, and Public Works Facilities

GM next challenges the requirement that it contribute up to $1.5 million toward the construction of a new fire and ambulance station. The Findings Statement provides that "Roseland shall be required to contribute towards the construction of, or shall construct at its expense, a firehouse/ambulance station at the location identified on the conceptual site plan. . . provided that in no event shall Roseland's cost to construct the facility exceed $1,500,000." The Findings Statement also requires GM to contribute up to $3.05 million toward construction of a Department of Public Works ("DPW") facility. GM contends that the Village has long had an inadequate DPW facility, a problem unrelated to the Project, and that the cost of creating an adequate facility should not be borne by GM. GM also argues that the monetary contributions are unreasonable in light of the fact that the Project is anticipated to produce an annual net fiscal surplus to the Village of approximately $630,000 at full build out.[7]

The record demonstrates that there is a significant relationship between the Project's impact on the population of Sleepy Hollow, and the provision of municipal resources required to service Lighthouse Landing. According to the Findings Statement, the Project will increase the

[7]The Environmental Impact Statements included an extensive fiscal impact analysis, which examined potential costs to the municipality to provide additional services. After considering the additional municipal services that would be required to meet the needs created by the Project, it was estimated that the Project would produce a net fiscal surplus to the Village.

number of residents in the Village of Sleepy Hollow by approximately twenty-seven percent, which will increase the demand for public services, including fire and police protection, ambulance service, public works, and refuse collection.[8]

In support of GM's contention, an April 4, 2004, memorandum from the Village confirms that the existing DPW facility in Sleepy Hollow is inadequate, that a new DPW facility is an "absolute necessity," and that such a facility is already planned for construction on land owned by GM "to service the *existing* and future Lighthouse Landing development" (emphasis added). However, the record also indicates that GM specifically committed to construct a new DPW facility, and to contribute up to $1.5 million towards the construction of a new fire/ambulation station. In responses to DEIS comments (which are incorporated into, and part of, the FEIS), GM specifically states that:

> The Village Fire Chief has indicated that. . . it would be desirable to locate a new firehouse on the Project site [. . .]. [U]nder the FEIS Alternative Plan, the Applicant proposes to donate land on the South Parcel at the corner of Beekman Avenue and Hudson Street, and contribute $1.5 million to the Village for the Village to construct a new Fire/Ambulance station to serve the western portion of the inner-village and Lighthouse Landing [. . .]. The new station will provide the fire department and ambulance corps with modern facilities to meet their existing and future operational needs. Further, the Applicant will construct a new Village DPW facility on the East Parcel, the design of which will be jointly developed between the Applicant and the Village. [. . .]

GM further states that"[i]t is particularly important to note that the 8 acres of vacant land to be donated to the Village on the East Parcel for the proposed DPW facility is especially beneficial to the Village since an alternate site of suitable size does not exist anywhere else within the

[8]The record indicates that construction of a new DPW facility was originally estimated to cost $5 million, an estimate later increased to $11 million. Respondents argue that GM's share is approximately 27 percent of the cost, which is proportional to the anticipated increase in population that the Project is expected to generate.

Village," and that its specific commitment is to "construct a 6,000 square foot DPW building for office and garage space in addition to a 6,000 square foot salt storage shed."

Because GM committed in the FEIS to contribute $1.5 million to the Village towards the cost of a new fire/ambulance station, and such requirement is reasonably expected to alleviate impacts caused by the Project, this condition is neither arbitrary or capricious, or contrary to law. The requirement that GM contribute up to approximately $3 million toward construction of a DPW facility is similarly reasonable. The Findings Statement simply caps GM's financial contribution, specifically providing that "in no event shall [the developer's] cost to construct the facility exceed $3,050,000." Since GM committed to construct a DPW office and storage shed, and there is a sufficient nexus between the impacts of the Project and the facility, imposing a cap on GM's financial contribution towards the DPW facility is not arbitrary or capricious, or otherwise contrary to law.

Expansion of the Buffer Area

GM contends that the Findings Statement improperly requires it to increase the width of a buffer adjacent to Kingsland Point Park, arguing that there is no study or evidence in the record to justify the expansion. However, in several different sections of the FEIS, GM states that it has expanded both the waterfront and interior open space areas available for public and resident use, and that its plan includes "[a] newly proposed landscaped buffer area between Kingsland Point Park and the Project, generally ranging from 75 to 175 feet in width, and extending over 1,000 feet from the expanded beach to the proposed Kingsland Point Park parking area." The Findings Statement indicates that the proposed buffer area will serve to mitigate the visual and "noise" impacts upon Kingsland Point Park that will be created by the Project. Thus, the record supports

the conclusion that expansion of the buffer area adjacent to Kingsland Point Park was agreed to by GM, and that the condition is neither excessive or disproportionate to the potential visual and audible impacts that may be caused by the Project.

Hudson River Estuary/Pocantico River Outlet

The Findings Statement requires GM to "reserve" certain space for any potential future creation of a Hudson River estuary or Pocantico River outlet. GM claims that this requirement should be stricken because it would not serve to mitigate any potentially adverse environmental impacts caused by the Project. This Court agrees.

Petitioner's FEIS states that:

> In the Applicant's opinion as reflected in the DEIS, the creation of this estuary (which is similar in many respects to proposals to relocate the Pocantico River) is not an alternative to the Lighthouse Landing Project, as it is not a measure necessary to mitigate any adverse impacts of the project. Nevertheless, the Applicant recognizes that . . . the new watercourse would provide several benefits for the Village. [. . .] It would add an additional aesthetically-pleasing element to the waterfront, enhancing the waterfront esplanade and related improvements associated with Lighthouse Landing and substituting a water rather than land buffer between the development and Kingsland Point Park. It could provide ecological benefits providing additional habitat for aquatic and terrestrial species and thus increasing biological diversity. It would also offer additional interpretive educational opportunities.

By this statement, GM did generally acknowledge the concept of an estuary. However, by letter dated April 18, 2007, from Roseland to the Mayor of Sleepy Hollow, the developer states:

> We have spent countless hours "convincing GM" to consent to reserve lands for a future estuary. GM will attach certain conditions to that future use of its land and will not provide any warranties or contribute to the remediation. It will require indemnification for such use if and when an estuary is constructed. As you well know this has always been a major issue to GM.

Under the specific facts and circumstances present here, it cannot be said that GM expressly agreed to set aside land for the creation of a future estuary. Because it is an aesthetic element and not a measure necessary to mitigate an adverse impact, the Board cannot *ipso facto* make it a binding, unilateral requirement that is properly included in the Findings Statement. As set forth, *supra*, "a condition may be imposed upon property so long as there is a reasonable relationship between the problem sought to be alleviated and the application concerning the property." *Matter of Mackall v. White*, 85 A.D.2d 696, 445 N.Y.S.2d 486 (1981); *see Holmes v Planning Bd. of Town of New Castle*, 78 A.D.2d 1, 19, 433 N.Y.S.2d 587 (1980). Here, the creation of a future estuary is not a measure necessary to mitigate an adverse impact caused by the Project. To the extent that GM discussed an agreement in principal to set aside land in order to create a future estuary, that agreement was never memorialized in a separate contract signed by both parties. While the Findings Statements lays out broad principles that may function as a framework for a final agreement, they are not conditions that may be unilaterally imposed upon GM. Accordingly, this requirement is stricken from the Findings Statement.

Increase in Parking Spaces

GM next contends that the Findings Statement improperly requires it to provide for 150-160 more parking spaces than it provided for in the FEIS. GM's design plans provide for approximately 4,000 parking spaces, including 816 off-street spaces adjacent to Beekman Place[9] and 245 on-street spaces within one bock of Beekman Place, which GM contends meets the peak parking demand and complies with existing zoning regulations.

[9]Beekman Avenue is an existing street that connects the Site to the rest of the Village of Sleepy Hollow. As far as this Court can determine, Beekman Place is a proposed street that will run along the commercial corridor of Lighthouse Landing.

The DEIS included a detailed parking analysis showing that there would be "shared" parking based on the mixed residential and commercial uses of the Project. The concept of shared parking in the commercial corridor of the Project is recognized in the text of the RF District, when "the cumulative parking demand is less than the sum of the peak demand values for each individual land use." The concept of "shared" parking avoids a large surplus of parking (and impervious surface) in the waterfront area. Sleepy Hollow Zoning Code § 62-5.1 V(12)(g).

The Findings Statement indicates that the peak commercial parking demand is estimated to be approximately 972 parking spaces, although accounting for the differing peak parking times, "the actual highest single peak parking demand is projected to be 759 spaces." Although 816 parking spaces were provided for in the FEIS, the Findings Statement concludes that "[w]hile this may be a sufficient number of parking spaces to meet the projected highest single peak demand of a given day by utilizing shared parking, the location of the 816 parking spaces on the FEIS Alternative Plan did not provide an adequate number of off-street parking spaces in sufficient proximity to the commercial components of the project." The Board gave no specific reason for its determination that there was an inadequate number of parking spaces within the Project's commercial corridor, other than its desire to "take a conservative approach."

Contrary to Respondent's contention, GM's statement that it would "consider" providing additional spaces is not the equivalent of a binding commitment to do so. In view of the uncontested fact that the actual highest single peak parking demand is projected to be 759 spaces, and the FEIS provided for 816 parking spaces, it was unreasonable for the Board to require GM to provide additional spaces.

Construction Sequencing

GM claims that the construction sequencing contained in the Findings Statement turned its proposed schedule "upside down," and requires the construction of various amenities at unreasonably premature stages of the construction process. Specifically, GM complains about the timing of the repair of a viaduct, the early construction of recreation facilities, including soccer fields and tennis courts, and the timing of the construction of the DWP facility.

With respect to repairing the viaduct, Respondents argue that because reconstruction of the Beekman Avenue Bridge must take place at an early phase of the overall project schedule (so that construction vehicles do not have to travel through a congested area of the Village to access the site), and because this work and repair of the viaduct both require coordination with MTA Metro-North Railroad, it would be costly and unreasonable to perform this work in two separate phases. Respondents further contend that early repair of the viaduct was motivated by safety concerns, including the existence of structural problems. Accordingly, Respondents reasonably changed the viaduct repair to the first year of the Project. With respect to the construction of the DPW facility, the FEIS provides that "[c]onstruction of the public works facility could be started in the first phase of construction, but the timing of the work will be as directed by the Village of Sleepy Hollow." Thus, the Court finds that the modified construction phasing in the Findings Statement with respect to these specific tasks bears a reasonable relationship to the impacts associated with the Project.

With respect to the recreational facilities, however, the Court finds that the construction schedule imposed by the Board is not rational. Respondents contend that "it is only logical that these facilities be developed in tandem with the repair of the viaduct and the reconstruction of the Beekman Avenue Bridge, given their proximity." The Findings Statement further indicates that:

> The burden and inconvenience Village residents will suffer over the course of the construction of the new "Village within a Village," including impacts related to noise and truck traffic, will be mitigated by the residents' ability to enjoy new recreational facilities. Additionally, the timely construction of the new DPW facility will allow for the provision of adequate maintenance of the public roads and additional public spaces to be subsequently constructed.

While GM stated, in response to comments made on the DEIS, that it "will provide public access to the waterfront as early as practicable once construction begins" and that "[e]fforts will be made to provide some pedestrian access to the waterfront as soon as may be practicable," Respondents point to no evidence in the record showing that recreational facilities may also be safely open to the public in the midst of a long term construction project. In any event, the public's early access to recreational facilities on the Site is not a measure that will mitigate impacts related to traffic or noise. Thus, this requirement is stricken from the Findings Statement.

Environmental Easement

With respect to the issue of existing and residual contamination on the Site, the Findings Statement imposes upon GM an obligation to execute an environmental easement in favor of the Village. An environmental easement is an enforcement mechanism used for property where there is residual contamination that makes the property suitable for some, but not all uses, and/or where the residual contamination requires ongoing management. Environmental easements, specifically provided for in Article 71, Title 36 of New York's Environmental Conservation Law (adopted as part of the New York Brownfields Law of 2003), are therefore used to restrict the use of a property to specified categories (e.g., commercial, industrial) or to require the long-term operation, maintenance, and monitoring of "engineering controls" such as pavement, covers,

subsurface barriers, building ventilation systems, fences, and water filtration devices, and "institutional controls," which are non-physical controls.

The purpose of an environmental easement is to ensure that use restrictions or engineering controls remain in place in order to protect public health and the environment. In creating environmental easements, the legislature declared in ECL § 71-3601 that:

> [. . .] contaminated site remedial programs are an important and necessary component of the state's policy of restoring and revitalizing real property located throughout New York state. The legislature further finds that when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or includes engineered structures that must be maintained or protected against damage to be effective, it is necessary to provide an effective and enforceable means of ensuring the performance of maintenance, monitoring or operation requirements, and of ensuring the potential restriction of future uses of the land, including restrictions on drilling for or pumping groundwater for as long as any residual contamination remains hazardous. The legislature declares, therefore, that it is in the public interest to create environmental easements because such easements are necessary for the protection of human health and the environment and to achieve the requirements for remediation established at contaminated sites.

The statute further provides that an environmental easement may be enforced in perpetuity against the grantor, subsequent owners of the property, lessees, and any person using the property by its grantor, by the State, or by the government of the municipality where the property is located. *See* Environmental Conservation Law Article 71, Title 36.

Here, the Findings Statement provides that:

> An environmental easement will be filed with the Land Records Division of the Westchester County Clerk's Office and will be binding upon all future owners of the site or any portions thereof. The Easement will be enforceable by NYSDEC and by the Board of Trustees of the Village of Sleepy Hollow, and, if required by

> NYSDEC, will specify the requisite obligations for securing the public health and environmental protection. The Easement will reference and require implementation of the [site management plan] and the engineering and institutional controls imposed on the Site [. . .]. The institutional controls will prohibit the use of Site groundwater for potable water purposes and restrict use to classifications which includes open space and parkland use. Should the NYSDEC file a brownfields easement without providing that the obligations run in such a way as to permit enforcement by the Village of Sleepy Hollow, then the Village Trustees shall require the Applicant to execute a separate environmental easement running in favor of the Village.

GM contends that this requirement violates a 2002 agreement between the Village and GM in which the Village agreed that GM's compliance with all New York State Department of Environmental Conservation remediation obligations would fully satisfy all of its soil remediation obligations, and that the Village would require no additional remediation measures.

Respondents counter that GM previously agreed to provide an easement and retain liability for environmental contamination on the Site, and that the Findings Statement does not require GM to do more than was required of it under prior agreements. The record does not support the conclusion that GM necessarily agreed to grant an environmental easement such as the one required by the Findings Statement, nor must this Court decide whether the Findings Statement is inconsistent with any prior agreements between the parties. The requirement that GM grant an environmental easement is reasonably related to the impacts of the Project, and appears to be a requirement under the ECL in any event.

As set forth in the Findings Statement and the parties' submissions, the GM Site was created through successive filling operations with "urban fill material." After the plant closed in 1996, GM conducted environmental tests on the soil, groundwater, and Hudson River sediments in order to determine the extent of potential contamination. In 1996, the Village and GM entered

into an agreement in order to ensure that "the Site is cleaned up in accordance with federal and New York State environmental laws and regulations to protect the public's health, safety and welfare." The agreement was, in part, the result of a federal lawsuit challenging the application of various environmental protection laws. GM agreed, *inter alia,* that it would design and carry out remediation of the site for the future use or reuse of the Site. The 1996 Agreement also contemplated a temporary easement for a public "walkway" over a specific part of the Site in order to facilitate public access to the Hudson River.

On August 29, 2002, GM and the Village entered into an agreement to settle additional claims with respect to the remediation and development of the Site. The Agreement acknowledges that GM was about to enter into a Voluntary Cleanup Agreement ("VCA") with the Department of Environmental Conservation. The Village agreed that "[i]n the event DEC determines, in the course of the investigation carried out pursuant to the VCA, that further remediation of the Site is required, then, with respect to the obligations of GM [concerning environmental assessment and remediation] of the 1996 Agreement, the Village agrees that the satisfactory completion of any such remediation required by DEC will completely satisfy and fulfill the same."

In 2003, GM and Roseland entered into a Voluntary Cleanup Agreement with the DEC, and in 2005 those parties entered into two Brownfield Cleanup Agreements under the State's Brownfield Cleanup Program.[10]

[10]The Brownfield Cleanup Program Act, ECL § 27-1401 (2008) *et. seq.*, was enacted in 2003 to encourage voluntary remediation of Brownfield sites for reuse and redevelopment. ECL § 27-1403. A Brownfield site, with certain exceptions, is defined as any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant. ECL § 27-1405(2). The benefits of admission to the BCP include tax credits and a release from liability to the State of New

It is not entirely clear what GM's substantive objection is to the requirement that it provide an environmental easement. The Findings Statement provides that GM shall provide an environmental easement in favor of the Village only in the event the DEC files a Brownfield easement without permitting enforcement of such an easement by the Village of Sleepy Hollow. However, subdivision 10 of Section 71-3605 of the ECL specifically provides that an environmental easement "may be enforced in law or equity by its grantor, by the state, or any affected local government," which in turn is defined as "every municipality in which land subject to an environmental easement is located." ECL § 71-3603 (1). Thus, the Village is statutory empowered to enforce such an easement; this right is restated in the Findings Statement. Moreover, the FEIS itself recognizes that "due to the Applicant's continuing obligations under the Brownfield Cleanup Program, future uses on the Site must be consistent with the use identified in the Brownfield Cleanup Agreement for the site and with the environmental easement that will be filed [. . .]." Thus, the requirement in the Findings Statement that GM provide an environmental easement is harmonious with the intent of state environmental conservation law, and can hardly be said to be arbitrary or capricious, or not reasonably related to the impacts of the Project.

Indemnification Obligation

GM also argues that the requirement in the Findings Statement that GM hold the Village harmless from injury arising out of any residual soil contamination below the public roads and public spaces on the Site "goes far beyond" the 2002 Agreement and is therefore arbitrary and

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York "arising out of the presence of any contamination in, on or emanating from the Brownfield site." *See* 6 NYCRR § 375-3.9 (e); ECL § 27-1421 (1).

capricious. As discussed above, the 2002 Agreement relates to the clean-up of GM's Site, and states that the satisfactory completion of any remediation required by DEC will satisfy all of GM's remediation obligations. It does not address the separate issues of indemnification, liability, environmental insurance requirements or any other issues pertaining to the allocation of risk and liability for residual contamination. In this Court's view, GM is mixing apples and oranges when it discusses remediation and indemnification as if they were synonymous; they are not. Moreover, whether the hold harmless requirement is inconsistent with the parties' 2002 Agreement is not the issue. The question is whether the Respondents can impose indemnification on GM as a condition of approving the Project. As discussed above, Respondents can impose reasonable conditions on GM that are designed to mitigate environmental impacts caused by the Project. However, indemnification is not a measure designed to mitigate an impact caused by the Project. It is a means to allocate liability in the event that there is future litigation, or future clean-up costs, with respect to the residual soil contamination that will remain on the Site after remediation measure have been undertaken. Indemnification will not reduce the level of this contamination, but serves to allocate responsibility for future, undetermined environmental damages. In the absence of an indemnification agreement between the parties, this Court finds that the Board may not unilaterally impose such an obligation on GM in the Findings Statement. This condition is therefore stricken.[11]

[11]Many, if not most of the litigated cases regarding the contractual allocation of environmental liability arise under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 94 Stat. 2767, as amended, 42 U.S.C. §§ 9601-9675, enacted by Congress in 1980. The Act was designed to promote the timely cleanup of hazardous waste sites and to ensure that the costs of such cleanup efforts were borne by those responsible for the contamination. CERCLA § 107(e) specifically addresses the

Dedication of Land in Fee Simple

Finally, GM challenges the Board's determination not to accept fee simple title to any of the land beneath public roads, public parks and open public spaces that GM intends to grant to the Village. Petitioner contends this is contrary to Section 62-5.1(E)(1) of the RF District. That section essentially provides that the public will always have access to the Hudson River waterfront in the RF District, and a landowner must provide waterfront access to the public either by means of granting an easement to the Village or by granting fee ownership to the Village. The statute defines public access as "safe and unobstructed access to and along the dry, nontidal or submerged shore areas of the Hudson River for all members of the public" and further provides that:

> Access may be regulated by reasonable conditions in a management plan submitted by the applicant and approved by the Mayor and Board of Trustees as part of the final site plan approval. *The access shall be at least 15 feet wide from a street to the shoreline and at least 20 feet wide along the shoreline for the entire width of the property in the RF - Riverfront Development District* (emphasis added).

Section 62-5.1(E)(1) also provides that such access " shall be, *at the option of the applicant*, in the form of a permanent easement or the granting of fee title to the Village of Sleepy Hollow" (emphasis added). Thus, the RF District recognizes that since the property owner must grant access to the public, it has the option to decide how it chooses to convey that property.

Neither Petitioner nor Respondents contest the meaning of Section 62-5.1(E)(1). Nor do they state what portions of land within the GM Site fall within the definition of this Section. The

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transfer of, and indemnification for, such liability. This Court does not make any determination with respect to which party may be responsible for future clean-up costs or other damages.

Findings Statement simply states:

> After the remediation of the West Parcel is completed to the satisfaction of the NYSDEC, there will remain residual soil contamination at low levels. The Village does not wish to assume any potential future liability to third parties as a result of this contamination. As part of the FEIS Alternative Plan certain areas of the West Parcel are proposed to be public roads, public parks and public open space both along the riverfront and within the interior of the site. In order to protect itself from any potential future liability, the Village will not take title to the land within any of these public areas or under any roads. Rather, the Village will take title to the physical improvements in those areas and the road bed and Roseland will grant easements in perpetuity to the Village which would obligate the village to repair and maintain the pubic roads, public parks and public open space areas [. . .].

Respondents concede that the import of Section 62-5.1(E)(1) is that a developer within the RF District must provide waterfront access to the public either by means of granting an easement of access to the Village or, by granting fee ownership of certain lands which would provide access to the waterfront. However, the plain text of this section gives the developer (not the Village) the option as to whether to provide access to the riverfront by either an easement to the Village or by fee ownership to the Village.

Respondents argue GM already agreed in the 1996 Agreement to grant an easement to the Village in order to facilitate public access to the Hudson River. However, the provision for an easement in that Agreement relates exclusively to an easement to construct, as part of a project undertaken by the Village, a public "walkway" on a specified part of the GM Site, referred to only as "over the rocks."

To the extent that certain portions of the GM Site fall within Section 62-5.1(E)(1), Respondents may not void the Petitioner's statutory option. While the Village may have a legitimate public purpose in avoiding title in fee simple to such property, there is simply no authority to do so either within the zoning statute or SEQRA.

CONCLUSION

For all of these reasons, GM's petition is granted in part, and denied in part, to the extent specifically discussed above.[12] The Court has considered all of the remaining arguments raised by the parties, and to the extent not specifically addressed above, finds them to be without merit. No further proceedings are warranted. *See St. Onge v. Donovan*, 71 N.Y.S.2d 507, 527 N.Y.S.2d 721 (1988)(lower courts properly excised invalid conditions without the need to remand for further proceedings); *Richter v. Delmond,* 33 A.D.3d 1008, 824 N.Y.S.2d 327 (2d Dep't 2006)(striking conditions without further proceedings); *Clinton v. Sommers, III*, 144 A.D.2d 145, 148, 534 N.Y.S.2d 473 (3d Dep't 1988)(annulling only the portion of the Planning Board's site plan approval that imposed improper conditions without further proceedings).

The foregoing constitutes the opinion, decision, order and judgment of this Court.

[12]Respondents' affirmative defenses either fail to state a claim, are wholly conclusory, or barred by this Court's prior ruling denying Respondents' motion to dismiss. The Court further finds that Respondents' argument that Roseland and/or the Town of Mount Pleasant Industrial Development Agency ("TMPIDA") are necessary parties to this proceeding pursuant to CPLR § 1001 to be without merit. Since Roseland is no longer an applicant, it has no interest in the Project or the Site and will not be inequitably affected by the judgment in this action. Moreover, the fact that the TMPIDA has legal title by virtue of the industrial bond financing transaction does not change the fact that GM is the party that will be affected by the judgment in this action.

Dated: White Plains, New York
December 31, 2009

James W. Hubert
Acting Supreme Court Justice

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ENVIRONMENTAL FINDINGS STATEMENT FOR
LIGHTHOUSE LANDING AT SLEEPY HOLLOW

WHEREAS, this document is an Environmental Findings Statement prepared pursuant to 6 NYCRR Part 617 in relation to the proposed redevelopment of the former General Motors automotive assembly plant, located at 199 Beekman Avenue, Sleepy Hollow, New York, and which consists of three parcels: 115.10-1-1, 115.11-1-1, and 115.15-1-1, totaling approximately 96 acres (the Site); and

WHEREAS, the project Site consists largely of land created to support industrial purposes and has an extensive industrial history dating back to the 1800's and which includes approximately 100 years of automobile assembly and manufacturing; and

WHEREAS, nearly all of the Site was created through a series of filling operations conducted with urban fill material such as ash and cinders or dredged materials by various entities, which started with the construction of the Hudson River Railroad in the 1840's and continued until 1960; and

WHEREAS, the West Parcel was historically used principally by the automotive industry, and after its acquisition of the West Parcel, GM demolished most of the existing buildings, conducted a series of fill events and constructed and expanded the automotive Assembly Plant; and

WHEREAS, the East Parcel began to receive silt and form wetlands in the 19th century, after the railroad track was laid across Slaperin Hav'n Bay, leaving the Pocantico River to pass into the Hudson under a trestle, similar to the trestle that is still in use at the confluence of Fremont Stream, from Fremont Pond, and the Hudson, and a portion of the East Parcel south of Continental Street had been used by the Village as a landfill for municipal refuse and ash, with additional fill added for public development of athletic facilities, and GM subsequently purchased the East Parcel, converting it into a parking lot; and

WHEREAS, the GM automotive Assembly Plant was located immediately adjacent to the Kingsland

Point county park, and in the late 1920s and early 1930s the mouth of the Pocantico was relocated to the north of Kingsland Point Park; and

WHEREAS, a portion of the site of the former GM automotive assembly plant is located in a "green crescent" of land running from the Hudson River, through Kingsland Point Park, DeVries Park, the Historic Hudson Valley Philipsburg Upper Mills historic site and restoration, the Pocantico River valley encompassing the Old Dutch Church at Sleepy Hollow and its burying ground, the Village's Douglas Park, the Sleepy Hollow Cemetery, the New York State Rockefeller State Park Preserve, and the Village's Barnhart Park; and

WHEREAS in 2003, GM and Roseland entered into a Voluntary Cleanup Agreement for the Site with the NYS Department of Environmental Conservation, and subsequently, in 2005, the parties entered into two Brownfield Cleanup Agreements for the Site; and

WHEREAS, over the years the Site was a significant and integral part of the Village and its economy, providing a major employment base, tax revenue source, and support for local business activity, particularly along Beekman Avenue; and

WHEREAS, when the closure of the General Motors assembly plant became apparent, the Village and other governmental agencies embarked on an extensive planning process designed to prepare a framework for the beneficial reuse of the Site. The planning efforts included:

a. In 1996, the establishment of the Governor's Task Force on the Reuse of the General Motors North Tarrytown Plant, led by the Westchester County Department of Planning and with representatives from the State and the Village, which prepared a Reuse Study to broadly identify potential redevelopment options for the Site, highlighting potential scenarios and positive aspects that would be important to attract future development; and

b. Throughout the late 1980s and 1990s, the Village worked on the creation of a Local Waterfront Revitalization Program (LWRP). Anticipating the dramatic change on the Village stemming from the closure of the General Motors plant, a major

component of the LWRP was the development of a series of goals and objectives for the redevelopment of the General Motors Site. The LWRP, adopted by the Village in November 1996 and approved by the NYS Department of State on June 5, 1997, proposed the creation of a specific zoning district that would allow for a redevelopment compatible with the balance of the Village. The Village then began the drafting of the new RF- Riverfront Development zoning district, which was based, in part, on recommendations from the Village's approved LWRP. The RF district, adopted by the Village in 1997, created specific zoning language outlining general parameters regarding building height, density, permitted uses, and design criteria. The RF district regulations contemplate a maximum development potential on the Site of approximately 1,870 residential units and 400,000+ square feet of commercial space. The LWRP concepts were subject to broad public input within the Village, including a mailing to all Village residents. The LWRP and RF-Riverfront Development District amendment were subject to a thorough environmental review conducted by the Village Board of the then Village of North Tarrytown.

c. In 2002, the Village prepared its Waterfront Linkage Study with the following purposes: to assist the Village in better visualizing what future development would look like; to identify specific components within the Village that could be linked to the Site; and to build consensus towards a concept plan which would begin to address land use, circulation, density and aesthetics. The Linkage Study team was made up of a wide range of participants, including private citizens, State and Village representatives, the development community and special interest and environmental organizations. The study process included multiple public workshops/presentations in which more than 170 members of the public participated; and

WHEREAS, the RF-Riverfront Development zoning language enumerates a number of purposes for the district, including: to promote the policies of the LWRP, including positive development and revitalization of the waterfront area, while ensuring that such revitalization takes place in a manner sensitive to the coastal and community resources; to afford a priority to waterfront-compatible well-designed uses, achieve public access to the coastal area and provide standards for development in

such a fashion as to create a distinct waterfront district in the spirit of an old Hudson River waterfront community image; to provide opportunities for permanent public views and visual access to the Hudson River; to protect, preserve and enhance sensitive environmental areas, prevent soil erosion, sedimentation and slope failure, prevent the loss or diminution of public views of the Hudson River and opposite shore, and prevent activities which will cause water and air pollution; to encourage an economic stimulus and by establishing a comprehensively planned central focus for the Village's waterfront area including land uses such as residential and waterfront commercial to serve as a catalyst for the revitalization of the entire Village core area; to encourage a mix of uses with a consistent set of design standards; to eliminate deteriorated structures and deleterious land uses; and to provide increased pedestrian access that integrates with pedestrian public access opportunities on adjacent public lands; and

WHEREAS, on February 11, 2003 a formal application for a Riverfront Development Concept Plan and Special Permit (the Proposed Action or project) was submitted by Roseland/Sleepy Hollow, LLC (Roseland) and General Motors Corporation (jointly with Roseland, the Applicant) to the Mayor and Board of Trustees of the Village of Sleepy Hollow (the Village Board); and

WHEREAS, the Proposed Action as initially submitted called for a mixed-use waterfront project consisting of 1,562 residential units, 185,000 square feet of retail space, 95,000 square feet of office space, a 150-room inn, a proposed train station and associated parking, and open space; and

WHEREAS, the Proposed Action is subject to approvals required by the Village's Waterfront Consistency Review Law, Zoning Ordinance, and Wetland/Watercourse Protection Law; and

WHEREAS, on February 25, 2003, the Village Board did declare its intent to be the Lead Agency for the Proposed Action, as required by the State Environmental Quality Review Act (SEQR) of the State of New York, and did cause to be circulated a Notice of Intent to Act as Lead Agency to a comprehensive list of interested and involved agencies and other members of the public concerned about this matter; and

WHEREAS, in order to aid in the environmental review, the Village retained a number of independent consultants to assist in the review of the technical documentation, including: Keane &

Beane, P.C., Special Counsel to the Village; Saccardi & Schiff, Inc., Planning and Development Consultant; STV Incorporated, Traffic, Air, and Noise Consultant; RealEstate Solutions Group, Socioeconomic and Fiscal Consultant; Dolph Rotfeld Engineering, P.C., Civil and Utility Engineering Consultant; DMJM Harris, Stormwater and Marine Facilities Consultant; Hardesty & Hanover, Structural Engineering Consultant; Beyer Blinder Belle, Design Consultant; Richard Daley Architects, Design Consultant; and Roux Associates, Environmental Consultant.

WHEREAS, the Village Board received a draft scoping document from the Applicant and circulated the draft scoping document to all known interested and involved agencies and other members of the public concerned about this matter; and

WHEREAS, on April 7, 2003, the Village Board of the Village of Sleepy Hollow did declare itself to be the Lead Agency as mandated by SEQR for the coordinated review of the Proposed Action described herein; and

WHEREAS, on April 7, 2003, the Village Board did issue a Positive Declaration pursuant to Section 617.7 of the SEQR regulations, requiring the preparation of a Draft Environmental Impact Statement (DEIS), based on the potential for impacts related to, among others, traffic generation, scenic viewsheds, stormwater management, and flood hazards, and did circulate a draft scoping outline to the various involved and interested agencies and other interested groups; and

WHEREAS, the Village Board held a public DEIS scoping session on May 5, 2003, at which time all members of the public were invited to attend and present their views as to the contents of the DEIS to be prepared by the Applicant, and continued the public scoping session until May 20, 2003, at which time the Village Board closed the public scoping session but retained a comment period for written comments until June 6, 2003; and

WHEREAS, the Village Board received 27 pieces of correspondence along with the public scoping transcripts to be considered as part of the scoping outline comment process; and

WHEREAS, on May 27, 2003, the Village Board, at a duly noticed work session, did review and discuss in detail comments to the proposed scoping outline; and

WHEREAS, on or about July 25, 2003, the Applicant circulated to the Village, its staff and consultants a revised draft scoping outline; and

WHEREAS, the Village staff and consultants reviewed the revised scoping outline and made further revisions and submitted them to the Lead Agency for its review; and

WHEREAS, on August 12, 2003, the Village Board did discuss the revisions to the proposed scoping outline, and accepted the scoping outline and directed the Applicant to circulate a copy of the scoping document to the attached list of interested and involved agencies and other members of the public concerned about this matter; and

WHEREAS, on April 14, 2004, the Applicant submitted a preliminary Draft Environmental Impact Statement (DEIS) to the Village, including a parking analysis prepared by Walker Parking Consultants, revised April 12, 2004; and

WHEREAS, on September 21, 2004, the Village Board passed a resolution accepting the September 14, 2004 draft of the Sleepy Hollow Waterfront Open Space Plan as being sufficient in detail for public review and comment as part of the forthcoming preliminary DEIS; and

WHEREAS, this preliminary DEIS was reviewed by the Village Board and its consultants for completeness with respect to the items identified in the adopted scoping outline; and

WHEREAS, the Village consultants provided written reports regarding the completeness of the DEIS; and

WHEREAS, the Applicant revised the preliminary DEIS to address the items identified in the completeness reports and on November 19, 2004 submitted a redlined revised preliminary DEIS to the Village; and

WHEREAS, on December 21, 2004, the Village Board held a special work session devoted to discussing the completeness aspect of the preliminary DEIS document; and

WHEREAS, during its deliberations on completeness the Village Board did consider review memoranda from its consultants, including Saccardi & Schiff, Inc. (June 24, 2004 and December 20, 2004), STV Incorporated (May 7, 2004, July 23, 2004, December 20, 2004 and December 21, 2004), RealEstate Solutions Group (July 23, 2004 and December 20, 2004) and Dolph Rotfeld Engineering, P.C. (June 28, 2004 and December 20, 2004); and

WHEREAS, on January 7, 2005, the Applicant submitted a revised DEIS, which was reviewed by the Village Board, Village staff and consultants, responding to the completeness comments, and

WHEREAS, on January 11, 2005, after due consideration, the Village Board declared that the DEIS was complete with respect to its scope, content and adequacy as prescribed by SEQR; and

WHEREAS, the DEIS was circulated to all Interested and Involved agencies; and

WHEREAS, the Village Board held a series of public meetings and hearings on the DEIS and the Proposed Action in order to receive public comment, including public meetings on February 8, 2005 and February 15, 2005, and public hearings on February 19, 2005 and February 22, 2005, at which time all those wishing to be heard were given the opportunity to speak, and

WHEREAS, all comments received during both the public meeting sessions and the official public hearings have been included in the EIS record and treated in the Final Environmental Impact Statement as public hearing comments; and

WHEREAS, in order to enhance public involvement in the review of the DEIS and facilitate a “hard look” by the Board of Trustees at the project’s impacts, the Village Board created various subcommittees, which were composed of no more than three trustees, Village staff and consultants and open to participation by members of the community to study focused areas of concern in the DEIS, including Site Design, Traffic, Community Facilities, Construction and Site Development, Environmental Conditions and Socioeconomics; and

WHEREAS, the subcommittees held a series of public meetings in Mach 2005 on these focused

areas of concern; and

WHEREAS, on October 4, 2005, the Applicant submitted a preliminary Final Environmental Impact Statement (pFEIS), intended to respond to all substantive comments received during the DEIS comment period; and

WHEREAS, the Proposed Action presented in the pFEIS was changed since the DEIS submission and included significant modifications to the project program and plan (such modified plan, the FEIS Alternative Plan) incorporating, among others: reducing the number of residential units by 312 units to 1,250; reducing the size of the retail component from 180,000 sf to 132,000 sf, including a 25,000 sf market, 18,000 sf fine arts cinema, 84,000 sf of shops and restaurants along Beekman Place, and a 5,000 sf restaurant within the hotel; reducing the size of the office component from 50,200 sf to 35,000 sf; reducing the hotel to 140 rooms; reducing the ratio of rental residential units from 72% to 51%; increasing the open space to be provided along the riverfront and within the interior of the Site, creating an open space buffer between Kingsland Point Park and the project; increasing the overall quantity of public open space and public use areas from between 26 to 33 acres to approximately 39 acres, which is approximately 41% of the total Site area; expanding the scope of water-dependent uses along the waterfront with a floating dock for small craft launching, widening and lengthening the waterfront access area, and providing an interpretive center/boathouse near the cove adjacent to Kingsland Point Park, a “dock and dine” dock adjacent to the proposed hotel location, and a third belvedere extending over the riprap opposite the hotel site; and increasing the extent of infrastructure improvements to be made as part of the project; and

WHEREAS, in order to facilitate the review of the FEIS Alternative Plan and the pFEIS document, the Village Board reconstituted the various subcommittees involved in the review of the DEIS, which were composed of no more than three trustees, village staff and consultants and open to participation by members of the community; and

WHEREAS, the subcommittees held a series of public meetings from October to December 2005 on focused areas of concern regarding the FEIS Alternative Plan and the pFEIS, including Site Design, Traffic, Community Facilities, Construction and Site Development, Environmental Conditions and Socioeconomics; and

WHEREAS, on December 20, 2005, reviews from the various Village consultants, the subcommittees, the Village Planning Board, Waterfront Advisory Committee and Architectural Review Board were packaged and transmitted to the Village Board; and

WHEREAS, these reviews included:

- December 20, 2005 cover memorandum from Saccardi & Schiff, Inc.
- November 18, 2005 review letter from Hardesty & Hanover, LLP
- December 8, 2005 review memorandum from Dolph Rotfeld Engineering, PC
- December 16, 2005 review memorandum from STV, Inc. (with 11/18/05 attachment on traffic review)
- December 16, 2005 review letter from Roux Associates, revised 1/31/06
- December 16, 2005 technical review by DMJM Harris
- December 17, 2005 review memorandum by Real Estate Solutions Group
- December 19, 2005 review memorandum by Saccardi & Schiff, Inc.
- December 19, 2005 review memorandum from STV, Inc
- Undated document, ARB Comments on the Lighthouse Landing Design Guidelines
- December 7, 2005 meeting minutes Waterfront Advisory Committee
- November 3, meeting minutes Traffic review sub-committee
- November 8, 2005 meeting minutes Community Facilities sub-committee
- November 15, 2005 meeting minutes Site development sub-committee
- November 16, 2005 meeting minutes Design review sub-committee
- November 17, 2005 meeting minutes Environmental review sub-committee
- November 22, 2005 meeting minutes Socio-economic review sub-committee
- December 13, 2005 meeting minutes Traffic review subcommittee, meeting 2
- December 15, 2005 review memorandum from Village of Sleepy Hollow Planning Board
- December 19, 2005 review memorandum from Beyer Blinder Belle

WHEREAS, the Village Board discussed the FEIS Alternative Plan and pFEIS and the comments received on the document at its December 20, 2005, January 10, 2006, January 17, 2006 and January 24, 2006 meetings; and

WHEREAS, after a careful and thorough review of the FEIS Alternative Plan and pFEIS document, the sub-committee reports, consultant reviews, and comments from other Boards and the public, the Lead Agency compiled a list of comments on the FEIS Alternative Plan and pFEIS to be addressed as part of the completeness aspect of the environmental review process and transmitted them to the Applicant by correspondence dated January 31, 2006; and

WHEREAS, on May 3, 2006 the Applicant submitted a revised pFEIS document; and

WHEREAS, after review of the revised document, the Village Board determined that the revisions were not sufficiently responsive to the completeness comments provided to the Applicant in January 2006, and directed the Applicant to further revise the pFEIS; and

WHEREAS, on November 7, 2006, the Applicant submitted a redlined pFEIS that had been further revised to address the completeness comments; and

WHEREAS, in response to further comments from Village consultants, on December 1, 2006 the Applicant submitted a redlined pFEIS that had been further revised; and

WHEREAS, the Village Board reviewed and discussed the FEIS Alternative Plan and revised pFEIS at its December 5, 2006, and December 12, 2006, meetings; and

WHEREAS, the pFEIS document was further revised in response to comments from the Village Board and a review memorandum from Saccardi & Schiff, Inc. (dated 12/8/06) and these redlined revisions transmitted to the Village Board on December 15, 2006; and

WHEREAS, during the course of the subject environmental review, the Lead Agency did evaluate building height as a design parameter and its relationship to the RF district zoning text; and

WHEREAS, a proposed amendment to the Zoning Code to allow for greater flexibility regarding building heights in the RF district was submitted for consideration with the Proposed Action by the Applicant on December 18, 2006, and subsequently amended on December 19, 2006; and

WHEREAS, the petition requested enactment of a Local Law to amend of Chapter 62, Section 62-5.1.X(2)(e) of the Code of the Village of Sleepy Hollow in regard to the height of buildings located in the RF - Riverfront Development Zoning District, so as to read (text in brackets deleted; underlined text added):

> No portion of a building or structure shall be erected to a height in excess of [42] 65 feet between the west side of the Metro-North Railroad property and 300 feet west of same.

Such Local Law would also amend Chapter 62, Section 62-5.1(X)(2)(g) so as to read (text in brackets deleted; underlined text added):

> With respect to the areas to which Subsections X(2)(d), (e) and (f) immediately above apply, and notwithstanding the provision of said sections, the Village Board of Trustees, during the concept plan review process, may grant an increase in building [length] height in excess of 65 feet where said Board finds that such increase would be consistent with the intent and purposes of the village's Local Waterfront Revitalization Program and would not result in adverse impacts to view corridors, nearby landmarks or adjacent land uses; and

WHEREAS, the Village Board continued its review and discussion of the FEIS Alternative Plan and pFEIS document revisions at its December 19, 2006 meeting; and

WHEREAS, by letter to the Village Board dated December 19, 2006, the Applicant advised the Village Board that the FEIS Alternative Plan is the Applicant's proposed Riverfront Development Concept Plan for the purposes of Section 62-5.1 of the Village Zoning Code; and

WHEREAS, based on the revisions to the pFEIS, on December 19, 2006 the Village Board completed the FEIS, the Applicant was directed to circulate the FEIS document by December 29, 2006 to all known involved and interested agencies, and the Village Board scheduled public hearings on the FEIS, the Riverfront Development Concept Plan and Special Permit applications and the proposed zoning text amendment; and

WHEREAS, a copy of the FEIS was also made available in the Village Clerk's office, the public library, and on a publicly-accessible Internet website (http://www.roselandproperty.com/coming_soon_new/lighthouse_landing.htm); and

WHEREAS, on January 10, 2007 the Applicant did appear before the Village WAC for a final consistency review with respect to the goals and policies detailed in the Village's LWRP; and

WHEREAS, at its January 10, 2007 meeting, the WAC, after due consideration and discussion, made a recommendation to the Village Board that the FEIS Alternative Plan was consistent with the goals and objectives contained in the Village's LWRP, subject to several conditions, including the condition that the WAC be consulted during development of the design for the waterfront open space; and

WHEREAS, on January 18, 2007, the Applicant appeared before the Village Planning Board, which discussed the FEIS and proposed zoning text amendment and subsequently submitted a recommendation on the proposed amendment and commentary on the FEIS to the Village Board; and

WHEREAS, although not a requirement under SEQR, the Village Board held a duly noticed public hearing on the FEIS and concurrent public hearings on the Riverfront Development Concept Plan and Special Permit applications and proposed zoning text amendment on January 23, 2007, at which time all those wishing to be heard were given the opportunity to speak; and

WHEREAS, the Village Board accepted public comments on the accepted FEIS until the end of the business day on Friday February 2, 2007, including comments from the Village of Sleepy Hollow Planning Board and the neighboring Village of Tarrytown; and

WHEREAS, the Village Board was provided copies of all correspondence submitted on the FEIS during the public comment period, a copy of the public hearing transcript, and two separate memoranda from Saccardi & Schiff, Inc. dated 2/16/07 and 2/22/07 summarizing all of the comments submitted to the Village and how they would be addressed; and

WHEREAS, the Village Board requested that various consultants to the Village prepare additional material for consideration relative to specific technical issues raised during the course of the comment period on the FEIS, which included STV, Inc. memorandum dated 6/26/07, RealEstate Solutions Group memorandum dated 6/20/07, Roux Associates commentary, and DMJM-Harris letters dated 4/25/07, 7/10/07, and 7/16/07; these studies do not change the FEIS impact analyses and were prepared to determine how to most effectively mitigate adverse effects; and

WHEREAS, on February 13, February 20, February 27, May 1, May 8, May 15, June 12, June 19, and June 26, July 10, July 17, and July 24, 2007, the Lead Agency held public meetings to review and discuss comments raised during the course of the FEIS comment period and issues to be addressed in the Environmental Findings Statement, including the reasonableness of lower density alternatives and their relative impact on traffic and fiscal conditions; and

WHEREAS, on May 15, 2007 the Applicant's design consultant, Lessard Architectural Group, presented to the Village Board a revised Riverfront Development Concept Plan and preliminary architectural drawings for certain of the proposed West Parcel buildings, dated May 15, 2007, and responding in part to comments received during the FEIS public hearing and from the Village's design consultant, Beyer Blinder Belle; and

WHEREAS since the Village of Tarrytown abuts the Village of Sleepy Hollow and may potentially be affected by development of the project, the Village Board is concerned with the potential for impacts on its neighboring municipality and has carefully considered the comments from the Village of Tarrytown raised during the environmental review process, including commentary from the Mayor of the Village of Tarrytown and other Tarrytown representatives delivered at the FEIS public hearing and the correspondence from the Village of Tarrytown dated February 1, 2007, as well as subsequent reports on behalf of Tarrytown from Adler Consulting and Urbanomics received after the close of the comment period related to traffic and fiscal impacts ; and

WHEREAS, cognizant of other projects potentially affecting the Proposed Action or contributing to its cumulative impact, the Village of Sleepy Hollow has reviewed and submitted comments on the Ferry Landings environmental review documents located in the neighboring Village of Tarrytown, and the Village of Sleepy Hollow recently completed its own environmental review process for

upgrades to the municipal water supply system; and

WHEREAS, on or about July 9, 2007 the NYSDEC issued a Decision Document on the Interim Remedial Measure for the Former General Motors North Tarrytown Assembly Plant; and

WHEREAS, as enumerated above, over the past several years the Village Board has held in excess of 50 public meetings, hearings or subcommittee meetings to discuss and consider the Proposed Action; and

WHEREAS, in the process of preparing this Findings Statement, the Village Board has reviewed and considered the DEIS, the FEIS, the LWRP, consultant reports, plans and studies, and public and agency comments and correspondence all maintained on file in the Village Clerk's office, including but not limited to the plan for the East Parcel prepared for the Village by Richard Daley Architects, the Waterfront Use Master Plan prepared for the Village by Beyer Blinder Belle, reports sponsored by Scenic Hudson (including those from Ecosystems Strategies, Inc., Han-Padron Associates, Metropolitan Conservation Alliance, and Milone & MacBroom, Inc.), and commentary from the Village of Tarrytown representatives, which are all included in the SEQR record; and

WHEREAS, during the course of the environmental review, the Village Board also reviewed information received from Historic Hudson Valley (HHV) as part of submissions by Arnold & Porter, LLP regarding a contemplated expansion of the Philipsburg Manor Restoration on the East Parcel, although this is not part of the proposed project and, at the time of review by the Village of any application by HHV for site plan approval, would be subject to further SEQR review to the extent necessary.

NOW THEREFORE BE IT RESOLVED that the Village Board has determined that the requirements of SEQR have been met, as evidenced by the recitals above; and be it further
RESOLVED that having reviewed the DEIS, the FEIS, comments received from the public, Interested and Involved Agencies, Village staff and consultants, and upon the entire record of the Proposed Action, the Village Board makes the following findings and determinations pursuant to SEQR and 6 NYCRR, Section 617.11.

Evaluation of Potential Impacts

The following section considers the relevant environmental impacts of the project, and is organized into 11 sections summarizing the Village Board's findings regarding each potential impact category identified during project scoping. Each category analysis has been divided into three subsections. The first subsection, *Potential Impacts*, summarizes the potential environmental impacts revealed through the environmental impact statement. The second subsection, *Mitigation*, identifies mitigation measures committed to by the Applicant, during the SEQR process to date. All mitigation measures identified in these sections shall be deemed required by the Village Board as conditions of approval and shall serve as baseline mitigation measures. The third subsection, *Findings*, identifies additional mitigation measures stipulated by the Village Board in order to more fully and effectively mitigate identified impacts. It also presents the Village Board's ultimate finding regarding each impact category, taken into account the potential impacts and required mitigation measures, and balance with other relevant factors, including environmental, social and economic considerations.

1. Land Use, Zoning and Public Policy

Potential Impacts

Land Use

1. The project Site is located along the Hudson River within the RF-Riverfront Development District. The area surrounding the Site is characterized by a mix of retail and commercial uses, a number of residential areas, historic properties, public uses (e.g., DPW garage) and park and open spaces (e.g., Horan's Landing, Kingsland Point Park). The proposed FEIS Alternative Plan, as described above, would involve the redevelopment of the Site with a mix of uses, including 1,250 condominium, apartment and townhouse residences, 132,000 sf of retail, cinema and restaurant space, 35,000 sf of office space, and a 140-room hotel. Based on comments received during the DEIS comment period, the FEIS Alternative Plan described in the FEIS, as compared to the proposed development described in the DEIS, reduces the number of residences by 20%, the amount of retail space by approximately 27% and the amount of office space by approximately 30%, but increases the open space and public use areas from between 26 to 33 acres to 39 acres, or approximately 41% of the Site

area. The FEIS Alternative Plan would have an overall residential density of 13.2 dwelling units per acre, which is below both the maximum permitted in the RF district (1 per 2,200 sf, which equals 19.8 units per acre) and the density of the existing Inner Village (approximately 17.1 units per acre) and at the lowest range of the "Patterns for Westchester" recommendations of 13 to 51 per acre. Under the FEIS Alternative Plan, the ratio of rental to ownership units has been adjusted so that there is essentially a balance between rental (51%) and ownership (49%) units.

2. The proposed project also would provide a number of water-dependent uses along the approximately 2,300 linear feet of newly accessible Hudson River shoreline (subject to applicable government permits and approvals and any further related environmental studies), including a small craft launch pier; a widened and lengthened waterfront access area; an interpretive center/boathouse near the cove adjacent to Kingsland Point Park; a fishing pier near the proposed extension of Beekman Avenue in the south of the site; a "dock and dine" dock adjacent to the proposed hotel location; a bulkhead and public plaza area at the hotel; two belvederes extending over the riprap at the street ends along the Site's southern exposure and at the hotel (and potentially a third belvedere at the hotel if the bulkhead is not approved); and the reservation of a corridor of open space next to Kingsland Point Park for the study of a potential Pocantico River estuary.

3. The proposed project would transform the site from an almost entirely impervious surface consisting of concrete slab and asphalt parking lot into a mixed-use neighborhood including commercial, residential, recreational, and public uses. These types of uses proposed are commonly found in a mixed-use setting and are compatible with surrounding development patterns.

4. The project also provides for a total of approximately 39 acres (approximately 41% of the Site area) for open space or public use, including a ±10.6 acre waterfront open space which will allow for recreational improvements in accordance with the Village's draft Waterfront Use Master Plan. These improvements provide a variety of water-dependent recreational uses with a substantial waterfront park environment. The inclusion of this substantial open space along the Hudson River and Kingsland Point Park improves the relationship between

the Site and surrounding public property. During the progression of the EIS process, and in response to public comments, the FEIS Alternative Plan introduced a curvilinear Road One along the Site's western frontage, and set this road further back into the Site to expand the riverfront open space and provide a buffer between the project and Kingsland Point Park. Although not part of the application, the Applicant has also committed to reserving this buffer area in a separate subdivided lot for any potential future creation by others of a new Hudson River estuary or Pocantico River outlet.

Zoning

5. The project is located within the RF-Riverfront Development district, created in 1997 to guide the redevelopment of the Site and other surrounding properties. The RF district permits a wide range of potential uses. All of the uses proposed in the FEIS and shown on the FEIS Alternative Plan are compliant with the RF district's list of permitted principal and special permit uses. In addition to use restrictions, the RF district also includes a number of other development standards in §62-5.1.V of the Village Zoning Code:

   a. Comprehensive Design

      The project involves a comprehensive development plan for the Site and includes land use elements that complement each other, are compatible with the surrounding area and which will serve as an economic stimulus and revitalize an underutilized brownfield site. For example, the mix of residential and commercial uses complement each other in that the residences provide a built-in market for the new businesses, and the services provided by these businesses will help to meet the needs of the new residents for goods and services, without necessarily requiring them to leave the Site or take a private automobile. A set of Design Guidelines has been prepared and will ensure higher standards of design and the creation of a distinct waterfront district in the spirit of an "old Hudson River community," as defined in the Village's LWRP and RF district regulations. The Design Guidelines provide for design control over the scale and form of each building regardless of use. Unlike a typical suburban development pattern with separate "stand alone" buildings, the Design Guidelines allow for the creation of an environment with visual continuity, but also the rich variety of spaces, activities, and architecture that is typical of a historic Hudson River village and which helps provide

visual interest. The project also provides for public views of the Hudson River and total public access along the length of the project's shoreline.

b. Relationship to Uses on Surrounding Public Property

The proposed riverfront open space and the buffer area adjacent to Kingsland Point will serve as the central portion of the "green crescent" of publicly accessible open space linking Kingsland Point Park, DeVries Park, Horan's Landing, Philipsburg Manor Restoration, Sleepy Hollow Cemetery, Douglas Park and the Rockefeller State Park Preserve. The open space will also accommodate continuation of the Westchester County Riverwalk. The uses proposed near the project's entrances are compatible with surrounding development, and the project will also involve the donation of approximately 23 acres on the East Parcel to the Village for public use, including the expansion of DeVries Park playing fields, parking, a new Village DPW facility, and other possible public or interpretive uses.

c. Relationship to the Hudson River

The layout of the streets, buildings, and open spaces functions to maximize physical and visual access to the Hudson River for both residents and non-residents. The opportunities for direct physical access to the water include fishing from the pier at the end of Beekman Avenue, boat access at the "dock and dine" pier, and small craft launching from the floating pier and expanded beach area in the cove near Kingsland Point Park. The project also includes a stormwater management system and will result in a substantial reduction in impervious surfaces as compared to the existing remnants of the former industrial use, which is anticipated to improve the quality of water being discharged to the Hudson River.

d. Provision of View Corridors:

The project's street system has been laid out so that all primary streets and the riverfront roadways lead to the Hudson River, so as to utilize the River as an organizing focus for the community and to maximize views of the water. Several of the streets also flare towards their ends, providing for wider public view corridors to the Hudson River. The project design also includes an open space along the project's entire shoreline, providing

view opportunities at the River's edge. In addition, the East Parcel will be improved with new buildings and structures that will not impair views from the adjacent properties to the east of the East Parcel. The DEIS and FEIS provide graphics depicting expected visual conditions from multiple vantage points throughout the Village, including viewsheds identified by the Village's LWRP.

e. Architectural Design Standards

Roseland has developed, in coordination with Village staff and design consultants, a comprehensive Design Guidelines document that establishes design principles for, among others, architectural treatment and scale, materials, building orientation, streetscapes, and open spaces. As indicated in the FEIS, the Design Guidelines were intended to be used during the site plan approval stage of the project. The Design Guidelines shall be utilized by the Planning Board and Architectural Review Board in subsequent reviews to ensure that the project elements will be integrated by cohesive design, maintain an appropriate Hudson River waterfront community image, and provide visual interest consistent with the framework found acceptable by the Village Board. Roseland has submitted a set of preliminary architectural drawings for certain of the proposed West Parcel buildings, prepared by the Lessard Architectural Group and dated May 15, 2007 (Lessard Plans), which are intended to address the concepts expressed in the Design Guidelines. The Village Board and Village staff and consultants have preliminarily reviewed these drawings and the Village Board finds that they advance the Village Board's design objectives, are generally consistent with the Design Guidelines, and shall serve as the basis for the architectural design of the project during the site plan approval process. The Village Board shall, by separate resolution, adopt the Design Guidelines as a policy document to guide the Village in matters of site plan and architectural design.

f. Energy Conservation and Efficiency

In an effort to address the growing concern about greenhouse gas emissions and related efforts to incorporate energy-saving technologies, the Village Board will require that the project will be a Leadership in Energy and Environmental Design (LEED) certified project under the Green Building Council's LEED for Neighborhood Development

(LEED-ND) program. Said certification to commence with the US Green Building Council once the LEED-ND pilot program is completed and upon the preparation of schematic site plans, which shall be designed in accordance with LEED-ND pilot program guidelines dated June 2007. Further the Village Board shall require that the larger buildings (above 90,000 square feet) be designed in such a way that, in the professional opinion of the Applicant's LEED Accredited Professional, the building could qualify for LEED Certification using the LEED for New Construction rating system, Version 2.2, as defined by the US Green Building Council, or as may be amended from time to time, or superceded with more state of the art specifications. Verification by the LEED Accredited Professional shall be provided to the Village Architect, the Board of Trustees, and the Planning Board. All attached townhomes shall be designed in such a way that, in the professional opinion of the Applicant's architect, the townhomes could qualify for the Energy Star Qualified Attached Homes National Builder Option Package. For all residential units, the Village Board shall require the use of a majority of Energy Star energy-efficient major kitchen appliances, as identified by the US Environmental Protection Agency. Further, the Village Board shall require that appropriate roofing materials that will reduce the heat island effect of these buildings be used on three of the larger residential residential and mixed-use buildings (Buildings A, B, C, F, G, H, K, L or M as shown on the Riverfront Development Concept Plan).

g. Landscaping, Screening and Buffering

The project proposes street tree planting and landscaping along street right-of-ways, within pocket parks and in building courtyards. The landscaping will be designed to complement the project architecture. Pocket park and courtyard landscaping will consist of evergreen and deciduous trees, shrubs, groundcover and grasses selected for their particular microclimates. Shade trees will be planted along the new streets, generally thirty to forty feet on center. Some landscaping principles are outlined in the Design Guidelines. However, in order to ensure that the design goals of the project are achieved, the Village Board will require that as a part of the first application for site plan approval, Roseland submit a detailed landscaping plan for Planning Board approval, components of which can be adopted and incorporated as a set of landscape design standards for all subsequent site plan approvals for the project. The protocol for planting

trees and shrubs on the Site is set forth below in the findings relating to remediation. In addition, Roseland will be required to provide the Village tree maintenance bonds, in a reasonable amount equal to a portion of the cost of the landscaping as determined by the Village Architect and Administrator in consultation with Roseland, and in a form satisfactory to the Village Attorney. A bond with a minimum term of two years commencing upon issuance of the certificate of occupancy for a particular building shall be posted to guarantee the replacement during that two year period of landscaping associated with that building. The Village shall also require the posting of bonds for all public improvements and plantings, the length of which will be dependent upon the extent of the improvements and their location as part of the overall Riverfront Development Concept Plan. Roseland has committed to retain a world class landscape architect to assist in the design of the 10.6 ± acre waterfront open space. The waterfront plan will be required to incorporate, as a baseline, the Westchester County Riverwalk design parameters. Further, during the design process for the creation of the waterfront open space, the landscape architect shall work with the various Village boards and committees to incorporate, to the extent practicable, their concerns and comments. The design of the waterfront open space shall be subject to the approval of the Village Board.

h. Lighting

The FEIS Alternative Plan includes the potential for utilizing the decorative style streetlight fixtures installed on Beekman Avenue or similar decorative style lighting along the new roadways. Individual building lighting, pathway lighting, and open space lighting will be reviewed and approved by the Planning Board during the site plan review process.

i. Signage

Signage for the project will be designed to complement the character of the architecture and will be prepared for Planning Board review and approval as part of the site plan review process.

j. Vehicular Circulation System and Traffic Access

The right-of-ways and pedestrian walkways have been designed to accommodate their

projected usage and promote safety and efficiency of movement. The Design Guidelines present typical street sections for the various roadway types and recommended turning radii, lane widths, planting strips widths, and sidewalk treatments. The proposal also calls for distinctive pavings, the use of on-street parking, roundabouts and other features to encourage traffic calming. The Proposed Action also introduces walkways and bicycle paths throughout the open space, allowing for continuous access from adjacent open spaces and throughout the Site. As described below, Roseland has also committed to the provision of a jitney/shuttle service during Metro-North peak hours that will run through the Site and transport commuters to the nearby Metro-North stations.

As described in the Design Guidelines, most of the project's streets will have parking on both sides of the roadway and traffic lanes of 11-12 feet. This approach is consistent with traditional neighborhood design techniques designed to provide for traffic calming and a more pedestrian friendly streetscape.

k. Public Access

The project provides pedestrian access along the entire length of its Hudson River shoreline. This open space has also been designed with connections to surrounding open spaces such as Kingsland Point Park, DeVries Park and Horan's Landing, facilitating a continuous riverfront pedestrian path system. The project also provides for expanded recreational uses, parking on the East Parcel and for supplemental on-site parking on the West Parcel to serve Kingsland Point Park. Access into the Park will be provided across the buffer from the project to the Park, although there shall be shall be no provision for vehicular traffic for the general public through Kingsland Point Park, other than for emergency and pedestrian access. In addition to these components, the site plan will also reserve space for the future development by others than the Applicants of an additional pedestrian bridge and pathway connecting the Kingsland Point Park buffer area and the Horseman's Trail. In conjunction with the rehabilitation of the historic Kingsland Point Park pedestrian bridge, which the Village has obtained grant funding to undertake, and the Horseman's Trail, the project will strengthen pedestrian connections through the Village.

l. Off-Street Parking and Loading

The parking and loading facilities have generally been designed in coordination with the proposed uses, street system, and open space network. The spaces are proposed in off-street lots, garages, below-grade structures and on-street locations and in aggregate total approximately 4,000 spaces.

The sum of the RF District off-street parking requirements for the individual non-residential land uses is 1,131 spaces. Based on the methodology and analysis prepared by Walker Parking, a conservative evaluation of the peak parking requirements for these land uses (without consideration of the differences in peak parking demand times among the individual uses) is approximately 972 spaces. However, accounting for the differing peak parking times of these uses, the actual highest single peak non-residential parking demand is projected to be 759 spaces. The FEIS Alternative Plan provides non-residential parking in both structures and surface configurations totaling 816 off-street spaces.

Given the compact nature of the proposed commercial core, the Village Board believes that it is important to provide for adequate parking to satisfy the projected peak parking demand and in proximate walking distance to these uses. The Village Board shall take a conservative approach and require that parking for an additional 150-160 cars be provided within the commercial corridor. The Riverfront Development Concept Plan provides sufficient space to accommodate this parking in three possible locations: Area 1 - behind Building C; Area 2 - in structured parking between Buildings A and B; and Area 3 - through a reconfiguration of the at-grade area between Buildings A and I. Additional parking shall be provided in Area 1 and developed at the same time that Building C is constructed. The balance of the additional parking can be provided in Areas 2 or 3 described above. Any additional parking in Area 3 shall initially be suitably treated and reserved so as to be used as overflow parking ("land banked"). Upon full build-out of the commercial corridor, if the future parking demand levels warrant, the Village Board can make the determination to have the land banked lot prepared for and converted to full-use parking by Roseland.

The residential component of the project consists of apartments, condominiums and townhouses. The townhouses provide two spaces in each garage and allow for additional driveway parking. This is adequate to meet the zoning requirements for these units and these are therefore acceptably parked and can be dismissed from further analysis.

The apartment and condominium parking is principally provided in structured parking below the buildings, with the exception that the loft buildings (I and N) have surface parking provided to the rear. The RF District off-street parking requirements for the apartment and condominium components total approximately 1,886 spaces. The peak parking demand for the apartment and condominium component of the project has been estimated at 1,609 spaces for the FEIS Alternative Plan. The FEIS Alternative Plan has provided for a total of 1,535 spaces for the apartment and condominiums. As indicated in the Summary of Design Modifications section, due to design considerations, the Village Board will require modifications to the Riverfront Development Concept Plan that will require the loss of approximately 73 units in a mix of townhouse and multifamily configurations. The reduction in density brings the provision of parking generally consistent with the project's residential parking demand.

Section 62-5.1(V)12 of the Village Code encourages a mix of land uses, wherein cumulative parking demand is less than the sum of the peak demand for each land use, and authorizes the Village Board to allow for portions of the off-street parking requirement to be satisfied by alternate parking solutions, such as shared parking, valet service, and off-site parking. The Village Board further recognizes that the project offers a number of shared parking opportunities for uses that traditionally have different peak parking hours. For example, office and retail typically have differing periods of peak activity. A parking space that is utilized by an office worker during weekday business hours would be available for use by a retail employee or shopper during weekend peak shopping hours. In addition, of the total 455 on-street spaces, approximately 245 are located on Beekman Place, or within one block of the

corridor, and could be available to accommodate retail patrons. Further, approximately 200 of the on-street parking spaces are located in the residential neighborhood and would be available for visitor and resident use, subject to Village regulation.

Overall, the RF District requirement for off-street parking for the Lighthouse Landing residential and commercial components would be approximately 3,635 spaces. With the modifications identified above, the project provides approximately 3,450 spaces directly associated with its residential and commercial uses (and excluding East Parcel parking, recreation parking, and on-street spaces.) Given that the site has a transit and pedestrian orientation, and in consideration of the alternative parking provisions discussed above, the Village Board finds pursuant to Section 62-5.1(V)12 that as modified by the conditions above, adequate parking would be provided for the project. Although parking for some uses may not be fully located on the same lot as the use to which they are accessory, parking on adjacent streets and shared parking will be utilized to meet demand. In order to ensure effective and efficient parking sharing, project signage and other way-finding measures shall be provided and reviewed in detail during the site plan review process. Access to and from shared parking facilities shall be subject to easements or other similar restrictions that allow for continuous shared use after subdivision.

The Village Board further finds that the 550-space commuter lot on the East Parcel included in the FEIS Alternative Plan should be eliminated and the Richard Daley plan substituted. The Village Board also notes that the FEIS Alternative Plan indicates 24 on-street parking spaces directly adjacent to the waterfront park on Road One. The Village Board reserves the right to determine the extent of the on-street parking to be provided in this area as part of the waterfront open space design process. Should adequate parking be available to serve the open space uses, such as the proposed boathouse, and in consideration of design and visual factors relating to the park space, the Village Board may elect to eliminate this parking. The maximum extent of removal would be 24 spaces, which does not materially affect the sufficiency of the parking being provided.

m. On-site Utilities and Services

All new utilities within the project will be located underground. As described below, the project will be served by public water and sewer systems, which will have adequate capacity to serve the new uses. The project also incorporates a stormwater management system that will provide water quality treatment of surface runoff from buildings and pavement areas prior to discharge to the Hudson River. The Village Board notes that given the location of the Site and the potential for the hydraulic head pressure from the Hudson River against the Site's stormwater outfalls during certain storm events, as a part of the site plan review process Roseland will be required to submit engineering details of the stormwater management system with appropriate measures to account for potential backflow and ensure proper drainage during storm surge events.

n. Floodplain Requirements

The project has been designed to comply with the Village's Flood Damage Prevention Law. The lowest habitable building floor on the West Parcel is at a minimum elevation of approximately 13 feet, which is well above the 100-year flood elevation of approximately 7.0 feet.

As described in the FEIS, with the exception of the height of two proposed live/work loft buildings and portions of two other multi-family residential buildings, the project is compliant with all dimensional requirements of the RF district. The Applicant has petitioned for amendment of the RF district height regulation for the area within 300 feet west of the railroad tracks so that the permissible height is consistent with the 65' maximum height permitted on either side of this zone. The Village Board has reviewed the requested zoning change, and determined that the project can meet desired design goals without this amendment. Therefore, the Village Board has not taken up further action on this matter.

Public Policy

6. The Village has created and/or adopted several public planning documents with direct relevance to the proposed project, including the LWRP, and the Linkage Study. In addition,

there are several other relevant regional planning efforts that relate to the Site, and other independent studies conducted by interested parties. The project was compared to these documents.

a. LWRP

The Village of Sleepy Hollow's Local Waterfront Revitalization Program was adopted by the Mayor and Board of Trustees on November 19, 1996, approved by the New York State Secretary of State on June 5, 1997 and concurred by the U.S. Office of Ocean and Coastal Resource Management on July 14, 1997, in accordance with the U.S. Coastal Zone Management Act of 1972, as amended, and its implementing regulations. The Sleepy Hollow Code requires that the Village's Waterfront Advisory Committee (WAC) provide a consistency review of the various goals and policies contained in the LWRP. On March 5 and March 15, 2005 the WAC reviewed the Proposed Action contained in the Draft Environmental Impact Statement. The WAC issued a preliminary recommendation that the project, as a whole and as presented in the DEIS was consistent with some of the policies in the LWRP and inconsistent with others and overall was inconsistent with the LWRP. Subsequently, upon submission and review of the FEIS Alternative Plan presented in the FEIS, the WAC, at its January 10, 2007 meeting reviewed the project against those remaining goals and policies it initially found inconsistent. Upon review and consideration, the WAC found that the FEIS Alternative Plan was consistent with all the applicable LWRP goals and policies, subject to the conditions that Roseland make a commitment to the provision of a jitney system, consult with the WAC on the design for the waterfront open space, and that a footbridge over the railroad tracks be further explored. The WAC review record, and the DEIS and the FEIS provide extensive documentation of the project's relationship to, and ultimate consistency with, the LWRP's 44 policies. The Village Board will be required to make its own waterfront consistency review prior to taking any action on the special permit application. The Village Board has reviewed each of the LWRP goals and policies and will take into account the recommendations of the WAC and the recommendations of the Planning Board prior to making its determination.

b. Waterfront Linkage Study

The Village's Waterfront Linkage Study identified a number of concepts for common design elements, linkages with surrounding areas, and treatment of open space that relate to the proposed project. The vast majority of these concepts are reflected in the FEIS Alternative Plan, including: the provision of an active mix of uses; screened parking; visual connections to the Hudson River; use of traditional building materials, with distinctive architectural elements, varied texture and depth, and a "planned eclecticism" design approach; pedestrian connections along the Hudson River waterfront and between Kingsland Point Park and Philipsburg Manor; orientation of primary streets to the Hudson River; providing for hand launch of non-motorized boats; an esplanade extending around the perimeter of the waterfront; and an educational/historical/interpretive component in the riverfront open space. The project also generally conforms with the Concept Plan presented in the Waterfront Linkage Study in terms of the types of uses and their orientation and relationship to each other and surrounding areas.

c. Patterns for Westchester

The project is consistent with the policies set forth in the Westchester County Planning Board's "Patterns for Westchester" (Patterns), particularly as it relates to the reinforcement of "centers." The project would reinforce Sleepy Hollow's designation as a "local center" through concentrating development and including a mix of uses at the Site. In addition, the project's 13.2 dwelling units per acre density falls at the low end of the High Density Urban category of 13 to 51 dwelling units per acre recommended by Patterns for the Site. The project has an appropriate relationship to surrounding development and open space, and will not result in adverse visual impacts.

d. Greenway Compact Plan

The Greenway Compact Plan was developed by Westchester County and is consistent with its Patterns document. As described above, the project provides for economic revitalization of a waterfront brownfield site, while also providing for a waterfront open space and recreation area extending along the Site's entire 2,300± linear feet of Hudson River shoreline that will be a significant component of the regional open space network.

e. Regional Plan Association

The Third Regional Plan recommendations developed by the Regional Plan Association are grouped into five campaigns designed to improve the region's economy, environment and equity. The proposed project is consistent with the Third Regional Plan's campaigns of creating a regional greensward and concentrating growth in centers. The redevelopment will extend and strengthen an existing village center and create a substantial riverfront open space that will link with other parklands.

f. Design Guidelines

As described above, during the course of the environmental review process, the Applicant, in coordination with Village staff and design consultants, has developed a comprehensive Design Guidelines document that establishes design principles for, among others, architectural treatment and scale, materials, building orientation, streetscapes and open spaces. The Design Guidelines, as indicated in the FEIS, were intended to be used during the site plan approval stage of the project. Both the Village Planning Board and Architectural Review Board were provided copies of the FEIS document. The Village Board finds that the application of the Design Guidelines will ensure that the project elements will be integrated by cohesive design, provide visual interest, and as required by the LWRP and RF District, maintain an appropriate "old Hudson River community" image. The Planning Board and the Architectural Review Board shall use the Design Guidelines during their subsequent reviews of the detailed site plans. The Lessard Plans submitted by Roseland advance the Village Board's design objectives, are generally consistent with the Design Guidelines, and shall serve as the basis for the architectural design of the project during the site plan approval process.

g. Village of Sleepy Hollow Waterfront Use Master Plan

The Waterfront Use Master Plan was prepared by Beyer Blinder Belle in consultation with the Applicant and identified recommended improvements along a significant portion of the Village's waterfront, including the project Site. The suggested improvements are designed to enhance public access, increase public enjoyment of the waterfront and identify locations for water-dependent uses. The FEIS Alternative Plan

has been designed to generally accommodate the Waterfront Use Master Plan recommendations.

h. Other Studies

The Village Board reviewed and considered studies prepared on behalf of Scenic Hudson by Ecosystems Strategies, Inc., Han-Padron Associates, Metropolitan Conservation Alliance and Milone & MacBroom, Inc. relative to potential drainage issues and other aspects associated with the Pocantico River.

Mitigation

7. The project has been substantially modified since the submission of the DEIS, resulting in the reduced residential density, reduced commercial (retail and office) square footage, increased open space, and enhanced water-dependent uses shown on the FEIS Alternative Plan. The project meets all of the RF district dimensional requirements, and with the exception of off-street parking satisfies the general design standards of the RF district. The project is also consistent with the various local and regional public policy and planning documents in terms of density, types of uses, recreational and open space linkages, reinforcement of existing centers of development, and economic revitalization.

Findings

8. The project would transform the Site from a vacant, almost entirely impervious surface consisting of concrete slab and asphalt parking lot, into a mixed-use neighborhood including commercial, residential, recreational, and public uses. The Village Board finds that the types of uses proposed are commonly found in a mixed-use setting and are compatible with surrounding development patterns. The mix of uses is also similar to the types of development found in the other historic Hudson River village communities studied in the Village's Waterfront Linkage Study, and further presented in the DEIS. The types of buildings to be developed are also representative of architectural elements found in other historic Hudson River communities.

9. However, the treatment of the key portion of Beekman Avenue between River Street and the Hudson River presents a somewhat complicated roadway pattern, and potentially creates a

disconnect between Beekman Avenue and the waterfront, and would relate poorly to the adjacent Ichabod's Landing development. The FEIS identifies an alternative concept for this intersection, initially prepared by Thomas Balsley Associates, which appears to present aesthetic, traffic operational, and land use relationship improvements. The Village Board finds that the Riverfront Development Concept Plan shall be modified to incorporate the alternative Beekman Avenue-Beekman Place intersection design concept. In addition, the project does not include an active streetscape presence on the north side of Beekman Avenue at the entrance to the project. This gap weakens the streetscape linkage between the Inner Village and Lighthouse Landing. In order to enhance the desired connectivity, the project shall be modified to introduce a streetscape element or elements that would visually connect the upgraded Beekman Avenue bridge with the Beekman Avenue/Beekman Place intersection and the Hudson River beyond. Such streetscape element(s), which may include street trees or other plantings, should also frame and/or enhance views along the north Beekman Avenue sidewalk to and over the project.

10. The Village Board further finds that while the proposed land uses are appropriate and compatible with surrounding development, the attractiveness and activity level of the waterfront open space would be enhanced by the extension of the commercial use along Beekman Avenue onto the Road A frontage. Building M as shown on the Riverfront Development Concept Plan shall be modified to eliminate the townhomes and expand the mixed-use retail/condominium building on the north side of building M toward the waterfront, as shown on the Lessard Plans. The Village Board shall also allow for the potential to provide up to an additional 6,000 square feet of commercial space in Building M fronting onto Road A and facing the adjacent waterfront parkland. Other modifications to the Riverfront Development Concept Plan (specifically the realignment of Road One and the associated open space adjacent to Kingsland Point Park) are being required by the conditions of this Findings Statement, which are anticipated to reduce the number of dwelling units by approximately 73 to 1,177 units. As indicated by the anticipated generation rates presented in the EIS, the peak hour traffic generation of 6,000 square feet of specialty retail is approximately equal to, or less than, depending on time of day, the peak hour traffic generation from 73 residential units. Therefore, this modification would not adversely affect traffic operations, as analyzed throughout the EIS process.

11. Other required modifications to the Riverfront Development Concept Plan include 1) incorporation of elements of the Richard Daley Architects East Parcel Master Plan, including a 150- space surface parking lot in lieu of the 550 space commuter lot, recreational fields and tennis courts and a new Village DPW facility (the design and specifications of which are only conceptual at this point); 2) increasing the minimum width of the reserved buffer area along Road One adjacent to Kingsland Point Park as described below; 3) providing a potential bulkhead or belvedere at the hotel subject to approval by the NYSDEC and Army Corps of Engineers; 4) increasing the overall public open space and public use area to 44.6 acres inclusive of an 11.1 acre waterfront open space, in part as a result of the incorporation of the alternative Beekman Avenue-Beekman Place intersection design concept and corresponding increase in the buffer between the Site and Ichabod's Landing; and 5) modifying the height of the buildings in the area within 300' west of the Metro-North Railroad tracks to comply with the current RF district height limitation for that area.

12. As described above, in response to public comments, the FEIS Alternative Plan introduced a curvilinear Road One along the Site's western frontage and set that road further back to expand the riverfront open space and provide a buffer, generally ranging from 75 feet to 175 feet in width, between the project and Kingsland Point Park, with a pinch point of approximately 45 feet. Roseland has also committed to reserving this space for any potential future creation by others of a new Hudson River estuary or Pocantico River outlet, which is not a part of the Proposed Action as described below in these findings. The Village Board notes that reservation of the buffer area provides a desirable land use relationship between the project and Kingsland Point Park. In order to more effectively buffer the park and better accommodate a potential future estuary in the buffer area, the Riverfront Development Concept Plan shall be modified to provide a minimum building setback of 150 feet from the boundary of Kingsland Point Park for buildings and structures other than the proposed boathouse, to increase the overall width of the buffer to a minimum of 100 feet, and to allow for a separate subdividable lot to be created. This will extend the character of Kingsland Point Park into the Site ,create a wider transitional open space between the activity areas within the park and the Lighthouse Landing development, and reserve a corridor of open space ranging in width from a minimum of 100 feet to approximately 165 feet on the GM

site (hereinafter referred to as the "buffer area", and as shown on the Exhibit attached to this Findings Statement) next to Kingsland Point Park for the study of a potential Pocantico River estuary. With the cooperation of Westchester County, the width of the area available for a potential estuary could be expanded to 230 feet. This will also further mitigate potential noise and visual impacts on park users, and facilitate a meaningful scientific and hydrologic study of the possible establishment of a future estuarine area from the Hudson in the buffer. The Village Board recognizes that the creation of an estuary could enhance biologic and natural conditions in the Village, but is not the responsibility of the Applicant. The inclusion of additional land area associated with a possible future estuary (minimum 45 feet shown on FEIS Alternative Plan modified to minimum 100 feet) would supplement the open space benefits associated with the approximately 15 acres of public open space area on the West Parcel. It is noted that approximately 25 percent of the West Parcel has been set aside as public open space. The expanded width created as a result of modifying the minimum development setback would further enhance the mitigative effects of the proposed buffer area. The Village Board notes that the Planning Board would be the responsible entity for reviewing and approving the subdivision and eventual site plan for the proposed estuary.

13. The potential creation of an estuary or Pocantico River outlet next to Kingsland Point Park received wide support during the public comment process required by SEQR, and could allow for the creation of additional water-dependent use opportunities. The concept of an estuary or additional Pocantico River outlet can be advanced through further study of its feasibility and, if the concept is found to be technically, ecologically and financially feasible, and if the requisite permits and approvals are obtained. The Village Board finds that increasing the building setback and expanding the buffer area, as described above, preserves sufficient land area to reasonably accommodate this concept. With the cooperation of Westchester County, portions of Kingsland Point Park may also be utilized as additional land area for the creation of an estuary or Pocantico River outlet. However, a minimum width of 100 feet of the buffer shall be located on the Lighthouse Landing Site. The Board notes that the possible future creation of an estuary or Pocantico River outlet could provide a number of potential community benefits and the setting aside of the buffer area and the study of the potential estuary or Pocantico River outlet is an appropriate measure to enhance biological

and natural conditions in the Village. In order to allow for the future establishment by others of an estuary or Pocantico River outlet as a separate and discrete action, the reserved buffer area shall be identified as a separate lot on the forthcoming subdivision plans.

14. See also Section 2.B(61) of this document for a discussion of the steps that would need to be taken to create an estuary or Pocantico River outlet.

15. The project would meet all of the RF district's use, dimensional and development standards, with the exception of off-street parking. As described above, the FEIS Alternative Plan provides 816 spaces associated with its commercial components, which are estimated to have a peak demand of approximately 972 spaces. However, accounting for the differing peak parking times of these uses, the actual highest single peak non-residential parking demand is projected to be 759 spaces. As described above, based on the analysis presented by the Applicant's parking consultant, the Village Board shall take a conservative approach and finds that additional parking within the commercial corridor needs to be provided amounting to generally 150-160 spaces in order to accommodate potential non-residential demand in a convenient location. The Village Board notes that the Riverfront Development Conceptual Plan provides sufficient space to accommodate this parking three possible locations: Area 1 - behind Building C; Area 2 - in structured parking between Buildings A and B; and Area 3 - through a reconfiguration of the at-grade area between Buildings A and I. Additional parking shall be provided in Area 1 and developed at the same time that Building C is constructed. The balance of the additional parking can be provided in Areas 2 or 3 described above. Any additional parking in Area 3 shall initially be suitably treated and reserved so as to be used as overflow parking ("land banked"). Upon full build-out of the commercial corridor, if the future parking demand levels warrant, the Village Board can make the determination to have the land banked lot converted to full-use parking by Roseland. Overall, the RF District requirement for off-street parking for the Lighthouse Landing residential and commercial components would be approximately 3,635 spaces. With the modifications identified above, the project provides approximately 3,450 spaces directly associated with its residential and commercial uses (and excluding East Parcel parking, recreation parking, and on-street spaces.) Given that the site has a transit and pedestrian orientation, and in consideration of the alternative parking provisions discussed above, the

Village Board finds pursuant to Section 62-5.1(V)12 that as modified by the conditions above, adequate parking would be provided for the project. Although parking for some uses may not be fully located on the same lot as the use to which they are accessory, parking on adjacent streets and shared parking will be utilized to meet demand. In order to ensure effective and efficient parking sharing, project signage and other way-finding measures shall be provided and reviewed in detail during the site plan review process. Access to and from shared parking facilities shall be subject to easements or other similar restrictions that allow for continuous shared use after subdivision.

16. The Village Board further finds that the 550-space commuter lot on the East Parcel included in the FEIS Alternative Plan should be eliminated and the Richard Daley plan substituted. The Village Board also notes that the FEIS Alternative Plan indicates 24 on-street parking spaces directly adjacent to the waterfront park on Road One. The Village Board reserves the right to determine the extent of the on-street parking to be provided in this area as part of the waterfront open space design process. Should adequate parking be available to serve the open space uses, such as the proposed boathouse, and in consideration of design and visual factors relating to the park space, the Village Board may elect to eliminate this parking. The maximum extent of removal would be 24 spaces, which does not materially affect the sufficiency of the parking being provided.

17. The required modifications to the Riverfront Development Concept Plan described above are illustrated and labeled on the attached Exhibit, "Design Modifications Summary Riverfront Development Concept Plan," attached to this Findings Statement and made a part thereof.

18. The Village Board notes that the Richard Daley East Parcel Master Plan contains several key municipal improvements including a new DPW facility, soccer fields, tennis courts, and attendant parking. The Village Board finds, given the municipal nature of these improvements, that it will retain specific site plan approval after review and recommendation by the Village's Planning Board and Architectural Review Board.

19. The Village Board finds that with the mitigation and conditions noted above, the Proposed Action is consistent with the applicable requirements of Village zoning and the objectives

and regulations of the RF Riverfront District, and with public policy as reflected by the various land use and planning studies discussed above.

2A. Land, Water and Ecological Resources

Potential Impacts

1. The project Site is covered almost entirely in asphalt pavement or concrete slab in its current condition. As detailed more fully in the following Section 2.B., nearly the entire western portion of the Site was created through filling operations conducted with urban fill material, such as ash and cinders or dredged materials. The Site is relatively flat and the existing plant community is restricted to scattered plants and small strips of vegetation composed of weedy or non-native species. As a result, redevelopment will have limited impact on existing terrestrial ecological communities. Only minor impacts are expected to slopes in excess of 5 percent. Protection of these slopes will include the use of erosion control fabric and diversion of upland stormwater runoff away from the slope until soil stabilization has occurred.

2. The project will also substantially reduce the overall amount of impervious area from approximately 91 acres to approximately 60 acres, reducing peak runoff rates and pollutant loadings. With the addition of pervious areas more stormwater should drain vertically through the soil, thereby reducing the overall volume of stormwater draining off the site when compared to when the Site was completely paved. In addition, a comprehensive conceptual storm sewer system has been designed to collect and transport storm flows off-site and to the Hudson River.

3. The project has been designed to comply with the Village's Flood Damage Prevention Law. Grading on the West Parcel has been designed to permit building first floor elevations to be set at a minimum of six feet above the 100-year flood elevation and based on proper engineering designs will sufficiently protect the structures. The earthwork on the East Parcel is anticipated to be balanced cut and fill, which will maintain the existing flood storage

capacity of the East Parcel.

4. On-site wetlands are limited to a series of man-made drainage ditches within the East Parcel located between the existing railroad tracks and sidings and the asphalt parking areas. Based upon the documentation contained in the EIS, these wetlands are of low ecological function and quality. The project would remove these ditches and replace the function of the ditches through the creation of interconnected water quality swales that would collect and treat stormwater from the parking areas, roadway and soccer fields on the East Parcel. Through the planting of native plant species, new higher quality wetlands would be created in the relocated swales. §61-13 of the Village Code requires that losses to wetlands be mitigated by replacement, enhancement or restoration of existing wetlands by a ratio of 2:1. As indicated in the FEIS, the FEIS Alternative Plan (Riverfront Development Concept Plan) includes an area of at least 0.46 acres of new wetland vegetation along the bottom of the swales, representing a doubling of the existing 0.23 acres of existing ditched wetland to be filled, and meeting the replacement standard of the Village Code.

5. As the EIS process progressed, the number of water-dependent uses was increased with the addition of a "dock and dine" dock, a fishing pier, an additional belvedere and/or bulkhead at the point near the hotel site, a floating dock for small craft launching, a set-aside of a buffer area for the study of a potential estuary or Pocantico River outlet adjacent to Kingsland Point Park, and a widened waterfront access area or beach near Kingsland Point Park. The additional water-dependent uses are expected to result in minimal adverse environmental impact, but may require further study as to the technical, environmental, and financial feasibility and applications for Village, County, State and Federal permits and approvals. As described in the EIS, in order to create the widened waterfront access area, approximately 100 linear feet of riprap will be removed and replaced with an impermeable, hard surface suitable to allow for small craft launching into the Hudson River, consistent with the requirements of the Brownfield Cleanup Program to ensure that the historic contaminated fill removed once the rip-rap is altered does not contaminate the Hudson River or the Lighthouse Landing site. This would result in a minimal loss of benthic habitat from the riprap and would not be significant given the riprap on the remainder of the Site's shore. The small craft dock near the boathouse will consist of a combination of permanent pier and floating

dock. The primary impact of the dock that will result from the coverage of surface waters is shading, which could affect benthic habitat. The pier portion of the structure will be approximately four feet above high tide, in order to minimize shading, and the relatively narrow width of the structure will allow sunlight penetration under the pier/dock. Installation of piles would be anticipated to generate a minor and temporary increase in suspended sediment. The impacts of the "dock and dine" floating dock as a result of shadowing or pile installation would be similar and not significant. The fishing pier would be elevated and relatively narrow, and as described above for the other piers, would not be anticipated to generate significant shading or pile installation impacts. Roseland has proposed an L-shaped pier extending 30 feet out from the shore and then running approximately 50 feet parallel to the shore. The proposed structures in or over the Hudson River and the beach expansion will require and are subject to permits and administrative approvals from the NYSDEC and U.S. Army Corps of Engineers. Roseland shall be responsible for preparing, submitting and pursuing all methods for obtaining said permits and approvals from any and all regulatory agencies relative to the proposed waterside improvements, and shall provide a quarterly status report on the permitting progress to the Village Administrator, for distribution to the Mayor and Trustees, and the Planning Board.

6. The West and South Parcels are unaffected by any current flooding from the Pocantico River. The limited flooding that presently occurs on the East Parcel results from upstream flows during large storm events overtopping the river banks onto the project Site. By balancing cut and fill on the East Parcel, the existing flood storage capacity of the East Parcel will be maintained. The duration of any floodwaters will be lessened due to the substantial decrease in impervious surface as a result of the project.

Mitigation

7. Roseland has prepared a conceptual erosion and sediment control plan. To minimize the erosion and sedimentation from both construction activities and post-development conditions, a detailed erosion and sediment control plan will be prepared and submitted as a part of the site plan review process. The plan will outline the structural measures to be provided during all activities, the amount of soil exposure that can be properly managed, the location of access, storage of materials and inspection and maintenance requirements. The

project will also need to comply with the NYSDEC General Permit for Stormwater Discharges From Construction Activities.

8. The project will result in a substantial reduction (34%) in the total amount of impervious coverage on the Site and will also include a series of structural measures, such as sediment traps (during construction only) and hydrodynamic separators (post construction), which will provide sediment and nutrient removal to meet applicable water quality standards.

9. As described above, the on-site wetlands consist of drainage ditches having low ecological function and quality. The function of the ditches would be replaced through the creation of interconnected water quality swales. Through the planting of native plant species, new higher quality wetlands would be created. Wetland permit applications are subject to approval by the Planning Board and typically require a 2:1 wetland replacement ratio. As indicated in the FEIS, the FEIS Alternative Plan (Riverfront Development Concept Plan) includes a wetland mitigation plan that would meet this replacement standard.

Findings

10. The Village Board finds that due to the primarily concrete and asphalt capped existing condition of the project Site, the impact on natural resources due to disturbance will be minimal, and that the proposed mitigation will be adequate to mitigate any adverse impacts. The project proposes significant street tree planting and landscaping along street right-of-ways, within pocket parks and in building courtyards. This introduction of substantial quantities of new vegetation is also expected to enhance the quality of the Site's ecological resources. Some landscaping principles are outlined in the Design Guidelines. However, in order to ensure that the landscape design goals of the project are achieved, the Village Board requires that as a part of the first application for site plan approval, Roseland submit a detailed landscaping plan for the project development, exclusive of the waterfront open space and the reservation area adjacent to Kingsland Point Park, consistent with the Design Guidelines, for Planning Board approval, components of which can be adopted and incorporated as a set of landscape design standards for all subsequent site plan approvals for the project. The waterfront open space and Kingsland Point Park buffer are subject to a separate design process described above in Section 1.g. and subject to Village Board

approval. The Village Board notes that the water dependent uses described above require permits and approvals, which Roseland is responsible for obtaining. However, the Village Board finds that whether or not permits and approvals are obtained for such uses, and these improvements are made, on balance, the significant benefits of the project substantially outweigh its adverse impacts.

11. The Village has observed that there has been a pattern of flooding along the lower portion of the Pocantico that causes portions of the East Parcel to be inundated during heavy rain events. The Village of Sleepy Hollow has previously requested both NYSDOT and Army Corps of Engineers assistance on addressing stormwater related issues associated with the Pocantico River. The Village has recently contacted Westchester County regarding this same issue and will cooperate with the County on their proposed Flood Action Plan. The Village of Sleepy Hollow is committed to working with Westchester County, NYSDOT, NYSOPRHP, the Rockefeller State Park Preserve, the Army Corps of Engineers, the Village of Briarcliff Manor and other related municipal entities in the Pocantico River watershed to address on-going approaches to flood control upstream of the project site so as to further protect, to the extent practicable, those portions of the East Parcel to be dedicated to the Village of Sleepy Hollow and those contemplated to be provided to Historic Hudson Valley from the impacts of an extended flooding duration. The Village Board notes that Roseland has agreed to participate towards the funding of a study of the Pocantico watershed that would provide a better understanding of how upstream conditions could be modified to best protect downstream property and to allow for the subdivision of the proposed buffer area on the West Parcel for contemplated future connection of the Pocantico River. Roseland shall cooperate with the Village, Westchester County, NYSDEC, and other affected municipalities, and use best efforts to ameliorate the effects of flooding.

2B. Environmental Remediation Findings

Potential Impacts

Site History and Investigations

1. Virtually the entire Site was created through successive filling operations conducted with urban fill material such as ash and cinders or dredged materials by various entities, including

GM's predecessors, GM, the Hudson River Railroad Company (now Metro-North Railroad), and the Village. Filling of the East Parcel and siltation of the northeastern part of the bay of the Hudson River known as "Die Slapering Haven" started with the construction of the Hudson River Railroad in the 1840s, and filling continued until 1960. Filling of the West Parcel also started with the construction of the Hudson River Railroad in the 1840s, and continued until about 1960.

2. The West Parcel was historically used principally by the automotive industry. From the late 1800s until 1914, when GM acquired what was then the West Parcel, the property was used for industrial operations, including a brickyard, a percussion rock drill factory, and two facilities where gasoline and steam-powered automobiles were manufactured and assembled. After GM acquired the West Parcel, it demolished most of the buildings, conducted a series of fill events, and constructed and expanded the automotive Assembly Plant. When the facility was closed in 1996, the main Assembly Plant property, located on the West Parcel, contained two manufacturing buildings (the Body Plant and the Chassis Plant) and support operations consisting of a powerhouse, petroleum bulk storage tanks, a wastewater pretreatment facility, a water storage tank, and miscellaneous day shelters for equipment and personnel.

3. GM purchased the East Parcel in 1960, after it had been filled. GM then added additional fill and paved this area. The Village had used approximately ten acres of the East Parcel as a landfill for municipal refuse and ash during the 1920s and 1930s. Additional urban fill was added to the East Parcel through the 1950s, prior to GM ownership, for public development of a football field, track, baseball field and other athletic facilities.

4. The South Parcel had historically been used for residential use before GM developed the parcel as a parking lot.

5. The Assembly Plant ceased operations in mid-1996. Between 1996 and 2000, GM conducted several environmental investigations of the Site, which entailed sampling of soil and groundwater. GM also conducted an investigation in the Hudson River to address the potential that historic discharges of wastewater from Assembly Plant operations, up until

1971, may have contaminated River sediments. GM completed an Interim Corrective Measures (ICM) Project between November 1997 and April 1998, during the facility decommissioning process. The ICM consisted of soil removal from nine potential areas of concern (PAOCs) where various oils or other non-hazardous fluids had leaked from plant equipment during facility operations, as well as the removal of two out-of-service underground storage tanks (USTs).

6. The structures on the Site were demolished by 1999, leaving two large concrete slabs over most of the West Parcel. Some of the slab is on-grade and other portions are elevated, up to approximately four feet above the current grade. Portions of the former structures were milled (i.e., crushed) by GM, resulting in approximately 45,000 cubic yards of millings (recycled concrete aggregate) that are stockpiled in a bermed area near the Site's waterfront for potential future use in redevelopment. The East Parcel remains asphalt paved, and over the past approximately 7 years has been used by the Village (with GM's consent) for the storage of Department of Public Works (DPW) vehicles and related DPW uses.

7. In 2002, Roseland conducted an independent investigation of the Site as part of its due diligence. This investigation included the review of documents and additional sampling of Site soil and groundwater. In addition, Roseland sampled the stockpiled millings from the buildings that had been demolished.

8. In 2003, GM and Roseland entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC) for the Site under that agency's Voluntary Cleanup Program. Subsequently, in 2005, GM and Roseland entered into two Brownfield Cleanup Agreements (BCAs) with NYSDEC under the State's Brownfield Cleanup Program (BCP). One BCA is for the West Parcel (which includes the South Parcel for this purpose) and the other BCA is for the East Parcel. Although NYSDEC is responsible for administration of the BCP, the New York State Department of Health (NYSDOH) plays a major role in consultation with NYSDEC in regard to health-related matters.

9. GM and Roseland conducted substantial additional investigations under the auspices of the VCA and the BCAs. The Investigation Work Plan (IWP) developed under the VCA and under NYSDEC auspices had, based on the previous investigations, identified 46 potential areas of concern (PAOCs) that might contain contaminants that could present an environmental or health concern. (An additional PAOC was discovered and evaluated during the course of the VCA investigation.) The IWP focused on areas that were most likely to be of concern, based on the prior investigations and the historic uses of the Site.

10. Overall, the Site investigations conducted by GM and Roseland included approximately 1,029 soil samples and 106 groundwater samples, most of which were analyzed for the full range of possible contaminants, including metals, petroleum, volatile organic compounds (VOCs), semivolatile-organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and pesticides. The investigation also included 136 soil gas samples to assess methane and potential soil gases (vapor) from petroleum or VOCs. In addition, GM has conducted additional sampling of sediments in the Hudson River. A full description of the onsite investigations conducted by GM and Roseland and the results thereof are found in the December 2006 Preliminary Draft Remedial Investigation Report (Preliminary Draft RIR), prepared under the auspices of the BCP. (The text of and exhibits to the Preliminary Draft RIR are Appendix 3B of the FEIS; the appendices to it are available in public repositories established by NYSDEC.)

11. NYSDEC has, until recently, used as recommended soil cleanup objectives the guidance levels found in its Technical and Administrative Guidance Memorandum (TAGM) # 4046 (1994, as amended 2000). For certain constituents, such as metals, the soil cleanup objectives are Site background conditions; for other constituents, such as for VOCs and SVOCs, the objectives are based on protecting public health or the environment. For the former, the levels assume unrestricted use and thus exposure to soil with such levels. These recommended cleanup objectives were generally used in the EIS.

12. In December 2006, however, NYSDEC adopted regulations that set forth recommended soil cleanup objectives for unrestricted use (like the TAGM) or restricted use (i.e., there are mechanisms in place to eliminate or limit potential exposure). The levels for "restricted

residential" use will apply to remediation of the Site because, as explained below, there will be a variety of controls that will prevent exposure to Site soil or fill containing contaminants. (See generally 6 New York Code of Rules and Regulations (NYCRR) Part 375-6.) The recommended soil cleanup levels, whether in TAGM # 4046 or the new Part 375 regulations, are just one factor that is applied by NYSDEC in determining the appropriate remediation; numerous other factors are applicable. These criteria and the recommended soil cleanup levels are discussed below, as relevant.

13. Groundwater is governed by State groundwater standards (GA standards), which are based on the assumption that all groundwater is used for drinking water. Groundwater under the Site is not currently used for drinking water and, because the area is serviced by the local municipal system and the natural water-bearing units below the fill are expected to have relatively low yields, will not be used for such purposes. Although the fill may represent a zone of significant groundwater yield, such artificially created deposits are typically unsuitable and undesirable as potable supplies, particularly beneath this site where the groundwater is brackish.

14. NYSDOH has guidance for evaluating potential vapor intrusion into closed buildings; however, the guidance does not apply to concentrations of compounds in subsurface vapors (i.e., soil gas). The agency does have guidance for concentrations in indoor air for certain constituents.

15. The investigations showed that the Site as a whole contains several background contaminants that are typical constituents of historic fill found on properties along the Hudson River and on other shoreline areas in the northeast United States: metals (primarily lead) and polycyclic aromatic hydrocarbons (PAHs). Lead is a heavy metal that is frequently in ash; PAHs are common byproducts of combustion, and are generally found in ash and petroleum products. Neither lead nor PAHs are highly soluble in water or volatile. Generally, the levels of these contaminants are more elevated on the West Parcel than on the East Parcel. In addition, as described below, areas that warrant location-specific remediation are on the West Parcel.

16. The Preliminary Draft RIR explains that there were six PAOCs, in addition to the Site-wide conditions described above, that warranted further investigation. The other PAOCs were eliminated because, upon completion of the full investigation, they were found to pose no threat to public health or the environment, particularly in light of the Site-wide remedial approach described below.

17. Two of these six PAOCs are undergoing remediation by natural attenuation. These are PAOCs 37 and 43 that are in the southeast corner and center, respectively, of the West Parcel. In both areas, subsurface soil exhibited petroleum odors or stains. The historic spills in these areas have been degraded under natural conditions. PAOC 37 would be under the proposed market/office building in the southern corner of the Site in the redevelopment; PAOC 43 would be under the proposed park that will bisect the Site roughly east to west. Although no physical remediation is necessary, the area downgradient of the former 10,000 gallon UST is also designated for remediation by natural attenuation. Groundwater monitoring will be conducted for five years, to confirm that natural attenuation is effective in all three PAOCs. These areas, like the other PAOCs, will also be subject to the Site-wide remedial program.

18. The remaining four PAOCs, which were the subject of additional sampling, contain (a) much higher levels of lead than present elsewhere on the Site,[1] (b) soil grossly contaminated by petroleum (i.e., soil containing residual petroleum product, stained soil or odors), or (c) high levels of chromium along with trichloroethylene (TCE). These PAOCs are:

- The former 10,000-gallon UST area: This area in the northwest portion of the West Parcel previously contained a 10,000-gallon underground storage tank, which had released fuel. The UST and some contaminated soil were removed by GM as part of its Interim Corrective Measures project completed in 1998. Soil below the groundwater in the immediate vicinity of the former UST contains petroleum contamination, some staining of soil and occasional sheen and odor in groundwater. The grossly contaminated soil in this area exhibit VOCs and/or SVOCs above the recommended soil

1 In terms of sampling for lead, the distribution of lead from 260 Site-wide samples was subjected to a statistical evaluation to determine what levels of this metal were considerably above the typical levels found at the Site. This analysis found that 62 percent of the samples had levels below 500 parts per million (ppm), 35 percent had levels between 500 and 10,000 ppm, and 3 percent had levels above 10,000 ppm. Based on this evaluation,

cleanup values. The contaminated soil is below the groundwater table, up to approximately 21 feet below current grade. VOCs were generally not found in groundwater at this location in excess of standards, as the spilled oil is aged and has been naturally degraded by bacterial decomposition. PAHs in groundwater were slightly elevated, but comparable to the levels in groundwater upgradient of the UST, where such levels are attributable to PAHs in ash and cinders in the historic fill. This PAOC would be under townhouses and some open space of the proposed redevelopment.

- PAOC 47: This area on the northwest edge of the West Parcel, near the northwest boundary of the Site with Kingsland Point Park, contains elevated levels of chromium in soil above the recommended soil cleanup values and chromium and TCE in groundwater above drinking water standards (these exceedances of groundwater standards extend approximately 8-10 feet into the Park). The source of the chromium, and likely the TCE (and certain breakdown products of TCE), is a pit constructed with a concrete bottom about six feet below the surface, which had been historically filled with sand and gravel and sealed flush with the existing concrete floor slab. This subsurface concrete bottom has a greenish hue, and soil or fill immediately above and below contains high concentrations of chromium. In addition, this area contains soil gas (vapors) trapped under the existing pavement or slabs. PAOC 47 is located primarily under open space of the redevelopment; some townhouses are located over areas in which the soil vapor investigation revealed vapor concentrations that might warrant remediation.[2]

- PAOC 7/ Fill Areas F, G and H (referred to hereinafter as PAOC 7) and PAOC 29: PAOC 7 is in the southwestern part of the West Parcel below the former Body Plant slab; PAOC 29 is in the northwest corner of the West Parcel, under asphalt and slab on grade. Both of these areas have levels of lead that exceed the 10,000 ppm demarcation level. Approximately 8 percent and 14 percent of the samples in PAOCs 7 and 29, respectively, had lead levels in excess of 10,000 ppm; approximately 58 percent and 35 percent of the samples in these respective areas had lead levels below 400 ppm.[3] The elevated levels of lead appear to be associated with the contents of the historic fill (e.g., furnace slag, ash and/or construction and demolition debris). Because PAOC 29 is adjacent to Kingsland

10,000 ppm was selected as a feasible dividing line for identifying areas that could be a source of lead concentrations that were anomalous as compared to lead levels Site-wide. (This number was used to identify potential areas of concern, and not specifically for cleanup levels.)

2 Chromium is a heavy metal, with characteristics akin to lead. TCE is a commonly-used industrial solvent, often used in degreasing operations.

Point Park, sampling was conducted in the Park. The sampling showed that Park soil did not contain elevated levels of lead similar to those in PAOC 29.

19. Samples were also taken from milled concrete that was recycled from upper levels of the demolished structures on the Site. The investigation showed that these millings contain PCBs at levels up to 4.4 ppm, with most samples around 1 ppm. The Recommended Soil Cleanup Objective (RSCO) for PCBs is 1 ppm for surface soil (the top 18-24 inches) and 10 ppm for subsurface soil. These millings will be used for structural fill under the capping system (described below), thus reducing the amount of fill required to be imported to the Site for redevelopment.

20. The soil gas investigation revealed the presence of methane on the East Parcel from the former Village landfill. There was also a limited area with methane on the northernmost section of the West Parcel. The methane is trapped under the asphalt of the East Parcel and under on-grade slabs and asphalt on the northern-most part of the West Parcel. Although not a significant health risk, methane can be flammable and explosive if allowed to build up in enclosed spaces and can be considered a greenhouse gas.

21. The investigation of groundwater generally showed minor exceedances of standards for some constituents, including several metals, once appropriate low turbidity samples or filtered samples were considered. If a groundwater sample is turbid, it generally reflects the presence of metals adsorbed onto the surface of soil particles in the sample rather than dissolved in groundwater, and thus gives inaccurate results. Low turbidity or filtered samples of groundwater taken in and around PAOCs 7 and 29 did not reflect exceedances of groundwater standards for lead. Based on the groundwater results as a whole, with the exception of PAOC 47 (for chromium and TCE), NYSDEC determined that the Site's groundwater was not part of any PAOC.

22. A principal concern of the sampling of sediments in the Hudson River is that historic wastewater discharges from the former Assembly Plant, until 1971, may have discharged contaminants in the vicinity of the three outfalls along the shoreline. The initial results of the sampling indicated that there are elevated levels of metals (primarily lead and zinc) in sediments in the vicinity of Outfall 1 (OF-1). This outfall, which is located at the southern

3 Under the BCP regulations, NYSDEC has set the recommended restricted residential soil cleanup level for lead at 400 ppm.

end of the property, discharged industrial wastewater during the 1960s until October 1971. GM has conducted additional sampling of sediments under the BCP.

Mitigation

23. The Applicant will undertake two basic remedial approaches: a Site-wide approach, which will include a Site-wide capping system, remediation of methane where present, and location-specific remediation of the four PAOCs described above. These proposed remedial activities, and related remedial measures, are described below; collectively, such activities are the "Remediation."

24. The Site-wide remedial approach would take place after the completion of the location-specific remediation. GM has proposed to conduct the location-specific remediation as Interim Remedial Measures (IRMs) under the BCP. The proposed IRMs are described in the FEIS. On March 14, 2007, NYSDEC issued a Draft Decision Document, which describes GM's IRM Scope of Work, and proposed its approval. The NYSDEC held a public meeting on the proposed IRM Scope of Work on March 28, 2007 at Village Hall. The IRM Decision Document was issued on or about July 9, 2007.

Former 10,000 Gallon UST Area

25. The proposed remedial activities in this area include two principal components: excavation and offsite disposal of petroleum-contaminated soil and treatment of petroleum-contaminated soil and groundwater. The first element entails the excavation of approximately 5,100 cubic yards of grossly contaminated soils, as delineated by the three-foot contour interval, to a depth of up to 21 feet below existing grade; the three-foot contour interval represents the thickness of stained soils. Excavation of the impacted soils will generally be conducted using conventional construction equipment, such as backhoes, excavators, front-end loaders, dump trucks, etc., once the slab over this area is removed.[4] When deemed necessary by the Village, shoring or sheeting will be utilized to conduct the excavation below the groundwater in accordance with the Village permit.

4 The existing surface concrete and or asphalt cover will be set aside for future onsite recycling and re-use.

26. A geotextile demarcation barrier will be installed at the base and sidewalls of the excavation before backfilling. The final specification of the geotextile fabric must be approved by NYSDEC. Excavation below the water table will be backfilled with clean, permeable fill. The remainder of the excavation will be backfilled and brought to grade with soil from the uncontaminated upper zone over the contaminated area (subject to NYSDEC approval) or clean fill. A barrier cap system (as described below) will be installed over the PAOC, as well as the remainder of the Site, as part of the Site-wide remediation.

27. Water generated during the excavation and dewatering activities will be treated onsite using a portable water treatment system. Wellpoints will typically be installed and operated around the excavation areas to lower the groundwater table and prevent potentially unstable conditions caused by groundwater entering the excavations Treated water will be discharged in accordance with all applicable requirements to the onsite sanitary sewers and transmitted to a Westchester County wastewater treatment plant. (In the event that an existing municipal treatment plant is not available, a temporary onsite treatment plant, which conforms with all applicable standards, would be provided by GM.)

28. The excavated materials will be stockpiled on staging areas to be constructed on the Site to facilitate dewatering of the materials. The stockpiled materials will be sampled (using composite sampling) to characterize it for purposes of disposal. Such sampling will need to meet the requirements of the offsite disposal facility. Materials that are determined by such sampling to be nonhazardous will be transported to a permitted solid waste management facility for either treatment and/or recycling or landfill disposal; any materials found to be hazardous will be transported to a permitted hazardous waste management facility.

29. The second remedial component is the injection of chemical oxidants, likely through shallow injection wells, to the saturated zone (groundwater and soils within the groundwater) both upgradient and downgradient of the excavation area described above. In situ chemical oxidation (ISCO) for the treatment of petroleum hydrocarbons in the subsurface is a well-accepted remedial approach, which will reduce, if not eliminate, vapors and odors. It would typically involve the use of chemical oxidants such as hydrogen peroxide (Fenton's reagent), sodium persulfate, permanganate (potassium or sodium), ozone, or ozone in combination with hydrogen peroxide, and associated supplemental reagents. A conceptual Site model, based onsite characterization activities, bench treatability studies and field pilot studies, will

precede the full-blown remediation and ensure that the reagents are dispersed effectively throughout the treatment zone to promote contact with VOCs in the subsurface soil and groundwater. Prior to the injection, data will be collected to establish baseline geochemical conditions in groundwater for the purposes of measuring ISCO success and monitoring groundwater quality.

30. The presence of VOCs in the soil and groundwater in this area raises the potential for soil vapors containing VOCs to enter closed buildings, which would present a potential health risk. The FEIS notes that the levels of VOCs in soil immediately beyond the edge of the areas to be excavated generally meet or only slightly exceed applicable restricted residential cleanup objectives, groundwater meets Class GA standards, and the proposed remediation would significantly reduce these levels of VOCs. To eliminate any concern over potential vapor intrusion, however, Roseland will design the townhouses to include passive subslab depressurization systems and implement the systems, if required by NYSDEC or NYSDOH. Such systems typically include the placement of gravel or geotextile fabric beneath the foundation of the building with horizontal pipes within the gravel or geotextile that vent vapors to the atmosphere. Vapors collect in the pipes and are then vented to the atmosphere by vertical pipes. Other buildings in the proposed project have ventilation systems in garages in the lower levels, which would also vent any vapors to the atmosphere. The design of all such subslab depressurization systems shall be approved by the State.

31. Groundwater monitoring will be conducted during and after the treatment period for five years, or as otherwise required by NYSDEC, to confirm effectiveness of this remediation. At the end of such period the data will be evaluated by NYSDEC to determine if additional monitoring is necessary. The remedial activities for this area will be considered complete when the excavation is completed to pre-established boundaries and either Class GA standards for individual petroleum constituents (VOCs and SVOCs) are achieved or asymptotic conditions (i.e., no further reductions in concentrations of VOCs or SVOCs can reasonably be achieved), as agreed to by NYSDEC, are observed in monitoring wells within the treatment area.

32. Development plans for this PAOC require the addition of 2-10 feet of additional fill and cover material to provide finished grade. Trench excavation for most underground utilities is not expected to penetrate the saturated zone. For sanitary and storm sewer construction, the

groundwater saturated zone may be encountered. All construction activities will be in accordance with the Health and Safety Plan (HASP) that meets all state requirements. Any trenches for new utilities will be over-excavated (e.g., 1-2 extra feet on all sides) and backfilled with clean fill, so that future work in these utility trenches will take place in clean soil. During deep utility work in this area, the removal and disposal of any residual petroleum-contaminated soils, as well as any dewatering necessary to achieve such removal, will be handled in accordance with the Site Management Plan (described below). The Environmental Easement that will be imposed on the Site (described below) as part of the BCP will prohibit use of the groundwater for any purpose.

PAOC 47

33. PAOC-47, the area containing chromium and TCE in the soil and groundwater, will be remediated through two primary components: soil removal and ISCO treatment of the TCE-impacted saturated zone (groundwater and soil in the groundwater). The first element will be excavation and removal of approximately 3,600 cubic yards of chromium and TCE-contaminated soil to a depth of approximately 13 feet below current grade (extending below the bottom of the pit) for offsite treatment and/or disposal. A geotextile fabric will be installed at the base of the completed excavation. The excavation below the water table will be backfilled with clean, permeable fill. The remainder of the excavation will be backfilled and brought to grade with structural fill.

34. The excavation of this area will utilize a similar approach as for the excavation of the petroleum-contaminated soils in the area of the former 10,000 gallon UST as set forth in paragraphs 25-28. Chemical stabilizers will be applied during excavation to aid in material handling and disposal and to minimize the generation of dust. Excavated material may be stockpiled and subjected to treatability studies to determine if any of the material, subject to NYSDEC approval, could be treated and made suitable for on-site re-use as structural fill. All excavated material not reused on-site will be tested for waste classification and disposed of offsite at permitted facilities, as required by the results of the characterization sampling. Water generated during excavation and dewatering activities will be treated and discharged in accordance with all applicable requirements to the onsite sanitary sewers and transmitted to a Westchester County wastewater treatment plant. (In the event that an existing municipal

treatment plant is not available, a temporary onsite treatment plant, which conforms with all applicable standards, will be provided by GM.)

35. Trench excavation for most future underground utilities in the redevelopment is not expected to penetrate the saturated zone, so there should be no worker contact with low levels of residual contamination. All construction activities will be in accordance with the SMP. (Any new trenches, as noted above, would be over-excavated and backfilled with clean fill.) The Environmental Easement will prohibit use of the groundwater for any purpose.

36. PAOC-47 will be open space or roadway under the proposed redevelopment, and thus the area, after the remedial excavation and backfilling, will be capped by two feet of clean fill or asphalt.

37. The second component of the remedial approach is to address the TCE contamination of the groundwater and resultant creation of soil gas vapors that could potentially migrate under townhouses planned proximate to this PAOC. To address this issue, ISCO treatment will be implemented. The FEIS explains that with the implementation of this IRM, the potential for soil vapors containing VOCs to enter closed buildings is minimal, as the source of VOCs in soil will be removed and groundwater will be treated by ISCO. As noted above, however, Roseland will design the townhouses to include passive subslab depressurization systems that would prevent any vapors from migrating into the buildings, and implement the systems if required by NYSDEC or NYSDOH.

38. The approach for this remediation would be similar to the ISCO for the former 10,000-gallon UST area (see Paragraph 29). Site characterization work, bench scale treatability studies and field scale pilot studies will be conducted and utilized to develop a conceptual Site model, which will be followed in the full-blown ISCO remediation. The chemical oxidants will be delivered through injection wells (or well points). The injection wells will be placed within the areas of impacted groundwater and target the depth intervals where TCE is present in groundwater at concentrations greater than NYSDEC Class GA groundwater quality standards. This approach will ensure that the reagents are dispersed effectively throughout the treatment zone to promote contact with VOCs (e.g., TCE) in the subsurface soil and groundwater. The chemical oxidants will also address the exceedance of TCE in groundwater bordering Kingsland Point Park. Prior to the injection, data will be collected to establish baseline geochemical conditions in groundwater for the purposes of measuring

ISCO success and monitoring groundwater quality. Monitoring wells shall be installed in Kingsland Point Park if requested by the NYSDEC or Westchester County.

39. The groundwater remediation process will continue (i.e., there will likely be multiple injections of oxidizing agents) until such time that the VOCs are no longer present at concentrations greater than the NYSDEC groundwater quality standards for TCE of 5 µg/L or asymptotic conditions (as agreed to by NYSDEC) are reached (i.e., no further reductions in concentrations of chlorinated solvents can reasonably be achieved). Groundwater monitoring will be conducted by the Applicant for a period of 5 years, or as otherwise required by NYSDEC to confirm the effectiveness of this remedial approach. At the end of that period the data will be evaluated by NYSDEC to determine if additional monitoring is necessary.

PAOCs 7 and 29

40. GM proposes the removal of fill in the two areas exhibiting atypically elevated levels of lead (PAOCs 7 and 29). The remediation in these two areas of concern will include the excavation and offsite disposal of approximately 5,340 cubic yards of fill containing lead concentrations greater than 5,000 ppm from above the groundwater table and fill containing lead concentrations greater than 10,000 ppm below the water table.[5] The estimates for the removal of fill in PAOCs 7 and 29 are subject to refinement based on the final delineation as approved by NYSDEC

41. For PAOC-7, fill containing lead concentrations greater than 5,000 ppm will be excavated to approximately four feet below the surface to the groundwater table. The excavation will then be taken to targeted depths at three locations ranging from 8-12 feet within this footprint to remove additional fill containing lead concentrations exceeding 10,000 ppm below the water table. A total of approximately 4,400 cubic yards of lead-contaminated fill will be removed from this area of concern.

42. For PAOC-29, soil with lead concentrations exceeding 5,000 ppm will be removed from above the water table, and all soil with lead concentrations over 10,000 ppm will be removed from below the water table. The excavation will extend to approximately 6 to 10 feet below the current grade. A total of approximately 940 cubic yards of lead-contaminated fill will be removed from this area of concern.

5 The existing surface concrete and or asphalt cover will be set aside for future onsite recycling and re-use.

43. Overall, the remediation of these two areas will remove all fill with lead concentrations >5,000 PPM above the water table.

44. The excavation of these areas will utilize the same general approach as for the excavation of the petroleum-contaminated PAOC described above. When deemed necessary by the Village, shoring or sheeting will be utilized to conduct the excavation below the groundwater in accordance with the applicable Village permit. Dewatering of the excavation will be in accordance with the procedures presented in paragraph 27 above. A geotextile demarcation barrier will be installed at the base and sidewalls of each excavation before backfilling. Excavated areas will be backfilled to existing grade and compacted with structural fill materials. Chemical stabilizers will be applied during excavation to aid in material handling and disposal and minimize generation of dust. Lead-contaminated soil excavated from these areas that is not reused on-site will be tested for waste classification, removed from the Site and transported offsite for disposal. In some instances, excavated soil may be stockpiled and would be sampled to determine, subject to NYSDEC approval, whether such fill could be treated and be re-used on-site as structural fill. Material excavated for disposal will be tested for waste classification and disposed offsite. The Village will be given a copy of the Final Engineering Report, which will contain copies of all manifests for both hazardous and nonhazardous soils shipped offsite.

45. Although concentrations of lead in groundwater in these PAOCs do not exceed the Class GA groundwater standard for low turbidity or filtered samples, additional remedial work will be conducted to assure that any residual lead contamination remaining in fill in these areas after the excavations will not adversely impact groundwater. GM will conduct Synthetic Precipitation Leaching Procedure ("SPLP") testing to ascertain whether there is any predisposition for the remaining fill above the water table to be prone to leaching soluble lead. If the SPLP data and other relevant information show that there is a high likelihood that unsaturated soils remaining at the Site (after excavation) may leach soluble lead in the future, after the existing concrete and asphalt surfaces are removed, NYSDEC may require the Applicant to agree to propose additional engineering controls within these PAOCs or portions thereof (e.g., a lower permeability cap system or other measures) to maintain stable conditions. In addition, post-excavation groundwater monitoring will be conducted by the Applicant for a period of 5 years, or as otherwise required by NYSDEC to monitor any

changes in groundwater quality with respect to lead; at the end of that period the data will be evaluated by NYSDEC to determine if additional monitoring is necessary.

46. PAOC-29, when developed, will be within the open space corridor between Kingsland Point Park and the townhouses. The area will be graded by the additional structural fill and then will be capped by two feet of clean fill. The final separation between the future cap surface and the water table will range between 3 and 9 feet.

47. PAOC-7 will be under open space and townhouses, and will be capped by either two feet of clean fill or impervious surfaces associated with the development. Up to eight feet of structural fill will be required to raise the finished grade in this area. Thus, there will be approximately 8-12 feet of separation between the post-development surface and soil containing residual lead contamination in this area. The final separation between the future cap surface and the few remaining concentrations of lead above 10,000 ppm will range from 12-24 feet. Utilities for the proposed development will not penetrate below the areas to be excavated.

48. The Environmental Easement that will be imposed on the Site (described below) as part of the BCP will prohibit use of the groundwater for any purpose.

General Measures

49. As part of the location-specific remediation, surveys will be conducted to identify the boundaries of all areas where excavation is conducted. These surveys will be incorporated into a final overall survey of the entire Site to be conducted post-remediation so that the elevation of the demarcation barrier, surface cap, and other remedial elements described below can be located. The survey will include global positioning system (GPS) coordinates that will be linked to a Geographic Information System (GIS). Survey accuracy shall be 0.1 foot horizontally and 0.1 foot vertically.

50. GM has proposed to transport at least 75 percent of the historic fill removed as a result of the location-specific remediation (i.e., the proposed IRMs) to offsite disposal locations by rail, and shall make reasonable best efforts to transport all of the historic fill removed as a result of the IRMs to offsite disposal locations by rail.

Site-Wide Remediation

51. The Site-wide remedial approach, which is discussed in the FEIS and described below, will also be contained in a Remedial Work Plan that will be reviewed and approved by NYSDEC under the BCP (after an opportunity for public review and comment). After that remediation is complete, under applicable BCP procedures, the Applicant will file a Final Engineering Report certifying to NYSDEC, and a separate, comparable certification to the Village of Sleepy Hollow, that all the remediation is complete. An Environmental Easement will be filed in the Land Records Division of the Westchester County Clerk's Office. (These documents are discussed in the FEIS and described below). The Applicant has agreed to prepare and file the SMP and the Environmental Easement providing for effectuation of that SMP by the time the location-specific remedial measures (i.e., the IRMs) are complete, thus accelerating this process and assuring effectuation of the measures described below.

52. The Site-wide remediation is as follows:

- Demarcation Barrier: One engineering control is the placement of a demarcation barrier that will consist of geotextile fabric, plastic fencing, or other appropriate material approved by NYSDEC and the Village Board above historic fill that will be left on the Site as well as structural fill from the Site placed as part of the IRMs. The barrier will be selected specifically so as to be of a color that is visible when encountered during future excavations. The barrier will warn that any work below it could disturb an area of historic fill or residual contamination. The barrier will be placed under open space and landscaped areas and under roadways. Prior to any such disturbance, the SMP will require that certain soils management, health and safety, and cap restoration measures be implemented. When landscaping and planting onsite, and when excavations below the clean fill cap are necessary, the demarcation barrier will be placed at the bottom and sides of the excavation.

- Capping System: A second engineering control is the installation of a surface cap of either impervious material (such as concrete or asphalt) or two feet of fill meeting NYSDEC restricted residential soil cleanup objectives over open space and landscaped areas to prevent exposure of the public to historic fill or residual contamination. In open space/landscaped areas, therefore, the surface cap would be at least two feet above the demarcation barrier (unless modified by NYSDEC in the Remedial Work Plan). The

capping system and demarcation barrier, along with other measures, will part of the Remedial Work Plan under the BCP.

- Prevention of Vapor Intrusion: As noted above, venting systems will be installed by Roseland, if required by NYSDEC or NYSDOH to prevent vapors from TCE, petroleum or methane from entering closed buildings. Each townhouse and Buildings I and N (if required by NYSDEC or NYSDOH) will have a passive subslab depressurization system. Subslab depressurization systems are standard measures used to prevent vapors from entering closed buildings, as they vent vapors that may be under the foundation into the air outside the structures. Other buildings will have garages with venting systems on the lower levels, which vent to the outside any vapors while also venting carbon monoxide from vehicles. The Village DPW facility will also be designed to incorporate engineering controls that will prevent the intrusion and accumulation of methane.

- Site Management Plan: The SMP, to be approved by NYSDEC, will include a complete description of the engineering controls (e.g., the cap and demarcation barrier) and institutional controls (e.g., the prohibition on the use of groundwater) that will need to be maintained under the Environmental Easement. It will also include the following elements that will apply during the remediation, construction and/or post-construction stages of the redevelopment:

  – Health and Safety Plan (HASP): The HASP will contain procedures that govern remedial activities and assure compliance with the applicable provisions of the Occupational Safety and Health Act (OSHA) and state requirements. The HASP applies to remediation and construction workers only. The HASP will require monitoring during remedial activities and during construction activities that might disturb historic fill or areas with residual contamination. There will be a general HASP for the Site as a whole, and individual subcontractors will have their own HASPs that govern their specific activities.

  – Community Air Monitoring Plan (CAMP): The CAMP will be implemented consistent with NYSDOH and other applicable guidance for such monitoring. The CAMP will provide for monitoring at construction area perimeters and the Site perimeter for volatiles and particulate matter, using real-time monitoring equipment, and will require the suspension of activities until any exceedances are addressed.

The CAMP will ensure that members of the public are not exposed to levels of dust or vapors above applicable guidelines or standards during remediation and construction.

- Dust and Vapor Suppression Measures: These measures will include spraying water mist on accessways and equipment during excavation and loading activities, and transporting waste loads in properly covered containers.
- Decontamination: The SMP will describe procedures to decontaminate construction vehicles, typically by washing them down before they leave the Site.
- Soil Management: The SMP will describe procedures for segregating and stockpiling of historic fill and contaminated soils, including provision for ensuring any NYSDEC-required separation of the Hudson River waters from any of the historic contaminated fill under the widened waterfront access area. These and other sediment and control measures will also be part of the Stormwater Pollution Prevention Plan applicable to the Site.
- New Contamination: The SMP will describe procedures to follow if additional contamination is discovered during either the remedial or construction process. These would include protocols for notification of the appropriate agency, sampling of any newly suspected unknown contamination, stockpiling such material and offsite disposal, if required.
- Characterization Sampling: The SMP will describe procedures for characterization sampling of soils that have been excavated on the Site to determine whether such soils can be reused on site as subsurface fill material or transported off-site to an appropriate disposal site.
- New Utilities: The SMP will require that trenches for new utilities will be over-excavated (by approximately one to two feet on all sides) and backfilled with clean fill.
- Dewatering: The SMP will describe requirements for the management and disposal of dewatering during any future remediation or construction activities, to assure that such waters are sampled, property managed and disposed offsite at a Westchester County municipal treatment plant.

- Clean Fill: Clean fill to be used for capping open space and landscaped areas will meet NYSDEC restricted residential soil cleanup objectives.

- Operation, Maintenance and Monitoring (OM&M) Plan: The Plan will include the following requirements for monitoring the effectiveness of the remediation and maintenance of the cap: installation of monitoring wells (including those as part of the location-specific remediation described above in PAOCs 7, 29 and 47 and the former 10,000 gallon UST area); a program of annual slab and cap inspection by a qualified professional (including details on such inspections and their frequency) to assure that the engineering controls continue to be effective and meet the criteria for maintenance and repair to all engineering control systems; and periodic engineering certifications describing measures taken to implement OM&M requirements and an annual confirmation report that all OM&M requirements are satisfied. The OM&M Plan will be subject to review by the Village consistent with Paragraph 65 of these Findings. Copies of all reports prepared under the Plan will be submitted to the Village.

- Plantings Protocol: Vegetation such as shrubs and trees with root balls will be planted with a minimum of a twelve-inch buffer of either topsoil or of clean fill that meets the NYSDEC restricted residential soil cleanup objectives for the protection of public health completely surrounding the root ball. The demarcation barrier described above will be installed between the clean fill/topsoil and the historic fill material. The Village Board notes that most of the trees and shrubs to be planted on the Site will be in areas that are to be regraded (elevated) with the placement of clean fill, so that there is more than the 12 inch minimum of clean fill/topsoil surrounding the root ball. During site plan review, the Village will retain an arborist, at Roseland's expense, to review and ensure that the planting plans are appropriate for the soil conditions.

- Post-Construction Activities: The SMP will also be applicable to post-construction activities. These post-construction soil and groundwater management protocols will be similar to those of the remediation phase but will also include criteria for determining what future activities trigger the need to implement the SMP soil and groundwater management measures. Future activities that would trigger the post-

construction aspects of the SMP will be ground-intrusive activities that may breach the demarcation barrier or extend beneath the future buildings and structures.

- Geographic Information System (GIS): At the completion of each principal phase of remediation and construction, the Applicant will have the Site surveyed to identify the location of remedial and related development components, including the boundaries of all remedial excavations, demarcation barrier, the cap, and the location of utility trenches. The survey will provide GPS coordinates for incorporation into a final site plan. This information can then be incorporated into a Village GIS system.

- Methane Scarification: Methane is present under the Site, primarily on the East Parcel as a result of the historic use by the Village as a landfill. The methane is presently trapped under asphalt on the East Parcel; there is also methane trapped under on-grade slab in the small area of the northwest corner of the West Parcel. During the initial stage of construction, Roseland will scarify (i.e., excavate trenches in) the asphalt on the East Parcel to release trapped methane vapors. Roseland will also remove the slab and asphalt in the northwest corner of the West Parcel during construction, which will release the methane trapped in that area.

- Re-use of Millings: Roseland will mill the slab and, as with the millings currently stockpiled on the Site, use this material for structural fill (i.e., above the water table and below the surface cap). The slab has already been sampled, and the only contaminant of concern found in the slab was PCBs. The concentrations of total PCBs (consisting of Aroclors 1248 and 1260) generally range from 1.8 ppm to 2.6 ppm, which is well under the 10 ppm NYSDEC criterion for use as subsurface fill. Use of the slab for millings will reduce the amount of fill that would need to be transported to the Site for the redevelopment.

- Construction Activities: The principal construction activities will include installation of utilities, cut and fill, grading, installation of piles to support buildings on the West Parcel, construction of building foundations, and construction of roads. As noted earlier, new utilities will be installed in trenches that will be over-excavated and backfilled with clean material. Piles can be safely driven, as the residual contamination on the Site is not mobile, and piles will not create a pathway for any contaminant migration. The cutting

and filling and grading will occur after the location-specific remedial activities, and will be performed using the variety of dust control and monitoring measures described above. Road and building foundations will be constructed in some portions of the Site in areas containing residual contamination, and will serve as part of the surface capping system. There is no need for buffers of clean fill around foundations or similar structures, as the top two feet of adjacent fill will be clean and any work done below the demarcation barrier will be conducted consistent with the protections identified in the SMP.

- Environmental Easement: An environmental easement will be filed with the Land Records Division of the Westchester County Clerk's Office and will be binding upon all future owners of the Site or any portions thereof. The Easement will be enforceable by NYSDEC and by the Board of Trustees of the Village of Sleepy Hollow, and, if required by NYSDEC, will specify the requisite obligations for securing the public health and environmental protection. The Easement will reference and require implementation of the SMP and the engineering and institutional controls imposed on the Site, and, if authorized by the Village, shall specify the metes and bounds for the buffer area. The institutional controls will prohibit the use of Site groundwater for potable water purposes and restrict use to classifications which includes open space and parkland use. Should the NYSDEC file a brownfields easement without providing that the obligations run in such a way as to permit enforcement by the Village of Sleepy Hollow, then the Village Trustees shall require the Applicant to execute a separate environmental easement running in favor of the Village.

53. Roseland shall obtain an initial environmental liability policy with commercially reasonable limits to be agreed upon by Roseland and the Village prior to NYSDEC's issuance of a Certificate of Completion of the Site. Such policy will be in place for at least the first ten-year period after NYSDEC issues its Certificate of Completion for the Site, which policy will include the Village, GM and Roseland as insured parties. Such a policy would cover contamination discovered after the NYSDEC has issued the Certificate of Completion for remediation of the Site under the BCP. Roseland or the Master Homeowners Association shall renew such a policy after the expiration of the initial term, if such policy is reasonably available. Such a policy, to the extent it can be renewed under the terms noted above, shall

remain in effect so long as required by the Village and will name the Village of Sleepy Hollow as an additional insured.

54. The Applicant has agreed to pay for an independent monitor, to be retained and approved by the NYSDEC and the Village to monitor its remedial activities and related earth-disturbing construction activities. The Village, NYSDEC and the Applicant will coordinate and develop the protocols for such monitoring.

Sediments

55. GM has conducted sampling of sediments in the Hudson River off-shore of the Site under the auspices of the BCP. Stormwater runoff from the Site will be managed under the Stormwater Pollution Prevention Plan and related provisions, and thus development is not expected to affect River sediments or surface water quality.

56. The only location in which sediment sampling to date has indicated potential contamination that might warrant remediation is in the area of OF-1, which had discharged wastewater from the former Assembly Plant until 1971.[6] The redevelopment plan for that area includes a fishing pier, which would be constructed on piles. If remediation is required under the BCP in that area, it would likely take the form of dredging and would be expected to be implemented prior to the construction of the pier in that area. If no remediation is necessary under the BCP, the piles that would be installed to support the pier will not significantly affect contaminated sediments. Any such dredging and de-watering would be conducted by GM according to a NYSDEC-approved work plan as part of the BCP and any required Village of Sleepy Hollow permit.

57. A report by Milone & MacBroom (January 2007), prepared on behalf of Scenic Hudson, Inc. and submitted to the Village Trustees after issuance of the FEIS, contains information relating to contamination of sediments in the Pocantico River. Sediments sampled in the Lower Mill Pond were found to contain mercury in excess of a level denominated as Effects Range Medium ("ERM"). This is a guidance value often applied by regulatory agencies in determining whether a concentration represents a "probable-effects" range within which adverse effects would occur in sediment-dwelling organisms. The report hypothesizes that these levels in the Lower Mill Pond may be due to backwash effects from the Hudson River

6 The results of the initial sediment sampling conducted by GM are contained in the Sediment Quality Investigation of the Hudson River (Exponent and EMCON, March 1999), which is in the NYSDEC public repositories.

or from contaminants that migrated from the GM site in a channel that extends from the Site into the Lower Mill Pond. The report recommends dredging of the Lower Mill Pond to eliminate the risk it associates with these sediments.

58. The Pocantico River flows adjacent to the northeast section of the East Parcel. As noted earlier, the East Parcel was filled by the Village, and when acquired by GM in 1960, it was paved. Although the largely paved 28-acre East Parcel drains to the Pocantico River through both overland flows and a system of ditches, which were noted in the Milone & MacBroom report, this section of the Site constitutes less than 0.3 percent of the contributing upstream Pocantico watershed of approximately 16 square miles, extending from Sleepy Hollow to Mount Pleasant and Briarcliff Manor. The channel noted in the Milone & MacBroom report does not carry stormwater from the West Parcel. The investigation of the East Parcel conducted by the Applicant did not indicate elevated levels of mercury.

59. The Milone & MacBroom report, as noted, also hypothesizes that the mercury contamination might be the result of backwash from the Hudson River. The GM site is not a significant source of mercury in the watershed.

60. Redevelopment of the East Parcel will reduce impervious surface area, and increase the pervious and grassed areas that would filter stormwater that would continue to drain from newly paved areas after East Parcel redevelopment.

The Estuary Concept

61. In response to public comments, the FEIS Alternative Plan introduced a curvilinear Road One along the Site's western frontage and set this road further back to expand the riverfront open space and provide a buffer, generally ranging from 75 feet to 175 feet in width, between the project and Kingsland Point Park. The Applicant has also committed to reserving this space for any possible future creation by others of a new Hudson River estuary or Pocantico River outlet (referred to herein as an "estuary"), which is not a part of the Proposed Action, and is not required for the redevelopment of the Site. As described under the Land Use findings, in order to more effectively buffer the park and better accommodate a potential future estuary in the buffer area, the Riverfront Development Concept Plan shall be modified so as to increase the minimum building setback and the width of the buffer t. As explained below, before any estuary could be developed, there need to be studies to

determine whether its creation is feasible and, if found to be feasible various approvals, permits and funding would be required.

Basic Steps to be Taken for Creation of Estuary from Hudson River to Pocantico River

- The Village will identify the entity (Entity), responsible for: (i) securing the funding for and conducting the studies necessary to ascertain the feasibility of the estuary; (ii) securing the funding for, designing, and obtaining all permits and approvals necessary for construction of the estuary; (iii) securing the funding for and arranging the construction of the estuary; and (iv) securing the funding for and performing any necessary post construction monitoring, certification, reporting, and/or long-term maintenance of the estuary.

- The Entity would secure funding and retain consultants necessary to undertake the studies to determine whether construction of the estuary is feasible, including studies to meet the requirements of SEQR and the National Environmental Policy Act ("NEPA), which studies would be expected to include hydrologic studies of the Hudson and Pocantico Rivers, ecological and engineering studies, studies of soil conditions in the area of the proposed channel, and estimates for the cost of construction and maintenance of the estuary.

- The results of the SEQR and NEPA reviews and studies should indicate the physical elements of the estuary, including channel depths, channel widths and other elements of the channel profile and configuration, surface treatment of the estuary channel and banks (including an impermeable barrier to insulate the estuary from the historic fill, and a conceptual planting plan for wetlands and banks), and basic construction requirements, including sequencing.

- After completion of the studies, if the Entity, in consultation with the Village of Sleepy Hollow, Roseland and GM, and subject to reasonable conditions by the Applicant, determines that the proposed estuary is feasible, then the Entity will make application for the requisite permits and approvals.

- The Entity would obtain appropriate insurance for the construction of the estuary of the same coverages and limits as Roseland will obtain for the development of Lighthouse Landing.

- When the work is completed, the Entity shall obtain an environmental liability insurance policy in limits acceptable to Roseland and GM and their respective successors and assigns, and the Village of Sleepy Hollow, which policy will name all of these parties as additional insureds. Such policies shall be renewed by the Entity or its successors in perpetuity.
- Upon receiving approvals for the construction, the Entity would provide Roseland and GM and their respective successors and assigns for Lighthouse Landing, and Westchester County for Kingsland Point park, and the Village of Sleepy Hollow, with an indemnification and release of liabilities for all aspects of the estuary construction and associated impacts, in perpetuity, other than any such liabilities reserved to GM under the Brownfield Cleanup Agreement.
- The Entity would be responsible for the construction of the estuary at its cost. In regard to construction, the appropriate NYS DEC brownfield SMP shall govern all activities.
- The design and engineering drawings for construction of the estuary would be subject to the review and approval of NYSDEC to the extent such construction or related activities would penetrate the demarcation barrier installed under this portion of the Site pursuant to these Findings and/or the BCP.
- Provided that the Entity meets all of the above conditions, prior to the commencement of construction of the estuary, GM or Roseland will transfer title to the real property containing the estuary to the Entity.
- On request, the Entity would pay the cost for Roseland or the subsequent owner(s) of the West and Parcel to obtain flood insurance against flooding from the estuary on an annual or other temporal basis for which insurance is available.

Independent Evaluation

62. The Village Trustees retained an independent environmental consulting firm, Roux Associates Inc., to review the investigation of the Site conducted by the Applicant, the proposed remediation, and related issues. Roux Associates supports the Village's findings incorporated herein.

63. The Village finds that the investigation of the Site conducted by the Applicant is sufficient for the Village Trustees to evaluate the remediation proposed by the Applicant.

64. The Village finds that the remediation described above and set forth in further detail in the FEIS (the location-specific and Site-wide remediation, together with the SMP and Environmental Easement; hereinafter the "Remediation") is consistent with the determination of NYSDEC and NYSDOH and will protect public health and the environment.

65. The Village, acting through the Village counsel and environmental engineering consultant, shall have a reasonable opportunity to review the proposed SMP and Environmental Easement and to provide comments to NYSDEC and the Applicant with respect thereto. Should the NYSDEC file a brownfields easement without providing that the obligations run in such a way as to permit enforcement by the Village of Sleepy Hollow, the Village Trustees will require the Applicant to execute a separate environmental easement running in favor of the Village.

66. The Applicant shall consult with representatives designated by the Village to coordinate, to the maximum practicable extent, the GIS described in these Findings with the Village archival systems.

67. The NYSDEC may require the Applicant to conduct remedial activities in addition to the Remediation, and any further requirements may be more stringent that those adopted herein by the Village in order to further protect public health and the environment. The Applicant shall be required to comply with any such -imposed requirements.

68. After the remediation of the West Parcel is completed to the satisfaction of the NYSDEC, there will remain residual soil contamination at low levels. The Village does not wish to assume any potential future liability to third parties as a result of this contamination. As part of the FEIS Alternative Plan certain areas of the West Parcel are proposed to be public roads, public parks and public open space both along the riverfront and within the interior of the site. In order to protect itself from any potential future liability, the Village will not take title to the land within any of these public areas or under any roads. Rather, the Village will take title to the physical improvements in those areas and the road bed and Roseland will grant easements in perpetuity to the Village which would obligate the Village to repair and maintain the public roads, public parks and public open space areas and the improvements and plantings in those areas (including but not limited to rip-rap and other shoreline

structures) and permit the Village to enter upon and disturb the land to the extent necessary to perform any such work. Notwithstanding the above, Roseland must provide for the lateral and subsurface support for the surface estate structures. Easements would also be granted to the Village obligating the Village to maintain, replace and repair public utilities under the public roads and public and permitting the Village to enter upon and disturb the land to the extent necessary to perform any such work. It is the intent of the Village and Roseland that the streets shall be public rights-of-way for all purposes, including installation of electric and gas utilities.

69. The Village Board notes that it is expecting that the trees to be planted should have the ability at maturity to grow out to their full and typical dimension, and, in designated areas, to a size consistent with those in the neighboring Kingsland Point Park. During site plan review, the Village will retain an arborist, at Roseland's expense, to review and ensure that the planting plans are appropriate for the soil conditions.

70. GM and Roseland shall hold harmless the Village from any injury or damage to persons or property arising out of the presence of any remaining residual soil contamination below the public roads and public spaces.

3. Socioeconomic Conditions

Potential Impacts

1. The GM site has long been an integral component of the Village's economy, providing a major source of employment and tax revenue generation. The closing of the plant in 1996 had a significant impact on the Village, as approximately 1,800 jobs were lost. The loss of the plant has also created a significant gap in the fiscal fabric of the Village, requiring the Village to cut back on the typical services previously provided to its citizens and forcing an increase in tax rates that was, and is still, borne by the residential tax payer.

2. The EIS included a detailed Fiscal Impact Analysis prepared by Burchell & Listokin LLC, a premier economic research organization. The analysis provided a measurement of development-generated costs versus revenues to the various jurisdictions which will be impacted by the project, including the Village, the Town of Mount Pleasant, the Tarrytown Union Free School District, and Westchester County. Costs were calculated by considering

the population introduced by the project along with the above public jurisdictions' outlays for servicing new residents. The cost to service estimates were generated through comparison of the municipal budgets with the number of residents and workers within the jurisdictions, and through costs suggested from detailed interviews with public officials. Revenue impacts were derived by estimating the property value of the project to these servicing districts and multiplying this figure by the current property tax rates. Together with non-property tax revenues, this constitutes total generated revenues. The net fiscal impact is the difference between project-induced public service costs and project-generated public revenues. As described in extensive detail in the Fiscal Impact Analyses included in the FEIS with respect to the FEIS Alternative Plan, the project would generate approximately $5.38 million annually to the Village of Sleepy Hollow and $5.62 million annually to the Tarrytown Union Free School District. After considering the public costs to service the new development, the project is anticipated to result in an annual net fiscal surplus of approximately $0.63 million to the Village, and $1.5 million to the Tarrytown Union Free School District. Westchester County is also expected to realize an annual fiscal surplus of approximately $0.96 million, and the Town of Mount Pleasant is expected to essentially break even from a fiscal perspective.

3. The project will also result in substantial secondary economic benefits during the construction phase, including discretionary worker spending and sales tax generation. The DEIS estimates suggest that over the project's construction period, the national economic impacts of the project construction phase expected to be generated per year would be approximately 1,291 jobs, $67 million in income, and $10 million in state and local taxes. New York State would be a beneficiary of a large share of these economic benefits. Westchester County and the Sleepy Hollow/Tarrytown area would also garner a portion of these benefits. The EIS included a detailed socio-economic technical report prepared by Economic Research Associates, which outlined the significant direct and secondary economic benefits resulting from Lighthouse Landing residents, employees and visitor consumer spending on-site, along Beekman Avenue and Main Street, and along Route 9.

4. Full build out of the FEIS Alternative Plan is anticipated to generate approximately 584 jobs. It is expected that the type of retailers at the project Site will be of a different type than the

independently-owned neighborhood-serving retailers found along Beekman Avenue in Sleepy Hollow and Main Street in Tarrytown.

5. The demographic data suggests that the FEIS Alternative Plan would have a residential population of approximately 2,514 persons. This would increase the Village population by 27% from its 2000 total of 9,212. The Fiscal Impact Analysis reviewed schoolchild generation figures from a demographic study prepared for the Union Free School District of the Tarrytowns, Westchester County field level experience reported by RH Consulting, and analysis of census data for newly built comparable housing in the region. Based on the most conservative of the schoolchild generation rates reviewed in the Fiscal Impact Analysis, the FEIS Alternative Plan would be anticipated to result in up to a maximum of 211 public schoolchildren. At the January 23, 2007 public hearing on the FEIS, the Superintendent of the School District concurred generally with the schoolchild generation estimates. The Fiscal Impact Analysis was, in turn, prepared using the most conservative (i.e., highest) number of schoolchildren. If the FEIS Alternative Plan generates children at the lower rates suggested by the other less conservative demographic multipliers, the net fiscal surplus to the School District would increase substantially. With the improvements associated with the 2005 bond referendum, the school district will have sufficient capacity to accommodate future enrollments from the project.

Mitigation

6. Roseland has committed to providing 40 affordable senior rental units and 21 Village workforce affordable housing rental units, in conformance with Westchester County affordability guidelines, which stipulate a maximum household income of 80 percent of the County median income ($61,750 for a family of 2, and $77,200 for a family of four based on 2006 limits.) The administration of the affordable housing program will be determined by the Village Board. As part of its commitment to meet the goals established in the County Allocation Plan, the Board has recently approved an affordable senior housing project. The affordable units may be either distributed throughout the rental buildings or included within a single rental building. As the project will result in a fiscal benefit to the Village and the School District, no additional mitigation is required.

Findings

7. The Village Board finds that the FEIS Alternative Plan would result in a substantial positive fiscal and economic impact on the Village. Although the project commercial components are anticipated to have a different character than the businesses in the existing local commercial districts, which is intended to minimize direct competitiveness, the Village Board remains concerned about the potential of the new commercial uses to adversely impact the Village's existing commercial core. In order to minimize this potential impact and enhance the overall commercial vitality of Beekman Avenue, Roseland shall make a financial contribution to the start-up costs of a not-for-profit "Downtown Revitalization Corporation" (a local development corporation or business improvement district), and to thereafter participate with downtown business owners in the activities of the organization. In order to further strengthen and reinforce the link between Lighthouse Landing and the Inner Village, the Village Board finds that the Riverfront Development Concept Plan shall be modified to introduce a streetscape element or elements that would visually connect the upgraded Beekman Avenue bridge with the Beekman Avenue/Beekman Place intersection and the Hudson River beyond.

8. The Village Board further finds that as the East Parcel parking lot primarily serves Village uses and would be a community resource, the lot should be Village managed and the parking revenues should be directed to the Village. The East Parcel lot, however, will remain available for Lighthouse Landing resident, employee and visitor use, subject to applicable parking regulations as may be imposed by the Village. Similarly, provided that the Village accepts dedication of the streets or otherwise accepts the obligation for maintaining the streets, the revenues from on-street parking in the project interior shall be collected by the Village.

9. The Village Board also recognizes that the project's commercial uses are a key component in creating the project's fiscal benefit, in that they provide tax generation while requiring relatively modest service cost. However, commercial uses may generate more impacts than other land uses in some categories (e.g., traffic generation.) The Village Board understands that overall project evaluation requires weighing potentially competing considerations, and in this context finds that the quantity of commercial use in the FEIS Alternative Plan strikes

an appropriate balance between social, economic and environmental concerns. The Village Board further finds that the required revisions to the Riverfront Conceptual Development Plan reducing density by approximately 73 units still provides the Village and other related taxing entities with a net fiscal surplus.

10. During comment on the FEIS**,** concerns were expressed that the Project's condominium units will be assessed as rental properties and, consequently, at a lower imputed value than residential lots held in fee simple ownership. With regard to Village taxes, the Village of Sleepy Hollow is certified as a "special assessing unit" and thereby utilizes a homestead and non-homestead tax classification. Thus, for purposes of Village tax assessments, the Project's condominium units will be classified as homestead parcels and thereby valued in the same manner as single-family homes in fee simple ownership. The school taxes generated by the Project will be based upon the assessments established by the Town of Mount Pleasant. The Town of Mount Pleasant is not a "special assessing unit." The analysis submitted with the EIS, however, accounts for differing assessments used for the calculation of Village taxes and all other real property taxes. The analysis projects that the Union Free School District of the Tarrytowns will obtain a net fiscal benefit, notwithstanding the form of ownership of the Project's units. The Village Board also notes that it has adopted a Resolution in support of the legislative proposal by Assemblywoman Sandra Galef requiring market-based assessments of real property owned or leased by a cooperative corporation or on a condominium basis which is converted or constructed on after January 1, 2008.

11. The Village Board finds that, with the mitigation and conditions described above, the FEIS Alternative Plan would result in a substantial positive fiscal and economic impact on the Village.

4. Community Facilities and Services

Potential Impacts

1. Development of the FEIS Alternative Plan would increase the number of residents in the Village by approximately 27%, as well as introducing new employees and visitors. This would potentially increase the demand for various public and community services, such as

police and fire protection, ambulance service, public works, refuse collection, and recreation. However, as discussed above, the EIS included an extensive fiscal impact analysis, which examined potential costs to the municipality to provide these community services. As documented, accounting for these costs, the FEIS Alternative Plan is anticipated to result in a net fiscal surplus to the Village of approximately $0.63 million annually. (The values expressed in the fiscal analysis are in 2003 terms, as the study was based on 2003 tax rates, market values, and other data. Over the course of the buildout, items such as assessed values, or the number of school children may change. Village tax rates may also change as a result of the budget decisions made by the Village Board. While acknowledging the potential for variability, the analysis utilizes an appropriate approach and provides an order-of-magnitude estimate of financial impact.)

Mitigation

2. In order to respond to facility and response considerations, Roseland proposed to donate land on the south parcel at the corner of Beekman Avenue and Hudson Street and contribute up to a maximum of $1,500,000 to the construction of a new fire/ambulance station to serve the western portion of the Inner Village and Lighthouse Landing. Roseland has also proposed under the FEIS Alternative Plan to donate approximately 23 and 15.9 acres of land to the Village on the East and West Parcels, respectively.

3. The Police Chief and Village administration have reviewed the project and anticipate that it will create a need to establish a fourth police post coverage area to patrol the residential and commercial portions of the project. This post would require approximately six additional police officers. However, as described above the Fiscal Impact Analysis indicates that the FEIS Alternative Plan would result in an annual net fiscal surplus, after accounting for the cost of providing public services. In addition, Roseland has committed to contracting with a private security service to monitor activity at the site. In order to further limit the extent of police services required, a secure entry system, such as a key card for the subsurface parking garages, shall be used.

4. Similarly, although the Village DPW anticipates that it will require additional staffing to service the project (approximately six new staff members to provide garbage removal, street

cleaning, landscape maintenance, etc.), the costs of DPW service have been considered in the Fiscal Impact Analysis and the FEIS Alternative Plan generates a net fiscal benefit. As noted in the FEIS, Roseland has also committed to construct a new Village DPW facility, which has been conceptually designed by the Village's design consultant in coordination with Roseland on the land Roseland proposes to donate on the East Parcel. Roseland shall be required to construct at its expense a a new DPW facility to the specifications provided by the Village's design consultant, provided that in no event shall Roseland's cost to construct the facility exceed $3,050,000. This total shall not include management/developer's fees or overhead costs.

5. In addition to the DPW site, Roseland has committed to the construction of the soccer fields, tennis courts and recreation parking spaces on the East Parcel, as well as the funding and construction of the West Parcel waterfront park and amenities described in the FEIS.

Findings

6. The FEIS Alternative Plan will increase the residential population of the Village by approximately 27 percent, and also includes a substantial commercial component. The Village Board finds that in light of the extent of the new development, in order to provide for public safety it is necessary to provide for an additional firehouse/ambulance station on or adjacent to the project Site that will be able to deliver effective emergency services. Therefore, Roseland shall be required to contribute towards the construction of, or shall construct at its expense, a firehouse/ambulance station at the location identified on the conceptual site plan, and in general accordance with the firehouse design prepared by Richard Daley Architects, provided that in no event shall Roseland's cost to construct the facility exceed $1,500,000. This total shall no include management/developer fees or overhead costs. The Village Board retains the right to approve the site plan associated with the proposed firehouse after review and recommendation by the Planning Board and Architectural Review Board. Based on discussions with the Fire Department during the course of the environmental review, it is anticipated that one fire company will be moved into this new location. This is not anticipated to have an adverse impact on fire insurance ratings for uses elsewhere in the Village. The project also includes a number of structured and under-building parking garages. The Village does not currently have equipment that can

effectively enter and attack fires from within these structures. In order to provide for maximum resident safety and minimize the potential for property loss, the Village will require that Roseland fund the purchase of a low-profile firefighting vehicle. The Village will require that the project incorporate appropriate fire and police safety measures (e.g., security camera installations, street level call boxes, etc.) into the site plan. This shall include installation of closed-circuit cameras in the new parks and main public thoroughfares for use by the Village, provided that in no event shall Roseland's cost to install the cameras exceed $75,000. These measures shall be reviewed and evaluated during the site plan approval process.

7. As indicated elsewhere throughout this document, the Village Board finds that the Richard Daley East Parcel Master Plan provides a beneficial and appropriate report for a variety of municipal-related functions. With the exception of the proposed provision of land to Historic Hudson Valley, the Village retains the right to review and approve the site plan for the municipally-related functions as shown on the Richard Daley Master Plan, after review and recommendation by the Planning Board and Architectural Review Board. The Planning Board for the Village of Sleepy Hollow shall be responsible for any potential improvements to the property proposed to be provided to Historic Hudson Valley.

8. The Village Board finds that with the mitigation proposed Roseland, and the conditions described above, the FEIS Alternative Plan will not result in significant adverse impacts on community facilities and services.

5. Historic, Cultural and Archaeological Resources

Potential Impacts

1. As part of the DEIS, a Stage 1A Literature Review and Sensitivity Analysis was prepared. The report reviewed site files from the NYS Office of Parks, Recreation and Historic Preservation (NYS OPRHP), and the NYS Museum, mapping dating back as far as 1725, and historical texts and studies dating from 1900. The analysis concluded that if the southeastern portion of the West Parcel and the South Parcel were undisturbed they would have a high potential to yield prehistoric cultural resources. However, both of these areas

have been profoundly disturbed by prior industrial development. With the exception of these two areas, the rest of the site is man-made and therefore, based on the available documentation, lacks potential for prehistoric resources. The southern portion of the land north of Beekman Avenue, as well as the land to the south have both been impacted by past development activities. Given these factors, the analysis concluded that the project site lacks the potential to yield prehistoric cultural resources.

2. The Stage 1A Analysis also concluded that evidence of the former historic industrial operations at the West Parcel and South Parcel of the Site would have been destroyed by subsequent development. Unlike the West Parcel, the East Parcel historically contained no structures, and until construction of the railroad in the mid-19th century, was part of an embayment of the Hudson River. After construction of the railroad cut off the area from the Hudson River, the area was gradually filled with silt from the Pocantico River (with the result that the Pocantico River became channelized upstream of the culvert under the railroad tracks through which it flowed), and in the mid-20th century this area was filled to create the General Motors parking lot. Prior to establishment of the parking lot, a portion of the East Parcel was also used for a municipal land fill and Village athletic fields. Given these factors, the Analysis concludes that the Site as a whole lacks the potential to yield historic resources.

3. Based on the information presented in the Stage 1A Analysis, the NYS OPRHP has indicated that the project will have no impact on historic properties in, or eligible for inclusion in, the State and National Registers of Historic Places.

Mitigation

4. Based on the findings of the Stage 1A Analysis, the Applicant has not proposed any mitigation measures.

5. However, based on concerns and supplemental information provided by the Village of Sleepy Hollow Planning Board and the Historical Society of the Tarrytowns to the Village Board regarding the potential archaeological sensitivity of the East Parcel, specifically in the vicinity of a pier at the end of what was known as “Continental Road”, the Village Board will require that additional archaeological mitigation protocols be followed prior to

disturbance of this area of this portion of the East Parcel. However, since the East Parcel was created by filling events, the NYSDEC IRMs will involve the placement of additional clean fill over the top, and the East Parcel Master Plan involves a relatively non-intensive development levels, it is anticipated that any potential historic material would likely remain in the fill.

Findings

6. The Village Board finds that as described in the Stage 1A Analysis and indicated by the NYS OPRHP, the proposed project would not have significant impacts on prehistoric archaeological or historic resources. In response to specific concerns raised regarding East Parcel sensitivity, the Village Board also notes that the level of subsurface disturbance associated with the proposed uses (the DPW garage, recreation fields, etc.) is relatively minimal. As described in the Land, Water and Ecological Resources section of this document, the NYSDEC IRMs will involve the placement of a demarcation barrier and a minimum of two feet of clean fill over the East Parcel (unless modified by NYSDEC). It is expected that the proposed East Parcel uses will not penetrate below this level, and thus would not be expected to adversely impact any potential archaeological resources associated with the prior bay that would be at lower levels. For those building components related to the possible future expansion of Philipsburg Manor requiring excavation below the two-foot remediation level, additional archaeological field investigations shall be undertaken by HHV (in consultation with the Historical Society of the Tarrytowns). In the event that archaeological artifacts are uncovered during construction, the Village Board will require that Historic Hudson Valley, in consultation with the NYS OPRHP and subject to any requirements of that agency shall document and recover these items.

6. Open Space, Pedestrian Circulation and Visual Resources

Potential Impacts

1. In total the FEIS Alternative Plan includes approximately 39 acres that would be devoted for open space or public uses, including approximately 10.6 acres of Hudson riverfront open space. Of this total, public open space areas on the West Parcel account for approximately 15 acres. Approximately 23 acres on the East Parcel would be available for a combination of

open space/recreation and public use (e.g., DPW) facilities. Roseland has also committed to the use of a world class landscape architect to assist in the design of the waterfront open space. In response to comments on the DEIS, the FEIS Alternative Plan includes an additional ±3 acre central park open space into the project interior, an increased buffer area between the proposed residences and Kingsland Point Park, and a "village green" at the intersection of Beekman Avenue and River Road. In addition, as the EIS process progressed, the number of water-dependent uses was increased with the addition of a "dock and dine" dock, a fishing pier, an additional belvedere and/or bulkhead at the point near the hotel site, a floating dock for small craft launching, and a widened beach area near Kingsland Point Park.

2. The new additional water-dependent uses are expected to result in minimal adverse environmental impact. As described in the EIS, in order to create the beach area, approximately 100 linear feet of riprap will be removed. This would result in a minimal loss of benthic habitat from the riprap and would not be significant given the riprap on the remainder of the site's shore. The small craft dock near the boathouse will consist of a combination of permanent pier and floating dock. The primary impact of the dock that will result from the coverage of surface water is shading, which could affect benthic habitat. The pier portion of the structure will be approximately four feet above high tide, in order to minimize shading, and the relatively narrow width of the structure will allow sunlight penetration under the pier/dock. Installation of piles would be anticipated to generate a minor and temporary increase in suspended sediment. The impacts of the "dock and dine" floating dock as a result of shadowing or pile installation would be similar and not significant. The fishing pier would be elevated and relatively narrow, and as described above for the other piers, would not be anticipated to generate significant shading or pile installation impacts. Roseland has proposed an L-shaped pier extending 30 feet out from the shore and then running approximately 50 feet parallel to the shore.

3. The proposed riverfront park will create a continuous pedestrian linkage from Kingsland Point Park in the north to Horan's Landing in the south, completing a nearly one mile component within Sleepy Hollow of a larger Hudson River trail network. The buffer between Kingsland Point Park and the Site maintains an open greensward that could

potentially be used for the possible creation by others of an estuary linking the Pocantico to the Hudson River in the future, if determined feasible. The plan also provides for an additional 105-space parking lot in the northern portion of the West Parcel that would service Kingsland Point Park. This would open the potential for removing existing parking from the park and providing additional room within the park itself for recreation activities.

4. The FEIS Alternative Plan has also reduced the amount of on-street parking along the portion of Road One adjacent to Kingsland Point Park. No parking is available on the park-side of Road One from the entrance to Kingsland Point Park to the new central park open space. One-side street parking is provided for a length of one block directly north of the central park where townhouses front onto the road. This configuration attempts to maximize the area available for use as a buffer.

5. As shown in the FEIS Alternative Plan (as required to be modified to incorporate elements of the Richard Daley Architects East Parcel Master Plan, as noted above), the East Parcel would be entirely dedicated to public, institutional or recreational use. In the eastern portion of the East Parcel, both the FEIS Alternative Plan and the Richard Daley Architects East Parcel Master Plan include a new DPW yard containing a DPW garage and offices, salt storage building, composting area, DPW parking areas, and bus service building. The remainder of the Richard Daley Architects East Parcel Master Plan includes space for two multipurpose fields, two tennis courts, and associated recreation parking, which Roseland has committed to in the FEIS, and shall be required to, construct. The East Parcel Master Plan also reserves the potential for expansion of the East Parcel parking, which may be undertaken by the Village in the future.

6. The East Side Master Plan also provides space that could be available in the future for a tenant farm in the northern portion of the parcel as a westerly extension of the existing Philipsburg Manor Restoration. As contemplated by the materials submitted by Historic Hudson Valley, the largest structure under such a proposal would be a New-World Dutch barn to be moved to the site from upstate and clad in wood shingles and hewn plank siding. The farmhouse and smokehouse would be made of stone and wood. Fences that define pastures, wheat fields, orchards, etc. would be made of wood in the varied styles presently

illustrated at Philipsburg Manor. The principal land uses, in addition to the buildings, may include the following: pasture for cattle and sheep, woodland, hay meadow, grain/wheat field, and orchard. Historical interpreters in period costume would demonstrate 18th century life and work. The Village Board understands that the components of the Historic Hudson Valley proposal are necessarily conceptual at this point, and that subsequent evaluation of a detailed proposal, when ready for implementation, will be required. The Village Board notes that this contemplated potential tenant farm is not part of the proposed project and, at the time of review by the Village Planning Board of any application by HHV for site plan approval, would be subject to further SEQR review to the extent necessary.

7. With the development of the proposed project, previously unavailable open and expansive views to river will be available from the Hudson River waterfront open space area, as well as along Roads A, B, C, One, Two and Three. The existing view to the River along the axis of Beekman Avenue will be retained. View analyses from eleven vantage points surrounding the site were presented in the EIS. The project will introduce new development onto the existing vacant site that will be visible or partially visible from these locations. However, the development creates an integrated community that will be guided by a comprehensive set of Design Guidelines, included in the FEIS. The LWRP identifies 23 significant scenic views throughout the Village. Identified scenic viewsheds that are directed towards or across the Site include views down Beekman Avenue towards the Hudson River (Views 1, 9, 10), views from DeVries and Barnhart Park (Views 7, 23), views towards the Hudson River from the edge of Kingsland Point Park (View 8), and views towards the Hudson River from Kykuit (View 20), the High School property (View 12), and the intersection of Bedford Road and the Old Croton Aqueduct (View 13). None of these LWRP-identified viewsheds will have their views towards the Hudson River obstructed by the proposed project, especially given that the Village Board has determined not to further consider the Roseland's proposed zoning amendment to increase the permitted building height in the RF district within 300 feet west of the railroad tracks. Therefore, all identified LWRP viewsheds will be maintained with the development of the project. Also, the existing concrete slabs and asphalt pavement are not in context with the Village or its Hudson River location. The aerial photographs included in the DEIS and other available documentation show that the former GM assembly plant buildings exhibited a monolithic and bulky visual aspect, which was also

not in visual context with the surrounding Village either.

Mitigation

8. The Applicant and the Village's design consultants have developed a comprehensive set of Design Guidelines for the redevelopment of the Site that describes the design of and relationship between the buildings, streetscapes and open space within the proposed development. The application of the Design Guidelines during the site plan approval process will serve to achieve the spirit of an "old Hudson River waterfront community," one of the primary objectives of the RF district and the LWRP. This will help achieve the desired visual character expressed by the Village in its zoning and various planning documents. Roseland has also committed to, and will be required to construct the identified water dependent recreational uses.

9. The Design Guidelines also provide standards for the street network. As shown in the Guidelines, nearly all streets will provide for two-way traffic, on-street parking, and relatively narrow travel lanes of 11 and 12 feet in order to calm traffic, minimize vehicle speeds, and provide for a more comfortable pedestrian and bicycle environment. The Guidelines also state that a bicycle network of on-street and off-street paths should be provided, and illustrates a potential network running along the central park open space and connecting to Beekman Avenue via Road Four. Each block will have a minimum sidewalk width of five feet, and residential blocks have a series of interconnected mews to facilitate pedestrian movement.

Findings

10. During the environmental review process, Richard Daley Architects, one of the Village's design consultants, developed an alternative East Parcel Master Plan. This plan is described in the FEIS analysis and reconfigures the recreational components and reduces the parking lot to a 150-space surface facility to serve the recreation fields. The Village Board finds that this plan provides for improved recreational use, and includes a more appropriately-sized parking facility, given the lack of a confirmed new railroad station. Should conditions change in the future, the plan preserves the ability of the Village to increase parking through the expansion of the existing surface lot and the addition of a parking deck above the surface

parking, that could potentially provide an additional 250 to 350 spaces. The Village Board finds that the Riverfront Development Concept Plan is required to be modified to incorporate the foregoing elements of the East Side Master Plan (other than the expanded parking shown thereon, which may be constructed by the Village in the future at its sole cost and expense).

11. The Village Board further finds that the concept of providing a greensward that reserves open space and the opportunity for the future creation by others of an estuary or new Pocantico River outlet, if feasible, is desirable and helps buffer Kingsland Point Park from the new residential development. The buffer area provided in the FEIS generally ranges from 75-175 feet, and there is a narrow point in the proposed buffer area that pinches down to approximately 45-50 feet. As described earlier in this document, in an effort to further buffer the park and better accommodate a possible future estuary , the Village Board shall require an increase in the building setback and expansion of the buffer area. This buffer area will extend the character of Kingsland Point Park into the project Site and create a wider transitional open space between the active park uses and Road One. This will also mitigate potential noise and visual impacts on park users. The potential creation of an estuary received wide support during the public comment process and could allow for the creation of additional water-dependent opportunities. The Village Board notes that the possible estuary is a future action by others, not part of the Proposed Action, and will require further study to determine its feasibility, as well as permits and funding. However, the expansion of the buffer area preserves adequate space to accommodate this concept. With the cooperation of the County, portions of Kingsland Point Park may also be utilized for the possible creation of the estuary. However, a minimum 100 foot wide buffer area on the Site shall be reserved for open space and any future estuary. The general configuration of the buffer is provided on the Exhibit attached to this Findings Statement. The Board notes that the creation of an estuary could provide a number of potential community benefits. In order to allow for the future establishment of an estuary or Pocantico River outlet as a separate and discrete action, the reserved buffer area shall be identified as a separate lot on the forthcoming subdivision plans. The inclusion of additional land area associated with a possible future estuary would supplement the open space benefits associated with the approximately 15 acres of public open space area on the West Parcel. Approximately 25% of the West Parcel has been set

aside as public open space. Additional buffer area created as a result of accommodating the estuary concept (minimum 45 feet shown on FEIS Alternative Plan modified to minimum 100 feet) would further enhance the mitigative effects of the proposed buffer area.

12. In addition, while not part of the Roseland's plan, the Village recognizes that appropriate space should be reserved in this buffer area to provide for the construction by others of a pedestrian overpass providing a continuation of the Horseman's Trail system across the railroad tracks. It is noted that the Village has secured grant funding for the restoration of the existing historic Kingsland footbridge just to the north of this Site. However, the Village does not wish to exclude the possibility of additional pedestrian access in the future with an additional bridge at this location that could serve as a more direct extension of the Horseman's Trail.

13. The FEIS Alternative Plan indicates a train station with a pedestrian overpass that would provide for a pedestrian link in the project core between the East and West Parcels. The Metropolitan Transportation Authority (MTA) has not yet provided a commitment for the establishment of this proposed station. However, in order to allow for the potential future development of a station and a pedestrian connection between the East Parcel and the West Parcel, Roseland shall be required to reserve the space indicated on the FEIS Alternative Plan for these uses. In conjunction with the removal of the existing GM property overpass, Roseland shall use all reasonable efforts to obtain the right from MTA for a future pedestrian bridge. Roseland will also be required to join with the Village and use best efforts to encourage MTA to relocate underground the overhead lines and remove excess sidings that will not be used for remediation activities and the construction of the project. However, in no event shall MTA's failure or refusal to grant such a right or do any of the foregoing preclude the project from being constructed as otherwise permitted by this Findings Statement.

14. The FEIS Alternative Plan indicates that the majority of the townhouse units along Road One are proposed as four stories. The Village Board finds that to increase visual interest and minimize the visual impact of these structures closest to the Hudson River and Kingsland Point Park, the townhouses along Road One should include an appropriate combination of

three and four-story units so that the appearance of a single-height wall of buildings is avoided facing the River and Kingsland Point Park as demonstrated on the Lessard Plans . To further guarantee the visual interest and quality of the project when viewed from surrounding vantage points, a variety of rooftop treatments, including but not limited to roof terraces, dormers, parapets, gables, etc. shall be used throughout the project. With these modifications, the Village Board finds that the FEIS Alternative Plan would not significantly adversely impact identified scenic viewsheds.

15. The Village Board further finds that the proposed water-dependent open space uses would not result in a significant adverse impact on the environment. However, in order increase the access available for anglers and other users of the fishing pier, and to maximize the potential for the fishing pier to serve as an additional boat tie-up area, the Village Board requires that the leg of the fishing pier perpendicular to the shore be extended as close to the federal channel as permissible by the Army Corps of Engineers and NYSDEC. Given the anticipated relatively narrow width of the pier in its final design, its elevation above the water level, and the maximum limit of pier length dictated by the presence of the channel 130 feet from shore, the Village Board finds that the pier would have no significant shading or sediment suspension impact. The pier shall also be designed to accommodate tie-up by an excursion craft and historic vessels that are capable of accessing the pier through the existing channel.

16. As described above, the Applicant has proposed the removal of approximately 100 feet of riprap in order to create a new waterfront access area. The Village Board finds that the waterfront access area shoreline shall be a minimum of 100 linear feet and shaped so as to provide a cove, as indicated on the FEIS Alternative Plan. The cove and waterfront access area should be contoured and developed to be consistent with engineering and boat access standards, and with NYSDEC-approved brownfield remediation protocols applied to ensure public protection and to minimize migration of contaminants from exposed land to the Hudson River during the removal of riprap and other aspects of constructing the waterfront access area expansion.

17. The Village Board also notes that while the proposal includes some modification of the

extensive rip rap shoreline, including the creation of an expanded cove area, the installation of a bulkhead at the hotel site, and belvederes, it is important to promote a variety of water edge treatments. There may be further opportunities to enhance the existing rip rap to provide a more intimate waterfront experience. This concept will be reviewed and its appropriateness evaluated during the waterfront design process, to which Roseland has committed the use of a world class landscape architect. As a part of the Riverfront Development Special Permit, the Village Board will retain the right to approve the final design of the waterfront area and other areas to be dedicated to, or controlled by, the Village. As indicated previously, the Village Board is concerned about the relationship between the Site and the lower portion of Beekman Avenue, including the design of the new Beekman Avenue bridge. Since the waterfront area and the lower portion of the Beekman Avenue corridor are intimately connected, the Village Board shall retain the right to approve the final design of the lower Beekman Avenue corridor.

18. The Village Board finds that, with the modifications and conditions described above, the Riverfront Development Concept Plan will improve the visual conditions of the riverfront area, and would not result in a significant adverse impact on identified scenic views. The Village Board also notes that the project creates 25 acres of new publicly accessible open space (approximately 26% of the site) and accommodates the continuation of the Westchester County Riverwalk. The Village Board further finds that the project will serve as a key component of the "green crescent" and provide a significant benefit to the Village's open space and pedestrian travel networks. The Village Board notes that the water dependent uses in or on the Hudson River will require permits and approvals, and thus the construction of such improvements is subject to Roseland obtaining such permits and approvals.

7. Utilities

Potential Impacts

1. The project is anticipated to have an average daily water demand of approximately 346,000 gpd. The Village of Sleepy Hollow has been investigating the construction of a new 1.6± million gallon water storage tank to meet contemporary water supply standards and

accommodate anticipated growth, including the project. The Village Board concluded the environmental review process for the proposed water supply expansion project with the issuance of an Environmental Findings Statement in December 2006. As described in the Water Supply Improvement Program EIS, the new municipal supply will provide sufficient capacity to accommodate the project and other contemplated Village growth.

2. Under the FEIS Alternative Plan, there would be no building construction directly over, nor relocation of the existing Westchester County Saw Mill Valley trunk sewer. The design of the new DPW facility shall be modified so that no relocation of any portion of the Village's 24-inch sewer main shall be required. Vehicular access is proposed over this trunk sewer adjoining the Buildings A and B parking structure. The details of this access will be reviewed by the Planning Board and the County Department of Environmental Facilities during site plan review. The FEIS Alternative plan is anticipated to generate an average wastewater flow of 315,000 gpd. The Westchester County Department of Environmental Facilities has confirmed in correspondence dated January 16, 2004 that the Saw Mill Valley trunk sewer and the Tarrytown Extension, the Tarrytown Pump Station and the Yonkers Joint Wastewater Treatment Plant all have sufficient capacity to accommodate the project.

3. The DEIS analysis indicated that the project will also create an anticipated gas load of approximately 160,000 cubic feet per hour and an electrical load of approximately 73,500 kVA. Con Edison has indicated that it has adequate gas and electric service capacity to serve the project. The FEIS Alternative Plan has reduced the overall development program, which would result in a proportionate reduction in gas and electric demand.

Mitigation

4. The Village has recently completed the environmental review process for an expansion of the water supply system with a total storage capacity upon completion of the improvement program of approximately 2.4 million gallons of water. Roseland will be required to contribute towards the improvements associated with the new water supply system. Based on the proportionate share of its anticipated water usage. Roseland's contribution will be $950,000. Once the new facility is constructed, no further mitigation for water supply will be required. In order to reduce water demand, the project will utilize water conservation

fixtures complying with the Plumbing Code of New York State. Since the existing wastewater system has sufficient capacity, no additional system mitigation is required. All new sewer mains installed in the project Site will be sized to accommodate peak sewage flows and meet Village construction standards.

Findings

5. In addition to the mitigation described above, the project shall utilize certified water-saving devices as mandated by the NYS Environmental Conservation Law. In order to provide for efficient water service and encourage further conservation, all project buildings shall have waters meter installed in accordance with New York State Building Code and applicable Village regulations. The Village Board finds therefore, that with the mitigation and conditions described above, the FEIS Alternative Plan would not result in significant adverse impacts on utilities.

8. Mass Transit

Potential Impacts

1. Development of the proposed project would likely increase the potential ridership for mass transit, including Westchester County Beeline bus service and MTA Metro-North commuter rail service at either or both the Philipse Manor Station or the Tarrytown Station. Preliminary planning for this project considered the potential for creation of a new on-site Metro-North railroad station. This would involve the construction of new platforms along the existing inbound and outbound tracks and an overpass connecting both platforms. No commitment from Metro-North regarding this station has yet been made. The final determination as to whether and when a station would be constructed at the project Site would depend on obtaining Village input, Metro-North approvals and sufficient funding. However, space has been reserved on the FEIS Alternative Plan for a station as described above, and the Village could increase the size of the East Parcel parking lot to accommodate parking for potentially 500 vehicles, should such a station be approved and funded in the future.

2. The DEIS estimated that the project could be expected to generate between 400 to 500

project residents commuting by rail during the AM peak commuting hours. This would equal approximately 20 percent of the Peak AM inboard boardings of the existing Philipse Manor and Tarrytown stations. In addition, 170 employees of the project commercial uses, as well as a portion of the retail customers to the Site could potentially be expected to utilize Metro-North rail service. With the reduction in the project's density under the FEIS Alternative Plan, the average daily weekday boarding during peak hours is anticipated to be reduced to approximately 332 commuters. The maximum likely increase in ridership on one of eight existing trains during the morning peak would be approximately 68 patrons, which is within the capacity of one additional car.

3. The Westchester County DOT has indicated that it would be able to adjust the Bee-Line Route 13 to extend further down Beekman Avenue to River Street in order to located stops near the proposed project.

Mitigation

4. In the event that a new station is not constructed at the Site, Lighthouse Landing would provide shuttle service for project residents and employees to the nearby Tarrytown or Philipse Manor train stations. Roseland has proposed that the shuttle operation would be initially geared toward weekday morning and evening commuting hours. Roseland has committed to providing up to three shuttle buses, each with a seating capacity for 20-25 passengers. Roseland has agreed to and shall provide a deed restriction or other similar instrument assuring the operation of the shuttle service in perpetuity, or until such time as a new train station may be constructed on-site.

Findings

5. The FEIS Alternative Plan currently shows an approximately 550-space commuter lot. This number of spaces was provided in response to projections from Metro-North regarding commuter parking demand. Metro-North has projected parking demands on the Hudson Line that go well beyond what could be accommodated at this Site. In addition, much of the projected volume on the Hudson Line has been projected to come from Rockland County, across the Tappan Zee Bridge. As described above, there is no commitment or certainty from Metro-North regarding an on-site train station. Therefore, the Village Board finds that

the Riverfront Development Concept Plan shall be modified to incorporate elements of the East Parcel Master Plan prepared by Richard Daley Architects, which includes a 150-space parking lot. This plan more appropriately reflects the lack of a train station. In the event a train station is approved in the future by Metro-North, the East Parcel Master Plan preserves the ability of the Village to expand the surface parking area and provide supplemental parking in a deck over the proposed surface spaces. The Village Board retains the right to approve a new Metro-North station after review and recommendation by the Planning Board and the Architectural Review Board. In order to provide for efficient mass transit utilization and minimization of potential traffic impacts, the Village Board will require phased implementation of the shuttle service with shuttle operation to commence no later than the issuance of a certificate of occupancy for the 100th residential unit, and the number of busses and level of service to be commensurate with demand.

6. While not specifically related to the Proposed Action, in order to provide for efficient transit utilization and minimization of traffic generated impacts, the Village of Sleepy Hollow is committed to and will create a local transportation and parking entity that would be charged with the development of a public transportation system that would connect the downtown, historic/tourism related resources and the Village's waterfront and coordinating with other agencies on transportation and traffic improvements. The local transportation and parking entity shall be created by the Village prior to site plan approval for the first phase of the project.

7. In addition, one of the concepts that arose from the Village's Waterfront Linkage Study was the creation of an intermunicipal transportation system that would connect the main business districts in Sleepy Hollow and Tarrytown with each respective community's waterfront. This system would be intended to reduce overall traffic congestion, enhance the local traveling experience, and promote opportunities for continued growth of the area's tourism economy. With a Village of Sleepy Hollow system in place, there would be potential to expand to an intermunicipal system. An Intermunicipal Transportation Entity would be created and charged with the responsibility of items such as routing/frequency, system operations and fares, identifying potential funding sources, oversight, and inter-relations with existing transport services. While the studies provided in the DEIS and the FEIS

indicate that the proposed roadway improvements and shuttle service will adequately mitigate potential significant adverse impacts on the road network, as the project represents a likely significant source and destination for potential riders, the Village Board will also require that Roseland participate in the proposed Intermunicipal Transportation Entity described in the FEIS, and contribute towards the study necessary to initiate the service.

8. With the implementation of the above mitigation and conditions, the Village Board finds that the project would not result in adverse impacts on mass transit systems.

9. Traffic and Parking

1. The traffic to be generated by the project includes residents, employees, visitors to the residential units and patronizing the commercial establishments and deliveries. Historically the GM plant, at full operation, employed some 12,000 employees. Trucks and trains were used to bring supplies to the facility and to transport new vehicles from the assembly plant. In 1987 there were approximately 4,500 employees although that number declined up until the point where the plant closed in 1996. Vehicle trips generated by these employees utilized the same roadways that exist today.

   The DEIS Traffic Study analyzed the following intersections:

   - US Route 9/Pierson Avenue/Gordon Avenue
   - US Route 9/Pocantico Street/Old Broadway/Philipsburg Manor Driveway
   - Pocantico Street/Continental Street
   - US Route 9/Lawrence Avenue
   - US Route 9/Bedford Road/ New Broadway
   - US Route 9/Beekman Avenue/Hudson
   - Beekman Avenue/Lawrence Avenue
   - Beekman Avenue/Washington Street
   - Beekman Avenue/Pocantico Street
   - Beekman Avenue/Cortland Street
   - Beekman Avenue/Clinton Street
   - Beekman Avenue/Hudson Street

- US Route 9/Wildey Street (Tarrytown)
- US Route 9/Central Avenue (Tarrytown)
- Main Street/Washington Street (Tarrytown)
- US Route 9/Main Street/Neperan Road (Tarrytown)
- Main Street/Washington Street (Tarrytown)
- H-Bridge/Main Street/Cortland Street/Depot Plaza (Tarrytown)
- West Franklin Street/Riverview Avenue (Tarrytown)
- US Route 9/Franklin Street (Tarrytown)
- US Route 9/Benedict Avenue (Tarrytown)
- Benedict Avenue/Highland Avenue/Prospect Avenue (Tarrytown)
- US Route 9/I-87/I-287 Westbound On-Ramp (Tarrytown)
- US Route 9/NY Route 119 (Tarrytown)
- US Route 9/I87/I287 Eastbound Ramps (Tarrytown)

2. Existing traffic volumes were recorded at each of the preceding intersections using manual and Automatic Traffic Recorder (ATR) counts to determine peak AM, peak PM and peak weekend (Saturday) volumes. The traffic counts were supplemented by information from NYSDOT. Pedestrian movements were also conducted at selected locations. Based on a review of specific field conditions and existing traffic volumes, existing capacity analysis for each intersection was determined.

3. In order to evaluate future conditions without the project an annually compounded growth rate was added to the existing traffic volumes through to the design year build out. Based on traffic volume information provided by the traffic consultants for the Village of Sleepy Hollow and Village of Tarrytown, the two-way Average Annual Daily Traffic (AADT) for Broadway and Wildey Street was 18,100 in 1990 and 18,400 in 2003, while the Broadway and Prospect Avenue intersection had a two-way AADT of 24,000 in 1990, and 24,500 in 2003. Traffic growth during that time frame has been relatively flat, with an average cumulative increase of approximately 0.159 percent per year. The Applicant has used an annually compounded growth rate of 0.25 percent for traffic impact projections.

The following projects were then added to generate the “No-Build” Condition:

- Ichabod's Landing
- Kendal on Hudson
- Hess Gas Station
- Ferry Landings
- New York Life
- Spring Hill Suites
- 155 White Plains Road
- Tarrytown Schools Expansion

4. The number of vehicles to be generated by the project was then estimated based on Institute of Transportation Engineers (ITE) standards and assigned to the local road network.

Potential Impacts

5. The trip generation estimates were prepared for the project based on trip generation data published by the Institute of Transportation Engineers in the Trip Generation Handbook, 6th and 7th editions.

6. The project's traffic impact was determined by comparing existing traffic conditions to future traffic conditions in the 2012 year design with and without the project; these conditions are identified as the "2005 Existing Condition," "2012 No-Build Condition," and "2012 Build Condition."

7. Traffic analysis performed by the Applicant and submitted to the Village were independently reviewed and analyzed by the Village's traffic consultant, STV, Inc., as well as other Village consultants. As part of the FEIS Traffic Study, an additional twelve (12) intersections were analyzed, nine (9) of which are in Tarrytown. These additional intersections are as follows:
   - US Route 9 & NY Route 117 Westbound
   - US Route 9 & NY Route 117 Eastbound
   - US Route 9 & Park Avenue (Tarrytown)
   - US Route 9 & Independence Street (Tarrytown)
   - US Route 9 & Church Street (Tarrytown)
   - West Franklin Street & Washington Street (Tarrytown)

- West Franklin Street & Miller Avenue (Tarrytown)
- US Route 9 & Prospect Avenue (Tarrytown)
- Eastern H-Bridge Intersection (Tarrytown)
- Western H-Bridge Intersection (Tarrytown)
- H-Bridge & Cortland Street/Wildey Street (Tarrytown)
- US Route 9 & Depeyster Street/High School Driveway

8. The Arrival/Departure distribution patterns for traffic to be generated by the project were developed based upon a review of the adjacent roadway network, "Journey to Work" US Census Data, a Retail Gravity Model and the existing traffic flow patterns. Because the project density, including the number of residential units has been reduced in the FEIS Alternative Plan, the Retail Gravity Model has changed accordingly from the DEIS.

9. The FEIS Alternative Plan is anticipated to generate 612 (254 entering and 358 exiting) vehicle trips in the AM peak hour, 710 (397 entering and 313 exiting) trips in the PM peak hour, and 948 (493 entering and 455 exiting) trips in the Saturday peak hour.

10. The ability of any roadway network to accommodate anticipated traffic volumes is measured by comparing Peak Hour Traffic Volumes to roadway capacities. Thus, it is essential to determine the Hourly Traffic Volumes to be generated by the project and add them to the No-Build Traffic Volumes for the Peak Hours. Under the FEIS Alternative Plan, the project would consist of:
    - 1,250 residential units (629 apartment units including 40 affordable senior units and 21 affordable Village workforce units; 373 condominium units, and 248 townhouses);
    - 35,000 square feet (sf) office building;
    - 109,000 sf of retail (includes a 25,000 sf grocery and 18,000 sf of restaurant space along Beekman Place);
    - 140-room hotel (includes 5,000 sf of accompanying restaurant/meeting space);
    - 18,000 sf Cinema;
    - On-site Fire/Ambulance station;
    - Interpretive Center, Small Craft Launch Pier, Fishing Pier, Dock & Dine Dock;
    - Village DPW Facility;

- Soccer fields;
- Metro-North train station and associated 550-space commuter parking lot.

11. As illustrated in the FEIS Traffic Study performed for the FEIS Alternative Plan, some intersections will experience impacts as a result of the proposed project. For example, during the Peak AM hour, intersections anticipated to experience a change in LOS category between the 2012 No-Build and 2012 Build conditions include: US Route 9/Pocantico St./Old Broadway/Phillipsburg Manor driveway; US Route 9/Lawrence Avenue; US Route 9/Beekman Avenue/Hudson Terrace; Beekman Ave./Pocantico St.; Beekman Ave./Cortland St. Beekman Ave./Clinton St.; H-bridge/Main St./Cortland St./Depot Plaza; and US Route 9/Benedict Ave. However, with the implementation of the proposed mitigation measures described below, the overall operation at many intersections is anticipated to improve. Some locations will continue to operate at conditions similar to those that will be experienced in the 2012 No-Build condition in the absence of the project. Using the Peak AM hour as an example, with the effect of mitigation measures considered, the intersections anticipated to operate at LOS E or F include US Route 9/Lawrence Ave.; and US Route 9/I-87/I-287 Eastbound ramps. US Route 9/Lawrence Ave would be the only intersection studied that would experience a negative change in LOS category (from e to f). The expected increase in delay, however, is approximately six seconds on the minor street only. The US Route 9/I-87/I-287 Eastbound ramps would remain at LOS E, but would experience an increase delay of approximately nine seconds.

12. In downtown areas similar to the study area, Level of Service E is generally the limit of acceptable delay due to the traffic volumes and the closely spaced intersections. However, during Peak Hour conditions in these areas, some individual movements or intersections will tend to operate at Level of Service F, but then operate at better Levels of Service during the remainder of the day.

13. The following intersections were determined to service significant amounts of background or adjacent development traffic (including Ferry Landings) and would be impacted even in the absence of the project:
    - US Route 9 at Pocantico Street/Old Broadway

- US Route 9 at Lawrence Avenue
- US Route 9 at New Broadway/Bedford Road/Beekman Avenue/Hudson Terrace
- Neperan Road at County House Road
- US Route 9 at Main Street/Neperan Road
- Main Street at Cortlandt Street/Depot Plaza/H-Bridge
- West Franklin Street at Riverview Avenue
- US Route 9 at Franklin Street
- US Route 9 at Benedict Avenue
- US Route 9 at NY Route 119
- US Route 9 at I-287/I-87 Eastbound Ramps/Hotel Driveway

14. The parking and loading facilities have generally been designed in coordination with the proposed uses, street system and open space network. The spaces are proposed in off-street lots, garages, below-grade structures and on-street locations and in aggregate total approximately 4,000 spaces. The sum of the RF District off-street parking requirements for the individual non-residential land uses is 1,131 spaces. Based on the methodology and analysis prepared by Walker Parking, a conservative evaluation of the peak parking requirements for these land uses (without consideration of the differences in peak parking demand times among the individual uses) is approximately 972 spaces. However, accounting for the differing peak parking times of these uses, the actual highest single peak non-residential parking demand is projected to be 759 spaces. The FEIS Alternative Plan provides non-residential parking in both structures and surface configurations totaling 816 spaces.

15. The residential component of the project consists of apartments, condominiums and townhouses. The townhouses provide two spaces in each garage and allow for additional driveway parking. This is adequate to meet the zoning requirements for these units and these are therefore acceptably parked and can be dismissed from further analysis. The apartment and condominium parking is principally provided in structured parking below the buildings, with the exception that the loft buildings (I and N) have surface parking provided to the rear. The RF District off-street parking requirements for the apartment and condominium components total approximately 1,886 spaces. The peak parking demand for the apartment

and condominium component of the project has been estimated at 1,609 spaces for the FEIS Alternative Plan. The FEIS Alternative Plan has provided for a total of 1,535 spaces for the apartment and condominiums. As indicated in the Summary of Design Modifications section, due to design considerations, the Village Board will require modifications to the Riverfront Development Concept Plan that will require the loss of approximately 73 units in a mix of townhouse and multifamily configurations. The reduction in density brings the provision of parking generally consistent with project's residential parking demand.

Mitigation

16. The project has been designed to limit its traffic impact on the adjacent roadway network. The mix of uses such as the residential and commercial components, including the grocery, was intended to help limit the number of external trips that will occur. The project has been designed to be pedestrian friendly and to encourage walking between the uses. The project will have mass transit access, most particularly the shuttle access to the Tarrytown train station.

17. Roseland has proposed the following mitigation measures:

18. If a new train station is not built on-site, Roseland, its successors and assigns, shall provide shuttle bus service to and from the Site to the Tarrytown train station. Roseland has committed to providing a service with three shuttle buses at full build out. The Village Board will require phased implementation of the shuttle service with shuttle operations to commence no later than the issuance of a certificate of occupancy for the 100th residential unit, and the number of busses and level of service to be commensurate with demand. The shuttle service will be required to operate during the Metro-North peak AM and PM weekday service hours. The Board notes that these periods cover potentially up to eight hours of the day. Issues such as shuttle bus routing, the installation of associated street furniture, and signage will be addressed during the site plan and subdivision review process.

19. Based upon the capacity analyses conducted for each study location, the following improvements were suggested by Roseland to improve future operating conditions on the

area roadway network. The potential for physical improvements are limited due to existing rights-of-way and building locations. Many of these potential improvements are recommended based upon not only the Lighthouse Landing project impacts, but also based upon existing conditions and/or anticipated traffic impacts as a result of either background growth or other proposed (such as the now-approved Ferry Landings in Tarrytown) or approved developments. At some locations, poor Levels of Service are projected to occur even without the project, if no improvements are constructed. Roseland has offered to contribute its fair share toward the costs of the improvements that are suggested to mitigate conditions projected to occur even in the absence of the project.

The following is a summary of the proposed mitigation for these intersections:

US Route 9 at Pocantico Street/Old Broadway

20. In order to accommodate the future traffic volumes at this location, signal timing modifications are recommended for the Peak AM, Peak PM and Peak Saturday Hours. With these signal timing modifications, the location will operate at acceptable Levels of Service.

US Route 9 at New Broadway/Bedford Road/Beekman Avenue/Hudson Terrace

21. These two directly-coordinated signalized intersections will operate at poor Levels of Service with or without the project due to existing conditions as well as background growth and adjacent developments. Additionally, due to the offset nature and direct coordination of these signals, a large number of signal phases are needed, thus resulting in significant red time for each movement. To mitigate this impact, one improvement that shall be implemented is to provide a northbound left-turn lane at the intersection of US Route 9 and Beekman Avenue/Hudson Terrace. This left-turn lane can be provided through re-striping and the elimination of some on-street parking spaces (approximately 7 to 10 metered spaces utilizing full length tapers) along northbound US Route 9; however, the number of spaces that would need to be eliminated could be reduced by modifying the tapers, subject to NYSDOT approval. This improvement was shown conceptually on Figure No. III.I-34 in the DEIS.

Beekman Avenue at Pocantico Street

22. The installation of a traffic signal and an eastbound left-turn lane along Beekman Avenue could be provided through re-striping and the elimination of some on-street parking spaces along eastbound Beekman Avenue. These improvements were shown conceptually on Figure No. III.I-35 in the DEIS. However, the intersection will operate at appropriate Levels of Service, after accounting for the reduced background traffic as well as the reduced density of the retail and commercial portions of the project, with only the left turn modification. The elimination of on-street parking (potentially 10 to 16 metered spaces if full length tapers are utilized) has been identified. With the proposed improvements, this location will operate at an acceptable Overall Level of Service "c" during all three Peak Hours.

US Route 9 at Main Street/Neperan Road

23. In order to accommodate the future traffic volumes at this location, the installation of northbound and southbound left-turn lanes along the US Route 9 approaches has been identified. Additionally, signal timing/phasing modifications will be needed in order to provide a northbound left-turn lag phase. The left-turn lanes could be provided via re-striping and the elimination of some on-street parking spaces along Route 9 (possibly 8 to 15 metered spaces if full length tapers are utilized; however, these can possibly be reduced as the Tarrytown CBD Traffic and Parking Study shows minimal parking spaces to be eliminated for a similar improvement). These improvements were shown conceptually on Figure No. III.I-36 in the DEIS and are recommended without and with the project. With the identified improvements, this location will operate at better overall Levels of Service than the 2012 No-Build Condition during all three Peak Hours. Roseland shall contribute its fair share for the proposed mitigation measures.

Main Street at Cortland Street/Depot Plaza/H-Bridge

24. In order to accommodate the future traffic volumes at this location, slight signal timing modifications are required with or without the project. With the proposed signal timing modifications, this location will continue to operate at an overall good Level of Service.

US Route 9 at Franklin Street

25. This location currently operates at poor Levels of Service due to the utilization of West Franklin Street as the main thoroughfare for traffic traveling to and from the Tarrytown train

station originating from US Route 9 to the south. Currently, a police officer is stationed at this intersection to direct traffic during critical time periods. Based upon a Signal Warrant Analysis, this location currently meets signal warrants. The identified improvements for this location include the installation of a traffic signal, and the restriction of left turns from East Franklin Street (during all times), as well as providing a northbound left-turn lane through re-striping and the elimination of some on-street parking spaces along Route 9 (possibly approximately 16 to 20 unmarked, part-time parking spaces), depending upon the length of tapers; however, these can likely be significantly reduced as the Tarrytown CBD Traffic and Parking Study shows minimal parking spaces to be eliminated for a similar improvement) along northbound US Route 9. These improvements were shown conceptually on Figure No. III.I-37 in the DEIS. Similar improvements were recommended in the Ferry Landings DEIS and in the 1998 Tarrytown CBD Traffic and Parking Study. With these suggested improvements, this location will operate significantly better and safer than the 2012 No-Build Conditions during all three Peak Hours. Roseland shall contribute its fair share for the proposed mitigation measures.

US Route 9 at Benedict Avenue

26. Consistent with the EIS, the re-striping of the northbound US Route 9 right-turn lane to a shared through/right-turn lane would accommodate the existing and future traffic volumes at this location. Additionally, slight signal timing modifications should be implemented. With the proposed improvements, this location will operate at a good overall Level of Service during all three Peak Hours. Additionally, the location will operate at better overall Levels of Service than the 2012 No-Build Conditions during all three Peak Hours. The re-striping may require the elimination of some minimal on-street parking (possibly one to three spaces although no parking spaces are delineated at this location). Roseland shall contribute its fair share for the proposed mitigation measures.

US Route 9 at NY Route 119

27. In order to accommodate the future traffic volumes at this location, the right-most left-turn lane on the westbound NY Route 119 approach should be re-striped to a shared left-turn/right-turn lane. In addition to these geometric improvements, signal timing modifications should be implemented. With these proposed improvements, this location will

operate at an acceptable overall Level of Service "C" during all three Peak Hours. Roseland shall contribute its fair share for the proposed mitigation measures.

US Route 9 at I-287/I-87 Eastbound Ramps/Hotel Driveway

28. In order to accommodate the future traffic volumes at this location, signal timing modifications should be implemented during both the Peak AM and Peak PM Hours. With these improvements, the intersection will continue to operate at essentially the same overall Levels of Service as the No-Build Conditions. Roseland shall contribute its fair share for the proposed mitigation measures.

29. The identified improvements will improve traffic flow in the corridor and would help keep traffic out of the adjacent neighborhoods. Some of the improvements are similar to improvements recommended in other previous traffic studies. The improvements would require a collaborative effort with the NYSDOT, the affected Village(s) and other developers. The NYSDOT, Rockland County, Westchester County and the affected Villages should also consider regional improvements to improve traffic flow. Some of these are being considered in conjunction with the analysis of the Tappan Zee Bridge, including the potential for mass transit access from Rockland County. The on-going improvements on I-87/I-287 will also improve traffic flow in the area. Other regional improvements, including the Route 9A Bypass and the Route 9A direct connection to the Taconic State Parkway southbound will also improve traffic operating conditions in the area. However, to be conservative, the analysis did not reduce any traffic volumes to account for these regional improvements which will improve local traffic conditions.

30. Roseland has agreed to participate in the funding of a study of the formation of an inter-municipal transportation district to coordinate a trolley-type loop system operating between both the Village of Sleepy Hollow and the Village of Tarrytown. The creation of such a district would be a government initiative.

31. Roseland is amenable to consider a transportation interface between the proposed shuttle service and a potential future inter-municipal trolley/jitney loop route to travel between the project and the downtown portions of the Villages.

32. Roseland shall contribute its fair share for traffic calming measures in the Miller Park area in the neighboring Village of Tarrytown. In addition, Roseland shall contribute towards its fair share of an emergency signal preemptive system. The New York State Department of Transportation could consider an emergency signal pre-emptive system in its long-range regional improvement plan.

Findings

33. The Village Board recognizes the need for the mitigation measures at the specific intersections described above. As a condition of the project, the Village Board requires that Roseland implement the traffic improvement mitigation measures described above within the Sleepy Hollow municipal boundaries, subject to the review and approval of all applicable jurisdictions. The Village Board requires that all of the proposed traffic mitigation measures within the Village of Sleepy Hollow must be completed by issuance of the certificate or temporary certificate of occupancy covering the 300,000th square foot of new development.

34. The Village Board further requires that Roseland use diligent, good faith efforts to cause all of the required traffic mitigation measures outside Sleepy Hollow which are described above to be implemented by all applicable jurisdictions, including the NYS Department of Transportation and the Village of Tarrytown, provided that Roseland's financial liability for such improvements shall be limited to its "fair share" of the costs of such improvements which are not required solely due to the project. Roseland's fair share shall be determined by an independent traffic engineer to be selected by the Village of Sleepy Hollow In the event that Roseland's good faith offer to pay its fair share of any improvement is not accepted by the applicable jurisdiction and/or such jurisdiction declines to make the improvement, Roseland shall post a bond or other reasonable security for its fair share of the cost of those traffic improvements, as defined above, to be maintained by the Village of Sleepy Hollow for the benefit of the other jurisdictions for a period of five years after site plan approval of the first phase of the project is granted. Each jurisdiction shall have a period of five years after site plan approval of the first phase of the project to accept Roseland's fair share and make the improvements for which the fair share was offered. Upon the expiration of this period, any remaining security shall be returned to Roseland, and thereafter Roseland shall not have any further obligation with respect to the improvements.

35. In addition to the mitigation measures outlined in paragraph 36 above, the Village of Sleepy Hollow has identified several other options that could be instituted to help alleviate potential traffic congestion, particularly on weekends. The Village Board notes that such alternatives are appropriate for consideration in light of the potential for changes in the transportation network due to major regional transportation improvements (e.g., the Tappan Zee Bridge Alternatives), but also notes that the construction of the project as permitted in this Findings Statement is not conditioned upon any of them (except Roseland's financial participation in the study described immediately below). The identified options include:

- Intermunicipal Transportation Entity: As described previously at paragraph 7 of Section 8, one of the concepts that arose from the Village's Waterfront Linkage Study was the creation of an intermunicipal transportation system that would connect the main business districts in Sleepy Hollow and Tarrytown with each respective community's waterfront. Roseland has agreed to participate in the funding of a feasibility study of the formation of an inter-municipal transportation district to coordinate a trolley-type loop system operating between the Village of Sleepy Hollow and the Village of Tarrytown. Letter #17 in FEIS Appendix 1 outlines an on-going process for implementing reductions in overall traffic congestion in the greater Village of Sleepy Hollow/Tarrytown area. The reduction in traffic is coupled with the opportunity to enhance the local traveling experience for residents and promote opportunities for continued growth of the area's tourism related economy. The system could be augmented with the use of hybrid busses similar to what General Motors has developed and used in other parts of the country.
- Light Rail Streetcar System: One alternative includes the potential for establishing a new street car line, using either historic steel wheel or modern trolley cars, running from the west side of Lighthouse Landing (across from the commuter parking lot outlined in the FEIS Alternative Plan) through the Lighthouse Landing development site along River Street across the H-Bridge, or along the west side of the Metro-North tracks to the Tarrytown Station. The streetcar system has the opportunity to: provide a reliable, quick link from a

satellite parking lot (for the purposes of Metro-North car parking) to the Tarrytown Station; improve transit access to Sleepy Hollow; and provide opportunities to apply transit oriented development principles using a streetcar line and associated station(s) instead of a new Sleepy Hollow Metro-North station as its transit focus. The contemplated one to two mile routing of the streetcar line would originate on the west side of the Lighthouse Landing site, pass through the site with a stop contemplated at the Beekman Place commercial district and terminate on the west side of the Tarrytown Metro-North station. Additional stops could be considered if it improves access to the Village. An evaluation of initiating a new streetcar system would include a study of the following elements: most appropriate type of vehicle to use; station or stop locations; operating hours; frequency; right-of-way requirements; operating economics; vehicle maintenance/storage facility requirements; and other infrastructure requirements, such as electrification for the streetcar route.

- MicroRail™ Personal Automated Transit: MicroRail is a new technology under development as part of the Personal Automated Transport (PAT) growth industry. The MicroRail PAT system utilizes an elevated guideway to transport small, four passenger cars. The system is designed to allow automatic driverless travel to selected destinations. According to information from MegaRail Transportation Systems, Inc. passengers enter the cars through a full-height, side and roof opening passenger door. A lower side door provides platform level directly to four first-class size seats. The MicroRail cars run with power supplied to the four drive-wheel motors and car air conditioning from electrical power hot rails located inside enclosed rail tubes in the guideway. The speed and position control of the vehicles is controlled by the basic technology used for computer control of high-performance military aircraft.

36. In addition, at the intersection of Beekman Avenue and Pocantico Street, the DEIS had previously recommended the installation of a traffic signal and eastbound left-turn lane needed to mitigate a higher level of development at Lighthouse Landing. The FEIS Alternative Plan does not include this signal since the development levels were decreased between the DEIS and the FEIS. The Village Board finds that in order to ensure the proper

function of Beekman Avenue at Pocantico Street and afford safety to pedestrians, particularly Morse School students, the intersection should be reviewed at the time of the issuance of the temporary or permanent certificate of occupancy covering the 300,000th square foot of new development to determine whether the intersection should be signalized with a demand activated pedestrian phase and interconnected with the Beekman Avenue/Washington Street traffic signal. If the Village Board determines that such improvements are appropriate through the conduct of a Traffic Signal Warrant Study and pedestrian safety evaluation, Roseland shall pay for the signal's installation. As needed during the interim construction period and prior to the implementation of this measure, Roseland shall fund a crossing guard and/or off-duty police officer for this intersection during the same hours that crossing guards are utilized at other intersections in the Village.

37. The Village Board finds that the measures described above will mitigate the potential traffic impacts from the project to the maximum extent practicable. The Board also notes that the traffic generation was based on the FEIS Alternative Plan, which analyzed an approximately 550-space commuter lot. This number of spaces was provided in response to projections from MTA regarding commuter parking demand. MTA has projected parking demands on the Hudson Line that go well beyond what could be accommodated at this Site. In addition, much of the projected volume on the Hudson Line has been projected to come from Rockland County, across the Tappan Zee Bridge. As described above, there is no commitment or certainty from the MTA regarding an on-site train station and the Village Board finds that the Riverfront Development Concept Plan shall be modified to incorporate the East Parcel Master Plan prepared by Richard Daley Architects, which provides a 150-space parking lot for Village uses and project overflow parking, not a commuter lot. As indicated in the FEIS, in the absence of the new on-site train station and with the 150 space lot, the intersections will generally operate at Levels of Service similar or better than described above for the FEIS Alternative Plan with the 550 space lot. A portion of the traffic destined to the commuter lot would have been new trips to the area. Given the projected volumes of commuter traffic that would originate from the Tappan Zee Bridge and the south, the Village Board finds that the elimination of the commuter lot and substitution of the 150 space lot will therefore reduce traffic generation from the project and improve future traffic operations.

38. Some of the mitigation measures require the removal of on-street parking. The Board realizes the importance of these spaces for the local business district and is committed to the pursuit of additional off-street parking facilities to serve local businesses. However, in order to provide more efficient traffic operations, this loss is unavoidable. The removal of spaces shall be limited to the minimum number necessary to safely implement the mitigation. In order to mitigate the loss of identified on-street parking within the Village, Roseland shall contribute $20,000 (which is a typical industry standard cost for structured parking) for each space removed within Sleepy Hollow, up to a maximum of $320,000 to fund the development of replacement off-street parking facilities. If on-street parking will be eliminated as part of any traffic mitigation improvement required in any municipality other than Sleepy Hollow, then Roseland's fair share of the costs of that improvement, and the bond or other security that Roseland shall provide pursuant to paragraph 36, above, shall also include Roseland's fair share of the cost to replace the eliminated spaces. As indicated in paragraph 24 above, the intersection of Route 9/New Broadway/Beekman Avenue/Bedford Road/Hudson Terrace is anticipated to operate at poor levels of service in the Build Condition. Roseland has provided mitigation at this intersection to the extent practicable. However, in an effort to advance a more comprehensive evaluation of the intersection configuration, Roseland shall contribute towards a comprehensive design analysis of this intersection, in an amount not to exceed $75,000.

39. The parking and loading facilities have generally been designed in coordination with the proposed uses, street system and open space network. The spaces are proposed in off-street lots, garages, below-grade structures and on-street locations and in aggregate total approximately 4,000 spaces. The sum of the RF District off-street parking requirements for the individual non-residential uses is 1,131 spaces. Based on the methodology and analysis prepared by Walker Parking, a conservative evaluation of the peak parking requirements for these land uses (without consideration of the differences in peak parking demand times among the individual uses) is approximately 972 spaces. However, accounting for the differing peak parking times of these uses, the actual highest single peak non-residential parking demand is projected to be 759 spaces. The FEIS Alternative Plan provides non-residential parking in both structures and surface configurations totaling 816 spaces. Given

the compact nature of the proposed commercial core, the Village Board believes that it is important to provide for adequate parking to satisfy the projected peak parking demand and in proximate walking distance to these uses. The Village Board shall take a conservative approach and require that parking for an additional 150-160 cars be provided within the commercial corridor. The Concept Plan provides sufficient space to accommodate this parking in three possible locations: Area 1 – behind Building C; Area 2 – in structured parking between Buildings A and B; and Area 3 – through a reconfiguration of the at-grade area between Buildings A and I. Additional parking shall be provided in Area 1 and developed at the same time that Building C is constructed. The balance of additional parking can be accommodated in Areas 2 or 3 described above. Any additional parking in Area 3 shall initially be suitably treated and reserved so as to be used as overflow parking ("land banked"). Upon full build-out of the commercial corridor, if the future parking demand levels warrant, the Village Board can make the determination to have the land banked lot converted to full-use parking by Roseland.

40. The residential component of the project consists of apartments, condominiums and townhouses. The townhouses provide two spaces in each garage and allow for additional driveway parking. This is adequate to meet the zoning requirements for these units and these are therefore acceptably parked and can be dismissed from further analysis. The apartment and condominium parking is principally provided in structured parking below the buildings, with the exception that the loft buildings (I and N) have surface parking provided to the rear. The RF District off-street parking requirements for the apartment and condominium components total approximately 1,886 spaces. The peak parking demand for the apartment and condominium component of the project has been estimated at 1,609 spaces for the FEIS Alternative Plan. The FEIS Alternative Plan has provided for a total of 1,535 spaces for the apartment and condominiums. As indicated in the Summary of Design Modifications section, due to design considerations, the Village Board will require modifications to the Riverfront Development Concept Plan that will require the loss of approximately 73 units in a mix of townhouse and multifamily configurations. The reduction in density brings the provision of parking generally consistent with project's residential parking demand.

41. Section 62-5.1(V)12 of the Village Code encourages a mix of land uses, wherein cumulative

parking demand is less than the sum of the peak demand for each land use, and authorizes the Village Board to allow for portions of the off-street parking requirement to be satisfied by alternate parking solutions, such as shared parking, valet service, and off-site parking. The Village Board further recognizes that the project offers a number of shared parking opportunities for uses that traditionally have different peak parking hours. For example, office and retail typically have differing periods of peak activity. A parking space that is utilized by an office worker during weekday business hours would be available for use by a retail employee or shopper during weekend peak shopping hours. In addition, of the total 455 on-street spaces, approximately 245 are located on Beekman Place, or within one block of the corridor, and could be available to accommodate retail patrons. Further, approximately 200 of the on-street parking spaces are located in the residential neighborhood and would be available for visitor and resident use, subject to Village regulation.

42. Overall, the RF District requirement for off-street parking for the Lighthouse Landing residential and commercial components would be approximately 3,635 spaces. With the modifications identified above, the project provides approximately 3,450 spaces directly associated with its residential and commercial uses (and excluding East Parcel parking, recreation parking, and on-street spaces.) Given that the site has a transit and pedestrian orientation, and in consideration of the alternative parking provisions discussed above, the Village Board finds pursuant to Section 62-5.1(V)12 that as modified by the conditions above, adequate parking would be provided for the project. Although parking for some uses may not be fully located on the same lot as the use to which they are accessory, parking on adjacent streets and shared parking will be utilized to meet demand. In order to ensure effective and efficient parking sharing, project signage and other way-finding measures shall be provided and reviewed in detail during the site plan review process. Access to and from shared parking facilities shall be subject to easements or other similar restrictions that allow for continuous shared use after subdivision.

43. The Village Board further finds that the 550-space commuter lot on the East Parcel included in the FEIS Alternative Plan should be eliminated and the Richard Daley plan substituted. The Village Board also notes that the FEIS Alternative Plan indicates 24 on-street parking spaces directly adjacent to the waterfront park on Road One. The Village Board reserves the

right to determine the extent of the on-street parking to be provided in this area as part of the waterfront open space design process. Should adequate parking be available to serve the open space uses, such as the proposed boathouse, and in consideration of design and visual factors relating to the park space, the Village Board may elect to eliminate this parking. The maximum extent of removal would be 24 spaces, which does not materially affect the sufficiency of the parking being provided.

10. Air Quality and Noise

Potential Impact

1. Construction of the project will result in short-term air quality impacts from vehicle engine emissions and fugitive dust created from vehicle movement, material handling, earth moving, etc. The impact from construction vehicles will be minimized by the proper maintenance of construction equipment, controlling unnecessary idling, and providing sufficient parking for construction workers. The emissions from construction vehicles are temporary and self-correcting once the project is completed. Fugitive dust is also a temporary impact and several mitigation measures will be employed to ensure that dust suspension is minimized. No blasting is anticipated to be required.

2. Westchester County is part of a non-attainment area for ozone that encompasses most of the New York City metropolitan area. The County, like most of the New York metropolitan area, has not achieved the National Ambient Air Quality Standards (NAAQS) for ozone established under the Clean Air Act. The NYSDEC has in place a State Implementation Plan (SIP), which has been approved by the US EPA to control emissions of ozone precursors from motor vehicles in the New York metropolitan area, including Westchester County. As documented in the Air Quality report included with the EIS, NYSDOT methods were used to determine whether intersections affected by project-generated motor vehicles would have the potential to violate the NAAQS. A microscale screening analysis was conducted and showed that further air quality modeling analysis was not required and that it is highly unlikely that the project would violate the NAAQS at build-out. NYSDOT and USEPA methods were also used to examine carbon monoxide levels in the project's parking garages. The results indicate that projected CO concentrations from the proposed parking

facilities would not violate the NAAQS carbon monoxide limits.

3. The project could potentially increase noise levels in the short-term through construction activity, and in the long-term through increases in vehicular traffic. A traffic noise assessment, calculating expected noise levels increases associated with traffic volumes, was performed. The results indicate that the increases in future noise levels during the peak traffic periods would be below the impact threshold of perceptibility.

4. Noise generated during construction comes primarily from the diesel engines that power the construction equipment and from pile drivers and slab demolition equipment. The actual sound levels experienced by surrounding residential uses will be a function of distance. Since the Site covers a large area, as construction progresses no one existing use will be exposed to the same sound levels over an extended period of time. The results of the noise assessment indicate that pile driving, which is slated to occur periodically over the construction period, is the only construction activity with the potential for noise impact. During the EIS process, the project was modified so that the footprint area requiring new pile foundations was reduced by approximately 32 percent from 12.2 acres to 8.3 acres. Pile driving activity can reach a noise level of 100dBA at 50 feet. However, the DEIS analysis indicates that pile driving noise would only exceed existing Leq levels at the most proximate receptor locations. Further the analysis does not take into account intervening buildings, which would reduce actual construction noise levels.

Mitigation

5. Measures proposed by Roseland to be employed during project construction to ensure that dust suspension is minimized include:
   - Keeping on-site construction vehicle speed low (under 10 mph);
   - Covering trucks carrying soils and other dry materials;
   - Covering exposed stockpiles of soil and gravel, or minimizing the height of these piles;
   - Periodic washing of paved surfaces during dry periods;
   - Applying water, as necessary, during concrete slab removal and crushing;
   - Applying water to stockpiles and unpaved roads during dry periods; and

- Final grading and landscaping of exposed areas as soon as practicable.

6. As good construction practice, mufflers will be maintained on all construction equipment. Pile driving noise will be mitigated by limiting pile driving to daytime hours as stipulated in the Village's noise ordinance. The FEIS Alternative Plan has also resulted in a reduction of the amount of required pile driving activity.

7. Roseland has proposed the use of mechanically vented parking garages to maintain fresh air flow.

8. The project also involves several components that serve to reduce motor vehicle traffic generation, thereby reducing the potential air quality impacts from mobile sources. These include proximity to a rail station; the implementation of a jitney service; pedestrian connections to the Beekman Avenue corridor, Philipse Manor train station and the eventual County trail network and other public and quasi-public uses; and a mix of on-site land uses. The project is not a major stationary source emitter of air pollutants of concern.

Findings

9. The Village Board finds that the mitigation measures for air and noise impacts presented in the EIS are typical and appropriate as a baseline for construction projects. However, given the scale and duration of the potential construction impacts from the project, the Village Board will require a series of supplemental conditions and mitigations. The air quality and noise conditions/mitigations presented above shall be augmented by the overall list of conditions/mitigations for Construction Impacts presented in the section below. With the implementation of these conditions, the Village Board finds that the project will adequately mitigate any potential adverse impacts on air quality and noise. Further, the air quality analysis presented in the EIS demonstrates that the project would not result in any non-compliance with the SIP.

10. Furthermore, and as described in more detail earlier, in an effort to address the growing concern about greenhouse gas emissions and related efforts to incorporate energy-saving technologies, the Village Board will require that the project be a Leadership in Energy and

Environmental Design (LEED) certified project under the Green Building Council's LEED for Neighborhood Development (LEED-ND) program, that the larger buildings be designed such that they could qualify for LEED certification using the LEED for New Construction rating system, and that the townhomes be designed such that they could qualify for the Energy Star Qualified Attached Homes National Builder Option Package.

11. Construction Impacts

Potential Impacts

1. The construction of the project will result in a number of temporary adverse impacts related to construction activity, such as noise from the operation of heavy equipment and the require foundation pile driving; construction traffic from employees and material delivery; increased soil erosion from earthwork operations; and fugitive dust and emissions from the operation of power equipment.

2. To improve construction vehicle access to the Site, the Beekman Avenue Bridge will be upgraded to current HS25 highway design loading. Bridge reconstruction is expected to commence during the early phase of the overall project schedule to permit construction vehicle access from Beekman Avenue.

3. Construction activities are anticipated to be phased over an approximately six-year period. During this period, the number of employee vehicles at the Site will vary in correlation with the construction sequence and number of construction workers required. Conservatively estimating one vehicle per employee, employee vehicles are expected to gradually increase during the course of construction from an approximate 20 employee vehicles daily at the project's onset to an estimated 600 employee vehicles daily at its peak. Truck traffic is anticipated to average approximately 70 round trips per day over the construction period, with fewer truck trips expected during the earliest and latest stages of construction. At peak, truck traffic is anticipated to average approximately 160 round-trips per day over a three-month period. These averages may be exceeded as a result of overlapping, truck intensive construction activity such as concrete work and the import of off-site borrow material.

4. The FEIS Alternative Plan requires the import of approximately 200,000 cubic yards of fill material to raise the Site to the proposed grade and complete construction. Approximately 16 acres of the Site will also require surcharging in order to compress the underlying material. The surcharging is anticipated to require less than150,000 cubic yards of material, which would then be reused on-site to help satisfy the project's 200,000 cubic yard import fill requirement.

5. The construction of the project would also likely result in an increase in short-term employment opportunities and increased patronization of existing retail and service establishments with the Village.

Mitigation

6. Construction operations will be undertaken in accordance with all applicable Village regulations. The construction work force typically has offset early arrival and departure times which vary from the local peak commuter periods and will reduce traffic related impacts to the local roadway network. All material storage, and construction staging and employee parking will be provided on-site. The phased construction and provision of adequate staging and material stockpile areas will permit the reuse of building materials (e.g., surcharge material); coordinated use of construction crews and equipment; and the reduction of material deliveries.

7. Roseland has proposed to contribute to the repair of the Beekman Avenue Bridge to current highway design loading HS25 standard. This would allow the lifting of the existing 12-ton weight limit and the passage of large trucks. Upon improvement, truck traffic from the proposed project would be routed along Beekman Avenue to Route 9. The existing viaduct to the East Parcel will also be repaired by Roseland to its original H15 design loading. GM has also committed to remove a minimum of 75 percent of the historic fill removed pursuant to the IRMs by rail to help minimize impacts on the local roadway.

Findings

8. The Village Board finds that the mitigation measures presented in the EIS are typical and appropriate as a baseline for construction projects. However, given the scale and duration of

the potential construction impacts from the project, the Village Board will require a series of supplemental conditions and mitigations, presented below.

9. Upgrade of the Beekman Avenue Bridge to the HS25 standard will be necessary to allow for appropriate construction vehicle access to the Site. Roseland will therefore be required to diligently pursue approval from Metro-North and the reconstruction of the Beekman Avenue Bridge to this standard with the goal of completing reconstruction within a period of approximately 15 months and prior to the issuance of the first temporary certificate of occupancy or certificate of occupancy. Prior to reconstruction of the Beekman Avenue Bridge, project construction vehicles exceeding the current 12-ton weight limit will utilize alternate routes to the Site.

10. The Village shall retain an inspector/liaison(s) at Roseland's expense to monitor overall construction activity, soil erosion and dust prevention measures, and construction traffic management, and material deliveries the in order to protect surrounding residents, Village streets and buildings, Kingsland Point Park and the Hudson River itself. This inspector shall report directly to the Village Building Inspector. Given the scale of the proposed filling operations, Roseland will be required to coordinate with the inspector/liaison in identifying potential material sources where the material could be efficiently brought to the Site by barge or rail. The inspector/liaison position shall be retained by the Village and be funded by Roseland on an annual basis beginning with the initiation of the environmental remediation. The position shall remain engaged throughout the duration of the construction period, or until determined by the Village Board that construction is substantially complete and the remaining potential for construction impacts have been minimized sufficiently to warrant an earlier end date.

11. GM shall be required to remove a minimum of 85% of the historic fill removed pursuant to the IRMs by rail to help minimize impacts on the local roadways. Roseland will be required to investigate, and, where practicable, employ commercially reasonable opportunities to use rail or other alternate transportation means for the importation of fill required at the Site. Roseland will also be required to coordinate regularly with the Village inspector/liaison regarding construction traffic management, and to ensure all due diligence is being used to

identify sources of material that can be brought to the Site by alternate (non-truck) means. A construction management program outlining the process for coordination of the arrival/departure of workers, and material deliveries with the Village monitor/representative will also be required.

12. In consideration of the truck activity that will be required to prepare the project Site for development and to import construction materials, Roseland will be required to provide a bond for the repair of any damage to Beekman Avenue or other Village roads caused by project construction traffic activity in an amount equal to the reasonably anticipated cost of repair as determined by the Village Architect, Engineer and Administrator in consultation with Roseland. Roseland shall use all reasonable efforts to accommodate delivery by means other than trucking.

13. In addition, due to the anticipated vibration from pile driving, Roseland shall be required to prepare a pre-construction inspection report (similar in scope and content to a typical pre-blast inspection), to document, at a minimum, the condition of the interiors and exteriors of the buildings within 500 feet of the on-site pile driving activity. This report would serve as a baseline for building condition and be the basis for any damage claims. The report shall be completed and made available to the Village prior to the start of construction. In the event that pile-driving activity continues after new residences have been constructed, the requirement to prepare pre-construction inspection reports shall extended to any new buildings on the Site within 500 feet of pile driving activity. In addition, seisometers shall be used and monitored to ensure that vibrations do not exceed acceptable levels during pile driving, the use of ram hoes, and blasting activity, if any.

14. As noted earlier in this Findings Statement, the Village Board has required the Riverfront Development Concept Plan to be modified to substitute an alternate configuration of the Beekman Avenue/Beekman Place/River Street intersection. The construction access as shown on the large scale erosion control plans for the FEIS Alternative Plan indicates an access directly adjacent to Ichabod's Landing. While, at the onset, the existing entrance to the Site may need to be used for site access, the construction of Beekman Place shall begin during the initial phase so it can be available as a construction access point as soon as is

practicable. After construction and occupation of the Beekman Place development, additional construction routes will be available. Detailed construction plans indicating all anticipated construction entrance usage shall be provided and reviewed during site plan approval.

15. As shown on Figure III.L.2 in the DEIS, the concrete crushing facility shall be located towards the north end of the West Parcel (north of the existing pedestrian bridge over the tracks), and at a minimum distance of 300 feet from Kingsland Point Park. The exact placement of the facility shall be detailed and reviewed during site plan approval of the first phase.

16. The DEIS provided construction parking and material storage locations for an early plan iteration. An updated construction management plan for the specific phase for which site plan approval is being sought, including staging, parking and storage locations, shall be provided during site plan review for that phase. Construction material storage and parking areas shall be located as far as practicable from the surrounding residential uses.

17. The EIS notes that the project will involve activities such as pile driving that may result in noise levels of above 90 dBA at surrounding properties. The mitigation proposed by Roseland is that work will be done during the day when most people are at work, specifically limited to Monday through Friday from 8am to 7pm and Saturday from 9am to 6pm, in accordance with the Village of Sleepy Hollow Noise Ordinance. However, in an effort to mitigate impacts to nearby residences from pile driving, slab removal and blasting activities, as well as any slab crushing outside of the area shown on the Exhibit III.L.2 in the DEIS, the aforementioned activities shall not be permitted on Saturdays within 500 feet of residences. Periodic monitoring by the Village inspector described in this section will be performed to ensure that allowable hours and other regulations are not exceeded.

18. The Village Noise Ordinance permits deliveries between 6:00AM and 9:00PM. Strict compliance with the Village's Noise Ordinance shall be adhered to for deliveries and other site construction activities. Additionally, Roseland shall use best efforts to limit its construction deliveries to between 7am and 6pm. Additionally, to protect schoolchildren

crossing Beekman Avenue during the construction of the project, Roseland has agreed to fund a crossing guards and/or off-duty police officer for the Pocantico Street/Beekman Avenue intersection during the same hours that crossing guards are utilized at other intersections in the Village.

19. Roseland shall be required to post a bond not to exceed $20,000 for the monitoring and remediation of off-site dust impacts.

20. Both silt fence and haybale backup shall be provided along the boundary of adjoining properties.

21. The "possible sediment basin" that is shown in the waterfront open space near Ichabod's Landing, on the large scale erosion and sediment control plan, should be shifted as close as practical to the proposed hotel site, with the understanding that with the anticipated phasing, the hotel site may potentially be used for material storage and parking.

22. All grading must be designed to slope away from Ichabod's Landing so as not to direct runoff toward Ichabod's Landing. Final grading and stormwater management details will be reviewed and approved during the site plan review process.

23. Preliminary calculations and a conceptual stormwater management system have been provided and illustrate an acceptable approach for proper function of a stormwater system. Detailed stormwater calculations demonstrating the adequacy of all existing and proposed drainage lines and systems must be provided during site plan approval.

12. Phasing

Potential Impacts

1. Due to the scale of the project, full buildout is anticipated to take at least five years. In order to manage the review of detailed site plans and the physical construction of the project, phasing is required. The Applicant prepared a construction schedule in the DEIS, with some modifications to the sequence provided in the FEIS.

Mitigation and Findings

2. The Village Board has reviewed the construction sequencing proposed by Roseland. In order to limit the duration and extent of construction impacts on surrounding properties, and to ensure that the positive benefits of the project, including public access to the waterfront, are realized and available for use by Village residents in a timely manner, the Village Board finds that certain modifications to the construction sequence are required.

3. The Village Board finds that the timely construction and opening of the waterfront open space and various public and recreational amenities is necessary to ensure that the benefits and mitigative effects of these features are realized. The various public amenities, benefits and mitigation measures shall be constructed as described in the sequence below, subject to obtaining the requisite government approvals and permits.

Mitigation Measures, Public Amenities, or Benefits	**Timing**
Waterfront open space (from Ichabod's Landing to hotel site)	Subject to the specifics of the waterfront open space design process, however Roseland shall be required to diligently proceed with, and fulfill the requirements for, the necessary applications to secure permits and approvals for the waterfront open space improvements.
Beekman Avenue Bridge and new Beekman Place intersection	To be commenced immediately upon Village Board approval
Viaduct	To be commenced immediately upon Village Board approval
Cove, bulkhead installation, riprap repair/modification (with the exception of that area between Ichabod's Landing and the hotel site, which shall be initiated earlier)	Subject to the specifics of the waterfront open space design process, however Roseland shall be required to diligently proceed with, and fulfill the requirements for, the necessary applications to secure permits and approvals for the waterfront open space improvements
East Parcel recreation facilities	To be commenced immediately after viaduct repair work
Department of Public Works	To be commenced immediately after viaduct repair work
Central park open space	To be completed prior to, or during, Phase 2 construction of the adjoining buildings
Fire Station	To be completed prior to completion of Phase 1
Boathouse	Subject to the specifics of the waterfront open space design process, however Roseland shall be required to diligently proceed with, and fulfill the requirements for, the necessary applications to

	secure permits and approvals for the waterfront open space improvements
Waterfront open space (from hotel site to Kingsland Point Park)**	Subject to the specifics of the waterfront open space design process, however Roseland shall be required to diligently proceed with, and fulfill the requirements for, the necessary applications to secure permits and approvals for the waterfront open space improvements.
Piers, docks, launches	Roseland shall be required to diligently proceed with, and fulfill the requirements for, the necessary applications to secure permits and approvals for these waterfront open space improvements.

**With the understanding that the hotel site may be developed during later stages, a pedestrian connection around the hotel site in order to establish continuous waterfront access shall be provided.

4. The Village Board finds that the proposed sequencing of building construction should be flexible in order to allow for manageable detailed site plan review and provide an efficient development schedule. The proposed schedule of Building Group sequencing during the construction process shall be submitted to the Planning Board for review and approval during the site plan review process.

Alternatives

The DEIS considered a range of alternative development scenarios, including those established in the Scoping Document. These alternatives are discussed below:

A. No Action

The No Action alternative would leave the site in its current condition, predominantly paved and used for temporary parking and storage. This is inconsistent and incompatible with the uses envisioned in the Village's LWRP and implemented as outlined in the Village's RF-Riverfront Development district. This would not meet the objectives of the Applicant to return the plant site to beneficial use and make the riverfront resource available to the public.

This alternative would permit continued untreated stormwater runoff into the Hudson and would not allow for the development of new housing stock, including affordable and senior apartments. Under this scenario, the Village would not receive the substantial open space and recreational amenities proposed with the project, and would not be able to create an open space linkage along the River between Kingsland Point Park and Horan's Landing. Infrastructure improvements, such as the repair and upgrade of the Beekman Avenue bridge, and community uses, such as the

development of new facilities for the DPW and the Fire Department, would not occur. The Village would also not receive the projected increase in tax revenues or employment opportunities.

B. Alternative Plan Configurations

1. Alternative Project Densities

The DEIS evaluated two alternative densities to the 1,562 residential unit DEIS proposal; one with 100 more units, and one with 100 fewer units. The extent of the commercial space (50,200 s.f. office, 180,000 s.f. retail, 147-room hotel) remained the same as in the DEIS proposal.

The 1,662-unit alternative would increase the residential density to 17.6 du/acre and could be accommodated with a similar site plan layout, but utilizing an additional floor on several of the larger buildings. Overall, the increase of 100 units would have the effect of raising potential quantitative impacts (e.g., schoolchildren, net fiscal impact, utility demand, and traffic generation) by between one and six percent. The alternative of a 100-unit decrease would have the effect of lowering the potential quantitative impacts from the DEIS proposal by between two and six percent.

During the public hearing process on the DEIS, the Village Board and the public expressed concern over the potential impacts related to project density, particularly traffic generation, at the 1,562 units initially proposed. In response, the Applicant prepared a new alternative, studied in the FEIS that proposed a greater reduction in residential units, as well as a reduction in the amount of proposed commercial space, which has eclipsed this initial lower density alternative. In addition, a sensitivity analysis identifying the incremental change in impacts associated with each reduction of 25 dwelling units was included in the FEIS.

During the FEIS public hearing, comments were raised suggesting that the Village review additional alternatives with significantly fewer units. As described in the Traffic Findings section above, potential traffic impacts resulting from the project can be mitigated at the FEIS Alternative plan density. However, as an example, at 850 units, the fiscal modeling prepared by the Village's fiscal consultant indicates that the Village would incur a deficit. In

this document, the Village has required a number of design modifications that will reduce the number of dwelling units. This revised program was also tested to ensure it was feasible and that the Village would continue to receive a surplus.

In response to comments raised by the Village of Tarrytown at the public hearing on the FEIS held on January 23, 2007 and in its February 1, 2007 comment letter, the Applicant analyzed the traffic implications of Tarrytown's suggested reduction in the number of dwelling units from 1,250 to 800 and from 132,000 square feet of commercial space to 90,000 square feet. The analysis, which was prepared by the Applicant's traffic engineers and submitted to the Village Board under cover of a June 26, 2007 letter from Divney Tung Schwalbe, LLP, shows that the reductions of density suggested by Tarrytown would result in only minimal changes in traffic conditions and would still require the same traffic improvement measures recommended for the FEIS Alternative Plan. In particular:

- The Traffic Study of the FEIS Alternative Plan demonstrates that project traffic impacts can be adequately mitigated. A total of 37 intersections were evaluated in the Traffic Study and improvements are recommended at 10 of these intersections in Tarrytown (including signal timing modifications and lane restriping to create turning lanes at select locations). Of the total of 22 intersections studied in Tarrytown, improvements have been suggested at eight intersections primarily due to Existing or No Build conditions. Many of the improvements recommended in Tarrytown, including selective elimination of on-street parking spaces to create turning lanes, were recommended in the Tarrytown CBD Traffic and Parking Study prepared by Adler Consulting in 1998.

- Scaling back the proposed retail floor area from 132,000 square feet to 90,000 square feet would not significantly reduce traffic. The reduction of residential units would reduce the internal draw of the retail. With the corresponding 30% retail gravity model reduction, the project retail-related trip reduction (exclusive of the hotel retail) would be approximately 43 trips out of a total of 612 primary trips (exclusive of the water dependent and East Parcel uses) in the AM Peak Hour, 43 trips out of a total of 710 trips in the PM Peak Hour, and 104 trips out of a total of 948 trips in the Saturday Peak Hour. Furthermore, a significant portion of the project retail traffic distribution will be drawn

from points north/east of Tarrytown or from within the Site (approximately 70%), and therefore would not pass through the Route 9 intersections in Tarrytown.

The reductions are limited in comparison to the overall volumes at the intersections. For example, at the intersection of US Route 9 and West Franklin, the reduction in trips resulting from the reduction in retail is 14 trips (0.59% of the overall intersection traffic) during the AM Peak Hour, 14 trips (0.51%) during the PM Peak Hour, and 38 trips (1.46%) during the Saturday Peak Hour. At the intersection of US Route 9 and Route 119, the reduction in trips resulting from the reduction in retail is 11 trips (0.30% of the overall intersection traffic during the AM Peak Hour), 11 trips (0.35%) during the PM Peak Hour, and 27 trips (0.97%) during the Saturday Peak Hour.

- Tarrytown's suggested density program would necessarily further reduce the number of total primary trips. A portion of the project residential traffic will distribute to/from points north/east of Tarrytown (approximately 45%), and therefore will not pass through any of the Tarrytown Route 9 intersections.

  For example, at the intersection of US Route 9 and West Franklin, the reduction in trips resulting from the reduction in residential is 52 trips (2.18% of the overall intersection traffic during the AM Peak Hour), 61 trips (2.22%) during the PM Peak Hour, and 54 trips (2.07%) during the Saturday Peak Hour. At the intersection of US Route 9 and Route 119, the reduction in trips resulting from the reduction in residential is 45 trips (1.22% of the overall intersection traffic during the AM Peak Hour), 58 trips (1.77%) during the PM Peak Hour, and 49 trips (1.86%) during the Saturday Peak Hour. These are small percentages of the overall intersection volume and would have marginal impact on traffic operating conditions.

- In the limited instances where the lower density program would result in an improvement in LOS at intersections where the LOS with the project and recommended improvements is E or F, those improvements: (a) all relate to a single turning lane and do not affect the overall LOS at an intersection (US Route 9A and West Franklin Street [AM Peak and PM Peak Hours] and US Route 9 and I-87/I-287 Eastbound Ramps [PM Peak Hour]); (b)

are the same LOS as the No-Build scenario (US Route 9 and Prospect Avenue [PM Peak Hour]); or (c) relate to non-signalized intersections (US Route 9 and Park Avenue [AM Peak Hour]). Overall, therefore, there would be no material improvement in traffic conditions even with the very substantial reduction in density suggested by the Village of Tarrytown.

These conclusions were confirmed by STV, Inc., the Village of Sleepy Hollow's consulting traffic engineers.

It should also be noted that the very substantial reductions in residential and commercial density would compromise the critical mass necessary to sustain a vibrant mixed-use community, and would jeopardize the significant fiscal benefits of the project to all taxing jurisdictions and would potentially make the Applicant's currently proposed open and public space program economically infeasible. For all of these reasons, the Village Board finds that the benefits of the FEIS Alternative Plan (as required to be modified by this Findings Statement) far outweighs the marginal traffic benefits of Tarrytown's suggested reduced density program.

2. Alternative Program Mix or Layout

The alternatives reviewed under the Alternative Program Mix or Layout included incorporating affordable housing units within the West Parcel; incorporating light industrial/flex office space; not requiring displacement of existing residents; and incorporating a pier.

The alternative of including affordable housing units within the WestParcel has been made part of the proposed project. The FEIS Alternative includes 40 affordable senior apartments and 21 workforce housing units located on the West Parcel. Similarly, since the park and municipal uses envisioned on the east parcel do not require displacement of existing residents from the Continental Street neighborhood, that alternative has also been incorporated into the proposed project.

The scoping document requested review of an alternative incorporating a pier suitable for

excursion boat service. However, the Village has prepared a Waterfront Use Master Plan, identifying a number of proposed water dependent improvements along the Village's shoreline. The Open Space Plan does not include a ferry/excursion boat pier, but contemplates establishing a fishing pier near the proposed extension of Beekman Avenue. The FEIS Alternative Plan has incorporated the concept of a fishing pier at this location. The Village Board does not contemplate accommodating regular commuter ferry service at Lighthouse Landing, but rather excursion boat service, similar to that accommodated at Ichabod's Landing. In order increase the length of access available for anglers and other pier users, and to maximize the potential for this pier to serve as an additional boat tie-up area, the Village Board requires that the leg of the fishing pier perpendicular to the shore be extended as close to the Federal channel as permissible by the Army Corps of Engineers. Given the relatively narrow width of the pier, its elevation above the water level, and the maximum limit of pier length dictated by the presence of the channel 130 feet from shore, the Village Board finds that the pier would have no significant shading or sediment suspension impact. The specific design of the pier will be determined at site plan review, but shall conform with the general parameters outlined above.

The Linkage Study identified "Flex/Office" spaces as a possible non-residential land use on the east parcel, and this alternative was requested in the scoping document. The Applicant analyzed an alternative with an approximately 50,000 square feet building on the East Parcel in the DEIS. The creation of this building and its associated parking would require approximately two acres. This would necessitate a reduction in size of one of the municipal uses proposed for the East Parcel. This alternative would also result in increased utility demand and traffic generation, but would yield approximately 100 more daytime workers, and additional tax revenue. Based on comments from the Village Board, the FEIS document evaluated an alternative of substituting approximately 136,000 square feet of light industrial/incubator space on the West Parcel in lieu of one of the 100 residential rental apartments. The assessment indicated that the fiscal impact of this substitution on the Village would be generally similar to the FEIS Alternative. Incubator/light industrial space would generate more traffic than 100 apartment units (approximately 134 more vehicle trips in the weekday AM peak, and 121 more in the weekday PM peak.) It is also noted that under the FEIS Alternative Plan, the two buildings along the railroad tracks are proposed to

be “live/work” loft apartments with open plans that would allow for flexibility in creating combined living and working spaces.

3. Alternative Building Heights

   This alternative examined the impact of varying roof heights by either adding or removing a floor from several buildings. This would result in impacts similar to the higher and lower density alternatives described above. The concept of providing for a variety of building heights has been incorporated into the FEIS Alternative Plan, which indicates three-, four-, and five-story buildings, as well as in the conditions applied to the project as part of this Findings Statement. The Applicant had submitted a petition to the Village Board to amend the zoning text in the RF District to allow for an increase in building height within the area 300 linear feet from the Metro-North railroad tracks on the West Parcel. Roseland has since revised the Riverfront Development Concept Plan so that the plan now conforms with current zoning.

4. Alternative Parking Concepts and Configurations

   The scoping outline requested a review of an alternative providing additional parking to serve commuters and potentially adjoining properties. The project plans studied in the DEIS and FEIS reviewed varied sizes of a parking lot for commuters on the East Parcel. Based upon parameters whereby the majority of commuter generated traffic was anticipated to come from the south and utilize Beekman Avenue as its main approach, the traffic analyses indicated that a commuter-oriented parking lot had the potential to contribute a significant increase to the project’s trip generation, and that the increase in commuter parking studied in the FEIS would essentially negate the traffic benefits from the reduction in the project’s residential and commercial program. The Village’s East Parcel Master Plan provides a smaller lot to service recreational users of the East Parcel and could provide overflow parking for other adjoining uses, such as Historic Hudson Valley.

C. Alternative Project without Railroad Station

   An alternative without a railroad station would look similar in plan to the proposed project, but would not include train station platforms and connecting stairs and ramps, drop-off areas, or a commuter parking lot. As the MTA has not yet confirmed approval of an on-site station, the

Proposed Action does not include a station, and therefore incorporates this alternative. In order to preserve the opportunity for establishing a train station in the future, the proposed project will reserve space for new platforms, parking, and an overpass. As described above, the Applicant has committed to the operation of a shuttle service that would transport project residents to the Tarrytown and/or Philipse Manor train stations. The Village's East Side Master Plan, which will be incorporated into the proposed project, includes a 150-space parking lot that will serve the recreational uses. In the event a station is deemed feasible in the future, the plan retains the potential to accommodate an additional 250-350 spaces through expansion and decked parking above the surface lot.

D. FEIS Alternative Plan

Based upon comments received on the DEIS, the FEIS included and examined a modified conceptual plan, entitled the FEIS Alternative Plan. The primary modifications included: reducing the number of residential units by 312 units to 1,250; reducing the size of the retail component to 132,000 sf, including a 25,000 sf market, 18,000 sf fine arts cinema, 84,000 sf of shops and restaurants along Beekman Place, and a 5,000 sf restaurant within the hotel; reducing the size of the office component to 35,000 sf; reducing the hotel to 140 rooms; increasing the ratio of ownership to rental residential units from 28%/72% to 49%/51%; increasing the open space to be provided along the riverfront and within the interior of the site, creating a more extensive buffer between Kingsland Point Park and the project; increasing the overall quantity of public open space and public use areas to approximately 39 acres; expanding the scope of water-dependent uses along the waterfront; and increasing the extent of infrastructure improvements to be made as part of the project. The impacts from this FEIS Alternative Plan are those that have been considered in the Findings made above. In order to allow for quantification of impacts from other design densities, the FEIS also included a sensitivity analysis table identifying the expected change in quantitative impacts for incremental modifications of the program by 25 units.

E. East Side Master Plan

On behalf of the Village of Sleepy Hollow, an East Side Master Plan was prepared by Richard A. Daley Architects. The East Side Master Plan incorporates a DPW facility, consisting of a main DPW garage building, salt storage shed, composting area, material bins, fueling facility

and surface parking. The East Side Master Plan replaces the 550-space commuter parking lot proposed under the FEIS Alternative Plan with a 150 space at-grade parking area (for recreational and public use) and shifts the two proposed soccer fields to the southern section of the parcel adjacent to the at-grade lot. A potential future parking deck located above the at-grade lot is also shown, with access proposed from Beekman Avenue via an at-grade road. The East Side Master Plan also includes two tennis courts in the northern portion of the parcel, adjacent to DeVries Park.

The East Side Master Plan contemplates a possible historic recreation of a tenant farm in the northern portion of the parcel as a westerly extension of the existing Philipsburg Manor Restoration. Under this concept, this potential expansion area would be donated by the Applicant to Historic Hudson Valley (HHV) in lieu of the currently proposed donation of the land to the Village. Such a donation to HHV is subject to a number of contingencies, including compliance of the possible tenant farm use with applicable provisions and restrictions of the BCA for the East Parcel between the Applicant and NYSDEC and HHV's acceptance of conditions attendant to any donation of the parcel to it. The largest structure contemplated would be a New-World Dutch barn to be moved to the site from upstate and clad in wood shingles and hewn plank siding. The farmhouse and smokehouse would be made of stone and wood. Fences that define pastures, wheat fields, orchards, etc. would be made of wood of the varied styles presently illustrated at Philipsburg Manor. The principal land uses, in addition to the buildings, would be pasture for cattle and sheep, woodland, hay meadow, grain/wheat field, and orchard.

The tenant farm would expand the contribution that HHV makes to preserving and presenting the history of the Village and the region. Re-creation of a typical farm would allow HHV to show and tell an historical story that is crucial to the settlement of the region. It would also create an evocative new landscape populated by rustic buildings, farm animals, historic interpreters, and students and visitors of all ages.

The Applicant has agreed to work with HHV in an effort (a) to resolve issues with NYSDEC pursuant to the BCP that would allow the donation to be made and the tenant farm to move forward without detrimentally affecting the Applicant's proposed remediation of the East Parcel

(as described in the NYSDEC IRM Decision Document, the FEIS and in these Findings) and attendant provisions of the BCA, and (b) to resolve other outstanding matters, including the conditions pertinent to any donation by GM or Roseland (whoever has title) of the subject parcel to HHV.

The tenant farm would not be a separate attraction, but rather an extension of the existing Philipsburg Manor Restoration use. It is therefore not expected to be a separate generator of visitors, but rather will strengthen the overall attractiveness of its current program. No significant traffic impacts are anticipated during peak hours from this alternative element of the East Side Master Plan. Impervious surface coverage within the tenant farm would be minimal and drainage patterns would be compatible with the surrounding area. There would be no adverse effect on community facilities, services or utilities, as the number of visitors to Philipsburg Manor Restoration would not be expected to materially increase. Noise levels would not be expected to significantly increase for the use of visitors to this portion of the East Parcel. The use would entail very limited construction and such effects would be expected to be very short in duration. There would be no adverse fiscal impact, as the land would not generate tax revenues whether owned by the Village or HHV. However, strengthening the attractiveness of Philipsburg Manor Restoration, which contributes to the Village through the attraction of tourists, would be a positive impact. It is noted that while there is no formal application for this contemplated use, it has been conceptually examined and considered as part of the overall planning and evaluation of the Proposed Action.

The East Side Master Plan would also include an extension of the existing overflow parking lot serving Philipsburg Manor Restoration to provide approximately 44 additional parking spaces with a cul-de-sac turnaround area on the East Parcel. Approximately 50 parking spaces would also be available along the cul-de-sac extending to DeVries Park. This aspect of the Plan would avoid the loss of existing overflow parking for Philipsburg Manor Restoration.

If the possible tenant farm moves forward, and as HHV's concepts become more defined, it would apply for site plan approval for such a use of this portion of the East Parcel. At that juncture, HHV's proposal would be subject to any further environmental review under SEQR required by the Village Planning Board to ascertain whether the more defined plans would cause

significant adverse environmental impacts not within the parameters of impacts discussed in the EIS.

The Village Board finds that the East Side Master Plan provides for improved recreational use, a more harmonious relationship with Philipsburg Manor Restoration, and includes a more appropriately-sized parking facility, given the lack of a confirmed new railroad station. Should a railroad station become feasible, it would be studied as a separate action, however the plan preserves the ability to increase parking through the expansion of the existing surface lot and the addition of a parking deck above the surface parking that could potentially provide an additional 250 to 350 spaces.

The Village Board understands that the components of the East Parcel Master Plan related to the HHV proposal are necessarily conceptual at this point, and that subsequent evaluation of a detailed proposal, when ready for implementation, will be required.

Summary of Design Modifications – Findings for the Preferred Alternative

The Village Board finds, that based on the analysis of the alternatives presented during the environmental review process, a revised version of the FEIS Alternative Plan is the preferred alternative, which will result in the greatest overall benefit to the community while minimizing adverse impacts. The preferred alternative has also incorporated concepts from several of the requested alternatives.

As documented in the various impact consideration discussions above, the Village Board will require several modifications to the FEIS Alternative Plan, and therefore to the Riverfront Development Concept Plan, as a condition of this Findings Statement. The modifications are summarized below:

- The inclusion of the alternate configuration of the Beekman Avenue and Beekman Place intersection to accommodate a roundabout at the aforementioned intersection with River Street, an associated green space, and a slight reconfiguration of Building H to provide more building frontage along the aforementioned green space

- The inclusion of the identified elements of the East Parcel Master Plan prepared by Richard A. Daley Architects
- Reconfiguration of Building M to include an extension of approximately 3,000 square feet of commercial space, with the possibility for an additional 6,000 square feet of commercial space fronting onto Road A and the waterfront open space, in an effort to bring more commercial development down to the waterfront
- The provision of additional parking (150-160 spaces) in proximity to Building C, the north side of Beekman Avenue, and in between Buildings A and I
- Reconfiguration of Road One and the proposed expansion of Kingsland Point Park parking to take into account an increase in the minimum building setback to 150 feet and an increase in the width of the Kingsland Point Park buffer area to a minimum of 100 feet, in order to provide sufficient space for any potential future establishment of an estuary.
- An adjustment of the height of the townhomes along Road One to include more of a mix of three and four story building heights
- A reduction in building height along the Metro-North railroad tracks in accordance with the Village Board's decision not to consider a proposed zoning text amendments allowing for additional height in this area (height to remain at 42 feet)
- An increase in the overall public open space and public use are from ±39 to ±44.6 acres, inclusive of an 11.1 acre waterfront open space, in part as a result of the incorporation of the alternative Beekman Avenue-Beekman Place intersection design concept and corresponding increase in the buffer between the Site and Ichabod's Landing.
- The elimination of Building N, the expansion of the buffer area adjacent to Kingsland Point Park and the land banked parking, has called for the reconfiguration of the site layout along the tracks. This proposed modification has increased the length of Building I (live/work loft building) and identifies a total of 131 residential (apartment) units. The Village Board retains the right to make certain modifications to Building I and the adjacent landed areas along the tracks. Upon mutual agreement with Roseland, it may be deemed necessary to address market and other land use considerations. In order to achieve maximum flexibility in the reconfiguration and use of Building I and the adjacent landed areas along the tracks, a reduction in residential density may occur. This reduction is to be considered as an adjustable use of the building, reducing the residential

units by the potential substitution of an alternate use comparable in overall intensity, particularly with respect to traffic, and intent.

In total, these required revisions are anticipated to result in the loss of approximately 73 dwellings, in a combination of townhome and multifamily units.

This list provides only a summary of the physical plan modifications that will be incorporated into the Riverfront Development Concept Plan as the Preferred Alternative. The project remains subject to all other conditions described in the impact sections above.

Certification to Approve/Fund/Undertake:

Having fully considered the Draft and Final Environmental Impact Statement and comments received at public hearings, and having considered the preceding written facts and conclusions relied upon to meet the requirements of 6 NYCRR 617.9, the Village Board certifies that:

1. The requirements of 6 NYCRR Part 617 have been met and fully satisfied;
2. Consistent with social, economic and other essential considerations, from among the reasonable alternatives available, the proposed project is one which minimizes or avoids adverse environmental effects to the maximum extent practicable; including the effects disclosed in the environmental impact statement; and
3. Consistent with social, economic and other essential considerations, to the maximum extent practicable, adverse environmental effects revealed in the environmental impact statement process will be minimized or avoided by incorporating as conditions to the decision those mitigative measures that were identified as practicable.

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Appendix H

Stormwater Runoff Analysis

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Stormwater Runoff Analysis

Stormwater runoff generated by rain falling on the East Parcel and offsite tributary areas is discharged to the Pocantico River. Stormwater runoff was analyzed at the edge of the East Parcel in two areas. The first is a design line (Design Line 1) at the project's northeast boundary with the Pocantico River and a tributary ditch that forms the boundary between the East Parcel and the neighboring Historic Hudson Valley property. The second point of analysis is where runoff leaves the East Parcel at the northwest corner (Design Point 2). The design line and design point were selected to facilitate a detailed comparison of stormwater runoff from the East Parcel under existing conditions versus the redeveloped condition. Pre-development and Post-Development Drainage Maps are presented as **Figure 1** and **Figure 2**, respectively.

Stormwater runoff from the site was performed using HydroCAD software. HydroCAD is a computer-aided design program for modeling the stormwater hydrology and hydraulics that is based primarily on the United States Department of Agriculture, Soil Conservation Service (USDA, SCS) TR-20 method combined with standard hydraulic calculations. This program was used to analyze the 1-year, 10-year, 25-year, and 100-year, 24-hour design storms. All stormwater runoff model input and output data are attached.

Summary of stormwater runoff analysis results are presented in **Table 1** and **Table 2**:

Table 1: Percent Reduction of Stormwater Peak Runoff Flow Rate

Design Point	Peak Runoff (cfs)			Peak Runoff (cfs)			Peak Runoff (cfs)			Peak Runoff (cfs)		
	1-Year, 24-Hour Storm			10-Year, 24 Hour Storm			25-Year, 24 Hour Storm			100-Year, 24 Hour Storm		
	Pre	Post	% Change	Pre	Post	% Change	Pre	Post	% Change	Pre	Post	% Change
1	17.07	2.4	86%	34.13	14.6	57%	41.8	21.60	48%	53.2	32.96	38%
2	39.3	19.9	49%	88.1	63.12	28%	110.6	84.85	23%	144.0	117.57	18%

Table 2: Percent Reduction of Stormwater Runoff Volume

Design Point	Runoff Volume (ac-ft)			Runoff Volume (ac-ft)			Runoff Volume (ac-ft)			Runoff Volume (ac-ft)		
	1-Year, 24-Hour Storm			10-Year, 24 Hour Storm			25-Year, 24 Hour Storm			100-Year, 24 Hour Storm		
	Pre	Post	% Change	Pre	Post	% Change	Pre	Post	% Change	Pre	Post	% Change
1	1.233	0.2	80%	2.556	1.0	61%	3.2	1.44	55%	4.1	2.156	47%
2	3.7	2.2	41%	8.4	6.052	28%	10.6	8.02	25%	14.0	11.094	21%



Legend

- Impervious Surfaces
- Grass/Open Space
- 1/4-Acre Residential
- Meadow
- Gravel ROW
- Woods

Figure 1
Pre-Development Drainage

Project: East Parcel Redevelopment

Prepared For: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF



Legend

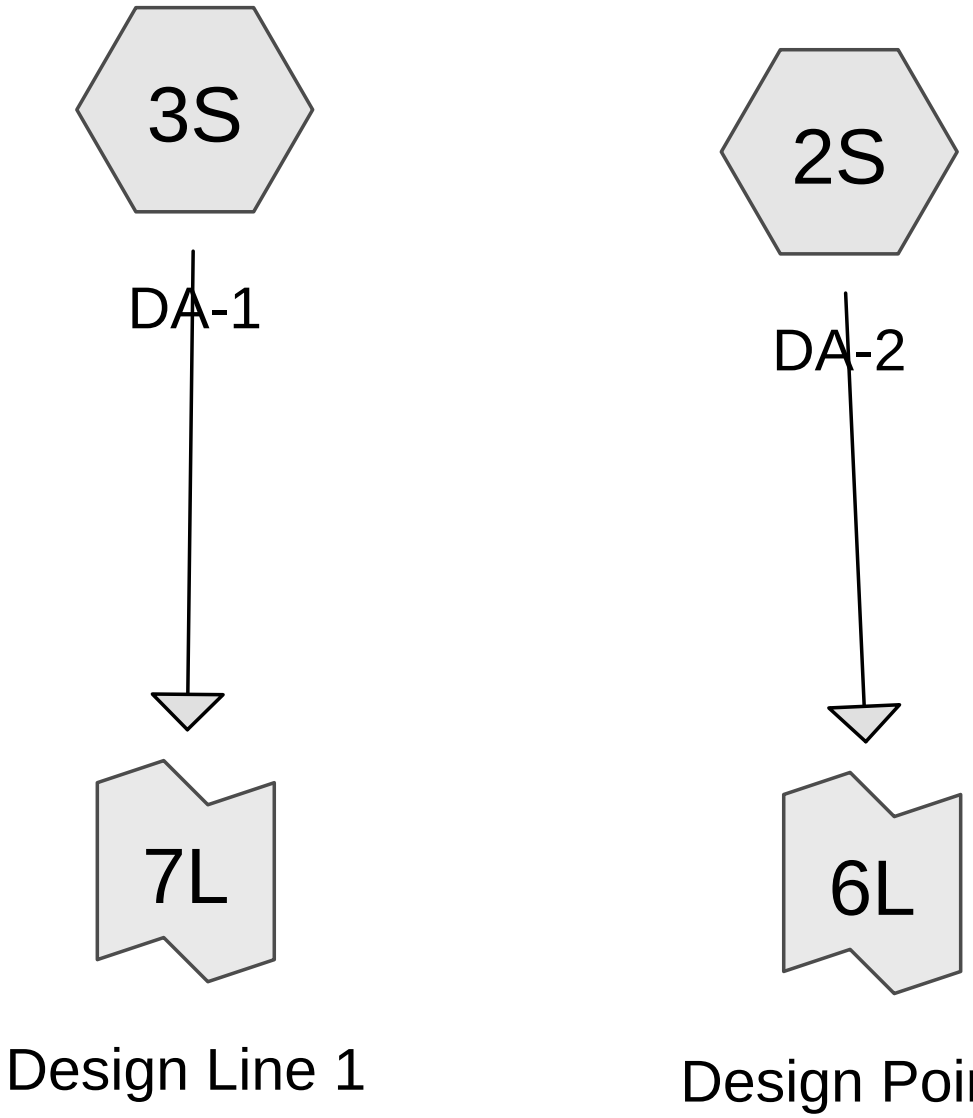
- Redeveloped Impervious
- New Impervious
- Grass/Open Space
- 1/4-Acre Residential
- Meadow
- Gravel ROW
- Woods
- Permeable Pavement

Figure 2
Post-Development Drainage

Project: East Parcel Redevelopment

Prepared For: Sleepy Hollow Local Development Corporation

WSP | PARSONS BRINCKERHOFF



Subcat Reach Pond Link

Routing Diagram for Sleepy Hollow East Parcel Pre-Development
Prepared by WSP, Printed 3/23/2017
HydroCAD® 10.00 s/n 07530 © 2013 HydroCAD Software Solutions LLC

Summary for Subcatchment 2S: DA-2

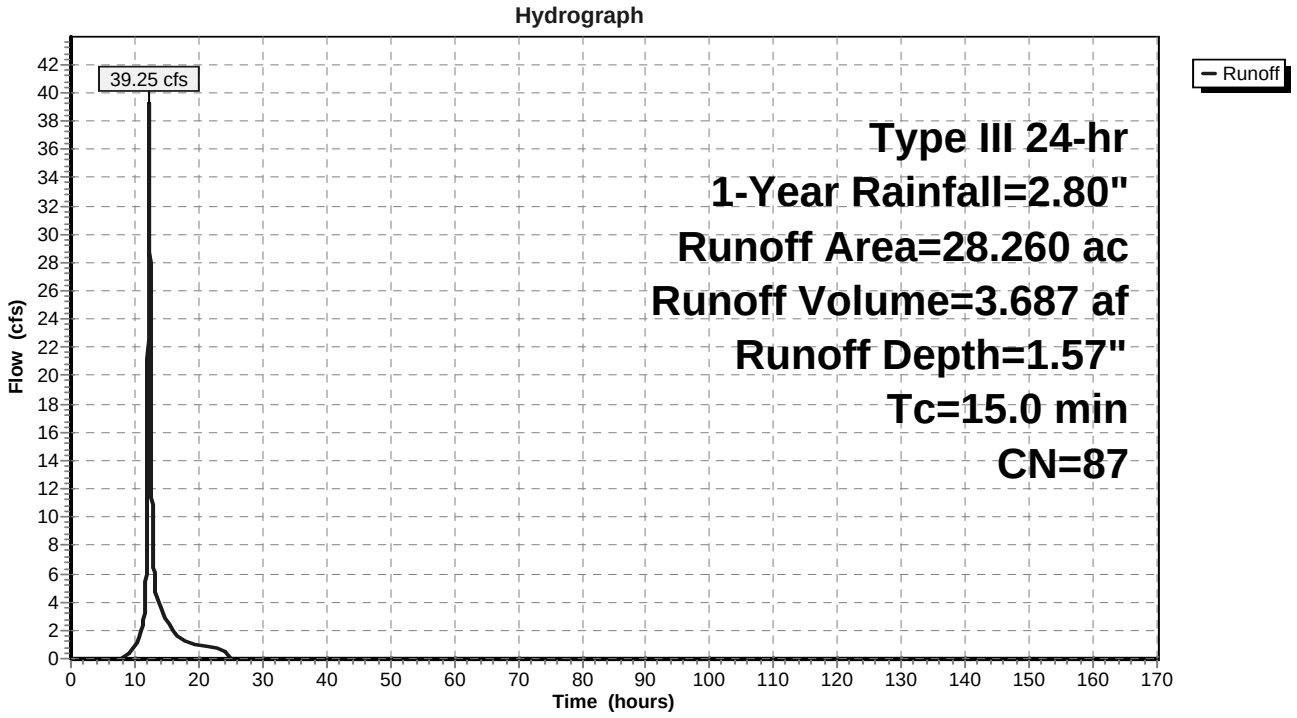
Runoff = 39.25 cfs @ 12.21 hrs, Volume= 3.687 af, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (ac)	CN	Description
16.400	98	Paved parking, HSG C
0.800	74	>75% Grass cover, Good, HSG C
0.800	83	1/4 acre lots, 38% imp, HSG C
2.960	71	Meadow, non-grazed, HSG C
3.000	89	Gravel roads, HSG C
4.300	55	Woods, Good, HSG B
28.260	87	Weighted Average
11.556		40.89% Pervious Area
16.704		59.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 2S: DA-2



Summary for Subcatchment 3S: DA-1

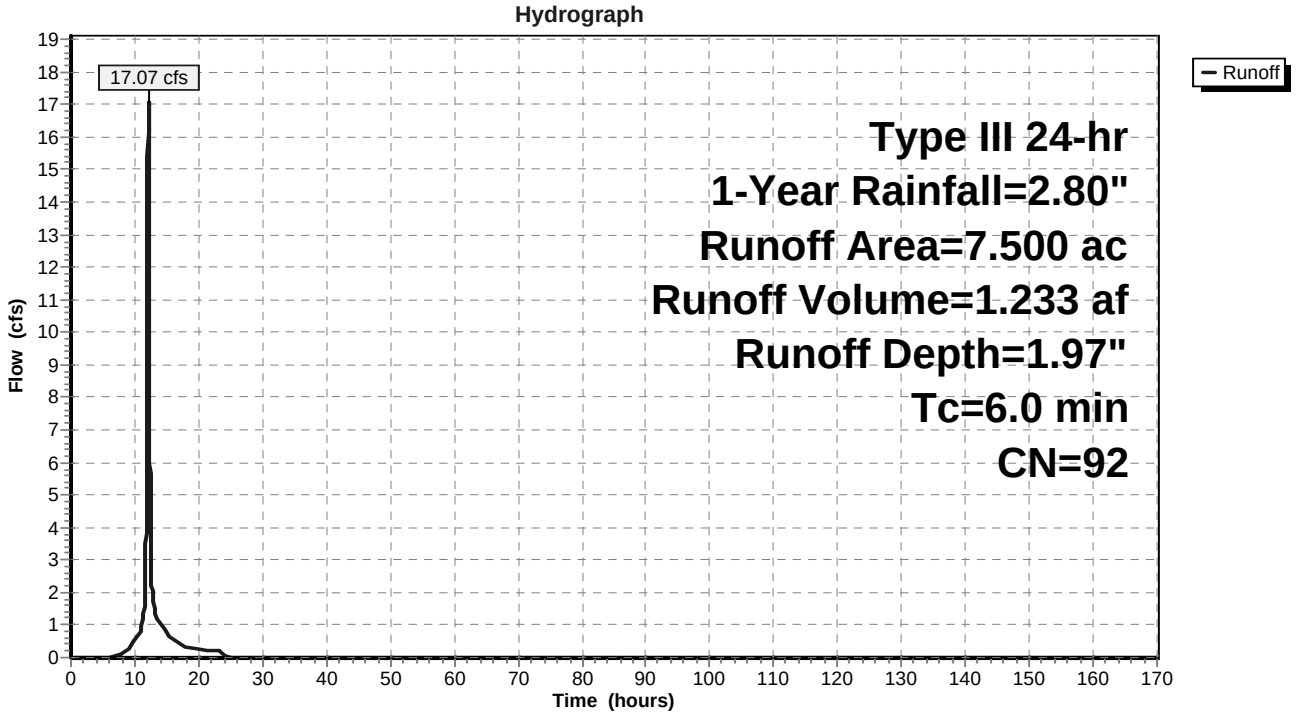
Runoff = 17.07 cfs @ 12.09 hrs, Volume= 1.233 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (ac)	CN	Description
5.200	98	Paved parking, HSG C
0.200	74	>75% Grass cover, Good, HSG C
0.600	71	Meadow, non-grazed, HSG C
1.500	83	1/4 acre lots, 38% imp, HSG C
7.500	92	Weighted Average
1.730		23.07% Pervious Area
5.770		76.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: DA-1

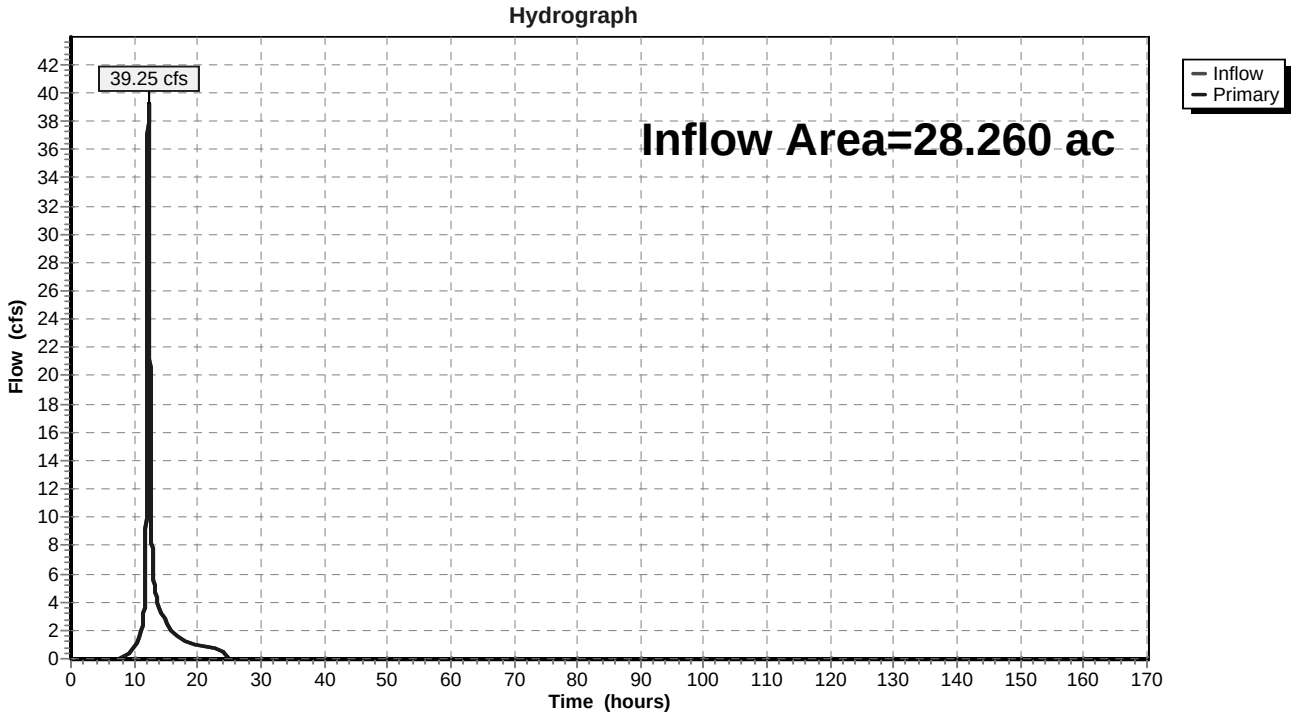


Summary for Link 6L: Design Point 2

Inflow Area = 28.260 ac, 59.11% Impervious, Inflow Depth = 1.57" for 1-Year event
Inflow = 39.25 cfs @ 12.21 hrs, Volume= 3.687 af
Primary = 39.25 cfs @ 12.21 hrs, Volume= 3.687 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 6L: Design Point 2

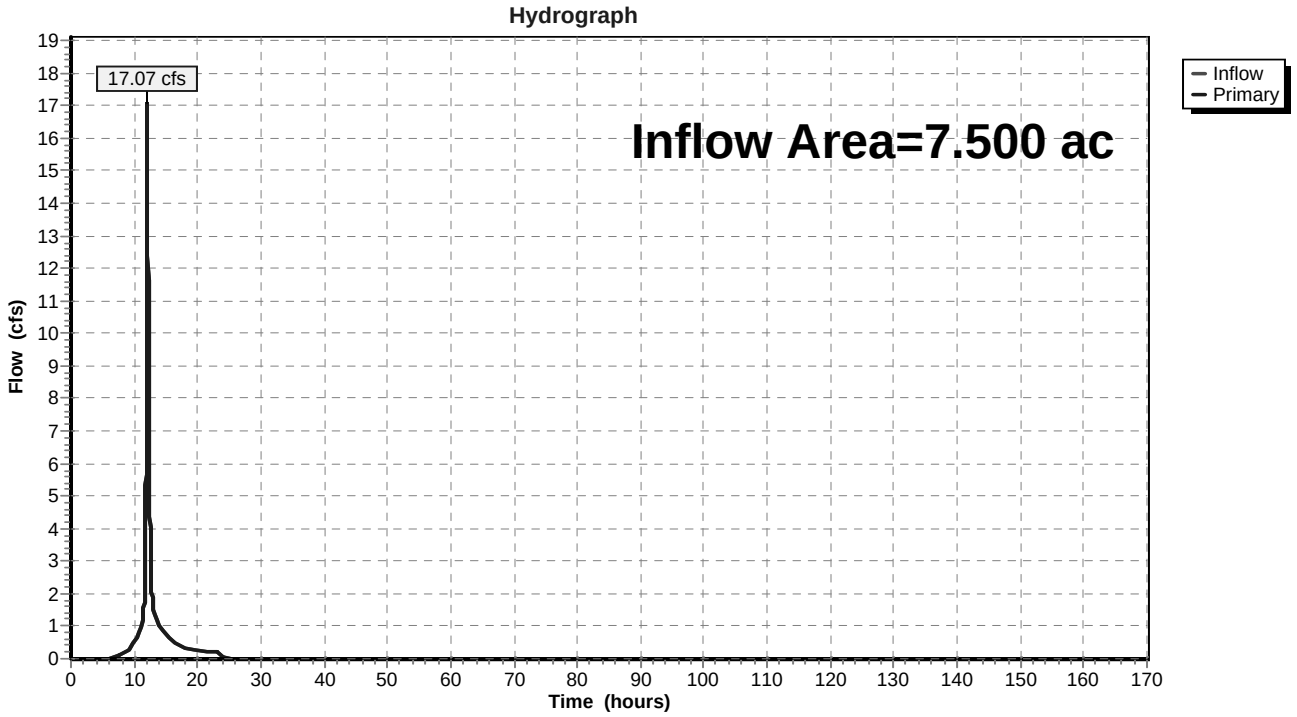


Summary for Link 7L: Design Line 1

Inflow Area = 7.500 ac, 76.93% Impervious, Inflow Depth = 1.97" for 1-Year event
Inflow = 17.07 cfs @ 12.09 hrs, Volume= 1.233 af
Primary = 17.07 cfs @ 12.09 hrs, Volume= 1.233 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 7L: Design Line 1



Summary for Subcatchment 2S: DA-2

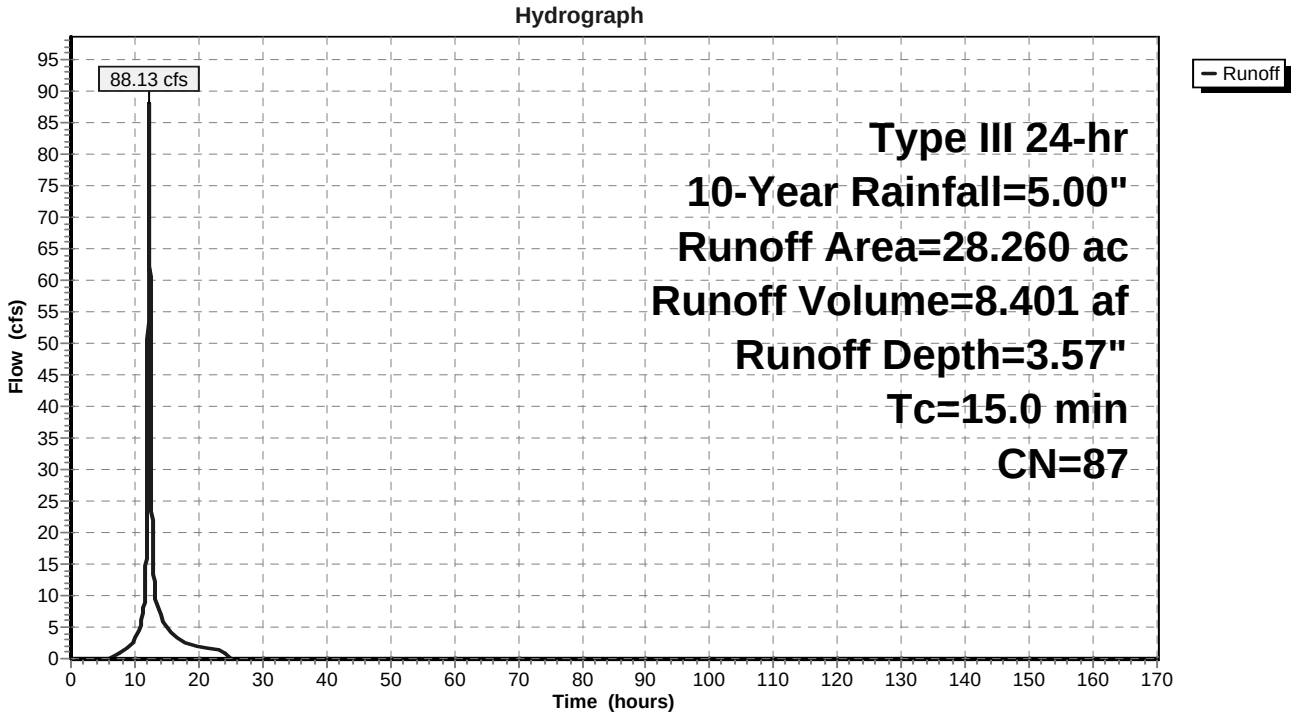
Runoff = 88.13 cfs @ 12.20 hrs, Volume= 8.401 af, Depth= 3.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.00"

Area (ac)	CN	Description
16.400	98	Paved parking, HSG C
0.800	74	>75% Grass cover, Good, HSG C
0.800	83	1/4 acre lots, 38% imp, HSG C
2.960	71	Meadow, non-grazed, HSG C
3.000	89	Gravel roads, HSG C
4.300	55	Woods, Good, HSG B
28.260	87	Weighted Average
11.556		40.89% Pervious Area
16.704		59.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 2S: DA-2



Summary for Subcatchment 3S: DA-1

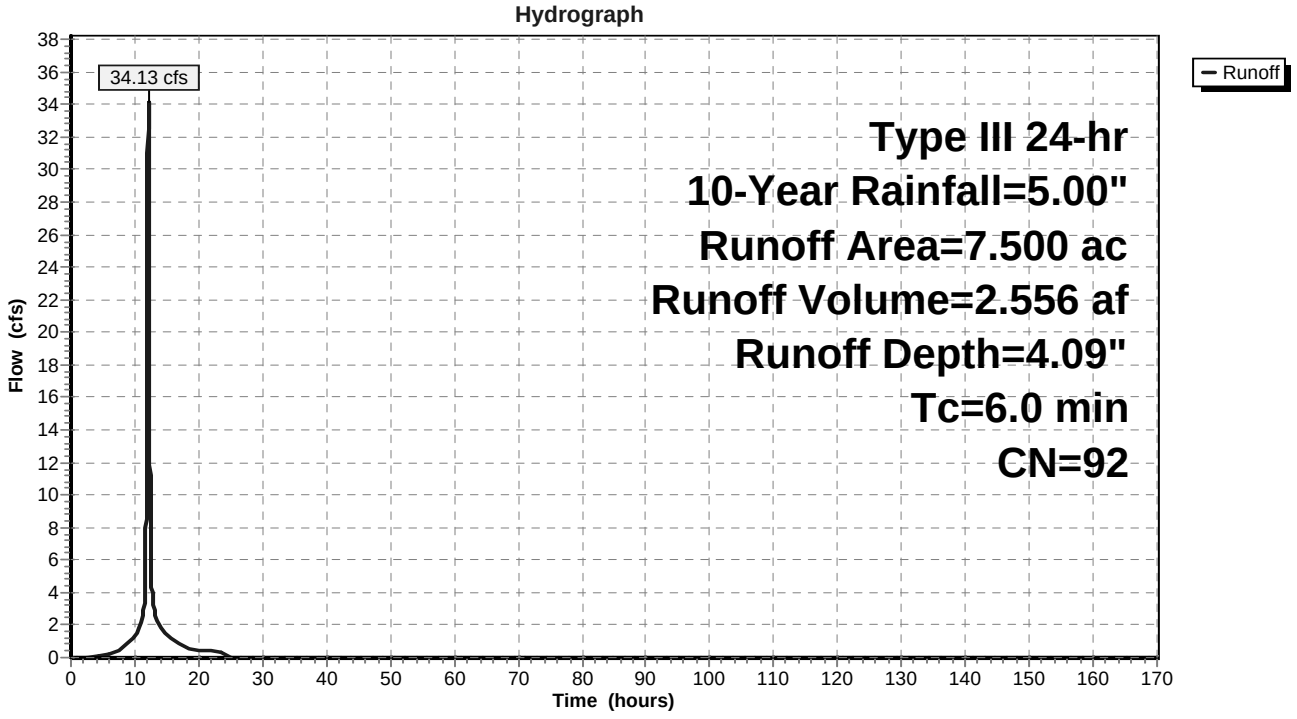
Runoff = 34.13 cfs @ 12.08 hrs, Volume= 2.556 af, Depth= 4.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.00"

Area (ac)	CN	Description
5.200	98	Paved parking, HSG C
0.200	74	>75% Grass cover, Good, HSG C
0.600	71	Meadow, non-grazed, HSG C
1.500	83	1/4 acre lots, 38% imp, HSG C
7.500	92	Weighted Average
1.730		23.07% Pervious Area
5.770		76.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: DA-1

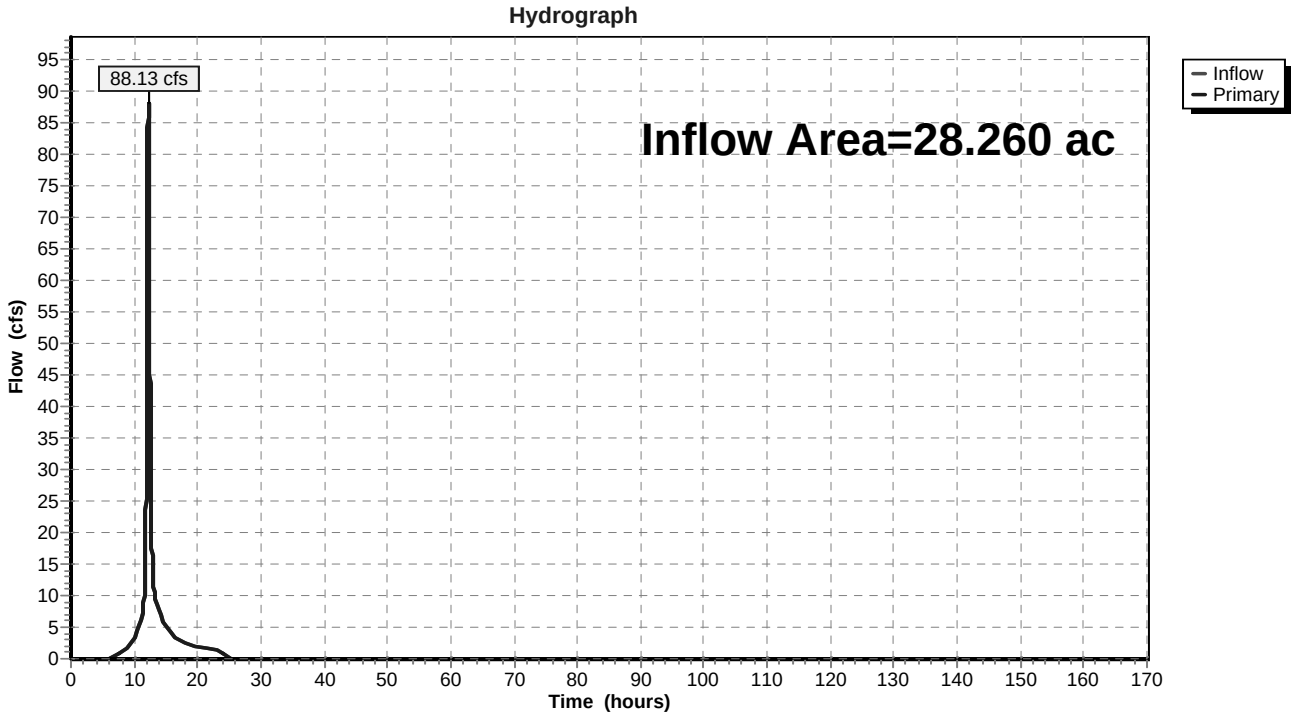


Summary for Link 6L: Design Point 2

Inflow Area = 28.260 ac, 59.11% Impervious, Inflow Depth = 3.57" for 10-Year event
Inflow = 88.13 cfs @ 12.20 hrs, Volume= 8.401 af
Primary = 88.13 cfs @ 12.20 hrs, Volume= 8.401 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 6L: Design Point 2

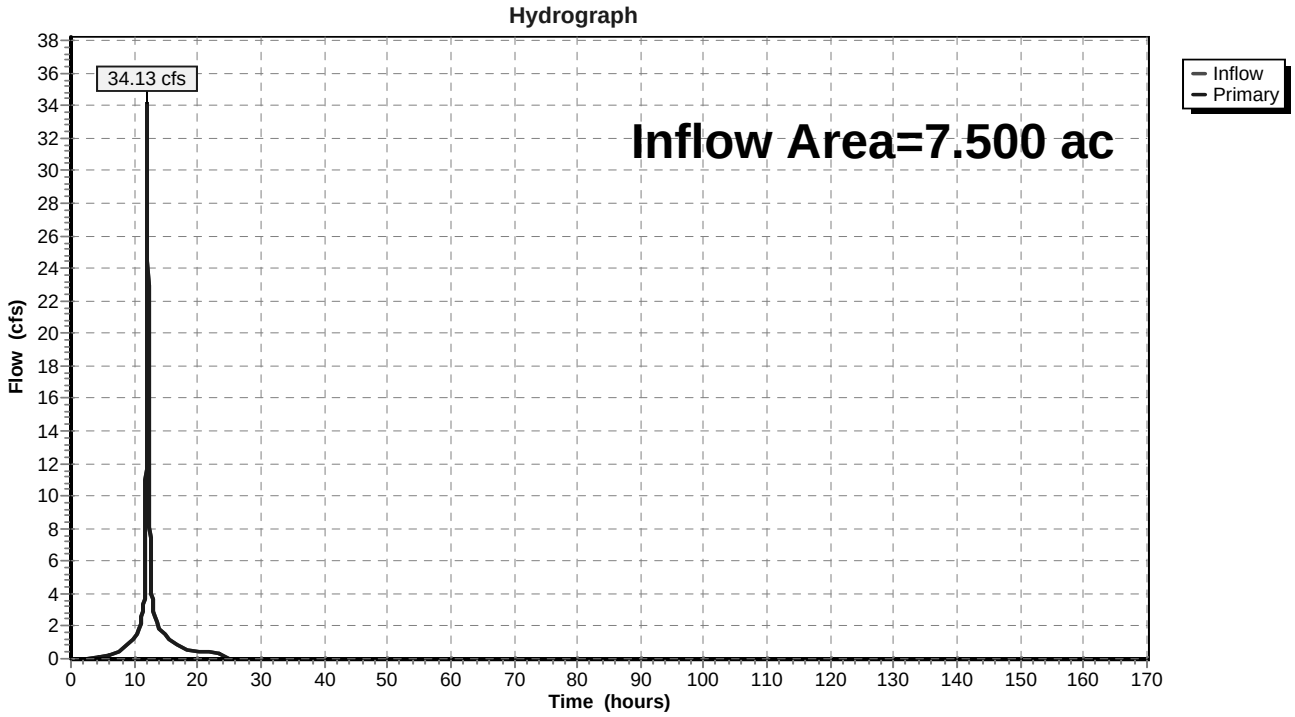


Summary for Link 7L: Design Line 1

Inflow Area = 7.500 ac, 76.93% Impervious, Inflow Depth = 4.09" for 10-Year event
Inflow = 34.13 cfs @ 12.08 hrs, Volume= 2.556 af
Primary = 34.13 cfs @ 12.08 hrs, Volume= 2.556 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 7L: Design Line 1



Summary for Subcatchment 2S: DA-2

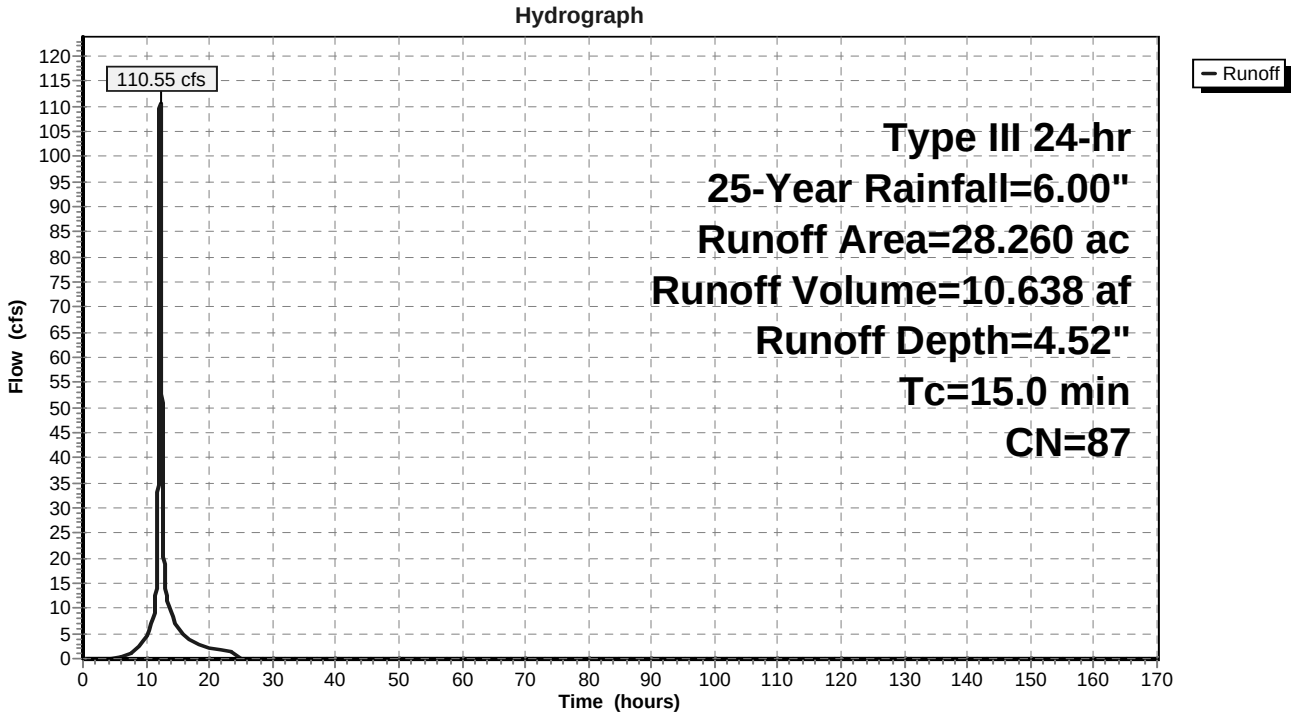
Runoff = 110.55 cfs @ 12.20 hrs, Volume= 10.638 af, Depth= 4.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
16.400	98	Paved parking, HSG C
0.800	74	>75% Grass cover, Good, HSG C
0.800	83	1/4 acre lots, 38% imp, HSG C
2.960	71	Meadow, non-grazed, HSG C
3.000	89	Gravel roads, HSG C
4.300	55	Woods, Good, HSG B
28.260	87	Weighted Average
11.556		40.89% Pervious Area
16.704		59.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 2S: DA-2



Summary for Subcatchment 3S: DA-1

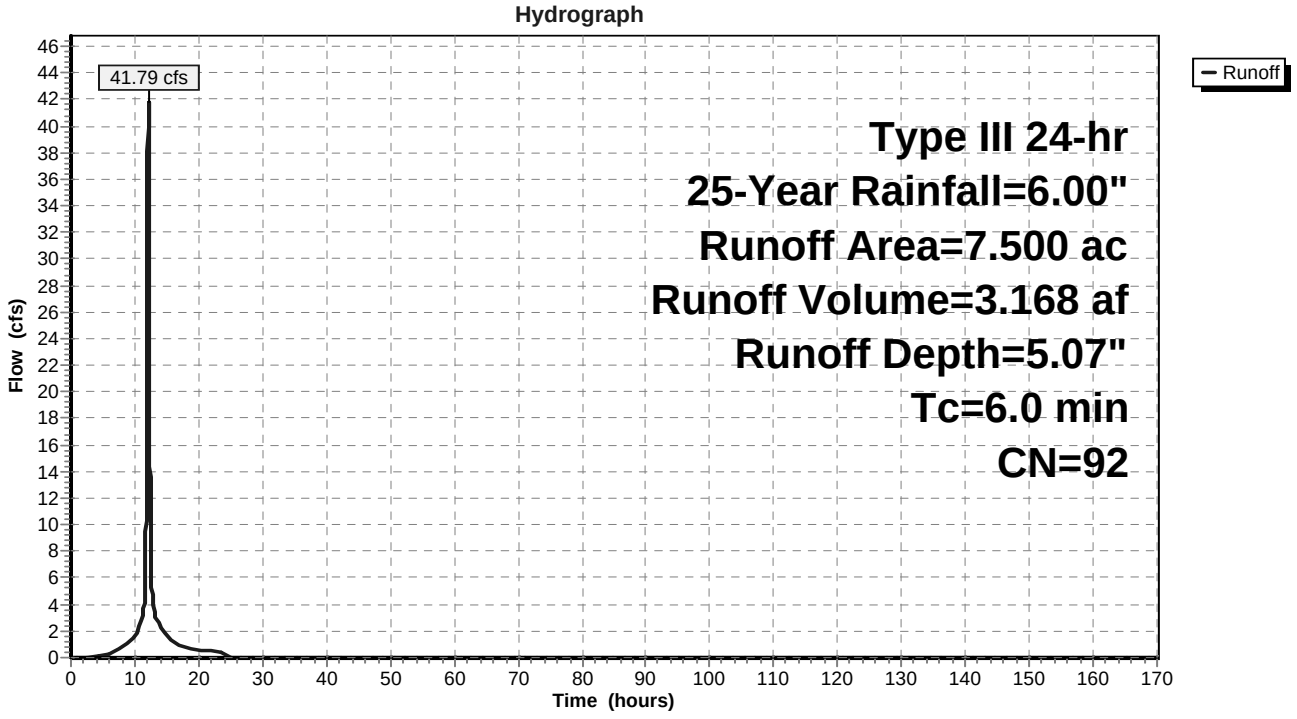
Runoff = 41.79 cfs @ 12.08 hrs, Volume= 3.168 af, Depth= 5.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
5.200	98	Paved parking, HSG C
0.200	74	>75% Grass cover, Good, HSG C
0.600	71	Meadow, non-grazed, HSG C
1.500	83	1/4 acre lots, 38% imp, HSG C
7.500	92	Weighted Average
1.730		23.07% Pervious Area
5.770		76.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: DA-1

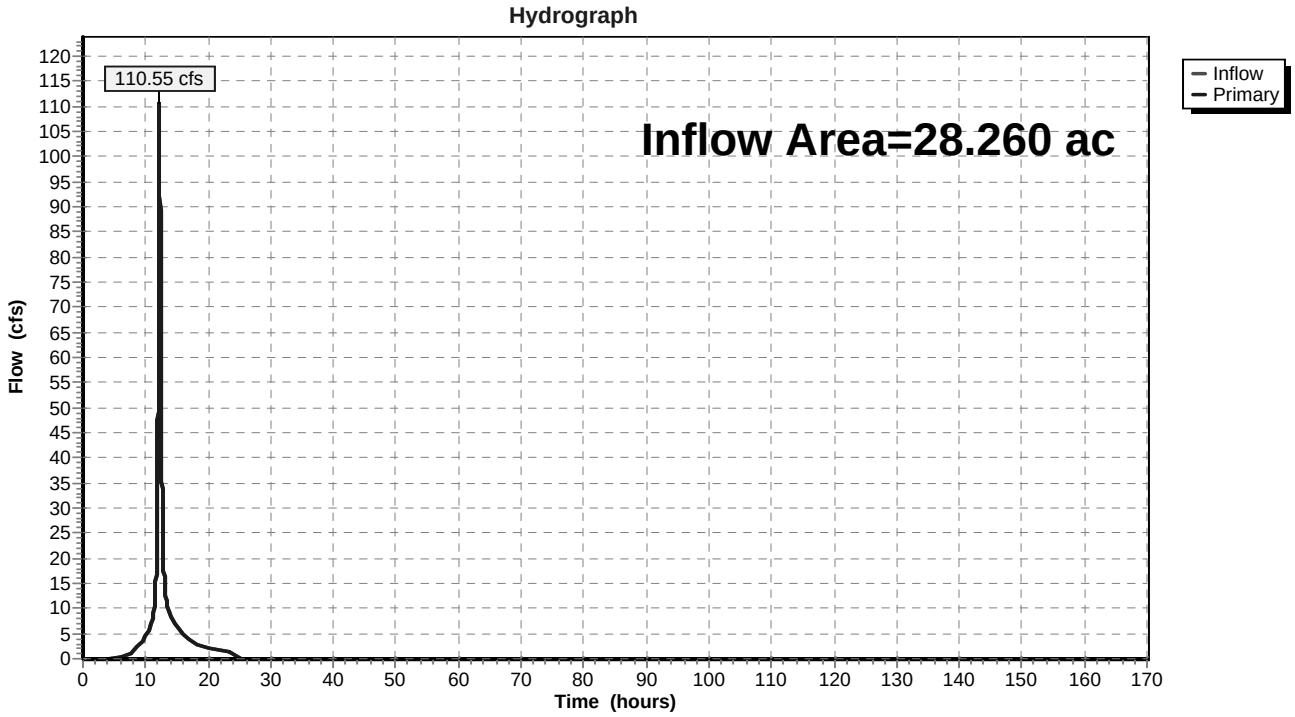


Summary for Link 6L: Design Point 2

Inflow Area = 28.260 ac, 59.11% Impervious, Inflow Depth = 4.52" for 25-Year event
Inflow = 110.55 cfs @ 12.20 hrs, Volume= 10.638 af
Primary = 110.55 cfs @ 12.20 hrs, Volume= 10.638 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 6L: Design Point 2

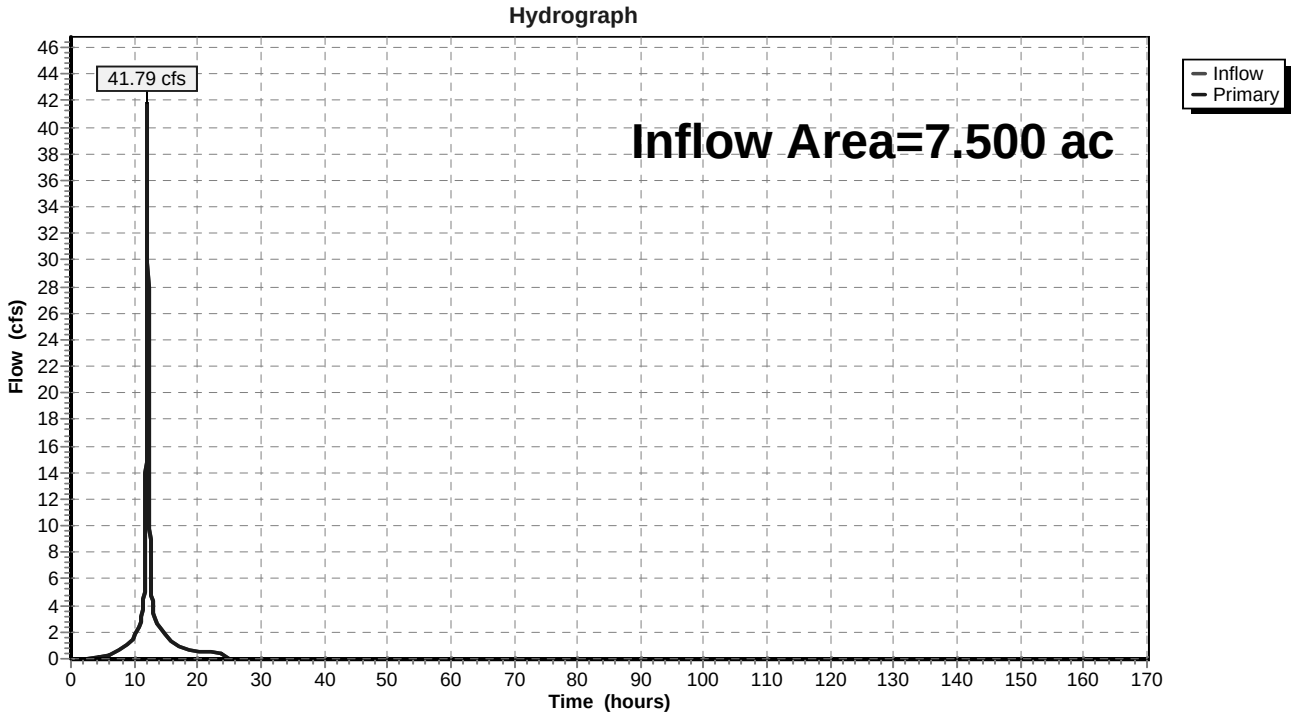


Summary for Link 7L: Design Line 1

Inflow Area = 7.500 ac, 76.93% Impervious, Inflow Depth = 5.07" for 25-Year event
Inflow = 41.79 cfs @ 12.08 hrs, Volume= 3.168 af
Primary = 41.79 cfs @ 12.08 hrs, Volume= 3.168 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 7L: Design Line 1



Summary for Subcatchment 2S: DA-2

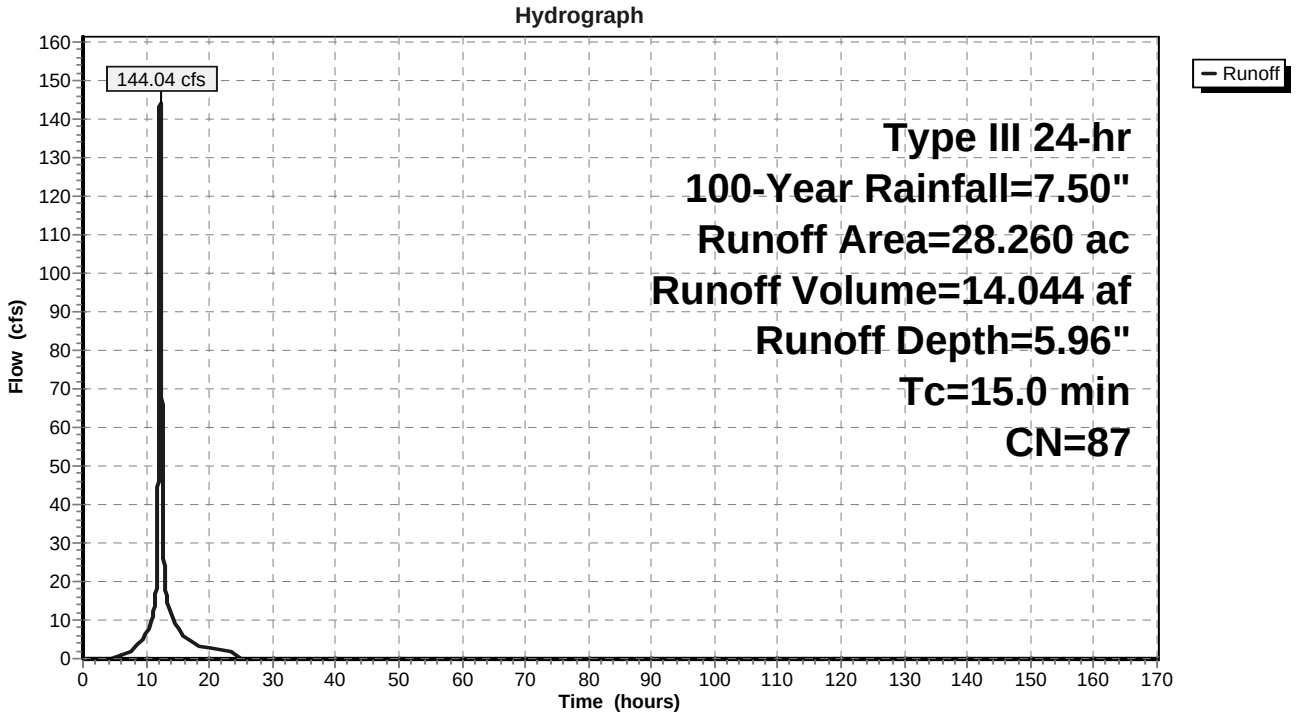
Runoff = 144.04 cfs @ 12.20 hrs, Volume= 14.044 af, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.50"

Area (ac)	CN	Description
16.400	98	Paved parking, HSG C
0.800	74	>75% Grass cover, Good, HSG C
0.800	83	1/4 acre lots, 38% imp, HSG C
2.960	71	Meadow, non-grazed, HSG C
3.000	89	Gravel roads, HSG C
4.300	55	Woods, Good, HSG B
28.260	87	Weighted Average
11.556		40.89% Pervious Area
16.704		59.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 2S: DA-2



Summary for Subcatchment 3S: DA-1

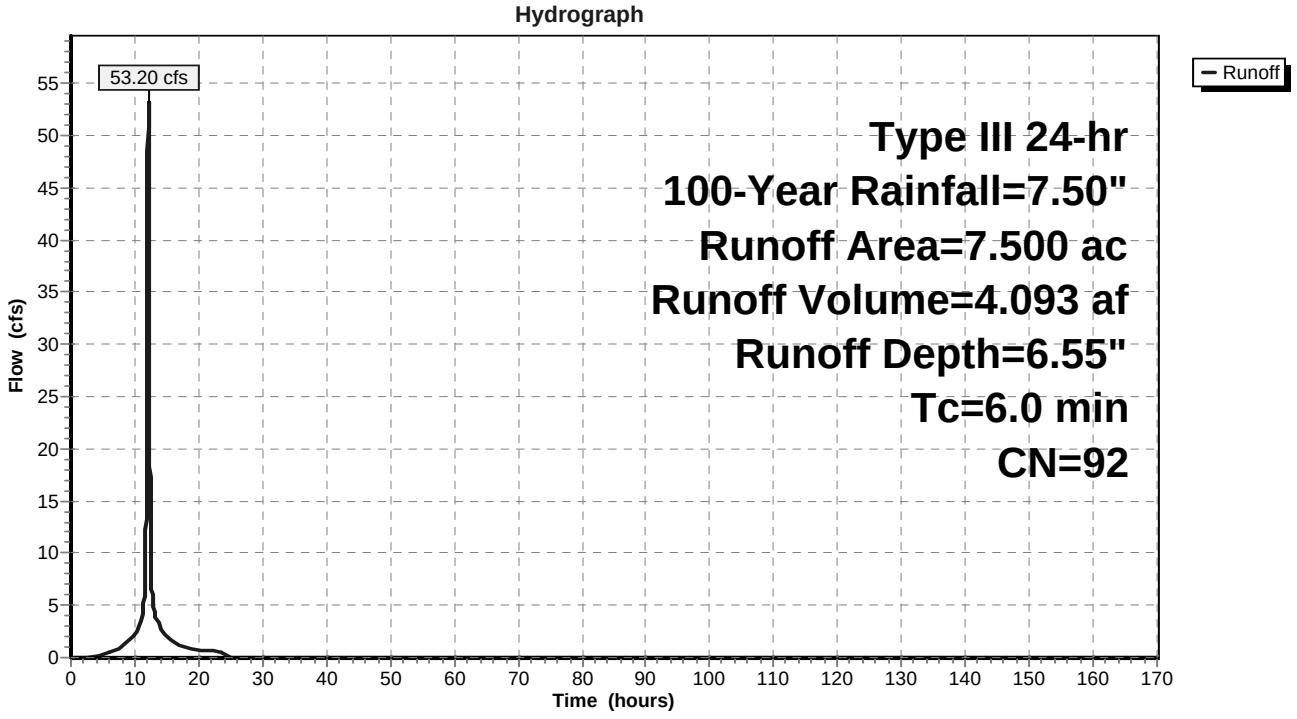
Runoff = 53.20 cfs @ 12.08 hrs, Volume= 4.093 af, Depth= 6.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.50"

Area (ac)	CN	Description
5.200	98	Paved parking, HSG C
0.200	74	>75% Grass cover, Good, HSG C
0.600	71	Meadow, non-grazed, HSG C
1.500	83	1/4 acre lots, 38% imp, HSG C
7.500	92	Weighted Average
1.730		23.07% Pervious Area
5.770		76.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: DA-1

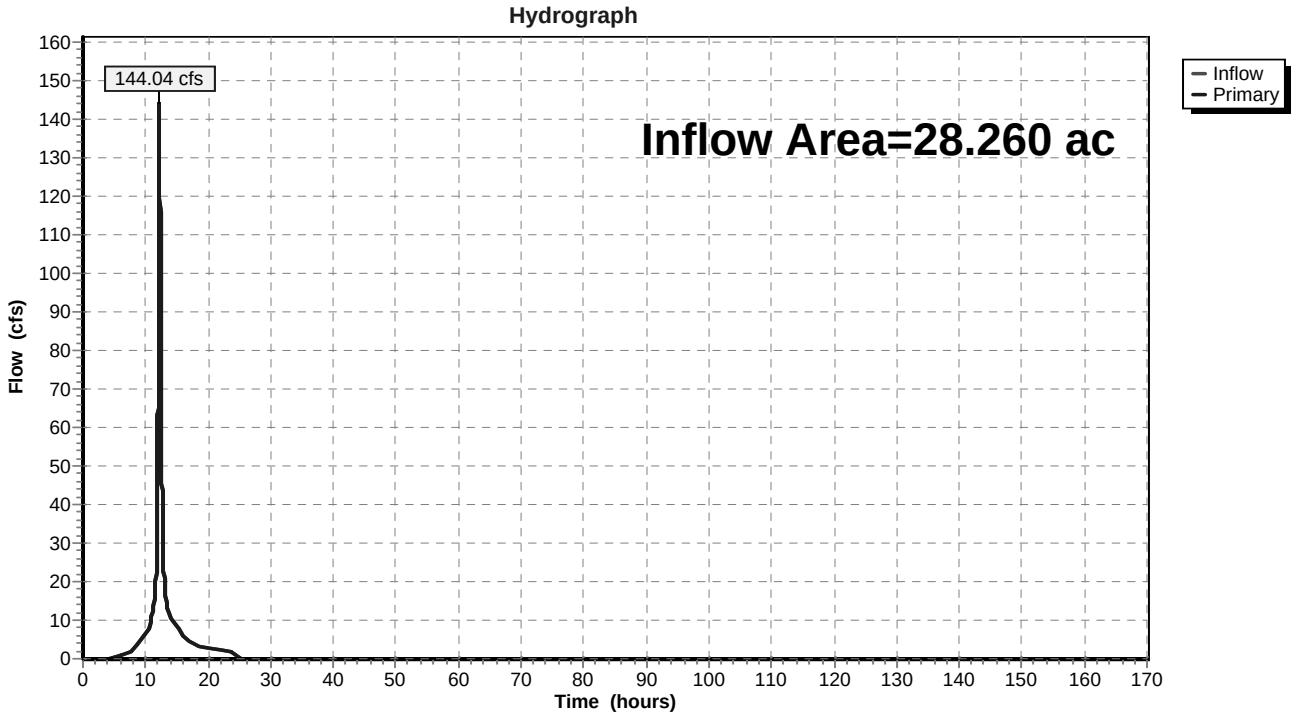


Summary for Link 6L: Design Point 2

Inflow Area = 28.260 ac, 59.11% Impervious, Inflow Depth = 5.96" for 100-Year event
Inflow = 144.04 cfs @ 12.20 hrs, Volume= 14.044 af
Primary = 144.04 cfs @ 12.20 hrs, Volume= 14.044 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 6L: Design Point 2

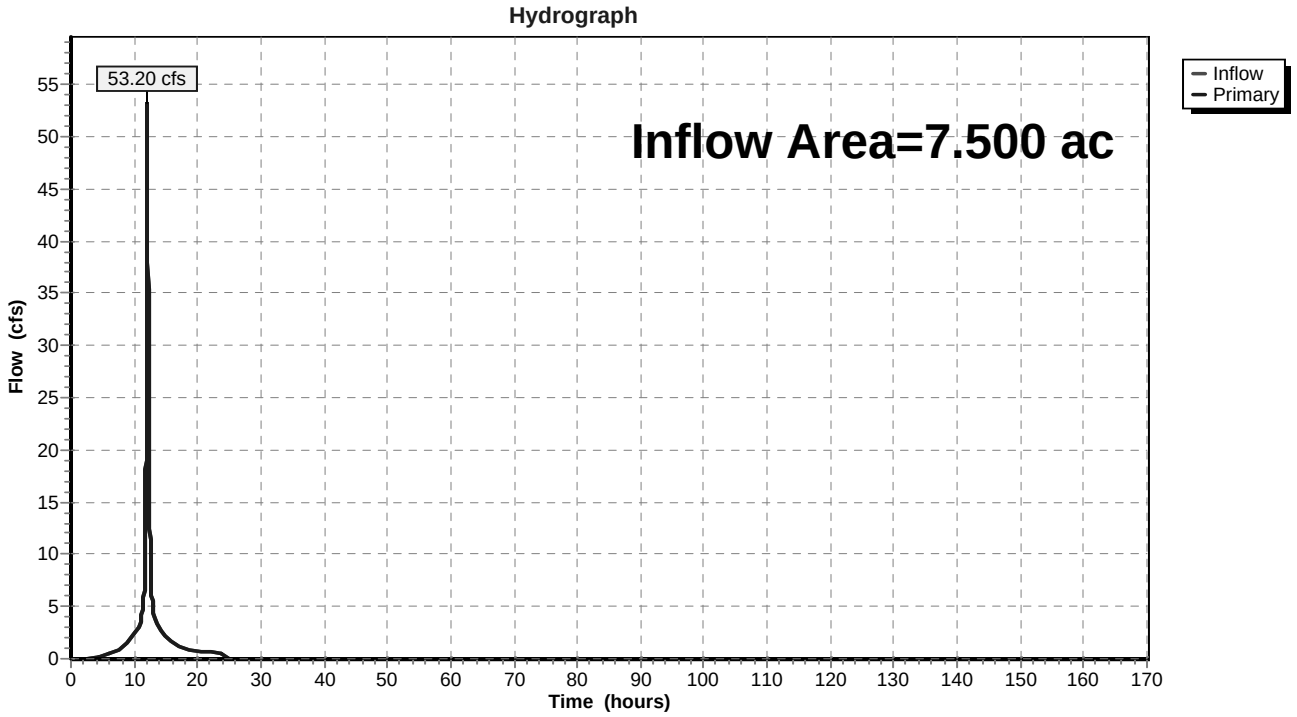


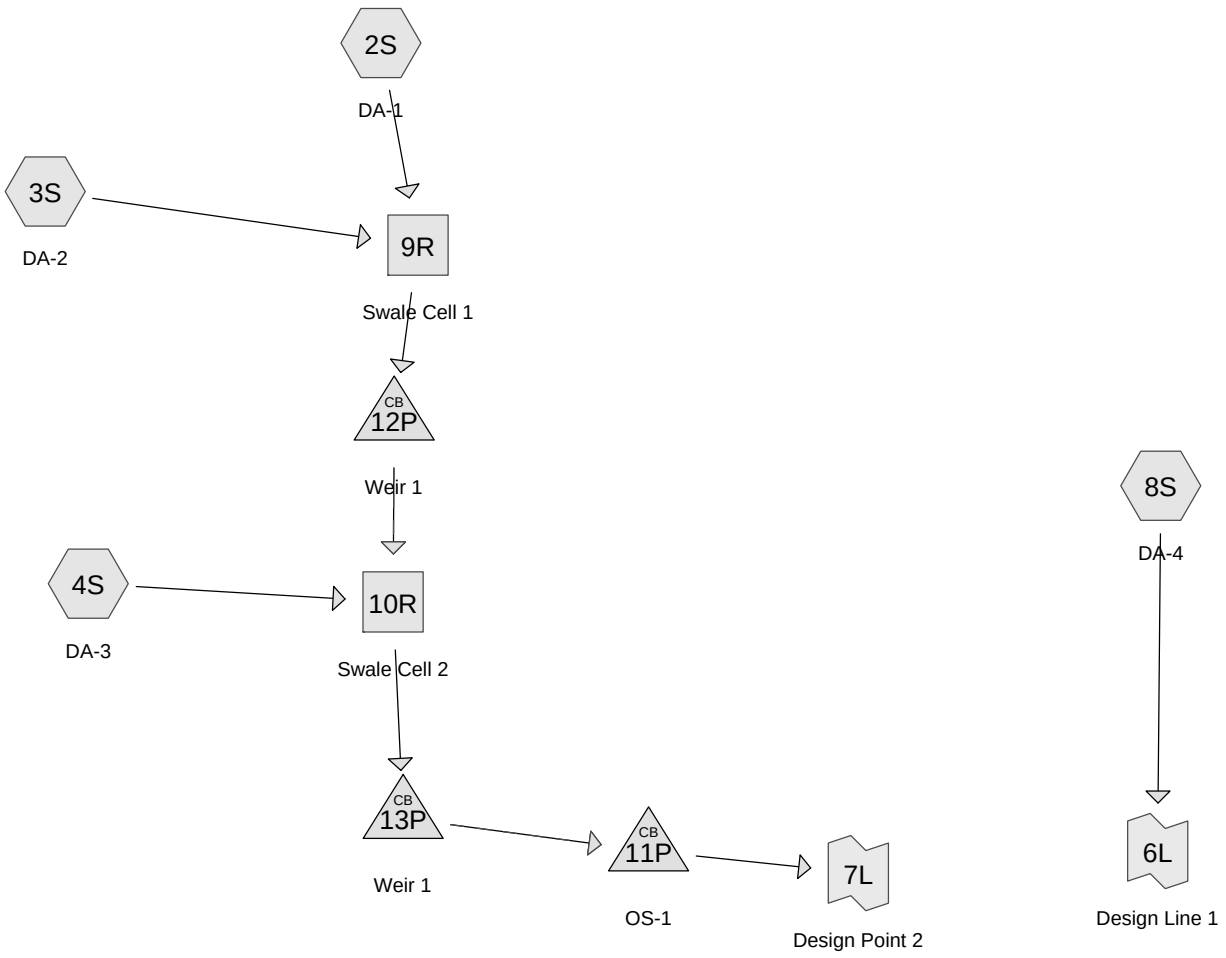
Summary for Link 7L: Design Line 1

Inflow Area = 7.500 ac, 76.93% Impervious, Inflow Depth = 6.55" for 100-Year event
Inflow = 53.20 cfs @ 12.08 hrs, Volume= 4.093 af
Primary = 53.20 cfs @ 12.08 hrs, Volume= 4.093 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-170.00 hrs, dt= 0.01 hrs

Link 7L: Design Line 1





Subcat Reach Pond Link

Routing Diagram for Sleepy Hollow East Parcel - Post-Development
Prepared by WSP, Printed 3/23/2017
HydroCAD® 10.00 s/n 07530 © 2013 HydroCAD Software Solutions LLC

Summary for Subcatchment 2S: DA-1

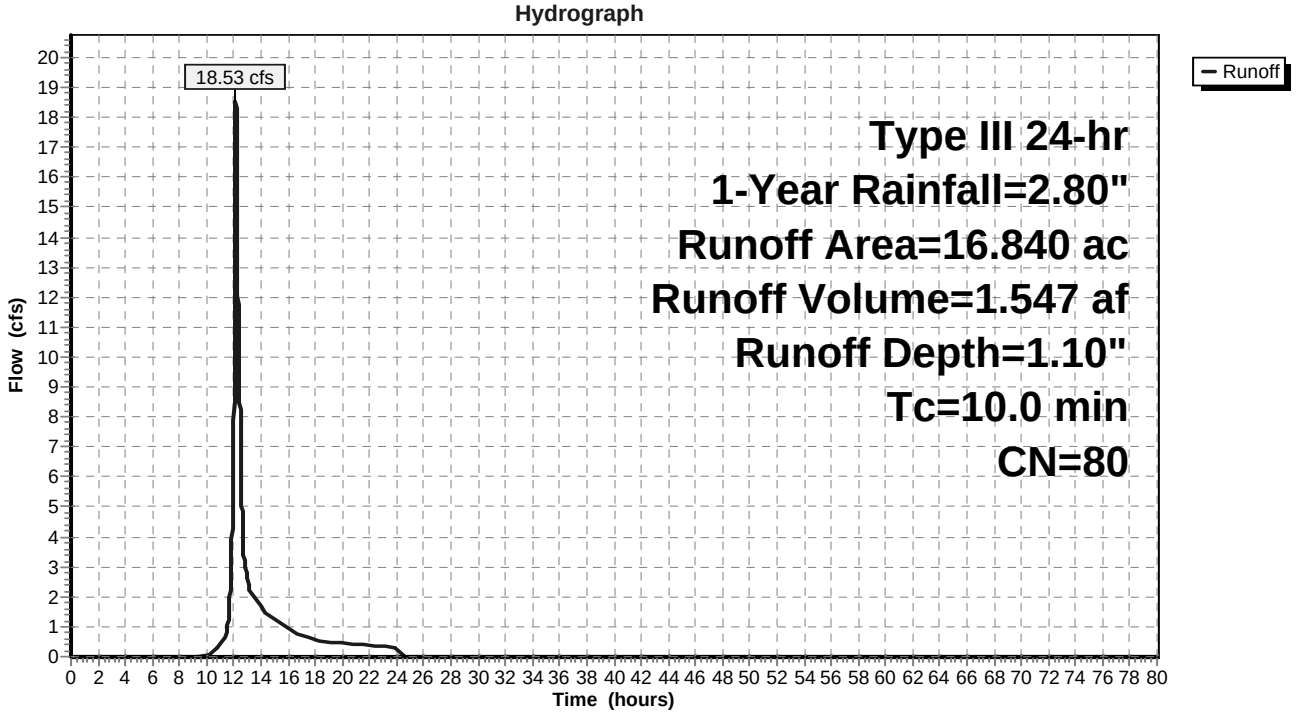
Runoff = 18.53 cfs @ 12.15 hrs, Volume= 1.547 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (ac)	CN	Description
6.200	98	Unconnected pavement, HSG C
0.900	98	Unconnected roofs, HSG C
3.400	61	>75% Grass cover, Good, HSG B
3.100	83	1/4 acre lots, 38% imp, HSG C
0.040	71	Meadow, non-grazed, HSG C
0.300	89	Gravel roads, HSG C
2.900	55	Woods, Good, HSG B
16.840	80	Weighted Average
8.562		50.84% Pervious Area
8.278		49.16% Impervious Area
7.100		85.77% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: DA-1



Summary for Subcatchment 3S: DA-2

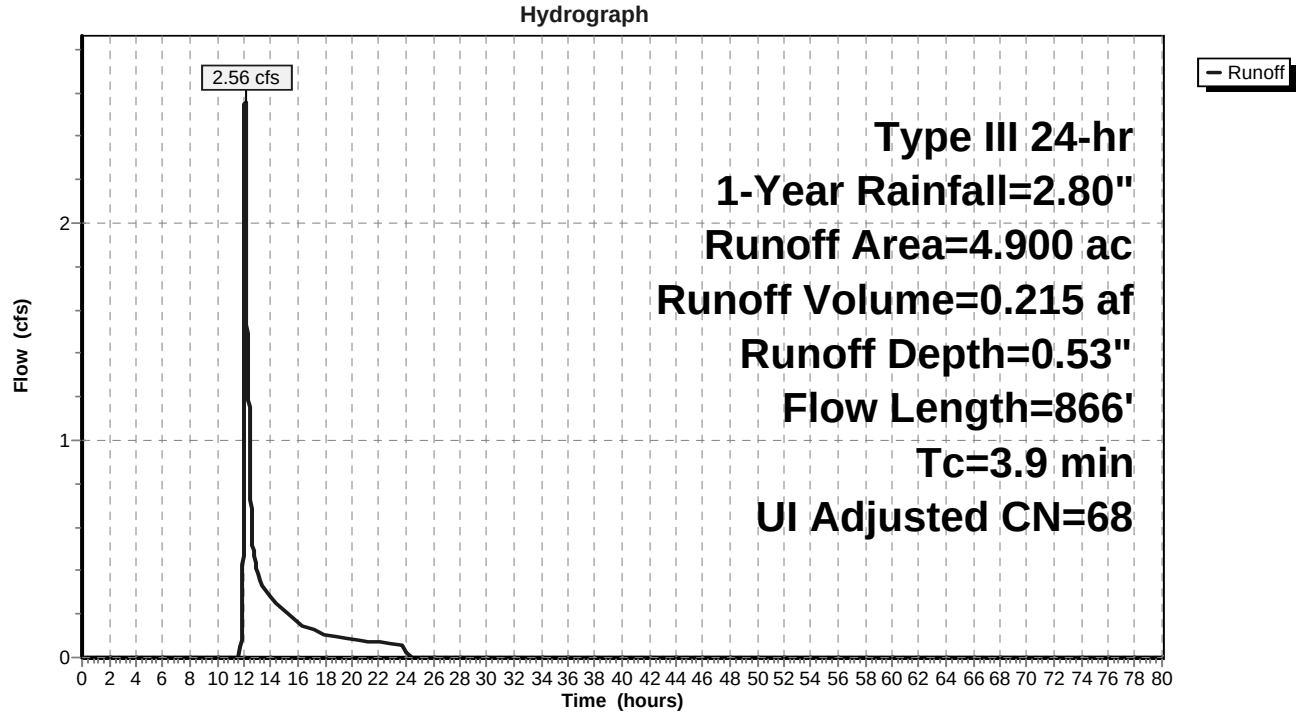
Runoff = 2.56 cfs @ 12.08 hrs, Volume= 0.215 af, Depth= 0.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (ac)	CN	Adj	Description
0.600	98		Unconnected pavement, HSG C
3.200	61		>75% Grass cover, Good, HSG B
0.400	71		Meadow, non-grazed, HSG C
0.700	89		Gravel roads, HSG C
4.900	70	68	Weighted Average, UI Adjusted
4.300			87.76% Pervious Area
0.600			12.24% Impervious Area
0.600			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	98	0.0606	2.23		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.7	582	0.0756	5.58		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	186	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.9	866	Total			

Subcatchment 3S: DA-2



Summary for Subcatchment 4S: DA-3

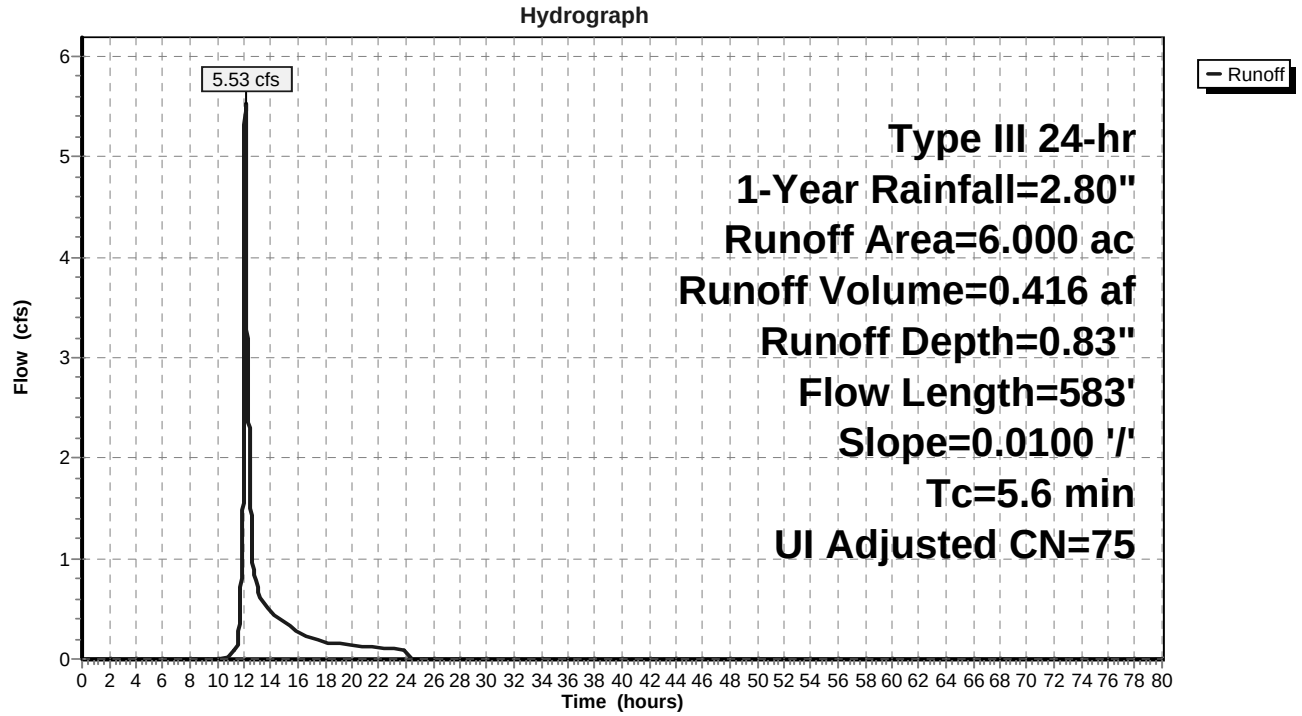
Runoff = 5.53 cfs @ 12.09 hrs, Volume= 0.416 af, Depth= 0.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.80"

	Area (ac)	CN	Adj	Description
	0.800	98		Unconnected pavement, HSG C
	1.700	61		>75% Grass cover, Good, HSG B
*	1.900	81		Artifical Turf
	0.900	71		Meadow, non-grazed, HSG C
	0.700	89		Gravel roads, HSG C
	6.000	77	75	Weighted Average, UI Adjusted
	5.200			86.67% Pervious Area
	0.800			13.33% Impervious Area
	0.800			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	128	0.0100	1.15		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
3.7	455	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.6	583	Total			

Subcatchment 4S: DA-3



Summary for Subcatchment 8S: DA-4

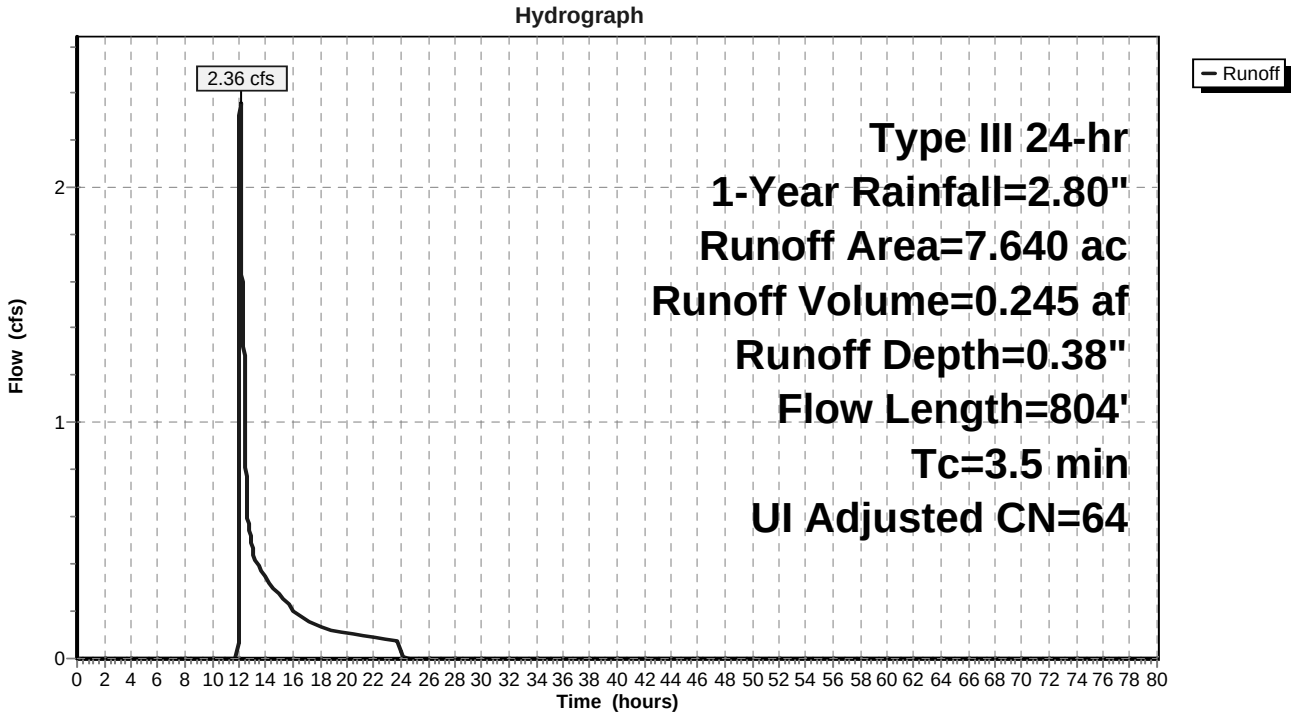
Runoff = 2.36 cfs @ 12.09 hrs, Volume= 0.245 af, Depth= 0.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.80"

	Area (ac)	CN	Adj	Description
	0.440	98		Unconnected pavement, HSG C
	1.000	61		>75% Grass cover, Good, HSG B
*	3.200	68		
	2.900	58		Meadow, non-grazed, HSG B
	0.100	89		Gravel roads, HSG C
	7.640	65	64	Weighted Average, UI Adjusted
	7.200			94.24% Pervious Area
	0.440			5.76% Impervious Area
	0.440			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	88	0.0100	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.1	166	0.0150	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	550	0.0150	8.85	354.20	**Channel Flow,** Area= 40.0 sf Perim= 18.0' r= 2.22' n= 0.035 Earth, dense weeds
3.5	804	Total			

Subcatchment 8S: DA-4



Summary for Reach 9R: Swale Cell 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 0.97" for 1-Year event
Inflow = 20.46 cfs @ 12.14 hrs, Volume= 1.762 af
Outflow = 18.91 cfs @ 12.19 hrs, Volume= 1.762 af, Atten= 8%, Lag= 2.9 min

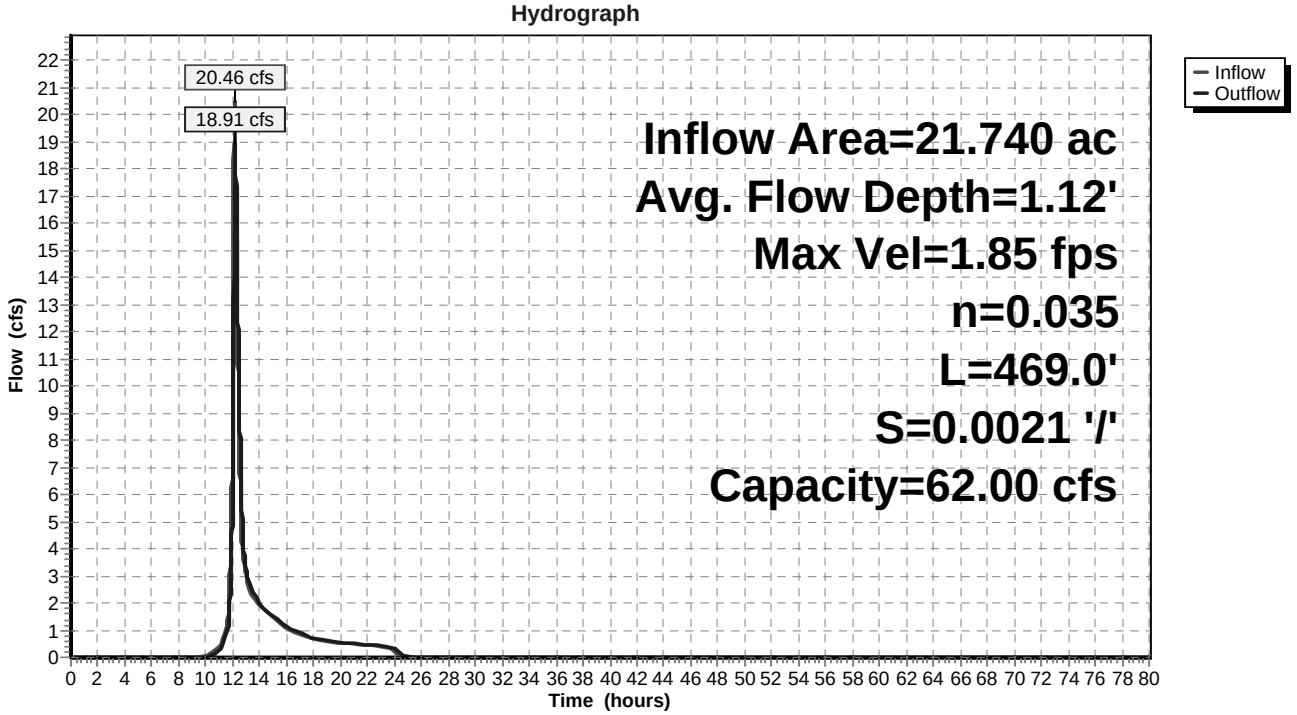
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.85 fps, Min. Travel Time= 4.2 min
Avg. Velocity = 0.47 fps, Avg. Travel Time= 16.6 min

Peak Storage= 4,798 cf @ 12.19 hrs
Average Depth at Peak Storage= 1.12'
Defined Flood Depth= 7.00' Flow Area= 82.3 sf, Capacity= 288.44 cfs
Bank-Full Depth= 2.25' Flow Area= 23.1 sf, Capacity= 62.00 cfs

8.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 12.50'
Length= 469.0' Slope= 0.0021 '/'
Inlet Invert= 4.00', Outlet Invert= 3.00'



Reach 9R: Swale Cell 1



Summary for Reach 10R: Swale Cell 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 0.94" for 1-Year event
Inflow = 22.72 cfs @ 12.17 hrs, Volume= 2.178 af
Outflow = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af, Atten= 12%, Lag= 5.4 min

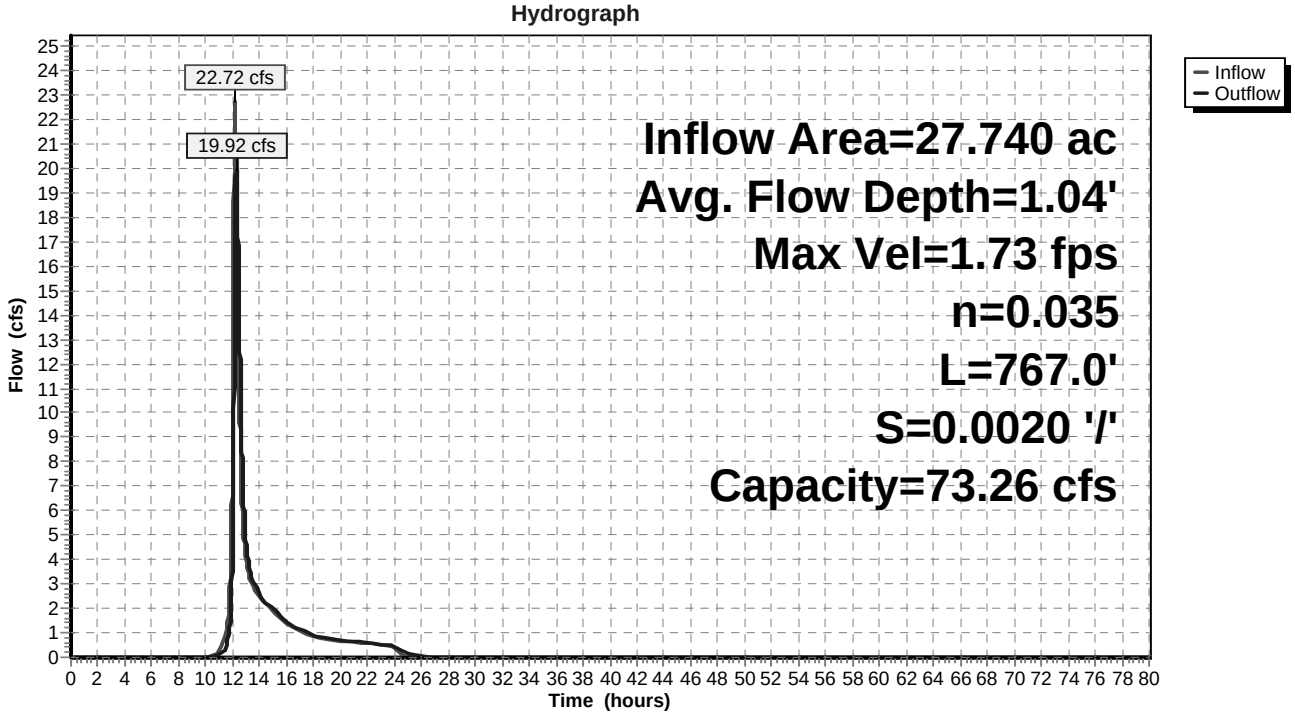
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.73 fps, Min. Travel Time= 7.4 min
Avg. Velocity = 0.39 fps, Avg. Travel Time= 32.7 min

Peak Storage= 8,811 cf @ 12.26 hrs
Average Depth at Peak Storage= 1.04'
Defined Flood Depth= 7.00' Flow Area= 96.3 sf, Capacity= 337.26 cfs
Bank-Full Depth= 2.25' Flow Area= 27.6 sf, Capacity= 73.26 cfs

10.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 14.50'
Length= 767.0' Slope= 0.0020 '/'
Inlet Invert= 3.00', Outlet Invert= 1.50'



Reach 10R: Swale Cell 2



Summary for Pond 11P: OS-1

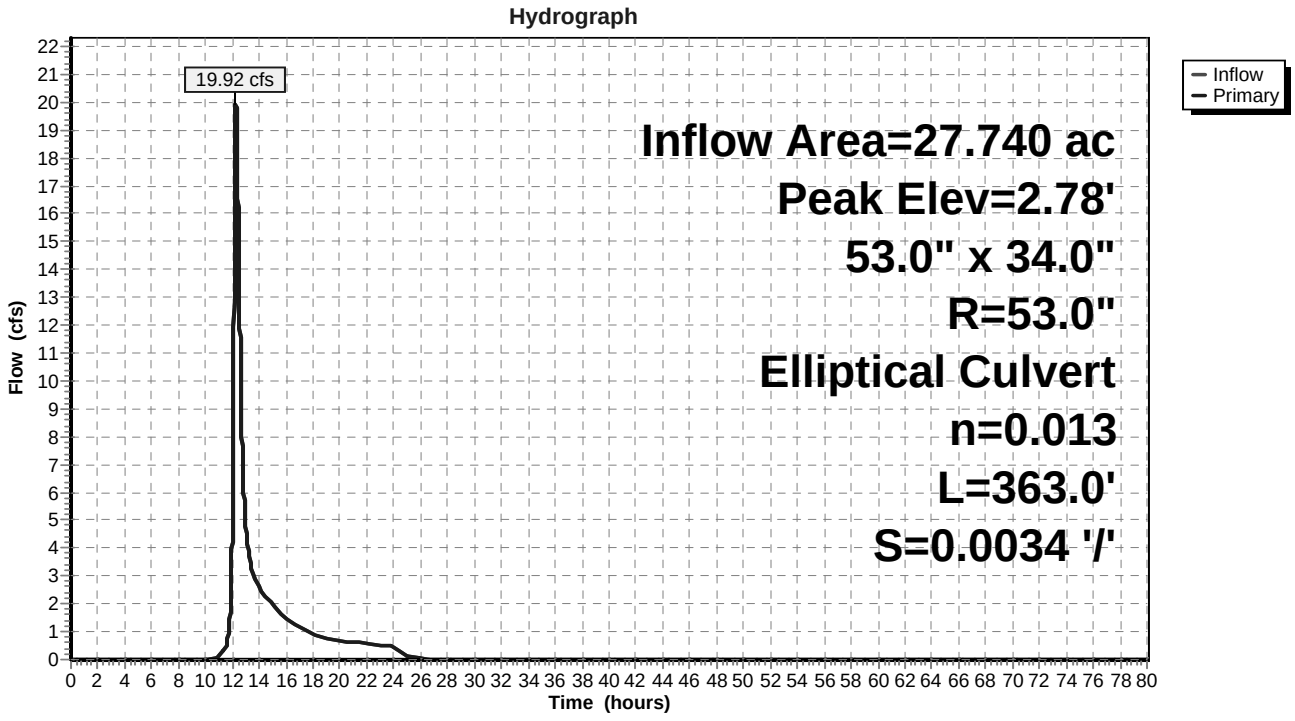
Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 0.94" for 1-Year event
Inflow = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af
Outflow = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af, Atten= 0%, Lag= 0.0 min
Primary = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.78' @ 12.26 hrs
Flood Elev= 5.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.25'	**53.0" W x 34.0" H, R=53.0" Elliptical Culvert** L= 363.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1.25' / 0.00' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 10.29 sf

Primary OutFlow Max=19.92 cfs @ 12.26 hrs HW=2.78' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 19.92 cfs @ 5.02 fps)

Pond 11P: OS-1



Summary for Pond 12P: Weir 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 0.97" for 1-Year event
Inflow = 18.91 cfs @ 12.19 hrs, Volume= 1.762 af
Outflow = 18.91 cfs @ 12.19 hrs, Volume= 1.762 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 11.78 hrs, Volume= 0.587 af
Secondary = 18.37 cfs @ 12.19 hrs, Volume= 1.174 af

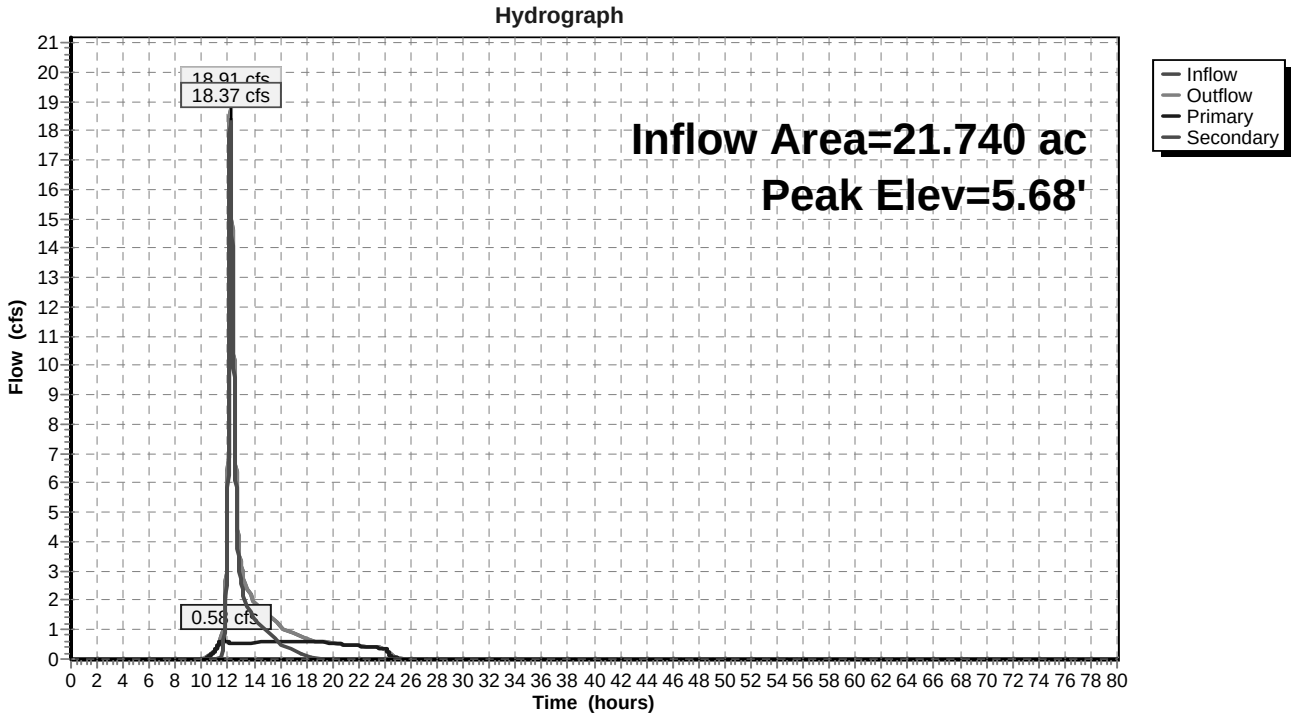
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.68' @ 12.19 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Secondary	5.00'	**10.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.58 cfs @ 11.78 hrs HW=5.12' TW=3.20' (Dynamic Tailwater)
└**1=Orifice/Grate** (Orifice Controls 0.58 cfs @ 6.67 fps)

Secondary OutFlow Max=18.36 cfs @ 12.19 hrs HW=5.68' TW=3.98' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 18.36 cfs @ 2.70 fps)

Pond 12P: Weir 1



Summary for Pond 13P: Weir 1

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 0.94" for 1-Year event
Inflow = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af
Outflow = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af

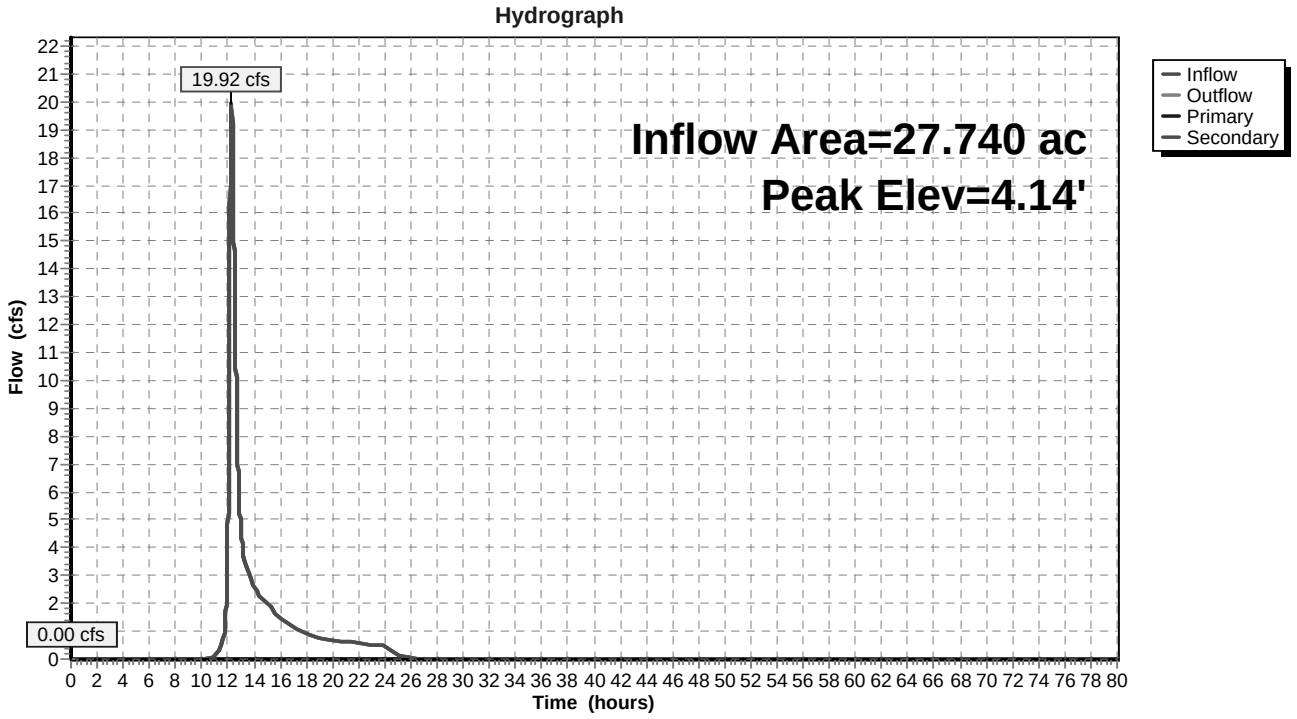
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.14' @ 12.26 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.50'	**4.0" Vert. Orifice/Grate X 0.00** C= 0.600
#2	Secondary	3.50'	**12.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1.55' TW=1.25' (Dynamic Tailwater)
└**1=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=19.92 cfs @ 12.26 hrs HW=4.14' TW=2.78' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 19.92 cfs @ 2.61 fps)

Pond 13P: Weir 1

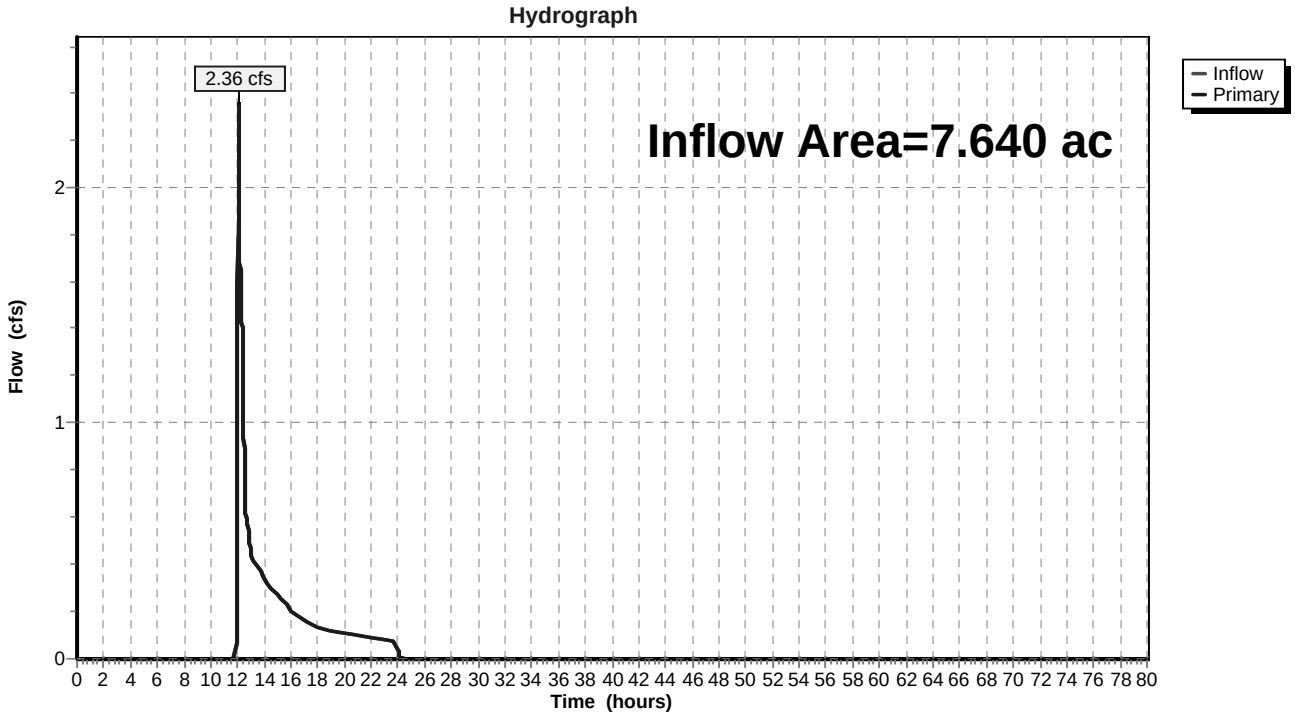


Summary for Link 6L: Design Line 1

Inflow Area = 7.640 ac, 5.76% Impervious, Inflow Depth = 0.38" for 1-Year event
Inflow = 2.36 cfs @ 12.09 hrs, Volume= 0.245 af
Primary = 2.36 cfs @ 12.09 hrs, Volume= 0.245 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 6L: Design Line 1

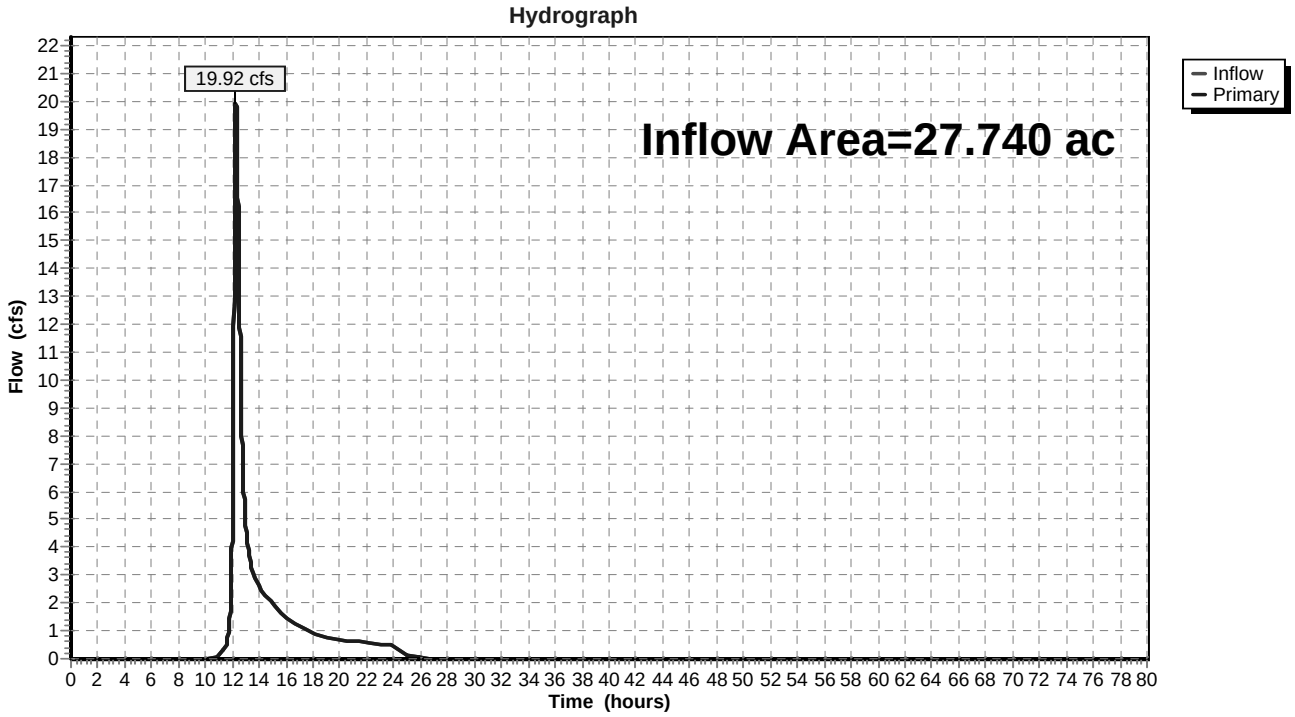


Summary for Link 7L: Design Point 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 0.94" for 1-Year event
Inflow = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af
Primary = 19.92 cfs @ 12.26 hrs, Volume= 2.178 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 7L: Design Point 2



Summary for Subcatchment 2S: DA-1

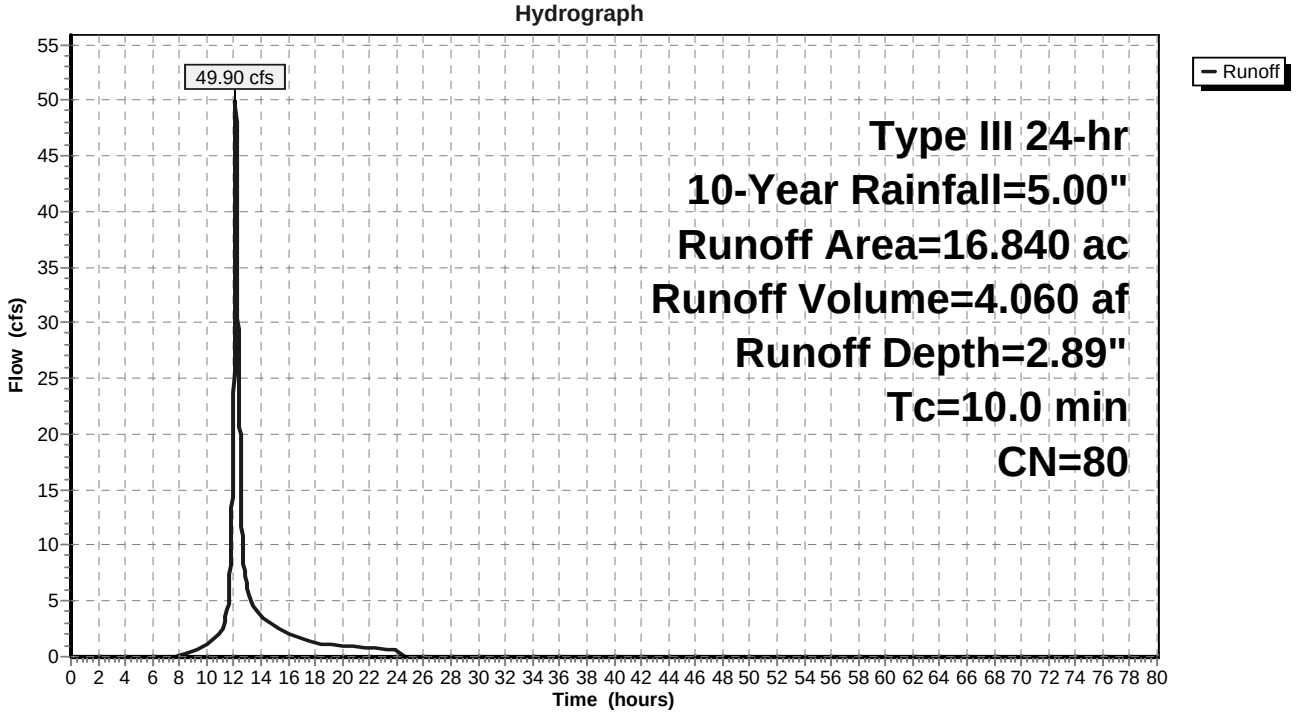
Runoff = 49.90 cfs @ 12.14 hrs, Volume= 4.060 af, Depth= 2.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.00"

Area (ac)	CN	Description
6.200	98	Unconnected pavement, HSG C
0.900	98	Unconnected roofs, HSG C
3.400	61	>75% Grass cover, Good, HSG B
3.100	83	1/4 acre lots, 38% imp, HSG C
0.040	71	Meadow, non-grazed, HSG C
0.300	89	Gravel roads, HSG C
2.900	55	Woods, Good, HSG B
16.840	80	Weighted Average
8.562		50.84% Pervious Area
8.278		49.16% Impervious Area
7.100		85.77% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: DA-1



Summary for Subcatchment 3S: DA-2

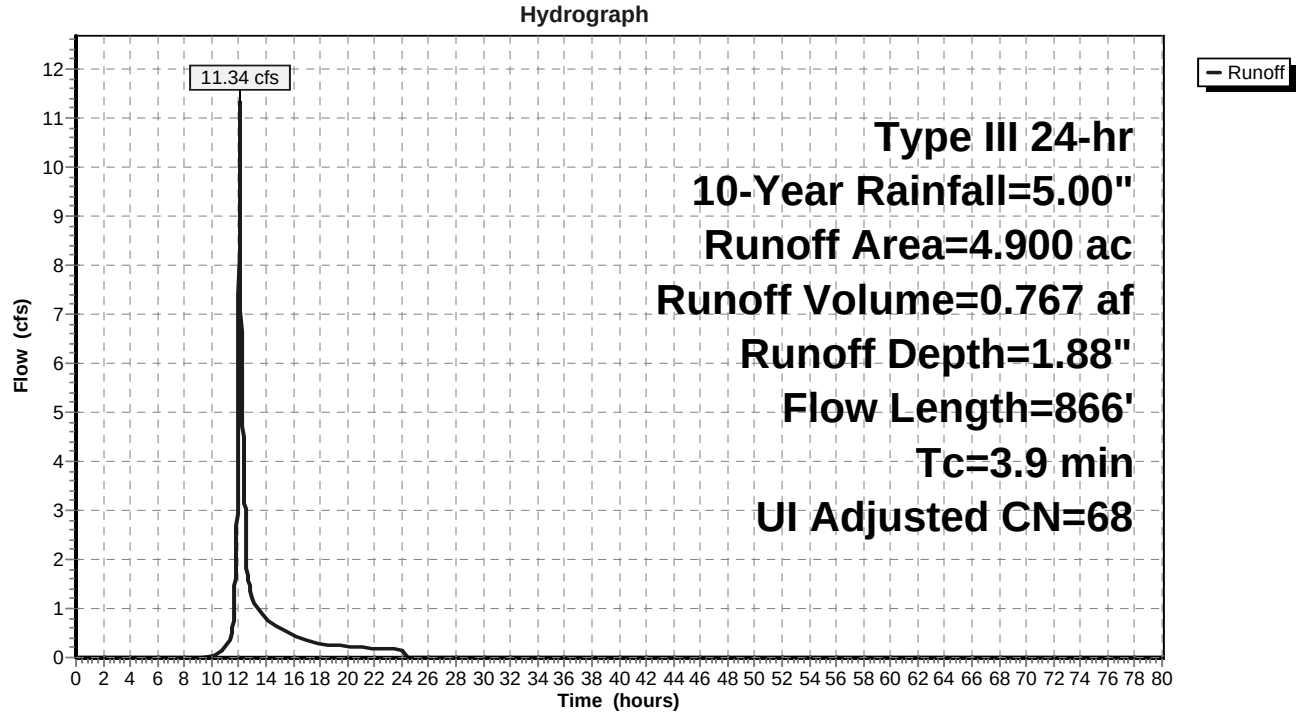
Runoff = 11.34 cfs @ 12.06 hrs, Volume= 0.767 af, Depth= 1.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.00"

Area (ac)	CN	Adj	Description
0.600	98		Unconnected pavement, HSG C
3.200	61		>75% Grass cover, Good, HSG B
0.400	71		Meadow, non-grazed, HSG C
0.700	89		Gravel roads, HSG C
4.900	70	68	Weighted Average, UI Adjusted
4.300			87.76% Pervious Area
0.600			12.24% Impervious Area
0.600			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	98	0.0606	2.23		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.7	582	0.0756	5.58		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	186	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.9	866	Total			

Subcatchment 3S: DA-2



Summary for Subcatchment 4S: DA-3

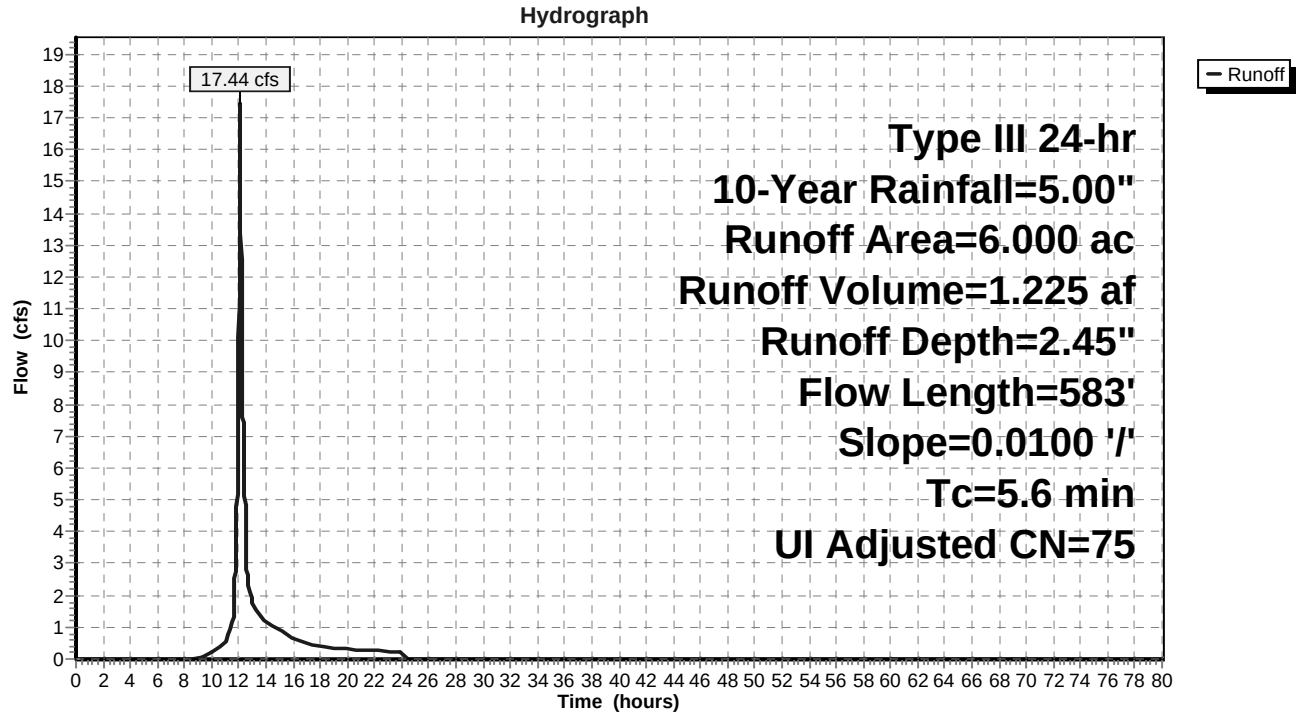
Runoff = 17.44 cfs @ 12.08 hrs, Volume= 1.225 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.00"

	Area (ac)	CN	Adj	Description
	0.800	98		Unconnected pavement, HSG C
	1.700	61		>75% Grass cover, Good, HSG B
*	1.900	81		Artifical Turf
	0.900	71		Meadow, non-grazed, HSG C
	0.700	89		Gravel roads, HSG C
	6.000	77	75	Weighted Average, UI Adjusted
	5.200			86.67% Pervious Area
	0.800			13.33% Impervious Area
	0.800			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	128	0.0100	1.15		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
3.7	455	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.6	583	Total			

Subcatchment 4S: DA-3



Summary for Subcatchment 8S: DA-4

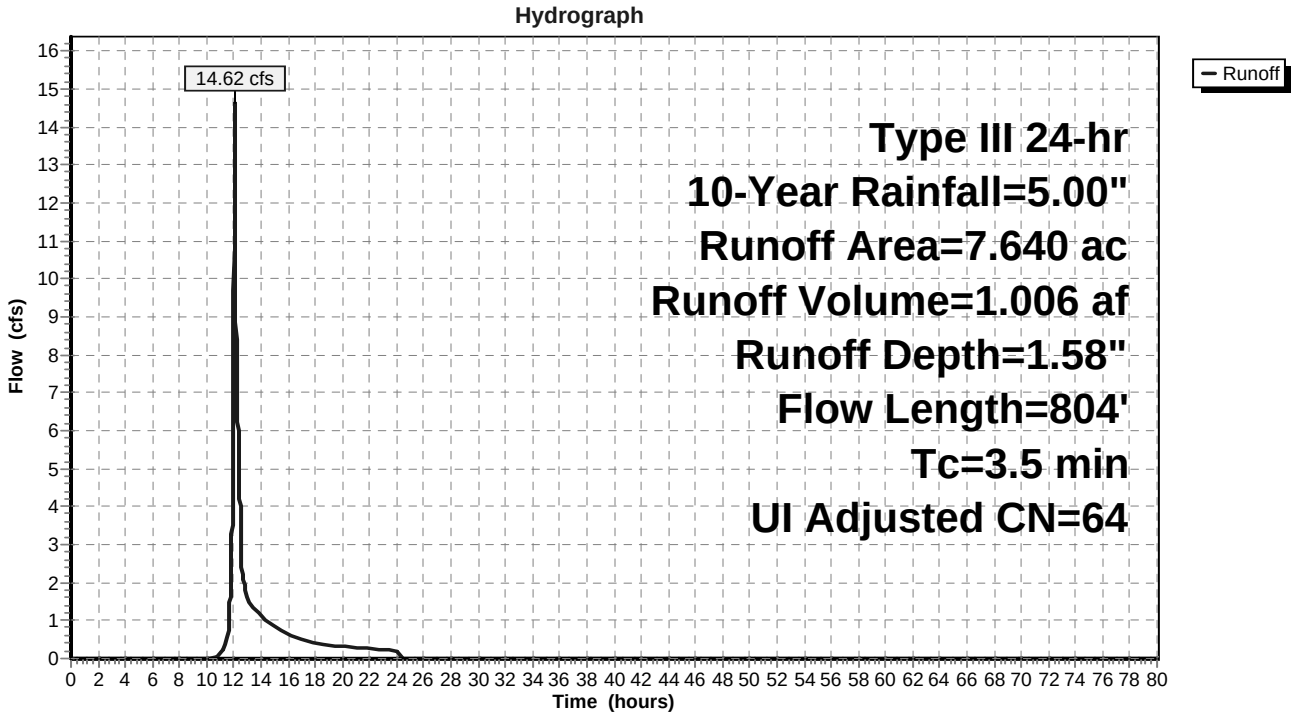
Runoff = 14.62 cfs @ 12.06 hrs, Volume= 1.006 af, Depth= 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.00"

	Area (ac)	CN	Adj	Description
	0.440	98		Unconnected pavement, HSG C
	1.000	61		>75% Grass cover, Good, HSG B
*	3.200	68		
	2.900	58		Meadow, non-grazed, HSG B
	0.100	89		Gravel roads, HSG C
	7.640	65	64	Weighted Average, UI Adjusted
	7.200			94.24% Pervious Area
	0.440			5.76% Impervious Area
	0.440			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	88	0.0100	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.1	166	0.0150	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	550	0.0150	8.85	354.20	**Channel Flow,** Area= 40.0 sf Perim= 18.0' r= 2.22' n= 0.035 Earth, dense weeds
3.5	804	Total			

Subcatchment 8S: DA-4



Summary for Reach 9R: Swale Cell 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 2.66" for 10-Year event
Inflow = 57.98 cfs @ 12.12 hrs, Volume= 4.827 af
Outflow = 55.42 cfs @ 12.16 hrs, Volume= 4.827 af, Atten= 4%, Lag= 2.2 min

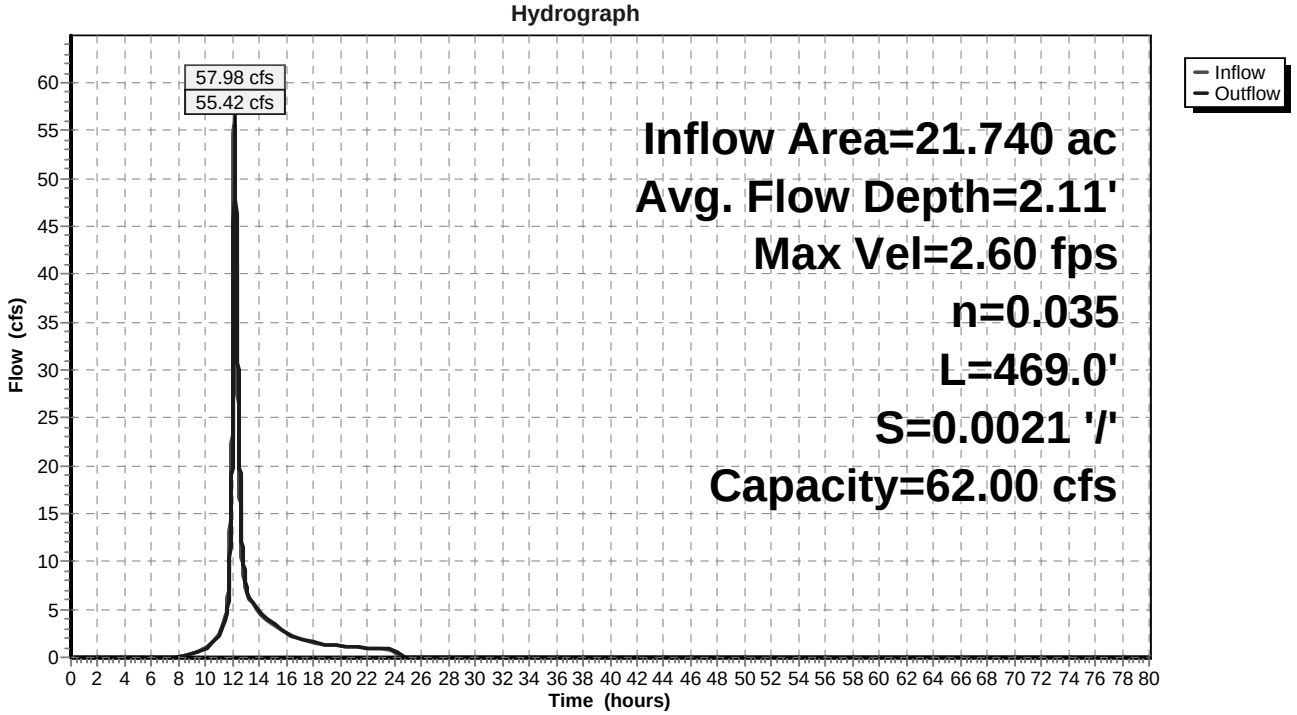
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 2.60 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 0.63 fps, Avg. Travel Time= 12.4 min

Peak Storage= 9,999 cf @ 12.16 hrs
Average Depth at Peak Storage= 2.11'
Defined Flood Depth= 7.00' Flow Area= 82.3 sf, Capacity= 288.44 cfs
Bank-Full Depth= 2.25' Flow Area= 23.1 sf, Capacity= 62.00 cfs

8.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 12.50'
Length= 469.0' Slope= 0.0021 '/'
Inlet Invert= 4.00', Outlet Invert= 3.00'



Reach 9R: Swale Cell 1



Summary for Reach 10R: Swale Cell 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 2.62" for 10-Year event
Inflow = 68.77 cfs @ 12.14 hrs, Volume= 6.052 af
Outflow = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af, Atten= 8%, Lag= 3.7 min

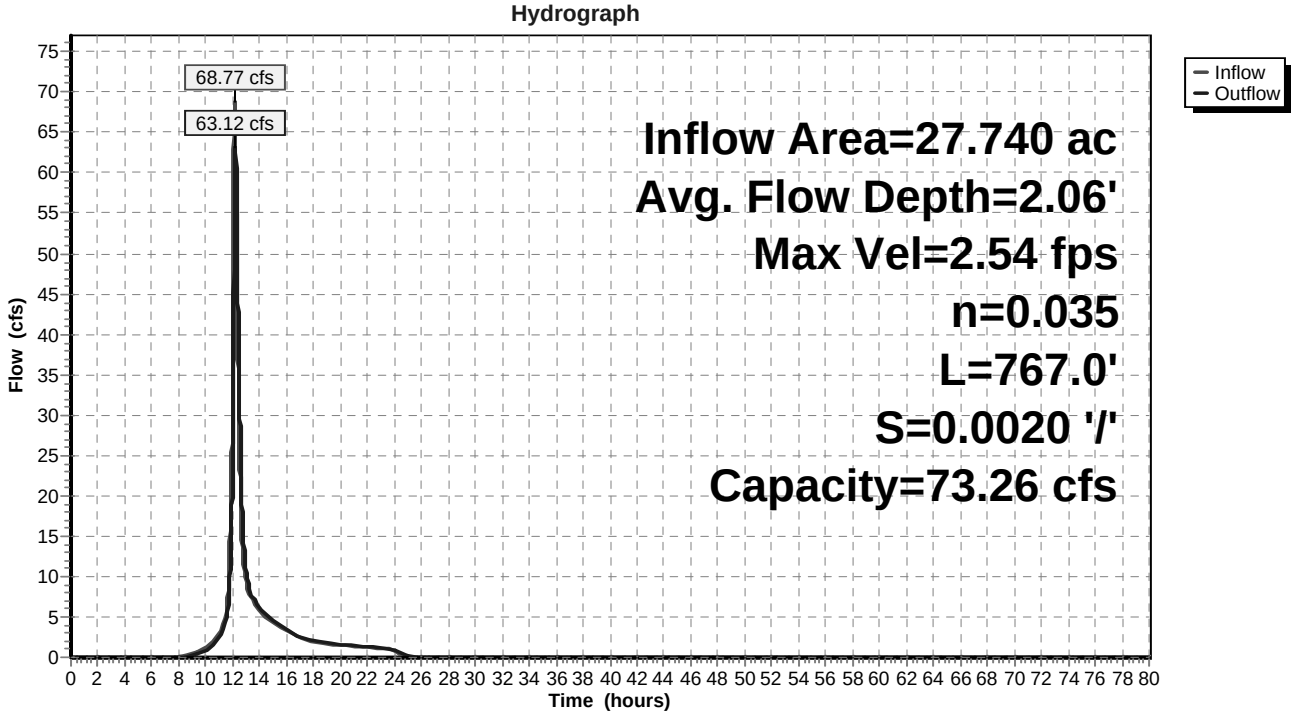
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 2.54 fps, Min. Travel Time= 5.0 min
Avg. Velocity = 0.52 fps, Avg. Travel Time= 24.5 min

Peak Storage= 19,079 cf @ 12.20 hrs
Average Depth at Peak Storage= 2.06'
Defined Flood Depth= 7.00' Flow Area= 96.3 sf, Capacity= 337.26 cfs
Bank-Full Depth= 2.25' Flow Area= 27.6 sf, Capacity= 73.26 cfs

10.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 14.50'
Length= 767.0' Slope= 0.0020 '/'
Inlet Invert= 3.00', Outlet Invert= 1.50'



Reach 10R: Swale Cell 2



Summary for Pond 11P: OS-1

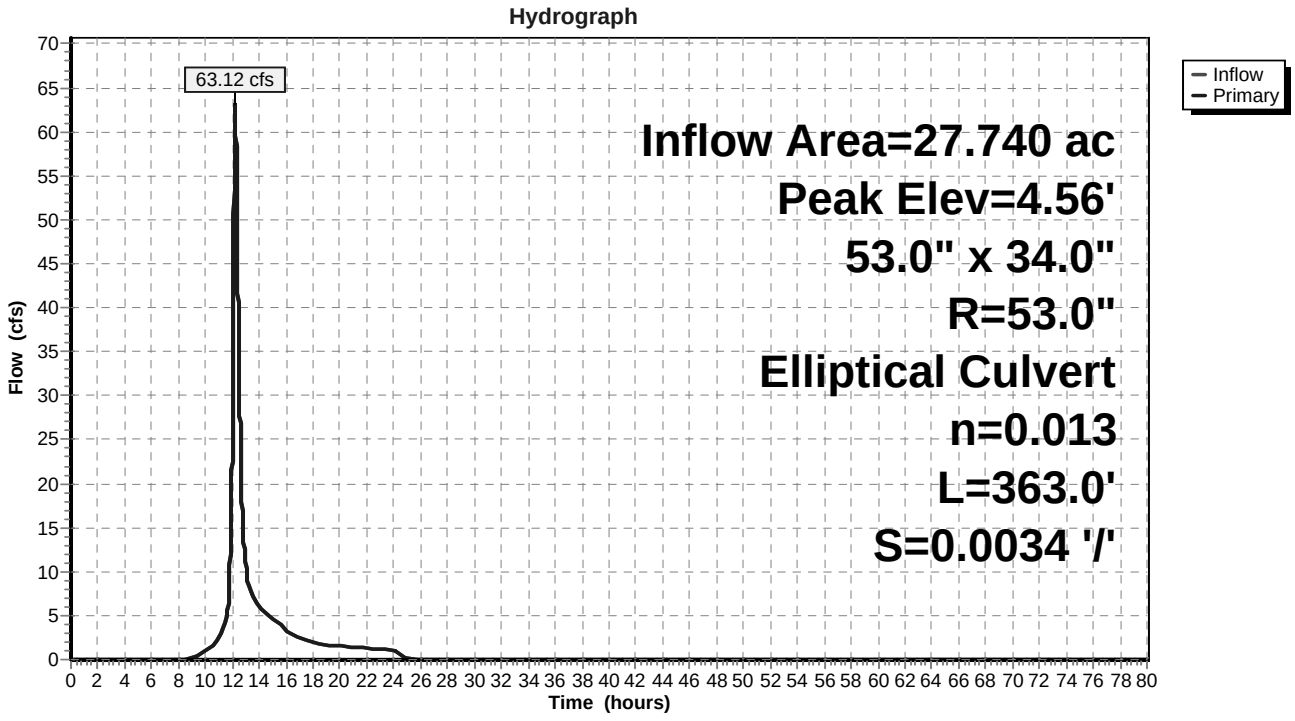
Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 2.62" for 10-Year event
Inflow = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af
Outflow = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af, Atten= 0%, Lag= 0.0 min
Primary = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.56' @ 12.20 hrs
Flood Elev= 5.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.25'	**53.0" W x 34.0" H, R=53.0" Elliptical Culvert** L= 363.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1.25' / 0.00' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 10.29 sf

Primary OutFlow Max=63.11 cfs @ 12.20 hrs HW=4.56' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 63.11 cfs @ 6.64 fps)

Pond 11P: OS-1



Summary for Pond 12P: Weir 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 2.66" for 10-Year event
Inflow = 55.42 cfs @ 12.16 hrs, Volume= 4.827 af
Outflow = 55.42 cfs @ 12.16 hrs, Volume= 4.827 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 10.03 hrs, Volume= 0.727 af
Secondary = 54.92 cfs @ 12.16 hrs, Volume= 4.100 af

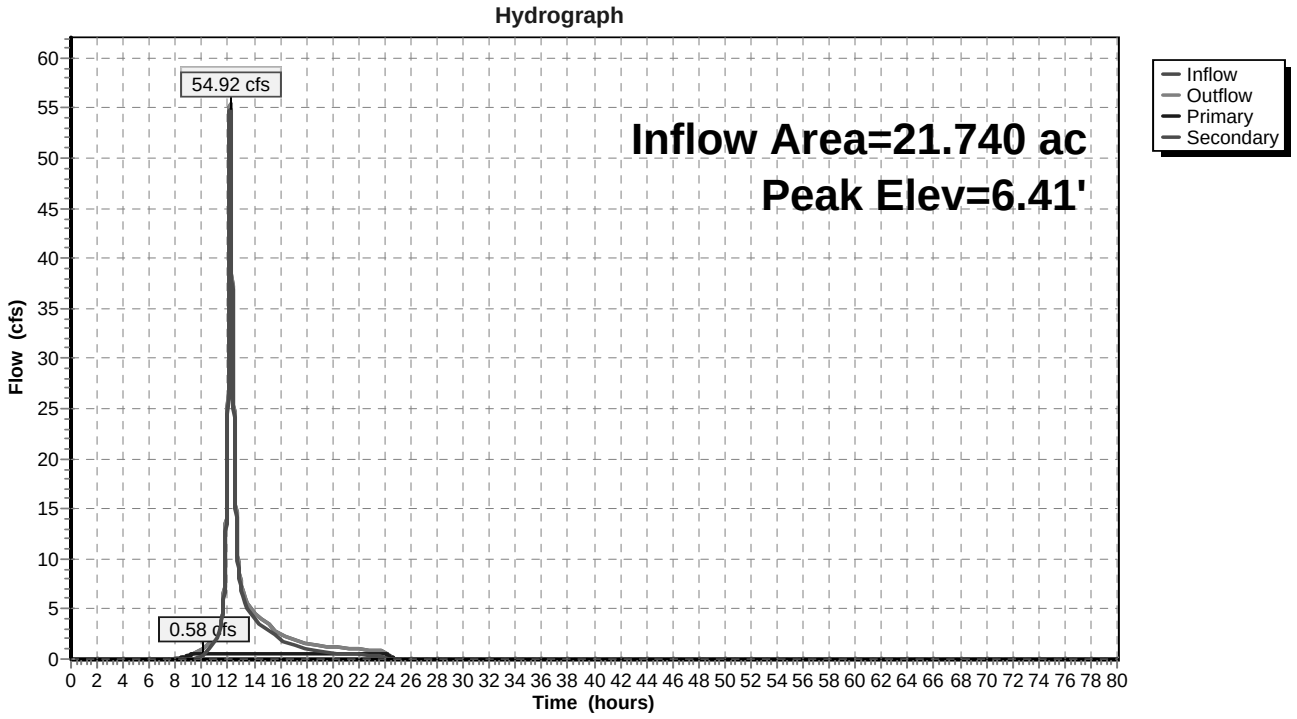
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.41' @ 12.16 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Secondary	5.00'	**10.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.58 cfs @ 10.03 hrs HW=5.05' TW=3.17' (Dynamic Tailwater)
└**1=Orifice/Grate** (Orifice Controls 0.58 cfs @ 6.61 fps)

Secondary OutFlow Max=54.89 cfs @ 12.16 hrs HW=6.41' TW=5.02' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 54.89 cfs @ 3.89 fps)

Pond 12P: Weir 1



Summary for Pond 13P: Weir 1

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 2.62" for 10-Year event
Inflow = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af
Outflow = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af

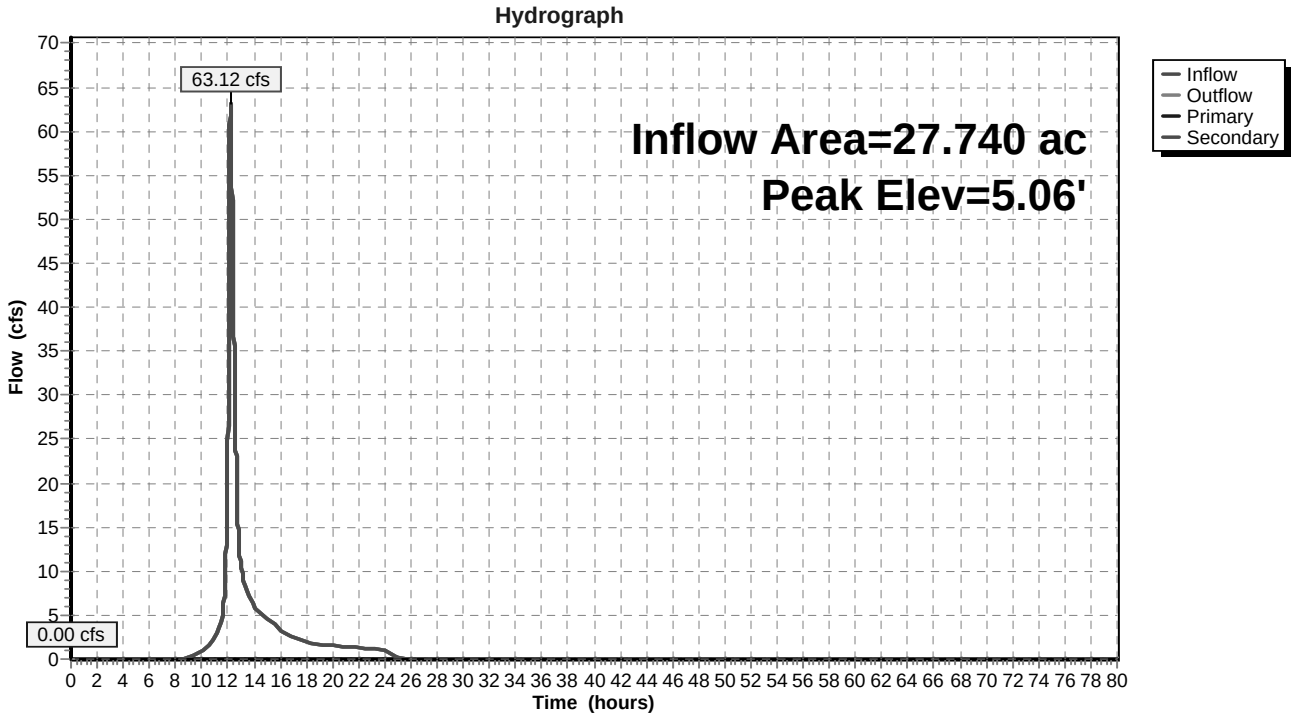
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.06' @ 12.20 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.50'	**4.0" Vert. Orifice/Grate X 0.00** C= 0.600
#2	Secondary	3.50'	**12.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1.55' TW=1.25' (Dynamic Tailwater)
└**1=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=63.11 cfs @ 12.20 hrs HW=5.05' TW=4.56' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 63.11 cfs @ 3.38 fps)

Pond 13P: Weir 1

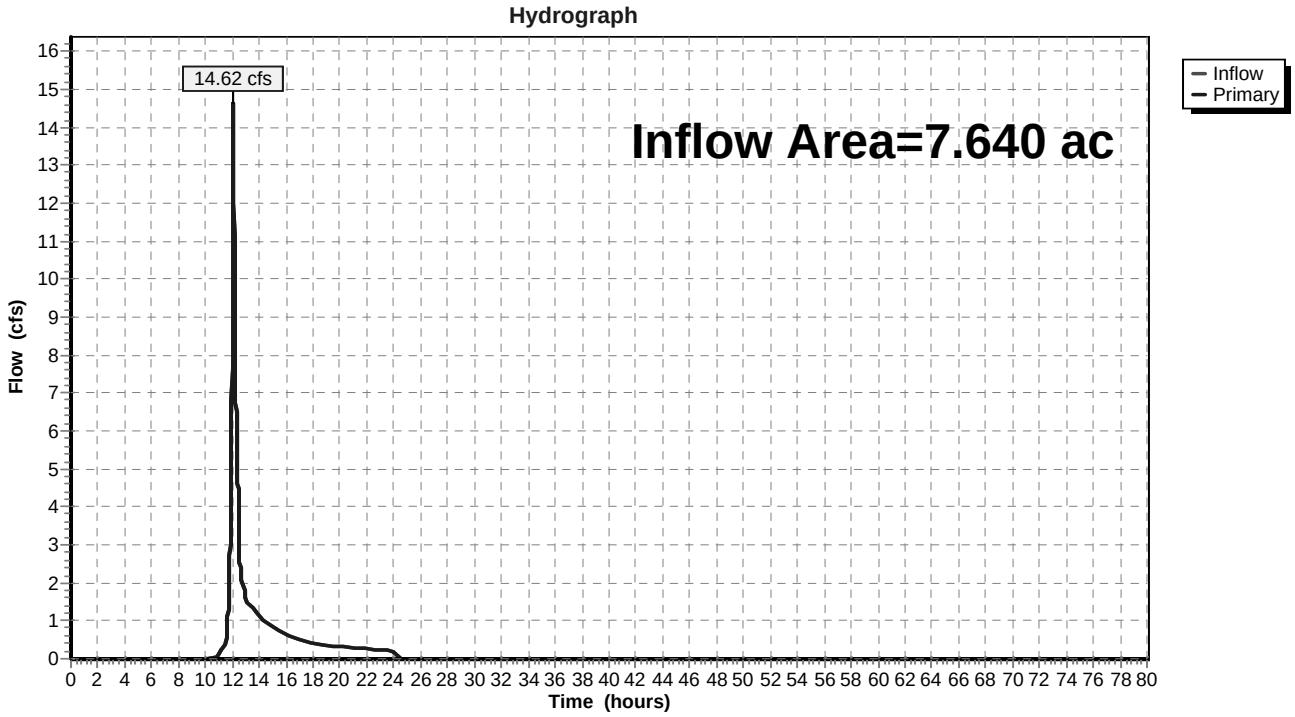


Summary for Link 6L: Design Line 1

Inflow Area = 7.640 ac, 5.76% Impervious, Inflow Depth = 1.58" for 10-Year event
Inflow = 14.62 cfs @ 12.06 hrs, Volume= 1.006 af
Primary = 14.62 cfs @ 12.06 hrs, Volume= 1.006 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 6L: Design Line 1

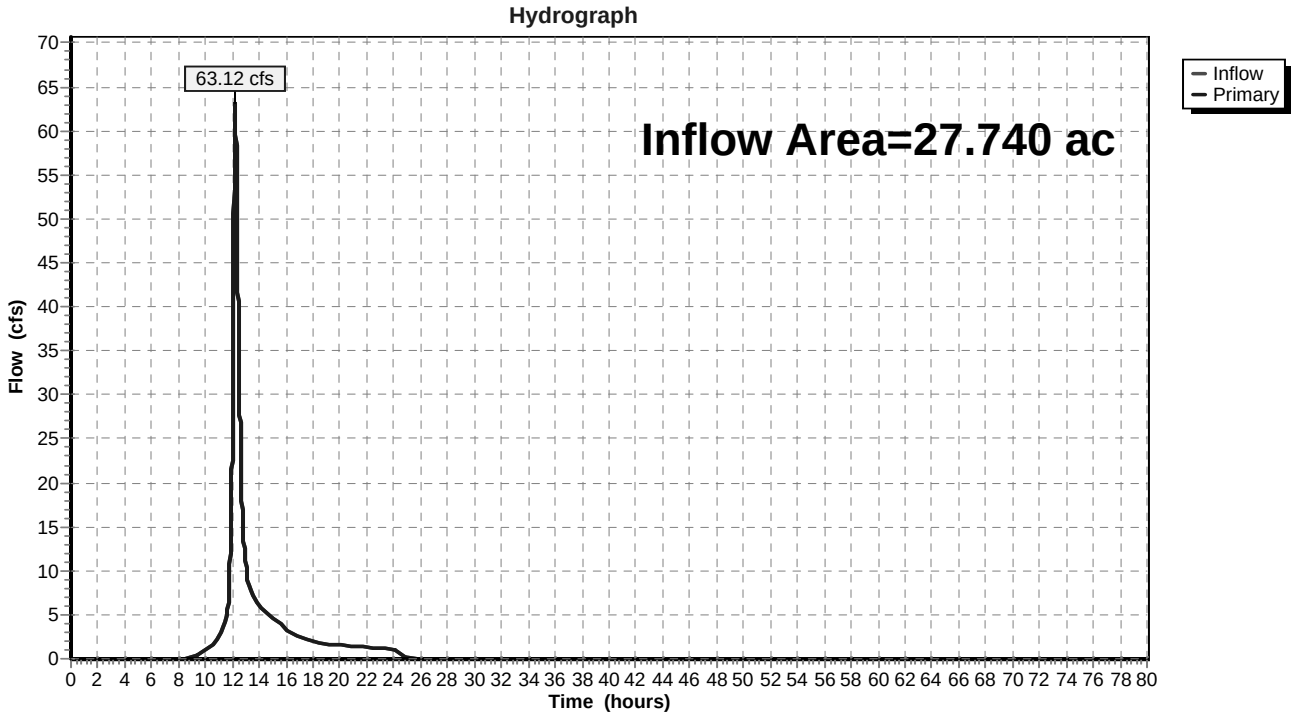


Summary for Link 7L: Design Point 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 2.62" for 10-Year event
Inflow = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af
Primary = 63.12 cfs @ 12.20 hrs, Volume= 6.052 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 7L: Design Point 2



Summary for Subcatchment 2S: DA-1

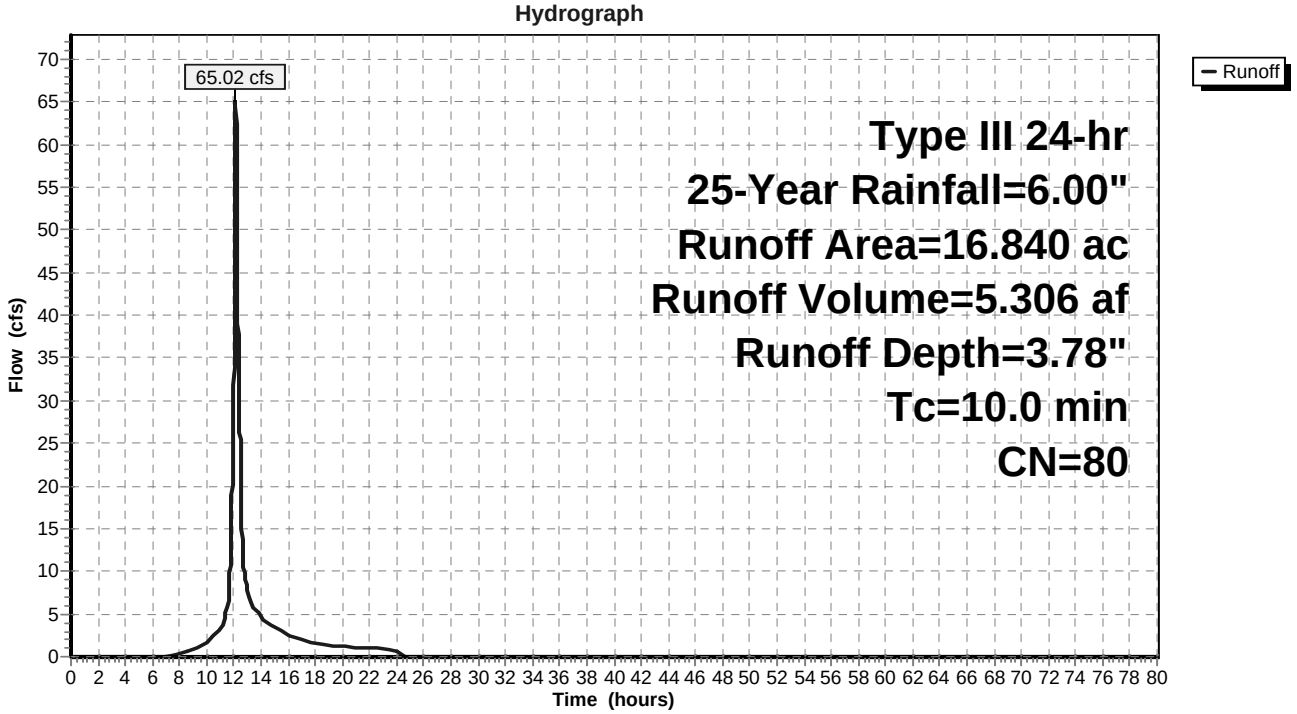
Runoff = 65.02 cfs @ 12.14 hrs, Volume= 5.306 af, Depth= 3.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
6.200	98	Unconnected pavement, HSG C
0.900	98	Unconnected roofs, HSG C
3.400	61	>75% Grass cover, Good, HSG B
3.100	83	1/4 acre lots, 38% imp, HSG C
0.040	71	Meadow, non-grazed, HSG C
0.300	89	Gravel roads, HSG C
2.900	55	Woods, Good, HSG B
16.840	80	Weighted Average
8.562		50.84% Pervious Area
8.278		49.16% Impervious Area
7.100		85.77% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: DA-1



Summary for Subcatchment 3S: DA-2

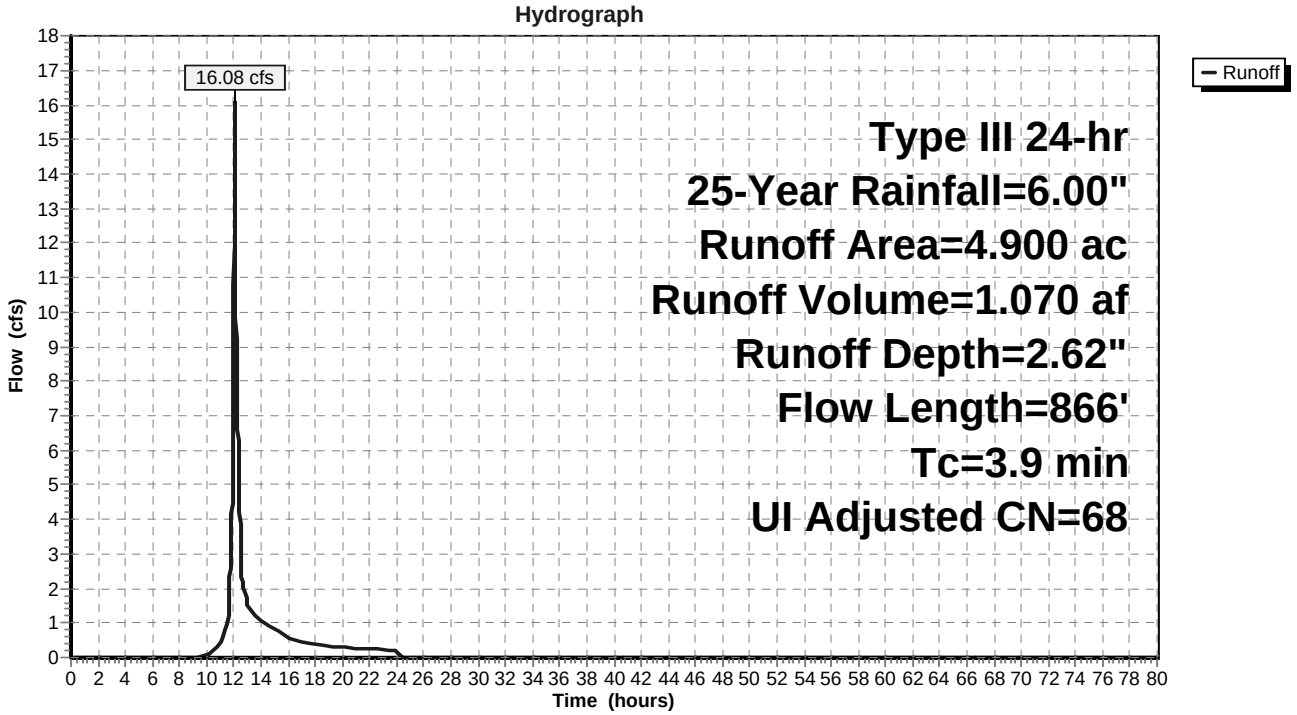
Runoff = 16.08 cfs @ 12.06 hrs, Volume= 1.070 af, Depth= 2.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Adj	Description
0.600	98		Unconnected pavement, HSG C
3.200	61		>75% Grass cover, Good, HSG B
0.400	71		Meadow, non-grazed, HSG C
0.700	89		Gravel roads, HSG C
4.900	70	68	Weighted Average, UI Adjusted
4.300			87.76% Pervious Area
0.600			12.24% Impervious Area
0.600			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	98	0.0606	2.23		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.7	582	0.0756	5.58		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	186	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.9	866	Total			

Subcatchment 3S: DA-2



Summary for Subcatchment 4S: DA-3

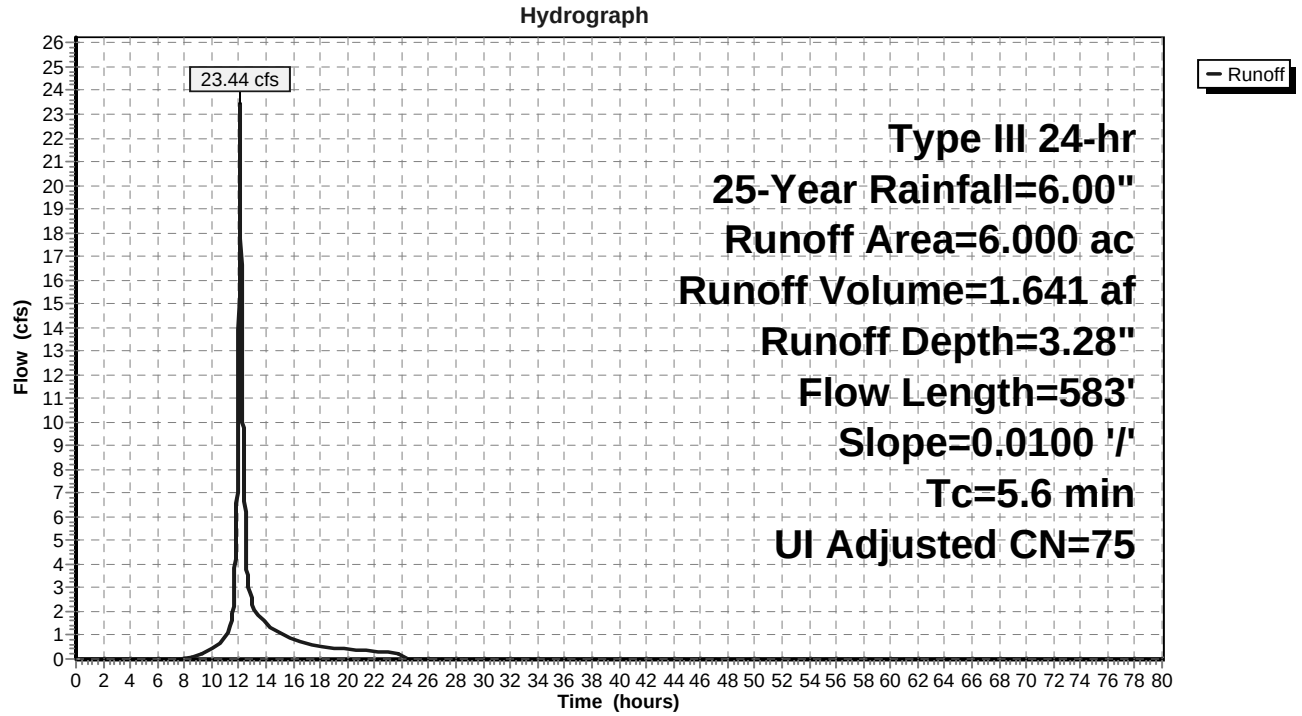
Runoff = 23.44 cfs @ 12.08 hrs, Volume= 1.641 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.00"

	Area (ac)	CN	Adj	Description
	0.800	98		Unconnected pavement, HSG C
	1.700	61		>75% Grass cover, Good, HSG B
*	1.900	81		Artifical Turf
	0.900	71		Meadow, non-grazed, HSG C
	0.700	89		Gravel roads, HSG C
	6.000	77	75	Weighted Average, UI Adjusted
	5.200			86.67% Pervious Area
	0.800			13.33% Impervious Area
	0.800			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	128	0.0100	1.15		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
3.7	455	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.6	583	Total			

Subcatchment 4S: DA-3



Summary for Subcatchment 8S: DA-4

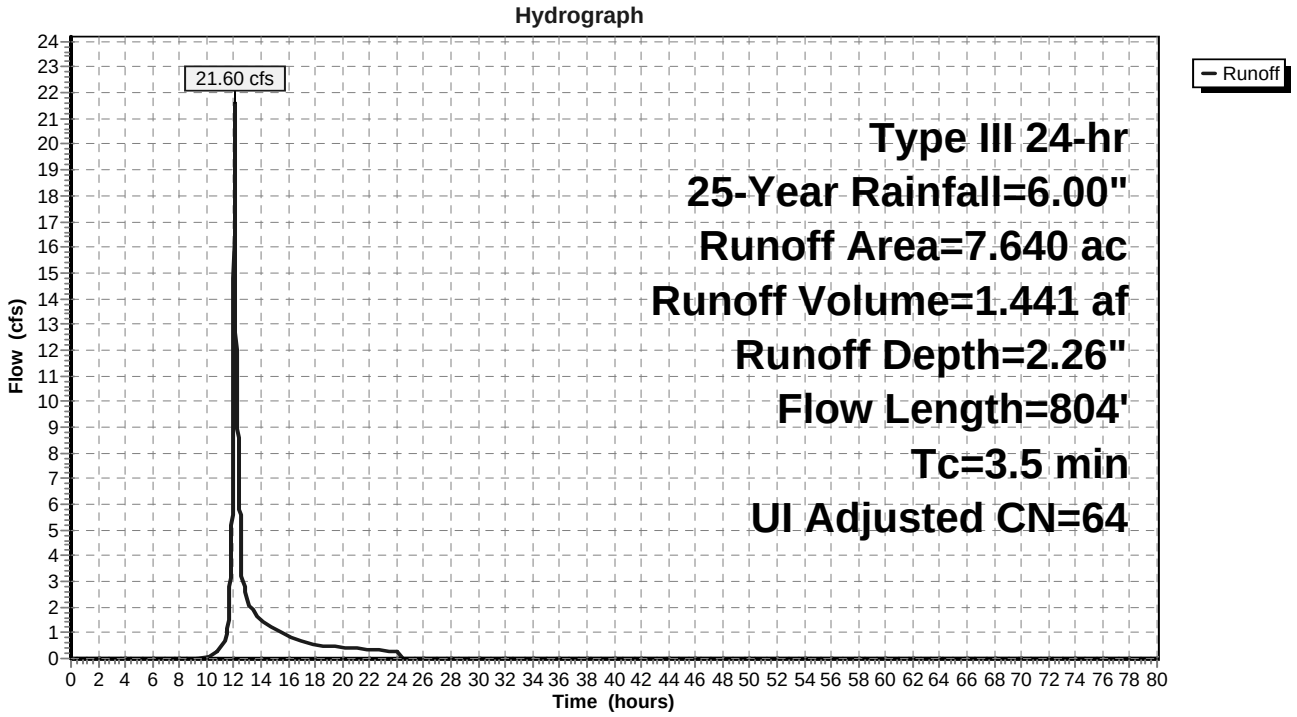
Runoff = 21.60 cfs @ 12.06 hrs, Volume= 1.441 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.00"

	Area (ac)	CN	Adj	Description
	0.440	98		Unconnected pavement, HSG C
	1.000	61		>75% Grass cover, Good, HSG B
*	3.200	68		
	2.900	58		Meadow, non-grazed, HSG B
	0.100	89		Gravel roads, HSG C
	7.640	65	64	Weighted Average, UI Adjusted
	7.200			94.24% Pervious Area
	0.440			5.76% Impervious Area
	0.440			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	88	0.0100	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.1	166	0.0150	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	550	0.0150	8.85	354.20	**Channel Flow,** Area= 40.0 sf Perim= 18.0' r= 2.22' n= 0.035 Earth, dense weeds
3.5	804	Total			

Subcatchment 8S: DA-4



Summary for Reach 9R: Swale Cell 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 3.52" for 25-Year event
Inflow = 76.47 cfs @ 12.12 hrs, Volume= 6.377 af
Outflow = 73.39 cfs @ 12.16 hrs, Volume= 6.377 af, Atten= 4%, Lag= 2.1 min

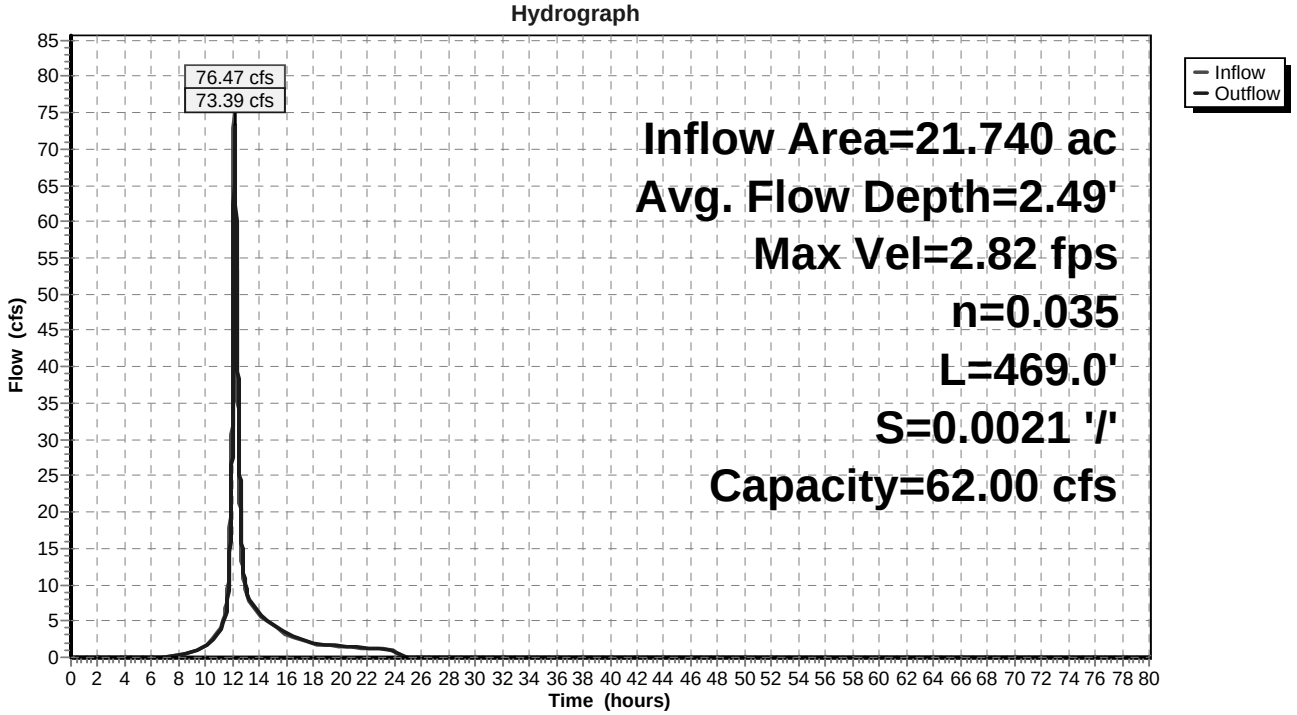
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 2.82 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 0.68 fps, Avg. Travel Time= 11.5 min

Peak Storage= 12,215 cf @ 12.16 hrs
Average Depth at Peak Storage= 2.49'
Defined Flood Depth= 7.00' Flow Area= 82.3 sf, Capacity= 288.44 cfs
Bank-Full Depth= 2.25' Flow Area= 23.1 sf, Capacity= 62.00 cfs

8.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 12.50'
Length= 469.0' Slope= 0.0021 '/'
Inlet Invert= 4.00', Outlet Invert= 3.00'



Reach 9R: Swale Cell 1



Summary for Reach 10R: Swale Cell 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 3.47" for 25-Year event
Inflow = 91.76 cfs @ 12.13 hrs, Volume= 8.018 af
Outflow = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af, Atten= 8%, Lag= 3.4 min

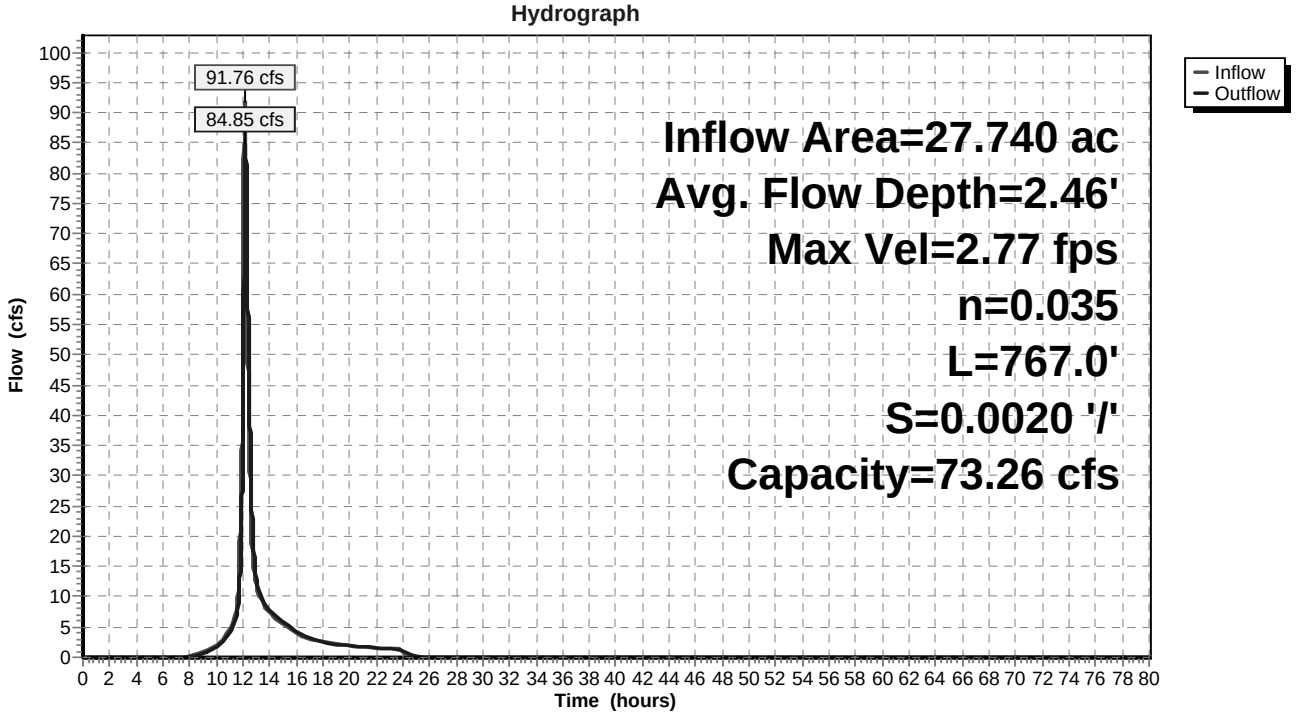
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 2.77 fps, Min. Travel Time= 4.6 min
Avg. Velocity = 0.57 fps, Avg. Travel Time= 22.6 min

Peak Storage= 23,456 cf @ 12.19 hrs
Average Depth at Peak Storage= 2.46'
Defined Flood Depth= 7.00' Flow Area= 96.3 sf, Capacity= 337.26 cfs
Bank-Full Depth= 2.25' Flow Area= 27.6 sf, Capacity= 73.26 cfs

10.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 14.50'
Length= 767.0' Slope= 0.0020 '/'
Inlet Invert= 3.00', Outlet Invert= 1.50'



Reach 10R: Swale Cell 2



Summary for Pond 11P: OS-1

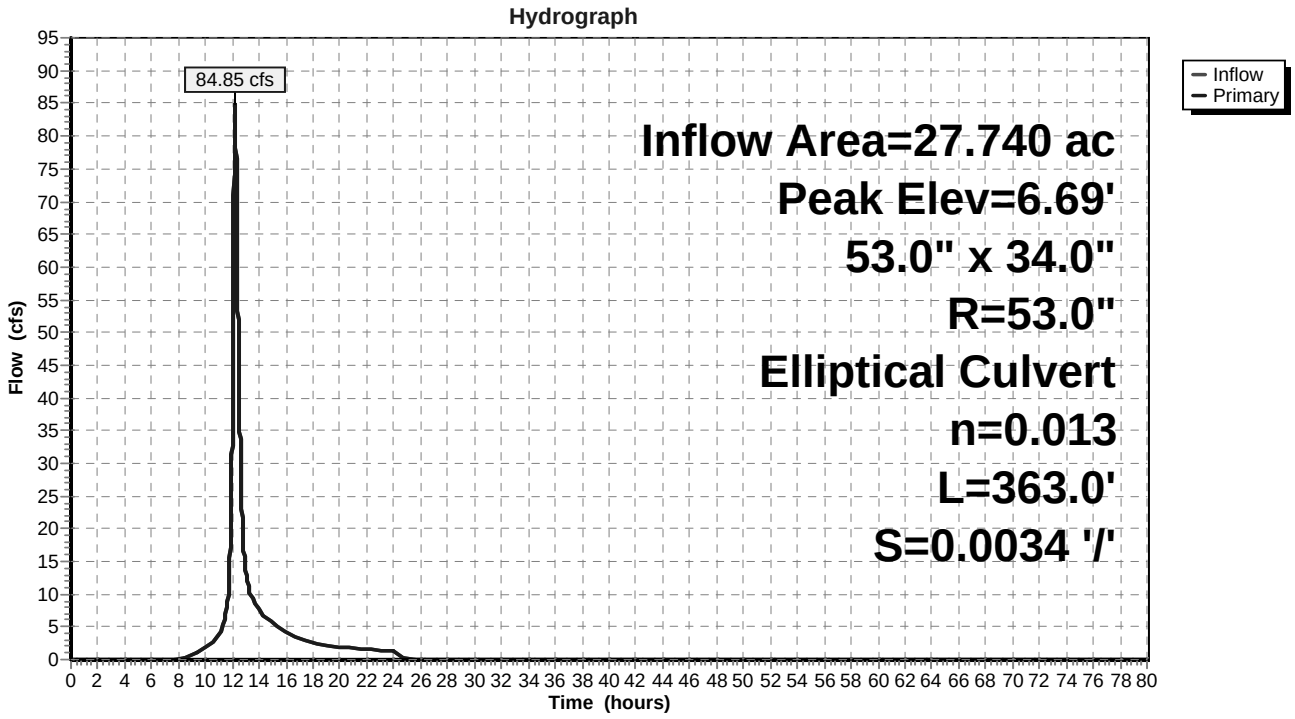
Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 3.47" for 25-Year event
Inflow = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af
Outflow = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af, Atten= 0%, Lag= 0.0 min
Primary = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.69' @ 12.19 hrs
Flood Elev= 5.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.25'	**53.0" W x 34.0" H, R=53.0" Elliptical Culvert** L= 363.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1.25' / 0.00' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 10.29 sf

Primary OutFlow Max=84.83 cfs @ 12.19 hrs HW=6.69' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 84.83 cfs @ 8.24 fps)

Pond 11P: OS-1



Summary for Pond 12P: Weir 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 3.52" for 25-Year event
Inflow = 73.39 cfs @ 12.16 hrs, Volume= 6.377 af
Outflow = 73.39 cfs @ 12.16 hrs, Volume= 6.377 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 9.34 hrs, Volume= 0.759 af
Secondary = 72.91 cfs @ 12.16 hrs, Volume= 5.618 af

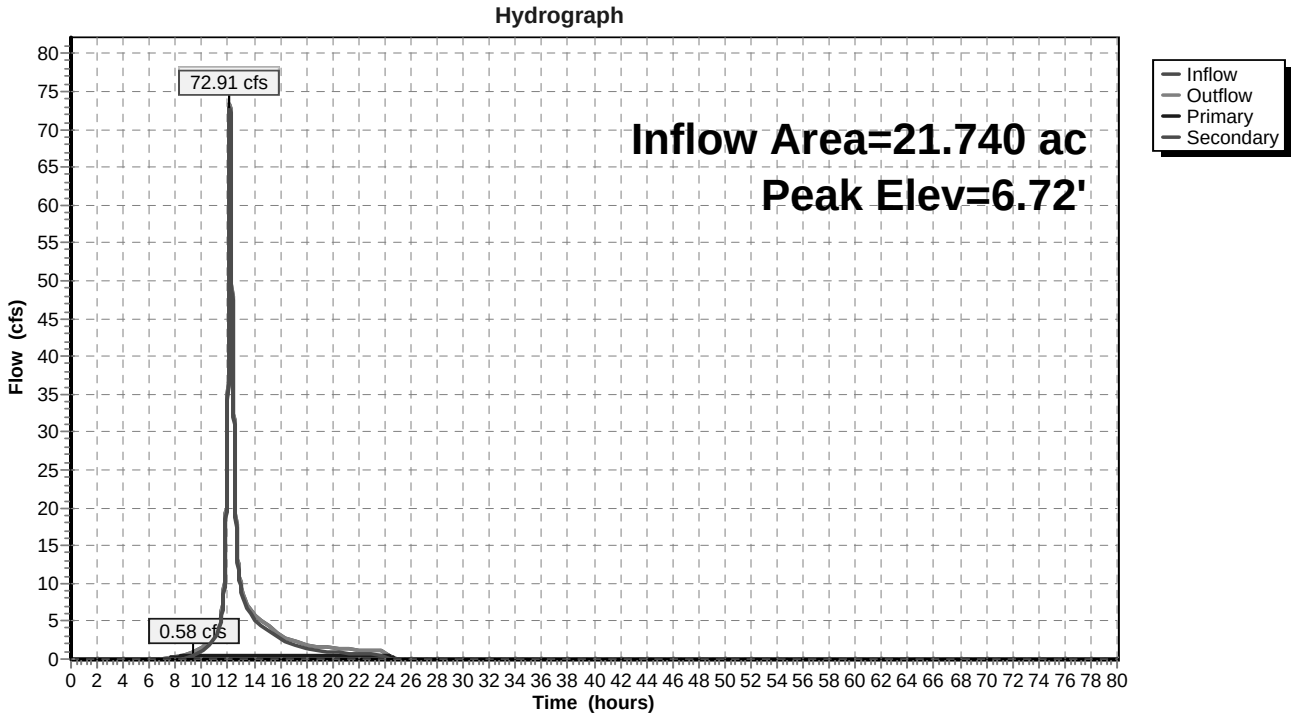
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.72' @ 12.16 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Secondary	5.00'	**10.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.58 cfs @ 9.34 hrs HW=5.05' TW=3.17' (Dynamic Tailwater)
└**1=Orifice/Grate** (Orifice Controls 0.58 cfs @ 6.61 fps)

Secondary OutFlow Max=72.86 cfs @ 12.16 hrs HW=6.72' TW=5.42' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 72.86 cfs @ 4.24 fps)

Pond 12P: Weir 1



Summary for Pond 13P: Weir 1

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 3.47" for 25-Year event
Inflow = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af
Outflow = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af

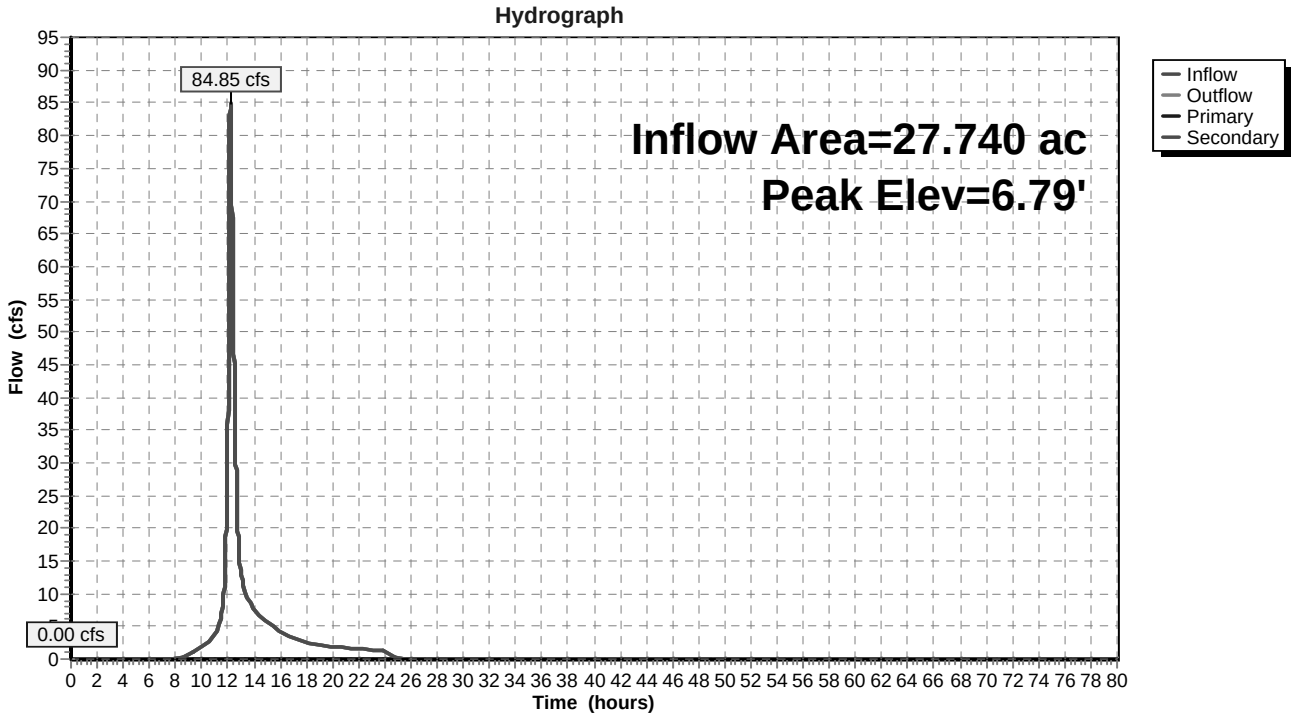
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.79' @ 12.19 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.50'	**4.0" Vert. Orifice/Grate X 0.00** C= 0.600
#2	Secondary	3.50'	**12.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1.55' TW=1.25' (Dynamic Tailwater)
└**1=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=84.83 cfs @ 12.19 hrs HW=6.78' TW=6.69' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 84.83 cfs @ 2.15 fps)

Pond 13P: Weir 1

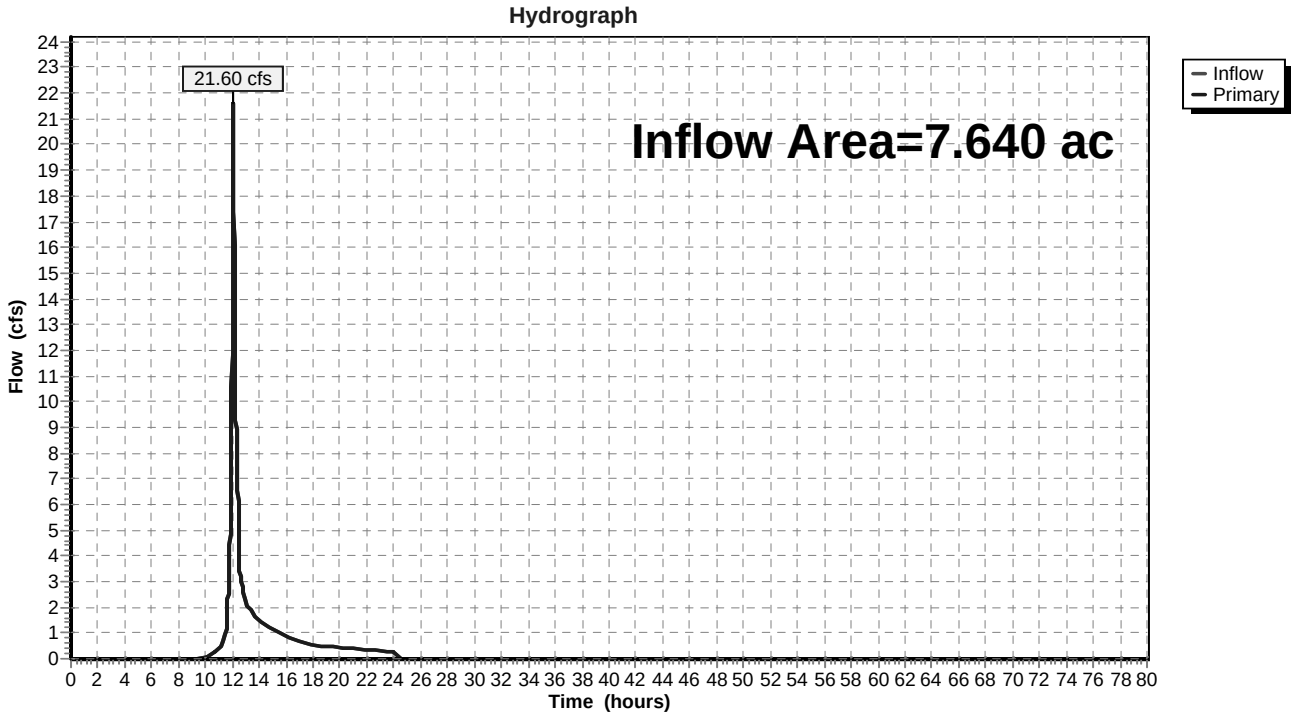


Summary for Link 6L: Design Line 1

Inflow Area = 7.640 ac, 5.76% Impervious, Inflow Depth = 2.26" for 25-Year event
Inflow = 21.60 cfs @ 12.06 hrs, Volume= 1.441 af
Primary = 21.60 cfs @ 12.06 hrs, Volume= 1.441 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 6L: Design Line 1

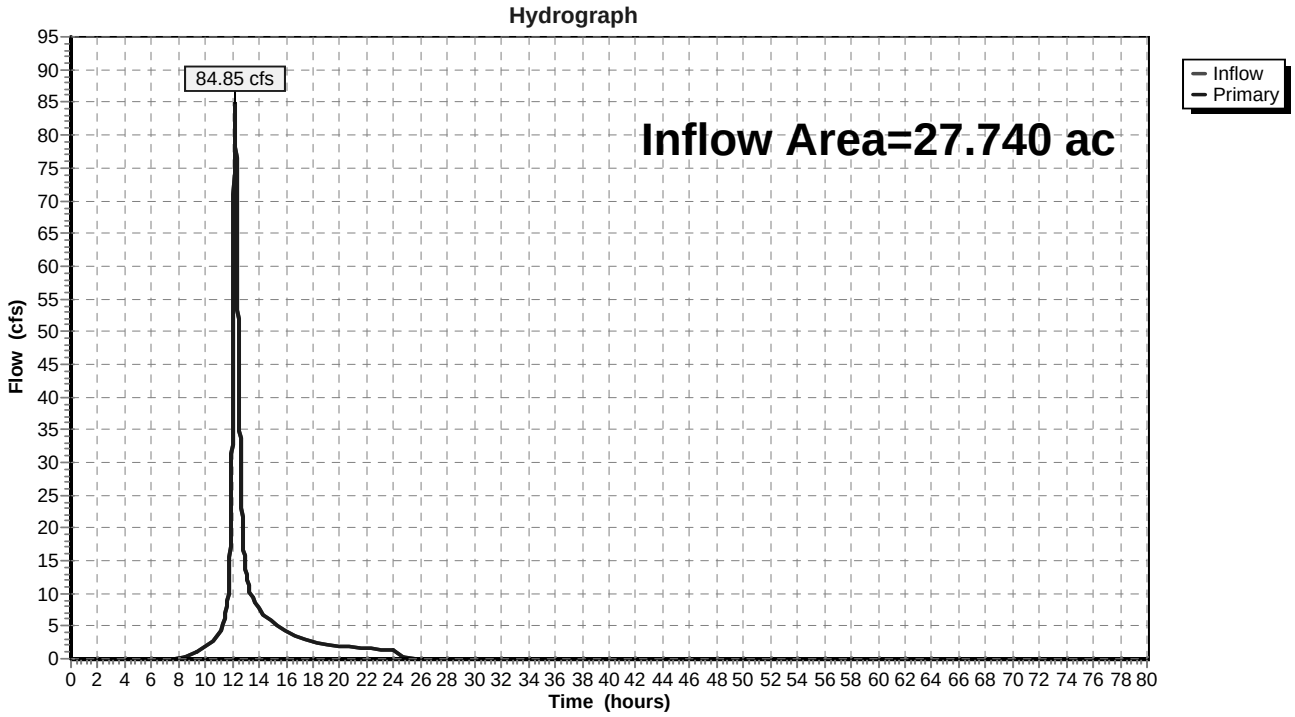


Summary for Link 7L: Design Point 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 3.47" for 25-Year event
Inflow = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af
Primary = 84.85 cfs @ 12.19 hrs, Volume= 8.018 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 7L: Design Point 2



Summary for Subcatchment 2S: DA-1

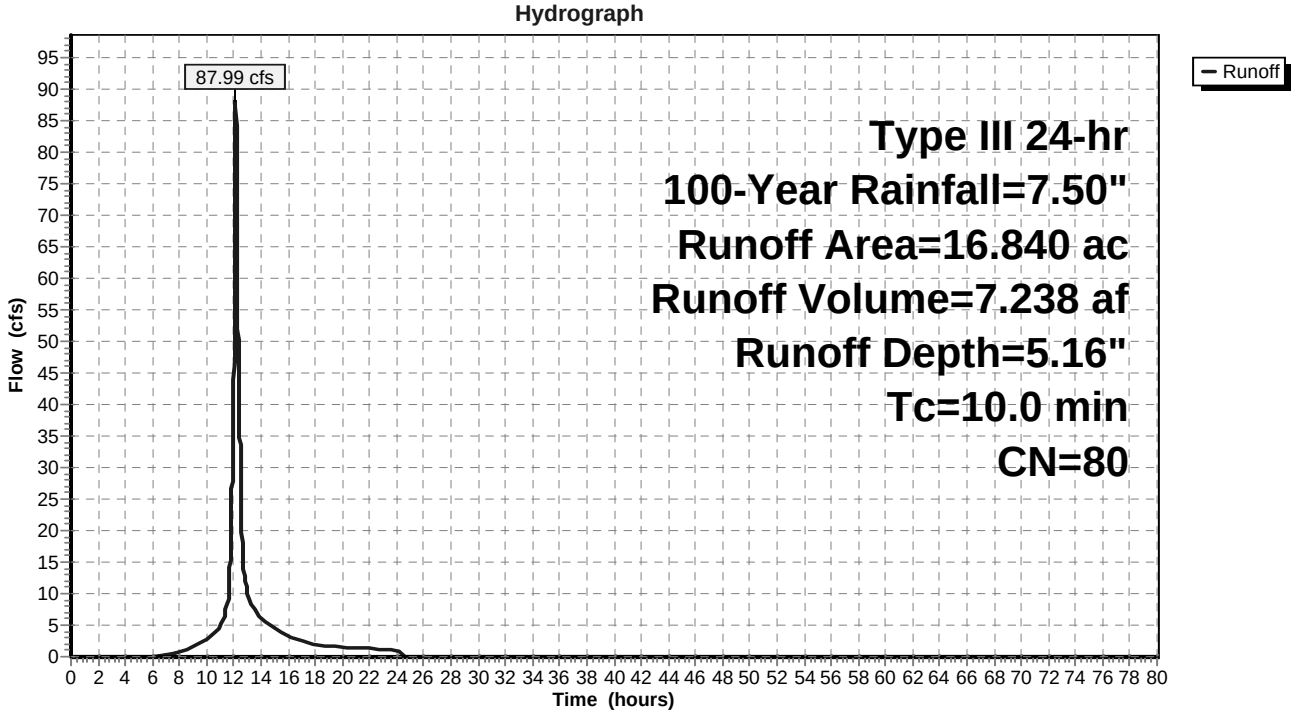
Runoff = 87.99 cfs @ 12.14 hrs, Volume= 7.238 af, Depth= 5.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.50"

Area (ac)	CN	Description
6.200	98	Unconnected pavement, HSG C
0.900	98	Unconnected roofs, HSG C
3.400	61	>75% Grass cover, Good, HSG B
3.100	83	1/4 acre lots, 38% imp, HSG C
0.040	71	Meadow, non-grazed, HSG C
0.300	89	Gravel roads, HSG C
2.900	55	Woods, Good, HSG B
16.840	80	Weighted Average
8.562		50.84% Pervious Area
8.278		49.16% Impervious Area
7.100		85.77% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: DA-1



Summary for Subcatchment 3S: DA-2

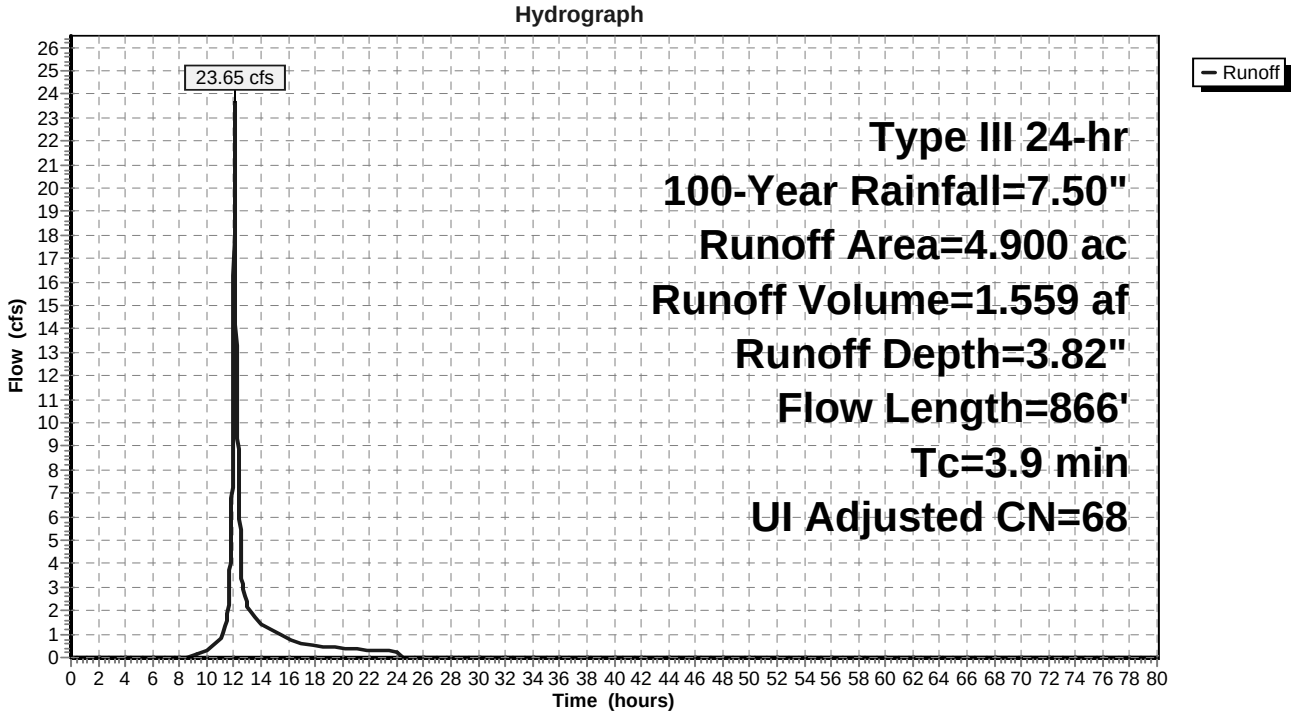
Runoff = 23.65 cfs @ 12.06 hrs, Volume= 1.559 af, Depth= 3.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.50"

Area (ac)	CN	Adj	Description
0.600	98		Unconnected pavement, HSG C
3.200	61		>75% Grass cover, Good, HSG B
0.400	71		Meadow, non-grazed, HSG C
0.700	89		Gravel roads, HSG C
4.900	70	68	Weighted Average, UI Adjusted
4.300			87.76% Pervious Area
0.600			12.24% Impervious Area
0.600			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	98	0.0606	2.23		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.7	582	0.0756	5.58		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	186	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.9	866	Total			

Subcatchment 3S: DA-2



Summary for Subcatchment 4S: DA-3

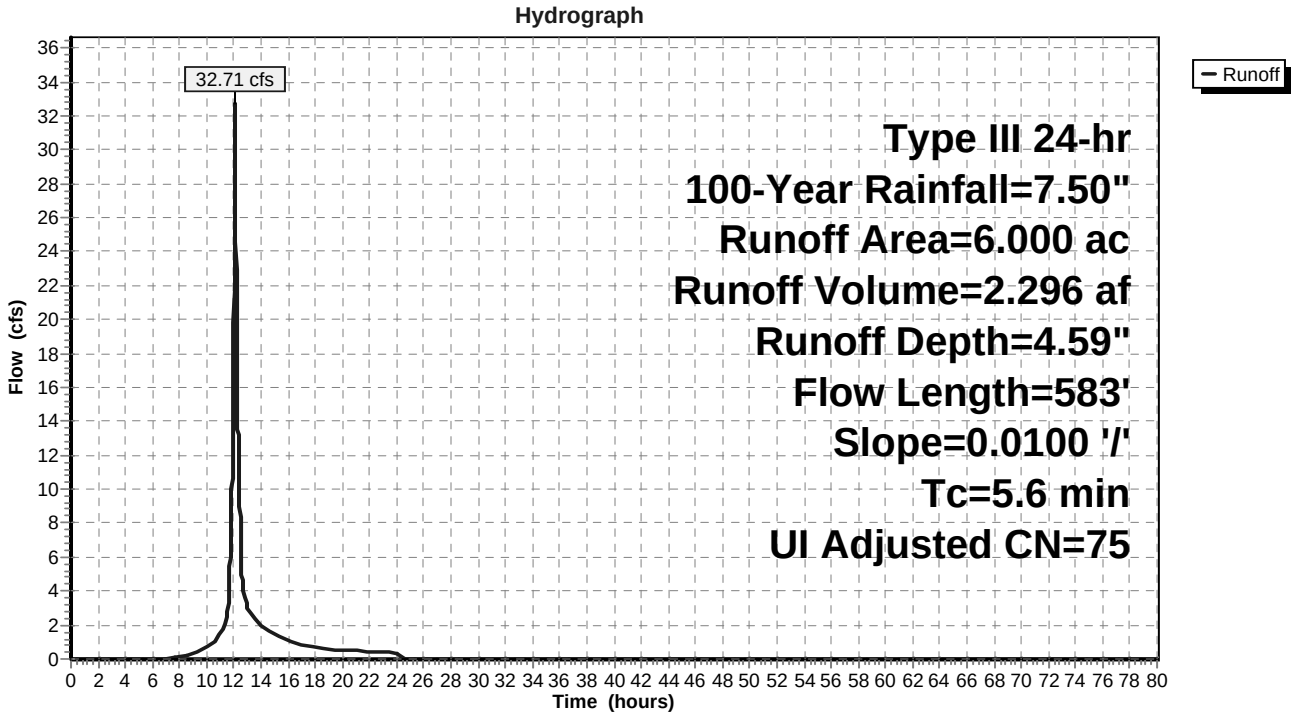
Runoff = 32.71 cfs @ 12.08 hrs, Volume= 2.296 af, Depth= 4.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.50"

	Area (ac)	CN	Adj	Description
	0.800	98		Unconnected pavement, HSG C
	1.700	61		>75% Grass cover, Good, HSG B
*	1.900	81		Artifical Turf
	0.900	71		Meadow, non-grazed, HSG C
	0.700	89		Gravel roads, HSG C
	6.000	77	75	Weighted Average, UI Adjusted
	5.200			86.67% Pervious Area
	0.800			13.33% Impervious Area
	0.800			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	128	0.0100	1.15		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
3.7	455	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.6	583	Total			

Subcatchment 4S: DA-3



Summary for Subcatchment 8S: DA-4

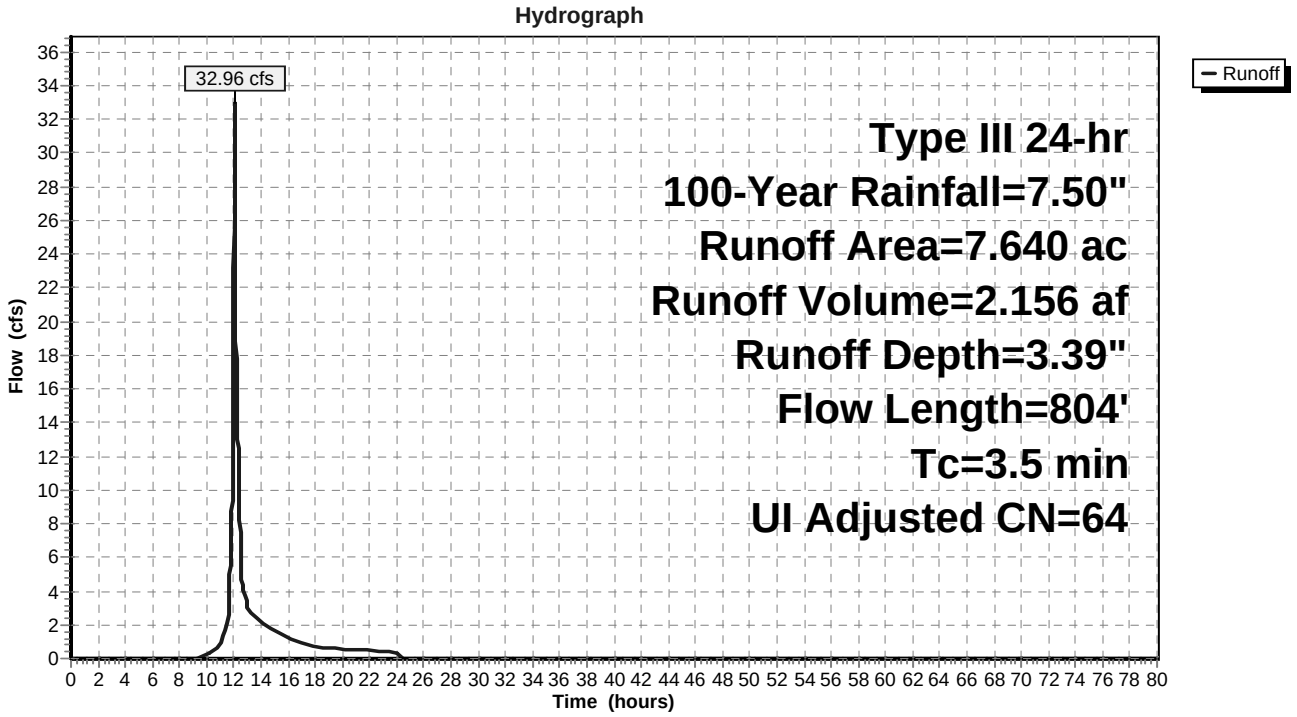
Runoff = 32.96 cfs @ 12.06 hrs, Volume= 2.156 af, Depth= 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.50"

	Area (ac)	CN	Adj	Description
	0.440	98		Unconnected pavement, HSG C
	1.000	61		>75% Grass cover, Good, HSG B
*	3.200	68		
	2.900	58		Meadow, non-grazed, HSG B
	0.100	89		Gravel roads, HSG C
	7.640	65	64	Weighted Average, UI Adjusted
	7.200			94.24% Pervious Area
	0.440			5.76% Impervious Area
	0.440			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	88	0.0100	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.1	166	0.0150	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	550	0.0150	8.85	354.20	**Channel Flow,** Area= 40.0 sf Perim= 18.0' r= 2.22' n= 0.035 Earth, dense weeds
3.5	804	Total			

Subcatchment 8S: DA-4



Summary for Reach 9R: Swale Cell 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 4.86" for 100-Year event
Inflow = 104.82 cfs @ 12.12 hrs, Volume= 8.798 af
Outflow = 100.70 cfs @ 12.15 hrs, Volume= 8.798 af, Atten= 4%, Lag= 2.0 min

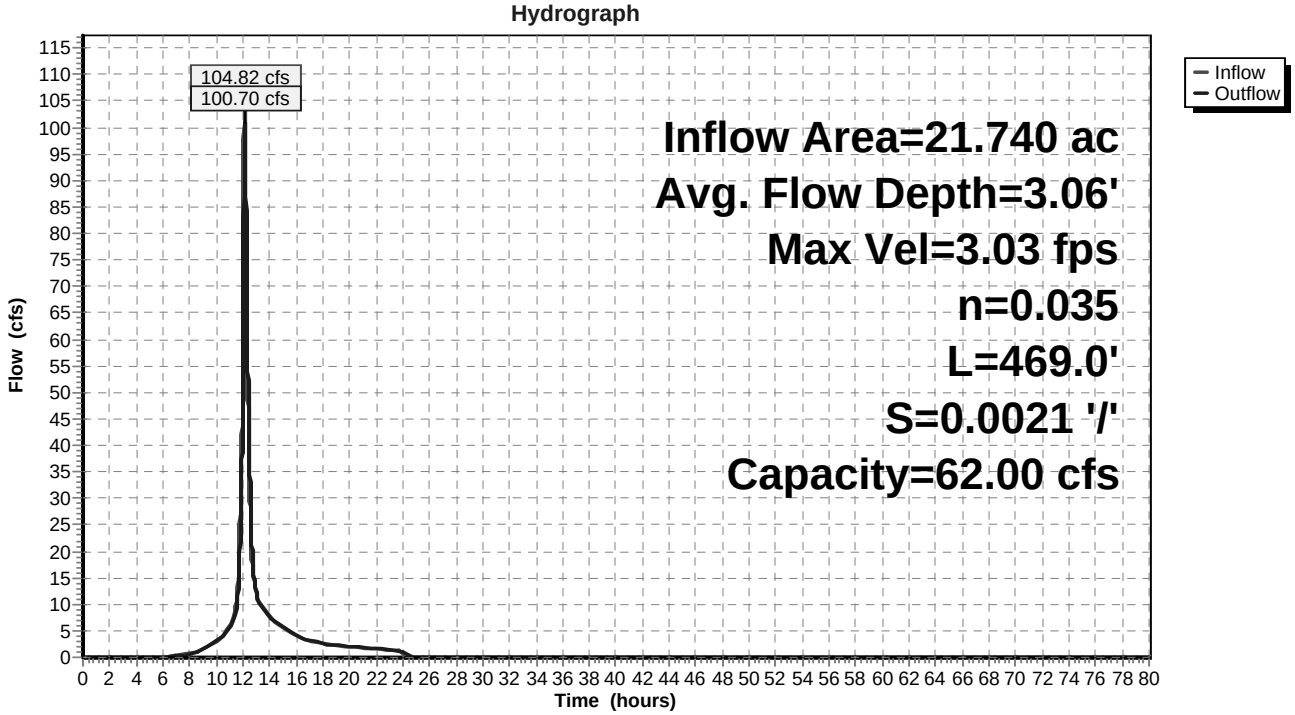
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 3.03 fps, Min. Travel Time= 2.6 min
Avg. Velocity = 0.75 fps, Avg. Travel Time= 10.5 min

Peak Storage= 15,568 cf @ 12.15 hrs
Average Depth at Peak Storage= 3.06'
Defined Flood Depth= 7.00' Flow Area= 82.3 sf, Capacity= 288.44 cfs
Bank-Full Depth= 2.25' Flow Area= 23.1 sf, Capacity= 62.00 cfs

8.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 12.50'
Length= 469.0' Slope= 0.0021 '/'
Inlet Invert= 4.00', Outlet Invert= 3.00'



Reach 9R: Swale Cell 1



Summary for Reach 10R: Swale Cell 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 4.80" for 100-Year event
Inflow = 126.73 cfs @ 12.13 hrs, Volume= 11.094 af
Outflow = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af, Atten= 7%, Lag= 3.3 min

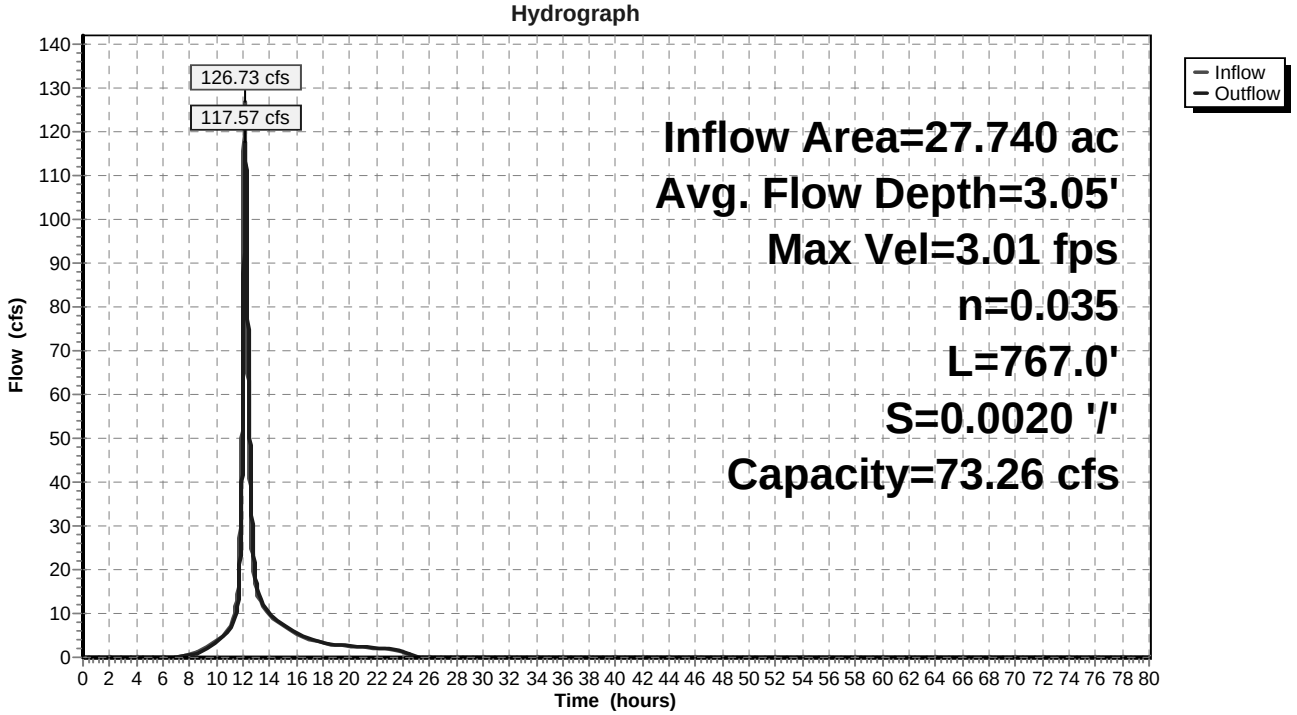
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 3.01 fps, Min. Travel Time= 4.3 min
Avg. Velocity = 0.62 fps, Avg. Travel Time= 20.5 min

Peak Storage= 29,994 cf @ 12.18 hrs
Average Depth at Peak Storage= 3.05'
Defined Flood Depth= 7.00' Flow Area= 96.3 sf, Capacity= 337.26 cfs
Bank-Full Depth= 2.25' Flow Area= 27.6 sf, Capacity= 73.26 cfs

10.00' x 2.25' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 1.0 '/' Top Width= 14.50'
Length= 767.0' Slope= 0.0020 '/'
Inlet Invert= 3.00', Outlet Invert= 1.50'



Reach 10R: Swale Cell 2



Summary for Pond 11P: OS-1

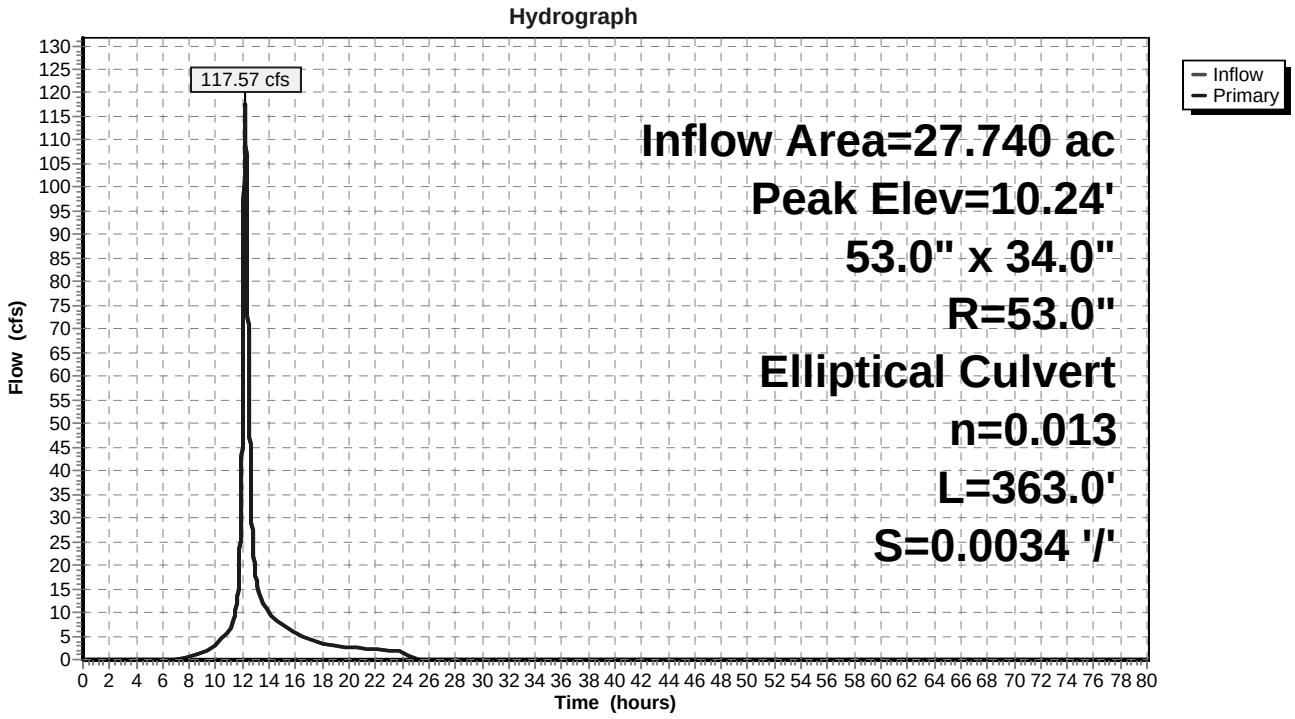
Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 4.80" for 100-Year event
Inflow = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af
Outflow = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af, Atten= 0%, Lag= 0.0 min
Primary = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 10.24' @ 12.18 hrs
Flood Elev= 5.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.25'	**53.0" W x 34.0" H, R=53.0" Elliptical Culvert** L= 363.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1.25' / 0.00' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 10.29 sf

Primary OutFlow Max=117.51 cfs @ 12.18 hrs HW=10.23' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 117.51 cfs @ 11.42 fps)

Pond 11P: OS-1



Summary for Pond 12P: Weir 1

Inflow Area = 21.740 ac, 40.84% Impervious, Inflow Depth = 4.86" for 100-Year event
Inflow = 100.70 cfs @ 12.15 hrs, Volume= 8.798 af
Outflow = 100.70 cfs @ 12.15 hrs, Volume= 8.798 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 8.53 hrs, Volume= 0.799 af
Secondary = 100.24 cfs @ 12.15 hrs, Volume= 7.999 af

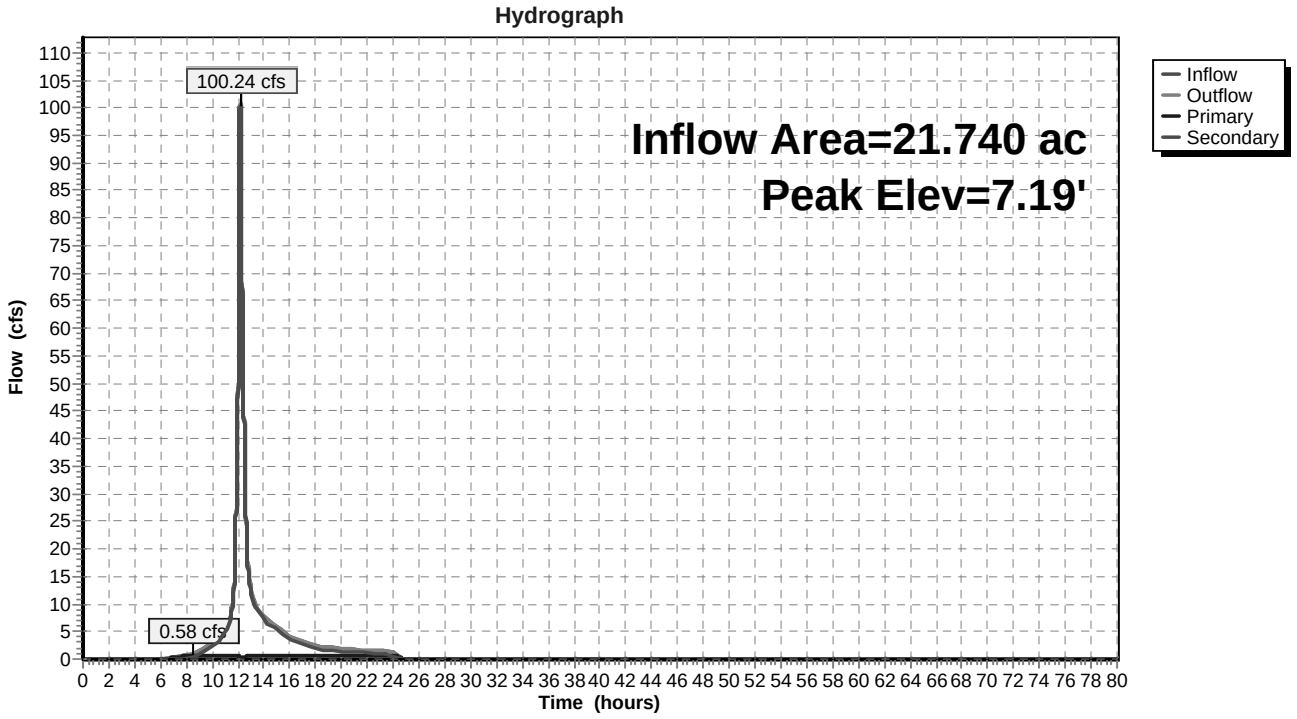
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.19' @ 12.16 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Secondary	5.00'	**10.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.58 cfs @ 8.53 hrs HW=5.05' TW=3.17' (Dynamic Tailwater)
└**1=Orifice/Grate** (Orifice Controls 0.58 cfs @ 6.61 fps)

Secondary OutFlow Max=100.17 cfs @ 12.15 hrs HW=7.19' TW=6.00' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 100.17 cfs @ 4.57 fps)

Pond 12P: Weir 1



Summary for Pond 13P: Weir 1

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 4.80" for 100-Year event
Inflow = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af
Outflow = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af

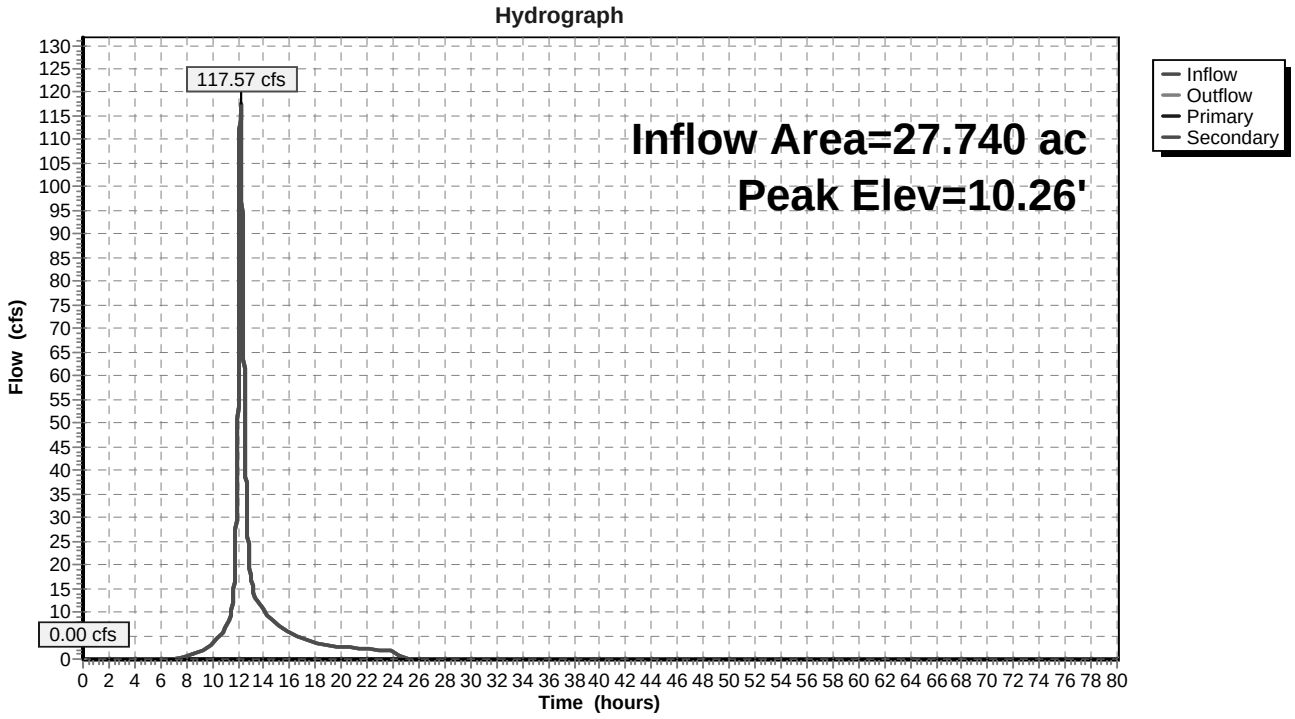
Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 10.26' @ 12.18 hrs
Flood Elev= 7.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	1.50'	**4.0" Vert. Orifice/Grate X 0.00** C= 0.600
#2	Secondary	3.50'	**12.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1.55' TW=1.25' (Dynamic Tailwater)
└**1=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=117.51 cfs @ 12.18 hrs HW=10.26' TW=10.23' (Dynamic Tailwater)
└**2=Sharp-Crested Vee/Trap Weir** (Weir Controls 117.51 cfs @ 1.45 fps)

Pond 13P: Weir 1

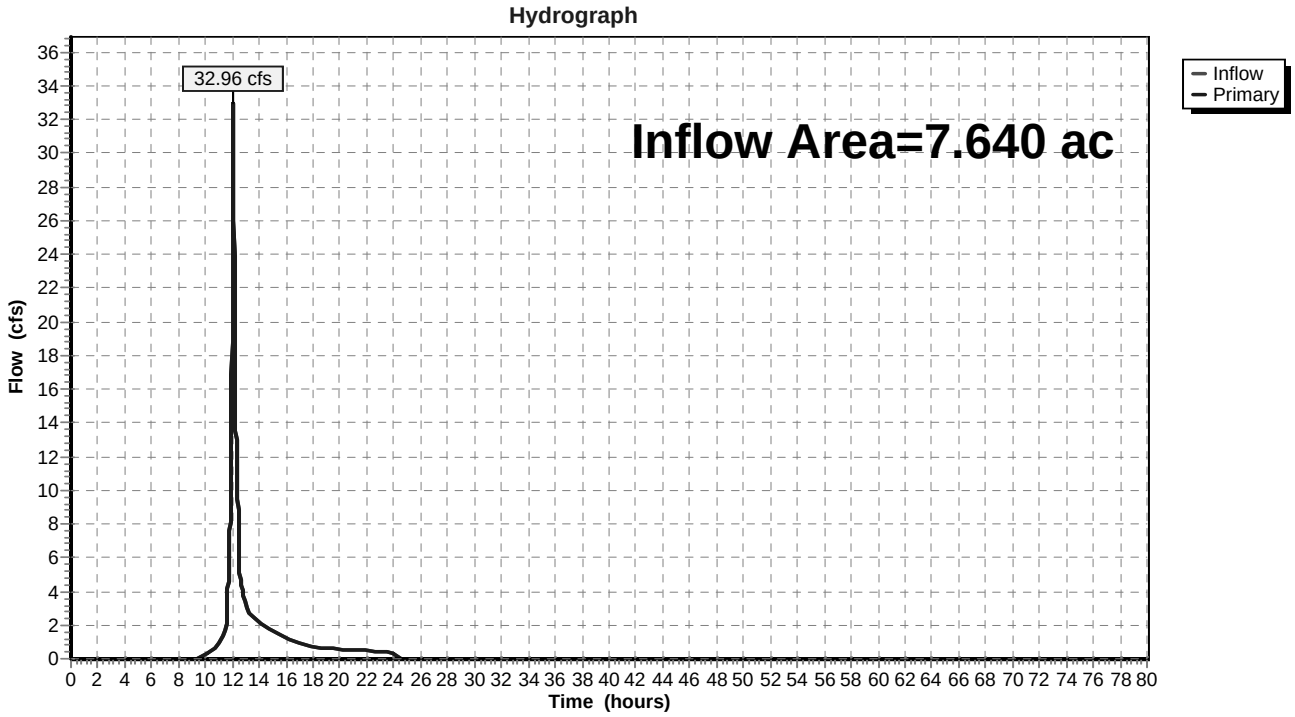


Summary for Link 6L: Design Line 1

Inflow Area = 7.640 ac, 5.76% Impervious, Inflow Depth = 3.39" for 100-Year event
Inflow = 32.96 cfs @ 12.06 hrs, Volume= 2.156 af
Primary = 32.96 cfs @ 12.06 hrs, Volume= 2.156 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 6L: Design Line 1

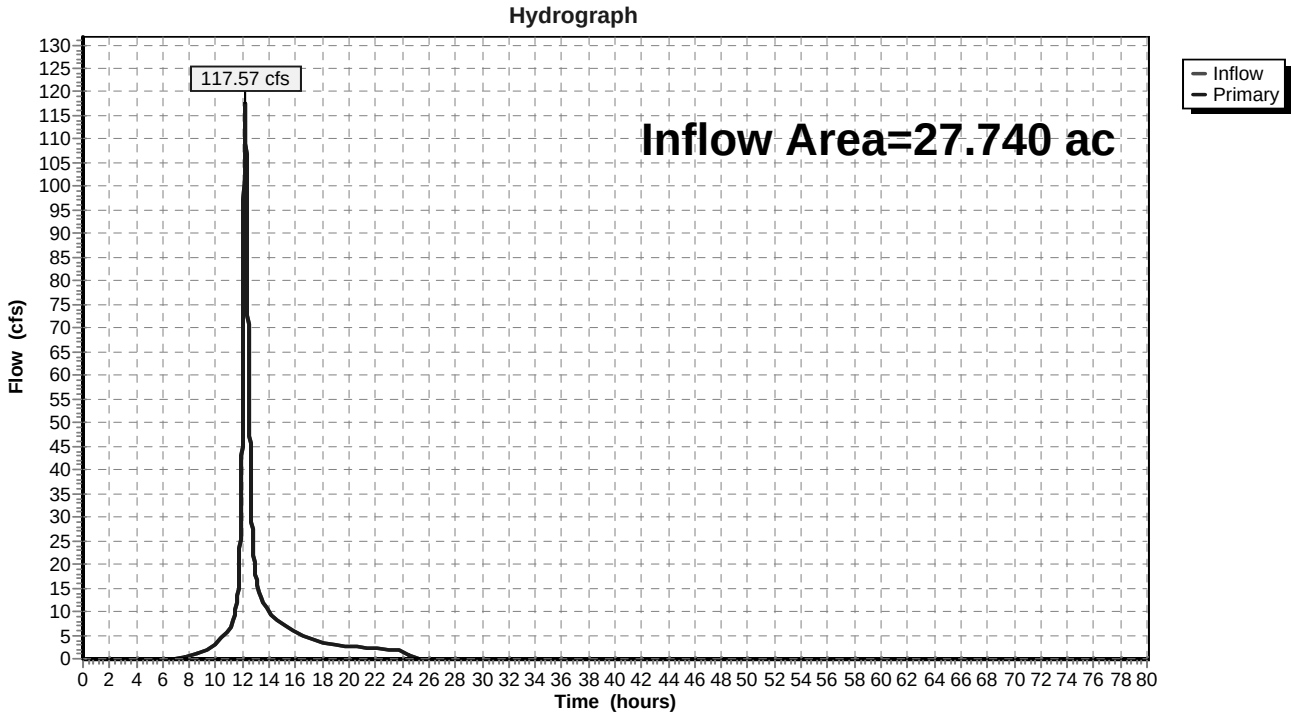


Summary for Link 7L: Design Point 2

Inflow Area = 27.740 ac, 34.89% Impervious, Inflow Depth = 4.80" for 100-Year event
Inflow = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af
Primary = 117.57 cfs @ 12.18 hrs, Volume= 11.094 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.01 hrs

Link 7L: Design Point 2



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Appendix I

Invasive Species Management Plan

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WSP | PARSONS BRINCKERHOFF

INVASIVE SPECIES MANAGEMENT PLAN

EAST PARCEL REDEVELOPMENT PROJECT

MARCH 2017



EXECUTIVE SUMMARY

Looking ahead to the successful Redevelopment of the East Parcel into the DPW headquarters and thriving civic space requires inventory of the historic and current condition, as well as a sustainable strategy for future land use. According to the U.S. Department of Interior and the New York Invasive Species Research Institute at Cornell University, "Invasive species represent one of the most significant threats to ecosystems, human, and animal health, infrastructure, the economy, and cultural resources." New York State is being proactive about invasive species identification and control, and has established Partnerships for Regional Invasive Species Management (PRISMs) throughout the state. The creation of these public-private partnerships is dramatically enhancing efforts to prevent and control the spread of invasive species. A New York State Invasive Species Task Force Report states: "By looking more at prevention, early detection, and rapid response as priorities for these funds, future invasive species problems and costs can be more effectively contained and minimized."

On November 21, 2016, WSP | Parsons Brinckerhoff performed a field investigation of the East Parcel site in support of the Final Environmental Impact Statement for Redevelopment. Dominance by invasive species was found along all site borders.

The buffer areas along the Pocantico River shore and the steeply sloped areas along the Eastern border of the site contain a number of invasive species that need to be removed in order to work toward a resilient ecosystem. Additionally, the wetland area along the western border is overruled by common reed which must be eradicated and controlled to ensure support to native flora and fauna. The invasive plants observed have the potential to impact forest regeneration, wetland restoration, and recreation in the East Parcel Area. Garlic mustard, for example, has been shown to reduce the viability of tree seedlings by exuding a toxic chemical into the soil. Japanese knotweed grows in dense patches along streams, which can alter stream habitat conditions. Contact with giant hogweed can have serious health consequences for humans.

The following report reflects the existing condition of aggressive species that threaten the biodiversity and quality of life of plants and animals in the local ecology. However, through a series of collaborative and determinative actions, including a planting plan composed of a diverse palette of native plant species, the East Parcel site in Sleepy Hollow will emerge as a renewed and enhanced Hudson River Valley Waterfront.

INVASIVE SPECIES MANAGEMENT GOALS AND IMPLEMENTATION

This plan sets forth the following goals, objectives, and actions for the management of invasive species:

1. Inventory and Map – Collect and map data on invasive species within the park.
2. Rank and Prioritize – Rank invasive species according to the feasibility of control and significance of impact on the environment.
3. Control/Remove – Select control methods and develop removal plans.
4. Restore – Restore treatment sites to an optimally functioning and resilient ecological state.
5. Maintain Native Ecological Systems – Monitor sites to prevent re-invasion and to identify and maintain areas free of invasive species.
6. Promote Stewardship – Train, educate, and provide outreach to staff and the public in order to provide support for successful invasive species control efforts.

GOAL 1: INVENTORY AND MAP

Knowing what and where invasive species are in the park is essential to begin to address potential threats. A standardized method of collecting and storing data on invasive species has been developed. The collection of complete inventory data is an ongoing process, therefore control can begin before the entire park is inventoried and mapped. The map included in this report identifies 5 zones along all borders of the site that are predominantly composed of invasive/aggressive plant species.

NORWAY MAPLE (*Acer platanoides*)



Management Goals:

- Prevent or limit seed production by targeting mature trees.
- Prevent saplings from growing to maturity.
- Avoid soil disturbance, which promotes seed germination.

Management Methods: Saplings and mature trees may be either cut or girdled, but they usually re-sprout from the stump. We recommend trying a type of girdling that has been used with success on tree-of heaven (*Ailanthus altissima*): In Winter or early Spring, partially girdle adult trees, by using a drawknife to remove approximately 12" of bark around the whole tree (but not the cambium underneath). This will kill the trees slowly, resulting in fewer stump sprouts.

TREE-OF-HEAVEN (*Ailanthus altissima*)



Management Goals:

- Remove trees in a way that minimizes root sprouting; kill root sprouts until root is dead.
- Remove seedlings until seed bank is depleted.
- Monitor annually to prevent re-establishment, especially if there are seed sources nearby.

Management Methods: In Winter or early Spring, partially girdle trees and sapling-sized stems, by carefully using a drawknife to remove 12-14" of bark (but not the cambium underneath), around the whole circumference of the trunk.

GARLIC MUSTARD (*Alliaria petiolata*)



Management Goals:

- Prevent establishment of new populations by annual monitoring and removal.
- Eradicate small patches by preventing seed production until seed bank is depleted.
- Limit spread and reduce density of large invasions by limiting seed production.
- Re-establish a diverse assemblage of native understory plants, including tree seedlings

Management Methods: In the Autumn, hand-pull the first-year rosettes when soils are moist, although pulling disturbs soil and may stimulate germination from the seed bank. Tamp soil firmly after pulling to minimize these effects. (By waiting until Autumn nature does most of the thinning for you mortality is high during the first year.)

ORIENTAL BITTERSWEET (*Celastrus orbiculatus*)



Management Goals:

- Prevent fruiting of mature vines.
- Completely remove seedlings and small vines by thorough excavation of roots
- Weaken and kill larger vines and patches by repeated cutting.
- For open fields, mow regularly and frequently (or pasture goats) for several years.
- Monitor un-infested or minimally-infested areas frequently for new seedlings.

Management Methods: First, cut all mature vines near the base, to prevent fruiting in that year and relieve stress to the tree (belowground competition will be reduced, and risk of wind damage reduced as vines dry and start to disintegrate). Cut large vines in July-August, before fruits mature, which also reduces sprouting (compared to cutting in Spring or Autumn) and depletes stored carbohydrates. Cutting the stem higher above the ground results in more sprouts.

GLOSSY BUCKTHORN (*Frangula alnus*)



Management Goals:

- Focus on occurrences in high-quality wetlands first: either remove, or keep at a low level with ongoing management.
- If it occurs in a rich fen, calcareous wet meadow, acidic bog, kettle shrub pool, or other rare wetland or wetland that may support rare species, consult with the NYS DEC or appropriate conservation organizations about management.
- Target mature shrubs first; then, remove seedlings until seed bank is depleted.

Management Methods: For large stands of glossy buckthorn, the best strategy is to remove the largest seed producing plants first. Removing plants before the seeds mature each year can significantly deplete the soil seed bank. Repeated cutting will reduce plant vigor and eventually kill the plant, but this method is probably the least efficient.

BELL'S HONEYSUCKLE (*Lonicera* × *bella*)



Management Goals:

- Remove seed sources (mature shrubs) in a way that minimizes root sprouting; kill root sprouts annually until root is dead.
- Where shrubs occupy forest understory and forest edge, focus on mature shrubs in edge (high-light environments) first, since their fruit production is much greater.
- Remove seedlings until seed bank is depleted.
- Monitor annually to prevent re-establishment, especially if there are seed sources nearby.
- Plant or facilitate re-establishment of native shrubs (particularly fruiting ones) such as viburnums, dogwoods, spicebush, and heath shrubs.

Management Methods: Hand-pull small to medium shrubs prior to fruiting. They have shallow root systems, but can re-sprout from small root fragments if any are left. Uprooting medium to large shrubs has a high success rate but is more labor-intensive than many other methods.

PURPLE LOOSESTRIFE (*Lythrum salicaria*)



Management Goals:

- Eradicate small/light infestations early.
- For large/dense patches, reduce height, density, and seed production.
- If purple loosestrife exists as a stable (not increasing) part of a diverse wetland flora, it may not need management.
- If it occurs in a rich fen, calcareous wet meadow, acidic bog, kettle shrub pool, or other rare wetland or wetland that may support rare species, consult with the NYS DEC or appropriate conservation organizations about management.

Management Methods: For small or sparse patches, hand-pull or dig with weed wrench when ground is wet. (Use a small piece of wood for leverage with the weed wrench in mucky conditions.) All plant parts can re-root and re-sprout, so bag and dispose of all material. Soil disturbance will promote loosestrife germination and re-sprouting, hand-pulling must be repeated until seed bank and viable root fragments are depleted (2-3 years).

MILE-A-MINUTE (*Persicaria perfoliata*)



Management Goals:

- Maintain wide, forested stream buffers and limit forest disturbance to prevent establishment.
- Monitor annually along stream banks, roads, and trails, to find and remove any new occurrence.
- Eradicate small patches by preventing seed production.

Management Methods: Hand-pull to remove small populations. Plants have shallow roots and are easy to pull. Wear gloves to protect from painful prickles. Aim to pull plants prior to prickles hardening, and definitely prior to any fruit production, which generally begins in June (35% of seeds in green fruit were viable**.** Dispose of pulled plants to prevent re-rooting. If any fruits are present on pulled or cut plants, bag whole plants and let sit in the sun for several weeks before landfilling.

COMMON REED (*Phragmites australis ssp. australis*)



Management Goals:

- For very small stands: Remove, and restore native plant community.
- For wetlands that are entirely dominated by common reed and where it cannot expand further, and where beneficial habitat functions or ecosystem services outweigh those that are detrimental (in view of management goals and potential non target impacts of management), for example in contaminated sites, or of sea level rise.
- For smaller stands and the edges of larger stands, where there is no immediate risk to a rare species or community: Monitor.
- For medium-large, dense stands where the goal is habitat improvement: Use a combination of the below methods to slow or prevent spread and create a more varied stand structure, including (for example) areas of shallow open water, forested or shrub swamp, low-density reed beds, and high-density areas for roosting birds and shelter for other animals.

Management Methods:

Very small stands: Hand-dig, being sure to remove the entire rhizome system; or smother by covering with heavy-duty black plastic (after cutting and removing stems) for at least two years; or cut stems repeatedly below water level (see below). Replant with native species. Dredging a pond can result in water too deep for common reed to re-colonize. In large wetlands, "scrapes" or large, shallow pools can be excavated to create marsh and water bird habitat. Mowing regularly (e.g., twice a year during the growing season for six years) and removing cut material can reduce reed biomass and increase plant species richness. However, mowing in wetlands can compact and damage soils. Cutting once per year in June (with a hand-held brush-cutter) and removing cut material resulted in reduced reed cover and increased cover of other plants.

JAPANESE KNOTWEED (Polygonum spp.)



Management Goals:

- Prevent establishment of new populations by annual monitoring of key areas and hand digging new sprouts.
- Eliminate small patches by repeated cutting.
- Reduce vigor and density of large patches and limit seed production.
- Limit spread by carefully disposing of all cut material.

Management Methods: Prevent establishment of new populations by annual monitoring and treatment of riparian areas and roadsides. After flood events, survey the floodplain and stream channel the following summer and hand-dig any new plants sprouting from fragments (loosen soil with spade and carefully excavate entire root/rhizome by hand – they will mostly belong). Survey

again the second spring after the flood and repeat. Knotweed fragments can remain viable for over a year. Also, roots/rhizomes remain small enough into the second spring to easily hand-dig. ☐ Disposal of cut material: do not shred or home compost. Cut stems can be piled in a paved area to dry (not in a floodplain) and then burned or else bagged and landfilled.

GOAL 2: RANK AND PRIORITZE

The following list of species observed on site are typically found in local invasive plant lists. Additional regional information available via the Lower Hudson Partnership for Regional Invasive Species Management Plan Data.

- Norway maple (*Acer platanoides*)
- Tree-of-heaven (*Ailanthus altissima*)
- garlic mustard (*Alliaria petiolata*)
- Japanese barberry (*Berberis thunbergii*)
- Oriental bittersweet (*Celastrus orbiculatus*)
- black swallowwort (*Cynanchum louiseae*)
- smooth buckthorn (*Frangula alnus*)
- Bell's honeysuckle (*Lonicera* × *bella*)
- purple loosestrife (*Lythrum salicaria*)
- stiltgrass (*Microstegium vimineum*)
- mile-a-minute weed (*Persicaria perfoliata*)
- common reed (*Phragmites australis*)
- Japanese Knotweed (*Polygonum cuspidatum* and *P.* × *bohemica*)
- Multiflora rose (*Rosa multiflora*)

GOAL 3: CONTROL/REMOVE

While eradication of invasive plants may be desirable, it is not always feasible as a management goal. Controlling existing populations to prevent their spread and quickly treating new infestations is usually the most practical and cost-effective goal. For most invasive plants there are a variety of effective control measures. Alternative control methods that have been used successfully elsewhere may not be the most suitable one for the current site. Selecting the most appropriate method will depend on the invasive plant species, the size of the invasion, surrounding environmental conditions, and the long-term management objectives. We have divided the control options into three categories: mechanical, biological, and chemical. In some instances several control methods may be combined. Regardless of the control method, repeated treatment for many years is often required to deplete the seed bank.

Removal of invasive plants often results in disturbance of the soil or large areas of bare soil where native vegetation has been displaced. In many cases it will be necessary to replant the area with native species. When seeding is completed it may be useful to plant a short-lived cover crop such as annual rye or oats to compete with the weedy species and control erosion as the native seedlings are becoming established.

MECHANICAL CONTROL:

Mechanical methods include prescribed burning, pulling, mowing, cutting, and other techniques that physically remove all or part of the plants. It is important to minimize soil disturbance as much as possible when using mechanical control because disturbance encourages invasive plant establishment. In general, mechanical control is most feasible for small invasions because of the intensive effort required. Depending on the species, it may be necessary to remove all plant material from the site and dispose of it by burning or burying very deeply to prevent roots or stems from re-sprouting. Mechanical control can be done by hand or using common tools such as shovels, loppers, mowers, and saws. Weed wrenches are specialized tools designed specifically for pulling plants and are especially useful for trees and shrubs.

BIOLOGICAL CONTROL:

In biological control, a plant's natural enemies, usually insects or diseases, are imported and released to control the invasive species. Before biological control agents are approved for use in the U.S. they must go through years of testing to ensure they attack only the invasive plant and do not have a negative effect on other plants or animals. At the time of writing, purple loosestrife is the only species for which biological control has been approved.

CHEMICAL CONTROL:

Chemical control may be appropriate when the infestation is large or when there are no other effective control methods known. Herbicides are most often either sprayed, brushed or wicked on the foliage, basal bark or cut stumps or stems of target plants. Regardless of which technique is chosen, the following guidelines should be used:

• Always carefully read and follow all label instructions. It is against the law to do otherwise.
• Use the safest effective herbicide at the safest time.
• Use appropriate personal protective equipment while working with herbicides.
• Always apply herbicide by working away from areas already treated.
• Do not over-apply chemical to the point of run-off from leaves, stems or stumps.
• Do not spray in windy conditions.
• Warn others by placing herbicide warning signs around the perimeter of the treated area.

WSP | Parsons Brinckerhoff does not endorse any particular herbicide or manufacturer, and therefore trade names are generally not used in the control recommendations.

- **Foliar Treatments**

Herbicides are applied to green leaves with a hand sprayer, sponge applicator, or wick. Herbicide should be applied uniformly, ensuring that all the leaves are thoroughly wetted but not dripping to avoid contact with non-target species. Spray applications will usually involve mixing a surfactant/dispersal agent with the herbicide; be sure to follow label directions. If label recommendations allow, colorants or marker dyes may be added to assist in proper herbicide application.

- **Cut-Stump or Cut-Stem Treatments**

Herbicide is applied to freshly cut trunks or stems with a hand held sprayer, brush, sponge applicator or contact solution bottle. Herbicide should be applied as soon as possible after cutting. For woody plants, only the cambium layer just inside the bark needs to be treated, not the entire stump. Trees and shrubs should generally be cut at the end of the growing season so that chemicals will be actively absorbed into the stump, although many species may be treated in the winter. Winter application is best done with temperatures are above freezing to maximize translocation.

- **Basal Bark Treatments**

Herbicide is applied in a ring around an uncut trunk or stem. In general, it should be applied in a 6 – 18 in. band around the entire trunk approximately 6 – 12 in. from the base of the plant. Often the herbicide is mixed with horticultural oil to increase penetration through the bark, but follow label instructions. The effectiveness of this treatment may not be consistent on trees larger than 6 inch in diameter at chest height.

- **Note for Plants with Flowers, Fruits, Seeds, Spores or Bulbils, and Where Vegetation is Viable**

While plant removal is best done before a plant has the opportunity to reproduce, do not underestimate the value of removing flowers, seeds and other reproductive material. Collect flowers, seed pods, tubers, and loose seeds when possible; incinerate if possible or "bag & bake."

GOAL 4: RESTORE

A briefing on safety and the restoration, including how the plants will be distributed along with planting requirements such as depth and watering, will occur on site. A site visit will be performed to assess the success of the replanting a month or so following the work. A second planting may be necessary if planting more than one species or if seasonality plays a role in plant availability or growth requirements. Planning for the eventual replanting of grasses, shrubs or tree saplings once eradication is complete will be a part of the overall site specific removal plan. The northern portion of the East Parcel adjacent to that portion of the DeVries Park where the Pocantico River is located will include a proposed planting plan that will include native species.

GOAL 5: MAINTAIN NATIVE ECOLOGICAL SYSTEMS

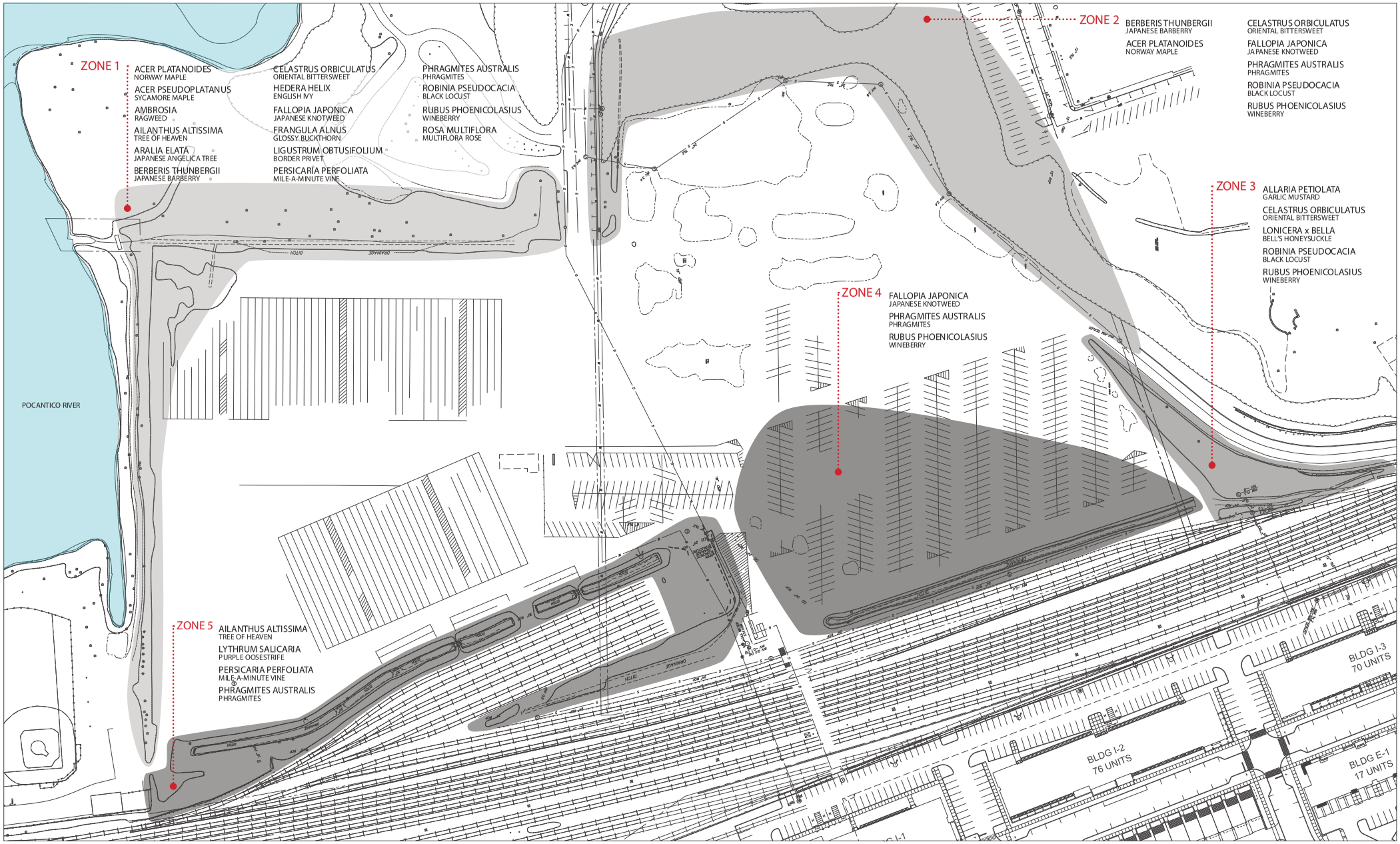
Maintaining native ecological systems will be achieved by preventing re-introductions of invasive species in areas where removal/control has taken place, and stopping new invasions of invasive species as they occur through an Early Detection and Rapid Response Program.

A Monitoring Schedule will include the previous year(s) removal plots and their monitoring dates, as well as updating the schedule with the monitoring dates for this year's removal/control plots. A quick site check several weeks post-removal will be done to gauge the frequency at which monitoring will be planned in subsequent years and to assess the plot for reinvasion of the same or possibly additional invasive species. This site visit will also be used to assess erosion at the site and native plant re-growth.

GOAL 6: PROMOTE STEWARDSHIP

Information about invasive species should be included in park kiosk panels, brochures, flyers, and newsletters to raise the overall level of awareness and promote participation and stewardship. The distribution of information on early detection is especially important. The sooner a new infestation of an invasive species is reported the less time and effort is needed to control and eradicate.

Invasive species management is not done in a void. It is performed in the context of the park, its neighbors and the surrounding land. There are many groups actively working on invasive species issues who could become involved with the implementation of this plan.



Riverfront Development Concept Plan for the East Parcel
Sleepy Hollow, NY

N

60 0 30 60 120

graphic scale at 22" x 34"
1" = 60'

Landscape Plan - Existing Invasive Species Zones
03.09.17

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Appendix J

DEC Support Documents

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DECISION DOCUMENT

Former General Motors North Tarrytown
Brownfield Cleanup Program
Sleepy Hollow, Westchester County
Site No. C360070
June 2012



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Former General Motors North Tarrytown
Brownfield Cleanup Program
Sleepy Hollow, Westchester County
Site No. C360070
June 2012

Statement of Purpose and Basis

This document presents the remedy for the Former General Motors North Tarrytown site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Former General Motors North Tarrytown site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

For OU: 01 and 02

The elements of the selected remedy are as follows:

With the completion of interim remedial measures (IRMs) to address soil and groundwater contamination on the land-based portion of the site, this alternative relies on site-wide institutional and engineering controls (IC/EC) previously identified for the IRMs to address the remaining contamination in OUs 1 and 2 on-site and the dredging of an area of the Hudson River to address off-site metals contamination.

Specifically, this alternative consists of implementing site-wide ICs/ECs, as described in the July 2007 IRM Decision Document, to mitigate direct contact with soil and historic fill materials that exceed 6 NYCRR Part 375 SCOs for restricted residential use. This alternative builds on the remedial actions that have already been taken to remove contaminated soil and historic fill and address contaminated groundwater through in-situ treatment.

The elements of the proposed remedy are as follows:

1) A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

• Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
• Reducing direct and indirect greenhouse gas and other emissions;
• Increasing energy efficiency and minimizing use of non-renewable energy;
• Conserving and efficiently managing resources and materials;
• Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
• Maximizing habitat value and creating habitat when possible;
• Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
• Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2) Removal of sediment will occur over an approximately 0.8 acre portion of the Hudson River near Outfall OF-1 (Figure 3). The removal area will extend 150 feet upstream and downstream of the outfall and will be bounded by the shoreline and the existing Tarrytown Harbor channel. Removal will extend to cut elevations of approximately 17.5 feet below mean sea level. This dredging will maximize mass removal based on remedial investigation sampling results and a graphical evaluation of the data and will remove approximately 4,400 cubic yards of metals contaminated sediment. The freshwater lowest effect levels established in the NYSDEC Technical Guidance for Screening Contaminated Sediments would be met within the delineated removal area to a significant depth (4-10 ft). To provide environmental controls, turbidity curtains will be used and water quality monitoring will be conducted during the sediment removal operations. Verification samples will be collected to document the quality of sediments left in-place following dredging.

3) Following removal, dredged sediment will be placed on a pre-constructed staging area on the West Parcel. Dredged material will be segregated to remove debris and material not suitable for disposal and staged to facilitate dewatering, stabilization, and sampling for waste characterization and evaluation of treatment and disposal requirements. Water generated during the dredging and dewatering activities will be treated onsite using a portable water treatment system. Treated water will then be discharged to the Hudson River.

4) The dredged area of the Hudson River will be backfilled with in-kind material; likely sand to within 2 feet of the final grade and 2 feet of fine material to the final grade on top of the sand. The final elevations of the restored dredged area will be the same as it was prior to dredging activities. The habitat zones disturbed during these remedial activities will be restored to current conditions.

5) During the Hudson River sediment dredging, a 30 foot section of the 48-inch storm sewer that discharges at OF-1 will be cleaned out to remove accumulated sediments. It is estimated that this cleanout will extend from the outfall to the first upstream manhole (approximately 30 feet). The sediment will be placed in the West Parcel staging area where it will be sampled for waste characterization purposes prior to disposal. In addition, a site-wide storm sewer inspection, including the collection of any necessary sediment samples for laboratory analysis, will be completed during the cleanout of the 48-inch storm sewer to determine sediment removal from

other areas of the system that may be required to meet the remedial action objectives and avoid recontamination of the dredged area.

6) Until site redevelopment occurs, the existing building slabs and pavement at the site will form the site cover, where there is currently no exposed surface soil. A site cover will be maintained as a component of any future site development, which will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

7) Imposition of an institutional control in the form of an environmental easement for the controlled property that:
(a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
(b) allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
(c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
(d) requires compliance with the Department approved Site Management Plan.

8) A Site Management Plan is required, which includes the following:
a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement, discussed in Paragraph 7 above.

Engineering Controls: The proposed remedy includes the Engineering Controls outlined in the July 2007 IRM Decision Document. This includes a demarcation barrier over soil or historic fill material that does not meet 6 NYCRR Part 375 SCOs for unrestricted use, a final barrier cap system, and mitigation measures to address potential intrusion of methane and volatile organic vapors into future overlying buildings.

This plan includes, but may not be limited to:
(a) an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
(b) descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
(c) a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

(d) provisions for the management and inspection of the identified engineering controls;
(e) maintaining site access controls and Department notification; and
(f) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
(a) monitoring of groundwater to assess the performance and effectiveness of the remedy;
(b) a schedule of monitoring and frequency of submittals to the Department; and
(c) monitoring for vapor intrusion for any buildings occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.



6/8/2012

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

Former General Motors North Tarrytown
Sleepy Hollow, Westchester County
Site No. C360070
June 2012

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comments on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

Warner Library
Attn: Reference Librarian
121 North Broadway
Tarrytown, NY 10591
Phone: (914) 631-7734

NYSDEC Region 3 Office
Attn: Michael Knipfing
21 South Putt Corners Road
New Paltz, NY 12561
Phone: (845) 256-3154

Village of Sleepy Hollow
Attn: Village Clerk
28 Beekman Avenue
Sleepy Hollow, NY 10591
Phone: (914) 366-5106

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Former General Motors North Tarrytown site is located at 199 Beekman Avenue in an urban area within the Village of Sleepy Hollow (Figure 1). The site occupies approximately 96.5 acres and is positioned along the eastern shore of the Hudson River. The site is approximately one-half mile west of the intersection of Beekman Avenue and New York State Route 9.

Site Features: The Site is comprised of three, non-contiguous parcels: 1) former main assembly plant area referred to as the West Parcel (approximately 66.2 acres); 2) eastern parking lot referred to as the East Parcel (approximately 28.3 acres); and 3) former salaried employee parking lot referred to as the South Parcel (approximately 1.7 acres). The West and East Parcels are bisected by an active passenger and freight rail corridor. Two large manufacturing buildings were demolished in 1999 from the West Parcel leaving two large concrete building slabs. The majority of the remainder of the site is covered with an asphalt parking surface. The Pocantico River borders the East Parcel to the north and discharges into the Hudson River approximately 1,000 feet upstream of the site.

Current Zoning/Use(s): The site is currently inactive and zoned for industrial land use. The site is located in a mixed industrial, commercial, residential, and parkland area. The commercial center for the Village of Sleepy Hollow is less than 0.5 miles east of the Site. Lands immediately southeast and east of the Site are primarily residential. Public parklands surround the northern borders of the Site. Kingsland Point Park of Westchester County abuts the northwest border of the Site. The Tarrytown Lighthouse, which is listed on the National Register of Historic Places, is located in the Hudson River immediately west of the Site and is accessible to the public through Kingsland Point Park.

Historic Use(s): Until approximately 1830 when a brickyard was established at the site, the property was undeveloped or used as farmland. In 1885, the Rand Drill Company acquired the

abandoned brickyard property and the facility was used to manufacture percussion rock drills until approximately 1909. Between 1899 and 1914 the north side of the property (adjacent to Kingsland Point) was used for vehicle manufacturing by the Mobile Company of America (Mobile) and the Maxwell Briscoe Company (Maxwell Briscoe). The Chevrolet Motor Company (which later became a division of GM) originally acquired the former Maxwell Briscoe Property and automobile manufacturing facility in 1914. Between 1914 and 1996, GM assembled automobiles at the Site. This included two manufacturing buildings (the Body Plant and the Chassis Plant) along with support operations consisting of a powerhouse, petroleum bulk storage tanks, a wastewater pretreatment facility, a water storage tank, and miscellaneous day shelters for equipment and personnel. Overall, approximately 90% of the site area has been developed on fill.

Operable Units: The site is divided into two operable units. Operable Unit 1 (OU1) includes the West Parcel (approximately 66.2 acres), the Hudson River, and the former salaried employee parking lot referred to as the South Parcel (approximately 1.7 acres). Operable Unit 2 (OU2) consists of the East Parcel (approximately 28.3 acres). The East Parcel was acquired by GM from the Village of North Tarrytown and was only used as a parking lot.

Site Geology and Hydrogeology: The majority of the site is developed on fill material with a highly variable composition and thickness. The fill is generally comprised of fine-to-coarse sand with lesser amounts of gravel, silt, and clay and varying amounts of coal cinder and ash fill cinders, along with brick fragments and other solid building materials. Areas of the site have also been filled in with Hudson River dredged material that consist of sand, silt, gravel, and shells. Fill, placed in a portion of the East Parcel by the Village of North Tarrytown, consists of municipal refuse and coal ash. The fill material is underlain in areas by soft organic clay and peat deposits associated with the Hudson and Pocantico Rivers. In other areas, layers of silt and clay underlies the fill. Beneath these deposits, a layer of compact granular glacial till (silty sand with gravel and occasional cobbles and boulders) overlies the bedrock with a thickness ranging from 1 foot to more than 10 feet. The underlying bedrock is a weathered to relatively sound gneiss. The depth to bedrock is extremely variable across the site, ranging from less than 20 feet below ground surface (bgs) to greater than 100 ft.

The groundwater table in the vicinity of the site is present in the fill and predominantly occurs at a depth of approximately 5 to 10 feet beneath the ground surface. In general, groundwater flow is to the west, toward the Hudson River.

Operable Unit (OU) Numbers 01 and 02 are the subject of this document.

A site location map is attached as Figure 1 and a map illustrating site features is attached as Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an

alternative that restricts the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Participant. The Applicant has an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- surface water
- soil
- sediment
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or

that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

For OU: 01

LEAD	MERCURY
CHROMIUM	TRICHLOROETHENE (TCE)
COPPER	PETROLEUM PRODUCTS
ZINC	

For OU: 02

METHANE	MERCURY

The contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil
- sediment
- soil vapor

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRMs have been completed at this site based on conditions observed during the RI. Figure 2 illustrates the IRM locations.

IRM - Lead Impacted Soils (PAOC 7 & 29)

The IRM activities completed within potential area of concern (PAOC) 7 and PAOC 29 included excavation and offsite disposal of grossly contaminated soil containing elevated concentrations of lead. In total, approximately 4,800 cubic yards of lead contaminated soil (greater than 5,000 parts per million) were removed from the PAOC 7 and PAOC 29 areas.

Following excavation, a demarcation barrier consisting of a black geotextile fabric was placed in the excavation to delineate soil left in place from the material used as backfill. The demarcation barrier was installed at the completed depth and horizontal extent of the excavations.

Following placement of the demarcation barrier, the PAOC 7 and PAOC 29 excavation areas were backfilled with imported 2-inch minus stone. Above the water table, the backfill was placed in 1-foot lifts and compacted to a minimum of 95 percent of the Standard Proctor density.

IRM - Chromium & TCE Impacted Area (PAOC 47)

The IRM activities completed within PAOC 47 included excavation and offsite disposal of soil contaminated with chromium and TCE that exceeded restricted residential and protection of groundwater soil cleanup objectives respectively. In total, approximately 3,700 cubic yards of chromium and TCE contaminated soil were removed from the PAOC 47 area.

Following excavation, a demarcation barrier was placed in the excavation to delineate soil left in place from the material used as backfill. The demarcation barrier consisted of a black geotextile fabric and was installed at the completed depth and horizontal extent of the excavation.

Following placement of the demarcation barrier, the PAOC 47 excavation area was backfilled with imported 2-inch minus stone. Above the water table, the backfill was placed in 1-foot lifts and compacted to a minimum of 95 percent of the Standard Proctor density.

To address residual TCE groundwater contamination, a total of 65 in-situ chemical oxidation (ISCO) injection wells were installed in the PAOC 47 area. The injection wells were used to introduce approximately 40,500 gallons of sodium persulfate and sodium hydroxide between April 23 and May 1, 2008. Following injection, groundwater quality monitoring was completed to confirm the overall effectiveness of the ISCO injection. Based on this groundwater monitoring, it was determined that additional ISCO injections were not necessary to address TCE groundwater contamination.

IRM - Former UST Area

The IRM activities completed in the former underground storage tank (UST) area included excavation and offsite disposal of approximately 6,400 cubic yards of petroleum contaminated soil that exceeded restricted residential soil cleanup objectives. During excavation of petroleum contaminated soil, the remaining portion of a UST (that was partially removed in 1998) and two additional USTs were encountered within the excavation area and subsequently removed and properly disposed of as part of the IRM.

Following excavation, a demarcation barrier was placed in the excavation to delineate soil left in place from the material used as backfill. The demarcation barrier consisted of a black geotextile fabric and was installed at the completed depth and horizontal extent of the excavation.

Following placement of the demarcation barrier, the former UST excavation area was backfilled with imported 2-inch minus stone and concrete millings. Above the water table, the backfill was placed in 1-foot lifts and compacted to a minimum of 95 percent of the Standard Proctor density.

To address residual petroleum groundwater contamination, a total of approximately 3,300 gallons of in-situ chemical oxididant (ISCO) were introduced into the former UST area. Following injection, groundwater quality monitoring was completed to confirm the overall effectiveness of the ISCO injection. Based on this groundwater monitoring, it was determined that additional ISCO injections were not necessary to address petroleum contamination.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:
Investigations have been completed to characterize the nature and extent of contamination associated with former industrial operations at the Former GM Assembly Plant site. The on-site investigations have focused on the west and east parcels and the off-site investigations have focused on the sediments and the benthic community adjacent to the site and residing in the Hudson River.

Investigations have identified widespread, low-level contamination across the Site at concentrations that exceed the standards, criteria, and guidance (SCGs) along with four specific areas containing significant levels of contamination. The contamination identified at the Site is associated with a combination of historical fill and past operations at the former GM Assembly Plant facility. The contaminants of concern on-site include metals (primarily lead and chromium), petroleum-derived VOCs and SVOCs, trichloroethene (TCE), and methane gas. The high concentrations of contaminants in the four areas of the site were addressed by a series of interim remedial measures (IRMs) in 2007. The cleanup goals for lead were 5,000 ppm for soil above the water table and 10,000 ppm below the water table and were based on an evaluation of site data. The cleanup goals for chromium and TCE were 180 ppm (restricted residential soil cleanup objective) and 0.47 ppm (protection of groundwater soil cleanup objective) respectively. The restricted residential soil cleanup objectives were used for the area with petroleum contamination. Contamination not exceeding the site specific cleanup goals remains at the site.

The off-site investigations in the Hudson River identified five metals, including chromium, copper, lead, mercury, and zinc as the primary contaminants of concern. These five metals were

detected in sediments at concentrations exceeding the respective sediment quality criteria. The highest concentrations were detected in the area of an outfall that historically discharged process water from the GM facility.

ON-SITE:
Soil:
Prior to remediation, lead contaminated soil was identified at two areas of the site at concentrations up to 167,000 ppm and above the restricted residential soil cleanup objective (400 ppm). The highest lead concentrations were consistently detected in areas referred to as Potential Area of Concern (PAOC) 7 and PAOC 29. Remediation activities completed as IRMs in these two areas removed approximately 4,800 cubic yards of lead constituting 74 percent of lead contamination. Lead remains in site soil/historic fill outside of the excavation areas at concentrations ranging from 26 ppm to 3,630 ppm above the water table and 80 ppm to 8,830 ppm below the water table. A final barrier cap system will be placed over the entire site to prevent direct contact with remaining lead contamination in soil.

Prior to remediation, chromium and TCE were detected at concentrations up to 3,750 ppm and 0.045 ppm respectively in soil samples collected from an area of the site formerly used as a process pit beneath the Body Plant (PAOC 47). IRM activities in 2007 removed approximately 3,700 cubic yards of chromium and TCE contaminated soil from the PAOC 47 area. Remaining at the site are chromium and TCE in site soil/historic fill outside of the excavation areas at concentrations ranging from 10.1 ppm to 94.6 ppm and 0.00037 ppm to 0.012 ppm respectively. The IRM effectively removed the contaminant source areas and met the cleanup objectives for chromium and TCE (180 ppm and 0.47 ppm respectively).

Prior to remediation in an area of a former 10,000 gallon No. 6 heating oil underground storage tank, viscous oil was present in the fill material and petroleum contaminants were present at concentrations significantly exceeding SCGs. The 2007 IRM removed three underground storage tanks and 6,400 cubic yards of petroleum contaminated soil from this area. No petroleum based volatile organic compounds or semi-volatile organic compounds were detected in soil samples collected outside of the excavation area at concentrations exceeding their respective soil cleanup objectives.

On the East Parcel, located on the eastern-side of the railroad corridor, mercury was detected at concentrations above the unrestricted soil cleanup objective of 0.18 ppm in 73 of 85 subsurface soil samples. In general, mercury was detected in soil from this part of the site at concentrations ranging from 0.05 ppm to 7.9 ppm, with one anomalous detection of 61.4 ppm. From the 85 soil samples collected from the East Parcel, mercury was detected at an average concentration of 1.58 ppm. The mercury detections occurred in an area of the site where the land was brought up to its current grade with material dredged from the Hudson River and other imported fill material. A final barrier cap system will be placed over the entire site to prevent direct contact with remaining mercury contamination in soil.

Groundwater:
Prior to remediation, TCE, chromium, and petroleum-derived VOCs and SVOCs were the primary contaminants of concern identified in site groundwater. TCE was detected beneath the

Body Plant (PAOC 47) at concentrations up to 75 ppb and exceeding the groundwater SCG of 5 ppb. Chromium was detected in groundwater from this area at concentrations up to 42,100 ppb and above the groundwater SCG of 50 ppb. The IRM in 2007 involved excavation of soil around the former process pit to remove the TCE and chromium source area, and the injection of chemical oxidants to reduce residual groundwater contamination. Following excavation and ISCO injection, TCE was detected at a maximum groundwater concentration of 8.5 ppb and slightly above the drinking water standard of 5 ppb. Chromium groundwater concentrations outside of the IRM treatment area range from non-detect to 466 ppb.

Groundwater sampling shows that petroleum-derived VOCs are no longer present in the remediated 10,000 gallon UST area and are present at low part-per-billion concentrations downgradient from this area. Natphalene, detected at a maximum concentration of 44 ppb and above the 10 ppb groundwater standard, was the VOC detected at the highest concentration downgradient of the former 10,000 gallon UST area. Fluoranthene was the SVOC detected at the highest concentration (68 ppb) and slightly above the groundwater standard of 50 ppb downgradient of the UST area. Overall, petroleum-derived VOCs and SVOCs, are effectively attenuated within the boundaries of the Site, approaching or meeting groundwater standards at the property line.

Although lead was a primary contaminant in site soil/fill material and required remediation, groundwater sampling across the site indicates that lead is not leaching from soil/fill material and impacting groundwater quality. Lead was detected at concentrations ranging from non-detect to 21.2 ppb in groundwater and below the groundwater standard of 25 ppb near PAOC 7 and PAOC 29 where lead contaminated soil/fill material was removed as part of IRMs.

Soil Vapor:
Methane gas was identified as a primary contaminant of concern for the East Parcel portion of the site due to the presence of the former village refuse area. Soil gas samples collected from the East Parcel area indicate the presence of high levels of methane beneath the asphalt covering the majority of the East Parcel. The overall distribution of the methane gas corresponds with the shape of the former municipal refuse area. Soil vapor sampling also identified elevated concentrations of methane in the northwest section of the West Lot (OU1). The presence of methane in this area is likely related to the decay of natural organic marsh deposits observed in soil borings advanced in this area.

OFF-SITE:
Sediments:
A series of investigations identified five metals, including chromium, copper, lead, mercury, and zinc in Hudson River sediments at concentrations exceeding the background screening levels and/or freshwater screening criteria. The highest concentrations were detected in a localized area near an outfall (OF-1) located along the southwest corner of the site. Specifically, in the immediate vicinity of OF-1, chromium, lead, and zinc were detected at the highest concentrations (148 ppm, 1,520 ppm, and 1,260 ppm respectively).

Special Resources Impacted/Threatened:
The Sediment Remedial Investigation (RI) report prepared by General Motors (GM) concluded that based on a weight-of-evidence evaluation the site contaminants present in Hudson River bulk sediments in close proximity to an outfall (OF-1), are not biologically available and are not toxic to the Hudson River benthic communities and no remedial action is necessary. The NYSDEC has reviewed the RI report and the sediment data, and does not agree with GM's conclusion. It is the Department's position that there is some impairment to fish and wildlife resources near the GM site. Although both parties still hold their position a settlement was negotiated agreeable to both the NYSDEC and GM that will allow this project to move forward. The settlement consists of GM's payment of $875,000 in damages for injuries to natural resources, pursuant to a settlement dated December 2010, and the removal of sediments at OF-1.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Access to the site is not restricted. Contact with contaminated soil or groundwater is unlikely unless an individual digs below the ground surface. Contaminated groundwater at the site is not used for drinking or other purposes and the surrounding community is served by a public water supply that obtains water from a distant source. People may come in contact with contaminants present in sediments while entering or exiting the river near the former outfall during recreational activities. Volatile organic compounds in the groundwater or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor for any future on-site development. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are summarized below. Table 1, included at the end of the Decision Document summarizes how each of the remedial action objectives will be achieved with the selected remedy.

For OU 01:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Sediment

RAOs for Public Health Protection

- Prevent direct contact with contaminated sediments.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Prevent releases of contaminant(s) from sediments that would result in surface water levels in excess of (ambient water quality criteria).
- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.
- Restore sediments to pre-release/background conditions to the extent feasible.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

For OU 02:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

For OU 01 and 02:

The elements of the selected remedy, as shown in Figure 3, for OU 01 and 02 are as follows:

With the completion of interim remedial measures (IRMs) to address soil and groundwater contamination on the land-based portion of the site, this alternative relies on site-wide institutional and engineering controls (IC/EC) previously identified for the IRMs to address the remaining contamination in OUs 1 and 2 on-site and the dredging of an area of the Hudson River to address off-site metals contamination.

Specifically, this alternative consists of implementing site-wide ICs/ECs, as described in the July 2007 IRM Decision Document, to mitigate direct contact with soil and historic fill materials that exceed 6 NYCRR Part 375 SCOs for restricted residential use. This alternative builds on the remedial actions that have already been taken to remove contaminated soil and historic fill and address contaminated groundwater through in-situ treatment.

The elements of the selected remedy are as follows:

1) A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:
• Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
• Reducing direct and indirect greenhouse gas and other emissions;
• Increasing energy efficiency and minimizing use of non-renewable energy;
• Conserving and efficiently managing resources and materials;
• Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
• Maximizing habitat value and creating habitat when possible;
• Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
• Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2) Removal of sediment will occur over an approximately 0.8 acre portion of the Hudson River near Outfall OF-1 (Figure 3). The removal area will extend 150 feet upstream and downstream of the outfall and will be bounded by the shoreline and the existing Tarrytown Harbor channel. Removal will extend to cut elevations of approximately 17.5 feet below mean sea level. This dredging will maximize mass removal based on remedial investigation sampling results and a graphical evaluation of the data and will remove approximately 4,400 cubic yards of metals contaminated sediment. The freshwater lowest effect levels established in the NYSDEC Technical Guidance for Screening Contaminated Sediments would be met within the delineated removal area to a significant depth (4-10 ft). To provide environmental controls, turbidity curtains will be used and water quality monitoring will be conducted during the sediment removal operations. Verification samples will be collected to document the quality of sediments left in-place following dredging.

3) Following removal, dredged sediment will be placed on a pre-constructed staging area on the West Parcel. Dredged material will be segregated to remove debris and material not suitable for disposal and staged to facilitate dewatering, stabilization, and sampling for waste characterization and evaluation of treatment and disposal requirements. Water generated during the dredging and dewatering activities will be treated onsite using a portable water treatment system. Treated water will then be discharged to the Hudson River.

4) The dredged area of the Hudson River will be backfilled with in-kind material; likely sand to within 2 feet of the final grade and 2 feet of fine material to the final grade on top of the sand. The final elevations of the restored dredged area will be the same as it was prior to dredging activities. The habitat zones disturbed during these remedial activities will be restored to current conditions.

5) During the Hudson River sediment dredging, a 30 foot section of the 48-inch storm sewer that discharges at OF-1 will be cleaned out to remove accumulated sediments. It is estimated that this cleanout will extend from the outfall to the first upstream manhole (approximately 30 feet). The sediment will be placed in the West Parcel staging area where it will be sampled for waste characterization purposes prior to disposal. In addition, a site-wide storm sewer inspection, including the collection of any necessary sediment samples for laboratory analysis, will be completed during the cleanout of the 48-inch storm sewer to determine sediment removal from other areas of the system that may be required to meet the remedial action objectives and avoid recontamination of the dredged area.

6) Until site redevelopment occurs, the existing building slabs and pavement at the site will form the site cover, where there is currently no exposed surface soil. A site cover will be maintained as a component of any future site development, which will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

7) Imposition of an institutional control in the form of an environmental easement for the controlled property that:
(a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
(b) allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
(c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
(d) requires compliance with the Department approved Site Management Plan.

8) A Site Management Plan is required, which includes the following:
a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement, discussed in Paragraph 7 above.

Engineering Controls: The proposed remedy includes the Engineering Controls outlined in the July 2007 IRM Decision Document. This includes a demarcation barrier over soil or historic fill material that does not meet 6 NYCRR Part 375 SCOs for unrestricted use, a final barrier cap system, and mitigation measures to address potential intrusion of methane and volatile organic vapors into future overlying buildings.

This plan includes, but may not be limited to:
(a) an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
(b) descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
(c) a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
(d) provisions for the management and inspection of the identified engineering controls;
(e) maintaining site access controls and Department notification; and
(f) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
(a) monitoring of groundwater to assess the performance and effectiveness of the remedy;
(b) a schedule of monitoring and frequency of submittals to the Department; and
(c) monitoring for vapor intrusion for any buildings occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



REFERENCE: BASE MAP USGS 7.5 MIN. QUAD., WHITE PLAINS, NY, 1967, PHOTOREVISED 1979.

2000' 0 2000'

Approximate Scale: 1" = 2000'



FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK

ALTERNATIVES ANALYSIS REPORT

SITE LOCATION MAP

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FIGURE
1

08/17/2010 SYRACUSE, NY-ENV/CAD-DJHOWES
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FIGURE 2
Site Features and Interim Remedial Measure Location Map



New York State
Department of Environmental Conservation

Division of Environmental Remediation

Map Details

Created in ArcGIS 9.3

Created by J. Pelton

Date of Last Revision: 6/6/2012

UNAUTHORIZED DUPLICATION
IS A VIOLATION OF APPLICABLE LAWS

Former GM Assembly Plant
Site # C360070

Westchester County
Village of Sleepy Hollow

DEC Contact:
J. Pelton

DOH Contact:
F. Navratil

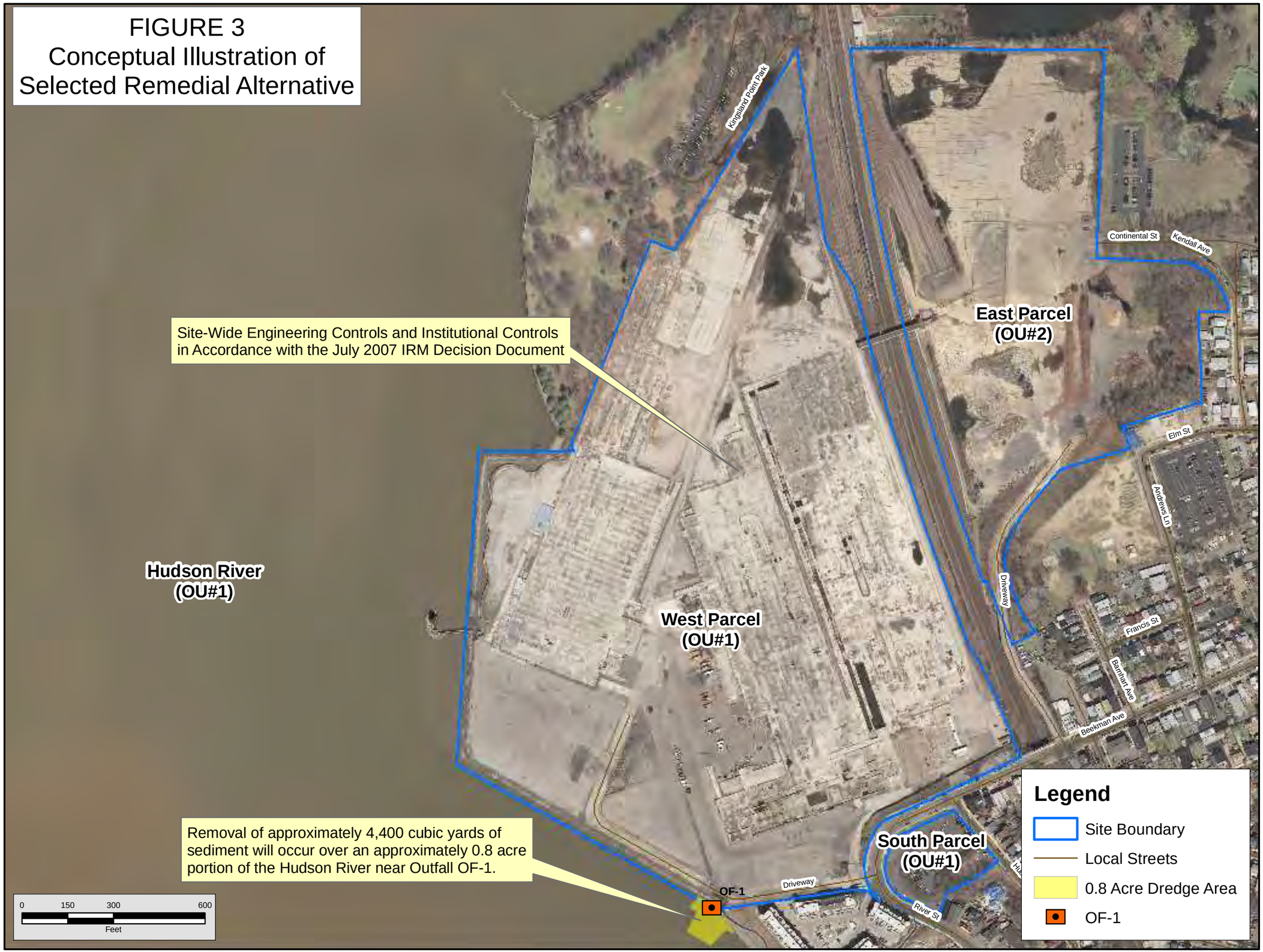
Spring 2003
Aerial Photography

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North American Datum 1983
UTM Zone 18N

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FIGURE 3
Conceptual Illustration of Selected Remedial Alternative



New York State
Department of Environmental Conservation

Division of Environmental Remediation

Map Details

Created in ArcGIS 9.3

Created by J. Pelton

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TABLE 1

SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES

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TABLE 1
SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES

FINAL DECISION DOCUMENT
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE

Remedial Action Objectives (RAOs) for Protection of Public Health and the Environment	Selected Remedial Actions for Protection of Public Health and the Environment
Groundwater RAOs for Protection of Public Health	
Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards	- Prohibit groundwater use as an Institutional Control - A Site Management Plan will include protocols to safely handle groundwater encountered during excavation activities.
Prevent contact with, or inhalation of volatiles, from contaminated groundwater	- Achieved by excavating source areas and injecting in-situ chemical oxidants as Interim Remedial Measures (July 2007 IRM Decision Document). - Institutional Controls/Engineering Controls with requirement that all buildings constructed on the site be designed and constructed to address potential for VOC vapors and methane intrusion and demonstrate effectiveness of mitigation controls. - A Site Management Plan will address inspection, testing and O&M of any active mitigation systems.
Groundwater RAOs for Environmental Protection	
Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable	- Achieved by excavating source areas and injecting in-situ chemical oxidants as Interim Remedial Measures (July 2007 IRM Decision Document).
Remove the source of ground or surface water contamination	- Achieved by excavating source areas and injecting in-situ chemical oxidants as Interim Remedial Measures (July 2007 IRM Decision Document).
Soil RAOs for Protection of Public Health	
Prevent ingestion/direct contact with contaminated soil	- Achieved by excavating source areas and injecting in-situ chemical oxidants as Interim Remedial Measures (July 2007 IRM Decision Document). - Implement Institutional Controls/Engineering Controls to cover the affected soil and fill with hard surfaces or a soil cap meeting applicable SCOs. - A Site Management Plan will include protocols to safely handle soil and fill materials that reside under the cover system to prevent future exposure potential.
Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.	- Achieved by excavating source areas and injecting in-situ chemical oxidants as Interim Remedial Measures (July 2007 IRM Decision Document). - Institutional Controls/Engineering Controls with requirement that all buildings constructed on the site be designed and constructed to address potential for VOC vapors and methane intrusion and demonstrate effectiveness of mitigation controls. - A Site Management Plan will address inspection, testing and O&M of any active mitigation systems.

TABLE 1
SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES

FINAL DECISION DOCUMENT
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE

Soil RAOs for Environmental Protection	
Prevent migration of contaminants that would result in groundwater or surface water contamination	- Achieved by excavating source areas and injecting in-situ chemical oxidants as Interim Remedial Measures (July 2007 IRM Decision Document). - Natural attenuation of onsite residual contamination. - A Site Management Plan will include groundwater monitoring.
Sediment RAOs for Protection of Public Health	
Prevent direct contact with contaminated sediments	- Achieved by excavating 4,400 cubic yards of metals contaminated sediments from the Outfall-1 (OF-1) area and restoring the dredged area with in-kind material.
Prevent surface water contamination which may result in fish advisories	- Achieved by excavating 4,400 cubic yards of metals contaminated sediments from the OF-1 area.
Sediment RAOs for Environmental Protection	
Prevent releases of contaminant(s) from sediments that would result in surface water levels in excess of (ambient water quality criteria)	- Achieved by excavating 4,400 cubic yards of metals contaminated sediments from the OF-1 area and restoring the habitat zones with in-kind material.
Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain	- Achieved by excavating 4,400 cubic yards of metals contaminated sediments from the OF-1 area and restoring the habitat zones with in-kind material.
Restore sediments to pre-release/background conditions to the extent feasible	- Achieved by excavating 4,400 cubic yards of metals contaminated sediments from the OF-1 area and restoring the habitat zones with in-kind material. - Achieved by removing potentially contaminated sediments from 48-inch storm sewer that discharges at OF-1.
Soil Vapor RAOs for Protection of Public Health	
Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site	- Achieved by excavating source areas and injecting in-situ chemical oxidants as Interim Remedial Measures (July 2007 IRM Decision Document). - Institutional Controls/Engineering Controls with requirement that all buildings constructed on the site be designed and constructed to address potential for VOC vapors and methane intrusion and demonstrate effectiveness of mitigation controls. - A Site Management Plan will address inspection, testing and O&M of any active mitigation systems.

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Remedial Investigation Report

General Motors LLC
Former General Motors
Assembly Plant Site
Sleepy Hollow, New York

VOLUME I of II

January 2012

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Certification Statement

I, Margaret A. Carrillo-Sheridan, P.E., certify that I am currently a New York State registered professional engineer, and that this *Remedial Investigation Report* was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Feb 2, 2012

Margaret A. Carrillo-Sheridan, P.E. Date
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Remedial Investigation Report

Former General Motors
Assembly Plant Site
Sleepy Hollow, New York

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Our Ref.:
B0064462

Date:
January 2012

ARCADIS

Raymond M. Kapp
Principal Scientist

Remedial Investigation Report

Former General Motors
Assembly Plant Site
Sleepy Hollow, New York

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Executive Summary

This Remedial Investigation Report (RI Report) has been prepared by ARCADIS on behalf of General Motors LLC (GM LLC), in accordance with Brownfield Cleanup Agreements (BCAs) with the New York State Department of Environmental Conservation (NYSDEC) for the investigation and remediation of the Former General Motors North Tarrytown Assembly Plant Site located at 199 Beekman Avenue, Village of Sleepy Hollow, New York (Site).

The Site is situated on the eastern shore of the Hudson River and occupies an area of approximately 96.2 acres within the Village of Sleepy Hollow. The Site is comprised of three, non-contiguous parcels: 1) the former main assembly plant area referred to as the West Parcel (approximately 66.2 acres); 2) the eastern parking lot referred to as the East Parcel (approximately 28.3 acres); and 3) the former salaried employee parking lot referred to as the South Parcel (approximately 1.7 acres).

The contemplated use of the Site is mixed commercial and restricted residential development, with public open space, including public access to the waterfront and municipal public works operations. The Site is located in the Village of Sleepy Hollow's RF – Riverfront Development Zoning district, which allows for a mixed use development of residential and commercial properties consistent with the RF zoning, as determined by the Village of Sleepy Hollow, lead Agency for State Environmental Quality Review (SEQR) of the proposed redevelopment of the Site (Findings Resolution adopted by the Village on July 24, 2007 and 2011 Amended Findings Resolution adopted January 25, 2011).

General Motors Corporation (GMC) and their development partner Roseland/Sleepy Hollow, LLC (Roseland) initiated formal NYSDEC review of Site environmental conditions in a Voluntary Cleanup Agreement (VCA) signed in November 2002. The VCA applied to the entire Site and included investigation of the Hudson River adjacent to the West Parcel. In June 2004, the project transitioned from the Voluntary Cleanup Program to the Brownfield Cleanup Program (BCP). As part of that transition, two separate BCAs were signed in May 2005, one for the East Parcel and the other for the West Parcel. The BCA for the West Parcel also includes the South Parcel and the Hudson River as an identified offsite area of interest to the West Parcel. On April 1, 2009, Roseland terminated its participation in the BCAs and the Site redevelopment. On June 1, 2009, GMC filed for bankruptcy. On July 10, 2009, in accordance with an order from the Bankruptcy court, GMC changed its name to Motors Liquidation Company (MLC) and sold its interest in the Sleepy Hollow site to a newly formed

company, General Motors LLC (GM LLC). GM LLC signed two BCAs in 2010 that superseded the two previous BCAs signed by GMC and Roseland.

On June 7, 2011 the Village of Sleepy Hollow adopted a resolution granting a Special Permit and Approving the Riverfront Development Concept Plan for the Lighthouse Landing Riverfront Development. In accordance with the Special Permit, the East Parcel will be donated to the Village of Sleepy Hollow for municipal uses and a portion may be donated to Historic Hudson Valley for their use as an expansion of Philipsburg Manor. The West and South Parcels will become a mixed commercial-residential development, with public open space, including public access to the waterfront. These West and South Parcel open spaces will also be donated to the Village of Sleepy Hollow.

Prior to GMC purchasing the West Parcel in 1914, the parcel was partially developed with urban fill consisting largely of coal cinders and various aggregate mixtures to extend the waterfront into a portion of the former Pocantico Bay. Industrial operations prior to GMC's purchase included a brickyard, a percussion rock drill factory, and two facilities where gasoline and steam-powered automobiles were manufactured and assembled. GMC demolished most of the early industrial buildings during the 1920s, filled in the remainder of Pocantico Bay with dredge spoils, and constructed an automotive assembly complex that continued to expand and operate until operations ceased in 1996. In the East Parcel, purchased by GMC in 1960 for parking, the former Village of North Tarrytown (Sleepy Hollow) operated a small (<10 acres) municipal refuse and ash landfill during the 1920s and 1930s. The South Parcel, developed on a natural hillside, was previously residential.

Prior to the RI, several environmental investigations were performed to characterize the nature and extent of contamination associated with historical site development and former industrial operations. These studies were conducted by GMC between 1996 2000 and by Roseland in 2002. The GMC and Roseland findings were used to prepare an Investigation Work Plan (IWP) in 2003, which specified additional sampling to complete the Site characterization pursuant to the VCA program. A separate IWP was prepared and implemented by GMC for Hudson River sediments in 2004, the results of which will be presented in a future report.

The RI was completed in two major phases in 2003-2004. Following the first phase, a Conceptual Remedial Action Work Plan (RAWP) prepared within the context of the VCA for the Site, was presented to the NYSDEC and formed the basis for the second phase of investigations. The Conceptual RAWP incorporated both site-wide

engineering and institutional controls (primarily in the form of a barrier cap), and location-specific remediation, including source removal. Location-specific remediation was proposed for several areas that contain sources of petroleum and/or volatile organic compound (VOC) contamination, as well as areas that exhibited higher than usual levels of lead or chromium (as compared to the remainder of the Site). The collective findings of the RI and previous investigations will be used to prepare remedial documents, including a Remedial Work Plan (RWP), and to provide the environmental remediation and protection specifications that will support the intended site uses.

Through the collective previous site investigations and the RI, representative sampling has been performed throughout the East and West Parcels, encompassing 47 PAOCs and a known petroleum spill location, as well as all onsite areas containing historic fill and two offsite areas of Kingsland Point Park bordering the Site. These investigations revealed few, if any, areas meeting Track 1 (unrestricted use) conditions as defined in NYSDEC's Draft Brownfield Cleanup Program Guide (NYSDEC 2004).

Groundwater data in the RI Report are compared to Class GA Groundwater Standards and Guidance. For soil data, the guidance available at the time that the RI was performed was NYSDEC's TAGM 4046, which provided recommended soil cleanup objectives (RSCOs) for unrestricted use. Throughout the RI Report, the investigation data are compared to the TAGM 4046 RSCOs. However, subsequent to the completion of the RI, generic Soil Cleanup Objectives (SCOs) were established by regulation in 6 NYCRR Part 375. These regulations replaced the guidance values in TAGM 4046 with revised unrestricted use SCOs, and provided additional SCOs for several restricted land use categories. The applicable SCOs that are used for analysis of remedial alternatives and development of the final remedy for the Site are the "restricted residential use" SCOs, as defined and listed in Part 375.

Originally released as a preliminary draft in 2006, the RI report recommends evaluation of a Site-wide remedial approach to support the contemplated use of the Site, with some areas identified for evaluation of additional location-specific measures. Site-wide remedial actions may include, but may not necessarily be limited to, a functional barrier cap (with demarcation marker) integrated into future structural and landscape features, a soils management plan, post-remediation monitoring, and an environmental easement.

Location-specific measures may include but are not limited to the following:

- location-specific remedial plans for areas containing historical fill with elevated lead concentrations, one area containing elevated chromium and trichloroethene (TCE), and the location of a former No.6 fuel oil tank

- natural attenuation to remediate residual petroleum in three general areas of historical spills

- general and location-specific measures to address volatile organic vapors that could pose a risk to future residents in an indoor air space, including preventing the intrusion of such vapors into future buildings

- general measures to mitigate the possible intrusion of methane into indoor air space if future development plans include buildings over methane source areas and any necessary venting of methane in such areas

The Preliminary Draft RI Report (BBL 2006) was referenced by NYSDEC in their July 2007 Interim Remedial Measure (IRM) Decision Document. Several IRMs, which involved soil removal and active groundwater remediation, were subsequently completed in accordance with the IRM Decision Document. As such, the findings and recommendations presented in this final RI Report represent pre-IRM conditions.

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1. Introduction and Purpose

This Remedial Investigation Report (RI Report) has been prepared by ARCADIS on behalf of General Motors LLC (GM LLC), in accordance with Brownfield Cleanup Agreements (BCAs) with the New York State Department of Environmental Conservation (NYSDEC) for the investigation and remediation of the Former General Motors North Tarrytown Assembly Plant Site located at 199 Beekman Avenue, Village of Sleepy Hollow, New York (Site). The Site is situated on the eastern shore of the Hudson River (Figure 1A) and occupies an area of approximately 96.2 acres within the Village of Sleepy Hollow. The Site (Figure 1B) is comprised of three, non-contiguous parcels: 1) the former main assembly plant area referred to as the West Parcel (approximately 66.2 acres); 2) the eastern parking lot referred to as the East Parcel (approximately 28.3 acres); and 3) the former salaried employee parking lot referred to as the South Parcel (approximately 1.7 acres).

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company, General Motors LLC (GM LLC). GM LLC signed two BCAs in 2010 that superseded the two previous BCAs signed by GMC and Roseland.

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GMC initially purchased properties that comprise the West Parcel in 1914. Prior to that purchase, the parcel had been partially developed with urban fill, consisting largely of coal cinders and various aggregate mixtures to extend the waterfront into a portion of the former Pocantico Bay. Industrial operations prior to GMC's purchase included a brickyard, a percussion rock drill factory, and two facilities where gasoline and steam-powered automobiles were manufactured and assembled. GMC demolished most of the early industrial buildings during the 1920s, filled in the remainder of Pocantico Bay with dredge spoils, and constructed an automotive assembly complex that continued to expand and operate for over 70 years. In the East Parcel, purchased by GMC in 1960 for parking, the former Village of North Tarrytown operated a small (<10 acres) municipal refuse and ash landfill during the 1920s and 1930s. The South Parcel, developed on a natural hillside, was previously residential. The North Tarrytown Assembly Plant ceased automobile assembly operations in the summer of 1996 and GMC commenced an organized process of facility decommissioning. The Village of North Tarrytown was renamed Sleepy Hollow in 1997. All references to North Tarrytown in this report and previous documents apply to the Village of Sleepy Hollow.

Between 1996 and 2000, GMC undertook several environmental investigations at the Site to prepare for facility closure. These efforts included Phase I and Phase II Environmental Site Assessments, a Phase III Extent of Contamination Study (EMCON, 1996; 1997; and 2001a), and a Sediment Quality Investigation in the Hudson River (Exponent and EMCON, 1999). In addition, an Interim Corrective Measures Project (EMCON, 2001b) was implemented primarily to remediate fill and soil containing residual petroleum and hydraulic fluids, as well as metals found in crawl spaces beneath floor slabs of the former Chassis and Body Assembly Plants, and to remove two underground fuel storage tanks before these buildings were demolished.

Roseland conducted additional sampling of soil and groundwater during 2002 as part of their due diligence investigation (EcolSciences, 2002). The findings of this investigation, and the earlier investigations conducted by GMC, reflect levels of metals, polycyclic aromatic hydrocarbons (PAHs), and petroleum compounds that are typical of historically filled sites along the Hudson River, especially those dedicated to industrial uses. The GMC and Roseland findings were used to prepare an Investigation Work Plan (IWP), which specified additional sampling pursuant to the VCA program (AMEC, 2003a).

The IWP described the proposed scope of work, data quality objectives, field sampling procedures, laboratory analytical requirements, and health-and-safety requirements for a supplemental investigation (the RI) of soil and groundwater conditions at the Site. The IWP built upon the findings of the previous investigations by identifying the remaining data needed to characterize the areas that may be subject to remediation.

The field investigation outlined in the IWP was performed from October 6 to November 17, 2003. The scope of the RI was modified (expanded), as required during the field work, based on qualitative field observations and initial laboratory analytical results, to meet the RI objectives and to provide sufficient information to support the RAWP. Addendum 1 to the IWP (AMEC, 2003b) was prepared and implemented during that same period to investigate the potential presence and characteristics of landfill gas on the East Parcel.

A Draft Conceptual Remedial Action Work Plan (RAWP) prepared by AMEC (AMEC, 2004a) was submitted to the NYSDEC in March 2004. This conceptual plan preliminarily identified site-wide and location-specific remedial actions based on the data from the 2003 RI and all previous investigations. For the location-specific remedial actions identified in the Draft Conceptual RAWP, certain data needs were identified. These needs were incorporated into Addendum 2 to the IWP (AMEC, 2004b). The plan presented in Addendum 2 was designed to confirm boundaries of areas suggested for location-specific remediation and to extend the investigation of methane and volatile organic soil vapors onto the West Parcel. A supplemental scope of work (AMEC, 2004c) was added to Addendum 2 to investigate the presence of possible offsite subsurface contamination in Kingsland Point Park and provide additional data on site groundwater quality. Field investigations outlined under Addendum 2, as amended, were performed between April and October 2004. The collective results of all site investigations performed under the VCA and reviewed in the context of the BCP are presented in this report, with reference to relevant data from previous investigations. As a result of transitioning into the BCP, a Fish and Wildlife

Exposure Assessment (not included as a requirement of the IWP) is presented in this report.

Separate IWPs were prepared and implemented by GMC in 2004 and 2006 for Hudson River sediments, pursuant to the VCA and BCAs for the Site. The focus of that two phase investigation was the possible impact of historical wastewater discharges on current sediment quality in the Site vicinity. The findings of the sediment investigation are presented in a separate Sediment RI report.

2. Site Description and History

2.1 Physical Characteristics and Land Use

At the time of facility closure in 1996, the main assembly plant property (West Parcel) contained two manufacturing buildings (the Body Plant and the Chassis Plant) and support operations consisting of a powerhouse, petroleum bulk storage tanks, a wastewater pretreatment facility, a water storage tank, and miscellaneous day shelters for equipment and personnel. These structures were decommissioned and demolished by 1999, leaving concrete building slabs and asphalt surfaces covering most of the Site (Figure 1B). A stockpile of recycled concrete aggregate from the demolition, some of which was spread on the West Parcel, is situated near the waterfront, landward of the former wastewater treatment plant berm and wall. The West Parcel is separated from the East Parcel by an active railroad corridor owned by Conrail serving Metro-North, AMTRAK, and freight services. The East Parcel was developed by GMC as a Parking lot, which remains covered with asphalt. The former salaried employee parking lot is located across Beekman Avenue, directly south of the West Parcel. This paved lot is bordered by Beekman Avenue, Hudson Street, River Street, and property owned by the Village of Sleepy Hollow.

The overall topography of the West Parcel is relatively flat, with significant portions occupied by the remaining building floor slabs of the former Chassis and Body Plants (Figure 1C). Ground surface elevations over much of the West Parcel are within 5 to 20 feet (ft) above mean sea level (MSL), with building slabs at an approximate elevation of 13 ft. The surrounding area rises steeply to the east, away from the Hudson River. The Salaried Parking Lot on the southeast side of the facility is located on this rise, overlooking the plant from an elevation sloping from approximately 20 to 50 ft. Most of the East Parcel is relatively flat, with paved surface elevations between 3-11 feet above MSL, bounded on the south and east perimeter by steep slopes. Under an agreement with GMC, the Village of Sleepy Hollow is currently using the East Parcel to temporarily stage materials for municipal public works projects.

Groundwater in the Site vicinity is not used as a potable water supply. A reservoir fed municipal water-supply system services the Sleepy Hollow area, including the Site. Reservoirs for this system (and other community water supplies) are located more than 3 miles upgradient of the Site. The Catskill Aqueduct serves as the main source of water for the Village of Sleepy Hollow. Water is stored in the Village's reservoir in the Rockefeller State Park Preserve. It is unlikely that groundwater beneath the Site would ever be used as a potable water supply because the area is serviced by the local

municipal system and the natural water bearing units below the fill are expected to have relatively low yields. Although the fill may represent a zone of significant groundwater yield, such artificially created deposits are typically unsuitable and undesirable as potable supplies.

Current land uses within the immediate site vicinity include a mix of industrial, commercial, residential, and parkland. Most of the industrial property in the surrounding area is located along the Hudson River waterfront, south of the Site. These industrial uses include shipping and receiving of automobiles and other freight, as well as commercial oil distribution and asphalt manufacturing. The oil and asphalt facilities are serviced by barge and land-based traffic. Several non-industrial commercial facilities, as well as the Village of Sleepy Hollow Public Works Facility, are also present within the industrially zoned area south of the Site. The commercial center for the Village of Sleepy Hollow is less than 0.5 miles east of the Site. Lands immediately southeast and east of the Site are primarily residential. Public parklands surround the northern borders of the Site. Kingsland Point Park of Westchester County abuts the northwest border of the Site. The Tarrytown Lighthouse, which is listed on the National Register of Historic Places, is located immediately west of the Site (in the Hudson River) and is accessible to the public through Kingsland Point Park. DeVries Park of Sleepy Hollow abuts the northern border of the Site. Philipsburg Manor, a restored early 18th century farm with public access, adjoins DeVries Park and the northeast corner of the Site. Active freight and passenger rail services run through the Site within a common corridor.

2.2 History of Site Use and Development

2.2.1 Historic Operations

The site was originally part of the Beekman Farm. In 1801, the Beekman family constructed a dock on what is now known as Kingsland Point (north of the Site). In 1830, a Brickyard was established on the southern portion of the Site at the foot of Beekman Avenue, on the south side of the Pocantico Bay (which has since been filled). The brickyard closed in 1861.

In 1885, the Rand Drill Company acquired the abandoned brickyard property. The facility was used to manufacture percussion rock drills. In 1905, the Ingersoll Sergeant Drill Company merged with Rand to become Ingersoll Rand. The Ingersoll Rand Company ceased operations at the Site in 1909.

In 1899, property on the north side of the former bay (adjacent to Kingsland Point) was purchased by the Mobile Company of America (Mobile) and a three-story brick and steel facility was constructed to manufacture steam-powered vehicles. By 1903, Mobile ceased operations, as the internal gasoline engine became more popular.

The Maxwell Briscoe Company (Maxwell Briscoe) purchased the Mobile Facility for the purpose of manufacturing automobiles in 1904. By 1909, Maxwell-Briscoe expanded the former Mobile Site into a complex of assembly buildings, machine shops, woodworking facilities, and painting/varnishing operations.

In 1909, Maxwell Briscoe also acquired the Ingersoll-Rand Property on the south side of the bay, increasing the size of the manufacturing floor space to more than 300,000 square ft. Maxwell Briscoe added a small foundry, and the Ingersoll-Rand buildings were converted to machine, sheet metal, and woodworking shops. United States Motor Company (US Motor) acquired Maxwell Briscoe as a subsidiary in 1913. Later in that same year, US Motor declared bankruptcy and Maxwell Briscoe ceased manufacturing automobiles in Sleepy Hollow.

The Chevrolet Motor Company (which later became a division of GMC) originally acquired the former Maxwell Briscoe Property and automobile manufacturing facility in 1914. Since that time, GMC has only assembled automobiles at the Site, with the exception of a period during World War II when airplane wings and light military vehicles were assembled at the Site.

2.2.2 Historic Fill

With the exception of the salaried parking lot, commercial and industrial development of the Site was accomplished through progressive advancement of fill (Drawing 1). With the construction of the original Hudson River Railroad in the 1840's, the portion of the Site east of the tracks (East Parcel) was isolated from Pocantico Bay by a strip of fill placed to support the tracks. Prior to 1914, fill had been placed on the West Parcel north and south of Pocantico Bay to develop the Site for the pre-GMC industries (Rand, Mobile and Maxwell Briscoe). During the mid-1920s, the lower Pocantico River was re-routed to its current location north of the Site. At that time, GMC filled in the remainder of Pocantico Bay and the former outlet to the lower Pocantico River with dredged materials (Drawing 1, Area A), demolished the former Maxwell Briscoe buildings near Beekman Avenue and replaced them with a new automobile assembly plant (first section of Chassis Plant). GMC continued to expand the waterfront for industrial development through 1960. The final extension of the waterfront in 1960 was

filled with sediments hydraulically dredged from the Hudson River main navigation channel (Drawing 1, Area K) and finished with stone riprap.

During the 1920s and 1930s, the Village of Sleepy Hollow (formerly Village of North Tarrytown) used part of this East Parcel for municipal refuse and ash disposal (Drawing 1, Refuse Area). The Village eventually filled the remainder of the East Parcel with non-refuse fill (Drawing 1, Area B). By 1960, GMC acquired this parcel from the Village. At that time, the same source of dredged material from the Hudson River used to develop the West Parcel waterfront in 1960 was used to finish the grade on the East Parcel, and prepare it for use as a parking lot (Drawing 1, Area L). GMC has only used the East Parcel for employee parking and to transfer cars from the assembly line to truck or rail.

2.3 Previous Investigations

Prior to cessation of automotive assembly in 1996, GMC initiated a comprehensive facility-decommissioning program that encompassed the identification of environmental management requirements for building deactivation and demolition. The objective of the facility deactivation process was to identify items requiring decontamination, removal, and/or special handling in order to prepare equipment and facilities for plant closure and demolition. Once assembly operations ceased, the areas identified during the facility deactivation process were decommissioned to remove hazardous materials, remove and properly dispose of lead based paints (from the building structures), remove and properly dispose of regulated asbestos-containing material (ACM), remove and dispose of regulated polychlorinated biphenyl (PCB) equipment, properly close all aboveground storage tanks (ASTs) and underground storage tanks (USTs) in accordance with state and federal regulations, drain chlorofluorocarbon (CFC) containing equipment and properly dispose of CFCs, decontaminate all process equipment and building structures, and dispose of all residues generated during decontamination activities. These activities were completed prior to final demolition of buildings and structures, and are not the subject of this RI.

At the same time the decommissioning process was initiated, GMC initiated a Phase I Environmental Site Assessment that entailed a thorough assessment of current and historical GMC operations to determine if petroleum or potentially hazardous chemical constituents had been released to the Site environment. This led to a series of subsurface investigations and a focused investigation of sediment quality in the Hudson River. The findings of these investigations can be found in the following reports, which have been previously submitted to the NYSDEC:

- *Phase I Environmental Site Assessment, Tarrytown Assembly Plant* (EMCON, 1996)
- *Phase II Environmental Site Investigation, Tarrytown Assembly Plant* (EMCON, 1997)
- *Phase I Environmental Site Assessment, Salaried Parking Lot* (EMCON 1998)
- *Data Report for the Sediment Quality Investigation, Hudson River near the General Motors Corporation Former Tarrytown Assembly Plant* (Exponent and EMCON, 1999)
- *Phase III Extent of Contamination Study, Former Tarrytown Assembly Plant* (EMCON, 2001a)
- *Interim Corrective Measures Completion Report, Former Tarrytown Assembly Plant* (EMCON, 2001b).

Additionally, on behalf of Roseland, EcolSciences, Inc. performed soil and groundwater sampling at the Site during August 2002. Their sampling was conducted as part of Roseland's due diligence investigation for the contemplated site use. The findings of that investigation can be found in *Due Diligence Sampling Results for the General Motors Corporation Tarrytown Assembly Plant Property*, (EcolSciences, 2002).

Supplemental Phase II Investigation findings from additional test pit and test borings conducted on behalf of GMC during 2000 were also provided to the NYSDEC in a letter dated March 17, 2003 (AMEC, 2003a).

Between the GMC and Roseland investigations, a total of 47 potential areas of concern (PAOCs) and two UST spills were identified and sampled at the Site (Drawing 2). GMC's focus was on potential spills or releases that may have occurred during its period of operation (1914 through 1996). GMC investigated 20 identified PAOCs associated with its former operations and the historical disposal of refuse in the East Parcel by the Village of Sleepy Hollow. One of the UST spills was successfully remediated by GMC and closure was approved by the NYSDEC. The other spill was partially remediated in 1998, and is included in the current RI. Areas where non-refuse fill was used for GMC's site development were sampled, but were not considered to be PAOCs.

Considering the proposed development of the Site for mixed use, Roseland identified and sampled 24 additional PAOCs. After Roseland completed its sampling, two additional PAOCs (PAOC 45 and 46) were identified and recommended for further investigation, based on a review of supplemental testing performed by GMC in spring 2000 (EMCON, 2003). Lastly, PAOC 47 was discovered and characterized during the RI.

Drawing 2 shows the location of all samples collected from the Site during the previous investigations conducted by EMCON and EcolSciences. Data from these investigations are included in Appendix A. Representative sampling of soil and fill was performed in these previous investigations to characterize each PAOC and to evaluate the distribution of potential contaminants in the fill materials placed onsite throughout its industrial history. Groundwater was also sampled at or in the general vicinity of PAOCs. The key findings of these previous investigations are summarized below.

2.3.1 Soil and Fill Quality

Approximately 90% of the Site acreage is developed on fill, which is of varying composition and thickness. Based on information obtained from geotechnical borings performed at the Site since the mid-1930s and borings installed by EMCON, the fill generally comprises fine-to-coarse sands with fewer amounts of gravel, silt, and clay. The pre-1914 fill (Drawing 1) on the West Parcel contains varying amounts of coal cinder and ash fill, particularly on the northern triangular corner of the West Parcel, which was formerly open water and marsh. Varying amounts of construction and demolition debris were encountered within fill Areas F, G, and H, including cinders, brick, and other solid building materials. Dredged materials, consisting of sand, silt, gravel, and shells is found in Areas A, K and L. The general outline of the Refuse Area within the East Parcel was determined from test borings and test pits performed during EMCON's Phase II Investigation (Drawing 1, Refuse Area). The refuse encountered was several feet below the water table. The refuse is typically covered by a layer of coal ash, a soil cap, dredged sands (1960) and asphalt. The remainder of the paved expanse of the East Parcel is filled primarily with urban soil and rock fill, typically with a layer of dredged materials beneath the asphalt cover.

The fill is underlain in areas by soft organic clay and peat deposits associated with the Hudson and Pocantico Rivers. In other areas, varved silt and clay underlies the fill. Beneath these deposits, a layer of compact granular till (silty sand with gravel and

occasional cobbles and boulders) overlies the bedrock with a thickness ranging from 1 ft to more than 10 ft. The underlying bedrock is a weathered to relatively sound gneiss. The depth to bedrock is extremely variable across the Site, ranging from less than 20 ft below ground surface (bgs) to greater than 100 ft.

EMCON originally analyzed representative samples of soil for the complete USEPA Target Compound List (TCL) and Target Analyte List (TAL). As part of its due diligence investigation in 2002, EcolSciences collected a representative number of soil samples from additional PAOCs for specific classes of USEPA Priority Pollutants that might have been anticipated for each PAOC investigated. Ranges of constituents detected in soils at levels above TAGM 4046 guidance are summarized by PAOC in Table 1. In general, the soil sampling previously conducted at the Site identified compounds typical of industrialized properties with extensive historical fill along the Hudson River waterfront. Moreover, one century of industrial operations has resulted in the localized presence of residual petroleum hydrocarbons (from fuel and hydraulic fluids) within the West Parcel. The principal contaminants of concern in the fill materials throughout the East Parcel are metals, with evidence of relatively minimal observations of PAHs. Within the fill materials in the West Parcel, metals and PAHs are the principal contaminants of concern. The Due Diligence Report prepared by EcolSciences indicated presence of these constituents at concentrations above the generic TAGM 4046 Recommended Soil Cleanup Objectives (TAGM guidance) developed and commonly used by the NYSDEC to evaluate contaminated sites. VOCs detected in soil samples from the previous investigations are shown in Appendix C. VOCs were primarily found in saturated zone soils, and have generally been attributed to residual petroleum from historic spills. Petroleum-contaminated soil/fill associated with two USTs, as well as hydraulic fluid-contaminated soil/fill and residues containing lead and other metals in building crawl spaces, were removed during GMC's ICM project (see Section 2.4). The current RI focused on identifying additional boundaries for possible location-specific remediation, beyond what would be considered for management of the Site fill in general.

Additionally, traces of PCBs were detected in samples of concrete millings that were collected by EcolSciences as part of their due diligence investigation. The concentration of total PCBs detected in the samples (i.e., the combined results for all Aroclors) ranged from 0.39 to 1.69 milligrams per kilogram (mg/kg) (median of 0.62 mg/kg). The millings were derived from the demolition of onsite concrete structures, which had not previously been known to contain PCBs. The current RI sampled millings that have been spread over a portion of the Site.

2.3.2 Groundwater Quality

Based on groundwater elevations obtained during spring 1997 from 23 groundwater monitoring wells onsite, EMCON determined that the direction of groundwater flow is southwest toward the Hudson River with local variations (see Section 6.2 for additional details). Groundwater flow across the East Parcel (east of the railroad tracks) is generally to the west, while flow across the West Parcel (west of the railroad tracks) is generally to the south-southwest. It is noted that the configuration of the groundwater contours appears to be somewhat influenced by the former Pocantico Creek and Bay, which used to run west across the East Parcel and southwest under the Chassis Plant on the West Parcel.

EMCON analyzed groundwater samples from 23 monitoring wells for the complete USEPA Target Compound List (TCL) and Target Analyte List (TAL). As part of its due diligence investigation in 2002, EcolSciences collected a representative number of groundwater samples from existing (permanent) monitoring wells, as well as a series of temporary monitoring wells, and analyzed for USEPA Priority Pollutants. Both filtered and unfiltered samples for metals were included in these previous investigations. Drawing 2 includes the location of all soil and groundwater sampling locations from the EMCON and EcolSciences investigations. Ranges of constituents detected in groundwater at levels above Class GA groundwater standards are summarized in Table 1.

Metals were detected in the groundwater samples collected by EcolSciences at concentrations above the Class GA groundwater standards (Table 1). All of the groundwater samples collected in both the East and West Parcels during the EcolSciences investigation contained detectable concentrations of one or more Target Analyte List (TAL) metals. Typically, between 14 and 20 different metals were detected in the unfiltered samples. However in the filtered samples, the metals detected at concentrations above the Class GA groundwater standards were typically limited to sodium, iron, magnesium, and manganese. These analytical results suggest that the metals detected in the unfiltered samples are derived principally from suspended particulate material contained in underlying fill material.

The previous investigations found no evidence of organic TCL or Priority Pollutant constituents above Class GA groundwater standards in the East Parcel. The distribution of VOCs in groundwater from the previous investigations is summarized in Appendix C. Groundwater in the northern corner of the West Parcel contains relatively low levels of volatile petroleum constituents in monitoring well OW-10 (Drawing 2).

Concentration gradients suggest an offsite contributing source. This condition was observed by EMCON and EcolSciences. South (downgradient) of OW-10, within the West Parcel, groundwater exhibited evidence of residual petroleum contamination (VOCs and/or occasional sheen and odor) in the vicinity of an abandoned 10,000-gallon No. 6 fuel oil UST that was removed during the ICM project. The results of previous groundwater sampling show that these constituents are attenuated within a limited area of the Site. EcolSciences observed a sheen or petroleum odor in groundwater samples collected from PAOCs 21 and 39, downgradient of the 10,000 gallon No. 6 fuel oil UST (Drawing 2). Petroleum-stained soils were also observed in a sample from the saturated zone at PAOC 37, although petroleum constituents were not observed above Class GA groundwater standards in this area.

Based on the findings of these previous investigations, the RI focused on the nature and extent of groundwater contamination associated with areas within the West Parcel under consideration for location-specific evaluation or contaminant delineation, and determined baseline groundwater quality along the downgradient side of the West Parcel. The need to evaluate the extent of landfill gases in the East Parcel was recognized and included in the RI, along with soil gas investigations in the West Parcel. The RI studies are described in Section 4.2.

2.4 Interim Corrective Measures

GMC completed an Interim Correctives Measures (ICM) Project between November 1997 and April 1998, during the facility decommissioning process. The ICM consisted of soil removal from nine PAOCs where various oils or other non-hazardous fluids had leaked from plant equipment during facility operations, as well as the removal of two out-of-service USTs. Except for the USTs, which were adjacent to the Chassis Plant, the ICM project was conducted within the unfinished basements or crawl spaces of the Chassis Plant and Body Plant. The affected surfaces in these areas consisted of sand fill. Almost all of the work conducted in basement/crawl spaces consisted of pick-and-shovel excavation by crews of laborers because these areas were generally not accessible by excavating equipment. In two areas, access was gained following partial removal of the overlying slabs that were scheduled for demolition.

Following excavation of contaminated soil/fill at each location, confirmatory samples were taken and analyzed before backfilling with clean sand to original grade. According to the ICM Report (EMCON, 2001b), confirmatory sampling of basements and crawl spaces demonstrated that the remaining soils meet NYSDEC STARS Guidelines for Petroleum-Contaminated Soils, and thus confirm the adequacy of

petroleum remediation. However, the historical fill in several of these areas contain metals and other constituents at levels above TAGM guidance values. Subsequent soil sampling performed by EcolSciences in 2002 identified petroleum-impacted soils elsewhere at the Site, in which soil contaminants were detected at concentrations above applicable TAGM guidance values. These areas were investigated further during the RI.

The out-of-service USTs removed during this action were one 1,000-gallon gasoline UST originally installed and used by GMC, and one 10,000-gallon bunker-fuel tank that was apparently abandoned in place before GMC developed that area of the Site in the 1920s. Spills were reported to the NYSDEC for both USTs. The 1,000-gallon UST spill was remediated by soil removal and the spill case was closed to the satisfaction of the NYSDEC. A limited area of residual petroleum contamination remained at the former 10,000-gallon UST location, which could not be completely removed during the ICM project due to access constraints caused by the ongoing demolition activities. This area was further characterized during the RI to confirm the extent of residual contamination in this area.

Overall, approximately 2,000 cubic yards of soil and several hundred tons of demolished concrete were removed during the ICM project. Excavated soils were shipped offsite to a licensed facility for thermal treatment and recycling. Demolished concrete from the ICM was disposed offsite at a permitted solid waste facility. Wastewater generated from excavation dewatering was pretreated to separate any oily product phase before being processed through GMCGMCC's wastewater treatment plant, which was operating at that time. Oily water was treated offsite at a permitted facility.

3. Objectives, Scope, and Rationale

The previous investigations described in Section 2.3 fulfilled many of the requirements for site characterization outlined in the BCP guidance, by identifying potential areas of concern (referred to as PAOCs) based on record review, site inspection, and sampling. At this site, the PAOCs are a combination of areas that may have been impacted from past industrial operations and areas impacted from the historical fill placed on the Site during the past century. It was found that much of the historical fill does not meet the NYSDEC's TAGMC 4046 guidance for unrestricted use, and that certain areas have been additionally impacted from historical operations. Several of the operationally impacted areas have been remediated through ICMs (summarized in Section 2.4). With the prior studies as a foundation, the RI focused on confirming and delineating areas that appeared to represent potential sources of contaminants, relative to the general condition of the Site. Source areas are portions of a site, typically soil or groundwater, which have the potential to release significant contamination to the environment.

At the request of the NYSDEC, soil sampling was performed at a representative number of PAOCs previously characterized by EMCON to validate the pre-existing data. As such, the RI was designed to supplement the previous investigations, complete the overall site characterization, and support development of an RWP.

The specific objectives of this investigation were as follows:

- characterize the extent of potential contaminant source areas that were identified and confirmed in the previous investigations
- complete the characterization of site fill
- complete the characterization of site groundwater, including the Kingsland Point Park Boundary
- determine if methane and (or) other landfill gases are present at significant levels in the soil gas throughout the Site, characterize the spatial distribution of the soil gases, and determine if landfill gases are currently being generated
- determine if site contaminants have impacted offsite, downgradient property (Kingsland Point Park)

- verify that site characterization data are adequate and usable for remedy selection.

This sampling program for soils was intended to distinguish between diffuse, site-wide soil contamination, which can be addressed through institutional and engineering controls, and specific areas that might require additional remedial measures. Many of the previous soil sampling results for metals and PAHs above the TAGMC 4046 guidance for unrestricted use are likely to be related to the presence of historically emplaced fill constituents, rather than localized discharges. The investigation was also designed to determine whether the petroleum odor, staining, and (or) sheen that have been observed locally in subsurface soils are the result of incidental spillage of petroleum (i.e., with or without an identifiable source), or whether they are related to previously identified point sources.

4. Scope of Work Overview

The field investigation was conducted in accordance with the approved IWP and Addendums 1 and 2. Tables 2 and 3 contain brief summaries of the work carried out within each PAOC, during 2003 and 2004, respectively.

The field investigation included the following elements:

- Geoprobe® soil and groundwater sampling
- surface material sampling
- groundwater monitoring-well installation and sampling
- geotechnical borings (to support subsequent design for source excavation in a former UST area)
- soil gas sampling and analysis

The specific field sampling methods used are discussed in Section 4.11 of the IWP. Soil and groundwater sampling, monitoring well installation, field screening of soils, equipment use and decontamination, sample collection and preservation, and chain-of-custody documentation were performed in accordance with the Standard Operating Procedures (SOPs) provided in Appendix A of the IWP and Addendums 1 and 2 (the specific SOPs referenced below were provided in the IWP or Addendums 1 and 2).

Iterative soil sampling was performed, where necessary, to verify that the extent of contamination in each area of interest was adequately defined (or confirmed to be characteristic of the historical fill). This objective was met either by sampling along transects extending outward from a starting location of interest, or within a grid established around an area of interest. Continuation of the initial sampling was based on the results of qualitative field observations and/or rapid analysis of selected samples in the laboratory, depending upon the constituents of interest. When investigating petroleum contamination, qualitative field observations guided the subsequent sampling for contaminant boundary definition. For lead, which exhibited no qualitatively detectable characteristics, laboratory analysis of collected samples was expedited in an iterative sequence that allowed for continuation of analyses until boundaries of contamination were established.

Generally, subsurface soil samples collected for environmental laboratory analysis were obtained using a truck-mounted or track-mounted Geoprobe® rig equipped with Macro-Core® samplers. The standard soil sampling procedures described in Section 5.2.2 of SOP FP-C-2 were employed. A limited number of the soil borings were also performed using a 4-¼ inch I.D. hollow-stem auger (HSA) rig equipped with 2-inch-diameter split-spoon samplers. The subsurface samples collected for geotechnical analysis were obtained using thin-walled (Shelby) tubes, using the procedures outlined in Section 5.2.3 of SOP FP-C-2.

In general, soil borings were advanced through fill material into the underlying native soils/sediments. Continuous soil cores were obtained, from which soil samples were collected for laboratory analysis, as required. The soil cores were examined and classified according to the Burmeister System, with particular attention paid to the presence of any anthropogenic materials. Further, because traces of petroleum have previously been detected in fill materials at the Site, the soil cores were routinely evaluated for evidence of petroleum (e.g., oil staining, petroleum odor, oily sheen) and field-screened using a hand-held photoionization detector (PID). Field screening was used as a basis for expanding the test boring program in the field so that the apparent boundaries of petroleum contamination could be located. Confirmatory laboratory analyses were frequently limited to these boundary areas.

Surface soil (or fill) samples and samples collected at depths of 12 inches bgs or less were obtained using decontaminated stainless-steel hand-trowels, as per Section 5.3.1 of the SOP FP-C-2. The samples were collected from either 6-inch or 12-inch vertical intervals (depending on the sampling specifications given in Table 2).

The temporary and permanent monitoring wells were constructed in accordance with SOP FP-D-1 (Appendix A of the IWP). The wells were developed in accordance with SOP FP-D-2. Purging of the wells was performed using either a submersible or peristaltic pump, according to the low-flow purging method outlined in Section 5.3.4.2 of SOP FP-D-3. Groundwater samples were collected according to procedures described in Section 5.3.5 of SOP FP-D-3. Disposable bailers were used to collect groundwater samples to be analyzed for VOCs and semivolatile organic compounds (SVOCs), according to Section 5.3.5.1 of the SOP, and sampling for metals was performed according to the low-flow procedure described in Section 5.3.5.2 of the SOP.

To verify that the samples collected for analysis of metals were representative of current groundwater conditions, monitoring wells OW-6, OW-7, OW-10, OW-11, OW-

12, OW-20, and OW-22 were redeveloped prior to sampling, according to the procedures outlined in SOP FP-D-2 (IWP, Appendix A). The turbidity of the purged water was monitored using a turbidity meter equipped with a flow-through cell. Consistent with TAGMC 4015, well development was continued until either a turbidity value of <50 nephelometric turbidity units (NTU) was achieved, or the turbidity of the purged water was observed to stabilize (i.e., no further reduction in turbidity was practical). In some areas where lead is the primary soil contaminant, extended low-flow sampling was performed in an effort to achieve sample turbidities well below 50 NTU.

The specific sampling strategies used in each area of interest are described below.

4.1 Soil Investigation

The goal of the remedy selection process in the Brownfield Cleanup Program is to select a remedy for a site that is fully protective of public health and the environment, taking into account the current, intended and reasonably anticipated future land use of the Site. The use is determined during the application process and confirmed during the remedy selection process. Applicants may elect to propose an unrestricted use cleanup (thus, the equivalent of Track 1) or a use-based approach (Track 4). As stated in the BCAs for both the East and West Parcels, “the intended use of the property is mixed restricted residential/commercial and public open space”. The Applicants entered the BCP and made clear their intentions to propose a site-specific use-based approach, having designed the RI under the former VCP to satisfy the data needs for that approach.

NYSDEC guidance on remedy selection for the BCP is summarized in *Draft DER-10, Division of Environmental Remediation Technical Guidance for Site Remediation* (NYSDEC 2002b), as it applies to voluntary cleanups. DER-10 specifies that the remedial goal for voluntary cleanups is to be protective of public health and the environment, given the intended use of the Site. Further, where an identifiable source of contamination exists at a site, it should be removed or eliminated, to the extent feasible. NYSDEC offers further discussion and definition of sources in the Draft BCP Guidance, Section 4.3 *Issues to be Considered in Remedy Selection* (NYSDEC 2004) as well as the newly adopted Part 375 Regulations -- 6 NYCRR § 375-18(c). These issues include source removal, plume stabilization, presumptive remedy/strategy, and innovative technologies. All of these issues were considered during the development of the IWP and will be addressed, where applicable, in the appropriate remedial documents. With regard to the Site soils, the previous investigations had provided

most of the necessary soil data to characterize the Site and confirm that a restricted use approach would be necessary due to the extensive presence of historic fill on the Site that does not meet Track 1 objectives for unrestricted use. For the RI, emphasis was placed on identifying and delineating possible sources, as defined further in Section 4.3 of the Draft BCP Guidance.

The following hierarchy of source removal and control remedies is ranked in the newly adopted Part 375 regulations (6 NYCRR § 375-1.8(c) and the Draft BCP Guidance from most preferable to least preferable:

- *Removal and/or treatment*: All free product, concentrated solid or semi-solid hazardous substances, dense-non-aqueous phase liquid, light-non-aqueous phase liquid and/or grossly contaminated soil shall be removed and/or treated to the extent feasible.

- *Containment:* Any source remaining following removal and/or treatment shall be contained to the greatest extent feasible.

- *Elimination of exposure:* Exposure to any source remaining following removal, treatment and/or containment shall be eliminated through additional measures, including but not limited to the timely and sustained provision of alternative water supplies and the elimination of volatilization into buildings to the greatest extent feasible.

- *Treatment of source at the point of exposure:* Including but not limited to, wellhead treatment or the management of volatile contamination within buildings, shall be considered as a measure of last resort.

Review of the previous investigations revealed the need to identify and delineate possible sources of lead in historic fill areas, and petroleum in confirmed or suspected historic petroleum spill areas. During the initial phase of the RI in September November 2003, a possible source area for chromium and TCE associated with historic facility operations was also identified and delineated in the second phase of the RI during April – October 2004. Other areas were investigated to address data gaps identified by the Department and the Applicants, including groundwater quality and soil gases or vapors. The scope of the soil investigations is presented below. Groundwater and soil gas investigations are summarized in Sections 4.2 and 4.3, respectively.

4.1.1 Areas of Elevated Lead Concentrations

During the development of the IWP, ranges of metals detected in Site soils (primarily historic fill) by the previous investigations were examined to determine if any areas should be considered "sources" of contamination. The previous investigations revealed that lead was frequently found at levels above the TAGM 4046 suggested range of 200-500 ppm for typical urban background, throughout several of the large tracts of historic fill (see Drawing 1 for historic fill locations). None of these areas contain free product, concentrated solid or semi-solid hazardous substances, or non-aqueous phase liquids as a source of lead. However, NYSDEC raised a concern regarding the possibility that certain locations might represent substantive areas of grossly contaminated soil (within the BCP definition of source) due to unusually high levels of lead relative to the rest of the historic fill. Therefore, the entire distribution of lead detected throughout the Site in the previous investigations was subjected to a knee-of-the-curve evaluation to determine what levels of lead were considerably above the typical condition for historic fill on the Site. Grossly contaminated soil may be subject to the priorities of source remediation described in the Draft BCP Guidance, described above.

A frequency distribution curve was developed for all 260 samples collected and analyzed for lead in Site soils (historic fill) prior to the RI (EMCON Phase II/III and EcolSciences Due Diligence Investigation). Post-IRM data were excluded. The pre-RI distribution curve illustrates the general condition, with the curve approaching the maximum condition, followed by a marked departure above the norm for a few samples (Appendix B 1). Approximately 62% of the pre-RI values for lead are less than 500 ppm. As values exceed 500 ppm, they approach 10,000 ppm (38% of the samples) before the marked departure above the curve (3% of the samples) is noted.

Evaluation of the geographical distribution of lead revealed that values above 500 ppm were widely distributed throughout the Site, but were also associated with certain types of historic fill. These are areas where cinders and/or ash are typically encountered, which include the pre-1914 fill, the former Village refuse area, and several of the mid-20th century fill segments (Fill Areas D, E, F, G, and H) shown on Drawing 1. Levels above 10,000 ppm appear to be unusual even for historic fill containing cinders and ash, which are components of fill in each of these areas. For example, the State of New Jersey has published a compilation of analytical results for common fill materials (e.g., construction debris, dredge spoils, incinerator residue, demolition debris, fly ash) in which the measured lead concentrations range from 0.28 to 10,700 ppm [N.J.A.C. 7:26E-Appendix D]. The historic fill containing lead above 500 ppm, but less than

10,000 ppm, was considered to be too extensive in area and volume to be removed or remediated differently than all other Site-wide historic fill exceeding TAGMC 4046 guidance, but was investigated further in the RI to isolate possible areas of grossly contaminated soil, relative to the normal range for these fill areas. In contrast, lead in dredged material fill (Areas A, K and L) is well below 500 ppm, but may contain other constituents at levels above TAGMC 4046 guidance, and would therefore be subject to remediation based on the pre-RI data. The South Parcel, although incorporated into the BCA for the West Parcel, was not sampled in the RI, due to the absence of PAOCs or historic fill on that parcel.

Lead concentration distribution maps (Appendix B 2, Drawings 1 through 5) were originally presented in the IWP. The distribution of lead was examined by location and by depth, and grouped into the following concentration intervals: ≥500 – <1,200; ≥1,200 – <5,700; ≥5,700 – <10,000; and ≥10,000 mg/kg (ppm). These maps show there are five PAOCs where lead was detected in at least 1 sample at a concentration ≥10,000 ppm. These locations are PAOCs 1, 7, 9, 12 and 29. The distribution of lead ≥10,000 ppm by depth intervals (Appendix B 2, Drawings 2 through 5) shows these values in the shallow (0-2 foot) interval within the crawl space areas under the former Body Plant slab (PAOCS 7 and 9) and the crawl space under the north end of the former Chassis Plant (PAOC 12). The remaining values ≥10,000 ppm are found in deeper intervals in PAOCs 1, 7 and 29. PAOC 12 soils exhibiting elevated lead concentrations were removed as part of the IRM conducted by GMC in 1998, before the north end of the Chassis Plant was demolished and the crawl space filled. Confirmatory post-IRM samples were below 400 ppm (EMCON 2001B). Therefore, there was no need to include PAOC 12 in the RI for further investigation or delineation of lead. PAOCs 1 and 9 were recommended for investigation due to a single sample result in each area >10,000 ppm. PAOC 7 was recommended for investigation due to two sample results >10,000 ppm. The PAOC 7 study area for the RI also encompasses three sample locations in the ≥5,700 – <10,000 ppm. Although an IRM had been performed within POAC 7, it was performed on discrete areas of oil-stained soil, which would not have removed a significant volume of fill containing lead. PAOC 29 (as shown on RI Drawing 2) was recommended for investigation in the RI to encompass EcolSciences borings 29 2 and SB 2, which fall into the ≥10,000 ppm interval (Appendix B 2, Drawings 1, though 5). Except for two pre-RI samples in this general area, lead levels elsewhere within the pre-1914 fill present in and around PAOC 29 were an order of magnitude lower.

The 10,000 ppm threshold used in this analysis is not proposed in this Report as a specific clean-up objective for the Site. The cleanup objective for unrestricted use,

used by New York State Department of Health (NYSDOH), is the USEPA residential lead hazard standard of 400 ppm in soils, promulgated under Section 403 of the Toxic Substances Control Act (40 CFR Part 745) in 2001. The USEPA standard applies to bare soils in residential play areas, accompanied by a standard of 1,200 ppm (as an average) in bare soil in the rest of a residential yard. The emphasis in the USEPA rule is on bare soil, and does not apply to soils under turf or other suitable clean cover that prevents exposure. In contrast, the selected threshold of 10,000 ppm serves as one criterion for identifying soils that may be considered a "source" in the form of grossly contaminated soil. The 10,000-ppm lead threshold is a Site-specific value that was selected as a logical dividing line for the RI because soils yielding results above this number are anomalous relative to the typical lead concentrations encountered throughout large segments of the Site.

Based on this soils approach, a threshold of 10,000 ppm was incorporated into the IWP to locate and delineate areas of grossly contaminated soils (relative to overall Site soils), if any, at PAOCs 1, 7, 9, and 29. Sampling was initiated relatively close to the previous sample locations exhibiting levels greater than 10,000 ppm (within approximately 5 10 feet from the previous samples before extending further), as described in Tables 2 and 3 and shown in Drawings 3 and 4. An iterative sampling strategy was used to determine if these PAOCs contained any significant volume of grossly contaminated soil/fill. The soil samples were submitted to the laboratory for total lead analysis on an expedited turn-around schedule. The initial sampling results were then evaluated in conjunction with the results of field observations to determine whether further sampling was required to define the distribution of lead at concentrations above 10,000 ppm. The results are presented in Section 6.1.1 of this report. Details pertaining to each of the PAOCs sampled are provided below.

4.1.1.1 Former Village Refuse Area (PAOC 1)

As outlined in Table 2, a series of 11 Geoprobe®/Macrocore® test borings were installed within the former village refuse area (PAOC 1) at the locations shown on Drawing 4 and Figure 3, which ranged in depth from 12 to 20 ft bgs. A total of 52 soil samples, including duplicates, were collected from targeted intervals for laboratory analysis of total lead. One soil boring (SB-1-B1) was situated immediately adjacent to a soil boring previously performed by EcolSciences (EcolSciences Boring 43-9 on Drawing 2), and three other soil borings (SB-1-B2 through B4) were located at a distance of approximately 5 ft measured radially from that point. Additionally, six soil borings were performed immediately beyond the perimeter of a former waste-characterization test pit sampled during the EMCON Phase II Investigation (EMCON

test pit location 1J on Drawing 1), and one soil boring was placed directly within the boundaries of that test pit (SI-1-B5 through B11). The test pit outline was identified based on the presence of a series of saw-cuts and an asphalt patch within the existing pavement.

4.1.1.2 Fill Area H – Historical Fill Area (PAOC 7)

Within the PAOC 7 area, 39 soil borings were performed at the locations shown on Drawing 3 and Figure 4C, from which 271 soil samples (including duplicates) were collected from targeted intervals for laboratory analysis of total lead. Borings SI-7-B2 through SI-7-B39 were located within and around the inferred horizontal limits of historical Fill Area H (Figure 4C), which was filled around 1955 (EMCON, 1996). These test borings extended into adjacent fill areas to confirm the boundaries of elevated lead. These include Fill Area K (which consists of fill dredged from the Hudson River during 1960) and Fill Areas E, F, G, and I (which contain various mixtures of pre-1960 structural fill).

4.1.1.3 Basement underneath Body Plant (PAOC 9)

Within the basement under the Body Plant (PAOC 9), shallow soil samples were collected from depth intervals of 0 to 0.5 feet (ft) and 0.5 to 1 ft at each of five locations (total of 10 samples) and were submitted to the laboratory for analysis of total lead (Figure 5). The samples were collected using decontaminated stainless-steel hand trowels, as per the surface sampling methods described in Appendix A of the IWP.

4.1.1.4 Former Maintenance Building Area (PAOC 29)

Soil sampling was performed in the vicinity of the Former Maintenance Building (PAOC 29) to define the horizontal and vertical distribution of fill materials containing lead concentrations greater than 10,000 ppm in the vicinity of EcolSciences Boring SB-2 (Drawing 2). As described in Table 2 and shown on Drawing 3 and Figure 7A, a total of 35 soil borings were advanced to depths of 8 to 12 feet bgs using a Geoprobe® rig. The soil borings were advanced through fill materials into the underlying, native marsh deposits to determine the extent of lead in excess of 10,000 ppm. Twelve of the 35 soil borings were performed in an access road/parking area within Kingsland Point Park because elevated lead was found up to the fence line separating the Site and the park, and the expected continuation of fill from the same era (pre-1914) on both sides of the fence line in this localized area (former marsh). Continuous soil cores were obtained from each boring using a Macrocore® sampler, from which soil samples were collected

at 2-ft vertical intervals for laboratory analysis. Iterative analyses were used for the onsite samples to establish a boundary line for fill containing lead greater than 10,000 ppm. As an exception, all soil samples collected in Kingsland Point Park were analyzed.

4.1.2 Confirmation of EMCON Sampling Results (PAOC 2, 4, 6, 7, and 17)

As outlined in Table 2, a representative number of PAOCs previously sampled by EMCON between 1996 and 2000 were resampled and analyzed for the complete Target Compound List (TCL) and the TAL to verify the results of prior soil analyses. The purpose of resampling these areas was to obtain and validate analytical data that meet the requirements of the VCP and generally confirm the acceptability of the EMCON data overall. EMCON's samples had been analyzed by Columbia Analytical Services (CAS) Laboratories, Rochester, New York, who possessed full ELAP certification at that time. However, the EMCON data were in the form of Category A deliverables, which could not undergo the same detailed level of data validation that is required under the VCP. CAS Laboratories in Rochester also analyzed all soil and groundwater samples for the RI and provided full Category B deliverables, which were validated by qualified (NYSDEC-approved) professionals.

For the RI, single Geoprobe®/Macrocore® borings were performed within each of five PAOCs, (PAOCs 2, 4, 6, 7, and 17) at the locations shown on Drawing 3. One soil sample was collected from each soil boring for TCL/ TAL analysis, as outlined in Table 2. The analytical results were evaluated to determine whether they supported the validity of the previous Category A data. The results are presented in Section 6.1.2 of this report.

4.1.3 Recycled Concrete Millings (PAOC 14, 15, and 32)

As proposed in the IWP, samples of recycled concrete aggregate millings (millings) were collected at the locations shown on Drawing 3 for analysis of PCBs. The sample locations are located within PAOCs 14, 15, and 32. The samples were collected using a hand trowel, in accordance with the procedures described in Appendix A of the IWP. The analytical results were compared to EcolSciences' prior results for millings, to verify whether the aggregate placed in these areas is similar in composition to the stockpiled millings. The results are discussed in Section 6.1.3 of this report.

4.1.4 Former Maxwell Briscoe Facilities – South Chassis Plant (PAOC 34 and 37)

As outlined in Table 2, a series of subsurface soil borings were performed at the approximate sites of the former Springfield Gas Machine (PAOC 34) and the former machine shop (PAOC 37) in order to determine if there are concentrated contaminant sources in these areas, and to delineate the extent of associated contamination. The former Springfield Gas Machines and the machine shop were inferred from Sanborn Fire Insurance Maps from the early 1900s, prior to GMC's use of the Site.

At PAOC 34, four soil borings were each advanced to a depth of 12 feet bgs (Figure 8A). Two soil samples were collected from each soil boring, at depth intervals of 4.5 to 5 feet and 8 to 8.5 feet bgs, which were submitted to the laboratory for analysis of PAHs. As described by EMCON, the Springfield Gas Machines were cold gasoline vapor production units that likely used underground gasoline tanks (Sanborn Maps labeled these as underground systems). The gas vapors were used for facility lighting before electric lighting was commercially available. As such, the contaminants of concern for this area are petroleum constituents. Sampling by EcolSciences revealed the absence of VOCs in this area, but confirmed the presence of PAHs, which could have been derived either from petroleum or historical fill. No significant source of contamination, as defined by the Draft BCP Guidance, was indicated, although there were qualitative indications of residual petroleum staining and odor within the saturated zone.

Within PAOC-37 (location of the former Machine Shop), 18 soil borings were each advanced to depths of up to 16 feet bgs (Figure 8A). An iterative approach was used to delineate the distribution of residual petroleum observed in the subsurface soils by EcolSciences. Initially, four soil borings (SI-37-B1 through B4) were performed within approximately 15 feet of a location previously sampled by EcolSciences (EcolSciences, 2002) (sample location 37-1). Fourteen additional soil borings were subsequently drilled to define the distribution of a subsurface zone of petroleum-stained soil that was identified during the preliminary phase of the investigation. Soil samples were collected immediately above the water table and within the saturated zone in eight of the 14 soil borings to confirm the horizontal limits of the petroleum-stained soil. The samples were analyzed for STARS-list VOCs and SVOCs.

Additionally, one temporary monitoring well was installed at location SI-37-B1 to assess groundwater quality within the inferred source area, from which one groundwater sample was collected for analysis of STARS list VOCs and SVOCs. The well-screen, which intercepted the water table, extended from 5 to 15 feet bgs (refer to

the well construction details in Appendix E). One groundwater sample was collected from this well for analysis of STARS list VOCs and SVOCs.

Based on the extent of degraded residual petroleum and associated groundwater contamination, an attenuation zone within the PAOC 37 area was defined. The attenuation zone represents the approximate "area of residual petroleum", interpolated between test borings yielding positive and negative indications of contamination based on field screening and supporting soil analysis (Figure 8A), plus the approximate downgradient area of groundwater contamination (Figure 8C). Field screening was relied upon to define the area of residual petroleum, and supplemented by laboratory analysis of representative soil samples. Because the historic fill in this area of the Site also contains varying levels of PAHs from ash and cinders, not necessarily indicative of residual petroleum, field screening provided the most reliable indicators of residual petroleum. Natural attenuation was proposed in the Conceptual RAWP, subject to verification of the extent of groundwater contamination. In April 2004, four permanent monitoring wells, screened across the water table interface (Figure 8C and Appendix E) were installed and sampled to confirm the extent of the attenuation zone and serve as future monitoring points. The results are discussed in Sections 6.1.4 and 6.2.3 of this report.

4.1.5 Potential Petroleum Contamination, North Body Plant Area (PAOC 21 and 39)

PAOCs 21 and 39 generally represent historical operational areas that lie within the footprint of the former Body Plant (Drawing 2). EcolSciences collected two subsurface soil samples and one groundwater sample from each of these adjacent areas (EcolSciences, 2002). Both areas exhibited PAHs and metals in soils above TAGM 4046 guidance values. Black stained soils with a petroleum odor were encountered at the water table interface in both areas. Groundwater samples exhibited an oily sheen and petroleum odor during sampling, but VOCs and SVOCs were below Class GA standards. Due to the qualitative observations of residual petroleum (odors and sheen), delineation sampling was performed in the RI (Table 1) to determine if these observations were related to a localized source of petroleum (e.g., historic spill) or were related to a possible upgradient source (e.g., historic 10,000 gallon No.6 fuel oil UST discussed in Sections 4.1.10 and 4.2.1).

Six Geoprobe®/Macrocore® soil borings were performed within PAOC 21, at the locations shown on Drawing 3 and Figure 6A. Four borings (SI-21-B1 through SI 21 B4) were initiated approximately 15 feet from EcolSciences Boring 21 1. Refusal was encountered at depths of 2 to 8 ft bgs. Therefore, soil samples could not be collected

from the targeted intervals within the saturated zone (below 8 feet). Instead, one soil sample was collected from each of the four soil borings at the lowest interval that could be sampled (lower six inches of core). Three of the samples were collected at or near the water table at depths of 6.5 to 8 ft bgs. Within boring SI-21-B3, in which refusal was encountered at 2 ft bgs, the sample was collected at a depth interval of 1.5 to 2 feet. Additional borings were advanced in an upgradient direction until at least one location where the saturated zone could be sampled was reached. Boring SI-21-B10, which encountered refusal at 12 ft bgs, was drilled entirely within an interval of concrete millings and demolition debris, and was not sampled. Boring SI-21-B11, which was drilled using an HSA rig to advance past the subsurface debris, was successfully advanced into the saturated zone to a depth of 27 ft bgs. This boring was so far upgradient of SI-21-B1 through B4 that it was used to supplement the physical delineation of residual oil associated with the former 10,000-gallon No. 6 fuel oil UST (described in Sections 4.1.10 and 4.2.1), and therefore was not sampled for laboratory analysis.

Within PAOC 39, eight Geoprobe®/Macrocore® soil borings (SI-39-B1 through B8) were performed at the locations shown on Drawing 3 and Figure 9A. Four borings (SI-39-B1 through B4) were initiated approximately 15 feet from EcolSciences Boring 39 1. Refusal was encountered in six of the borings at depth of 4.5 to 12 ft bgs. The other two borings were successfully advanced to the target depth of 16 ft bgs. Soil samples were collected within the saturated zone (where permitted by drilling conditions) or at the deepest available interval (in cases of refusal). In all cases, the sample intervals were biased toward the intervals exhibiting the highest field screening (PID) readings and (or) qualitative evidence of the presence of petroleum. Because all evidence of residual petroleum was observed at intervals located below the water table (i.e., no evidence of petroleum contamination in the unsaturated zone based on field screening), the unsaturated zone was not specifically targeted for soil sampling and analysis.

Soil boring SI-39-B4 (Figure 9B) was converted into a temporary monitoring well, after completion of the soil sampling, as proposed in the IWP. Groundwater samples were subsequently collected for analysis of STARS list VOCs and SVOCs. The results are described in Sections 6.1.5 and 6.2.7 of this report.

4.1.6 Historical Fill with Elevated PAH Concentrations (PAOC 43)

POAC 43 (Historic Fill) was originally identified by EcolSciences as areas of historic fill on the East and West Parcels that had not been previously sampled by EMCON.

Based on this additional sampling of historic fill (EcolSciences 2002), PAOC 43 was redefined in the IWP to encompass a relatively small area of interest between the Chassis and Body Plant building slabs on the West Parcel where there was qualitative evidence of residual heavy petroleum contamination below the water table in one sample (EcolSciences Boring "Fill-D"). No significant source of contamination, as defined by the Draft BCP Guidance, was indicated, although there were qualitative indications of residual petroleum staining and odor within the saturated zone. Iterative Geoprobe®/Macrocore® sampling was performed during the RI within this PAOC 43 area, as described in Table 2 and shown on Drawing 3 and Figure 10A. Because the previous analytical results for samples collected from the surrounding areas met TAGM guidance for total carcinogenic PAHs, delineation sampling was initiated relatively close (within approximately 10 ft) to the single high concentration sample collected by EcolSciences, as described in Table 2. Twenty-three soil borings were completed within PAOC 43, typically ranging in depth from 16 to 28 ft bgs. Qualitative and semi-quantitative field-screening methods (e.g., oil-water shake test, hand-held PID) were used to assess the presence or absence of residual petroleum. Confirmatory soil samples were collected from 12 of the soil borings, at various depth intervals, in order to confirm the limits of residual petroleum in the subsurface fill materials.

Based on the extent of degraded residual petroleum and associated groundwater contamination, an attenuation zone within the PAOC 43 area was defined. ,The attenuation zone represents the approximate "area of residual petroleum", interpolated between test borings yielding positive and negative indications of petroleum based on field screening and supporting soil analysis (Figure 10A), plus the approximate downgradient area of groundwater contamination (Figure 10C). Field screening was relied upon to define the area of residual petroleum, and was supplemented by laboratory analysis of representative soil samples. Because the historic fill in this area of the Site also contains varying levels of PAHs from ash and cinders, not necessarily indicative of residual petroleum, field screening provided the most reliable indicators of residual petroleum. Natural attenuation for residual petroleum in PAOC 43 was proposed in the Conceptual RAWP, subject to verification of the extent of groundwater contamination. In April 2004, four permanent monitoring wells were installed to confirm the extent of the attenuation zone and serve as future monitoring points. These wells were screened across the water table interface (Appendix E). The results are described in Sections 6.1.6 and 6.2.4.

4.1.7 Former Gasoline UST – North End of Body Plant (PAOC 45)

As outlined in Table 2 and shown on Drawing 3 and Figure 11A, two Geoprobe®/Macrocore® borings were performed at PAOC 45, which encompasses the approximate location of a former gasoline UST that was identified on a series of historical Sanborn Fire Insurance Maps for the 1909 to 1915 period. These borings were performed to supplement previous investigations by EMCON (3 test pits and test boring TB-09 on Drawing 2) that failed to indicate gasoline contamination at this location (AMEC 2003). In this vicinity, EcolSciences had performed Borings 26-4 and SB-5 for investigation of PAOCs 26 and historic fill, respectively, which overlap PAOC 45. No evidence of petroleum contamination was noted by EcolSciences. For the RI, one temporary monitoring well was installed at boring location SI-45-B1, from which one groundwater sample was collected for analysis of STARS VOCs. Results are described in Sections 6.1.7 and 6.2.5.

4.1.8 Verification of Fill, Chassis Plant (PAOC 46)

PAOC 46 was identified based on information offered anonymously by a former employee at the GMC North Tarrytown Assembly Plant. The information referred to alleged disposal of automotive batteries within a concrete assembly line pit (trench), at a specific location within the former Chassis Plant. This information was discussed and initially investigated by EMCON (EMCON 2003). To verify the presence or absence of lead-acid batteries within this sealed concrete chase in the Chassis Plant (PAOC 46), eight Geoprobe®/Macrocore® test borings were advanced into the subsurface soils at the locations shown on Drawing 3 and Figure 12. The test borings were advanced through the Chassis Plant slab and continued to the bottom of each filled chase in question. In addition to visual examination of all soil samples to identify any evidence of battery disposal, 12 soil samples collected from depths of 4 to 6.5 ft below the Chassis Plant slab (i.e., at or near the bottom of each chase) were analyzed for lead to confirm the presence or absence of lead-acid battery contamination. Results are discussed in Section 6.1.8 of this report.

4.1.9 Body Plant at Park Boundary near OW-24 (PAOC 47)

Monitoring well OW-24, which is one of two new monitoring wells installed during the first phase of the RI (September-November 2003) along the boundary between the Site and Kingsland Point Park (see Section 4.2.8), indicated the unexpected presence of trichloroethene (TCE) and chromium at levels above the Class GA standards. A new PAOC (PAOC 47) was assigned to this area and was the subject of subsurface investigations in the second phase of the RI (April – October 2004) summarized in Table 3. To characterize the distribution of TCE and chromium in soil adjacent to well

OW-24 and the Kingsland Park Boundary, soil sampling was performed in the vicinity of PAOC 47 to define the horizontal and vertical distribution of fill materials containing TCE and chromium. A series of 27 iterative Geoprobe®/Macrocore® borings were installed and 25 soil samples were collected for VOCs and chromium analysis (Figures 13A and 13C). The dimensions of a filled pit, whose bottom was encountered at approximately 6 ft below the Body Plant slab, was delineated by visual identification of concrete encountered in the Macrocore® samples.

The investigation of PAOC 47 expanded during the RI to include delineation of groundwater containing elevated chromium and chlorinated VOCs (primarily TCE). Fifteen temporary groundwater monitoring wells were installed onsite and sampled for these parameters (Figures 13B and 13D). One well was dry (SI-47-B12) and was replaced with SI-B47-19. In addition, as described in Section 4.2.8, two offsite temporary wells were installed in Kingsland Point Park and sampled for chromium and VOCs (Figure 13D). Surface soil samples (0 to 6 inches) were collected in the park, at the location of each temporary well (Figure 13C) to provide a reference on background chromium levels in the park soils. Results are presented in Sections 6.1.9 and 6.2.6 of this report.

4.1.10 Former 10,000 Gallon Heating Oil UST – North Chassis Plant (PAOC – UST)

Iterative Geoprobe®/Macrocore® sampling was performed along a series of transect lines, as described in Table 2 and shown on Figures 14A through 14D, in order to further delineate the extent of residual oil associated with the former 10,000-gallon heating-oil UST. Previous investigations by EMCON revealed an abandoned UST (circa 1920s) and a body of grossly contaminated soil. The IRM performed by GMC in 1998, removed the UST and over 700 cubic yards of grossly contaminated soil from this area, to the extent practicable without undermining the building foundations in that area. Any light non-aqueous phase petroleum product that may have been present before the IRM was not observed following the IRM. The RI investigated the extent of grossly contaminated soils that was not removed during the IRM, including the areas that were not previously accessible. Qualitative and semi-quantitative field screening methods (e.g., soil-water shake test, PID readings, visible petroleum sheen and odor) were used to assess the presence or absence of residual petroleum in and around this area.

Additionally, three geotechnical borings were performed at locations GT-1 though GT-3 (Figure 14A) from which six soil cores were collected using thin-walled (Shelby) tube samplers. The geotechnical samples were analyzed for physical soil characteristics

listed in Table 2. The results will be used for conceptual development of possible remedial measures for this area.

Fifty-eight Geoprobe®/Macrocore® borings and one HSA boring (SI-UST-46) were performed for delineation purposes, which ranged in depth from 6.5 ft bgs (in cases of refusal) to 36 ft bgs. In those soil borings where evidence of residual oil was noted based on field observations, the boring was advanced below the affected horizon in order to delineate the vertical extent of petroleum. In soil borings where no evidence of petroleum was found based on field screening (or evidence was minimal), the soil borings were advanced into the underlying native soils/sediments (typically to a depth of 32 to 36 ft bgs), to provide geotechnical information on the thickness and composition of fill in this area.

Borings SI-UST-B1 through B48 were performed in 2003 and provided data used for delineating the vertical and horizontal extent of residual petroleum contamination in the vicinity of the former heating oil UST and proposing preliminary source removal boundaries, as discussed in Section 6.1.10 and shown on Figure 14A. Borings SI-UST-B49 through B58 were performed in 2004 to confirm the concentrations of STARs VOCs and SVOCs around the perimeter of the preliminary source removal boundaries, as discussed in Section 6.1.10 and shown on Figure 14C.

4.2 Groundwater Investigation

The groundwater investigation was performed to complete the characterization of groundwater quality initiated in previous investigations, delineate the extent of groundwater contamination related to specific contaminant source areas, and establish monitoring well networks to verify current and future conditions. For the RI, the groundwater investigation was confined to the West Parcel. As described in Section 2.3.2, groundwater quality in the East Parcel was adequately characterized in the previous investigations, and no location-specific remedial concerns were identified. However, groundwater will be included in the overall remedial strategy of the East Parcel because it does not meet Class GA groundwater standards.

As summarized in Tables 2 and 3, the groundwater investigation consisted of the following elements:

- investigating petroleum constituents in groundwater in the vicinity of the former 10,000-gallon heating oil UST, including PAOC 21 and PAOC 39 (located downgradient of the former UST), and establishing a monitoring well network for natural attenuation monitoring

- investigating petroleum constituents in onsite groundwater at the north end of the West Parcel to confirm the extent of background petroleum contamination upgradient of the former 10,000 gallon UST

- investigating metals in groundwater throughout the West Parcel to establish a current baseline

- investigating petroleum constituents and metals in groundwater in the vicinity of historical Fill Area H (PAOC 7) and establishing a monitoring well network specific to this area

- investigating lead concentrations in groundwater in the vicinity of PAOC 29

- investigating the extent of petroleum contamination in groundwater in the vicinity of the former Maxwell Briscoe Facilities (PAOCs 34 and 37) and establishing a monitoring well network for natural attenuation monitoring

- investigating the extent of petroleum contamination in groundwater in the vicinity of PAOC 43 (historical fill with elevated PAHs) and establishing a monitoring well network for natural attenuation monitoring

- investigating groundwater quality along the property boundary between the West Parcel and Kingsland Point Park in the vicinity of PAOC 47

The field investigations pertaining to each of these elements are described below:

4.2.1 Area of 10,000-Gallon Heating Oil UST, PAOC 21, and PAOC 39

An extent-of-contamination investigation was performed downgradient of the former 10,000-gallon heating oil UST, including PAOCs 21 and 39. A series of 30 temporary monitoring wells (Drawing 3) were installed within an iterative grid pattern, using a series of Geoprobe® borings extending to the base of fill (typically12 to 16 ft bgs). The temporary wells were constructed using 1-inch I.D., Schedule 40 polyvinyl chloride (PVC) screens and risers in accordance with the IWP. Qualitative and semi-

quantitative field screening methods (e.g., oil-water shake test, hand-held PID) were used to assess the presence or absence of residual petroleum in the soil. Groundwater sampling for petroleum constituents (STARS List VOCs and SVOCs) was performed to define their upgradient extent between the north end of the property and the former 10,000-gallon heating oil UST, as well as their downgradient extent between the UST and PAOCs 21 and 39 (refer to Table 2).

4.2.2 Onsite Groundwater at North End of Property

To characterize background petroleum contamination upgradient of the former 10,000-gallon heating oil UST, groundwater samples were collected from existing monitoring wells OW-10 and OW-22 (Drawing 3) for analysis of petroleum constituents (STARS list) as described in Table 2. Additionally, one temporary monitoring well (OW-26T) was installed mid-way between the UST area and existing monitoring well OW 10, to further evaluate the extent of background petroleum constituents in the saturated zone. This temporary well was constructed using 2-inch I.D., Schedule 40 PVC screens and risers in accordance with the IWP. The downgradient area was also investigated and delineated by temporary monitoring wells, as described in Section 4.2.1. The purged water was drummed and stored onsite pending the results of the groundwater analyses.

4.2.3 Metals in Groundwater

Previously existing monitoring wells OW-6, 7, 10, 11, 12, 20, and 22 were sampled and analyzed for TAL metals (Drawing 3and Table 2), and in order to establish a current baseline data set. Low-flow purging and sampling techniques were used to minimize the entrainment of solids into the samples, consistent with NYSDEC guidance (TAGM 4015). Additionally, the two new monitoring wells (OW-24 and 25), installed at the Kingsland Park boundary, were analyzed for TAL metals (as part of the analyses described in Section 4.2.8 below).

Temporary well OW-26T was inadvertently included in the sampling program for TAL metals, which was outside the scope of the IWP. Temporary well OW-26T was developed according to the same procedures used to develop (or redevelop) the permanent wells. However, the turbidity of 50 NTU or less was not achieved in this well. Therefore, both filtered and unfiltered samples were collected for analysis of metals.

Monitoring wells OW-6, 7, 10, 11, 12, 20, and 22 were redeveloped prior to sampling, with the objective of reducing turbidity to levels below 50 NTU. Redevelopment of the wells was accomplished using a submersible pump, in conjunction with periodic "surging" of the wells, as outlined in the SOP FP-D-2 (refer to Appendix A of the IWP). The turbidity of the wells was measured periodically using a portable turbidity meter, and well development was continued until no further reduction in turbidity was observed (i.e., the measured results were asymptotic). The purged water was drummed and stored onsite pending the results of the groundwater analyses.

4.2.4 Fill Area H – Historical Fill Area (PAOC 7)

Monitoring wells OW 45, 46, 47, 48, 49, 50, and 51 were sampled and analyzed for TAL metals (Drawing 3and Tables 2 and 3) to provide additional delineation of metals in groundwater. The monitoring wells were constructed using 2-inch I.D., Schedule 40 PVC screens and risers (complete well specifications are provided in Appendix E). Prior to sampling, the wells were developed according to the same procedures used for redevelopment of the existing wells (refer to Section 4.2.3), and the purged water was drummed and temporarily stored onsite pending the results of the groundwater analyses.

4.2.5 Former Maintenance Building Area (PAOC 29)

One temporary well, SI-29-B36, was installed within the center of the area exhibiting lead levels above 10,000 ppm in the fill to obtain one groundwater sample for lead analysis (Drawing 3 and Table 3) The monitoring well was constructed using 1-inch I.D., Schedule 40 PVC screen and riser (complete well specifications are provided in Appendix E). Low-flow purging and sampling was performed to obtain one sample with turbidity less than 50 NTU. The purged water from the groundwater sample was drummed and stored onsite pending the results of the groundwater analyses.

4.2.6 Former Maxwell Briscoe Facilities – South Chassis Plant (PAOC 34 and 37)

One temporary well (SI-37-B1) and four permanent monitoring wells were installed and sampled for STARS VOCs and SVOCS (Drawing 3 and Tables 2 and 3) to confirm the extent of petroleum-contaminated groundwater in this area. The temporary well was constructed using 1-inch I.D., Schedule 40 PVC screen and riser in accordance with the IWP. The permanent monitoring wells were constructed using 2-inch I.D., Schedule 40 PVC screens and risers (complete well specifications are provided in Appendix E). Prior to sampling, the wells were developed according to the same

procedures used for redevelopment of the existing wells (refer to Section 4.2.3), and the purged water was drummed and temporarily stored onsite pending the results of the groundwater analyses. The permanent monitoring wells will also be used in the future to monitor natural attenuation.

4.2.7 Historical Fill with Elevated PAH Concentrations (PAOC 43)

Based on the distribution of residual petroleum contamination determined from Geoprobe® borings, five permanent monitoring wells (OW-40 through 44) were installed and sampled for STARS VOCs and SVOCS to confirm the extent of petroleum-contaminated groundwater in this area. The monitoring wells were constructed using 2-inch I.D., Schedule 40 PVC screens and risers (complete well specifications are provided in Appendix E). Prior to sampling, the wells were developed according to the same procedures used for redevelopment of the existing wells (refer to Section 4.2.3), and the purged water was drummed and temporarily stored onsite pending the results of the groundwater analyses. The permanent monitoring wells will also be used in the future to monitor natural attenuation.

4.2.8 Park Boundary near OW-24 (PAOC 47)

Two permanent monitoring wells (OW-24 and OW-25) were installed along the Kingsland Point Park boundary, as described in Table 2 and shown on Drawing 3, to obtain additional baseline groundwater quality data along the downgradient side of the Site. Based on the discovery of chromium and TCE in OW-24 at levels above the Class GA groundwater standards for drinking-water supplies, a new PAOC (PAOC 47) was identified during the RI. Fifteen temporary wells were also installed onsite, through Geoprobe® borings, in the vicinity of PAOC 47 to further characterize the distribution TCE and chromium in groundwater. In addition, two temporary wells (SB-47-B27 and SB-47-B28) were installed offsite in the park immediately downgradient of PAOC 47.

Groundwater samples were collected from OW-24 and OW-25 for the complete TCL/TAL analyses, and groundwater samples collected from the temporary wells were collected for TCL VOCs and chromium. The monitoring wells were constructed using 2-inch I.D., Schedule 40 PVC screens and risers (complete well specifications are provided in Appendix E). The temporary wells were constructed using 1-inch I.D., Schedule 40 PVC screens and risers in accordance with the IWP. OW-24 and OW-25 were developed according to the same procedures used for redevelopment of the existing wells (refer to Section 4.2.3).

The temporary onsite wells were installed and sampled in two phases to delineate the extent of groundwater contamination. Groundwater was analyzed for chromium and TCL VOCs/STARS VOCs.

Temporary offsite wells SB-47-B27 and SB-47-B28, in Kingsland Point Park, were purged dry to remove fine material and allowed to recover for 24 hours prior to collecting groundwater samples. Soil samples were also collected from the surface (0- to 6-inch interval) at SI-47-B27 and SI-47-B28 to determine the background levels of chromium in park soils at these locations. Groundwater was analyzed for chromium and TCL VOCs/STARS VOCs. Purged water from all permanent and temporary wells was drummed and temporarily stored onsite pending the results of the groundwater analyses.

4.3 Soil Gas Survey

4.3.1 Soil Gas Survey: East Parcel

As outlined in the IWP Addendum 1 (AMEC, 2003c), a soil gas survey was performed at the East Parcel and at the locations shown on Figures 15A and B. The survey consisted primarily of field-screening measurements of methane (measured as combustible gas) and hydrogen sulfide, which are typically generated during subsurface biodegradation of organic matter. A representative number of soil gas samples were also collected for laboratory analyses to characterize the individual constituents indicated by the results of the field screening. The survey results were used to develop a three-dimensional profile of methane gas levels. Additionally, four soil Geoprobe® borings were performed to further characterize subsurface soil conditions outside of the former village refuse area, at locations where relatively high methane readings were obtained.

The soil gas survey was conducted in accordance with AMEC SOP FP-C-3 (Appendix A of IWP Addendum 1), following the general guidance of the United States Environmental Protection Agency (USEPA) Soil Gas Sampling SOP 2042 (06/01/96.). Field measurements were obtained for combustible gas, hydrogen sulfide, and oxygen concentrations at 47 locations throughout the 27-acre parcel (Figure 15A). These include five locations along the eastern edge of the buried refuse, approximately 10 to 20 ft outside the asphalt edge. Additional sampling locations were added in the field in an iterative response to the field measurements. In general, field measurements were obtained at two or more of the following depth intervals (subject to local site conditions): approximately 1 ft bgs, approximately 3 ft bgs, immediately above the

water table (where groundwater was deeper than 3 ft) and at a mid-point between the 3-ft interval and the water table (where groundwater was deeper than 5 ft). The exact sample depths were determined by the conditions at each location and were recorded in the field logs.

Gas samples were obtained by advancing a Geoprobe® to the appropriate depth. The probe was constructed of stainless steel with a slotted bottom section or tip that allowed for gas sampling at a specific depth. The probe was purged in accordance with AMEC SOP FP-C-3. A LANDTEC GA-90 multi-gas meter was used to draw the soil gas and measure combustible gas and oxygen levels from the desired depth before advancing the probe to the next interval. A LANDTEC hydrogen sulfide pod was added to the instrument to monitor for reduced sulfur gases. In areas that exhibited zero to 1% combustible gas, a portable Flame Ionization Detector (FID) (Photovac MicroFID) was used to screen for ppm levels of total methane and non-methane hydrocarbon vapors. All field readings and observations will be documented on survey log sheets as found in AMEC SOP FP-C-3.

Based on the results of the field survey and field observations, soil gas samples were collected for laboratory analysis at four locations (approximately 10% of the total number of sampling locations) as shown in Figure 16. These included two locations within the refuse area and two locations within the paved parking lot beyond the refuse area. A summary of the laboratory analyses is presented in Table 2. Laboratory samples were collected in evacuated Summa canisters (1-liter size), from locations yielding field readings of between 5% and 25% total combustible gas. Per the IWP Addendum 1, this range was selected for sampling to minimize concerns for shipping combustible gas while still providing samples where non-methane hydrocarbons would be expected to be detectable if the source is municipal refuse. The gas samples were analyzed for fixed gases (CO, CO2, and O2), methane, and speciated non-methane light hydrocarbons (C2-C5 hydrocarbons and C6+ hydrocarbons) by ASTM D-1945 (GC/FID/TCD), and specific VOC compounds by EPA Method TO-15. Laboratory analysis for hydrogen sulfide and other reduced sulfur gases were not conducted because the field survey data did not indicate the presence of H2S at elevated (1 ppm or higher) levels.

4.3.2 Soil Gas Survey: West Parcel

The soil gas survey on the West Parcel comprised a methane survey and a VOC survey. Because different sampling strategies and locations were used in each survey, they are described separately.

4.3.2.1 Naturally Occurring Methane Survey

On the West Parcel there is no evidence of buried refuse, based on historical records and representative borings throughout the West Parcel. However, the potential for minor methane generation from natural decomposition of former marsh vegetation, buried by fill during historical site development, was recognized and a sampling plan was designed to provide representative sampling throughout those portions of the West Parcel where marsh vegetation was likely to have existed (IWP Addendum 2). Field measurements of combustible gas and oxygen concentrations were obtained at 33 locations within the West Parcel (Drawing 3and Figure 17). These included five soil gas measuring points within the footprint of the former Pocantico Bay, with the rest along the margins of the former embayment, and within filled areas of the West Parcel underlain by marsh deposits. Iterative sampling was performed, based on the results of initial field measurements at the first 23 locations. In most cases, field measurements were obtained at one shallow depth interval (nominal depth of 2 ft bgs), although some locations required minor modifications to sampling depth to attain a good seal between the soil probe and the atmosphere.

The soil gas measurements were conducted in accordance with AMEC SOP FP-C-3 (IWP Addendum 1), following the general guidance of the USEPA Soil Gas Sampling SOP 2042 (02/16/02.) The majority of the soil gas measurements were performed in areas currently covered either by concrete building slabs or asphalt pavement. To the degree that these existing features may act as barriers to natural soil gas release to the atmosphere, they would be analogous to the conditions anticipated under future buildings at the Site. Fourteen of the sampling points shown on Figure 17 are located within the footprints of proposed new construction at the Site. All sampling locations are located within areas that are currently covered by building slabs or pavement.

The soil gas measurements were obtained through Teflon tubing inserted into test holes created with either using either a Geoprobe® rig equipped with a stainless-steel probe or a hammer drill (in concrete covered areas). The placement and sealing of the sample tubing was performed in the same manner as the East Parcel survey. Once the sampling probe had been advanced to the targeted depth, the tubing was purged in accordance with AMEC SOP FP-C-3 (IWP Addendum 1). A LANDTEC GA-90 multi-gas meter was used to draw the soil gas from the desired depth and measure the combustible gas (assumed to be methane) and oxygen concentrations. Under conditions where less than 1% combustible gas was detected, a portable FID (Photovac MicroFID or equivalent) was used to screen for ppm levels of total methane and non-methane-hydrocarbon vapors.

4.3.2.2 VOC Survey

A quantitative soil gas survey was performed at representative future building area locations within the West Parcel where VOCs have been detected in saturated zone soils (which detections were at least 4-5 feet below ground surface) or in groundwater. There were no areas investigated in the RI or previous investigations where VOCs were confirmed to be present in the unsaturated zone, unless such samples were obtained at the saturated/unsaturated interface (at the water table). A negligible exception is noted where trace part-per-billion levels of toluene or xylenes were reported in numerous surficial or shallow crawl space soil samples under the Body and Chassis Plant slabs from the previous investigations. These observations, many below the method reporting limit, can be considered artifact in the absence of any other evidence of contamination. The sampling strategy of VOCs in soil gas on the West Parcel was to obtain representative samples where VOCs were confirmed to be present within or near the footprint of future buildings, as conceptualized in the DEIS for Lighthouse Landing. As described in Table 2 and shown on Drawing 3 and Figure 18, 52 representative soil gas samples (including duplicates) were collected as follows:

- twenty-five sub-slab soil gas samples, plus two duplicates, collected from shallow soil borings installed through low-permeability surfaces (e.g., concrete slabs and asphalt pavement)

- twenty samples, consisting of 10 pairs of soil gas and crawl space air samples, plus two duplicates, collected from existing crawl spaces beneath the former Chassis and Body Plants

- two background air samples, plus one duplicate collected upwind and downwind of the Chassis and Body Plant foundations

The soil gas survey was conducted in accordance with AMEC SOP FP-C-3 (from IWP Addendum 1), following the general guidance of the USEPA Soil Gas Sampling SOP 2042 (02/16/02). Integrated 1-hour samples were collected in 6-liter Summa canisters and analyzed for VOCs by Modified USEPA Method T0-15. This method consists of a full scan GC/MS analysis of the standard TO-15 compound list, with standard reporting limits, plus naphthalene (2 parts-per-billion-volume [ppbv] reporting limit). Summa canisters were 100% certified free of target compounds (Method TO-15 compound list plus naphthalene) before they were shipped to the Site for sampling. Each canister was fitted with 1-hour fixed flow controllers.

The soil gas measurements were obtained through Teflon tubing inserted into test holes created with either a Geoprobe® rig equipped with a stainless-steel probe or a hammer drill (in concrete covered areas and in areas where access was limited, such as crawl spaces). The targeted sampling depths were as follows:

- in asphalt-paved areas, samples were collected at a nominal depth of 1 ft bgs
- beneath a competent (intact) concrete slab, the samples were collected immediately beneath the slab
- within uncovered soil or other permeable materials (crawl space areas), the samples were collected at a depth of 1 to 2 ft bgs

The tubing was sealed to the slab or asphalt interface with modeling clay or an equivalent material. For crawl-space soil gas sampling, the annular space between the sample tubing and the soil was packed with sand and the upper 6 inches sealed with bentonite to attain a seal between the soil gas probe and the atmosphere. Once the probe was advanced to the specified depth, and an adequate seal was obtained, the hole was purged in accordance with AMEC SOP FP-C-3 (Addendum No. 1 to IWP). Once the purging was completed, the Summa canister was connected to the Teflon tubing and the soil gas sample was collected. Field duplicate samples, collected at a frequency of one in 10 samples, were obtained simultaneously from a common inlet connected to a Swagelock tee.

The crawl space air and background (outside) air samples were drawn directly from the ambient air. Crawl space sample locations were out of the direct influence of doorways or similar openings.

4.4 Survey Control

Horizontal and vertical survey control for nearly all onsite sample locations from the RI was provided by a licensed New York State land surveyor. The survey coordinates were registered in the New York East State Plane Coordinate System, using the North American Datum of 1983 (NAD 83) and the North American Vertical Datum of 1988 (NAVD 88). Horizontal accuracy on sample locations was within ±1 ft. Exceptions to this level of surveying were as follows:

- soil gas samples from crawl space areas and the test borings for alleged battery disposal in Chassis Plant pits, which are based on field measurements by the sampling team, relative to the structural column grid shown on Drawing 3

- offsite sampling locations in Kingsland Point Park, which are based on field measurements taken by the sampling team, relative to onsite surveyed locations

Vertical control was provided for temporary and permanent groundwater monitoring wells installed onsite during the RI (a vertical benchmark was previously established for the Site). Vertical accuracy requirements were within ±0.01 feet. The horizontal coordinates and elevations of the surveyed sample points were provided to AMEC by the surveyor. The site base map for the RI was used to prepare Drawings 3 and 4, as well as all close-up figures displaying RI sample locations.

5. Quality Assurance/Quality Control

5.1 Field Quality Assurance/Quality Control Procedures

5.1.1 Quality Assurance/Quality Control Samples

The field quality control (QC) procedures were carried out in accordance with the IWP and IWP Addendums 1 and 2. Field QC samples consisted of trip blanks, sample duplicates, and equipment blanks (equipment rinsate blanks). Descriptions of the sample types and frequencies are provided below.

Trip blanks were used to assess any possible contamination that may have occurred during transport of the sample bottles to and from the field. The trip blanks consisted of analyte-free reagent-grade water filled in the specific sampling containers used for the project sampling program. Trip blanks were prepared at the laboratory, sealed, transported to the sampling site, and returned to the laboratory without being opened. Trip blanks were analyzed for VOCs only. Trip blanks were submitted at a rate of one per sampling day whenever VOC samples were to be shipped to the laboratory. Trip blanks were not shipped with soil samples.

Field duplicates were used to assess consistency of sampling, sample homogeneity, and laboratory analytical consistency. Sample duplicates were submitted as laboratory blind duplicates and were analyzed for all analytes of interest. Field duplicates were collected at a frequency of 10% (1 in 10) of the total number of samples collected per sample matrix. Duplicate soil samples, for analyses other than VOCs, were split from a specified sample after the specified sample had been homogenized in the field. Duplicate soil samples for VOC analyses were not homogenized to minimize the loss of volatile constituents to the atmosphere during sample handling. Duplicate groundwater samples were obtained by alternately filling sample containers from the same sampling device.

Matrix spike/matrix spike duplicate (MS/MSD) samples were used to assess the laboratory method's accuracy and precision. These samples were spiked with known quantities of target analytes at the laboratory. The samples were collected at a frequency of 5% (1 in 20). For water samples, triple sample volumes were collected.

Equipment (rinsate) blanks were collected only in cases where non-dedicated sampling devices (e.g., reusable soil trowels) were used for sample acquisition. Dedicated devices include disposable single-use sampling devices (such as Macrocore™ liners

and polyethylene bailers) and devices that may remain in place (e.g., inside a monitoring well) for periodic sample acquisition. Equipment blanks were prepared by pouring analyte-free water over decontaminated sampling equipment as a check that the decontamination procedure has been adequately carried out and that there is no cross-contamination of samples occurring due to the equipment itself. Analysis of equipment blanks was performed for all analytes included in the corresponding field samples. One equipment blank was prepared and collected at a frequency of 5% (1 in 20) of the total number of samples collected with a non-dedicated sampling device. Equipment blanks were collected from hand trowels used at PAOC 9 and at PAOCs 14, 15, and 32. Other soil samples were collected using disposable sampling devices.

5.1.2 Calibration of Field Instruments

PIDs used for field screening of soils and air monitoring were calibrated prior to starting field activities using certified calibration gases, in accordance with the manufacturer's specifications, and calibrations were performed periodically throughout the field investigation program. The particulate monitoring instruments (PDMs) used for air monitoring (which were factory calibrated), were re-zeroed daily prior to starting field operations. The field instruments used for measuring temperature, conductivity, dissolved oxygen, pH, turbidity, etc. (used in connection with well development and groundwater sampling) were calibrated in accordance with the manufacturers' specifications, and checked daily. Results of field calibrations and calibration checks were maintained in the field logbook.

5.2 Laboratory Quality Assurance/Quality Control

A Data Usability Summary Report (DUSR) was prepared for each sample delivery group in accordance with the Department's June 1999 Guidance for Development of Data Usability Summary Reports. Each DUSR thoroughly evaluates project-acquired analytical data. The primary objective of the DUSR is to determine whether or not the data, as presented, meet the project-specific criteria for data quality and data use. The DUSRs confirm that the data-quality objectives outlined in the IWP and subsequent addenda were met, and provide the final validated laboratory data tables for all samples. All analytical data included in the RI Report have been validated and any adjustments based on the DUSRs are reflected in the data presented in RI tables and figures. Copies of the DUSRs produced in connection with this investigation are provided to the NYSDEC under separate cover.

6. Results

6.1 Soil Investigation

6.1.1 Areas of Elevated Lead Concentrations

PAOCs 1, 7, 9, and 29 were investigated for the presence and extent of elevated concentrations of lead in soil/fill. A threshold value of 10,000 ppm was proposed in the IWP and in the Conceptual RAWP, based on a knee-of-the-curve soils approach (described in Section 4.1.1) to define potential areas of grossly contaminated soils with respect to lead. Previous investigations revealed that at least one sample from each of these areas had exceeded this value. The goal was to:

- determine if elevated levels of lead (>10,000 ppm) could be verified through systematic sampling to discern a zone of contamination that could be considered grossly contaminated

- delineate the extent of the lead >10,000 ppm and define any specific areas to be considered for location-specific remediation

The laboratory analytical results for lead in soils are summarized in Table 4. Results are presented as mg/kg in Table 4, more commonly referred to as ppm. The corresponding soil boring logs are provided in Appendix D. The results pertaining to each specific area of interest are discussed in the following sections.

6.1.1.1 Former Village Refuse Area (PAOC 1)

Domestic refuse, typically consisting of glass, coal ash, shells, ceramic material, metal debris, and decomposed organic material, was encountered in soil borings SI-1-B4 through SI-1-B11 (Figure 3 and Appendix D), at depth intervals ranging from 3 to 8 ft bgs. The refuse was typically overlain by dredged material fill, which typically consisted of fine sand with scattered oyster shells. Native marsh deposits, consisting of peat and (or) organic-rich clay and silt horizons, were encountered beneath the refuse layer.

The analytical results for total lead from 52 samples (Table 4 and Figure 3) ranged from non-detectable to a maximum of 3,490 ppm. The frequency distribution for the RI data from PAOC 1, provided in Appendix B 3, contrasts the distribution of pre-RI and RI data. Lead was detected at concentrations above the NYSDOH guidance value of

400 ppm (but well below 10,000 ppm) in 8 samples, all of which were collected at depths greater than 5 ft bgs. All of the lead results above the NYSDOH guidance value were associated with the refuse/ash material. The results obtained for duplicate samples SI-1-B7-A-1 and SI-1-B7-A-2 (Table 4) were 720 and 3,490 ppm respectively, which suggest a relatively high degree of sample heterogeneity within the refuse/ash layer. These results are consistent with those of previous EMCON and EcolSciences investigations, in which soil samples collected at adjacent locations typically yielded widely differing analytical results. The RI results indicate that lead concentrations within the refuse/ash layer are typically well below 10,000 ppm. Even the previous results did not suggest that there was a discernable body of fill with elevated lead concentrations in PAOC 1. The single EMCON Phase II sample from the ash/refuse layer that had yielded 43,500 ppm was part of a duplicate analysis from the same sample, where the duplicate result was 1,270 ppm. All other EMCON samples showed lead to be below 500 ppm in the refuse area. The 52 samples from the RI did not encounter any materials containing lead greater than 10,000 ppm, confirming that such elevated values are not typical of PAOC 1.

Because the RI results demonstrated that there is no zone of grossly contaminated soil in PAOC 1, the Former Village Refuse Area is not considered a source area for lead. Therefore, location-specific remediation is not recommended for lead within this area. PAOC 1 is recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance. In addition, the need for a general area-specific remedial plan for methane in this area, and throughout the East Parcel, is discussed in Section 6.3.1.

6.1.1.2 Fill Areas H, F and G – Historic Fill Area (PAOC 7)

Fill materials encountered within Fill Area H (the historic fill in PAOC 7) extend to a depth of 12 to 13 ft bgs (Figure 4C and Appendix D). Anthropogenic (human derived) materials, such as slag, glass, brick fragments, concrete, coal ash, and metal fragments, were observed throughout the fill materials sampled in Fill Area H. Additionally, a layer of slightly oil-stained silt/muck was encountered at a depth interval of approximately 8 to 12 ft bgs (Appendix D), which typically contained metal parts such as bolts, washers, and pieces of wire.

The analytical results for PAOC 7 soil samples are summarized in Table 4. Lead concentrations ranged from not-detected (in 23% of the samples), to a maximum of 167,000 ppm. Of the 271 soil samples (including 25 duplicates) that were analyzed within Fill Area H and vicinity (Fill Areas F, G and K), 21 samples (8 %) yielded lead

results greater than 10,000 ppm. A majority of samples (approximately 58%) were below 400 ppm. The frequency distribution for the RI data from PAOC 7/Fill Areas H, F and G, provided in Appendix B 3, illustrates a similar curve to the Site-wide condition observed with the frequency distribution of the pre-RI data shown in Appendix B 1. In comparison, the 8% occurrence of values>10,000 ppm within PAOC 7/Fill Areas H, F and G is only slightly higher than the 3% occurrence of these levels observed Site-wide in the pre-RI data.

All of the samples in which lead was detected above 10,000 ppm were collected from intervals where anthropogenic fill materials were observed. As shown on Figure 4C, 12 of the 19 samples containing lead concentrations above 10,000 ppm were collected at depths greater than 4 ft below the crawl space ground surface (within the groundwater saturated zone). The original high-density sampling that was conducted within Fill Area H at the beginning of the RI in 2003 was later expanded to cover a larger area once it was realized that lead levels above 10,000 ppm were detected in more than one location. As the delineation continued on an iterative basis, elevated lead levels were also found in several samples from adjacent Fill Area F and in one sample from adjacent Fill Area G. Boring SI-7-B16 is displayed as being in Fill Area K (Figure 4C), but based on the physical classification of fill materials encountered, boring SI-7-B16 is representative of Fill Area H rather than Fill Area K.

The materials encountered in Fill Area K consist entirely of dredged material fill (fine sand with traces of oyster shells), which extended to a depth of approximately 16 ft bgs. This material was dredged from the Hudson River main channel and placed directly onsite during 1960 (EMCON, 1996). All eight soil samples collected from Fill Area K that consisted of dredged material yielded analytical results for lead that were below the 400 ppm NYSDOH guidance value for unrestricted use (maximum was 225 ppm lead). Fill Area K therefore provides a substantial separation zone between the elevated lead materials and the Hudson River shoreline.

Collectively, the analytical results from the PAOC 7 area indicate that lead concentrations >10,000 ppm are primarily confined to Fill Areas H and F, which may have slightly larger boundaries than shown on Figure 4C based on the fill encountered and the lead distribution just beyond those inferred boundaries. However, the distribution of lead greater than 10,000 ppm is heterogeneous, without any common zone of contamination or even a common confirmed source of lead within the fill. At the OW-45 location, the deep samples (11 to 12 ft bgs) exhibited more than 10,000 ppm lead along with evidence of sunken barges (wood, oily material, and metal debris)

that were used as containment structures to construct the fill units. The maximum lead concentration of 167,000 ppm was associated with slag found at 1 to 2 ft bgs.

Overall, there is a significant volume of historical fill in Fill Areas H and F, and possibly Fill Area G, (in excess of 20,000 cubic yards) containing a wide range of lead concentrations at varying depths, including levels greater than 10,000 ppm. However, only 8% of the samples exceed 10,000 ppm, and 58% are below 400 ppm; indicating that this entire volume is not grossly contaminated with lead. Rather, this area represents a significant mass of historic fill with fairly well mixed concentrations of lead, but which still warrant special attention relative to the remainder of the Site.

As demonstrated by the groundwater investigation (Section 6.2.1), lead is not currently impacting groundwater in this area. Under current conditions, lead found in the historical fill in this area is not a source of groundwater contamination.

Based on these findings, an evaluation of location-specific remedial alternatives is recommended for PAOC 7Fill Areas H, F and G. The long-term potential for lead to remain inert, with respect to future groundwater quality, should be considered in evaluating remedial options. Remedial alternatives to prevent future public exposure to lead-contaminated fill in this area, including some excavation, should be considered.

Based on subsurface materials described in the RI boring logs (Appendix D), the approximate boundaries of fill areas in this part of the Site, originally approximated from historical maps and aerial photographs, are not accurate enough for defining the actual source area boundaries. Preliminary boundaries encompassing the area within PAOC 7/Fill Areas H,F and G to be evaluated for remediation will be presented in the remedial documents and will be based on a more detailed review of boring logs, historical maps, and the observed distribution of lead at levels greater than 10,000 ppm.

6.1.1.3 Basement underneath Body Plant (PAOC 9)

PAOC 9 encompasses an area of a wastewater sewer overflow observed within the former Body Plant crawlspace during facility operations in 1996 (Drawing 2). For the RI, the specific location of concern at PAOC 9 was defined by a single surficial soil sample from the Body Plant Basement in 1997 that exhibited lead at a concentration greater than 10,000 ppm in the general vicinity of the former sewer overflow. The EMCON Phase III investigation (EMCON 2001) reported one out of 16 samples from

this area of the crawl space above 10,000 ppm (10,500 ppm at EMCON surface sample BP-33-2).

Of the 10 surface soil samples collected during the RI within the immediate vicinity of BP-33-2 (Figure 5) only two yielded lead results above the 400 ppm TAGM 4046 guidance value (but well below 10,000 ppm). The highest lead concentration detected (995 ppm) was in surface sample SI-9-S4-A-1. All 10 surficial samples collected during the RI from this location exhibited considerably lower levels of lead (< 1,000 ppm) than was indicated by the single 1997 sample, confirming that lead levels of 10,000 ppm, or greater, are not typical of PAOC 9.

Because the RI results demonstrated that there is no zone of grossly contaminated soil in PAOC 9, this region of the crawl space area beneath the former Body Plant slab is not considered a source area for lead. Therefore, location-specific remediation is not recommended for lead in this area. PAOC 9 is recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.1.4 Former Maintenance Building Area (PAOC 29)

The subsurface soils encountered in the former Maintenance Building Area (PAOC 29) consisted of a sequence of fill extending to a depth of up to 8 ft bgs (Figure 7A and Appendix D), which was underlain by native marsh deposits (peat, clay, and silty clay). The fill materials typically included anthropogenic components, such as coal ash, glass, nails, concrete fragments, brick fragments, crushed stone, and wood. In borings SI-29-B1 through SI-29-B4, the fill was principally coal ash. The fill encountered in borings SI-29-B5 through SI 29 B8 generally consisted of 50% or more medium to fine-grained sand, along with the anthropogenic components listed above. Offsite fill encountered in Kingsland Point Park, beneath the roadway and parking strip ranged in thickness from 4 feet along the GMC Site fence line to 6 inches where the paved surface met the higher terrain in the park. This fill consisted of brown and black fine to coarse sand with varying amounts of glass, coal, and gravel. The underlying native material consisted of brown sand or black organic sediments, which also contained glass fragments.

The analytical results for lead in PAOC 29 area soils are summarized in Table 4 and Figure 7A. Lead was detected in all but one sample, ranging from 6.22 ppm to a maximum of 90,000 ppm. The frequency distribution for the RI data from PAOC 29, provided in Appendix B 3, illustrates a similar curve to the Site-wide condition observed with the frequency distribution of the pre-RI data shown in Appendix B 1, but with a

somewhat higher frequency of values >10,000 ppm. Separate frequency curves for the onsite and offsite (Kingsland Point Park) data from PAOC 29 are also provided in Appendix B 3. Approximately 14% of the onsite samples (11% of the combined onsite/offsite data) exhibited values >10,000 ppm. This frequency is slightly higher than the 8% frequency observed in PAOC 7/Fill Areas H, F and G. Approximately 38% of the onsite values were below 400 ppm.

The samples yielding analytical results above the NYSDOH guidance value of 400 ppm were associated exclusively with the fill material. As shown in Table 4 and Figure 7A, lead was detected at concentrations >10,000 ppm within random depth intervals in 12 out of 35 soil borings. All borings yielding greater than 10,000 ppm were on the GMC Site, at depths ranging from 1 to 9 ft bgs. Presently, the fill in this area is entirely covered by asphalt or concrete. Lead concentrations above 10,000 ppm do not extend offsite. Approximately 86% of the offsite soil/fill samples in Kingsland Point Park exhibited lead concentrations below the NYSDOH guidance value of 400 ppm. The samples containing lead above 400 ppm ranged from 420 to 815 ppm, and were distributed between 0.2 to 6 feet below the asphalt surface in the park road that runs along the GMC fence line.

The lead levels above 10,000 ppm in the PAOC 29 area are clustered in one relatively contiguous area, but randomly distributed throughout the depth of fill. The fill encountered at this location is not visibly distinct from the general blended historical fill used throughout this area of the Site, and exhibits no visible or other chemical indication of an association with the former maintenance building in this area. A possible boundary for grossly contaminated soil at PAOC 29 can only be based on the observed distribution of lead at levels greater than 10,000 ppm, since no other distinguishing characteristics are evident. However, only 14% of the samples exceed 10,000 ppm, indicating that this entire volume within this boundary is not grossly contaminated with lead. Rather, this area represents a large mass of historic fill with fairly well mixed concentrations of lead not readily distinguishable from the surrounding pre-1914 fill, but concentrated enough to still warrant special attention, relative to the remainder of the Site.

As demonstrated by the groundwater investigation (Section 6.2.2), lead is not currently impacting groundwater in this area. Under current conditions, lead found in the historical fill in this area is not a significant source of groundwater contamination.

Based on these findings, an evaluation of location-specific remedial alternatives is recommended for PAOC 29. The long-term potential for lead to remain inert, with respect to future groundwater quality, should be evaluated in the remedial documents. Remedial alternatives to prevent future public exposure to lead-contaminated fill in this area, including some excavation, should be considered.

6.1.2 Confirmation of EMCON Sampling Results (PAOC 2, 4, 6, 7, and 17)

The locations of the soil borings performed in PAOCs 2, 4, 6, 7, and 17 are shown on Drawing 3 (SI-2-B1, SI-4-B1, SI-6-B1, SI-7-B1, and SI-17-B1). As shown by the soil boring logs in Appendix D, all of the soils sampled consisted of fill, which contained anthropogenic materials such as coal ash, glass, concrete fragments, and rock fragments. The analytical results pertaining to these soil borings are summarized in Tables 5 through 8.

A comparison of the soil analytical results produced during this investigation with those reported previously at PAOCs 2, 4, 6, 7, and 17 (EMCON Phase III Investigation) is presented in Table 9. From a qualitative standpoint, the analytical results generated during this RI appear to be comparable to those obtained during the previous EMCON investigations at PAOCs 2, 4, 6, 7, and 17 (i.e., most of the same compounds were detected). Quantitative comparisons based on the relative percent difference (RPD) between adjacent samples show variations on the order of 100% or more for some analytes (Table 9). These differences can be attributed the heterogeneity of the fill materials that were sampled. Therefore, results from all previous investigations by EMCON are considered reliable for site characterization purposes. Data from the previous investigations were considered in the development of the IWP and Conceptual RAWP.

With the exception of PAOC 7, which was recommended for location-specific alternatives analysis (as described in Section 6.1.1.2), the RI results did not indicate that these re-sampled areas should be considered for location-specific remediation. Therefore, PAOCs 2, 4, 6, 17 and all other PAOCs identified by EMCON, not otherwise recommended for location-specific remediation in this RI Report, are recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.3 Recycled Concrete Millings (PAOC 14, 15, and 32)

The analytical results for the concrete millings samples collected at PAOCs 14, 15, and 32 are summarized in Tables 5, 7, and 8. The sample locations are shown on Drawing 3. The results were similar to those reported in connection with the EcolSciences Due Diligence Investigation (EcolSciences, 2002) for PAOC 32 (Millings Pile). Levels of PAHs and several metals exceed TAGM 4046 guidance values for unrestricted use (Tables 5 and 8) and have similar ranges to those observed for historical fill (see similar results for PAOCs 2, 4, 6, 7, and 17). PCB Aroclors 1248 and 1260 were detected at maximum concentrations of 1.8 mg/kg and 2.6 mg/kg respectively (Table 7). The maximum total PCB concentration detected in these samples was 4.4 mg/kg. The source of trace PCBs in the millings has not been determined. The millings consist of unscreened recycled concrete aggregate from the slabs, decks, and walls of the demolished GMC assembly plant and support buildings. Prior to demolition, a comprehensive assessment of hazardous and other regulated materials was conducted. PCB-containing equipment was removed and associated contaminated concrete (e.g., within electrical transformer areas and some hydraulic fluid pump systems) was cleaned or removed for offsite disposal prior to demolition. Therefore, the presence of trace PCBs throughout the millings was not anticipated. Ancillary materials associated with the demolished slabs (imbedded in the slabs or coating some surfaces) may have contributed. For example, fragments of structural steel reinforcement (rebar) materials (brick, wire, and glass) were observed in the millings. The surfaces of some concrete fragments were also observed to be covered with paint and (or) other coatings.

With the majority of milling samples yielding values at or close to the 1 ppm TAGM guidance value for unrestricted use, but well below the 10 ppm TAGM guidance value for subsurface soils (under clean cover), the millings are of suitable quality for use as subsurface structural fill. Due to the collective presence of several metals, PAHs, and PCBs at levels above TAGM 4046 guidance for unrestricted use, the millings are not suitable for general surface applications.

Based on these findings, the millings (PAOCs 14, 15 and 32) are not recommended for location-specific remediation. Rather, the millings should be considered as structural fill that may be placed below barrier cap surfaces suitable for the end uses at the Site. With that approach in mind, PAOCs 14, 15 and 32 are recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.4 Former Maxwell Briscoe Facilities – South Chassis Plant (PAOC 34 and 37)

The analytical results for soil and groundwater samples collected during this investigation are summarized in Tables 5, 6, and 11, and shown on Figures 8A and 8C, respectively. Soil boring logs are provided in Appendix D.

Fill materials were encountered at PAOC 34 to depths of up to 12 ft bgs (Appendix D). Anthropogenic (human derived) materials observed in the fill included concrete and brick fragments, coal ash, and wood (lumber). No evidence of petroleum was noted in the soil borings, based on field screening (e.g., stains, odors, sheens or PID readings). Several PAHs were detected at concentrations above the applicable TAGM 4046 guidance values in soil samples collected from the depth interval of 4 to 4.5 ft bgs (Table 5 and Figure 8A), but were not detected in samples collected from the 8 to 8.5 ft depth interval. Given that no evidence of petroleum was observed in the subsurface soils, these results may be related to the presence of coal ash in the fill material, rather than a petroleum source.

Within the vicinity of PAOC 37, a layer of fill was encountered, which typically extended to a depth of 7 to 8 ft bgs (Appendix D and Figure 8B). The fill layer consisted of a mixture of dredged material fill (typically fine sand with oyster shells), along with traces of coal ash and building demolition debris. Below the fill layer was a sequence of native soils consisting principally of reddish-brown, stratified, fine- to coarse-grained sand. The depth to groundwater ranged from 6 to 8 ft below grade (Figure 8B).

A lens of dark-gray, petroleum-stained soil was encountered within the saturated zone, at a typical depth interval of 9 to 12 ft bgs. The stained soil was observed only within the native soils. No oil staining was noted within the overlying soils in the unsaturated zone. The horizontal and vertical distribution of petroleum staining is shown in Figures 8A and 8B respectively.

A strong petroleum odor (suggestive of #2 heating oil or diesel fuel) was noted in the stained soil, which typically yielded initial PID readings at the sample surface of up to 600 ppm above background. No evidence of floating product was observed. Oil/water agitation screening performed in the field with this stained soil typically produced a thin film coating the sides of the sample jar, which was pale yellow in color. These observations are consistent with the presence of a relatively “light” petroleum source, such as #2 heating oil or diesel fuel. From these collective observations, an “area of residual petroleum” was identified (Figure 8A).

As described in Section 4.1.4, confirmatory soil samples were collected from seven soil borings located immediately beyond the observed “area of residual petroleum” (Figure 8A). Two soil samples were collected from each soil boring, one immediately above the water table, and one within the saturated zone. Additionally, one soil sample was collected from petroleum-stained soil observed within boring SI-37-B17, which was located adjacent to the retaining wall shown on Figure 8A. The analytical results for soil are summarized in Tables 5 and 6, and are described below.

A series of VOCs (principally xylenes and benzene derivatives) were detected at concentrations of 5.4 to 25 ppm in sample S-37-B17-A-A (Table 6), which was collected from petroleum-stained soil at a depth interval of 8.5 to 9 ft bgs. No VOCs were detected in the other samples, which were collected outside the perimeter of the petroleum-stained soil. SVOCs were detected in samples collected from three soil borings. As shown in Table 5 and on Figure 8A, traces of SVOCs were detected in soil samples collected from perimeter borings SI-37-B1, SI-37-B3, and SI-37-B8, at depth intervals ranging from 5 to 8 ft bgs. No evidence of petroleum was observed at these locations (the results of oil/water agitation tests and head-space analyses were all negative). Two of the samples were collected from fill material within the unsaturated zone, at a depth interval of 5 to 5.5 ft bgs. As shown in the corresponding boring logs (Appendix D), coal ash was observed within the fill material at both locations. Sample SI-37-B3-A-1 (Table 5) was collected within the saturated zone, at the lower contact between the fill layer and the underlying native soil. Given that no evidence of petroleum was observed within this interval, and the fact that no VOCs were detected, the presence of PAHs in sample SI-37-B3-A-1 may be related to anthropogenic materials (e.g., coal ash) present in the fill.

The results of groundwater sampling of temporary monitoring well SI-37-B1, located within the center of the residual petroleum area are summarized in Table 11 and shown on Figure 8C. The VOCs n-butylbenzene and n-propylbenzene were detected at concentrations slightly above the Class GA guidance values (Table 11). Other VOCs were detected at concentrations below the NYSDEC standards or guidance values including xylenes, naphthalene, and several benzene derivatives. Additionally, traces of several PAHs were detected. These results suggested that any residual petroleum remaining in the soil and groundwater beneath PAOC 37 has undergone extensive degradation and weathering during the past 80 to 90 years, and that the associated petroleum constituents in groundwater are relatively dilute. The Conceptual RAWP recommended natural attenuation as the location-specific remedy for this area, subject to defining the boundaries and establishing an appropriate monitoring well network.

In contrast to the initial groundwater results described above, there were no detectable VOCS or SVOCs in groundwater subsequently obtained from permanent monitoring well OW-39, installed next to temporary well location SI-37-B1 to monitor natural attenuation conditions. VOCs and SVOCS were also not detected in downgradient monitoring well OW-36, or in upgradient monitoring well OW-38. The second downgradient monitoring well (OW-37) exhibited only traces of naphthalene and several SVOCs (below method reporting limits). Naphthalene (at estimated values of 1.9 and 2 parts per billion [ppb] is below the Class GA guidance value of 10 ppb. Many of the trace estimated SVOCS were not even detected in the duplicate groundwater sample collected from OW-37. Based on the collective soil and groundwater data, the natural attenuation zone for residual petroleum at PAOC 37 has been confirmed (as shown in Figure 8C) and adequately encompassed by monitoring wells OW-36 through OW-39. Groundwater results are further discussed in Section 6.2.3.

Based on these findings, an evaluation of location-specific remedial alternatives is recommended for PAOC 37, with consideration of natural attenuation as a viable alternative. However, location-specific remedial action is not recommended for PAOC 34. PAOCs 34 and 37 are also recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.5 Potential Petroleum Contamination, North Body Plant Area (PAOC 21 and 39)

The locations of the subsurface soil borings performed in PAOCs 21 and 39 are shown on Drawing 3 and Figures 6A and 9A, respectively. The corresponding soil boring logs are provided in Appendix D.

A sequence of fill was encountered beneath PAOC 21 extending to a depth of up to 17 ft bgs. The fill typically contains anthropogenic materials such as glass, brick fragments, concrete, coal ash, and wood (lumber). The underlying native soils could be characterized at only one boring location (SI-21-B11), as refusal due to buried concrete was encountered elsewhere. The native soils at this location consisted of a sequence of interbedded fine sand and silt which, in turn, was underlain by a sequence of peat and organic-rich clay (marsh deposits).

Within the PAOC 21 area, there was no evidence of petroleum contamination in the unsaturated zone (above the water table). Evidence of minor petroleum contamination was noted at two locations within the saturated zone. Since this area is downgradient of the former 10,000 gallon No.6 fuel oil UST (discussed in Section 6.1.10), the

saturated zone contamination in the PAOC 21 area appears to be associated with the spill that occurred at the former 10,000 gallon No. 6 UST more than 80 years ago. The proximity of PAOC 21 samples to the 10,000 gallon No. 6 UST is shown on Figure 14A. A petroleum odor was noted in saturated soils recovered from a depth of 8 feet below grade in boring SI-21-B2, from which a PID reading of 98 ppm was obtained (Appendix D). In soil boring SI-21-B11, a faint petroleum odor and sheen were noted in soil collected from a depth of 15 to 17 ft bgs, and the corresponding PID readings ranged from 10 to 15 ppm. The analytical results for soil samples collected from SI-21-B1 through B4 showed very little evidence of petroleum compounds (Tables 5 and 6), suggesting that the PAOC 21 area is not a source of petroleum contamination. Therefore, location-specific remediation is not recommended for petroleum in soil in this area, other than including this area in the petroleum attenuation zone for the former 10,000 gallon No.6 fuel oil UST. PAOCs 21 and 39 are recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

The soils underlying PAOC 39 consist of a sequence of fill approximately 12 ft thick, which is underlain by interbedded sand, silt, and organic-rich clay deposits (Appendix D). Oil staining, oily sheen, and relatively high PID readings (more than 1,000 ppm) were noted in soil cores obtained from borings SI-39-B1 through SI-39-B5, which are shown on Figure 9A, at depth intervals ranging from 7 to 10 ft bgs (within the saturated zone). Refusal was encountered in borings SI-39-B6 at depths of 6 to 8 ft bgs. No petroleum-stained soils were noted within the unsaturated zone. The soil sampling results (Table 5 and 6) confirmed the presence of PAHs and petroleum VOCs in the oil-stained saturated zone. The single groundwater sample collected from temporary monitoring well SI-39-B4 yielded qualitatively similar results, with several PAHs and petroleum VOC compounds detected at relatively trace concentrations, but above the Class GA standards or guidance values for drinking-water supplies (Table 11 and Figure 9B.) Owing to the general absence of a local source of petroleum contamination in PAOCs 21 and 39, location-specific remediation is not recommended for groundwater in this area. The observed petroleum constituents in the saturated zone should be remediated as part of the petroleum attenuation zone for the former 10,000 gallon No. 6 fuel oil UST. Groundwater is discussed further in Section 6.2.7. PAOCs 21 and 39 are also recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.6 Historical Fill with Elevated PAH Concentrations (PAOC 43)

The soils underlying PAOC 43 consist of a wedge of fill material ranging in thickness from approximately 6 to 23 ft (Figures 10A and Appendix D). A cross-section of this area is provided on Figure 10B. The fill consists predominantly of fine sand mixed with crushed stone, concrete, brick fragments, coal ash, and wood (lumber). Layers of wood (planed lumber) recovered from the soil cores suggest the presence of buried wooden structures (e.g., docks or bulkheads) within the fill. Beneath the lower contact of the fill, a sequence of organic-rich fine sands and silt was encountered (Figure 10B), which was interpreted as native soils/sediments. An interval of oil-stained soil was encountered at the typical depth interval of 10 to 12 ft bgs (i.e., below the water table). The source of this residual oil has not been confirmed, but is likely one or more historical petroleum spills within this former (pre-1960) waterfront area., before approximately 5 feet of dredged material fill was added to this area to establish the post-1960 ground surface elevation. The affected soil/fill was characterized by a strong petroleum odor and an oily sheen observed on soil samples collected within the saturated zone. However, PID readings were typically less than 200 ppm above background. At some locations, a black, viscous, oily coating was observed on the soil grains. However, no evidence of free-floating product was observed in monitoring wells installed in this area, as described in Section 6.2.4.

Although visible evidence of residual oil was typically encountered between 10 to 12 ft bgs, the analytical results for soil samples collected from oil-stained intervals revealed relatively low concentrations of petroleum constituents throughout much of this area. VOCs were analyzed in samples from the two borings that exhibited the highest PID readings (SI-43-B18 and B-20), but the trace levels detected by the laboratory were below TAGM guidance values (Table 6 and Figure 10A). SVOCs were relatively low overall, except for the 7.5- to 8-ft interval sample from SI-43-B6 and the 12- to 13-ft interval from SI-43-B19, which exhibited total SVOCs (4,682 ppm and 4,675 ppm, respectively) above the 500 ppm TAGM guidance value. However, borings within 20 ft of B-6 exhibited only trace levels of PAHs. SI-43-B19 did not exhibit evidence of residual petroleum contamination, suggesting that the historical ash/cinder fill may be the source of PAHs at this location. Based on qualitative evidence of degraded residual petroleum, identified through field screening of subsurface soil samples (sheens, odors, PID readings, or visible oil stain), as well as supporting soil analyses and groundwater sampling, an “area or residual petroleum” was identified (Figure 10A). Field screening methods are described further in Section 4.1.6. Natural attenuation was proposed for this area in the Conceptual RAWP, subject to confirmation of the extent of groundwater contamination. Groundwater quality results from monitoring

wells installed in April 2004, including a monitoring well near the B-6 and B-19 locations, are discussed in Section 6.2.4. Figure 10C identifies the areas of residual petroleum and associated downgradient groundwater contamination.

Based on these findings, an evaluation of location-specific remedial alternatives is recommended for PAOC 43, with consideration of natural attenuation as a viable alternative. PAOC 43 should also be evaluated for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.7 Former 10,000 Gallon Gasoline UST – North End of Body Plant (PAOC 45)

No evidence of petroleum was noted in either of the two soil borings performed at PAOC 45 (Figure 11A and Appendix D). The analytical results for STARS VOCs in soil at SI-45-B1 and B2 (Table 6) were below the applicable TAGM guidance values. These results are consistent with EMCON's findings based on test pits and a test boring in this area. Also, as described in Section 6.2.5, groundwater at this location was not impacted with petroleum-derived VOCs (Figure 11B) above Class GA groundwater standards. Therefore, this area is not recommended for location-specific remediation. PAOC 45 is recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.8 Verification of Fill, Chassis Plant (PAOC 46)

No visible evidence of buried batteries or any other solid waste was noted in the soil borings performed in the filled pits at PAOC 46 (Figure 12 and Appendix D). The fill encountered was primarily sand. The reported concentrations of lead in the fill (Table 4) were below the NYSDOH guidance value of 400 ppm for unrestricted use. Therefore, location-specific remediation is not recommended for this area. Although the fill materials tested are not contaminated with lead, fill disrupted during Site development should be handled under a soils management plan. Therefore, PAOC 46 is recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.1.9 Park Boundary near OW-24 (PAOC 47)

The investigation near OW-24 was designed to locate and delineate the sources of chromium and TCE that were initially detected in groundwater at levels above Class GA groundwater standards for drinking-water supplies. This finding resulted in the

addition of a new PAOC (PAOC 47) to the RI. Through iterative sampling along transects branching out from OW-24, a subsurface concrete slab was located immediately upgradient of OW-24, approximately 6 ft beneath the Body Plant floor slab. There is no crawl space or basement under this section of the slab. The subsurface slab encountered appears to be the base of a former pit.

Of the 24 soil samples collected at PAOC 47 (Table 7 and Figure 13C), 22 yielded chromium results above the 10 ppm TAGM 4046 guidance value for unrestricted use. However, levels well above 200 ppm are indicative of the source area, based on their association with the filled pit. The highest chromium concentration detected (3,750ppm) was in SI-47-B15 at 4.6 to 5 bgs. This depth coincides with the bottom of the filled pit (Figure 13C), where degraded yellow-stained concrete was encountered. The concrete bottom of the pit appears to have been saturated with chromium, likely from an historical wet process in the pit. The boundaries of the chromium source area have been defined as the outline of the filled pit, based on field observations and analytical results. Chromium in soil/fill outside the source area ranges from 8.7 to 81.9 ppm, which is within the background range of chromium throughout the Site, based on previous investigations by EMCON and EcolSciences. As discussed in Section 6.2.6, the extent of groundwater contamination has also been defined, including confirmation of chromium and TCE in offsite groundwater within Kingsland Point Park.

The source area for TCE appears to be located in the immediate vicinity of this filled pit, despite the absence of a confirmed zone of significant TCE contamination in the soils or fill. Trace concentrations of VOCs were detected in soil samples from PAOC 47, but no strong source area for TCE was located (Table 5 and Figure 13A). The maximum level of 0.045 ppm was located within the pit, at the bottom (6.5 to 7 ft). This maximum is below the TAGM guidance value of 0.7 ppm for TCE. Soil analysis for VOCs was not extensive due to the lack of positive field screening results with a PID. A larger area was covered by temporary wells (Figure 13B), which encountered relatively low-level groundwater contamination, coincident with the buried slab, but with no indication of a concentrated source area. TCE in groundwater samples from the temporary wells ranged from non-detect to 21 ppb, with the highest levels in the immediate vicinity of the filled pit. The extent of TCE in groundwater is coincident with the chromium-contaminated pit, and is limited to a relatively small radius around the pit. However, the potential source area may include a zone upgradient of the pit based on the distribution of TCE in groundwater. Alternative points of entry into the saturated zone from any TCE releases attributable to historical operations may have included the floor drains observed in this portion of the former Body Plant slab. Groundwater contamination, including the offsite sampling in Kingsland Point Park, is discussed in

Section 6.2.6 of this report. The extent of TCE and other VOCs in soil vapors associated with PAOC 47 is discussed in Section 6.3.2.2.

Based on these findings, an evaluation of location-specific remedial alternatives is recommended for PAOC 47, to remediate the source-area soils associated with chromium and TCE in groundwater. Measures to remediate downgradient groundwater and soil vapor contamination should also be evaluated.

6.1.10 Former 10,000 Gallon Heating Oil UST – North Chassis Plant (PAOC UST)

A previous IRM completed in 1998 removed most of this abandoned No. 6 heating oil UST, as well as more than 700 cubic yards of oil-contaminated fill. A portion of the UST that was pinned in by piles that were driven to support the 1929 construction of the Chassis Plant remains in place, along with residual oil that resides around the perimeter and bottom of the IRM excavation. Test borings from the RI revealed that the subsurface materials within the vicinity of the former UST consist of a layer of fill material extending to a depth of up to 21 ft bgs (Figures 14A and 14B) (Appendix D). At least two different types of fill were observed: (1) an upper layer of dredged material fill (consisting principally of fine sand and traces of oyster shells) mixed with crushed stone, concrete, brick fragments, and traces of coal ash (extending to a depth of 5 to 15 ft bgs); and (2) an underlying (older) fill layer consisting predominantly of coarse-grained coal ash (cinders) along with wood, brick fragments, concrete, metal debris, and glass (Figure14B).

Iterative field screening of Geoprobe®/Macrocore® samples was used to qualitatively determine the vertical and horizontal extent of residual oil contamination in the vicinity of the former UST (Figure 14A). Oil-stained soils were observed to be present only within the saturated zone at depths ranging from 7 to 21 ft bgs. The thickness of the oil-stained intervals, rather than the depth of contamination, is illustrated in Figures 14A and 14B. The oil staining was observed principally within the older fill layer described above. Typical evidence of residual oil included elevated PID readings (up to 10,000 ppm above background), a strong petroleum odor, a visible sheen, and dark brown or black staining of the soil (Appendix D). Within some borings located relatively near the source area (former UST), a coating of dark, viscous oil was observed on the soil grains. However, at a majority of the locations where evidence of oil was observed, the physical indicators were limited to a sheen and elevated PID readings. No evidence of recoverable free-product phase was observed within the soil borings or currently existing monitoring wells located within the area of the former 10,000-gallon UST. Previous temporary observation/recovery wells, installed by EMCON within the UST

excavation cavity, had not exhibited any free recoverable product following the UST removal (EMCON, 2001b).

Oil-stained soil was observed principally in association with the lower fill layer (coal ash). Most of the oil staining was observed to be on the former landward side of the inferred location of the 1926 shoreline bulkhead (Figure 14A) Residual oil contamination generally runs parallel to the buried bulkhead in the vicinity of the former UST.

The distribution of residual oil contamination shown on Figure 14A is based on field observations from borings SI-UST-B1 through B-47 (Appendix D), as well as previous borings from EMCON (EMCON, 1997 and 2001a). Isopachs (contours that connect points of equal thickness) were developed from these data to illustrate the distribution of residual oil in the subsurface. Because these isopachs represent thickness of the impacted interval based on field screening, they should not be confused with the depth of contamination. In general, the upper boundary of these isopachs is at or below the water table, which ranges from approximately 4 to 10 ft below the existing surfaces in this area. This information was used to prepare the proposed limits of source remediation in this area (Figure 14C), as described in the Conceptual RAWP. Since the proposed limits of source remediation could leave some residual contamination in the saturated zone, soil samples were collected from 10 Geoprobe®/Macrocore® borings located around the perimeter of the proposed removal area to quantify petroleum constituent concentrations. Soils exhibiting the greatest degree of apparent petroleum contamination, based on field screening, were selected and analyzed for STARS list VOCs and SVOCs. Sample depths ranged from 9 to 14 ft bgs, based on selection of the most visibly contaminated interval. Samples were submitted to the laboratory from nine of the 10 borings and included two duplicates (SI-UST-B55 was not analyzed based on the absence of residual contamination, as indicated by field screening).

The analytical results presented in Tables 5 and 6, and on Figure 14C indicate that seven out of nine boring locations exhibited VOCs and/or SVOCs above TAGM guidance values, but represented relatively low levels of petroleum contamination at the edges of the proposed source remediation area. Since the conceptual RAWP assumed that deep low-level residual petroleum contamination will remain outside the high-level source remediation area, these data confirm that the proposed source area boundaries are generally adequate. Some adjustments to the proposed boundary may be proposed when assessing the remedial approach. The balance of residual petroleum contamination resides in the saturated zone and will continue to be

remediated through time by natural attenuation. Based on the qualitative observation of residual oil and the quantitative soil and groundwater data from test borings and temporary wells, a natural attenuation zone was established (Figure 14D). The groundwater quality associated with the attenuation zone perimeter will be discussed further in Section 6.2.7.

Based on these findings, an evaluation of location-specific remedial alternatives is recommended for the PAOC UST area, with consideration of a combination of source remediation and natural attenuation as a viable alternative. The attenuation zone is also recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

6.2 Groundwater Investigation

Groundwater flows through the shallow unconfined fill units from the East Parcel through the West Parcel before discharging to the Hudson River. Figure 19 shows the generalized flow throughout the Site, based on the EMCON investigations. Localized flow from the northern end of the East Parcel to Pocantico Creek is also suggested by the contours. A more detailed representation of groundwater flow through the West Parcel is provided on Figure 20, based on water elevations from the expanded network of monitoring wells installed as of April 2004. The laboratory results for all groundwater samples obtained from either permanent or temporary monitoring wells are summarized in Tables 10, 11, and 12. The NYSDEC standards and guidance values displayed on these tables are groundwater quality standards (6NYCRR Part 703.5) and guidance values for Class GA groundwater (drinking-water supplies), provided in the NYSDEC's Technical and Operational Guidance Series (TOGS) 1.1.1, June 1998 as amended. They are not provided as proposed cleanup criteria for this site, because groundwater at the Site is not currently used, and it is reasonable to assume that it will not be used as a potable water source in the future. The same values are also referenced in TAGM 4046 as groundwater standards and criteria, where they are used by the NYSDEC as the basis for generic soil cleanup objectives to protect groundwater quality. The results pertaining to each area of interest are discussed below:

6.2.1 PAOC 7/Fill Area H

Following the development of the Conceptual RAWP, seven monitoring wells were installed within and around PAOC 7/Fill Area H and vicinity (Figure 4D), in accordance with IWP Addendum 2, to determine if lead and petroleum constituents in the fill materials are impacting groundwater in this area. Three of the seven monitoring wells

were installed within Fill Area H, including two locations where the fill samples exhibited lead levels greater than 10,000 ppm and low levels of petroleum hydrocarbons (OW-45 and OW-47), and a third well was installed in the western (downgradient) outer edge of Fill Area H (OW-48). One well was installed in Fill Area F (also at a location where lead exceeded 10,000 ppm in the fill) to monitor water quality immediately upgradient of Fill Area H (OW-49). Three downgradient wells were installed approximately 30 feet beyond the confirmed edges of Fill Area H (OW-46, 50 and 51).

Lead concentrations in unfiltered samples from an initial round of groundwater samples (April 2004) ranged from non-detect to 116 ppb (Table 10). Three samples (OW-45, OW-47, and OW-49) yielded lead concentrations greater than the Class GA groundwater standard of 25 ppb (Table 10). No lead was detected in the filtered samples, confirming that lead was in the particulate phase. There appeared to be a relationship between the turbidity (a measurement of the relative sample clarity) and lead concentrations. For the samples from OW-45, 47, and 49 where lead exceeded the 25 ppb standard, turbidities ranged from 25 to 340 NTU (Appendix G). These data suggested that lead may not be leaching from the fill, but may be associated with fine particulate matter suspended in the samples. Despite the presence of lead in the solid fill at levels greater than 10,000 ppm, there was relatively little indication of impact to groundwater.

To confirm the possibility that groundwater has not been impacted with lead (i.e., Class GA standards are being met), the wells that yielded lead above the standards in unfiltered samples were redeveloped using low-flow procedures (described in the IWP), which minimize entrainment of suspended solids into the well. Redevelopment records are provided in Appendix F. The wells were re-sampled twice (July 2004) using the low-flow procedures. Consistent with the April samples, lead was not detected in the filtered samples collected from this area in July. However, NYSDEC guidance (TAGM 4015) on groundwater samples for metals indicates that unfiltered samples are preferred, and are acceptable for analysis if the turbidity does not exceed 50 NTU. Low-flow procedures yielded progressively lower turbidities during re-sampling, and levels below 50 NTU were eventually achieved (Appendix G). In the July 2004 re-samples from OW-45 for example, lead was detected at 38.5 ppb and 14.3 ppb in the unfiltered samples at turbidities of 193 and 3.9 NTU respectively, confirming that OW-45 complies with the Class GA standard of 25 ug/l. Figure 4D displays the lowest lead values that were achieved in unfiltered low-turbidity samples. The Class GA standard for lead was achieved in all monitoring wells within and

downgradient of PAOC 7/Fill Areas H, F and G. These results demonstrate that groundwater in this area has not been impacted by lead.

Under current conditions, lead found in the historical fill in PAOC 7/Fill Areas H, F and G is not a source of groundwater contamination. The long-term potential for lead to remain inert, with respect to future groundwater quality, should be evaluated.

Both OW-47 and OW-48 exhibited traces of petroleum VOCs and SVOCs (Table 11 and Figure 4D) at similar levels. No petroleum VOCs or SVOCs were detected in the other monitoring wells downgradient of PAOC 7 (OW-46, 50, and 51), suggesting that petroleum contamination has only affected a very localized area. The limited distribution of petroleum constituents, after almost 50 years since the fill was placed in this area, suggests that contaminants are attenuated by natural processes and/or subsurface barriers such as buried barges and bulkheads.

The low levels of lead and petroleum constituents within this area can be adequately monitored with the existing monitoring well network (Figures 4B and 4D) to verify the effectiveness of attenuation.

As recommended in Section 6.1.2, an evaluation of location-specific remedial alternatives is recommended for PAOC 7/Fill Areas H, F and G. No matter what remedial alternative is selected for soil in this area, remediation of groundwater is recommended under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.2.2 PAOC 29 Area

One temporary monitoring well (SI-29-B36) was installed at PAOC 29 within a cluster of borings exhibiting greater than 10,000 ppm lead (Figure 7B). Groundwater samples were collected from this temporary well, and from permanent monitoring well OW-11 located in the nearest downgradient vicinity of the elevated lead area at PAOC 29, using low-flow procedures to verify that turbidity levels in the samples were below 50 NTU. Unfiltered samples were obtained from both wells because the turbidity standard of 50 NTU was met. One additional filtered sample was obtained from the temporary well for comparison. Analysis of unfiltered samples from SI-29-B36 and OW-11 yielded 75.2 and 5.1 ppb lead, respectively, compared to a Class GA standard of 25 ppb for drinking-water supplies. No lead was detected in the filtered sample from SI-29-B36, suggesting that lead is associated with the particulate phase in the B-36 location. Considering the frequency of lead concentrations greater than 10,000 ppm in

the PAOC 29 fill, there is little indication from the groundwater results that the observed concentrations of lead in groundwater are due to leaching. As was demonstrated in PAOC 7/Fill Areas H, F and G wells, even low turbidities at or just below 50 NTU can lead to false positive indications of groundwater contamination from lead. When sampling temporary wells like SI-29-B36, it was generally not possible to obtain samples with consistently low turbidity in the range of 10 NTU or less. Therefore, the unfiltered sample from SI-29-B-36, with a corresponding turbidity of 36 NTU, is likely to overestimate the true lead concentration in groundwater.

It is noted that OW-11 may not ideally intersect all of the potentially impacted groundwater from this area. Comparison of groundwater contours between Figures 19 and 20 suggest localized variability in groundwater flow directions near PAOC 29. Both OW-10 and OW-11 could periodically intercept groundwater flow from the affected area of PAOC 29 as a result of these apparent fluctuations. In either case, total lead concentrations in OW-10 and OW-11 have not been detected above the Class GA standard.

Based on the absence of dissolved lead in the filtered sample and compliance with drinking-water guidelines in two monitoring wells that are periodically downgradient, it is apparent that lead is not impacting groundwater in this area. Under current conditions, lead found in the historical fill in PAOC 29 is not a significant source of groundwater contamination. As recommended in Section 6.1.4, an evaluation of location-specific remedial alternatives is recommended for PAOC 29. No matter what remedial alternative is selected for soil at PAOC 29, remediation of groundwater is recommended under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.2.3 Natural Attenuation Area for PAOC 37

Four permanent monitoring wells were installed to confirm the extent of groundwater contamination to be included in the proposed natural attenuation zone at PAOC 37, and to be used in the future to monitor the effectiveness of natural attenuation. The attenuation zone encompasses the area of residual petroleum, identified through field screening of subsurface soil samples (sheens, odors, PID readings, or visible oil stain) and supporting laboratory analysis of soil (described in Section 6.1.4), as well as the area of downgradient groundwater contamination (Figure 8C). The monitoring well network included one upgradient well, one well within the source area, and two wells at the downgradient edge of the residual petroleum area (Figure 8C). Petroleum-derived VOCs and SVOCs were detected at relatively trace levels in the center of the residual

petroleum area in temporary monitoring well SI-37-B1, but were not detected in the permanent monitoring well installed adjacent to SI-37-B1 (OW-39). Downgradient well OW-36 did not encounter VOCs or SVOCs. VOCS in downgradient well OW-37 were within Class GA standards for drinking-water supplies and SVOCs were at trace levels (estimated levels below method reporting limits). In addition, as described in Section 6.3.2, some petroleum-derived VOCs were also detected in soil vapors within the attenuation zone. The need for any remedial measures for soil vapors will be evaluated in the remedial documents.

Based on these findings, the boundaries of the natural attenuation zone at PAOC 37 have been confirmed and the monitoring well network is adequate for use in monitoring and verifying the effectiveness of attenuation for remediating this area.

As discussed in Section 6.1.4, an evaluation of location-specific remedial alternatives is recommended for PAOC 37, with consideration of natural attenuation as a viable alternative. PAOC 37 is also recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.2.4 Natural Attenuation Area for PAOC 43

Five permanent monitoring wells were installed to confirm the extent of groundwater contamination to be included in the proposed natural attenuation zone at PAOC 43, and to be used in the future to monitor the effectiveness of natural attenuation. The attenuation zone encompasses the area of residual petroleum, identified through field screening of subsurface soil samples (sheens, odors, PID readings, or visible oil stain) and supporting laboratory analysis of soil (described in Section 6.1.6), as well as the area of downgradient groundwater contamination (Figure 10C). This monitoring well network included one upgradient well, two wells at the most contaminated locations, and two wells at the downgradient edge of the residual petroleum area (Figure 10C). In addition, one previously installed well (OW-8) was sampled as another downgradient monitoring point. Within the zone of residual petroleum contamination, OW-41 and OW-43 exhibited SVOCs at levels above Class GA standards and guidance values (Table 11). Downgradient OW-42 exhibited lower levels of SVOCs relative to OW-41; OW-42 also exhibited naphthalene and other petroleum-derived VOCS. These VOCs were not detected in OW-49, approximately 170 feet downgradient of OW-42 (Figure 4B). The second downgradient well (OW-43) and OW-8 exhibited no VOCs or SVOCs above Class GA standards or guidance. In addition, as described in Section 6.3.2, some petroleum-derived VOCs were also detected in soil vapors within the attenuation

zone. The need for any remedial measures for soil vapors will be evaluated in remedial documents.

Based on these findings, the boundaries of the natural attenuation zone at PAOC 43 have been confirmed. The monitoring well network, in conjunction with monitoring wells further downgradient (OW-45 through 49), is adequate for use in monitoring and verifying the effectiveness of attenuation for remediating this area. Other than verification by groundwater monitoring and any additional measures that may be recommended in remedial documents to mitigate the potential impact of soil vapors on future land use in this area, no further location-specific remedial actions are recommended for groundwater at this location.

As discussed in Section 6.1.6, an evaluation of location-specific remedial alternatives is recommended for PAOC 43, with consideration of natural attenuation as a viable alternative. PAOC 43 is also recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.2.5 Former 10,000 Gallon Gasoline UST – North End of Body Plant (PAOC 45)

One temporary monitoring well (SI-45-B1) was installed in the vicinity of a former gasoline UST noted on Sanborn Fire Insurance Maps (Drawing 3 and Figure 11B) and sampled for STARS VOCs. No VOCs exceeded Class GA groundwater standards or guidance values listed in TOGS 1.1.1. In conjunction with the test boring results from this area (Section 6.1.7), there was no indication of a gasoline spill at PAOC 45. Therefore this area is not recommended for location-specific remediation. PAOC 45 is recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.2.6 Park Boundary near OW-24 (PAOC 47)

Permanent monitoring wells OW-24 and OW-25 were installed along the Kingsland Point Park boundary and sampled in the initial 2003 phase of the RI (Drawing 3). Groundwater contamination was not anticipated to be significant in this area, based on the previous investigations. These monitoring wells were sampled and analyzed for the full TCL and TAL. TAL metals are shown in Table 10, VOC and SVOC results in Table 11, and pesticide/PCBS results in Table 12. There was no evidence of groundwater contamination in OW-25 when they were sampled for the complete TCL/TAL in October 2003. Although iron, manganese, and sodium exceed the Class

GA standards for groundwater as a drinking-water supply, these constituents are not indicative of site contamination. Rather, this condition is consistent with general conditions elsewhere onsite. These constituents are likely related to naturally occurring sources (iron/manganese oxides in the soil and sodium associated with the Hudson River Estuary). When OW-25 was sampled for STARS VOCs in May 2004 (Table 11), trace levels of secondary petroleum VOCs (that are not TCL analytes), were detected. These VOCs were isopropylbenzene (7.9 ppb) and n-propylbenzene (5.2 ppb). The observed concentrations are slightly above the Class GA guidance value of 5 ppb for drinking-water supplies. Since OW-25 is located along the downgradient edge of the 10,000-gallon UST attenuation zone, the detected VOCs are most likely associated with the attenuation zone.

In contrast to OW-25, VOC and metal contamination unique to this part of the Site was encountered in OW-24 when it was initially sampled in October 2003. TCE and chromium were detected at levels of 75 ppb and 554 ppb respectively, which are above the Class GA standards of 5 ppb for TCE and 50 ppb for chromium. The OW-24 area was named PAOC 47 based on these findings.

As shown on Drawing 3and Figures 13B and 13D, 15 temporary wells were installed onsite between October and April 2004 in the PAOC 47 area, and two temporary wells were installed offsite in Kingsland Point Park in October 2004 to delineate the extent of groundwater contamination in the PAOC 47 area. Groundwater samples were collected from the temporary wells and analyzed for VOCs and chromium. TCE was detected above the applicable Class GA standard of 5 ppb in 10 of the 15 onsite sampling points, and one of the two offsite sampling points. The extent of groundwater contamination encompasses a relatively small area, but is more extensive than was indicated by soil samples from the PAOC 47 test borings described in Section 6.1.9. OW-24 exhibited the maximum concentrations of TCE (33 to 75 ppb). In addition, cis-1,2 dichloroethene (a biological degradation by-product of TCE) was also detected in OW-24 at 2.6 to 9.1 ppb, compared to the Class GA standard of 5 ppb (Table 11 and Figure 13B).

Chromium was detected above the Class GA standard for drinking-water supplies (50 ppb) in 26 out of 42 filtered and unfiltered groundwater samples, at concentrations ranging from 60 to 42,100 ppb (Table 10 and Figure 13D). Where detected, chromium was present on both filtered and unfiltered samples (many at nearly equivalent levels), indicating that chromium is generally present in the dissolved phase. The maximum chromium concentration (42,100 ppb), was detected in a filtered sample from SI-47-B7 at the edge of the filled pit believed to be the source of chromium (as described in

Section 6.1.9). Upgradient of the filled pit, chromium is either not detected or meets the 50 ppb standard. Offsite, chromium exceeded 50 ppb in one of the two temporary wells in the park, at a maximum level of 150 ppb (Figure 13D).

Based on these findings, it is recommended that location-specific remedial alternatives be evaluated for chromium and TCE in groundwater, integrated with remedial alternatives for soil and soil vapors at PAOC 47. The extent of soil contamination was discussed in Section 6.1.9. The TCE detected in groundwater at this location is also considered the source of TCE in soil vapors, as discussed in Section 6.3.2.2.

6.2.7 Area of 10,000-Gallon Heating Oil UST, PAOC 21, and PAOC 39

SVOCs (principally PAHs) were detected in all of the wells located downgradient of the former 10,000-gallon UST (Table 11 and Figure 14D). Generally, the presence of SVOCs in groundwater was associated with the occurrence of residual oil staining or odors (as observed in the soil borings). PAOC 21 and 39 are encompassed within the 10,000-gallon UST attenuation area shown in Figure 14D. Within the attenuation area, the constituent concentrations appear to show very little petroleum contamination. The boundaries were inferred from field observations of residual oil contamination in the saturated zone, as evidenced by test borings and temporary wells installed in the early phase of the RI. The attenuation area is surrounded by monitoring wells exhibiting either trace or no detectable petroleum VOCs and SVOCs. Based on these results, the existing monitoring well network is adequate for monitoring natural petroleum attenuation downgradient of the UST.

Naphthalene, as well as traces of benzene and related petroleum VOCs, was detected at concentrations above the applicable NYSDEC guidance in OW-47 and OW-48, which is located within PAOC 7. Similar low-level petroleum contamination was noted in temporary monitoring well SI-GWI-B11W within PAOC 7 (Table 11 and Drawing 3). Compared to the general absence of VOCs throughout the former 10,000-gallon UST attenuation area, the VOCs detected in PAOC 7 may be related to localized low-level petroleum contamination. As noted in Section 6.1.1.2, localized petroleum staining was noted at the base of the PAOC 7 fill unit (Fill Area H).

As discussed in Section 6.1.10, an evaluation of location-specific remedial alternatives is recommended for the 10,000 gallon No.6 fuel oil UST source area, with consideration of natural attenuation of petroleum contaminants in groundwater as a viable alternative outside the source area. PAOCs 21 and 39, which are not recommended for location-specific alternatives analysis due to absence of localized

sources in those areas, lie within the downgradient extent of groundwater contamination associated with this UST. This entire area is also recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.2.8 Onsite Groundwater at North End of Property

The area north (upgradient) of the former No. 6 oil UST was investigated for petroleum contamination by sampling permanent monitoring wells OW-10, OW-3, and OW-22, as well as temporary well OW-26T (Drawing 3). The results for VOCs (Table 11) show the presence of petroleum VOCs above the applicable NYSDEC guidance at OW-10, and significantly decreasing at OW-26T, midway between OW-10 (upgradient end of West Parcel) to the UST. Previous investigation by EMCON established that OW-10 was impacted by an offsite gasoline spill. A trace level of benzene (1.5 ppb) was detected in OW-22, which may be related to the UST or may be attributed to the background petroleum contamination detected in OW-10. Petroleum VOCs detected in OW-10 are of relatively recent gasoline origin, presumably from an offsite spill. These findings are consistent with previous sampling at OW-10 by EMCON in 1997.

Overall, background petroleum VOC contamination exists upgradient of the UST area. Little, if any, background gasoline contamination has impacted the UST area, suggesting that natural attenuation processes have effectively minimized the extent of contaminant migration at the North end of the West Parcel. Residual petroleum contamination detected in soil samples from the saturated zone within 200 ft upgradient of the former UST appears to be related to localized oil contamination in the vicinity of the UST (Figure 14A and 14D), rather than to the background gasoline-derived contamination at the north end of the West Parcel, based on field observations and analytical results. As discussed in Section 6.1.10, an evaluation of location-specific remedial alternatives is recommended for the 10,000 gallon No.6 fuel oil UST source area,

Based on these findings, no additional areas are recommended for location-specific remediation. Throughout the West Parcel, remediation of groundwater is recommended under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.2.9 Metals in Groundwater – West Parcel

In addition to the location-specific groundwater investigations discussed in the preceding sections, one round of groundwater samples was collected from existing and new monitoring wells on the West Parcel in the initial 2003 phase of the RI (Drawing 3). Development/redevelopment of wells OW-6, OW-7, OW-10, OW-11, OW-12, OW-20, and OW-22 (Appendix F) was performed successfully (i.e., turbidity levels of less than 50 NTU were achieved in these previously installed wells). The measured turbidities within the two newly installed permanent wells (OW-24 and OW-25) were also reduced below 50 NTU. However, the turbidity in temporary well OW-26T was observed to stabilize above 50 NTU, despite prolonged well development efforts (Appendix G).

Unfiltered samples were collected from OW-6, OW-7, OW-10, OW-11, OW-12, OW-20, OW-22, OW-24, and OW-25. Both filtered and unfiltered samples were collected from temporary well OW-26T, due the relatively high turbidity (>50 NTU) of the samples.

The analytical results for metals in groundwater are shown in Table 10. Results are consistent with previous investigations and provide a baseline for any future monitoring. The analytical results for barium in unfiltered samples were above the applicable Class GA standard of 1,000 ppb for drinking-water supplies in the samples collected from wells OW-10 and OW-11. Additionally, lead was detected in unfiltered samples collected from wells OW-20 and OW-26T at concentrations (81.7 and 88.1 ppb respectively) above the Class GA standard of 25 ppb (Table 10). As evidenced by the lower concentration of 22.1 ppb lead in the filtered samples from OW-26T (complies with the Class GA standard of 25 ppb), lead appears to be strongly associated with the particulate phase. Iron, manganese, and sodium were also detected locally above the applicable standards and guidance values, but likely represent a natural background condition for the Site.

Based on these findings, no additional areas are recommended for location-specific remediation. Throughout the West Parcel, remediation of groundwater is recommended under a Site-wide approach for areas that do not meet Class GA groundwater standards.

6.3 Soil Gas Survey

6.3.1 Soil Gas Survey – East Parcel

Table 11 presents the results of field measurements taken with the landfill gas monitors on the East Parcel. The soil gas sampling and (or) measurement points are shown in Figure 15A, along with contours (concentration isopleths) of the methane results. The shape of the area exhibiting the highest methane results (70% to 100% methane) corresponds with the shape of the former landfill.

As illustrated in Figure 15A, approximately half of the area of the highest methane concentrations is located above the landfill area, with the remainder shifted slightly to the west. An overlay of the methane contours with the groundwater-flow contours (Figure 15B) suggests that the methane plume originated within the former refuse area and is migrating along the groundwater flow path, until the gas is naturally released to the atmosphere.

As noted, the water table for most areas of the Site was relatively high, precluding gas sampling below 2 or 3 ft. At locations where the boring could be extended to greater depths, concentrations remained relatively constant with depth. Near-surface concentrations noted at several locations (e.g., SG22, SG32, and SG34) were much lower than the concentrations at depth, suggesting that methane could be escaping through cracks in the asphalt. At other locations, such as SG7 and SG8, concentrations were constant over a 3- or 4-ft depth profile.

There is an additional small area off the asphalt at the southwest corner of the East Lot (SG-42 location) exhibiting elevated methane. This area is near the junction of the local municipal sewer lines. It is possible that the municipal Village Department of Public Works (Village) sanitary sewer line corridor is a preferential pathway for methane originating at the landfill (this leg of the local sewer line passes through the landfill), although methane was not detected above this line much closer to the landfill. It was learned, through personal communications with the Village, that a failed section of the Village sewer line in the East Parcel was abandoned to make the current connection to the county system and it may terminate at or very near to the SG-42 location exhibiting methane gas. The approximate location of that abandoned section (from a GMC site plan) is shown in the background on Figure 15A. Iterative sampling in response to an initial high gas reading off the edge of the asphalt confirmed that this isolated area of methane was confined to the immediate vicinity of the junction

between the Village and Westchester County sewer systems (Figure 15 A), and does not extend beyond the East Parcel.

Areas east of the landfill, outside of the asphalt area, had very low or non-detect (zero percent) levels of methane. Areas along the northern and southern perimeters of the East Parcel had non-detect levels of methane.

Hydrogen sulfide was not detected at significant levels at any location. It was determined, on the initial day of sampling, that the LANDTEC unit used for monitoring did not have the expected sensitivity for reduced sulfur gases at or below 0 to 1 ppm. As a result, a Jerome 631-X H2S meter with sensitivity down to low ppb was obtained for the next day. Readings of 1 to 2 ppm, as initially measured with the LANDTEC, were not confirmed by field duplicate sampling on subsequent days by the Jerome meter, and may have been attributable to instrument drift.

Oxygen was not detected at most of the sampling locations that had detectable methane, confirming that conditions were anaerobic at these locations. Oxygen was at near-ambient concentrations at the locations along the eastern side of the Site, outside of the paved area, where methane was not detected.

Total hydrocarbons (including methane) in the ppm range were monitored at those locations where methane concentrations were less than 1%. Results ranged from non-detect to 0.9%.

Laboratory analyses for volatile organic hydrocarbons in the soil gas samples collected at four locations where methane was present are summarized in Table 14 and Figure 16. These results are presented in ug/m3, converted from parts-per-billion by volume (ppbv) measured in Summa samples. The variety of compounds detected is typical for landfill gas, including Freons, common chlorinated solvents, and aliphatic and aromatic hydrocarbons, but the levels were much lower than typically seen in landfill gas emissions. In general, the levels of VOCs in samples collected from within and outside the former refuse area were similar.

Laboratory analyses for fixed gases and non-methane hydrocarbons were also conducted. Ethane, detected at less than 20 ppm, was the only non-methane hydrocarbon detected in the samples.

One set of field duplicates was submitted for reduced sulfur analysis. These were taken from Location SG18, where the Jerome meter had indicated a concentration of

1.5 ppm total sulfur, although the LANDTEC did not detect sulfur gases. No reduced sulfur gases were detected in the laboratory analysis. This may indicate a false positive for the Jerome meter field measurement, or could reflect losses of any sulfur compounds to the walls of the canister. Although the recommended glass-lined canister was used, active sites within the canister can and will absorb reactive gases during the time between sampling and analysis. Based on these findings, there is no evidence of significant hydrogen sulfide production in East Parcel soils.

Because the source of methane is natural decomposition of organic matter, which will continue for an unknown period of time, any buildings constructed over areas exhibiting percent levels of methane in soil gas must be designed to prevent intrusion of methane into indoor air space. Although buildings are not currently proposed on the East Parcel (Figure 2), the Village may ultimately propose a Department of Public Works structure. Therefore, the need for general methane mitigation measures for future building construction should be incorporated into the remedial documents.

6.3.2 Soil Gas Survey – West Parcel

Based on the findings in the East Parcel, the possibility of some methane gas from buried marsh vegetation on the West Parcel was recognized. As a result, a soil gas survey for methane was conducted on the West Parcel in areas that may have been populated by marsh vegetation before fill was placed for site development (as discussed in Section 4.3.2.1). A separate survey for VOC vapors in soil was conducted in areas where residual petroleum contamination was delineated, and included PAOC 47 where low levels of TCE were detected in groundwater (as discussed in Section 4.3.2.2). The survey results are summarized below.

6.3.2.1 Naturally Occurring Methane

In contrast to the presence of methane in soil gas throughout the paved areas of the East Parcel (Section 6.3.1), methane was not prevalent throughout the West Parcel (Table 15). Methane (measured as percent combustible gas) was limited to the northern corner of the West Parcel (Figure 17) in an area where evidence of marsh vegetation (roots, organic mud) was noted in test borings. Methane ranged from 0.1% (MS-26) to 18% (MS-1) in this area. At the maximum methane location (MS-1) a second measurement (MS-1A), obtained approximately 10 feet from MS-1, exhibited 8% methane. Samples MS-2, 25, and 27 exhibited 2%, 6%, and 8.1% methane, respectively. Beyond these locations, trace levels of methane in the northern corner of the West Parcel were below 1% (10,000ppm), ranging from zero to 752.2 ppm as

measured with an FID. The FID measured ppm levels of hydrocarbons (methane and non-methane), which ranged from zero to 25 ppm elsewhere throughout the remainder of the surveyed area. Because methane is produced from the natural decomposition of organic matter, which will continue for an unknown period of time, any buildings constructed over areas exhibiting percent levels of methane in soil gas must be designed to prevent intrusion of methane into indoor air space. General methane mitigation measures for future building construction should be incorporated into a site-wide approach for areas exhibiting the potential for methane gas intrusion.

6.3.2.2 VOC Vapors

The quantitative soil vapor survey focused on the proposed natural attenuation areas for historical petroleum spills, as well as other locations where VOCs were detected in soil and/or groundwater (PAOC 47). Sampling locations were within future building footprints, or the nearest intact slab or asphalt surface. Dual soil vapor (SV) and ambient crawl space (CS) air samples were obtained in targeted areas where crawl spaces are present under the existing slabs. Samples from the CS locations (Figure 18) are differentiated from the corresponding SV samples with “A” (ambient air) and “G” (soil gas) codes, respectively, in the sample identifications listed in Table 16. This characterization of the nature and the extent of VOC vapors excludes acetone, 2-butanone, chloroform, carbon disulfide, and Freons, which are possibly laboratory artifact, but also have no relationship to confirmed soil and groundwater contamination at the Site. Carbon disulfide, for example, is used by the laboratory (Air Toxics, Inc.) as an extraction solvent for NIOSH Methods 1501 and 1550 for the analysis of various petroleum hydrocarbons in air. Such artifacts may be inadvertently introduced to samples during handling and analysis, even under the best conditions, despite the use of certified clean Summa canisters for sampling and verification of uncontaminated analytical equipment by method blanks. Samples of soil, water and air that are diluted for one or more constituents of interest, sometime will exhibit acetone or methylene chloride at unusually high levels as well. The observed occasional appearance of acetone in all environmental media at this Site appears to be attributable to laboratory artifact.

VOCs were detected in soil gas (vapor) samples throughout the areas sampled on the West Parcel (Table 16 and Figure 18). VOCs are measured in parts-per-billion by volume (ppbv), and converted to ug/m3 for evaluating the vapor intrusion to indoor air pathway. Petroleum-derived vapors were detected within and near the petroleum attenuation areas. Chlorinated VOCs were detected primarily in the former Body Plant Area, within and near PAOC 47, where TCE is found in groundwater (SV-4, 5, 6, 10,

13, 14, 17, 18, 19, 20, and 26). The extent of chlorinated VOCs is broader than the footprint of groundwater contamination. The CS air samples did not exhibit VOCs associated with SV samples, with one possible exception. A trace level of toluene (4.2) was detected at location CS-08 (Sample SV-8A-1), but was not detected in a duplicate air sample (SV-8A-2) from that location nor in the corresponding soil gas sample (SV-8G-1), suggesting that the original result is a false positive. Based on the paired CS and soil gas samples, VOCs that would otherwise accumulate under intact slabs and asphalt are rapidly dissipated to the atmosphere within the crawl spaces.

The areas exhibiting either petroleum-derived or chlorinated VOC vapors in soil gas should be evaluated in the AAR, with regard to the respective planned uses of each area. As discussed in the Exposure Assessment (Section 7), that evaluation should address whether any of these areas represent a potential exposure risk to occupants of future buildings, develop alternatives to remediate these areas, and evaluate the effectiveness of pre- and post-construction measures to prevent the intrusion of VOCs into the indoor air space of future buildings.

7. Qualitative Human Health Exposure Assessment

7.1 Introduction

This section presents a qualitative human health exposure assessment that describes the potential for human health exposure to site-related constituents of potential concern (COPCs) at the Site. This assessment uses information regarding current and foreseeable land uses, and available data for the Site to evaluate potential exposure to human receptors. The human health evaluation characterizes the environmental setting of the Site, and identifies COPCs and potentially complete exposure pathways. The results of the qualitative human health exposure assessment will be used, in part, to help evaluate potential remedial options for the Site.

7.2 Environmental Setting

The site is located along the eastern shore of the Hudson River, in the Village of Sleepy Hollow, New York (Figure 1A). The site currently consists of three, non-contiguous portions totaling approximately 96.2 acres. The former main assembly plant area (West Parcel) contains 66.2 acres, the eastern parking lot (East Parcel) contains 28.3 acres, and the salaried employee parking lot (South Parcel) contains 1.7 acres (Figure 1B). The former main assembly plant area and the eastern parking lot are separated by an active railroad corridor owned by Metro-North/Conrail. The former salaried employee parking lot is located across Beekman Avenue, directly south of the main assembly plant property. This lot is bordered by Beekman Avenue, Hudson Street, River Street, and property owned by the Village of Sleepy Hollow.

Prior to GMC purchasing the property in 1914, the Site was partially developed with urban fill consisting largely of coal cinders, and various soil and aggregate mixtures that extend the waterfront into a portion of the former Pocantico Bay. During the 1920s to 1930s, a small (<10 acres) municipal refuse and ash landfill was owned and operated by the former Village of North Tarrytown (Sleepy Hollow). Industrial operations prior to the purchase included a brickyard and the manufacture of percussion rock drills and two brands of gasoline and steam-powered automobiles. GMC demolished most of the early industrial buildings during the 1920s, filled in the remainder of Pocantico Bay with dredge spoils, and constructed an automotive assembly complex that continued to expand and operate until operations ceased in 1996.

At the time of the closure, the assembly facility comprised two large manufacturing buildings, providing more than 2.5 million square feet of floor space, as well as associated utility buildings and material storage structures. Between 1996 and 2000, GMC undertook several environmental investigations, due diligence assessments, and an ICM Project at the Site in preparation for facility closure. The assembly plant and support buildings were decommissioned and all structures have been demolished, except for two large floor slabs and a section of a pedestrian bridge over the rail lines.

Current land uses within the immediate site vicinity include a mix of industrial, commercial, residential, and parkland. Most of the industrial property in the surrounding area is located along the Hudson River waterfront, south of the Site. The commercial center for the Village of Sleepy Hollow is less than 0.5 miles east of the Site. Lands immediately southeast and east of the Site are primarily residential. Public parklands surround the northern borders of the Site. The West Parcel is bounded to the north by Kingsland Point Park of Westchester County. Lands located east of the East Parcel consist of single-family residential and commercial properties, and DeVries Park of Sleepy Hollow. Lands south of the Site property include riverfront commercial and multifamily and general residential properties. The Hudson River and a portion of Kingsland Point Park mark the western boundary. The Tarrytown Lighthouse, which is listed on the National Register of Historic Places, is located immediately west of the Site (in the Hudson River) and is accessible to the public through Kingsland Point Park. Active freight and passenger rail services run through the Site within a common corridor.

Groundwater beneath the Site generally flows west/southwest toward the Hudson River with some local variations (Figures 19 and 20). The water table is typically between 6 to 7 ft bgs in the West and East Parcels, and can be encountered at less than 3 feet below grade toward the northern side of the East Parcel near the Pocantico River. Groundwater is unconfined and is encountered in the fill and native deposits. Groundwater in the Site vicinity is not used as a potable water supply. The Village of Sleepy Hollow and surrounding communities are serviced by public water systems that draw from surface-water supplies upgradient of the Site. The Catskill Aqueduct serves as the main source of water for the Village of Sleepy Hollow. Water is stored in the village's reservoir in the Rockefeller State Park Preserve. It is unlikely that groundwater beneath the Site would ever be used as a potable water supply because the area is serviced by the local municipal system and the natural water bearing units below the fill are expected to have relatively low yields. Although the fill may represent a zone of significant groundwater yield, such artificially created deposits are typically undesirable as potable supplies.

As mentioned above, the Site now consists of a vacant lot with that is primarily covered with the former building floor slabs and paved parking areas and roadways. On the western boundary of the West Parcel, near the Hudson River shoreline, there is a steep pile of concrete millings recycled from building demolition operations. These millings were also spread across portions of the West Parcel in various locations around existing slabs for use as ramp material during demolition operations. Additionally, the Village of Sleepy Hollow Department of Public Works parks vehicles within the West Parcel near the former gatehouse and stages piles of raw materials (e.g., gravel, sand, cobble, and compost) within the East Parcel. Access to the entire site is restricted by chain-link fence and locks at existing gates.

The contemplated future use of the Site is mixed commercial and restricted residential development, with public open space, including public access to the waterfront and municipal public works operations. In accordance with the BCAs for the East and West Parcels, a soil management plan will be implemented during and following redevelopment of the Site, which will preclude any unauthorized disturbance of soil (e.g., digging, construction) without implementation of the plan.

As such, this qualitative human health exposure assessment evaluates potential exposure of human receptors to site-related constituents under both current and future land use conditions. Media of concern include soil and groundwater, in addition to stockpiles of recycled concrete millings. Soil vapor data are also included in the evaluation. Sediments of the adjacent Hudson River are the subject of a separate report and are not addressed in this qualitative evaluation.

7.3 Constituents of Potential Concern

Between 1996 and 2000, GMC undertook several environmental investigations at the Site to prepare for facility closure, including Phase I and Phase II Environmental Site Assessments, a Phase III Extent of Contamination Study, and a Sediment Quality Investigation in the Hudson River. In addition, an ICM Project was implemented primarily to clean up residual petroleum and hydraulic fluids found in crawl spaces beneath the floor slabs of the former Chassis and Body Assembly Plants, and to remove two underground fuel storage tanks before these buildings were demolished.

Roseland conducted additional sampling of soil and groundwater in 2002. The findings of this recent investigation, and the prior investigations conducted by GMC, reflected levels of metals, PAHs, and petroleum compounds that are generally typical of historically filled sites along the Hudson River, especially those dedicated to industrial

uses. These findings were used to prepare the IWP, which specified additional remedial investigations, which were completed during 2003-2004.

Based on investigations conducted to date at the Site, areas of potential concern can be grouped into the following broad categories for exposure assessment:

- soils or historical fill containing metals, PAHs, and VOCs at levels above TAGM 4046 guidelines for unrestricted use
- recycled concrete millings stockpiled or spread on the surface of the West Parcel
- groundwater contaminated with VOCs, SVOCs, and metals above groundwater standards or guidance values for drinking-water use
- VOCs and methane in soil gas

Analytical data used in the evaluation include soil, groundwater, and concrete millings data collected as part of the Due Diligence Investigation performed in 2002 and the RI conducted in 2003 2004. Samples were generally analyzed for VOCs, SVOCs, and metals, and select samples for PCBs. Soil gas data from the RI for methane and VOCs were also evaluated. Analytical results for the RI, which are presented in Section 6 of this report, are discussed below by potential exposure category.

7.3.1 Soils

Approximately 90% of the Site is developed on fill, which generally comprises fine to coarse sands with lesser amounts of gravel, silt, and clay. Historical fill includes various coal cinders, dredged Hudson River sediments, and smaller segments of construction and demolition debris. Constituents detected in this fill include various inorganics (including lead) and PAHs that are typical of historically filled sites along the Hudson River. Lead and PAHs are found throughout the Site with concentrations frequently exceeding the TAGM 4046 guidance values for unrestricted use. Chromium has also been reported in soil and groundwater in a discrete area of the Site (PAOC 47) at levels above the unrestricted use TAGM values.

7.3.1.1 Metals

Although several metals are present in soil/fill across the Site, lead is the primary inorganic COPC in historical fill. It is frequently present at concentrations greater than

the NYSDOH guidance value of 400 ppm for unrestricted use in the pre-1960 historical fill areas. Atypical lead concentrations indicative of a possible concentrated source area are defined for this report as concentrations exceeding 10,000 ppm.

Concentrations of lead in soils (fill) from PAOC 7/Fill Areas H, F and G area ranged from non-detect to 167,000 ppm. Fill materials were encountered within PAOC 7 at depths between 12 to 16 ft bgs. Concentrations of lead in this area ranged from 15.5 ppm to 9,990 ppm in soils less than 1 ft below the crawl space ground surface. Lead concentrations exceeding 10,000 ppm were detected sporadically at depths of 1 to 12 ft bgs. The maximum value of 167,000 ppm was detected in the 1 to 2 ft interval.

The soils encountered near the former Maintenance Building Area (PAOC 29) also consist of anthropogenic fill that extends to a depth of 8 ft bgs. The highest lead levels measured in near-surface samples (less than 2 ft bgs) were infrequently greater than the NYSDOH guidance value of 400 ppm for unrestricted use (but reached a maximum of 25,000 ppm). Concentrations of lead reported in soil were also generally above the NYSDOH guidance value of 400 ppm at depths greater than 2 ft bgs, up to a maximum of 90,000 ppm (within the 3 to 8 ft depth range).

Chromium concentrations reported in soils (fill) from the PAOC 47 source area, ranged from 212 ppm to 3,750 ppm (Figure 13C), at depths between 3 to 5 ft below the existing concrete slab. The two offsite 0-to 6-inch soil samples collected from an area within Kingsland Point Park (adjacent to PAOC 47) to document background levels in shallow soils above the water table at two temporary well locations exhibited chromium concentrations of 32 to 43.5 ppm. Although the chromium concentrations in these two park samples are greater than the TAGM default value of 10 ppm, the observed concentrations are similar to regional background concentrations. In a literature study conducted for soils of New York State, chromium in “uncontaminated soils” was reported to range from 1.5 ppm to 40 ppm (McGovern, 1988). Shacklette and Boerngen also reported an average background chromium concentration of 54 ppm (Shacklette and Boerngen, 1984). As such, chromium is not considered a COPC for offsite soils.

7.3.1.2 SVOCs

SVOCs at the Site essentially comprise PAHs. Site fill contains PAHs from combustion products such as ash and slag, and localized historical petroleum spills. Individual PAH soil concentrations are above TAGM guidance values for unrestricted use within PAOCs 2, 4, 6, 7, 17, 21, 34, 37, 39, and 43, and in the UST area. From previous

investigations, pre-1960 fill generally contains PAHs above TAGM guidance values for individual compounds, The highest concentrations of SVOCs occur at PAOC 47 (maximum of 4,675 ppm total SVOCs), where evidence of residual oil was found within the fill at 7 to 13 ft bgs. Total carcinogenic PAHs (a subset or the total SVOCS) ranged from non-detect to 1,853 ppm at this same depth interval in PAOC 47.

7.3.1.3 VOCs

Within PAOCs 7, 21, 37, and 39 (areas of historical petroleum spills and/or downgradient of such spills), VOCs (primarily xylene and benzene derivatives) were detected in petroleum-stained soils above TAGM guidance values for unrestricted use at concentrations of 0.34 ppm to 25 ppm, at depths ranging from 8 to 9.5 ft bgs (below the water table).

7.3.2 Recycled Concrete Millings

Concrete millings in PAOCs 14, 15, and 32 were sampled (top foot of surface material) and analyzed for PAHs, metals, and PCBs. Individual PAHs were detected above TAGM values at concentrations ranging from 3.5 ppm to 31 ppm. Total carcinogenic PAHs concentrations ranged from 97.5 ppm to 149 ppm, compared to the TAGM guidance value of 10 ppm. Metals including arsenic, barium, cadmium, chromium, copper, iron, lead, mercury, nickel, and zinc exceeded TAGM values for unrestricted use. Lead was detected at a maximum concentration of 1,900 ppm in millings at PAOC 15, while remaining samples were less than the 400 ppm TAGM value. PCB Aroclors 1248 and 1260 were detected in six of the seven samples collected during the RI at maximum concentrations of 1.8 ppm and 2.6 ppm respectively. Total PCB concentrations ranged from non-detect to 4.4 ppm in the spread millings. Total PCB concentrations measured in samples previously collected from the millings pile at PAOC 31 ranged from 0.39 ppm to 1.69 ppm (EcolSciences, 2002). Overall, the concrete millings onsite generally contain PCBs near or slightly above the TAGM guidance value of 1 ppm for surface soil (unrestricted use), but all samples are consistently below the TAGM guidance value of 10 ppm for subsurface soil (i.e., beneath clean cover soil).

7.3.3 Groundwater

Site groundwater is influenced by underlying historic fill and individual PAOCs, which define the COPCs. Metals, SVOCs, and VOCs have been detected in site groundwater and are described below. These constituents have been compared to

NYSDEC Class GA groundwater standards (for drinking-water supplies) in Tables 10 and 10 of this report. However, comparison to these standards is considered conservative and not relevant to the groundwater exposure pathway considered in this human health assessment because groundwater at the Site is not currently used, and it is reasonable to assume that it will not be used as a potable water source in the future. The only potential for human exposure to contaminants in site groundwater would be via dermal contact with groundwater during construction (See Section 7.4). For this evaluation, data from unfiltered groundwater samples (which may include suspended solids) are used to evaluate this pathway.

7.3.3.1 Metals

Groundwater within the north to northwest portion of the Site contains several metals that exceed Class GA groundwater standards (for drinking-water supplies). Six monitoring wells (OW-10, OW-11, OW-20, OW-24, OW-25, and OW-26T) were sampled in this area during the RI. Analytical results showed Class GA standards were exceeded for barium, chromium, iron, lead, manganese, and sodium. Barium and chromium were detected at maximum concentrations of 6,560 and 554 micrograms per liter (µg/L) respectively. Lead was detected in monitoring wells OW-20 and OW-26T at concentrations of 81.7 and 88.1 µg/L.

Groundwater within the south to southwest portion of the West Parcel, under portions of the former Body Plant and Chassis Plant areas were sampled from 11 monitoring wells (OW-6, 7, 8, 40, 42, 45, 46, 47, 49, 50, and 51). Class GA standards were exceeded for barium, iron, lead, manganese, and sodium. Barium and lead were detected at maximum concentrations of 5,040 and 116 µg/L.

Groundwater samples collected in the vicinity of the UST attenuation area showed that the Class GA standard was exceeded for iron, manganese, and sodium. Onsite groundwater in the PAOC 47 exhibited chromium as high as 42,100 µg/L. Offsite groundwater monitoring at wells in the park (SI-47-B27 and SI-47-B28), near PAOC 47, contained chromium above the Class GA standard, at a maximum concentration of 466 µg/L.

7.3.3.2 SVOCs

For SVOCs, PAHs are the primary COPC for groundwater. Samples collected within the former 10,000-gallon UST attenuation area at PAOCs 7, 21, 37, 39, 43, and 47, have concentrations of individual PAHs exceeding Class GA standards. The

maximum detected PAH concentration was for phenanthrene at a concentration of 140 µg/L.

7.3.3.3 VOCs

Groundwater within the northern end of the West Parcel showed VOC concentrations above Class GA standards in OW-10, OW-22, OW-25, OW-26T, and temporary well SI-GWI-B11W. Benzene and other petroleum-derived VOCs are present in groundwater in this area. Trace levels of petroleum-derived VOCs are also localized in groundwater at PAOCs 7 and 37. In the PAOC 47 area, 16 monitoring wells (including boundary well OW-24), and two temporary wells located on the Kingsland Point Park Property, were sampled to delineate the extent of localized TCE contamination. TCE ranged from non-detect to 75 µg/L in onsite wells and non-detect to 16 µg/L in the park. In addition, 1,1-dichloroethane was slightly above the Class GA standard in one onsite well, and cis-1,2-dichloroethene was slightly above the standard in one offsite well in the park.

7.3.3.4 Soil Gas

Methane has been confirmed in site soil gas in some areas of the Site over organic deposits (Figures 15A, 15B, and 17). Methane is derived from the natural anaerobic biodegradation of organic matter. Within the paved portion of the East Parcel, methane concentrations in soil gas beneath the asphalt ranged from70% to 100% within the extent of the former landfill. Migration of methane from the former Village landfill toward the west appears to be following the groundwater flow path, until the gas is naturally released to the atmosphere. Methane was not detected beyond the edges of the asphalt pavement within the East Parcel (Figure 15A). Lower levels of methane (up to 18%) were found beneath the asphalt in the northern corner of the West Parcel (Figure 17) where organic marsh soils underlie the fill.

VOCs were analyzed for samples collected within several PAOCs found under the former Body and Chassis Plants of the West Parcel (Figure 18). Specifically, portions of PAOCs 7, 21, 37, 39, 43, 47, and the UST attenuation area were sampled based on presence of VOCs within the soil and groundwater. Representative sampling was performed where future buildings were anticipated, based on the DEIS for Lighthouse Landing. Soil vapor data were collected from areas below the slab and from uncovered surface soil areas (including samples located near current crawl spaces beneath the existing slab floor). Air samples were also measured in the crawl spaces. Constituents detected in the crawl space air samples were acetone, chloroform, carbon

disulfide, and toluene. These same constituents were detected in the crawl space soil vapor samples. In total, 27 volatile constituents were detected in the soil vapor. These constituents included Freon 11 and Freon 12, chlorinated solvents (i.e., TCE, 1,1-dichloroethene, tetrachloroethene), and aliphatic (i.e., xylenes, heptane) and aromatic hydrocarbons (i.e., toluene, naphthalene, benzene). The aliphatic and aromatic VOCs were generally reported in soil vapor data collected from PAOC 37 and PAOC 43 (within the proposed natural petroleum attenuation monitoring areas). Similarly, these petroleum-derived compounds were detected within the petroleum attenuation area associated with the former10,000-gallon No.6 fuel oil UST.

Chlorinated solvents, predominantly, TCE, were detected only within and around the area of PAOC 47. The TCE in soil gas corresponds to the TCE found within the groundwater and soil samples collected in the PAOC 47 area, exhibiting a larger footprint than would be indicated by the soil and groundwater data alone. VOCs from the soil gas phase were not detected in the crawl space atmosphere beneath the former Chassis and Body Plant slabs. The results of the soil vapor and crawl space air sampling, for all detected constituents, are presented on Figure 18.

7.4 Potential Exposure Points, Receptors, and Route of Exposure

An initial step in evaluating potential human exposure is identifying complete exposure pathways. In accordance with New York State Department of Health (NYSDOH) guidance for conducting a Qualitative Human Health Exposure Assessment (NYSDEC, 2002a and 2002b), for an exposure pathway to be complete, the following five elements must exist:

1. a source of COPC
2. release and transport mechanisms of COPC
3. a point of human exposure
4. routes of exposure where constituents from these media could be taken up by the human body
5. a receptor population

An exposure pathway is complete if all five elements exist.

As previously described, COPCs have been identified in soils and historical fill, recycled concrete millings, soil vapor, and groundwater. Potential human exposure to these media could occur via ingestion, dermal contact, and/or inhalation of particulates or volatile organics released to the air. Because the Site is currently vacant (but will be redeveloped in the future), the most likely current receptors are general workers (e.g., individuals involved in maintenance activities, environmental samplers, land developers, and DPW personal [who currently park their vehicles onsite]). Although the Site is fenced, there is potential for exposure of trespassers to constituents in some media.

The proposed future land uses for this site are mixed residential and commercial development, open public space, and municipal public works operations. Development and future property management will need a soil management plan to preclude unauthorized soil disturbance activities below the impervious cap or soil or other cover that will be constructed over residual contamination. As such, the most likely future receptors are workers involved in excavation and construction activities (associated with redevelopment and infrastructure maintenance). Future residents, visitors, and commercial workers who may live, visit and/or work in the area, will need to be isolated from contaminated media that may remain onsite following any preconstruction remediation. Measures to remediate these potential future exposure pathways should be evaluated and presented in appropriate remedial documents.

Potentially complete human exposure pathways for the Site are identified below.

7.4.1 Potential Direct Contact with Soils and Millings

There is little potential for direct contact exposure (i.e., incidental ingestion, dermal contact) of general workers (e.g., consultants, land developers) and trespassers to constituents in soils and historical fill because soils across the Site are generally covered by asphalt or concrete slabs. Historical fill may be contacted during work in accessible crawl spaces beneath portions of the former Body and Chassis Plant slabs. As such, this exposure pathway to soils and historical fill is not complete throughout most of the Site (i.e., there is no point of human exposure), except in the crawl spaces. General workers and trespassers may also be exposed to COPCs at the Site through direct contact with recycled concrete aggregate (millings) located in stockpiles and in areas where they are spread on the surface. However, these persons are not consistently on the Site, and general workers are aware of the millings and the potential for exposure. These millings were found to contain metals, PAHs, and occasionally PCBs above TAGM guidance values for unrestricted use. Therefore,

under current land use at the Site, the exposure pathway is complete for general workers and trespassers potentially exposed to millings or crawl space soils (via direct contact).

Under the proposed future land use, there is a potentially complete exposure pathway for construction workers exposed to constituents in soil and concrete millings while engaged in intrusive activities (e.g., removal of concrete slabs, utility work, building construction, use of concrete millings for fill material). There would be, however, little to no potential for exposure of future residents, visitors, and commercial workers to constituents in these media if impervious surfaces or other cover functioning as a barrier cap (as described in the Conceptual RAWP) are utilized to effectively isolate the existing fill materials from the public. Final soil cover, roadways, parking areas, and building slabs, should be integrated into a barrier cap system to prevent direct contact with subsurface contamination following any pre-construction remediation that may be required. In addition, a soil management plan should be developed and implemented to prohibit unauthorized soil disturbance below the impervious cap or soil (or other) cover and require safe handling of soils that need to be excavated for future construction and repairs. Measures to eliminate or mitigate these potential future exposure pathways, will be evaluated and presented in appropriate remedial documents. With appropriate remedial measures in place, this potential future exposure pathway is not complete (there will be no point of human exposure).

7.4.2 Potential Inhalation of Vapors and/or Particulates

Under current land use, general workers and potential trespassers at the Site are not likely to be exposed to constituents via inhalation of vapors and/or particulates (e.g., dust). This is because the Site is primarily covered with concrete slabs and asphalt, which limits the potential for exposure to constituents in underlying soils, including potential vapors associated with these soils and other underlying media (e.g., groundwater). Because there are currently no buildings onsite, there is no concern for the potential migration of vapors to indoor air. The only potential for exposure to chemical constituents via inhalation of particulates is limited to areas of recycled concrete millings. However, given the course-grained nature of this material (generally coarse-grained sand, gravel, and up to 6-inch pieces of concrete), exposure of current receptors (general workers and trespassers) is not likely. In addition, perimeter air monitoring conducted in the 2003 RI field sampling did not detect nuisance dust from the millings pile near the Site boundary or elsewhere (AMEC, 2004a). As such, the inhalation exposure pathway is incomplete under current land use at the Site (i.e., there is no point of human exposure).

For proposed future land use, there is, however, a potentially complete exposure pathway for exposure (via inhalation of particulates and/or volatiles) of construction workers engaged in intrusive activities to constituents in millings and in soils beneath the slab floors and pavement/concrete. Volatile constituents have been reported in soil gas, subsurface soil, and groundwater data, and in some instances, these volatiles are present in areas proposed for residential housing (PAOC 43 and 47). Although the migration of vapors into buildings is dependent upon several conditions (e.g., soil type, depth of and type of contamination, building size, building materials, ventilation), there is a potential for migration of vapors into buildings proposed to be constructed in these areas. As such, there is a potentially complete exposure pathway for future residents who may be exposed to potential volatile constituents in indoor air. This pathway should be further evaluated and, as necessary, suitable remedial plans developed to prevent the intrusion of VOCs into the indoor air space of future buildings.

Methane gas has also been detected at the Site, but its presence is generally confined to the former landfill (which is generally covered by asphalt), with the exception of lower levels in the northern corner of the West Parcel. Based on current data, methane levels in the general vicinity of proposed residential housing are not detected or relatively low, but would represent a potentially complete pathway if any buildings are constructed on the East Parcel and northern corner of the West Parcel. In the absence of specific building plans for the affected areas, remedial measures to mitigate the impact of methane on any buildings that may be desired in these areas in the future should be generally specified in remedial documents.

7.4.3 Direct Contact with Groundwater

Groundwater occurs at various depths across the Site (generally 6 to 7 ft), and generally flows west/southwest toward the Hudson River. Groundwater is not currently used as a potable source, as the entire site and surrounding area is served by a public water system that GMC used for both a potable and process water supply. It is reasonable to assume that there will be no anticipated uses of site groundwater as a water supply in the future. As such, the exposure pathway is incomplete for potential exposure to constituents in groundwater via consumption.

Because groundwater at the Site is not potable, the only potential for exposure is via direct contact with groundwater that may be encountered during future excavation and construction activities associated with remediation and land redevelopment. Elevated concentrations of metals, SVOCs, and VOCs have been detected within various PAOC areas in site groundwater. While this exposure pathway is complete, potential

exposure (via direct contact and potential inhalation of volatiles) of construction workers to constituents in groundwater can be mitigated by use of properly trained personnel and personal protective equipment (PPE).

7.5 Pathway Summary

Under the current land use, a potentially complete exposure pathway exists for general workers and trespassers that could potentially be exposed (via direct contact) to constituents in the recycled concrete millings and fill that may be encountered in crawl spaces. The Site Health and Safety Plan, and the Community Air Monitoring Plan (included in the IWP), were implemented to mitigate potential exposure during the RI, as were similar plans during the previous investigations.

For future land use, a potentially complete exposure pathway exists for construction workers that may be exposed to constituents in soil or fill (below the asphalt and concrete slabs), concrete millings, and groundwater. These construction workers could potentially be exposed during intrusive activities to constituents via incidental ingestion, dermal contact, and inhalation of particulates and/or VOCs. These potential exposures can be mitigated by use of properly trained personnel, implementation of engineered exposure controls, and the use of PPE. A Soils Management Plan prepared in conjunction with the RWP should include site-specific requirements for mitigation of exposure during construction.

There is also a potentially complete exposure pathway for future residents to be exposed to volatile organic constituents via vapor intrusion into future residential complexes. Further evaluations should be undertaken to determine the potential for volatile constituents to migrate into indoor air spaces, and the magnitude of any potential exposures. For specific areas where a potential adverse risk to human health via the indoor vapor intrusion pathway would be indicated, remedial measures should be developed and incorporated into appropriate remedial documents.

8. Fish and Wildlife Exposure Assessment

8.1 Introduction

This section of the RI presents a qualitative fish and wildlife exposure assessment that was conducted for the Former GMC North Tarrytown Assembly Plant Site (Site) located at 199 Beekman Avenue, Village of Sleepy Hollow, New York. The focus of this qualitative assessment is restricted to the Former GMC North Tarrytown Assembly Plant Site. Sediments of the adjacent Hudson River are the subject of another report and are not evaluated in this document. The objectives of this qualitative assessment were to identify the fish and wildlife resources that exist on and in the vicinity of the Site and to evaluate the potential for exposure of these resources to Site-related constituents in environmental media.

This qualitative assessment for fish and wildlife resources was conducted in accordance with NYSDEC (NYSDEC, 2004) guidance for the Brownfield Cleanup Program (BCP). Per the BCP requirements, this qualitative assessment is generally equivalent to Steps I and IIA of NYSDEC's Fish and Wildlife Resource Impact Analysis outlined in DER-10 (NYSDEC, 2002b). Step I characterize the terrestrial and aquatic ecology of the Site and surrounding areas and develop a list of potential ecological receptors. The specific components of Step I include: IA) Site description and maps, IB) description of fish and wildlife resources, IC) description of fish and wildlife resource value, and ID) identification of applicable fish and wildlife regulatory criteria. Step IIA involves a pathway analysis, which utilizes the receptor information generated in Step I to evaluate potential exposure pathways based on Site ecology and the location of Site-related constituents. If necessary, Step IIB involves a criteria-specific analysis, which compares Site-specific data to ecological criteria.

An ecological assessment was conducted for the Site in April 2004, and was subsequently revised in January 2005 (EcolSciences, 2005). This ecological assessment (entitled Assessment of Ecological Resources for Lighthouse Landing Redevelopment Project, Village of Sleepy Hollow, Westchester County, New York) is presented as Appendix H. Information presented in the ecological assessment (EcolSciences, 2005) was the basis for this qualitative assessment.

8.2 Site Description

The Site description and topography are described in Section 2.1. All three parcels were developed for commercial and industrial use. Currently, all three parcels are

capped with asphalt, concrete, or recycled concrete aggregate, except for vegetated slopes on the south and east edges of the East Parcel and two drainage swales along the east and west edges of the paved expanse of the East Parcel. The Hudson River shoreline along the southwest side of the West Parcel is constructed of rip-rap with a narrow (3-4 foot) strip of mowed vegetation between the riprap and asphalt surface of the West Parcel. Ecological resources are primarily associated with offsite lands and waterways, as described in Section 7.3

8.3 Ecological Characterization

Information from the ecological assessment (EcolSciences, 2005) was used to identify the general physical and ecological features of the Site and surrounding areas. The ecological assessment (EcolSciences, 2005) included a map of vegetative communities within the Site and a 200-foot buffer zone surrounding the Site. Aerial photographs were reviewed to supplement the information presented in the ecological assessment (EcolSciences, 2005), specifically to identify vegetative communities surrounding the Site within a 0.5-mile radius (i.e., outside the 200-foot buffer zone).

A covertype map for the Site and surrounding areas within a 0.5-mile radius of the Site is presented as Figure 21. The covertype map (Figure 21) classifies areas into ecological communities based on vegetative assemblages (e.g., residential/industrial/commercial, oak-tulip tree forest, urban vacant lot). As part of the ecological characterization, natural resources (i.e., rivers, lakes, wetlands) located within a 2-mile radius of the Site were also identified. This information assisted in the evaluation of wildlife habitat value and human resource value for the Site and surrounding areas.

8.3.1 Vegetative Covertypes

The majority of the Site is characterized by impervious surfaces (e.g., asphalt, concrete). There are several offsite areas (i.e., areas within a 0.5-mile radius of the Site) that contain natural (undeveloped) habitats. Vegetative communities identified in the ecological assessment (EcolSciences, 2005) for the Site and surrounding 200-foot buffer zone were classified according to the NYSDEC (NYSDEC, 2002b) document entitled Ecological Communities of New York State, Second Edition. Aerial photographs were reviewed to identify vegetative communities within a 0.5-mile radius of the Site (i.e., outside the 200-foot buffer zone). Eleven major covertypes were identified within a 0.5-mile radius of the Site, including:

1. Mowed lawn
2. Mowed lawn with trees
3. Brackish tidal marsh
4. Railroad
5. Red maple-hardwood swamp
6. Estuarine riprap/artificial shore
7. Oak-tulip tree forest
8. Ditch/artificial intermittent stream
9. Urban vacant lot
10. Tidal river
11. Residential/industrial/commercial

A map depicting the spatial distribution of these covertypes is presented on Figure 21. Individual covertypes are briefly described below.

Mowed Lawn Covertype – The mowed lawn covertype consists of residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees (NYSDEC, 2002b). The recreational parklands in the vicinity of the Site (i.e., Devries Park, portions of Kingsland Point Park) were classified as mowed lawn because these areas are routinely maintained by mowing, and are characterized by less than 30% cover of trees (EcolSciences, 2005).

Mowed Lawn with Trees Covertype – The mowed lawn with trees covertype consists of residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and there is at least 30% cover of trees (NYSDEC, 2002b). The majority of Kingsland Point Park was classified as mowed lawn with trees because a significant portion of the park is characterized by mature trees (EcolSciences, 2005).

Brackish Tidal Marsh Covertype – The brackish tidal marsh is described as a marsh community that occurs where water salinity ranges from 0.5 to 18.0 ppt, and water is less than 6 feet deep at high tide (NYSDEC, 2002b). This community consists of a mixture of salt marsh and freshwater tidal marsh species (NYSDEC, 2002b). Dominant herbaceous species include common reed (Phragmites australis) and Japanese knotweed (Polygonum cuspidatum) (EcolSciences, 2005). Mature trees consist of black willow (Salix nigra), cottonwood (Populus deltoides), alder (Alnus spp.), red maple (Acer rubrum), American elm (Ulmus americana), ash (Fraxinus spp.), and American sycamore (Platanus occidentalis) (EcolSciences, 2005). The brackish tidal

marsh is located along a portion of the Pocantico River shoreline within Devries Park (EcolSciences, 2005).

Railroad Covertype – The railroad covertype is described as a permanent road having a line of steel rails fixed to wood ties and laid on a gravel roadbed that provides a track for cars or equipment drawn by locomotives (NYSDEC, 2002b). The railroad tracks run in a north-south direction between the West and East Parcels. Sparse herbaceous vegetation is present along both sides of the railroad tracks (EcolSciences, 2005).

Red Maple-Hardwood Swamp Covertype – The red maple-hardwood swamp generally occurs in poorly drained depressions, and consists of a broadly defined vegetative community (NYSDEC, 2002b). Dominant trees generally consist of red maple, ashes, elms (Ulmus spp.), yellow birch (Betula alleghaniensis), and swamp white oak (Quercus bicolor) (NYSDEC, 2002b). The shrub and herbaceous layers are often quite diverse (NYSDEC, 2002b). The red maple-hardwood swamp is located along the southern shoreline of the Pocantico River (EcolSciences, 2005).

Estuarine Riprap/Artificial Shore Covertype – The estuarine riprap/artificial shore covertype is generally described as a constructed shoreline consisting of broken rocks, wooden bulkheads, and concrete that reduces erosion of the shoreline (NYSDEC, 2002b). Vegetative cover is generally low (NYSDEC, 2002b). Vegetation within this covertype is generally limited to woody and herbaceous plant species typical of disturbed areas (e.g., tree-of-heaven [Ailanthus altissima], Queen Anne's Lace [Daucus carota], evening primrose [Oenothera biennis]) (EcolSciences, 2005). This covertype is present along the shoreline of the Hudson River, extending south from Kingsland Point Park to the terminus of the West Parcel (EcolSciences, 2005).

Oak-Tulip Tree Forest Covertype – The oak-tulip tree forest covertype consists of a mesophytic hardwood forest that occurs on moist, well-drained sites in southeastern New York (NYSDEC, 2002b). Dominant trees generally consist of red oak (Quercus rubra), tulip tree (Liriodendron tulipifera), beech (Fagus grandifolia), black birch (Betula lenta), red maple, scarlet oak (Quercus coccinea), black oak (Quercus velutina), and white oak (Quercus alba) (NYSDEC, 2002b). The oak-tulip tree forest covertype occurs along the eastern and southern edges of the East Parcel, and a portion of Kingsland Point Park (EcolSciences, 2005). It also occurs along upland slopes within Devries Park and the Philipsburg Manor Historic Site (EcolSciences, 2005).

Ditch/Artificial Intermittent Stream Covertype – The ditch/artificial intermittent stream covertype is described as the aquatic community of an artificial waterway constructed for drainage or irrigation of adjacent lands (NYSDEC, 2002b). Water levels generally fluctuate in response to variations in precipitation and/or groundwater levels (NYSDEC, 2002b). Vegetation within these drainage ditches is primarily herbaceous and includes common reed, cattail (Typha spp.), purple loosestrife (Lythrum salicaria), soft rush (Juncus effusus), goldenrod (Solidago spp.), evening primrose, and mugwort (Artemisia vulgaris) (EcolSciences, 2005). Tree species are also present and include black willow, cottonwood, black locust (Robinia pseudoacacia), and tree-of-heaven. The ditch/artificial intermittent stream covertype occurs in two areas along the eastern boundary of the railroad tracks, within the East Parcel (EcolSciences, 2005).

Urban Vacant Lot Covertype – The urban vacant lot covertype consists of an open site in a developed, urban area that has been cleared for either construction or following the demolition of a building (NYSDEC, 2002b). Vegetation within this covertype is generally sparse (NYSDEC, 2002b). The majority of the Site (i.e., West, East, and South Parcels) is classified as an urban vacant lot covertype (EcolSciences, 2005). Vegetation associated with the urban vacant lot covertype is generally found in pavement cracks (EcolSciences, 2005).

Tidal River Covertype – The tidal river covertype is described as the aquatic community of continuously flooded substrates that supports no emergent vegetation (NYSDEC, 2002b). Tidal rivers generally consist of two zones: (1) the deepwater zone that includes areas where substrates are usually over 6 feet deep at high tide; and (2) the shallow zone that includes submerged areas less than 6 feet deep at low tide that lack rooted aquatic vegetation (NYSDEC, 2002b). The Hudson and Pocantico Rivers were both classified as tidal rivers (EcolSciences, 2005).

Residential/Industrial/Commercial Covertype – The residential/industrial/commercial covertype is present south and east of the Site. Most of the industrial properties are located along the Hudson River waterfront, south of the Site. The commercial center for the Village of Sleepy Hollow is located approximately 0.5 miles east of the Site. The residential/industrial/commercial covertype is generally characterized by residential houses, industrial and commercial buildings, paved roads and parking lots, and limited amounts of cultivated vegetation (e.g., lawns, ornamental trees and shrubs).

8.3.2 Surface Waters

The main surface water bodies in the vicinity of the Site include the Hudson River, which borders the Site to the west, and the Pocantico River, which borders the Site to the north. The NYSDEC best usage classification for these stretches of the Hudson and Pocantico Rivers is Class SB. According to New York Regulations Title 6 §701.11, the best usages of Class SB streams are primary and secondary contact recreation and fishing. Class SB waters are suitable for fish propagation and survival.

8.3.3 Wetlands

According to the NYSDEC Freshwater Wetlands Map for the White Plains quadrangle (NYSDEC Freshwater Wetlands Map, Westchester County, Map 10 of 14), there are no state-regulated freshwater wetlands within a 2-mile radius of the Site (EcolSciences, 2005). The New York State Freshwater Wetlands Map is presented as Figure 2 in the ecological assessment (EcolSciences, 2005) for the Site (see Appendix H). Tidal wetlands maps are not currently available for the Site, and are in the process of being developed for the area of the Hudson River north the Tappan Zee Bridge to the Troy Lock (EcolSciences, 2005).

National Wetlands Inventory (NWI) maps are generated by the U.S. Fish and Wildlife to identify potential freshwater wetland areas that may fall under federal jurisdiction. Electronic versions of NWIs are available online (http://www.nwi.fws.gov). According to the NWI Map for the White Plains quadrangle, no federally-regulated freshwater wetlands are present within a 2- mile radius of the Site. However, small man-made drainage ditches on the East Parcel have been identified by EcolSciences as wetlands falling under federal jurisdiction. These ditches drain stormwater to the Pocantico River via a pipe and are believed to be tidally influenced.

8.4 Fish and Wildlife Resources

The following subsections briefly describe the natural resources found in each covertype, and identifies fish and wildlife species that may utilize such resources. A list of wildlife species observed onsite, or expected to be onsite or in the immediate vicinity of the Site is presented in the ecological assessment (EcolSciences, 2005) (refer to Attachment C of Appendix H).

Mowed Lawn and Mowed Lawn with Trees Covertypes – The parklands surrounding the Site (i.e., Devries Park, Kingsland Point Park) are classified as mowed lawn and

mowed lawn with trees covertypes (Figure 21). These covertypes are characterized by recreational areas (e.g., baseball fields, picnic areas) with maintained (mowed) grasses and some mature trees. Wildlife species that may utilize these covertypes are most likely limited to species typically found in urban landscapes (e.g., gray squirrel [Sciurus carolinensis], mice [Peromyscus spp.], American robin [Turdus migratorius]).

Brackish Tidal Marsh Covertype – The brackish tidal marsh is present along a section of the Pocantico River within Devries Park (Figure 21). This covertype is characterized primarily by herbaceous vegetation, with trees and shrubs present along the perimeter of the marsh (EcolSciences, 2005). This covertype may be used by a variety of terrestrial, aquatic, and semi-aquatic birds and wildlife for foraging, nesting, and/or cover.

Railroad Covertype – The railroad runs in a north-south direction between the West and East Parcels, and consists of a railroad with a gravel substrate. Vegetation within the railroad is very limited and generally consists of sparse patches of herbaceous plants (EcolSciences, 2005). Due to the lack of natural habitat, use of the railroad by local wildlife is expected to be low and use of this area by wildlife is most likely limited to transient individuals.

Red Maple-Hardwood Swamp Covertype – The red maple-hardwood swamp covertype is present along the Pocantico River, north of the brackish tidal marsh (Figure 21). This covertype extends along the tidally-influenced section of the Pocantico River to the dam at Philipsburg Manor (Figure 21). These wetland areas are generally not inundated by diurnal tides (EcolSciences, 2005). Due to the presence of mature trees, this covertype is most likely used by passerine birds and arboreal mammals for nesting, foraging, and/or cover. Terrestrial wildlife such as various species of small mammals, amphibians, and reptiles may also use this covertype.

Estuarine Riprap/Artificial Shore Covertype – The estuarine riprap/artificial shore covertype is located along the shoreline of the Hudson River, adjacent to the West Parcel (Figure 21). This covertype is characterized by an armored slope of stone riprap. Because the substrate consists of large stone riprap and the vegetation is generally limited, use of this covertype by terrestrial wildlife is most likely limited.

Oak-Tulip Tree Forest Covertype – The oak-tulip tree forest covertype is present in several areas including along the eastern boundary of the East Parcel, a portion of Kingsland Point Park, and along upland slopes in Devries Park and Philipsburg Manor Historic Site (Figure 21). This covertype is characterized by mature trees, shrubs, and

herbaceous vegetation; although only a small number of canopy trees remain within this vegetative community (EcolSciences, 2005). Terrestrial wildlife such as various species of small mammals, passerine birds, and reptiles may use this covertype for foraging, nesting, and/or cover.

Ditch/Artificial Intermittent Stream Covertype – The ditch/artificial intermittent stream covertype is present as two drainage ditches along the eastern boundary of the railroad, within the East Parcel (Figure 21). The ecological assessment for the Site (EcolSciences, 2005) identified these drainage ditches as wetland areas associated with a series of man-made ditches connected by pipes. Due to their intermittent nature, these drainage ditches most likely do not provide significant ecological habitat to terrestrial, aquatic, or semi-aquatic wildlife.

Urban Vacant Lot Covertype – The Site is classified as an urban vacant lot, and generally does not contain natural habitat (Figure 21). Because the majority of the Site consists of mostly impervious surfaces (e.g., asphalt, concrete), the Site itself does not offer wildlife habitat that would be conducive to foraging, nesting, and/or shelter. Therefore, wildlife usage of the Site is expected to be minimal due to its lack of natural resources. In general, the wildlife species that may use the Site are likely common species typical of urbanized and disturbed areas (e.g., Norway rat [Rattus norvegicus], pigeon [Columba livia]).

Tidal River Covertype – The Hudson River is located immediately west of the Site, and the Pocantico River is located along the northern border of the Site (Figure 21). Characteristic fishes of the tidal river covertype include year-round residents as well as seasonal migrants or anadramous species (NYSDEC, 2002b). Fish species that are likely to inhabit tidal sections of the Hudson and Pocantico Rivers may include rainbow smelt (Osmerus mordax), sturgeon (Acipenser spp.), striped bass (Morone saxatilis), banded killifish (Fundulus diaphanous), and white perch (Morone americana) (NYSDEC, 2002b).

Residential/Industrial/Commercial Covertype – The residential/industrial/commercial covertype is present south and east of the Site (Figure 21). This covertype is generally characterized by buildings, paved roadways, and patches of mowed lawns. Wildlife species that utilize these covertypes generally consist of species that are capable of utilizing habitats that are created by urban landscapes. Typical wildlife species that may use residential/industrial/commercial areas include, but are not limited to, gray squirrel, mice, pigeon, and house sparrow (Passer domesticus).

8.4.1 Threatened/Endangered Species and Significant Habitat

According to the NYSDEC Natural Heritage Program (NHP), the shortnose sturgeon (Acipenser brevirostrum) (a state-endangered fish species) is recorded as occurring within the lower Hudson River from the Battery in New York City at its junction with Upper New York Bay, upstream to the Federal Dam in Troy (EcolSciences, 2005). The NHP also has historical records (circa 1890s) for three rare plant species that may be present onsite or in the immediate vicinity of the Site: rattlebox (Crotolaria sagittalis) (state-endangered), shrubby St. John's wort (Hypericum prolificum) (state-threatened), and Virginia false gromwell (Onosmodium virginianum) (state-endangered) (EcolSciences, 2005). However, these species were not observed during field studies for the ecological assessment, nor are they expected to occur onsite due the lack of natural habitat and presence of impervious surfaces (EcolSciences, 2005). The Kentucky warbler (Oporormis formosus) (a rare bird species) was also identified by the NHP as being onsite or within the immediate vicinity of the Site, although this species most likely would not be found in the area due to the lack of suitable habitat (i.e., dense underbrush of woodlands) (EcolSciences, 2005).

No Significant Coastal Fish and Wildlife Habitats are present onsite or within the immediate vicinity of the Site (EcolSciences, 2005).

8.4.2 Observations of Stress

No visible evidence of stressed vegetation or negative impacts on wildlife was noted for the Site or surrounding areas in the ecological assessment (EcolSciences, 2005).

8.5 Fish and Wildlife Resources Values

Step IC consists of an assessment of 1) the general ability of the area within 0.5-mile of the Site to support fish and wildlife resources, and 2) the value of fish and wildlife resources to humans. The following subsections provide a qualitative evaluation of the value of the identified covertypes to wildlife and the value of these wildlife resources to humans.

8.5.1 Value of Habitat to Associated Fauna

The qualitative determination of habitat value is based on field observations, research, and professional judgment. Habitat values are assigned using the following classification system:

- **No Value** – Paved areas, building, and parking lots
- **Low Value** – Areas with habitat quality that marginally supports a minimal number and diversity of low quality species
- **Moderate Value** – Areas that support a variety of quality species with little or no stress related to anthropogenic disturbance
- **High Value** – Critical habitat for rare species and/or extensive undeveloped habitat supporting a great diversity and abundance of wildlife without functional restraints imposed by anthropogenic disturbance

The Site is described as an urban vacant lot covertype. The majority of the Site consists of impervious surfaces (e.g., asphalt, concrete), and has minimal vegetation. Due to the general lack of suitable habitat onsite, the Site itself is concluded to provide no value to wildlife. Similarly, the surrounding areas that are classified as estuarine riprap/artificial shore, railroad, and residential/industrial/commercial covertypes do not provide adequate food, shelter, and/or nesting areas for most bird and wildlife species due to a general lack of native vegetation. Therefore, these covertypes in the surrounding areas of the Site are concluded to provide low value to wildlife.

Devries Park and Kingsland Point Park are classified as mowed lawn and mowed lawn with trees covertypes. These covertypes generally consist of maintained (mowed) grassy areas with interspersed mature trees. Devries Park contains several baseball fields, and Kingsland Point Park is characterized by picnic areas. These recreational parks are most likely used on a regular (seasonal) basis by people, which likely limits the use of these areas by wildlife other than those species accustomed to inhabiting urban landscapes (e.g., small mammals, passerine birds). Therefore, the mowed lawn and mowed lawn with trees covertypes are concluded to provide low value to wildlife.

The red maple-hardwood swamp covertype is present as a relatively large, continuous covertype north of the Site, and is associated with the Pocantico River. The brackish tidal marsh covertype is present in a relatively large area along the southern shoreline of the Pocantico River. These covertypes contain mature trees that provide arboreal habitat to terrestrial wildlife (e.g., birds, small mammals). These wetland habitats offer food, cover, and nesting habitat for a variety of wildlife species, but use of these covertypes by large mammals is most likely limited due to surrounding residential, industrial, and commercial land uses. On a regional level, these covertypes provide good quality habitat that is generally free from anthropogenic disturbances. As such,

the red maple-hardwood swamp and brackish tidal marsh covertypes are concluded to offer moderate value to wildlife.

The oak-tulip tree forest covertype is present in several areas of the Site: along the eastern boundary of the East Parcel, in portions of Kingsland Point Park, and along the upland slopes in Devries Park and Philipsburg Manor Historic Site. This forested covertype is characterized by mature trees and in some areas, dense shrub and groundcover layers. The mature trees may provide habitat to passerine birds and arboreal mammals. Likewise, the dense underbrush may provide habitat to small mammals and reptiles. Therefore, the oak-tulip tree covertype is concluded to provide moderate value to wildlife.

The ditch/artificial intermittent stream covertype consists of two drainage ditches along the eastern side of the railroad. These drainage ditches are considered to be of low ecological value due to their small size (approximately 0.23 acres) and configuration (i.e., linear, narrow, and discontinuous), the dominance of exotic plant species, and impacts from stormwater discharges (EcolSciences, 2005).

The Hudson River borders the Site to the west. The Hudson River is inhabited by a variety of fish species, and also serves as an important travel corridor for migratory birds (EcolSciences, 2005). Although the section of the Hudson River adjacent to the Site does not have a natural shoreline (i.e., free from anthropogenic modifications and/or disturbances), this tidal river is still considered to be an important aquatic resource to aquatic, semi-aquatic, and terrestrial wildlife.

The Pocantico River borders the Site to the north. The Pocantico River has natural vegetation present along much of its banks, and is bordered by wetlands and forests. The river itself in the vicinity of the Site appears to be relatively undisturbed and offers adequate food, cover, and/or nesting habitat for a variety of terrestrial and aquatic organisms. Therefore, the Pocantico River offers moderate value to fish and wildlife.

8.5.2 Value of Resources to Humans

The Site itself does not offer any natural resources that would encourage recreational use of the Site. Current human use of fish and wildlife resources within the vicinity of the Site are associated with the Hudson and Pocantico Rivers and recreational parks (i.e., Devries Park and Kingsland Point Park). Activities associated with the rivers may include fishing, recreational boating, and wildlife observation. People may also use the natural habitats onsite (e.g., oak-tulip tree forest, red maple-hardwood swamp) for

recreational activities such as hiking, fishing, and/or wildlife observations. These uses of the rivers, recreational parks, and natural habitats are likely to remain consistent in the future, and are not likely to be affected by activities or conditions at the Site.

8.6 Pathway Analysis

The pathway analysis is generally equivalent to Step IIA outlined in DER-10. The goal is to identify complete or potentially complete ecological exposure pathways to Site-related constituents. A criteria-specific analysis (Step IIB), which consists of comparing Site data to numerical criteria, would be conducted only if potentially complete exposure pathways are identified. According to NYSDEC guidance (NYSDEC, 1994), if Step IIA concludes that there are no potentially complete exposure pathways, ecological impacts are considered to be minimal and no further evaluation is warranted.

The objective of the pathway analysis is to evaluate potential pathways by which fish and wildlife receptors may be exposed to Site constituents. A complete exposure pathway exists if there is a source, a potential point of exposure, and a viable route of exposure and receptors at the exposure point. If any one of these elements is missing, then the pathway is not considered to be complete and exposure cannot occur, irrespective of chemical concentrations in environmental media. Potential media of interest associated with the Site include soils and groundwater. Potential exposure pathways associated with these media are discussed below.

Surface Soils

The Site primarily consists of impervious surfaces (e.g., asphalt, concrete) and has minimal vegetation. The existing plant community is restricted to scattered plants and small strips of vegetation composed of weedy or non-native species (EcolSciences, 2005). Due to the general lack of suitable habitat, throughout the Site, the Site currently offers very little value to wildlife. The ecological assessment for the Site (EcolSciences, 2005) also concluded that the ecological value of the Site and its associated wildlife habitat is “extremely low” (EcolSciences, 2005). Therefore, exposure to surface soils (0 – 0.5 feet bgs) is not a complete pathway.

Subsurface Soils

As previously stated, the Site is primarily characterized by impervious surfaces (e.g., asphalt, concrete). The Site itself provides very little value to wildlife due to its general

lack of natural resources. Wildlife is generally not exposed to subsurface soils (i.e., soils deeper than 0.5 feet bgs) during normal activities such as foraging and nesting. Furthermore, impervious surfaces at the Site preclude use of the Site by burrowing wildlife. Based on these factors, exposure to subsurface soils is not a complete exposure pathway.

Groundwater

Groundwater beneath the Site generally flows in a west/southwest direction towards the Hudson River. The water table is typically between 6 to 7 feet bgs in the West and East Parcels, and can be encountered at less than 3 feet below grade toward the northern side of the East Parcel near the Pocantico River. There are no identified groundwater seeps at the Site, and exposure of wildlife to groundwater would only occur if an animal were to burrow down to the water table, which is unlikely given the presence of impervious surfaces throughout most of the Site. Based on these factors, exposure of wildlife to impacted groundwater is not a complete pathway.

Given the information presented above, it is concluded that there are no potentially complete exposure pathways for ecological receptors at the Site.

There are various ecological habitats present in the vicinity of the Site (i.e., offsite). Offsite groundwater contamination in Kingsland Point Park has been confirmed for chromium and VOCs. However, groundwater is approximately 10 feet below ground surface in that area of the Park, which is a depth that is unlikely to be encountered by burrowing animals in the Park. Groundwater discharge to the Hudson River and Pocantico River systems are not considered potentially complete pathways for groundwater constituents, based on the relatively minimal levels of Site-related constituents in groundwater at the Hudson River waterfront and at the northern end of the East Parcel near the Pocantico River. GM LLC has investigated the Hudson River sediments near the Site to determine if historic wastewater and stormwater discharges (long-since discontinued) may have impacted offsite sediments, which is the scope of separate RI. A qualitative Fish and Wildlife Exposure Assessment associated with Hudson River sediments is included in the Sediment RI Report.

8.7 Summary and Conclusions

The Site is a former industrial facility predominately covered by impervious surfaces, which provide no value to wildlife. The media of interest at the Site include soils and groundwater. Based on the extent of impervious cover throughout the Site and the low

ecological value associated with this environment, no complete ecological exposure pathways exist at the Site. Therefore, no further evaluation of potential fish and wildlife impacts, associated with the Site, is recommended, other than a fish and wildlife exposure assessment for offsite Hudson River sediments. An assessment of this potential offsite area of concern will be provided in a separate RI Report for the Hudson River.

9. Conclusions and Recommendations

The RI was conducted to characterize the extent of potential contaminant source areas identified in previous investigations conducted between 1996 and 2000, and to fulfill the land-based data requirements of the BCAs for the Site. Those objectives have been met through several phased investigations conducted from September 2003 through October 2004. Based on the findings of the RI, the onsite characterization is complete and adequate for use in preparing remedial documents, including the RWP for the East and West Parcels. Offsite conditions in the Hudson River sediments are being evaluated in a separate RI.

The Conceptual RAWP, developed after the first phase of the RI, considered a combination of location-specific remedial measures for contaminant source areas coupled with site-wide engineering and institutional controls. Potential location-specific remediation areas, which were further evaluated in the second phase of the RI, will be defined and remedial actions that are consistent with the terms of the BCAs and compatible with the proposed site redevelopment will be included in remedial documents. In addition to location-specific remedial actions, the Conceptual RAWP proposed site-wide engineering controls in the form of a barrier cap over existing fill materials to prevent exposure to residual soil contamination, and institutional controls to verify that these measures remain effective. This general conceptual approach has been validated, based on the findings of all phases of the RI and previous investigations.

The conclusions derived from the RI, as they pertain to the intended Site use, are generally as follows:

- Through the collective performance of the previous site investigations and the RI, representative sampling has been performed throughout the East and West Parcels, encompassing 47 PAOCs and a known petroleum spill location, as well as all onsite areas containing historic fill and two offsite areas of Kingsland Point Park bordering the Site. These investigations have revealed that current site-wide conditions generally do not meet the Track 1 requirements (TAGM 4046 and Class GA Groundwater Standards and Guidance) as specified in NYSDEC's Draft BCP Guidance. Remediation of soil and groundwater is recommended under a Site-wide approach for all areas that do not meet Track 1 requirements. Based on the intended use of the Site, Track 4 (use-based) remediation is recommended. Site-wide remedial actions could include, but may not necessarily be limited to, a functional barrier cap with a demarcation layer integrated into future structural and

landscape features, a soils management plan, and an environmental easement. Certain areas (discussed below) should also be considered for additional location-specific remedial alternative evaluation.

- During the development of the IWP, ranges of metals detected in Site soils (primarily historic fill) by the previous investigations were examined to determine if any areas should be considered "sources" of contamination for lead, based on the presence and extent of grossly contaminated soil. The distribution of lead detected throughout the Site in the previous investigations was subjected to a knee-of-the-curve evaluation to determine what levels of lead were considerably above the typical condition for historic fill on the Site. A value of 10,000 ppm was identified as the Site-specific threshold for atypically high concentrations of lead relative to the general distribution of lead throughout the Site. This value was used in the RI to identify and delineate areas of grossly contaminated soil, with respect to lead (discussed below). The NYSDOH guidance value of 400 ppm for lead in soils is the recommended cleanup objective for unrestricted use (Track 1). Site-wide Track 4 (use-based) remediation (described above) is recommended for soils that contain lead above 400 ppm. Location-specific remediation should be considered for grossly contaminated soil.

- The RI results demonstrated that there is no zone of grossly contaminated soil in PAOC 1 (Former Village Refuse Area) and PAOC 9 (Sewer Overflow in Body Plant Crawl Space). Delineation sampling confirmed the general presence of lead, but at levels considerably lower than the Site-specific threshold value. Therefore, location-specific remediation of lead in PAOCs 1 and 9 is not recommended. Remediation of these areas should be included under a Site-wide approach.

- Representative test borings into filled pits under the Chassis Plant slab at PAOC 46 (Alleged Battery Disposal Pits) revealed no evidence of battery disposal. Lead concentrations within the fill were well below the NYSDOH guidance value of 400 ppm for unrestricted use at the Site. Therefore, location-specific remediation of lead in PAOC 46 is not recommended. Remediation of this area, to the extent that any subsurface materials encountered underneath the filled pits may not meet Track 1 requirements, should be included under a Site-wide approach.

- Because only 14% of the lead concentrations in POAC 29 are above the Site-specific threshold of 10,000 ppm, the entire volume bounded by this threshold is not considered to be grossly contaminated. The RI confirmed that offsite lead concentrations near PAOC 29 are an order-of-magnitude lower than the Site-

specific threshold value and generally below the NYSDOH guidance value of 400 ppm. Groundwater sampling confirmed that lead at PAOC 29 has resulted in little to no impact on groundwater quality, relative to Class GA Standards for protection of drinking-water supplies. An evaluation of location-specific remedial alternatives is recommended for PAOC 29. The alternatives should include partial removal of grossly contaminated soil and other remedial measures to prevent public exposure to lead.

- Because only 8% of the lead concentrations in POAC 7/Fill Areas H, F and G are above the Site-specific threshold of 10,000 ppm, the entire volume bounded by this threshold is not grossly contaminated. Lead is a component of the various historic fill materials in this area, which are located beneath the elevated slab and crawl space of the former Body Plant. Fill Areas H, F and G are laterally bounded by buried bulkheads or barges from the pre-1960 waterfront. Data from monitoring wells installed within the source area confirm that lead has not impacted groundwater quality, relative to Class GA standards for protection of drinking-water supplies. An evaluation of location-specific remedial alternatives is recommended for PAOC 7/Fill Areas H, F and G. The alternatives should include partial removal of grossly contaminated soil and other remedial measures to prevent public exposure to lead.

- The source and extent of chromium in soil and groundwater at PAOC 47 have been adequately delineated. The source of chromium is the contaminated concrete bottom of a filled pit located under the remaining slab at the north end of the former Body Plant. Groundwater contaminated with chromium extends offsite into Kingsland Point, 8 to 10 ft below ground surface in the park. There are no means for park visitors to come in contact with the affected groundwater, which is not used for any park facilities. An evaluation of location-specific remedial alternatives is recommended for the chromium source and downgradient areas.

- The origin of TCE at PAOC 47 has not been definitively located, but the areal extent of TCE generally appears to coincide with the chromium source area. TCE is primarily found in the groundwater saturated zone, where the extent of TCE contamination has been adequately delineated. Groundwater contaminated with TCE extends offsite into Kingsland Point, 8 to 10 ft below ground surface in the park. There are no means for park visitors to come in contact with the affected groundwater, which is not used for any park facilities. There are no park buildings in or near the affected area that could be impacted by TCE via soil vapor intrusion.

An evaluation of location-specific remedial alternatives is recommended for the combined TCE and chromium source area, and associated downgradient areas.

- The extent of grossly contaminated soil and downgradient extent of groundwater contamination associated with the former 10,000-gallon No. 6 fuel oil UST have been adequately delineated. An evaluation of location-specific remedial alternatives is recommended for this source area. Alternatives should include removal of grossly contaminated soil and consideration of natural attenuation of petroleum contaminants in groundwater as a viable alternative outside the source area. This area is also recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet Class GA groundwater standards.

- Groundwater analyses support the consideration of natural attenuation as the primary location-specific remedy for PAOC 37 (Former Maxwell Briscoe Facilities) and PAOC 43 (Fill with Elevated PAHs), as originally proposed in the Conceptual RAWP. An evaluation of location-specific remedial alternatives is recommended for PAOCs 37 and 43, with consideration of natural attenuation as a viable alternative. PAOCs 37 and 43 are also recommended for remediation of non-petroleum constituents under a Site-wide approach for areas that do not meet Class GA groundwater standards.

- PAOCs 21 and 39 (North Body Plant Area) are not localized sources of petroleum. Rather, they lie within the delineated natural attenuation area downgradient of the former 10,000-gallon No.6 fuel oil UST. Therefore, location-specific remediation is not recommended for petroleum in soil or groundwater in these areas. PAOCs 21 and 39 are recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

- VOCs are present in soil gases on the West Parcel in the vicinity of residual petroleum and TCE contamination. It should be determined whether any of these areas represent a potential exposure risk to occupants of future buildings, and where necessary, develop alternatives to remediate these areas. In addition, the effectiveness of measures to prevent the intrusion of VOCs into the indoor air space of future buildings should be evaluated.

- Methane has been detected beneath pavement and concrete surfaces at the northern end of the West Parcel due to the decomposition of natural organic marsh deposits, and under paved surfaces throughout the East Parcel due to the

combined decomposition of natural organic deposits and buried municipal refuse. The remedial documents should include general measures to safely prevent or mitigate the intrusion of methane into any buildings that may be constructed in the future over areas exhibiting percent levels of methane.

- Analytical results from areas re-sampled during the RI are generally consistent with previous findings. With the exception of PAOC 7, which was recommended for location-specific alternatives analysis, the RI results did not indicate that these re-sampled areas should be considered for location-specific remediation. Therefore, PAOCs 2, 4, 6, 17 and all other PAOCs identified by EMCON, not otherwise recommended for location-specific remediation in this RI Report, are recommended for remediation under a Site-wide approach for areas that do not meet TAGM 4046 guidance.

- Recycled concrete aggregate (millings) in existing stockpiles (PAOC 31), and those already in place in parts of the West Parcel (PAOCs 14, 15, and 32), are not suitable for use as final cover because they do not meet TAGM 4046 guidance values for unrestricted use. However, they are proposed for use as structural fill under a final barrier cap or buildings, consistent with the Site-wide approach. Therefore, location-specific remediation is not recommended for the recycled materials in these areas. During Site development, these materials should be managed in accordance with the soils management plan to be developed for the Site-wide approach.

In conclusion, the land-based Site characterization phase of the project has been completed. The RWP and other remedial documents will be prepared from the information provided by the RI, as well as the previous investigations conducted for GMC and Roseland.

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Tables

TABLE 1
POTENTIAL AREAS OF CONCERN AND INVESTIGATION SUMMARY

REMEDIAL INVESTIGATION REPORT
FORMER NORTH TARRYTOWN ASSEMBLY PLANT SITE

Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
1. Former Village Refuse Area - East Parcel	EMCON 1997-2001 (Including Fill Area B)	TCL/TAL	Arsenic	ND - 19.4	7.5 or SB	Limited Category A	Asphalt Cover	None	Yes, Engineering and Institutional Controls
			Chromium	12.5 - 697	50 or SB				
			Copper	11.5 - 217	25 or SB				
			Lead	4.85 - 43,500	400				
			Mercury	ND - 2.12	0.1				
			Nickel	15.8 - 41.6	13 or SB				
			Zinc	43.4 - 1000	20 or SB				
	EcolSciences 2002	TCL/TAL	Arsenic	ND - 18.6	7.5 or SB	Full Category B			
			Beryllium	ND - 0.70	0.16 or SB				
			Copper	6.9 - 7560	25 or SB				
			Lead	2.7 - 1,030	400				
			Mercury	ND - 0.51	0.1				
			Nickel	10.9 - 45.2	13 or SB				
			Zinc	26.5 - 1870	20 or SB				
	BBL 2005	Lead	Lead	ND - 3,490	400	Full Category B			
2. Former Drum Pile Area	EMCON 1997-2001	TCL/TAL	C-PAHs	ND - 49.5	10	Limited Category A	Asphalt Cover	None	Yes, Engineering and Institutional Controls
		Arsenic	Arsenic	ND - 8.56	7.5 or SB				
		Lead	Copper	16.7 - 26.9	25 or SB				
			Lead	6.95 - 1100	400				
			Nickel	10.3 - 21.8	13 or SB				
			Zinc	44.2 - 187	20 or SB				
3. Former Garage Area	EMCON 1997-2001	TCL/TAL	Copper	14.5 - 27.4	25 or SB	Limited Category A	Asphalt Cover	None	Yes, Engineering and Institutional Controls
		TCL VOCs	Nickel	12.2 - 14.8	13 or SB				
			Zinc	29.8 - 61	20 or SB				
4. Former Incinerator Area	EMCON 1997-2001	TCL/TAL	C-PAHs	ND - 11.9	10	Limited Category A	Asphalt Cover	None	Yes, Engineering and Institutional Controls
		Arsenic	Arsenic	ND - 22.3	7.5 or SB				
		Lead	Barium	377 - 3560	300 or SB				
			Cadmium	ND - 14.4	10 or SB				
			Chromium	17.4 - 297	50 or SB				
			Copper	37.7 - 244	25 or SB				
			Lead	34.3 - 3640	400				
			Mercury	ND - 0.228	0.1				
			Nickel	17.1 - 49.8	13 or SB				
			Zinc	349 - 1130	20 or SB				
5. Paint Storage Room - Body Plant	EcolSciences 2002	TAL	Copper	50	25 or SB	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
			Nickel	49.2	13 or SB				
			Zinc	508	20 or SB				

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6.	Internal Rail Spurs - Body Plant	EMCON 1997-2001	TCL/TAL	C-PAHs Arsenic Barium Beryllium Copper Mercury Nickel Zinc	4.95 - 51.6 ND - 10.2 47.27 - 480 ND - 0.566 22.9 - 380 ND - 0.835 7.96 - 48.7 26.8 - 249	10 7.5 or SB 300 or SB 0.16 or SB 25 or SB 0.1 13 or SB 20 or SB	Limited Category A	3-Foot Recycled Aggregate Cover	None	Yes, Engineering and Institutional Controls
7.	Basement Below Welding Area - Body Plant /Fill Areas H, F, & G	EMCON 1997-2001	TCL/TAL STARS SVOCs Arsenic Lead	C-PAHs: Pre-IRM C-PAHs: Post-IRM Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Zinc	ND - 98.7 ND - 104 ND - 84.6 65.5 - 5,550 ND - 35.1 17.1 - 398 97.9 - 10,200 5.66 - 11,300 ND - 1.47 14.9 - 146 159 - 10,000	10 10 7.5 or SB 300 or SB 10 or SB 50 or SB 25 or SB 400 0.1 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	Completed for hydraulic fluids. Metal ranges are pre-IRM in soil	Yes, Location-Specific Evaluation
		EcolSciences 2002	TCL/TAL	C-PAHs Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Selenium Zinc	0.09 - 13.5 1.6 - 97.1 36.8 - 12,800 0.088 - 9.4 12 - 96.2 12.2 - 321 11.6 - 30,900 ND - 0.33 14.9 - 65 0.92 - 2.7 47.1 - 708	10 7.5 or SB 300 or SB 10 or SB 50 or SB 25 or SB 400 0.1 13 or SB 2 or SB 20 or SB	Full Category B			
		BBL 2005	TCL SVOCs TAL Lead	C-PAHs Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Zinc	ND - 63.4 15.1 1,300 13.7 64.8 995 ND - 167,000 3.3 36.8 719	10 7.5 or SB 300 or SB 10 or SB 50 or SB 25 or SB 400 0.1 13 or SB 20 or SB				

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Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
8. ELPO Area Wastewater Leak - Body Plant	EMCON 1997-2001	TCL/TAL TAL TCL SVOCs Arsenic Lead	Barium Chromium Copper Pre-IRM Lead Post-IRM Lead Nickel Zinc	9.39 - 414 9.68 - 978 9.99 - 137 ND - 807 ND 13.2 - 1,870 34.8 - 21,400	300 or SB 10 or SB 25 or SB 400 400 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	Completed for lead residue. Metal ranges are pre-IRM in soil, except lead.	Yes, Engineering and Institutional Controls
9. Column E2X Wastewater Overflow - Body Plant	EMCON 1997-2000	TCL/TAL TAL Metals TCL VOCs TCL SVOCs Arsenic Lead	C-PAHs Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Zinc	ND - 23.4 1.54 - 29.6 176 - 10,000 ND - 4.42 15.8 - 552 30.7 - 640 5.51 - 10,500 ND - 0.308 15.1 - 259 139 - 4990	10 7.5 or SB 300 or SB 10 or SB 50 or SB 25 or SB 400 0.1 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	None	Yes, Engineering and Institutional Controls
	BBL 2005	Lead	Lead	87.8 - 995	400	Full Category B			
10. Remote Fill Port Location - Body Plant	EMCON 1997-2001	TAL	Copper Nickel Zinc	8.32 - 41.7 12.3 - 24 30.5 - 98.9	25 or SB 13 or SB 20 or SB	Limited Category A	Asphalt Cover	None	Yes, Engineering and Institutional Controls
11. Basement Conveyor System - Body Plant	EMCON 1997-2001	TCL/TAL STARS SVOCs	Nickel Zinc	14.9 - 15.2 36.9 - 68.4	13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	Completed for hydraulic fluids. Metal ranges are pre-IRM in soil	Yes, Engineering and Institutional Controls
12. North Basement - Chassis Plant	EMCON 1997-2001	TCL/TAL TCL SVOCs Arsenic Lead Asbestos STARS SVOCs	C-PAHs: Pre-IRM C-PAHs: Post-IRM Arsenic Barium Cadmium Chromium Copper Lead: Pre-IRM Lead: Post-IRM Mercury Nickel Zinc	ND - 120 ND - 104 ND - 28.6 45.8 - 683 ND - 17.2 14.9 - 189 14.2 - 337 6.35 - 11,300 8.5 - 1,400 ND - 3.06 12.3 - 71 32.1 - 1,240	10 10 7.5 or SB 300 or SB 10 or SB 50 or SB 25 or SB 400 400 0.1 13 or SB 20 or SB	Limited Category A	6-Foot Fill and Recycled Aggregate Cover	Completed for hydraulic fluids and oil. Metal ranges are pre-IRM in soil, except as noted for lead.	Yes, Engineering and Institutional Controls

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Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern [1]	Concentration Range (ppm unless noted) [2]	Screening Value (ppm unless noted) [3]	DUSR [4]	Existing Controls [5]	IRM [6]	Remediation Recommended [7]
13. M12 Hydraulic Elevator - Chassis Plant	EMCON 1997-2001	TCL/TAL TCL SVOCs STARS SVOCs	C-PAHs: Pre-IRM C-PAHs: Post-IRM Nickel Zinc	ND - 80.1 ND - 71.8 13.4 - 16.9 45 - 163	10 10 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	Completed for hydraulic fluids. Metals are pre-IRM.	Yes, Engineering and Institutional Controls
14. East Rail Spur - Chassis Plant	EcolSciences 2002	TCL VOCa TCL SVOCs PCBs TAL	Copper Nickel Zinc	50 49.2 508	25 or SB 13 or SB 20 or SB	Full Category B	Recycled Aggregate Cover	None	Yes, Engineering and Institutional Controls
15. Central Rail Spur - Chassis Plant	EMCON 1997-2001	TCL/TAL TCL	C-PAHs Copper Nickel Zinc	2.65 - 18.47 17.9 - 105 9.6 - 17.3 36 - 289	10 25 or SB 13 or SB 20 or SB	Limited Category A	3-Foot Recycled Aggregate Cover	None	Yes, Engineering and Institutional Controls
16. Paint Tote and Central Sludge - Chassis Plant	EMCON 1997-2001	TCL/TAL TCL VOCs TAL	Cadmium Copper Nickel Zinc	ND - 4.32 8.56 - 33.1 9.32 - 17.9 27.6 - 81.6	10 or SB 25 or SB 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	None	Yes, Engineering and Institutional Controls
17. Basement Conveyor System - Chassis Plant	EMCON 1997-2001	TCL/TAL STARS SVOCs	C-PAHs: Pre-IRM C-PAHs: Post-IRM Copper Nickel Zinc	ND ND - 22.03 20.2 - 77.2 13.4 - 15.8 31 - 107	10 10 25 or SB 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	Completed for hydraulic fluids. Metals are pre-IRM.	Yes, Engineering and Institutional Controls
18. Column Q5 Wastewater Leak - Chassis Plant	EMCON 1997-2001	TCL/TAL	Copper Nickel Zinc	71 - 77.2 17.8 - 18 184 - 218	25 or SB 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	None	Yes, Engineering and Institutional Controls
19. Column M23 Hydraulic Leak - Chassis Plant	EMCON 1997-2001	TCL/TAL PCBs STARS SVOCs	Pre-IRM PCBs Post-IRM PCBs Zinc	0.83 - 9.9 ND 29.9 - 296	1 / 10 [8] 1 / 10 [8] 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	Completed remediation of PCBs to residential criterion.	Yes, Engineering and Institutional Controls
20. Column S20 Hydraulic Leak - Chassis Plant	EMCON 1997-2001	TAL TCL VOCs TCL SVOCs PCBs STARS SVOCs	C-PAHs Cadmium Chromium Copper Nickel Zinc	12.48 0.684 - 5.6 17 - 51.2 32.4 - 150 11.4 - 17.6 123 - 287	10 10 or SB 50 or SB 25 or SB 13 or SB 20 or SB	Limited Category A	Slab Over Limited Access Crawl Space	Completed for hydraulic fluids. Metal ranges are pre-IRM.	Yes, Engineering and Institutional Controls

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21. Historic Power Plant, Dipping, Laundry and Transformers (Body Plant)	EcolSciences 2002	TCL VOCs TCL SVOCs TAL Metals	C-PAHs Beryllium Nickel Zinc *Groundwater* Phenol Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene	25.1 0.54 14 137 13 ug/l 1.1 ug/l 1.2 ug/l 2.2 ug/l	10 0.16 or SB 13 or SB 20 or SB 1 0.002 ND 0.002	Full Category B	Recycled Aggregate Cover	None	Yes, Engineering and Institutional Controls
	BBL 2005	STARS VOCs STARS SVOCs	*Soil* Napthalene n-Butylbenzene *Groundwater* Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,I)perylene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-CD)pyrene Phenanthrene	 0.061 - 19 0.002 - 25 3.4 - 6.1J ug/l 2.4 - 4.4J ug/l 2.4 - 4.4J ug/l 2.1 - 3.4J ug/l 2.5 - 4.6J ug/l 3.7 - 6.5J ug/l 2.0 - 3.1J ug/l 5.7J - 12 ug/l	 13 10 0.002 ND 0.002 0.002 0.002 0.002 0.002 0.4				
22 Historic Gasoline UST (Chassis Plant)	EcolSciences 2002	TCL VOCs	VOCs	100% Compliance	TAGM 4046	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
23 Historic Gasoline UST (Body Plant)	EcolSciences 2002	TCL VOCs	VOCs	100% Compliance	TAGM 4046	Full Category B	Recycled Aggregate Cover and Partial Slab	None	Yes, Engineering and Institutional Controls
24. Historic Service and Repair	EcolSciences 2002	TCL/TAL	Arsenic Beryllium Copper Nickel Zinc	15.5 0.66 122 15.4 22.1	7.5 or SB 0.16 or SB 25 or SB 13 or SB 20 or SB	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
25. Historic Machine Shop	EcolSciences 2002	TCL VOCs TCL SVOCs PCBs TAL	Beryllium Nickel Zinc	ND - 0.44 14.5 - 26 23.1 - 339	0.16 or SB 13 or SB 20 or SB	Full Category B	Recycled Aggregate Cover and Partial Slab	None	Yes, Engineering and Institutional Controls

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Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
26. Historic Chassis Assembly and Spray	EcolSciences 2002	TCL/TAL TCL VOCs TAL	Beryllium Copper Lead Mercury Nickel Zinc	ND - 0.73 7.9 - 68.8 4.2 - 1540 ND - 0.12 9.7 - 22.5 12.5 - 419	0.16 or SB 25 or SB 400 0.1 13 or SB 20 or SB	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
27 Historic Solvent Recovery Building (1930 Body Plant)	EcolSciences 2002	TCL VOCs	VOCs	100 % Compliance	TAGM 4046	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
28. No. 6 Oil ASTs Removed 1965	EcolSciences 2002	TCL SVOCs TAL	C-PAHs	1.139 - 25.38	10	Full Category B	Slab on Grade	None	Yes, Location-Specific Evaluation
29. 1945 Maintenance Building Demolished in 1971 (Including SB-2)	EcolSciences 2002	TCL VOCs TCL SVOCs PCBs TAL	Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Zinc	5.1 - 26.2 195 - 8,270 0.76 - 19 21.7 - 104 72.4 - 413 1940 - 50,100 0.15 - 0.60 23.8 - 141 507 - 13,400	7.5 or SB 300 or SB 1 or SB 25 or SB 400 0.1 13 or SB 20 or SB	Full Category B	Slab on Grade	None	Yes, Location-Specific Evaluation
	BBL 2005	Lead	Lead	ND - 90,000	400				
30. Waste Water Treatment Plant Area	EcolSciences 2002	TCL VOCs TAL	Nickel Zinc	12 - 14.9 37 - 55.9	13 or SB 20 or SB	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls

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Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
31. Millings Pile (Recycled Concrete Aggregate from Facility Demolition)	EcolSciences 2002	TCL/TAL	Phenanthrene	13 - 140	50	Full Category B	Runoff Controls	None	Yes, Engineering and Institutional Controls
			Di-n-butylphthalate	ND - 9.6	8.1				
			Fluoranthene	23 - 150	50				
			Pyrene	23 - 160	50				
			C-PAHs	63.9 - 373.1	10				
			PCB's	0.39 - 1.69	1				
			Barium	96.2 - 1220	300 or SB				
			Cadmium	ND - 7.6	1 or SB				
			Chromium	15.3 - 67.7	50 or SB				
			Copper	22.7 - 82.4	25 or SB				
			Lead	99.2 - 543	400				
			Mercury	ND - 0.43	0.1				
			Nickel	10.2 - 28.7	13 or SB				
			Zinc	148 - 1460	20 or SB				
32. Bulk Storage Tanks	EcolSciences 2002	TCL/TAL	C-PAHs	ND - 38.99	10	Full Category B	Recycled Aggregate Cover	None	Yes, Engineering and Institutional Controls
			Copper	9.5 - 61.6	25 or SB				
			Mercury	ND - 0.91	0.1				
			Nickel	15.1 - 25.7	13 or SB				
			Zinc	38.6 - 409	20 or SB				
33. Historic South Lot Out Building (West Parcel)	EcolSciences 2002	TCL/TAL	Beryllium	0.51	0.16 or SB	Full Category B	Asphalt	None	Yes, Engineering and Institutional Controls
			Nickel	21.7	13 or SB				
			Zinc	65.9	20 or SB				
34. Historic Sprinfield Gas Machines - Underground	EcolSciences 2002	TCL VOCs TCL SVOCs TAL	C-PAHs	ND - 789	10	Full Category B	Asphalt and Slab on Grade	None	Yes, Engineering and Institutional Controls
			Anthracene	ND - 58	50				
			Fluoranthene	ND - 260	50				
			Benzo(g,h,I)perylene	ND - 85	50				
			Pyrene	ND - 310	50				
			Phenanthrene	ND - 250	50				
			Copper	10.5 - 79.5	25 or SB				
			Mercury	ND - 0.24	0.1				
			Nickel	11.3 - 15.8	13 or SB				
			Zinc	15.7 - 715	20 or SB				
	BBL 2005	TCL SVOCs	C-PAHs	ND - 167	10	Full Category B			
			Fluoranthene	ND - 72	50				
			Phenanthrene	ND - 53	50				
			Pyrene	ND - 86	50				
35. Historic Chemical Lab / Furnace Retorts	EcolSciences 2002	TCL/TAL	Copper	27.6 - 34.5	25 or SB	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
			Nickel	15.1 - 30.8	13 or SB				
			Zinc	52.8 - 103	20 or SB				

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36. Historic Tar Kettle and Storage	EcolSciences 2002	TCL SVOCs TAL	C-PAHs Copper Nickel Zinc	ND - 66.1 20.8 - 25.2 17 - 21.5 45.3 - 56.5	10 25 or SB 13 or SB 20 or SB	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
37. Historic Machine Shop / Sheet Metal Working	EcolSciences 2002	TCL VOCs TCL SVOCs PCBs TAL	Copper Nickel Zinc C-PAHs Anthracene Fluoranthene Phenanthrene Pyrene	11.1 - 25.1 9.2 - 16.4 12.3 - 52.1 ND- 714 ND - 58 ND - 260 ND - 250 ND - 310	25 or SB 13 or SB 20 or SB 10 50 50 50 50	Full Category B	Asphalt and Slab on Grade	None	Yes, Location-Specific Evaluation
	BBL 2005	TCL SVOCs	C-PAHs 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	ND - 54.3 11 8.6	10 10 3.3				
38 Historic Varnishing Room	EcolSciences 2002	TCL VOCs	VOCs	100% Compliance	TAGM 4046	Full Category B	Asphalt	None	Yes, Engineering and Institutional Controls
39. Historic Painting and Assembly	EcolSciences 2002	TCL/TAL	CPAHs Barium Beryllium Copper Lead Mercury Nickel Zinc	ND - 48 841 - 1180 ND - 0.43 19.9 - 41.8 179 - 5180 0.06 - 0.18 14.5 - 22.0 360 - 760	10 300 or SB 0.16 or SB 25 or SB 400 0.1 13 or SB 20 or SB	Full Category B	Slab Over Limited Access Crawl Space	None	Yes, Engineering and Institutional Controls
40. Operations that Existed During WWII	EcolSciences 2002	TCL/TAL	C-PAHs Chromium Copper Nickel Mercury Selenium Zinc	ND - 41.2 6.3 - 17.6 5.3 - 57.3 ND - 19.9 ND - 0.12 ND - 3.5 17.7 - 194	10 10 or SB 25 or SB 13 or SB 0.1 2 or SB 20 or SB	Full Category B	Slab on Grade or Slab over Limited Access Crawl Space	None	Yes, Engineering and Institutional Controls
41. Railroad Track Area (Sidings within Property)	EcolSciences 2002	TCL/TAL TCL SVOCs PCBs TAL	Chromium Copper Mercury Nickel Zinc	10.4 20.9 14.8 - 128 0.20 - 3.7 10.9 - 17.7 41.7 - 75.7	10 or SB 25 or SB 0.1 13 or SB 20 or SB	Full Category B	Railroad Bedding over Soils	None	Yes, Engineering and Institutional Controls

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42. East and West Tank Area	EcolSciences 2002	TCL VOCs TCL SVOCs	CPAHs	66.6	10	Full Category B	Recycled Concrete Aggregate Fill	None	Yes, Engineering and Institutional Controls
43. Historic Fill Areas - Additional Sampling of Fill Areas - Pre-1914 Fill (SB-1, 3, 4 and 5) and Areas B, C, E, I, and J, including BH Series samples along waterfront. (See PAOC 7 for Fill Areas H, F &G, and see PAOC 29 for location SB-2).	EcolSciences 2002	TCL/TAL	C-PAHs Phenanthrene Fluoranthene Pyrene Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Zinc	0.1- 456 ND -150 ND - 170 ND - 150 1.5 - 38.9 26.9 - 3,920 0.077 - 9 10.1 - 59.9 9.9 - 509 32.1 - 7,580 ND - 0.89 14.2 - 42.1 26.5 - 1,090	10 50 50 50 7.5 or SB 300 or SB 1 or SB 10 or SB 25 or SB 400 0.1 13 or SB 20 or SB	Full Category B	Asphalt, Slab on Grade or Slab over Limited Access Crawl Space	None	Yes, Location-Specific Evaluation
	BBL 2005 (Fill Areas A, C and D between Chassis and Body Plant)	TCL SVOCs	C-PAHs Total SVOCs Fluoranthene Fluorene Napthalene Phenanthrene Pyrene	ND - 1853 ND - 4682 ND - 750 ND - 160 ND - 100 ND - 710 ND - 660	10 500 50 50 13 50 50	Full Category B			
44 Building Slabs (West Parcel)	EcolSciences 2002	PCBs	PCBs	ND - 0.57 (100% Compliance)	1 ppm at surface	Full Category B	Concrete Slabs were Cleaned prior to Building Demolition	Concrete Slabs were Cleaned prior to Building Demolition	Yes, slabs should be recycled or re-used in foundations
45 Historic 10,000 Gal. Gasoline UST	BBL 2005	STARS VOCs	*Soil* STARS VOCs *Groundwater* STARS VOCs	100%Compliance 100% Compliance	TAGM 4046 Class GA Standards	Full Category B	Slab on Grade	None	Yes, Engineering and Institutional Controls
46 Location of Alleged Automobile Battery Disposal (Chasis Plant)	BBL 2005	Lead	Lead	ND - 143 (100% Compliance)	400	Full Category B	Slab Over Limited Access Crawl Space	None	Yes, Engineering and Institutional Controls

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47	Park Boundary Near OW-24 (Body Plant)	BBL 2005	TCL/TAL TCL VOCs Chromium	*Soil* Chromium Trichloroethene *Groundwater* Chromium Trichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene	 8.7 - 3,750 ND - 0.045 ND - 42,100 ug/l ND - 75 ug/l ND - 6.8 ug/l ND - 9.1	 10 or SB 0.7 50 ug/l 5 ug/l 5 ug/l 5 ug/l	Full Category B	Slab on Grade	None	Yes, Location-Specific Evaluation
#	10,000-Gallon No. 6 Fuel Oil UST	BBL 2005	STARS VOCs STARS SVOCs	*Soil* Total VOCs Total CPAHs - Total SVOCs *Groundwater* Isopropyl benzene Napthalene n-Butyl benzene n-Propylbenzene sec-Butylbenzene	 ND - 31.18 ND - 59.10 ND - 180 ND - 10 ug/l ND - 140 ug/l ND - 19 ug/l ND - 31 ug/l ND - 8.8 ug/l	 10 10 500 5 ug/l 10 ug/l 5 ug/l 5 ug/l 5 ug/l	Full Category B		UST and Soil Partially Removed 1998	Yes, Location-Specific Evaluation
#	Bulkhead Area Sampling Requested by NYSDEC (West Parcel Waterfront)	EcolSciences 2002	TCL/TAL	Mercury Nickel Zinc	ND - 0.17 12.4 - 15.2 41.2 - 57.2	0.1 13 or SB 20 or SB	Full Category B	Asphalt or Slab on Grade	None	Yes, Engineering and Institutional Controls
#	Background Fill - East Parcel (Area L and Rail Spur)	EMCON 1997-2001	TCL/TAL TCL VOCs TCL SVOCs RCRA Metals	Arsenic Lead Mercury Nickel Zinc	ND - 8.07 5.02 - 1090 ND - 7.3 14.6 - 20.9 40.2 - 134	7.5 or SB 400 0.1 13 or SB 20 or SB	Limited Category A	Asphalt Cover, Concrete Slabs, Rail Siding	None	Yes, Engineering and Institutional Controls
#	Background Fill - West Parcel (Areas A, C, D, E, F, G, H, I, J, K and Pre-1914 Fill)	EMCON 1997-2001	TCL/TAL	C-PAHs Semi-VOCs Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Zinc	ND - 471 ND - 893.2 ND - 39 9.85 - 7700 ND - 25.4 7.75 - 350 6.34 - 340 2.24 - 8,660 ND - 0.485 8.14 - 75.9 17.6 - 2740	10 500 or SB 7.5 or SB 300 or SB 10 or SB 50 or SB 25 or SB 400 0.1 13 or SB 20 or SB	Limited Category A	Asphalt Cover, Concrete Decks, Concrete Building Slabs, Limited Access Crawl Spaces	None	Yes, Engineering and Institutional Controls

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TABLE 1
POTENTIAL AREAS OF CONCERN AND INVESTIGATION SUMMARY

REMEDIAL INVESTIGATION REPORT
FORMER NORTH TARRYTOWN ASSEMBLY PLANT SITE

	Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
#	Groundwater - East Parcel	EMCON 1997-2001	TCL VOCs TCL SVOCs TAL	*Total Metals* (9) Chromium Lead *Dissolved Metals* (10)	 ND - 0.086 ND - 0.070 COCs Meet Criteria	 0.050 0.025	Limited Category A	Asphalt Cover, Concrete Slabs, Rail Siding	None	Yes, Engineering and Institutional Controls
		EcolSciences 2002	TCL VOCs TCL SVOCs TAL	*Total Metals* (9) Arsenic Cadmium *Dissolved Metals* (10) Arsenic	 ND - 0.035.6 ND - 0.0055 ND - 0.0339	 0.025 0.005 0.025	Full Category B			
#	Groundwater - West Parcel	EMCON 1997-2001	TCL/TAL	*VOCs (ug/l)* Benzene Ethylbenzene m&p-Xylene Toluene *Semi-VOCs* Naphthalene *Total Metals* (9) Antimony Arsenic Barium Cadmium Lead Selenium *Dissolved Metals* (10) Antimony Barium Selenium	 ND - 92 ug/l ND - 17 ug/l ND - 11 ug/l ND - 6.8 ug/l ND - 11 ug/l ND - 0.184 ND - 0.112 0.13 - 5.15 ND-0.022 ND-0.70 ND - 0.0602 ND - 0.0125 0.02 - 2.87 ND - 0.0105	 1 ug/l 5 ug/l 5 ug/l 5 ug/l 10 ug/l 0.003 0.025 1 0.005 0.025 0.010 0.003 1 0.010	Limited Category A	Asphalt Cover, Concrete Decks, Concrete Building Slabs, Limited Access Crawl Spaces	Source of petroleum at monitoring well OW-13 partially removed.	Yes, Location-specific for certain PAOCs plus Engineering and Institutional Controls

See Notes on Page 15.

TABLE 1
POTENTIAL AREAS OF CONCERN AND INVESTIGATION SUMMARY

REMEDIAL INVESTIGATION REPORT
FORMER NORTH TARRYTOWN ASSEMBLY PLANT SITE

	Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
#	Groundwater - West Parcel (Continued)	EcolSciences 2002	TCL VOCs TCL SVOCs TAL	Benzene	ND - 6.2 ug/l	1 ug/l	Full Category B	Asphalt, Concrete Cover Over Most of Site	None	Yes, Location-specific for certain PAOCs plus Engineering and Institutional Controls
				1,1-Dichloroethene	ND - 6.8 ug/l	5 ug/l				
				1,1-Dichloroethane	ND - 10 ug/l	5 ug/l				
				Chloroethane	ND - 16 ug/l	5 ug/l				
				Xylenes (total)	ND - 20 ug/l	5 ug/l				
				Phenol	ND - 13 ug/l	5 ug/l				
				Benzo(a)anthracene	ND - 2.3 ug/l	0.002 ug/l				
				Benzo(b)fluoranthene	ND - 4.2 ug/l	0.002 ug/l				
				Benzo(a)pyrene	ND - 2.6 ug/l	ND				
				Ideno(1,2,3-cd)pyrene	ND - 1.8 ug/l	0.002 ug/l				
				Total Metals (9)						
				Antimony	ND - 94.3 ug/l	3 ug/l				
				Arsenic	ND - 138 ug/l	25 ug/l				
				Barium	ND - 15700 ug/l	1000 ug/l				
				Cadmium	ND - 154 ug/l	5 ug/l				
				Chromium	ND - 1390 ug/l	50 ug/l				
				Copper	ND - 4160 ug/l	200 ug/l				
				Lead	ND - 106000 ug/l	25 ug/l				
				Mercury	ND - 22.6 ug/l	0.7 ug/l				
				Nickel	ND - 762 ug/l	100 ug/l				
				Selenium	ND - 13.3 ug/l	10 ug/l				
				Dissolved Metals (10)						
				Antimony	ND - 24.8 ug/l	3 ug/l				
				Arsenic	ND - 33.9 ug/l	25 ug/l				
				Barium	ND - 7060 ug/l	1000 ug/l				
				Lead	ND - 446 ug/l	25 ug/l				

See Notes on Page 15.

TABLE 1
POTENTIAL AREAS OF CONCERN AND INVESTIGATION SUMMARY

REMEDIAL INVESTIGATION REPORT
FORMER NORTH TARRYTOWN ASSEMBLY PLANT SITE

	Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
#	Groundwater - West Parcel (Continued - Excluding PAOC 47)	BBL 2005	TAL STARS VOCs STARS SVOCs	*Total Metals* (9) Barium Lead *Dissolved Metals* (10) Barium *STARS VOCs* Benzene Isopropylbenzene Naphthalene n-Propylbenzene sec-Butylbenzene *STARS SVOCs* Acenaphthene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)flouranthene Chrysene Flouranthene Ideno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	 ND - 6,560 ug/l ND - 27.2 ug/l 194 - 4,860 ug/l ND - 9.8 ug/l ND - 20 ug/l ND - 140 ug/l ND - 35 ug/l ND - 8.8 ug/l ND - 37 ug/l ND - 50 ug/l ND - 48 ug/l ND - 32 ug/l ND - 39 ug/l ND - 52 ug/l ND - 110 ug/l ND - 30 ug/l ND - 99 ug/l ND - 140 ug/l ND - 81 ug/l	 1,000 ug/l 25 ug/l 1,000 ug/l 1 ug/l 5 ug/l 10 ug/l 5 ug/l 5 ug/l 20 ug/l 0.002 ug/l ND 0.002 ug/l 0.002 ug/l 0.002 ug/l 50 ug/l 0.002 ug/l 10 ug/l 50 ug/l 50 ug/l	Full Category B	Asphalt, Concrete Cover Over Most of Site	None	Yes, Location-specific for certain PAOCs plus Engineering and Institutional Controls

See Notes on Page 15.

TABLE 1
POTENTIAL AREAS OF CONCERN AND INVESTIGATION SUMMARY

REMEDIAL INVESTIGATION REPORT
FORMER NORTH TARRYTOWN ASSEMBLY PLANT SITE

	Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
#	Soil Gas- East Parcel	BBL 2005	Methane	Methane	ND - 100%	NA (11)	Full Category B	Asphalt Cover	None	Yes, Engineering and Institutional Controls
			H_2S	H_2S	ND - 1.5 ppm (12)	NA (13)				
			TO-15 VOCs	Freon 12	ND - 4.4 ug/m3	NA (14)				
			CO, CO_2,O_2	Freon 113	ND - 21 ug/m3	NA (14)				
			Hydrocarbons	Benzene	ND - 17 ug/m3	NA (14)				
			TO-15 VOCs	Trichloroethene	ND - 25 ug/m3	NA (14)				
				Toluene	ND - 49 ug/m3	NA (14)				
				Tetrachloroethene	ND - 96 ug/m3	NA (14)				
				Ethylbenzene	ND - 4.4 ug/m3	NA (14)				
				m,p-Xylene	ND - 16 ug/m3	NA (14)				
				o-Xylene	ND - 6.8 ug/m3	NA (14)				
				1,3-Butadiene	ND - 19 ug/m3	NA (14)				
				Hexane	ND - 79 ug/m3	NA (14)				
				Cyclohexane	ND - 53 ug/m3	NA (14)				
				Heptane	ND - 33 ug/m3	NA (14)				
				Acetone	ND - 87 ug/m3	NA (14)				
				2-Propanol	ND - 41 ug/m3	NA (14)				
				2-Butanone (MEK)	ND - 12 ug/m3	NA (14)				
				Ethanol	ND - 32 ug/m3	NA (14)				
				Methyl-t-butyl ether	ND - 14ug/m3	NA (14)				

See Notes on Page 15.

TABLE 1
POTENTIAL AREAS OF CONCERN AND INVESTIGATION SUMMARY

REMEDIAL INVESTIGATION REPORT
FORMER NORTH TARRYTOWN ASSEMBLY PLANT SITE

	Potential Area of Concern (PAOC)	Data Source	Analyses	Constituents of Concern (1)	Concentration Range (ppm unless noted) (2)	Screening Value (ppm unless noted) (3)	DUSR (4)	Existing Controls (5)	IRM (6)	Remediation Recommended (7)
#	Soil Gas- West Parcel	BBL 2005	Methane TO-15 VOCs Napthalene	Methane	ND - 18 %	NA (11)	Full Category B	Asphalt Cover, Concrete Decks, Concrete Building Slabs, Limited Access Crawl Spaces	None	Yes, Location-specific for certain PAOCs plus Engineering and Institutional Controls
				1,1,1-Trichloroethane	ND - 410 ug/m3	NA (14)				
				1,1-Dichloroethene	ND - 44 ug/m3	NA (14)				
				1,2,4-Trimethylbenzene	ND - 83 ug/m3	NA (14)				
				1,3,5-Trimethylbenzene	ND - 46 ug/m3	NA (14)				
				1,3-Dichlorobenzene	ND - 34 ug/m3	NA (14)				
				1,4-Dioxane	ND - 160 ug/m3	NA (14)				
				2-Butanone (MEK)	ND - 73 ug/m3	NA (14)				
				2-Propanol	ND - 420 ug/m3	NA (14)				
				4-Ethyltoluene	ND - 97 ug/m3	NA (14)				
				Acetone	ND - 2500 ug/m3	NA (14)				
				Benzene	ND - 15 ug/m3	NA (14)				
				Carbon Disulfide	ND - 20 ug/m3	NA (14)				
				Chloroform	ND - 110 ug/m3	NA (14)				
				Cyclohexane	ND - 16 ug/m3	NA (14)				
				Ethanol	ND - 69 ug/m3	NA (14)				
				Ethyl Benzene	ND - 57 ug/m3	NA (14)				
				Freon 11	ND - 200 ug/m3	NA (14)				
				Freon 12	ND - 35 ug/m3	NA (14)				
				Heptane	ND - 22 ug/m3	NA (14)				
				Hexane	ND - 21 ug/m3	NA (14)				
				m,p-Xylene	ND - 200 ug/m3	NA (14)				
				Naphthalene	ND - 24 ug/m3	NA (14)				
				o-Xylene	ND - 73 ug/m3	NA (14)				
				Propylbenzene	ND - 5.3 ug/m3	NA (14)				
				Tetrachloroethene	ND - 55 ug/m3	NA (14)				
				Toluene	ND - 140 ug/m3	NA (14)				
				Trichloroethene	ND - 2900 ug/m3	NA (14)				

Notes:

(1) Constituents confirmed by Site sampling, with at least one concentration reported above screening value. List excludes abundant inorganic constituents (e.g., aluminum, calcium, iron, magnesium, manganese, potassium, sodium), inherent in most Site fill and soils. PAOCs with 100% of analyzed COCs below screening values are listed.
(2) Range reflects all results from references listed.
(3) Screening values for soil from TAGM 4046, as amended. Lead value of 400 ppm in soil, per USEPA, as specified by NYSDOH. Groundwater values per Class GA Standards and Guidance
(4) Data usability summary report (DUSR) based on Category A analytical report (limited) or Category B (full), or no DUSR performed (none).
(5) Existing controls include cover materials or restricted access to fill or soils.
(6) IRMs were removal actions for USTs, petroleum impacted soils, and surficial residuals in limited access crawl spaces.
(7) PAOCs to be included in the Alternative Analysis Report (AAR), including those to be addressed with Site-wide engineering and institutional controls.
(8) Total PCB values for surface / subsurface residential
(9) Analyses for Total Metals (unfiltered samples) may be biased high due to sample turbidity (suspended solids).
(10) Analyses for Dissolved Metals are from samples filtered in the field to remove suspended solids.

TABLE 2
REMEDIAL INVESTIGATION AND ANALYSIS SUMMARY – 2003

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Area of Interest	Objectives	Work Performed	Field / Laboratory Analytical Parameters	Laboratory Methods
PAOC 1 - Former Village Refuse Area	Delineate horizontal and vertical distribution of lead in Southern End of Former Village Refuse Area.	Performed 11 Geoprobe® borings to base of fill, at original boring locations SB-43-9 and 1J, and at locations within 5 feet of each. Up to 5 samples per boring were collected from targeted intervals.	Analyzed all samples for lead, within 5-day turnaround for results	USEPA SW-846 Method 6010B
PAOCs 2,4,6,7&17	Confirm results of Phase II, Phase III and ICM data at representative locations.	Installed one Geoprobe® boring at each listed PAOC to 4 feet below the water table and selected worst case sample for analysis based on field screening.	Analyzed all samples for full TCL/TAL (VOCs, SVOCs, Pesticides, PCBs and metals).	USEPA SW-846 Methods 8260B, 8270C, 8081A, 8082, 6010B, and 7471A
PAOC 7 - Basement Below Welding Area, Body Plant	Delineate vertical distribution of lead in PAOC 7 and Fill Area H.	Performed 15 Geoprobe® borings to a depth of 12 feet, at and within 5 feet of the locations exhibiting 3 highest levels of lead in prior investigations (7A, Fill H, BP-10). Four samples per boring were collected from targeted intervals.	Analyzed all samples for lead, within 5-day turnaround for results	USEPA SW-846 Method 6010B
PAOC 9 - Vicinity of Column H3x, Body Plant	Delineate horizontal distribution of lead at previous sample location BP-33.	Sampled surface soils from 0-6 and 6-12 inch intervals at 5 locations within a 20-foot square, centered at BP-33. Include BP-33 as a confirmatory sampling location.	Analyzed all samples for lead, within 5-day turnaround for results	USEPA SW-846 Method 6010B
PAOC 14 - Millings	Characterize Millings material that has been spread across parts of the site.	Collected two samples from the 0"-12" interval at two locations within the PAOC.	Analyzed samples for PAHs, PCBs, and TAL Metals.	USEPA SW-846 Methods 8270C, 8082, 6010B and 7471A
PAOC 15 - Millings	Characterize Millings material that has been spread across parts of the site.	Collected two samples from the 0"-12" interval at two locations within the PAOC.	Analyzed samples for PAHs, PCBs, and TAL Metals.	USEPA SW-846 Methods 8270C, 8082, 6010B and 7471A
POACs 21 & 39 - Former Power Plant, Laundry & Transformers (PAOC 21), and Former Painting & Assembly (PAOC 39).	Further investigate the petroleum odor and soil staining previously observed in previous soil borings PAOC-21-1 and PAOC-39-1.	Completed vertical and horizontal delineation of residual petroleum using a series of Geoprobe® borings extending to the base of fill (typically15-20 feet bgs).	Field-screened soils for VOC using a PID; examined for staining, odors, etc.; used qualitative oil/water shake test to detect traces of residual petroleum. Collected samples from unsaturated zone if petroleum contamination was evident. Set temporary groundwater well in worst case boring. Analyzed soil and groundwater samples for VOCs and SVOCs (STAR list parameters).	USEPA SW-846 Methods 8021B and 8270C

TABLE 2
REMEDIAL INVESTIGATION AND ANALYSIS SUMMARY – 2003

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Area of Interest	Objectives	Work Performed	Field / Laboratory Analytical Parameters	Laboratory Methods
PAOC 29 - Former (1945) Maintenance Building	Delineate vertical and horizontal distribution of lead in vicinity of former building footprint.	Performed 8 Geoprobe® borings to base of fill, at and within 5 feet of SB-29-2 and SB2. Collected up to four samples per boring from targeted intervals.	Analyzed all samples for lead, within 5-day turnaround for results	USEPA SW-846 Method 6010B
PAOC 32 - Millings	Characterize Millings material that has been spread across parts of the site.	Collected two samples from the 0"-12" interval, at original locations SB-32-1 and SB-32-2.	Analyzed sample for PAHs, PCBs, and TAL Metals.	USEPA SW-846 Methods 6010B, 7471A, 8082, and 8270C
PAOC 34 - Former Springfield Gas Machines	Delineate vertical and horizontal distribution of elevated C-PAHs identified previously at sample location PAOC-34-4.	Performed Geoprobe® borings at sample location PAOC-34-4 and at 3 surrounding locations within 10 feet of original sample. Sampled at original sample depth and below to complete vertical delineation.	Analyzed representative samples for PAHs. Used field observations to determine exact sampling depths.	USEPA SW-846 Method 8270C
POAC 37 - Former Machine Shop & Sheet Metal Working	Delineate the horizontal and vertical extent of the 6-inch thick horizon of petroleum stained soil observed at a depth of 8-10 feet bgs in soil boring PAOC 37-1.	Completed vertical and horizontal delineation of residual petroleum using a series of 18 Geoprobe® borings extending into native soils (typically12-16 feet bgs) (iterative sampling). Converted two borings to temporary monitoring wells.	Field-screened soils for VOCs using a PID; examined for staining, odors, etc.; used qualitative oil/water shake test to detect traces of residual petroleum. Analyzed soil samples from selected borings defining the edge of petroleum contamination for STAR list VOCs and SVOCs, based on field screening results. Analyzed groundwater from temporary wells for STAR list VOCs and SVOCs.	USEPA SW-846 Methods 8021B and 8270C
PAOC 43 - Fill Areas	Delineate vertical and horizontal distribution of PAHs surrounding sample location FILL-D.	Completed vertical and horizontal delineation of residual petroleum via iterative sampling, using a series of 23 Geoprobe® borings extending into native soils (typically12-24 feet bgs)	Analyzed representative samples for PAHs, using field observations to determine exact sampling depths.	USEPA SW-846 Method 8270C
PAOC 45 - Former Gasoline Underground Storage Tank	Identify if soils and/or groundwater in area of former gasoline UST have been impacted.	Installed two soil borings to base of fill material. Converted one of the soil borings into a temporary well point for groundwater sampling.	Field-screened soils for VOCs using a PID; examined for staining, odors, etc.; used qualitative oil/water shake test to detect traces of residual petroleum. Analyzed soil for VOCs (STARS List), and groundwater sample from temporary well point for VOCs (STARS List)	USEPA SW-846 Methods 8021B

TABLE 2
REMEDIAL INVESTIGATION AND ANALYSIS SUMMARY – 2003

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Area of Interest	Objectives	Work Performed	Field / Laboratory Analytical Parameters	Laboratory Methods
PAOC 46 - Location of Alleged Automobile Battery Disposal	Identify if fill material used to fill concrete chase has been impacted with lead or if lead batteries are present in this fill material.	Installed four soil borings through concrete slab to base of concrete chase to sample fill material.	Analyzed fill material at bottom of chase for lead.	USEPA SW-846 Method 6010B
Former 10,000-gallon Heating-oil UST	Delineate extent of petroleum in subsurface soils at the site of the former 10,000-gallon, No.6 heating-oil UST.	Delineated the subsurface distribution free and residual petroleum using a series of 44 Geoprobe® borings extending to the base of fill (typically16-36 feet bgs) and into the underlying native sediments.	Field-screened soils for VOC using a PID; examined for staining, odors, etc.; used qualitative oil/water shake test to detect traces of residual petroleum. Collected representative soil samples from saturated zone fill and native sediments at 3 locations for geotechnical tests[1] for use in remedial design.	NA
On-Site Groundwater Near Former Heating-Oil UST and POACs 21 & 39	Characterize ground-water quality down-gradient of former 10,000-gallon heating-oil UST and in the vicinity of POAC 21 and POAC 39.	Installed 12 temporary wells, along a regularly-spaced grid, downgradient of the former UST, through the area of PAOCs 21 and 39 using a series of Geoprobe® borings extending to the base of fill (typically16-24 feet bgs).	Field-screened soils for VOC using a PID; examined for staining, odors, etc.; used qualitative oil/water shake test to detect traces of residual petroleum. Set temporary groundwater wells where saturated zone contamination was evident. Analyzed soil and groundwater samples for VOCs and SVOCs (STAR list parameters).	USEPA SW-846 Methods 8021B and 8270C
On-Site Groundwater at North End of Property	Further characterized ground-water flow direction and extent of on-site gasoline constituent migration downgradient of OW-10.	Installed one (1) temporary monitoring well (26T) approximately midway between wells OW-10 and OW-3, screened within the same hydrostratigraphic interval.	Analyzed groundwater samples from wells OW-10, OW-22, and OW-26T for VOCs (STARS list parameters).	USEPA SW-846 Methods 8021B
Metals in Groundwater	Further characterize metal concentrations in groundwater using low-flow purging and sampling techniques.	Redeveloped existing monitoring wells OW-6, OW-7, OW-10, OW-11, OW-12, OW-20, and OW-22 to minimize turbidity. Collected groundwater samples for analysis of TAL metals using low-flow technique.	Collected samples from existing wells OW-6, OW-7, OW-10, OW-11, OW-12, OW-20, OW-22, and OW-26T for analysis of TAL Metals.	USEPA SW-846 Methods 8021B, 6010B, and 7470A
Park Boundary	Characterized ground-water flow conditions and groundwater quality adjacent to the northwestern site boundary (Kingsland point Park).	Installed two groundwater monitoring wells, screened above the seasonal high water table, and extending to a depth of approximately 15 feet into the saturated zone.	Analyzed groundwater samples from wells OW-24 and OW-25 for full TCL/TAL	USEPA SW-846 Methods 8260B, 8270C, 8081A, 8082, 6010B, and 7470A

TABLE 2
REMEDIAL INVESTIGATION AND ANALYSIS SUMMARY – 2003

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Area of Interest	Objectives	Work Performed	Field / Laboratory Analytical Parameters	Laboratory Methods
East Parcel Soil-Gas Survey	Determine if methane and other landfill gases are present at significant levels at the East Lot, characterize their spatial distribution, and determine whether landfill gases are currently being generated.	Performed field soil-gas measurements for combustible gas, hydrogen sulfide, and oxygen concentrations at 47 locations. Collected 4 soil-gas samples in evacuated SUMMA canisters from locations exhibiting between 5 and 25% combustible gas laboratory analysis of soil gases.	Analyzed samples for fixed gases, methane, non-methane hydrocarbons, VOCs, and reduced sulfur compounds.	ASTM D1945, USEPA TO-15, ASTM D5504

[1] - Geotechnical parameters:

Modulus of Elasticity, E_s
Shear Modulus, G'
Poisson's Ratio, m
Friction Angle, f
Coefficient of Secondary Consolidation, C_α
Unit Weight, γ
Water Content, w
Specific Gravity, G_s
Void Ratio, e
Liquid Limit, w_l
Plastic Limit, w_p

TABLE 3
REMEDIAL INVESTIGATION AND ANALYSIS SUMMARY – 2004

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Area of Interest	Objectives	Proposed Work	Field / Laboratory Analytical Parameters	Laboratory Methods
PAOC 7/Fill Areas H & F -Basement Below Welding Area, Body Plant within Historic Fill Areas H &F and Vicinity	Further delineate horizontal and vertical distribution of lead greater than 10,000 ppm within Fill Area H and adjacent fill areas, and confirm boundaries of lead contamination. Determine extent of lead contamination in groundwater.	Performed 28 additional Geoprobe® borings to confirm contact with native sediment (14-16 feet) and collect samples from each 2-foot vertical interval. Performed 5 hand auger borings to evaluate shallow contamination at one crawl space location. Installed 3 monitoring wells within Fill Area H, including 2 within previously identified high lead concentration areas, and third well in the northern end of Fill Area H. Installed 1 upgradient well in Fill Area F (at a high lead concentration location) and 3 downgradient wells. Wells at PAOC 43 were used as upgradient wells for Fill Area F.	Analyzed all soil samples for lead, within 5-day turnaround for results. Analyzed all groundwater samples for TAL metals and TCL VOCs and SVOCs, expanded for STARS parameters. Sampling and analysis for lead was iterative until boundaries were confirmed. Representative soil samples were Analyzed for VOCs and SVOCs to characterize petroleum source limits.	USEPA SW-846 Methods 6010B, 8260B and 8270C
PAOC 29 - Former (1945) Maintenance Building	Delineate vertical and horizontal distribution of lead greater than 10,000 ppm.	Performed 15 Geoprobe® borings to base of fill (6-8 feet), surrounding borings SB-29-B 5, 6 & 8. Collected 3-4 samples per boring from 2-foot intervals, but analyzed on an iterative basis until 10,000 PPM boundaries were established. Installed 1 temporary well within high lead concentration area and analyzed groundwater for lead. Extended investigation off site into Kingsland Point Park, performed 12 borings, and analyzed samples from each 2-foot vertical interval for lead.	Analyzed all samples for lead, within 5-day turnaround for results. Sampling and analysis for lead was iterative until boundaries of 10,000 ppm lead were confirmed	USEPA SW-846 Method 6010B
POAC 37 - Machine Shop & Sheet Metal Working	Install observation wells for natural attenuation monitoring.	Installed 4 monitoring wells, after screening each proposed location for evidence of petroleum with a Geoprobe® boring. Well screens extend from 3 feet above water table to targeted depth.	Field-screened soils in saturated zone for VOCs using a PID. Analyzed groundwater from monitoring wells for STARS VOCs and SVOCs.	USEPA SW-846 Method 8260b (low detection) and 8270C

TABLE 3
REMEDIAL INVESTIGATION AND ANALYSIS SUMMARY – 2004

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Area of Interest	Objectives	Proposed Work	Field / Laboratory Analytical Parameters	Laboratory Methods
PAOC 43 - Historic Fill with Elevated PAHs	Install observation wells for natural attenuation monitoring.	Installed 5 monitoring wells, after screening each proposed location for evidence of petroleum with a Geoprobe® boring. Well screens extend from 3 feet above water table to targeted depth.	Field-screened soils in saturated zone for VOCs using a PID. Analyzed groundwater from monitoring wells for STARS VOCs and SVOCs.	USEPA SW-846 Method 8260b (low detection) and 8270C
PAOC 46 - Location of Alleged Automobile Battery Disposal	Expand investigation of fill in concrete chase to confirm the absence of batteries or residual lead.	Installed 6 additional soil borings at former trench turn locations, through concrete slab to base of concrete chase, and sampled fill material at the bottom.	Analyzed fill material at bottom of chase for lead.	USEPA SW-846 Method 6010B
Former 10,000-gallon Heating-oil UST	Confirm source removal area and natural attenuation zone boundaries, and install observation wells for natural attenuation monitoring.	Performed 11 Geoprobe® borings around perimeter of proposed excavation to supplement qualitative test boring results from the SI with quantitative data. For the attenuation area, installed 8 monitoring wells, after screening each proposed location for evidence of petroleum with a Geoprobe® boring. Wells screens extend from 3 feet above water table to targeted depth.	Obtained saturated soil sample from most visibly contaminated 2-foot depth interval in borings along source area boundaries. For the attenuation observation wells, field-screened soils in saturated zone for VOCs using a PID. Sampled groundwater and analyzed for STARS VOCs and SVOCs. Included 7 existing wells in baseline sampling.	USEPA SW-846 Method 8260b (low detection) and 8270C
PAOC 47 - Park Boundary at OW-24	Locate sources of chlorinated VOCs and chromium in soil and groundwater near OW-24, and delineate extent of groundwater contamination.	Performed an iterative subsurface investigation and obtain soil and groundwater samples from a Geoprobe boring and temporary wells, based on field screening for VOCs. Performed 26 Geoprobe® borings on site and 2 offsite in Kingsland Point Park and obtained soil and groundwater samples for chromium and VOC analyses. Fifteen on-site and 2 off-site borings were converted to temporary monitoring wells for groundwater sampling.	Field-screened soils in from surface to base of fill for VOCs using a PID. Obtained 2 soil samples from each on-site boring (saturated and unsaturated zones) for chromium analysis (5-day turnaround). Analyzed representative soils for TCL VOCs as needed based on PID readings. Analyzed surficial soil from Park for chromium. Analyzed groundwater for TCL VOCs and chromium.	USEPA SW-846 Method 8260b (low detection), 8270C and 6010B

TABLE 3
REMEDIAL INVESTIGATION AND ANALYSIS SUMMARY – 2004

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Area of Interest	Objectives	Proposed Work	Field / Laboratory Analytical Parameters	Laboratory Methods
Soil Gas Survey - West Parcel	Determine if volatile organic vapors from petroleum and other VOC contaminated areas would require remediation to mitigate intrusion of vapors to future buildings.	Performed quantitative soil gas survey by collecting 52 representative soils gas samples at 33 locations below hard surfaces (concrete slabs and asphalt roadways) and in both soils and ambient air within existing crawl spaces. Sampling encompassed areas where VOCs are present in groundwater under or near proposed building footprints. Two background ambient air samples were included.	Integrated 1-hour Samples were collected in 100% - certified 6-liter Summa canisters and analyzed for VOCs by Modified USEPA Method T0-15 (standard full scan plus napthalene).	Modified USEPA Method TO-15
Methane Survey - West Parcel	Precautionary survey to confirm presence or absence of methane from natural organic sources.	Performed methane gas survey at 33 representative potential buried marsh locations within 100-foot grid pattern throughout West Parcel where building construction and open space is contemplated.	Real time field measurements obtained with combustible gas meter, drawing from tubes advance through borings 1-foot below slab or asphalt surface. Sampling was designed to delineate zero percent gas boundary.	NA

TABLE 4
LEAD ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description										
PAOC 1										
Field Sample ID	**Unrestricted Use**	**SI-1-B1-A-1**	**SI-1-B1-B-1**	**SI-1-B1-C-1**	**SI-1-B1-D-1**	**SI-1-B1-E-1**	**SI-1-B2-A-1**	**SI-1-B2-A-2**	**SI-1-B2-B-1**	
Depth Interval (ft)	**Screening Value[1]**	3.0 - 3.5	6.0 - 6.5	8.5 - 9.0	11.5 - 12.0	13.5 - 14.0	3.5 - 4.0	3.5 - 4.0	6.5 - 7.0	
Lead (mg/Kg)	**400 or SB**	115 J	44.9 J	80.2 J	93.3 J	12 J	27.9 J	61 J	151 J	
Field Sample ID	**Unrestricted Use**	**SI-1-B2-C-1**	**SI-1-B2-D-1**	**SI-1-B2-E-1**	**SI-1-B3-A-1**	**SI-1-B3-B-1**	**SI-1-B3-C-1**	**SI-1-B3-D-1**	**SI-1-B3-E-1**	
Depth Interval (ft)	**Screening Value[1]**	8.0 - 8.5	11.0 - 11.5	14.0 - 14.5	3.5 - 4.0	7.5 - 8.0	11.5 - 12.0	13.5 - 14.0	15.0 - 15.5	
Lead (mg/Kg)	**400 or SB**	43.4	ND	ND	53.5 J	22.5 J	36.5 J	50.7 J	ND	
Field Sample ID	**Unrestricted Use**	**SI-1-B4-A-1**	**SI-1-B4-A-2**	**SI-1-B4-B-1**	**SI-1-B4-C-1**	**SI-1-B4-D-1**	**SI-1-B4-E-1**	**SI-1-B5-A-1**	**SI-1-B5-A-2**	
Depth Interval (ft)	**Screening Value[1]**	3.5 - 4.0	3.5 - 4.0	7.5 - 8.0	11.0 - 11.5	13.5 - 14.0	15.0 - 15.5	4.8 - 6.0	4.8 - 6.0	
Lead (mg/Kg)	**400 or SB**	96.2	243	48.8 J	16.5 J	60.9 J	ND	56.2 J	78.5 J	
Field Sample ID	**Unrestricted Use**	**SI-1-B6-A-1**	**SI-1-B6-B-1**	**SI-1-B6-C-1**	**SI-1-B6-D-1**	**SI-1-B7-A-1**	**SI-1-B7-A-2**	**SI-1-B7-B-1**	**SI-1-B8-A-1**	
Depth Interval (ft)	**Screening Value[1]**	2.4 - 2.9	6.0 - 6.4	7.0 - 7.4	7.7 - 8.0	6.0 - 6.4	6.0 - 6.4	7.0 - 7.4	2.0 - 2.4	
Lead (mg/Kg)	**400 or SB**	11.8 J	321	210	898 J	720 J	3490	2000	ND	
Field Sample ID	**Unrestricted Use**	**SI-1-B8-B-1**	**SI-1-B8-C-1**	**SI-1-B8-D-1**	**SI-1-B8-E-1**	**SI-1-B9-A-1**	**SI-1-B9-B-1**	**SI-1-B9-C-1**	**SI-1-B9-D-1**	
Depth Interval (ft)	**Screening Value[1]**	3.6 - 4.0	5.0 - 5.4	7.0 - 7.4	8.0 - 8.4	2.0 - 2.4	4.6 - 5.0	5.6 - 6.0	6.6 - 7.0	
Lead (mg/Kg)	**400 or SB**	14.2 J	79.7	441	ND	11.6 J	68.4 J	3300	1100	
Field Sample ID	**Unrestricted Use**	**SI-1-B9-E-1**	**SI-1-B10-A-1**	**SI-1-B10-B-1**	**SI-1-B10-C-1**	**SI-1-B10-D-1**	**SI-1-B10-E-1**	**SI-1-B11-A-1**	**SI-1-B11-B-1**	
Depth Interval (ft)	**Screening Value[1]**	7.6 - 8.0	2.0 - 2.4	5.2 - 5.6	6.0 - 6.4	8.0 - 8.4	9.0 - 9.4	2.0 - 2.4	4.6 - 5.0	
Lead (mg/Kg)	**400 or SB**	ND	ND	ND	59.8	339 J	ND	17 J	78.6	
Field Sample ID	**Unrestricted Use**	**SI-1-B11-B-2**	**SI-1-B11-C-1**	**SI-1-B11-D-1**	**SI-1-B11-E-1**					
Depth Interval (ft)	**Screening Value[1]**	4.6 - 5.0	6.6 - 7.0	7.6 - 8.0	8.4 - 8.8					
Lead (mg/Kg)	**400 or SB**	70.5	2590	261	ND					
PAOC 7										
Field Sample ID	**Unrestricted Use**	**SI-7-B2-A-1**	**SI-7-B2-A-2**	**SI-7-B2-B-1**	**SI-7-B2-C-1**	**SI-7-B2-D-1**	**SI-7-B3-A-1**	**SI-7-B3-B-1**	**SI-7-B3-C-1**	**SI-7-B3-D-1**
Depth Interval (ft)	**Screening Value[1]**	2.6 - 3.0	2.6 - 3.0	5.6 - 6.0	7.6 - 8.0	11.6 - 12.0	2.6 - 3.0	5.6 - 6.0	8.6 - 9.0	11.6 - 12.0
Lead (mg/Kg)	**400 or SB**	18.8 J	21.1 J	795 J	155 J	**16000 J**	ND	ND	**31700 J**	**26300 J**
Field Sample ID	**Unrestricted Use**	**SI-7-B4-A-1**	**SI-7-B4-B-1**	**SI-7-B4-C-1**	**SI-7-B4-D-1**	**SI-7-B5-A-1**	**SI-7-B5-B-1**	**SI-7-B5-C-1**	**SI-7-B5-D-1**	**SI-7-B6-A-1**
Depth Interval (ft)	**Screening Value[1]**	2.6 - 3.0	5.6 - 6.0	8.6 - 9.0	11.6 - 12.0	2.6 - 3.0	5.6 - 6.0	8.6 - 9.0	11.6 - 12.0	2.5 - 3.0
Lead (mg/Kg)	**400 or SB**	**11100 J**	435 J	4300 J	7490 J	ND	ND	783 J	**43000 J**	96.2
Field Sample ID	**Unrestricted Use**	**SI-7-B6-A-2**	**SI-7-B6-B-1**	**SI-7-B6-C-1**	**SI-7-B6-D-1**	**SI-7-B6-G-1**	**SI-7-B6-H-1**	**SI-7-B7-A-1**	**SI-7-B7-A-2**	**SI-7-B7-B-1**
Depth Interval (ft)	**Screening Value[1]**	2.5 - 3.0	5.5 - 6.5	8.0 - 8.5	11.5 - 12.0	17.0 - 17.5	19.0 - 19.5	2.5 - 3.0	2.5 - 3.0	5.5 - 6.0
Lead (mg/Kg)	**400 or SB**	87.6	2200	1020	36	63	1040	248 J	49.3 J	6750
Field Sample ID	**Unrestricted Use**	**SI-7-B7-C-1**	**SI-7-B7-D-1**	**SI-7-B8-A-1**	**SI-7-B8-B-1**	**SI-7-B8-C-1**	**SI-7-B8-D-1**	**SI-7-B9-A-1**	**SI-7-B9-B-1**	**SI-7-B9-C-1**
Depth Interval (ft)	**Screening Value[1]**	7.5 - 8.0	8.5 - 9.0	2.5 - 3.0	5.5 - 6.0	9.0 - 9.5	11.5 - 12.0	2.5 - 3.0	5.5 - 6.0	8.0 - 8.5
Lead (mg/Kg)	**400 or SB**	**16400**	1120 J	6620	778	**38400 J**	55.1	**12400 J**	6460 J	6250 J
Field Sample ID	**Unrestricted Use**	**SI-7-B9-D-1**	**SI-7-B10-A-1**	**SI-7-B10-A-2**	**SI-7-B10-B-1**	**SI-7-B10-C-1**	**SI-7-B10-D-1**	**SI-7-B10-E-1**	**SI-7-B11-A-1**	**SI-7-B11-B-1**
Depth Interval (ft)	**Screening Value[1]**	11.5 - 12.0	2.8 - 3.2	2.8 - 3.2	5.6 - 6.0	8.6 - 9.0	11.6 - 12.0	12.6 - 13.0	2.6 - 3.0	5.6 - 6.0
Lead (mg/Kg)	**400 or SB**	1610 J	522 J	707 J	6550 J	956 J	1720 J	15.8 J	**32300 J**	2750

See Notes on Page 5.

TABLE 4
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REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description										
Field Sample ID	**Unrestricted Use**	**SI-7-B11-C-1**	**SI-7-B12-A-1**	**SI-7-B12-B-1**	**SI-7-B12-C-1**	**SI-7-B12-D-1**	**SI-7-B13-A-1**	**SI-7-B13-B-1**	**SI-7-B13-C-1**	**SI-7-B13-D-1**
Depth Interval (ft)	**Screening Value[1]**	0.0 - 0.4	2.5 - 3.0	5.5 - 6.0	7.5 - 8.0	9.0 - 9.5	2.5 - 3.0	5.5 - 6.0	8.0 - 8.5	11.5 - 12.1
Lead (mg/Kg)	**400 or SB**	2060 J	314	3970	**13500**	1100	**10500**	6420	5940 J	984
Field Sample ID	**Unrestricted Use**	**SI-7-B14-A-1**	**SI-7-B14-A-2**	**SI-7-B14-B-1**	**SI-7-B14-C-1**	**SI-7-B14-D-1**	**SI-7-B15-A-1**	**SI-7-B15-B-1**	**SI-7-B15-C-1**	**SI-7-B15-D-1**
Depth Interval (ft)	**Screening Value[1]**	2.6 - 3.0	2.6 - 3.0	5.6 - 6.0	8.6 - 9.0	11.6 - 12.0	2.6 - 3.0	5.6 - 6.0	8.6 - 9.0	11.6 - 12.0
Lead (mg/Kg)	**400 or SB**	22.5 J	ND	ND	ND	ND	ND	ND	ND	ND
Field Sample ID	**Unrestricted Use**	**SI-7-B16-A-1**	**SI-7-B16-A-2**	**SI-7-B16-B-1**	**SI-7-B16-C-1**	**SI-7-B16-D-1**	**SI-7-B16-F-1**	**SI-7-B16-G-1**	**SI-7-B16-H-1**	**SI-7-B17-A-1**
Depth Interval (ft)	**Screening Value[1]**	0.0 - 0.5	0.0 - 0.5	2.1 - 2.5	3.5 - 4.0	4.5 - 5.5	8.5 - 9.5	10.5 - 11.5	12.5 - 13.5	0.0 - 1.0
Lead (mg/Kg)	**400 or SB**	555	360	ND	**18,000**	2120	**53,900**	589	350	34.3
Field Sample ID	**Unrestricted Use**	**SI-7-B17-B-1**	**SI-7-B17-B-2**	**SI-7-B17-C-1**	**SI-7-B17-D-1**	**SI-7-B17-E-1**	**SI-7-B17-F-1**	**SI-7-B17-G-1**	**SI-7-B17-H-1**	**SI-7-B18-A-1**
Depth Interval (ft)	**Screening Value[1]**	2.0 - 3.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	14.0 - 15.0	2.0 - 3.0
Lead (mg/Kg)	**400 or SB**	ND	ND	ND	ND	ND	ND	44.7	ND	6,400
Field Sample ID	**Unrestricted Use**	**SI-7-B18-A-2**	**SI-7-B18-B-1**	**SI-7-B18-C-1**	**SI-7-B18-D-1**	**SI-7-B18-E-1**	**SI-7-B18-F-1**	**SI-7-B18-G-1**	**SI-7-B18-H-1**	**SI-7-B19-A-1**
Depth Interval (ft)	**Screening Value[1]**	2.0 - 3.0	4.0 - 4.5	4.5 - 5.5	6.5 - 7.5	8.5 - 9.5	10.5 - 11.5	12.5 - 13.5	14.5 - 15.5	0.0 - 1.0
Lead (mg/Kg)	**400 or SB**	274	ND	132	ND	ND	ND	ND	ND	ND
Field Sample ID	**Unrestricted Use**	**SI-7-B19-B-1**	**SI-7-B19-B-2**	**SI-7-B19-C-1**	**SI-7-B19-D-1**	**SI-7-B19-E-1**	**SI-7-B19-F-1**	**SI-7-B19-G-1**	**SI-7-B19-H-1**	**SI-7-B20-A-1**
Depth Interval (ft)	**Screening Value[1]**	2.0 - 3.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	14.0 - 14.5	0.0 - 1.0
Lead (mg/Kg)	**400 or SB**	ND	ND	25.1	ND	ND	27.3	ND	ND	ND
Field Sample ID	**Unrestricted Use**	**SI-7-B20-A-2**	**SI-7-B20-B-1**	**SI-7-B20-C-1**	**SI-7-B20-D-1**	**SI-7-B20-E-1**	**SI-7-B20-F-1**	**SI-7-B20-G-1**	**SI-7-B20-H-1**	**SI-7-B21-A-1**
Depth Interval (ft)	**Screening Value[1]**	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	14.0 - 15.0	0.0 - 1.0
Lead (mg/Kg)	**400 or SB**	23.2 J	ND	21.5 J	17.2 J	ND	18 J	ND	ND	55.2 J
Field Sample ID	**Unrestricted Use**	**SI-7-B21-B-1**	**SI-7-B21-C-1**	**SI-7-B21-D-1**	**SI-7-B21-E-1**	**SI-7-B21-E-2**	**SI-7-B21-F-1**	**SI-7-B21-G-1**	**SI-7-B21-H-1**	**SI-7-B22-A-1**
Depth Interval (ft)	**Screening Value[1]**	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	14.0 - 15.0	0.0 - 1.0
Lead (mg/Kg)	**400 or SB**	1,240 J	8,070 J	391 J	229 J	1,070 J	3,640 J	257 J	18.7 J	25.8 J
Field Sample ID	**Unrestricted Use**	**SI-7-B22-B-1**	**SI-7-B22-C-1**	**SI-7-B22-G-1**	**SI-7-B22-G-2**	**SI-7-B22-H-1**	**SI-7-B23-A-1**	**SI-7-B23-B-1**	**SI-7-B23-C-1**	**SI-7-B23-D-1**
Depth Interval (ft)	**Screening Value[1]**	2.0 - 3.0	4.0 - 5.0	12.0 - 13.0	12.0 - 13.0	14.0 - 15.0	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0
Lead (mg/Kg)	**400 or SB**	1,270 J	4,460	ND	ND	ND	2,840 J	13.3 J	222 J	1,430 J
Field Sample ID	**Unrestricted Use**	**SI-7-B23-E-1**	**SI-7-B23-E-2**	**SI-7-B23-F-1**	**SI-7-B23-G-1**	**SI-7-B23-H-1**	**SI-7-B23-I-1**	**SI-7-B24-A-1**	**SI-7-B24-B-1**	**SI-7-B24-C-1**
Depth Interval (ft)	**Screening Value[1]**	8.0 - 9.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	14.0 - 15.0	16.0 - 17.0	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0
Lead (mg/Kg)	**400 or SB**	4,100 J	2,480 J	1,030 J	294 J	23.2 J	ND	264 J	112 J	ND
Field Sample ID	**Unrestricted Use**	**SI-7-B24-D-1**	**SI-7-B24-D-2**	**SI-7-B24-E-1**	**SI-7-B24-F-1**	**SI-7-B24-G-1**	**SI-7-B24-H-1**	**SI-7-B24-I-1**	**SI-7-B25-A-1**	**SI-7-B25-B-1**
Depth Interval (ft)	**Screening Value[1]**	6.0 - 7.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	14.0 - 15.0	16.0 - 17.0	0.0 - 1.0	2.0 - 3.0
Lead (mg/Kg)	**400 or SB**	ND	ND	3,140 J	4,230 J	ND	ND	ND	976 J	512 J
Field Sample ID	**Unrestricted Use**	**SI-7-B25-C-1**	**SI-7-B25-D-1**	**SI-7-B25-E-1**	**SI-7-B25-F-1**	**SI-7-B25-G-1**	**SI-7-B25-G-2**	**SI-7-B25-H-1**	**SI-7-B26-A-1**	**SI-7-B26-B-1**
Depth Interval (ft)	**Screening Value[1]**	4.0 - 5.0	6.0 - 7.0	10. 0 - 11.0	16.0 - 17.0	18.0 - 19.0	18.0 - 19.0	19.5 -20.0	0.0 - 1.0	2.0 - 3.0
Lead (mg/Kg)	**400 or SB**	463 J	1,000 J	2,780 J	71.4 J	ND	ND	ND	2,430 J	1,980 J
Field Sample ID	**Unrestricted Use**	**SI-7-B26-D-1**	**SI-7-B26-F-1**	**SI-7-B26-F-2**	**SI-7-B27-A-1**	**SI-7-B27-B-1**	**SI-7-B27-C-1**	**SI-7-B27-D-1**	**SI-7-B27-E-1**	**SI-7-B27-F-1**
Depth Interval (ft)	**Screening Value[1]**	6.5 - 7.5	10.5 - 11.5	10.5 - 11.5	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0
Lead (mg/Kg)	**400 or SB**	2,390 J	318 J	169 J	15.5 J	3,630 J	2,090 J	2,110 J	3,040 J	1,780 J

See Notes on Page 5.

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REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description										
Field Sample ID	**Unrestricted Use**	**SI-7-B27-G-1**	**SI-7-B27-G-2**	**SI-7-B27-H-1**	**SI-7-B27-I-1**	**SI-7-B29-A-1**	**SI-7-B29-B-1**	**SI-7-B29-C-1**	**SI-7-B29-D-1**	**SI-7-B29-E-1**
Depth Interval (ft)	**Screening Value[1]**	12.0 - 13.0	12.0 - 13.0	14.0 - 15.0	18.0 - 19.0	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	12.0 - 13.0
Lead (mg/Kg)	**400 or SB**	8,420 J	4,840 J	2,510 J	94.1 J	9,990 J	6,020 J	3,470 J	2,790 J	21.1 J
Field Sample ID	**Unrestricted Use**	**SI-7-B29-F-1**	**SI-7-B29-G-1**	**SI-7-B29A-A1**	**SI-7-B29A-A2**	**SI-7-B29A-A3**	**SI-7-B29B-A1**	**SI-7-B29C-A1**	**SI-7-B29D-AA1**	**SI-7-B29E-A1**
Depth Interval (ft)	**Screening Value[1]**	14.0 - 15.0	16.0 -17.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	1.0 - 2.0
Lead (mg/Kg)	**400 or SB**	ND	58.2 J	8,280 J	8,250 J	ND	2,150 J	2,460 J	2,220 J	4,730 J
Field Sample ID	**Unrestricted Use**	**SI-7-B29D-A1**	**SI-7-B29E-AA1**	**SI-7-B30-A-1**	**SI-7-B30-B-1**	**SI-7-B30-C-1**	**SI-7-B30-D-1**	**SI-7-B30-F-1**	**SI-7-B30-G-1**	**SI-7-B30-H-1**
Depth Interval (ft)	**Screening Value[1]**	1.0 - 2.0	0 - 1.0	0.0 -1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	10.0 - 11.0	12.0 - 13.0	14.0 - 15.0
Lead (mg/Kg)	**400 or SB**	**167,000 J**	7,470 J	2,020 J	935 J	3,000 J	**18,300 J**	**49,700 J**	34.9 J	ND
Field Sample ID	**Unrestricted Use**	**SI-7-B31-A-1**	**SI-7-B31-A-2**	**SI-7-B31-B-1**	**SI-7-B31-C-1**	**SI-7-B31-D-1**	**SI-7-B31-E-1**	**SI-7-B31-F-1**	**SI-7-B31-G-1**	**SI-7-B31-H-1**
Depth Interval (ft)	**Screening Value[1]**	0.0 - 1.0	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.5 - 7.5	8.5 - 9.5	10.5- 11.5	12.5 - 13.5	14.5 - 15.5
Lead (mg/Kg)	**400 or SB**	150 J	116 J	10.9 J	ND	ND	ND	ND	ND	ND
Field Sample ID	**Unrestricted Use**	**SI-7-B31-I-1**	**SI-7-B32-A-1**	**SI-7-B32-B-1**	**SI-7-B32-B-2**	**SI-7-B32-C-1**	**SI-7-B32-D-1**	**SI-7-B32-E-1**	**SI-7-B32-F-1**	**SI-7-B32-G-1**
Depth Interval (ft)	**Screening Value[1]**	16.5 - 17.5	0.0 - 1.0	2.0 - 3.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0
Lead (mg/Kg)	**400 or SB**	1710 J	534	ND	ND	5,670	**21,800**	3,830	7,360	2,260 J
Field Sample ID	**Unrestricted Use**	**SI-7-B32-H-1**	**SI-7-B33-A-1**	**SI-7-B33-B-1**	**SI-7-B33-C-1**	**SI-7-B33-D-1**	**SI-7-B33-E-1**	**SI-7-B33-F-1**	**SI-7-B33-G-1**	**SI-7-B33-H-1**
Depth Interval (ft)	**Screening Value[1]**	14.0 - 15.0	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	15.0 - 16.0
Lead (mg/Kg)	**400 or SB**	464	55.4	**11,000**	6,460	5,330	761	550	2,320	1,090
Field Sample ID	**Unrestricted Use**	**SI-7-B34-A-1**	**SI-7-B34-A-2**	**SI-7-B34-B-1**	**SI-7-B34-C-1**	**SI-7-B34-D-1**	**SI-7-B34-E-1**	**SI-7-B34-F-1**	**SI-7-B34-G-1**	**SI-7-B34-H-1**
Depth Interval (ft)	**Screening Value[1]**	0.5 - 1.0	0.5 - 1	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 -11.0	12.0 - 13.0	14.0 - 15.0
Lead (mg/Kg)	**400 or SB**	41.4	36.4	38.6	11	91.6	35.9	12.4	**21,700**	**16,700**
Field Sample ID	**Unrestricted Use**	**S1-7-B35-A-1**	**S1-7-B35-A-3**	**S1-7-B35-B-1**	**S1-7-B35-C-1**	**S1-7-B35-D-1**	**S1-7-B35-E-1**	**S1-7-B35-F-1**	**S1-7-B35-G-1**	**S1-7-B35-H-1**
Depth Interval (ft)	**Screening Value[1]**	1.0 - 2.0	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	7.0 - 8.0	9.0 - 10.0	11.0 - 12.0	13.0 - 14.0	22.0 - 23.0
Lead (mg/Kg)	**400 or SB**	4.9	7.8	4.7	17.6	9.5	6.0	5.9	4.3	4.8
Field Sample ID	**Unrestricted Use**	**SI-7-B36-A-1**	**S1-7-B36-A-2**	**SI-7-B36-B-1**	**S1-7-B36-C-1**	**SI-7-B36-D-1**	**S1-7-B36-E-1**	**SI-7-B36-F-1**	**S1-7-B36-G-1**	**S1-7-B36-I-1**
Depth Interval (ft)	**Screening Value[1]**	1.0 - 2.0	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	7.0 - 8.0	9.0 - 10.0	11.0 - 12.0	13.0 - 14.0	17.0 - 18.0
Lead (mg/Kg)	**400 or SB**	57.1	34	27.4	4.4	44.7	10.4	35.1	1,280	297
Field Sample ID	**Unrestricted Use**	**S1-7-B36-K-1**	**SI-7-B37-A-1**	**S1-7-B37-B-2**	**S1-7-B37-C-1**	**S1-7-B37-D-1**	**S1-7-B37-E-1**	**S1-7-B37-F-1**	**SI-7-B37-G-1**	**S1-7-B37-H-1**
Depth Interval (ft)	**Screening Value[1]**	24.0 - 25.0	2.5 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0	13.0 - 14.0	18.0 - 19.0
Lead (mg/Kg)	**400 or SB**	15.7	47.1	53	253	39.3	33.4	104	72	119
Field Sample ID	**Unrestricted Use**	**SI-7-B37-I-1**	**SI-7-B-38-A-1**	**SI-7-B-38-A-2**	**SI-7-B-38-B-1**	**SI-7-B-38-C-1**	**SI-7-B-38-D-1**	**SI-7-B-38-E-1**	**SI-7-B-38-E-2**	**SI-7-B38-F-1**
Depth Interval (ft)	**Screening Value[1]**	24.0 - 25.0	0.0 - 1.0	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	8.0 - 9.0	10.0 - 11.0
Lead (mg/Kg)	**400 or SB**	46.6	13.9 J	11.4 J	103 J	16.7 J	18.9 J	6.2 J	21.8 J	ND
Field Sample ID	**Unrestricted Use**	**SI-7-B-38-G-1**	**SI-7-B-38-H-1**	**SI-7-B-39-A-1**	**SI-7-B39-B-1**	**SI-7-B-39-C-1**	**SI-7-B-39-D-1**	**SI-7-B-39-E-1**	**SI-7-B39-F-1**	**SI-7-B-39-G-1**
Depth Interval (ft)	**Screening Value[1]**	15.0 - 16.0	18.0 - 19.0	0.0 - 1.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	12.0 - 13.0
Lead (mg/Kg)	**400 or SB**	156	19.9 J	420 J	2910 J	518 J	682 J	**13,700 J**	1550 J	643
Field Sample ID	**Unrestricted Use**	**SI-7B-39-H-1**								
Depth Interval (ft)	**Screening Value[1]**	14.0 - 15.0								
Lead (mg/Kg)	**400 or SB**	13.4								

See Notes on Page 5.

TABLE 4
LEAD ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description										
PAOC 9										
Field Sample ID	**Unrestricted Use**	**SI-9-S1-A-1**	**SI-9-S1-A-2**	**SI-9-S1-B-1**	**SI-9-S2-A-1**	**SI-9-S2-B-1**	**SI-9-S3-A-1**	**SI-9-S3-A-2**	**SI-9-S3-B-1**	
Depth Interval (ft)	**Screening Value[1]**	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0	
Lead (mg/Kg)	**400 or SB**	154 J	285 J	87.8 J	291 J	260 J	191 J	121 J	125 J	
Field Sample ID	**Unrestricted Use**	**SI-9-S4-A-1**	**SI-9-S4-B-1**	**SI-9-S5-A-1**	**SI-9-S5-B-1**					
Depth Interval (ft)	**Screening Value[1]**	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5	0.5 - 1.0					
Lead (mg/Kg)	**400 or SB**	995 J	526 J	175 J	180 J					
PAOC 29										
Field Sample ID	**Unrestricted Use**	**SI-29-B1-A-1**	**SI-29-B1-A-2**	**SI-29-B1-B-1**	**SI-29-B1-C-1**	**SI-29-B1-D-1**	**SI-29-B2-A-1**	**SI-29-B2-B-1**	**SI-29-B2-C-1**	**SI-29-B2-D-1**
Depth Interval (ft)	**Screening Value[1]**	0.0 - 0.4	0.0 - 0.4	3.6 - 4.0	5.6 - 6.0	7.6 - 8.0	1.6 - 2.0	3.6 - 4.0	5.6 - 6.0	8 - 8.4
Lead (mg/Kg)	**400 or SB**	92 J	337 J	726 J	4760 J	357 J	466 J	872 J	207 J	451 J
Field Sample ID	**Unrestricted Use**	**SI-29-B3-A-1**	**SI-29-B3-A-2**	**SI-29-B3-B-1**	**SI-29-B3-C-1**	**SI-29-B3-D-1**	**SI-29-B4-A-1**	**SI-29-B4-B-1**	**SI-29-B4-C-1**	**SI-29-B4-D-1**
Depth Interval (ft)	**Screening Value[1]**	1.6 - 2.0	1.6 - 2.0	3.6 - 4.0	5.6 - 6.0	7.6 - 8.0	0.0 - 0.4	1.6 - 2.0	4.0 - 4.8	6 - 6.4
Lead (mg/Kg)	**400 or SB**	26.9 J	26.7 J	4720 J	1500 J	212 J	58 J	119	4490 J	173 J
Field Sample ID	**Unrestricted Use**	**SI-29-B5-A-1**	**SI-29-B5-B-1**	**SI-29-B5-C-1**	**SI-29-B5-D-1**	**SI-29-B6-A-1**	**SI-29-B6-A-2**	**SI-29-B6-B-1**	**SI-29-B6-C-1**	**SI-29-B6-D-1**
Depth Interval (ft)	**Screening Value[1]**	2.5 - 3.0	3.5 - 4.0	5.5 - 6.0	7.5 - 8.0	2.5 - 3.0	2.5 - 3.0	3.5 - 4.0	5.0 - 5.5	6 - 6.5
Lead (mg/Kg)	**400 or SB**	6260	**23800**	3750	**11400**	293	167	533	**26000**	9040
Field Sample ID	**Unrestricted Use**	**SI-29-B7-A-1**	**SI-29-B7-B-1**	**SI-29-B7-C-1**	**SI-29-B7-D-1**	**SI-29-B8-A-1**	**SI-29-B8-B-1**	**SI-29-B8-C-1**	**SI-29-B8-D-1**	
Depth Interval (ft)	**Screening Value[1]**	2.0 - 2.5	3.5 - 4.0	5.0 - 5.5	6.0 - 6.5	2.0 - 2.5	3.5 - 4.0	5.0 - 5.5	6.0 - 6.5	
Lead (mg/Kg)	**400 or SB**	21.9	867	7290	451	2400	410	7910	**21100**	
Field Sample ID	**Unrestricted Use**	**SI-29-B9-A-1**	**SI-29-B9-B-1**	**SI-29-B9-B-2**	**SI-29-B9-C-1**	**SI-29-B9-D-1**	**SI-29-B9-E-1**	**SI-29-B10-A-1**	**SI-29-B10-B-1**	**SI-29-B10-C-1**
Depth Interval (ft)	**Screening Value[1]**	1.0 - 2.0	3.0 -4.0	3.0 - 4.0	5.0 - 6.0	7.0 - 8.0	9.0 - 10.0	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0
Lead (mg/Kg)	**400 or SB**	8,830 J	70.6 J	711 J	3,600 J	174 J	389 J	3,780 J	8,760 J	**25,300 J**
Field Sample ID	**Unrestricted Use**	**SI-29-B10-C-2**	**SI-29-B10-D-1**	**SI-29-B10-E-1**	**SI-29-B11-A-1**	**SI-29-B11-B-1**	**SI-29-B11-C-1**	**SI-29-B11-D-1**	**SI-29-B11-E-1**	**SI-29-B12-A-1**
Depth Interval (ft)	**Screening Value[1]**	5.0 - 6.0	7.0 - 8.0	9.0 - 10.0	1.0 - 2.0	3.0 -4.0	3.0 - 4.0	5.0 - 6.0	7.0 - 8.0	1.0 - 2.0
Lead (mg/Kg)	**400 or SB**	4,040 J	52.9 J	179 J	1,890 J	15.3 J	1,170 J	**50,500 J**	2,700 J	**25,100**
Field Sample ID	**Unrestricted Use**	**SI-29-B12-B-1**	**SI-29-B12-C-1**	**SI-29-B12-D-1**	**SI-29-B12-E-1**	**SI-29-B13-A-1**	**SI-29-B13-B-1**	**SI-29-B13-C-1**	**SI-29-B13-D-1**	**SI-29-B13-E-1**
Depth Interval (ft)	**Screening Value[1]**	3.0 - 4.0	5.0 - 6.0	7.0 - 8.0	9.0 - 10.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0
Lead (mg/Kg)	**400 or SB**	162	1,620	1,460	1,810 J	16.2	**13,900**	3,390	149 J	5760 J
Field Sample ID	**Unrestricted Use**	**SI-29-B13-F-1**	**SI-29-B13-G-1**	**SI-29-B13-H-1**	**SI-29-B14-A-1**	**SI-29-B14-B-1**	**SI-29-B14-C-1**	**SI-29-B14-D-1**	**SI-29-B14-E-1**	**SI-29-B15-A-1**
Depth Interval (ft)	**Screening Value[1]**	12.0 - 13.0	14.0 - 15.0	16.0 - 17.0	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	8.0 - 9.0	10.0 - 11.0	1.0 - 2.0
Lead (mg/Kg)	**400 or SB**	53.4 J	191 J	17.1 J	113 J	125 J	367 J	**15,100 J**	76.8 J	9310 J
Field Sample ID	**Unrestricted Use**	**SI-29-B15-B-1**	**SI-29-B15-B-2**	**SI-29-B15-C-1**	**SI-29-B15-D-1**	**SI-29-B16-A-1**	**SI-29-B16-B-1**	**SI-29-B16-C-1**	**SI-29-B16-D-1**	**SI-29-B16-E-1**
Depth Interval (ft)	**Screening Value[1]**	3.0 - 4.0	3.0 - 4.0	5.0 - 6.0	7.0 - 8.0	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	7.0 - 8.0	9.0 - 10.0
Lead (mg/Kg)	**400 or SB**	**39,200** J	7,780 J	**14,100 J**	1,000 J	1,070 J	80.3 J	176 J	3,420 J	143 J
Field Sample ID	**Unrestricted Use**	**SI-29-B17-A-1**	**SI-29-B17-B-1**	**SI-29-B17-C-1**	**SI-29-B17-D-1**	**SI-29-B18-A-1**	**SI-29-B18-B-1**	**SI-29-B18-C-1**	**SI-29-B18-C-2**	**SI-29-B18-D-1**
Depth Interval (ft)	**Screening Value[1]**	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	7.0 - 8.0	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	5.0 - 6.0	7.0 - 8.0
Lead (mg/Kg)	**400 or SB**	87.3	**90,000**	**14,600**	8,890	429 J	155 J	8,120 J	451 J	1600 J

See Notes on Page 5.

TABLE 4
LEAD ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description										
Field Sample ID	**Unrestricted Use**	**SI-29-B21-A-1**	**SI-29-B21-B-1**	**SI-29-B21-C-1**	**SI-29-B21-D-1**	**SI-29-B-22-A-1**	**SI-29-B-22-B-1**	**SI-29-B-22-C-1**	**SI-29-B-22-D-1**	**SI-29-B-22-E-1**
Depth Interval (ft)	**Screening Value[1]**	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	7.0 -8.0	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	10.0 - 11.0	13.0 - 14.0
Lead (mg/Kg)	**400 or SB**	6,950	**28,500**	1,570	140	83.8 J	62.4 J	7,180 J	9,740 J	605 J
Field Sample ID	**Unrestricted Use**	**SI-29-B24A**	**SI-29-B24B**	**SI-29-B24C**	**SI-29-B24D**	**SI-29-B25A**	**SI-29-B25C**	**SI-29-B25D**	**SI-29-B26A**	**SI-29-B26C**
Depth Interval (ft)	**Screening Value[1]**	0.2 - 1.5	1.5 - 2.5	4.0 - 4.9	6.0 - 8.0	0.2 - 2.0	4.0 - 6.0	6.0 - 8.0	0.2 - 2	4.5 - 6.0
Lead (mg/Kg)	**400 or SB**	369	11.9	168	10.6	266	120	6.22	749	479
Field Sample ID	**Unrestricted Use**	**SI-29-B26D**	**SI-29-B27A**	**SI-29-B27C**	**SI-29-B28A**	**SI-29-B28B**	**SI-29-B29A**	**SI-29-B29B**	**SI-29-B30A**	**SI-29-B30C**
Depth Interval (ft)	**Screening Value[1]**	6.0 - 8.0	0.2 - 2.0	5.0 - 5.9	0.2 - 1.1	1.3 - 2.7	0.2 - 1.0	1.2 - 2.1	0.2 - 2.2	4.0 - 6.0
Lead (mg/Kg)	**400 or SB**	ND	170	17.4	41.8	ND	46.4	ND	420	19.7
Field Sample ID	**Unrestricted Use**	**SI-29-B31A**	**SI-29-B31C**	**SI-29-B32A**	**SI-29-B32C**	**SI-29-B33A**	**SI-29-B33C**	**SI-29-B34A**	**SI-29-B34C**	
Depth Interval (ft)	**Screening Value[1]**	0.2 - 1.6	4.0 - 6.0	0.2 - 2	4.0 - 5.4	0.2 - 2.0	4.0 - 5.0	0.2 - 1.0	4.0 - 5.0	
Lead (mg/Kg)	**400 or SB**	185	236	213	7.51	815	8.65	135	10.7	
Field Sample ID	**Unrestricted Use**	**SI-29-B35A**	**SI-29-B35B**							
Depth Interval (ft)	**Screening Value[1]**	0.2 - 0.7	0.7 - 2.2							
Lead (mg/Kg)	**400 or SB**	24.4	ND							
PAOC 46										
Field Sample ID	**Unrestricted Use**	**SI-46-B1-A-1**	**SI-46-B1-A-2**	**SI-46-B2-A-1**	**SI-46-B3-A-1**	**SI-46-B4-A-1**	**SI-46-B5-A-1**	**SI-46-B6-A-1**	**SI-46-B8-A-1**	**SI-46-B9-A-1**
Depth Interval (ft)	**Screening Value[1]**	5.6 - 6.0	5.6 - 6.0	5.6 - 6.0	6.0 - 6.5	6.0 - 6.5	5.0 - 6.0	0.0 - 1.0	4.0 - 6.0	4.0 - 5.0
Lead (mg/Kg)	**400 or SB**	ND	ND	ND	143 J	81.5 J	41.8	7.3	15.7	23.1
Field Sample ID	**Unrestricted Use**	**SI-46-B9-A-2**	**SI-46-B10-A-1**	**SI-46-B11-A-1**						
Depth Interval (ft)	**Screening Value[1]**	4.0 - 5.0	4.0 - 5.5	4.0 - 5.0						
Lead (mg/Kg)	**400 or SB**	26.8	18.2	7						

Notes:
1 - TAGM 4046 Screening Values.
SB = Site Background.
ND = Not detected.
Constituents with Levels above TAGM 4046 Guidance (not necessarily greater than site background).
Levels above 10,000 mg/kg Screening Value (bold).

TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 2, 4,6, 7, 17										Millings		
Field Sample ID	Screening Value TAGM 4046	SI-2-B1-A-1	SI-4-B1-A-1	SI-6-B1-A-1	SI-6-B1-A-2	SI-7-B1-A-1	SI-7-B27-D-1	SI-7-B29-E-1	SI-7-B30-D-1	SI-7-B31-D-1	SI-17-B1-A-1	SI-14-S1-A-1	SI-14-S1-A-2	SI-14-S2-A-1
Depth Interval (ft)	(mg/kg)	4.0 - 5.0	6.0 - 6.5	9.0 - 10.0	9.0 - 10.0	8.5 - 9.0	6.0 - 7.0	12.0 - 13.0	14.0 - 15.0	14.0 - 15.0	8.5 - 9.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
1,2,4-TRICHLOROBENZENE	3.4	ND	ND	ND	ND	ND					ND			
1,2-DICHLOROBENZENE	7.9	ND	ND	ND	ND	ND					ND			
1,3-DICHLOROBENZENE	1.6	ND	ND	ND	ND	ND					ND			
1,4-DICHLOROBENZENE	8.5	ND	ND	ND	ND	ND					ND			
2,4,5-TRICHLOROPHENOL	0.1	ND	ND	ND	ND	ND					ND			
2,4,6-TRICHLOROPHENOL	NA	ND	ND	ND	ND	ND					ND			
2,4-DICHLOROPHENOL	0.4	ND	ND	ND	ND	ND					ND			
2,4-DIMETHYLPHENOL	NA	ND	ND	ND	ND	0.21 J					ND			
2,4-DINITROPHENOL	0.2 or MDL	ND	ND	ND	ND	ND					ND			
2,4-DINITROTOLUENE	NA	ND	ND	ND	ND	ND					ND			
2,6-DINITROTOLUENE	1	ND	ND	ND	ND	ND					ND			
2-CHLORONAPHTHALENE	NA	ND	ND	ND	ND	ND					ND			
2-CHLOROPHENOL	0.8	ND	ND	ND	ND	ND					ND			
2-METHYLNAPHTHALENE	36.4	0.43 J	7.2	0.19 J	0.2 J	0.74					ND			
2-METHYLPHENOL	0.1 or MDL	ND	ND	ND	ND	ND					ND			
2-NITROANILINE	0.43 or MDL	ND	ND	ND	ND	ND					ND			
2-NITROPHENOL	0.33 or MDL	ND	ND	ND	ND	ND					ND			
3,3'-DICHLOROBENZIDINE	NA	ND	ND	ND	ND	ND					ND			
3+4-METHYLPHENOL	0.9	ND	ND	ND	ND	ND					ND			
3-NITROANILINE	0.5 or MDL	ND	ND	ND	ND	ND					ND			
4,6-DINITRO-2-METHYLPHENOL	NA	ND	ND	ND	ND	ND					ND			
4-BROMOPHENYL PHENYL ETHER	NA	ND	ND	ND	ND	ND					ND			
4-CHLORO-3-METHYLPHENOL	0.24 or MDL	ND	ND	ND	ND	ND					ND			
4-CHLOROANILINE	0.22 or MDL	ND	ND	ND	ND	ND					ND			
4-CHLOROPHENYL PHENYL ETHER	NA	ND	ND	ND	ND	ND					ND			
4-NITROANILINE	NA	ND	ND	ND	ND	ND					ND			
4-NITROPHENOL	0.1 or MDL	ND	ND	ND	ND	ND					ND			
ACENAPHTHENE	50	ND	0.92 J	ND	ND	1.6	3.7 J	ND	1.6 J	ND	0.17 J	2.1 J	2.6 J	2.8 J
ACENAPHTHYLENE	50	0.2 J	ND	ND	ND	ND		ND		ND	0.11 J	ND	ND	2.9 J
ANTHRACENE	50	0.15 J	0.67 J	0.069 J	0.11 J	1.1	4.8	ND	1.3 J	ND	0.16 J	5.5 J	6.8 J	11
BENZO(A)ANTHRACENE	0.224 or MDL	1.2	1.3 J	0.26 J	0.35 J	0.76	12	ND	2.5 J	ND	0.49	20	21	30
BENZO(A)PYRENE	0.061 or MDL	0.84	1.6 J	0.29 J	0.37 J	0.62	11	ND	2.1 J	ND	0.49	19	19	26
BENZO(B)FLUORANTHENE	0.22 or MDL	1.1	1.7	0.27 J	0.3 J	0.6	9.6	ND	2.1 J	ND	0.4 J	15	16	21
BENZO(G,H,I)PERYLENE	50	0.7	1 J	0.2 J	0.26 J	0.37 J	7.3	ND	1.7 J	ND	0.31 J	12	12	15
BENZO(K)FLUORANTHENE	0.22 or MDL	1	1.3 J	0.21 J	0.33 J	0.59	8.9	ND	1.6 J	ND	0.41 J	15	16	21
BENZYL ALCOHOL	50	ND	ND	ND	ND	ND					ND			
BIS(1-CHLOROISOPROPYL) ETHER	NA	ND	ND	ND	ND	ND					ND			

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 2, 4,6, 7, 17										Millings		
Field Sample ID	Screening Value TAGM 4046	SI-2-B1-A-1	SI-4-B1-A-1	SI-6-B1-A-1	SI-6-B1-A-2	SI-7-B1-A-1	SI-7-B27-D-1	SI-7-B29-E-1	SI-7-B30-D-1	SI-7-B31-D-1	SI-17-B1-A-1	SI-14-S1-A-1	SI-14-S1-A-2	SI-14-S2-A-1
Depth Interval (ft)	(mg/kg)	4.0 - 5.0	6.0 - 6.5	9.0 - 10.0	9.0 - 10.0	8.5 - 9.0	6.0 - 7.0	12.0 - 13.0	14.0 - 15.0	14.0 - 15.0	8.5 - 9.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
BIS(2-CHLOROETHOXY)METHANE	NA	ND	ND	ND	ND	ND					ND			
BIS(2-CHLOROETHYL) ETHER	NA	ND	ND	ND	ND	ND					ND			
BIS(2-ETHYLHEXYL) PHTHALATE	50	ND	ND	ND	ND	1.3					ND			
BUTYL BENZYL PHTHALATE	50	ND	ND	ND	ND	ND					ND			
CARBAZOLE	NA	0.16 J	ND	ND	ND	0.33 J					ND			
CHRYSENE	0.4	1.6	2	0.38 J	0.47 J	0.78	13	ND	3.2 J	ND	0.57	19	20	31
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	0.21 J	ND	ND	ND	ND	2.5 J	ND	ND	ND	ND	4.3 J	3.8 J	5.5 J
DIBENZOFURAN	6.2	0.21 J	ND	0.064 J	ND	1.3					ND			
DIETHYL PHTHALATE	7.1	ND	ND	ND	ND	ND					ND			
DIMETHYL PHTHALATE	2	ND	ND	ND	ND	ND					ND			
DI-N-BUTYL PHTHALATE	8.1	0.054 J	9.4	0.067 J	0.1 J	0.17 J					ND			
DI-N-OCTYL PHTHALATE	50	ND	ND	ND	ND	ND					ND			
FLUORANTHENE	50	2.3	2.8	0.39 J	0.54 J	3.1	26	ND	7.2		0.66	40	40	74
FLUORENE	50	ND	1 J	ND	ND	1.8	3.9 J	0.54 J	2 J		0.068 J	1.8 J	2.6 J	5.2 J
HEXACHLOROBENZENE	0.41	ND	ND	ND	ND	ND					ND			
HEXACHLOROBUTADIENE	NA	ND	ND	ND	ND	ND					ND			
HEXACHLOROCYCLOPENTADIENE	NA	ND	ND	ND	ND	ND					ND			
HEXACHLOROETHANE	NA	ND	ND	ND	ND	ND					ND			
INDENO(1,2,3-CD)PYRENE	3.2	0.63	0.83 J	0.17 J	0.21 J	0.28 J	6.4	ND	1.2 J	ND	0.28 J	11	11 J	14
ISOPHORONE	4.4	ND	ND	ND	ND	ND					ND			
NAPHTHALENE	13	0.33 J	4.7	0.13 J	0.16 J	0.88	1.9 J	ND	1.1 J	ND	ND	ND	ND	2 J
NITROBENZENE	0.2 or MDL	ND	ND	ND	ND	ND					ND			
N-NITROSODIMETHYLAMINE	NA	ND	ND	ND	ND	ND					ND			
N-NITROSODI-N-PROPYLAMINE	NA	ND	ND	ND	ND	ND					ND			
N-NITROSODIPHENYLAMINE	NA	ND	ND	ND	ND	ND					ND			
PENTACHLOROPHENOL (PCP)	1 or MDL	ND	ND	ND	ND	ND					ND			
PHENANTHRENE	50	0.79	2.8	0.4 J	0.53 J	6.2	19	ND	7.5	ND	0.57	20	25	50
PHENOL	0.03 or MDL	ND	ND	ND	ND	ND					ND			
PYRENE	50	2.3	2.9	0.47	0.67 J	2	23	0.053 J	6.5	ND	0.93	28	32	49
Total C-PAHs	10	6.58	8.73	1.58	2.03	3.63	63.4	ND	12.7	ND	2.64	103.3	106.8	148.5
Total Semi-Volatile	500	14.204	42.12	3.56	4.6	24.73	153	0.593	41.6	ND	5.618	212.7	227.8	360.4

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	Millings				PAOC 34								
Field Sample ID	Screening Value TAGM 4046	SI-15-S1-A-1	SI-15-S2-A-1	SI-32-S1-A-1	SI-32-S2-A-1	SI-34-B1-A-1	SI-34-B1-A-2	SI-34-B1-B-1	SI-34-B2-A-1	SI-34-B2-B-1	SI-34-B3-A-1	SI-34-B3-B-1	SI-34-B4-A-1	SI-34-B4-B-1
Depth Interval (ft)	(mg/kg)	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	4.5 - 5.0	4.5 - 5.0	8.0 - 8.5	4.5 - 5.0	8.0 - 8.5	4.5 - 5.0	8.0 - 8.5	4.5 - 5.0	8.0 - 8.5
SVOCs (mg/Kg) TCL, STARS, PAHs														
1,2,4-TRICHLOROBENZENE	3.4													
1,2-DICHLOROBENZENE	7.9													
1,3-DICHLOROBENZENE	1.6													
1,4-DICHLOROBENZENE	8.5													
2,4,5-TRICHLOROPHENOL	0.1													
2,4,6-TRICHLOROPHENOL	NA													
2,4-DICHLOROPHENOL	0.4													
2,4-DIMETHYLPHENOL	NA													
2,4-DINITROPHENOL	0.2 or MDL													
2,4-DINITROTOLUENE	NA													
2,6-DINITROTOLUENE	1													
2-CHLORONAPHTHALENE	NA													
2-CHLOROPHENOL	0.8													
2-METHYLNAPHTHALENE	36.4													
2-METHYLPHENOL	0.1 or MDL													
2-NITROANILINE	0.43 or MDL													
2-NITROPHENOL	0.33 or MDL													
3,3'-DICHLOROBENZIDINE	NA													
3+4-METHYLPHENOL	0.9													
3-NITROANILINE	0.5 or MDL													
4,6-DINITRO-2-METHYLPHENOL	NA													
4-BROMOPHENYL PHENYL ETHER	NA													
4-CHLORO-3-METHYLPHENOL	0.24 or MDL													
4-CHLOROANILINE	0.22 or MDL													
4-CHLOROPHENYL PHENYL ETHER	NA													
4-NITROANILINE	NA													
4-NITROPHENOL	0.1 or MDL													
ACENAPHTHENE	50	2.9 J	ND	2.3 J	2.4 J	ND	ND	ND	3.7	ND	2.1 J	ND	0.041 J	ND
ACENAPHTHYLENE	50	ND	ND	ND	ND	ND	ND	ND	2.2	ND	1.8 J	ND	0.036 J	ND
ANTHRACENE	50	8.7 J	5.1 J	7.8 J	6.6 J	ND	ND	ND	14	ND	9.3 J	ND	0.11 J	ND
BENZO(A)ANTHRACENE	0.224 or MDL	23	18 J	27	23	ND	ND	ND	34	ND	21	ND	0.39	ND
BENZO(A)PYRENE	0.061 or MDL	24	18 J	25	20	ND	ND	ND	34	ND	19	ND	0.4	ND
BENZO(B)FLUORANTHENE	0.22 or MDL	18 J	15 J	21	17	ND	ND	ND	23	ND	14	ND	0.36	ND
BENZO(G,H,I)PERYLENE	50	18 J	12 J	14 J	13	ND	ND	ND	19	ND	10	ND	0.24 J	ND
BENZO(K)FLUORANTHENE	0.22 or MDL	19	14 J	20	17	ND	ND	ND	22	ND	15	ND	0.33 J	ND
BENZYL ALCOHOL	50													
BIS(1-CHLOROISOPROPYL) ETHER	NA													

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

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FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	Millings				PAOC 34								
Field Sample ID	Screening Value TAGM 4046	SI-15-S1-A-1	SI-15-S2-A-1	SI-32-S1-A-1	SI-32-S2-A-1	SI-34-B1-A-1	SI-34-B1-A-2	SI-34-B1-B-1	SI-34-B2-A-1	SI-34-B2-B-1	SI-34-B3-A-1	SI-34-B3-B-1	SI-34-B4-A-1	SI-34-B4-B-1
Depth Interval (ft)	(mg/kg)	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	4.5 - 5.0	4.5 - 5.0	8.0 - 8.5	4.5 - 5.0	8.0 - 8.5	4.5 - 5.0	8.0 - 8.5	4.5 - 5.0	8.0 - 8.5
SVOCs (mg/Kg) TCL, STARS, PAHs														
BIS(2-CHLOROETHOXY)METHANE	NA													
BIS(2-CHLOROETHYL) ETHER	NA													
BIS(2-ETHYLHEXYL) PHTHALATE	50													
BUTYL BENZYL PHTHALATE	50													
CARBAZOLE	NA													
CHRYSENE	0.4	22	18 J	25	23	ND	ND	ND	34	ND	20	ND	0.42	ND
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	5.6 J	3.5 J	4.8 J	4.5 J	ND	ND	ND	5.2	ND	3.5 J	ND	0.082 J	ND
DIBENZOFURAN	6.2													
DIETHYL PHTHALATE	7.1													
DIMETHYL PHTHALATE	2													
DI-N-BUTYL PHTHALATE	8.1													
DI-N-OCTYL PHTHALATE	50													
FLUORANTHENE	50	45	32 J	52	40	ND	ND	ND	72	ND	56	ND	0.84	ND
FLUORENE	50	2.5 J	ND	2.3 J	2.3 J	ND	ND	ND	3.9	ND	3.8 J	ND	0.04 J	ND
HEXACHLOROBENZENE	0.41													
HEXACHLOROBUTADIENE	NA													
HEXACHLOROCYCLOPENTADIENE	NA													
HEXACHLOROETHANE	NA													
INDENO(1,2,3-CD)PYRENE	3.2	15 J	11 J	13 J	12	ND	ND	ND	15	ND	9.2 J	ND	0.21 J	ND
ISOPHORONE	4.4													
NAPHTHALENE	13	ND	ND	ND	ND	ND	ND	ND	0.92 J	ND	ND	ND	ND	ND
NITROBENZENE	0.2 or MDL													
N-NITROSODIMETHYLAMINE	NA													
N-NITROSODI-N-PROPYLAMINE	NA													
N-NITROSODIPHENYLAMINE	NA													
PENTACHLOROPHENOL (PCP)	1 or MDL													
PHENANTHRENE	50	30	18 J	24	23	ND	ND	ND	53	ND	41	ND	0.42	ND
PHENOL	0.03 or MDL													
PYRENE	50	33	24 J	38	37	ND	ND	ND	86	ND	39	ND	0.57	ND
Total C-PAHs	10	126.6	97.5	135.8	116.5	ND	ND	ND	167.2	ND	101.7	ND	2.192	ND
Total Semi-Volatile	500	266.7	188.6	276.2	240.8	ND	ND	ND	421.92	ND	264.7	ND	4.489	ND

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 37												
Field Sample ID	Screening Value TAGM 4046	SI-37-B3-A-1	SI-37-B3-B-1	SI-37-B4-A-1	SI-37-B4-A-2	SI-37-B4-B-1	SI-37-B7-A-1	SI-37-B7-B-1	SI-37-B8-A-1	SI-37-B8-B-1	SI-37-B12-A-1	SI-37-B12-B-1	SI-37-B13-A-1	SI-37-B13-B-1
Depth Interval (ft)	(mg/kg)	8.0 - 8.5	6.0 - 6.5	7.5 - 8.0	7.5 - 8.0	5.0 - 5.5	6.0 - 6.5	9.0 - 9.5	5.0 - 5.4	11.0 - 11.4	6.6 - 7.0	7.6 - 8.0	5.5 - 6.0	7.5 - 8.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
1,2,4-TRICHLOROBENZENE	3.4													
1,2-DICHLOROBENZENE	7.9													
1,3-DICHLOROBENZENE	1.6													
1,4-DICHLOROBENZENE	8.5													
2,4,5-TRICHLOROPHENOL	0.1													
2,4,6-TRICHLOROPHENOL	NA													
2,4-DICHLOROPHENOL	0.4													
2,4-DIMETHYLPHENOL	NA													
2,4-DINITROPHENOL	0.2 or MDL													
2,4-DINITROTOLUENE	NA													
2,6-DINITROTOLUENE	1													
2-CHLORONAPHTHALENE	NA													
2-CHLOROPHENOL	0.8													
2-METHYLNAPHTHALENE	36.4													
2-METHYLPHENOL	0.1 or MDL													
2-NITROANILINE	0.43 or MDL													
2-NITROPHENOL	0.33 or MDL													
3,3'-DICHLOROBENZIDINE	NA													
3+4-METHYLPHENOL	0.9													
3-NITROANILINE	0.5 or MDL													
4,6-DINITRO-2-METHYLPHENOL	NA													
4-BROMOPHENYL PHENYL ETHER	NA													
4-CHLORO-3-METHYLPHENOL	0.24 or MDL													
4-CHLOROANILINE	0.22 or MDL													
4-CHLOROPHENYL PHENYL ETHER	NA													
4-NITROANILINE	NA													
4-NITROPHENOL	0.1 or MDL													
ACENAPHTHENE	50	0.44 J	ND	ND	ND	0.34 J	ND	ND	0.22 J	ND	ND	ND	ND	ND
ACENAPHTHYLENE	50													
ANTHRACENE	50	2.6	ND	ND	ND	3.1	ND	ND	0.72 J	ND	ND	ND	ND	ND
BENZO(A)ANTHRACENE	0.224 or MDL	5.5	ND	ND	ND	11	ND	ND	2	ND	ND	ND	ND	ND
BENZO(A)PYRENE	0.061 or MDL	3.3	ND	ND	ND	8.8	ND	ND	1.5	ND	ND	ND	ND	ND
BENZO(B)FLUORANTHENE	0.22 or MDL	2.2	ND	ND	ND	7.8	ND	ND	1	ND	ND	ND	ND	ND
BENZO(G,H,I)PERYLENE	50	2.3	ND	ND	ND	6.6	ND	ND	1.1	ND	ND	ND	ND	ND
BENZO(K)FLUORANTHENE	0.22 or MDL	2.3	ND	ND	ND	7.4	ND	ND	1	ND	ND	ND	ND	ND
BENZYL ALCOHOL	50													
BIS(1-CHLOROISOPROPYL) ETHER	NA													

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

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FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 37												
Field Sample ID	Screening Value TAGM 4046	SI-37-B3-A-1	SI-37-B3-B-1	SI-37-B4-A-1	SI-37-B4-A-2	SI-37-B4-B-1	SI-37-B7-A-1	SI-37-B7-B-1	SI-37-B8-A-1	SI-37-B8-B-1	SI-37-B12-A-1	SI-37-B12-B-1	SI-37-B13-A-1	SI-37-B13-B-1
Depth Interval (ft)	(mg/kg)	8.0 - 8.5	6.0 - 6.5	7.5 - 8.0	7.5 - 8.0	5.0 - 5.5	6.0 - 6.5	9.0 - 9.5	5.0 - 5.4	11.0 - 11.4	6.6 - 7.0	7.6 - 8.0	5.5 - 6.0	7.5 - 8.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
BIS(2-CHLOROETHOXY)METHANE	NA													
BIS(2-CHLOROETHYL) ETHER	NA													
BIS(2-ETHYLHEXYL) PHTHALATE	50													
BUTYL BENZYL PHTHALATE	50													
CARBAZOLE	NA													
CHRYSENE	0.4	6	ND	ND	ND	11	ND	ND	2.2	ND	ND	ND	ND	ND
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	0.6 J	ND	ND	ND	2.2 J	ND	ND	0.28 J	ND	ND	ND	ND	ND
DIBENZOFURAN	6.2													
DIETHYL PHTHALATE	7.1													
DIMETHYL PHTHALATE	2													
DI-N-BUTYL PHTHALATE	8.1													
DI-N-OCTYL PHTHALATE	50													
FLUORANTHENE	50	11	ND	ND	ND	21	ND	ND	4	ND	ND	ND	ND	ND
FLUORENE	50	1.3 J	ND	ND	ND	0.81 J	ND	ND	0.29 J	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	0.41													
HEXACHLOROBUTADIENE	NA													
HEXACHLOROCYCLOPENTADIENE	NA													
HEXACHLOROETHANE	NA													
INDENO(1,2,3-CD)PYRENE	3.2	1.8 J	ND	ND	ND	6.1	ND	ND	0.84	ND	ND	ND	ND	ND
ISOPHORONE	4.4													
NAPHTHALENE	13	ND	ND	ND	ND	0.57 J	ND	ND	ND	ND	ND	ND	ND	ND
NITROBENZENE	0.2 or MDL													
N-NITROSODIMETHYLAMINE	NA													
N-NITROSODI-N-PROPYLAMINE	NA													
N-NITROSODIPHENYLAMINE	NA													
PENTACHLOROPHENOL (PCP)	1 or MDL													
PHENANTHRENE	50	18	ND	ND	ND	11	ND	ND	4	ND	ND	ND	ND	ND
PHENOL	0.03 or MDL													
PYRENE	50	13	ND	ND	ND	16	ND	ND	5.3	ND	ND	ND	ND	ND
Total C-PAHs	10	21.7	ND	ND	ND	54.3	ND	ND	8.82	ND	ND	ND	ND	ND
Total Semi-Volatile	500	70.34	ND	ND	ND	113.72	ND	ND	24.45	ND	ND	ND	ND	ND

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

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FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 37		PAOC 39									PAOC 43	
Field Sample ID	Screening Value TAGM 4046	SI-37-B17-A-A	SI-37-B18-A-1	SI-39-B1-A-1	SI-39-B2-A-1	SI-39-B3-A-1	SI-39-B4-A-1	SI-39-B5-A-1	SI-39-B5-A-2	SI-39-B6-A-1	SI-39-B7-A-1	SI-39-B8-A-1	SI-43-B1-A-1	SI-43-B1-B-1
Depth Interval (ft)	(mg/kg)	8.5 - 9.0	9.0 - 10.0	4.0 - 4.5	7.0 - 8.0	8.0 - 8.5	10.0 - 11.0	8.0 - 8.5	8.0 - 8.5	4.0 - 4.5	4.5 - 5.0	5.0 - 5.5	7.0 - 8.0	16.0 - 17.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
1,2,4-TRICHLOROBENZENE	3.4													
1,2-DICHLOROBENZENE	7.9													
1,3-DICHLOROBENZENE	1.6													
1,4-DICHLOROBENZENE	8.5													
2,4,5-TRICHLOROPHENOL	0.1													
2,4,6-TRICHLOROPHENOL	NA													
2,4-DICHLOROPHENOL	0.4													
2,4-DIMETHYLPHENOL	NA													
2,4-DINITROPHENOL	0.2 or MDL													
2,4-DINITROTOLUENE	NA													
2,6-DINITROTOLUENE	1													
2-CHLORONAPHTHALENE	NA													
2-CHLOROPHENOL	0.8													
2-METHYLNAPHTHALENE	36.4													
2-METHYLPHENOL	0.1 or MDL													
2-NITROANILINE	0.43 or MDL													
2-NITROPHENOL	0.33 or MDL													
3,3'-DICHLOROBENZIDINE	NA													
3+4-METHYLPHENOL	0.9													
3-NITROANILINE	0.5 or MDL													
4,6-DINITRO-2-METHYLPHENOL	NA													
4-BROMOPHENYL PHENYL ETHER	NA													
4-CHLORO-3-METHYLPHENOL	0.24 or MDL													
4-CHLOROANILINE	0.22 or MDL													
4-CHLOROPHENYL PHENYL ETHER	NA													
4-NITROANILINE	NA													
4-NITROPHENOL	0.1 or MDL													
ACENAPHTHENE	50	0.14 J	ND	0.26 J	ND	0.096 J	0.21 J	1.4 J	1.2 J	ND	15 J	13 J	ND	ND
ACENAPHTHYLENE	50												ND	ND
ANTHRACENE	50	0.28 J	ND	1.1 J	ND	0.097 J	0.39 J	2.8 J	1.5 J	0.25 J	39	34	7.1 J	ND
BENZO(A)ANTHRACENE	0.224 or MDL	0.52	ND	3	ND	0.41	0.71 J	5.8	2.5 J	0.73 J	74	68	ND	0.04 J
BENZO(A)PYRENE	0.061 or MDL	0.35 J	ND	3.2	ND	0.34 J	0.61 J	6.1	1.7 J	0.83 J	66	66	ND	ND
BENZO(B)FLUORANTHENE	0.22 or MDL	0.29 J	ND	2.4	ND	0.25 J	0.42 J	4.7	1.3 J	0.71 J	49	54	ND	ND
BENZO(G,H,I)PERYLENE	50	0.23 J	ND	2.1	ND	0.19 J	0.28 J	3.5 J	0.7 J	0.5 J	41	29	ND	ND
BENZO(K)FLUORANTHENE	0.22 or MDL	0.28 J	ND	2.3	ND	0.21 J	0.43 J	4.7	1 J	0.66 J	52	50	ND	ND
BENZYL ALCOHOL	50													
BIS(1-CHLOROISOPROPYL) ETHER	NA													

See Notes on Page 14.

TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 37		PAOC 39									PAOC 43	
Field Sample ID	Screening Value TAGM 4046	SI-37-B17-A-A	SI-37-B18-A-1	SI-39-B1-A-1	SI-39-B2-A-1	SI-39-B3-A-1	SI-39-B4-A-1	SI-39-B5-A-1	SI-39-B5-A-2	SI-39-B6-A-1	SI-39-B7-A-1	SI-39-B8-A-1	SI-43-B1-A-1	SI-43-B1-B-1
Depth Interval (ft)	(mg/kg)	8.5 - 9.0	9.0 - 10.0	4.0 - 4.5	7.0 - 8.0	8.0 - 8.5	10.0 - 11.0	8.0 - 8.5	8.0 - 8.5	4.0 - 4.5	4.5 - 5.0	5.0 - 5.5	7.0 - 8.0	16.0 - 17.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
BIS(2-CHLOROETHOXY)METHANE	NA													
BIS(2-CHLOROETHYL) ETHER	NA													
BIS(2-ETHYLHEXYL) PHTHALATE	50													
BUTYL BENZYL PHTHALATE	50													
CARBAZOLE	NA													
CHRYSENE	0.4	0.63	ND	3.3	ND	0.47	0.74 J	6.8	2.7 J	0.82 J	71	67	ND	0.049 J
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	0.093 J	ND	0.64 J	ND	0.066 J	ND	1.3 J	ND	ND	14 J	11 J	ND	ND
DIBENZOFURAN	6.2													
DIETHYL PHTHALATE	7.1													
DIMETHYL PHTHALATE	2													
DI-N-BUTYL PHTHALATE	8.1													
DI-N-OCTYL PHTHALATE	50													
FLUORANTHENE	50	1.5	ND	5	1.6 J	0.51	1.4 J	12	6.4	1.3 J	160	160	14 J	0.082 J
FLUORENE	50	0.15 J	ND	0.34 J	ND	ND	ND	1.8 J	1.3 J	ND	16 J	13 J	11 J	ND
HEXACHLOROBENZENE	0.41													
HEXACHLOROBUTADIENE	NA													
HEXACHLOROCYCLOPENTADIENE	NA													
HEXACHLOROETHANE	NA													
INDENO(1,2,3-CD)PYRENE	3.2	0.21 J	ND	1.7 J	ND	0.15 J	0.23 J	3 J	0.65 J	0.43 J	37	27	ND	ND
ISOPHORONE	4.4													
NAPHTHALENE	13	ND	ND	0.38 J	ND	0.21 J	ND	ND	ND	ND	3 J	3 J	ND	ND
NITROBENZENE	0.2 or MDL													
N-NITROSODIMETHYLAMINE	NA													
N-NITROSODI-N-PROPYLAMINE	NA													
N-NITROSODIPHENYLAMINE	NA													
PENTACHLOROPHENOL (PCP)	1 or MDL													
PHENANTHRENE	50	0.43	ND	2.4	ND	0.064 J	0.97 J	9.3	5.4	0.55 J	140	110	31 J	0.044 J
PHENOL	0.03 or MDL													
PYRENE	50	0.91	ND	5.1	3.8 J	0.56	1.3 J	7.6	4.4	1.2 J	120	100	18 J	0.061 J
Total C-PAHs	10	2.373	ND	16.54	ND	1.896	3.14	32.4	9.85	4.18	363	343	ND	0.089
Total Semi-Volatile	500	6.013	ND	33.22	5.4	3.623	7.69	70.8	30.75	7.98	897	805	81.1	0.276

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 43												
Field Sample ID	Screening Value TAGM 4046	SI-43-B1-B-2	SI-43-B2-A-1	SI-43-B2-B-1	SI-43-B3-A-1	SI-43-B3-B-1	SI-43-B4-A-1	SI-43-B4-B-1	SI-43-B5-A-1	SI-43-B5-B-1	SI-43-B6-A-1	SI-43-B6-B-1	SI-43-B14-A-1	SI-43-B14-B-1
Depth Interval (ft)	(mg/kg)	16.0 - 17.0	7.0 - 7.5	14.5 - 15.0	7.0 - 7.5	13.0 - 13.5	7.0 - 7.5	13.0 - 13.5	6.5 - 7.0	12.5 - 13.0	7.5 - 8.0	15.5 - 16.0	7.0 - 7.5	13.0 - 13.5
SVOCs (mg/Kg) TCL, STARS, PAHs														
1,2,4-TRICHLOROBENZENE	3.4													
1,2-DICHLOROBENZENE	7.9													
1,3-DICHLOROBENZENE	1.6													
1,4-DICHLOROBENZENE	8.5													
2,4,5-TRICHLOROPHENOL	0.1													
2,4,6-TRICHLOROPHENOL	NA													
2,4-DICHLOROPHENOL	0.4													
2,4-DIMETHYLPHENOL	NA													
2,4-DINITROPHENOL	0.2 or MDL													
2,4-DINITROTOLUENE	NA													
2,6-DINITROTOLUENE	1													
2-CHLORONAPHTHALENE	NA													
2-CHLOROPHENOL	0.8													
2-METHYLNAPHTHALENE	36.4													
2-METHYLPHENOL	0.1 or MDL													
2-NITROANILINE	0.43 or MDL													
2-NITROPHENOL	0.33 or MDL													
3,3'-DICHLOROBENZIDINE	NA													
3+4-METHYLPHENOL	0.9													
3-NITROANILINE	0.5 or MDL													
4,6-DINITRO-2-METHYLPHENOL	NA													
4-BROMOPHENYL PHENYL ETHER	NA													
4-CHLORO-3-METHYLPHENOL	0.24 or MDL													
4-CHLOROANILINE	0.22 or MDL													
4-CHLOROPHENYL PHENYL ETHER	NA													
4-NITROANILINE	NA													
4-NITROPHENOL	0.1 or MDL													
ACENAPHTHENE	50	ND	ND	ND	ND	0.053 J	ND	0.071 J	2	17 J	120	0.13 J	ND	ND
ACENAPHTHYLENE	50	ND	0.3 J	ND	ND	0.049 J	ND	0.082 J	0.57 J	ND	23 J	0.24 J	0.35 J	ND
ANTHRACENE	50	ND	0.45 J	ND	1 J	0.07 J	ND	0.1 J	2.8	14 J	230	0.24 J	0.33 J	ND
BENZO(A)ANTHRACENE	0.224 or MDL	ND	1.5	ND	4.2 J	0.2 J	0.93 J	0.32 J	5.1	21 J	360	0.87	1.5	0.043 J
BENZO(A)PYRENE	0.061 or MDL	ND	1.1	ND	4.2 J	0.2 J	1 J	0.31 J	5	17 J	340	0.85	1.6	ND
BENZO(B)FLUORANTHENE	0.22 or MDL	ND	1.4	ND	3.1 J	0.15 J	0.83 J	0.26 J	4	17 J	250	0.78	1.5	ND
BENZO(G,H,I)PERYLENE	50	ND	0.81 J	ND	2.4 J	0.098 J	0.65 J	0.16 J	2.5	ND	230	0.61	1	0.043 J
BENZO(K)FLUORANTHENE	0.22 or MDL	ND	1.4	ND	3.4 J	0.16 J	0.75 J	0.25 J	3.8	ND	260	0.65	1.4	ND
BENZYL ALCOHOL	50													
BIS(1-CHLOROISOPROPYL) ETHER	NA													

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 43												
Field Sample ID	Screening Value TAGM 4046	SI-43-B1-B-2	SI-43-B2-A-1	SI-43-B2-B-1	SI-43-B3-A-1	SI-43-B3-B-1	SI-43-B4-A-1	SI-43-B4-B-1	SI-43-B5-A-1	SI-43-B5-B-1	SI-43-B6-A-1	SI-43-B6-B-1	SI-43-B14-A-1	SI-43-B14-B-1
Depth Interval (ft)	(mg/kg)	16.0 - 17.0	7.0 - 7.5	14.5 - 15.0	7.0 - 7.5	13.0 - 13.5	7.0 - 7.5	13.0 - 13.5	6.5 - 7.0	12.5 - 13.0	7.5 - 8.0	15.5 - 16.0	7.0 - 7.5	13.0 - 13.5
SVOCs (mg/Kg) TCL, STARS, PAHs														
BIS(2-CHLOROETHOXY)METHANE	NA													
BIS(2-CHLOROETHYL) ETHER	NA													
BIS(2-ETHYLHEXYL) PHTHALATE	50													
BUTYL BENZYL PHTHALATE	50													
CARBAZOLE	NA													
CHRYSENE	0.4	ND	1.9	ND	4.9 J	0.22 J	1.2 J	0.38 J	5.7	24 J	360	1	1.6	0.05 J
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	ND	0.3 J	ND	ND	ND	ND	0.059 J	1.1 J	ND	83	0.21 J	0.45	ND
DIBENZOFURAN	6.2													
DIETHYL PHTHALATE	7.1													
DIMETHYL PHTHALATE	2													
DI-N-BUTYL PHTHALATE	8.1													
DI-N-OCTYL PHTHALATE	50													
FLUORANTHENE	50	0.061 J	3.5	ND	7.4 J	0.4 J	1.7 J	0.81	11	48 J	750	1.8	1.8	0.083 J
FLUORENE	50	ND	0.15 J	ND	ND	ND	ND	ND	2.7	18 J	160	0.078 J	ND	ND
HEXACHLOROBENZENE	0.41													
HEXACHLOROBUTADIENE	NA													
HEXACHLOROCYCLOPENTADIENE	NA													
HEXACHLOROETHANE	NA													
INDENO(1,2,3-CD)PYRENE	3.2	ND	0.76 J	ND	2.2 J	0.09 J	0.54 J	0.15 J	2.3	ND	200	0.54	0.98	ND
ISOPHORONE	4.4													
NAPHTHALENE	13	ND	0.15 J	ND	ND	ND	ND	ND	0.43 J	19 J	56 J	0.073 J	0.29 J	ND
NITROBENZENE	0.2 or MDL													
N-NITROSODIMETHYLAMINE	NA													
N-NITROSODI-N-PROPYLAMINE	NA													
N-NITROSODIPHENYLAMINE	NA													
PENTACHLOROPHENOL (PCP)	1 or MDL													
PHENANTHRENE	50	ND	2	ND	3.4 J	0.19 J	1.4 J	0.23 J	12	68 J	710	0.84	0.42	0.045 J
PHENOL	0.03 or MDL													
PYRENE	50	0.044 J	2.2	ND	6.4 J	0.36 J	1.5 J	0.63	7.8	41 J	550	1.4	1.8	0.076 J
Total C-PAHs	10	ND	8.36	ND	22	1.02	5.25	1.729	27	79	1853	4.9	9.03	0.093
Total Semi-Volatile	500	0.105	17.92	ND	42.6	2.24	10.5	3.812	68.8	304	4682	10.311	15.02	0.34

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 43							PAOC 21				
Field Sample ID	Screening Value TAGM 4046	SI-43-B18-A-1	SI-43-B18-B-1	SI-43-B19-A-1	SI-43-B19-A-2	SI-43-B20-A-1	SI-43-B22-A-1	SI-43-B23-A-1	SI-21-B1-A-1	SI-21-B1-A-2	SI-21-B2-A-1	SI-21-B3-A-1	SI-21-B4-A-1
Depth Interval (ft)	(mg/kg)	13.4 - 14.0	16.0 - 17.0	12.0 - 13.0	12.0 - 13.0	12.0 - 13.0	12.0 - 13.0	13.0 - 14.0	6.5 - 7.0	6.5 - 7.0	8.0 - 8.5	1.5 - 2.0	6.5 - 7.0
SVOCs (mg/Kg) TCL, STARS, PAHs													
1,2,4-TRICHLOROBENZENE	3.4	ND	ND			ND							
1,2-DICHLOROBENZENE	7.9	ND	ND			ND							
1,3-DICHLOROBENZENE	1.6	ND	ND			ND							
1,4-DICHLOROBENZENE	8.5	ND	ND			ND							
2,4,5-TRICHLOROPHENOL	0.1	ND	ND			ND							
2,4,6-TRICHLOROPHENOL	NA	ND	ND			ND							
2,4-DICHLOROPHENOL	0.4	ND	ND			ND							
2,4-DIMETHYLPHENOL	NA	ND	ND			ND							
2,4-DINITROPHENOL	0.2 or MDL	ND	ND			ND							
2,4-DINITROTOLUENE	NA	ND	ND			ND							
2,6-DINITROTOLUENE	1	ND	ND			ND							
2-CHLORONAPHTHALENE	NA	ND	ND			ND							
2-CHLOROPHENOL	0.8	ND	ND			ND							
2-METHYLNAPHTHALENE	36.4	0.56 J	1.5 J			2.1 J							
2-METHYLPHENOL	0.1 or MDL	ND	ND			ND							
2-NITROANILINE	0.43 or MDL	ND	ND			ND							
2-NITROPHENOL	0.33 or MDL	ND	ND			ND							
3,3'-DICHLOROBENZIDINE	NA	ND	ND			ND							
3+4-METHYLPHENOL	0.9	ND	ND			ND							
3-NITROANILINE	0.5 or MDL	ND	ND			ND							
4,6-DINITRO-2-METHYLPHENOL	NA	ND	ND			ND							
4-BROMOPHENYL PHENYL ETHER	NA	ND	ND			ND							
4-CHLORO-3-METHYLPHENOL	0.24 or MDL	ND	ND			ND							
4-CHLOROANILINE	0.22 or MDL	ND	ND			ND							
4-CHLOROPHENYL PHENYL ETHER	NA	ND	ND			ND							
4-NITROANILINE	NA	ND	ND			ND							
4-NITROPHENOL	0.1 or MDL	ND	ND			ND							
ACENAPHTHENE	50	0.71 J	5.5	27	140	1.1 J	9.5	0.095 J	1.9 J	2.1 J	1.2 J	5.1 J	3.5 J
ACENAPHTHYLENE	50	0.4 J	ND	6.1 J	22 J	ND	1.1 J	0.24 J					
ANTHRACENE	50	1.4 J	6.9	39	220	0.96 J	9.1	0.17 J	4.9	6.1 J	2.5 J	9.2 J	6.9
BENZO(A)ANTHRACENE	0.224 or MDL	3.7	9.5	88	390	2.8 J	12	0.99	12	12	6.9	16 J	13
BENZO(A)PYRENE	0.061 or MDL	3.3	8.4	73	350	2.8 J	10	1.1	9	9.1 J	6.4	13 J	9.6
BENZO(B)FLUORANTHENE	0.22 or MDL	2.6	6.3	54	250	3.4 J	8.2	1	8.2	7.8 J	5.4	11 J	8
BENZO(G,H,I)PERYLENE	50	2.1 J	4.9	39	170	3.1 J	5.6	0.71	6.1	6.2 J	3.9	8.4 J	6.7
BENZO(K)FLUORANTHENE	0.22 or MDL	2.4 J	6.3	60	250	2.7 J	7.9	0.84	7	7.4 J	5.5	10 J	7.5
BENZYL ALCOHOL	50	ND	ND			ND							
BIS(1-CHLOROISOPROPYL) ETHER	NA												

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TABLE 5
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FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 43							PAOC 21				
Field Sample ID	Screening Value TAGM 4046	SI-43-B18-A-1	SI-43-B18-B-1	SI-43-B19-A-1	SI-43-B19-A-2	SI-43-B20-A-1	SI-43-B22-A-1	SI-43-B23-A-1	SI-21-B1-A-1	SI-21-B1-A-2	SI-21-B2-A-1	SI-21-B3-A-1	SI-21-B4-A-1
Depth Interval (ft)	(mg/kg)	13.4 - 14.0	16.0 - 17.0	12.0 - 13.0	12.0 - 13.0	12.0 - 13.0	12.0 - 13.0	13.0 - 14.0	6.5 - 7.0	6.5 - 7.0	8.0 - 8.5	1.5 - 2.0	6.5 - 7.0
SVOCs (mg/Kg) TCL, STARS, PAHs													
BIS(2-CHLOROETHOXY)METHANE	NA	ND	ND			ND							
BIS(2-CHLOROETHYL) ETHER	NA	ND	ND			ND							
BIS(2-ETHYLHEXYL) PHTHALATE	50	ND	ND			ND							
BUTYL BENZYL PHTHALATE	50	ND	ND			ND							
CARBAZOLE	NA	0.38 J	3			ND							
CHRYSENE	0.4	4.1	9.4	87	370	4.4 J	13	1.2	12	11	7.2	16 J	13
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	0.76 J	1.7 J	17 J	73	0.95 J	2.3 J	0.25 J	2.2 J	2.1 J	1.4 J	2.9 J	2.1 J
DIBENZOFURAN	6.2	0.28 J	2.1 J			ND							
DIETHYL PHTHALATE	7.1	ND	ND			ND							
DIMETHYL PHTHALATE	2	ND	ND			ND							
DI-N-BUTYL PHTHALATE	8.1	3.9	0.57 J			ND							
DI-N-OCTYL PHTHALATE	50	ND	ND			ND							
FLUORANTHENE	50	7.5	23	170	730	9.9	32	1.6	27	30	15	40	35
FLUORENE	50	0.87 J	4.1	19 J	110	2.3 J	11	ND	2 J	1.9 J	0.97 J	4.8 J	2.7 J
HEXACHLOROBENZENE	0.41	ND	ND			ND							
HEXACHLOROBUTADIENE	NA	ND	ND			ND							
HEXACHLOROCYCLOPENTADIENE	NA	ND	ND			ND							
HEXACHLOROETHANE	NA	ND	ND			ND							
INDENO(1,2,3-CD)PYRENE	3.2	1.9 J	4.6	37	170	2.4 J	5.3	0.68	5.3	5.8 J	3.7 J	8.1 J	5.9
ISOPHORONE	4.4	ND	ND			ND							
NAPHTHALENE	13	0.43 J	2.4	12 J	100	ND	6.2	0.052 J	1.2 J	ND	7.3	ND	3.7 J
NITROBENZENE	0.2 or MDL	ND	ND			ND							
N-NITROSODIMETHYLAMINE	NA	ND	ND			ND							
N-NITROSODI-N-PROPYLAMINE	NA	ND	ND			ND							
N-NITROSODIPHENYLAMINE	NA	ND	ND			ND							
PENTACHLOROPHENOL (PCP)	1 or MDL	ND	ND			ND							
PHENANTHRENE	50	6.2	23	110	670	7.5	38	0.31 J	18	21	11	31	39
PHENOL	0.03 or MDL	ND	ND			ND							
PYRENE	50	6.2	16	130	660	6.4	24	1.5	23	22	11	27	23
Total C-PAHs	10	18.76	46.2	416	1853	19.45	58.7	6.06	55.7	55.2	36.5	77	59.1
Total Semi-Volatile	500	49.69	139.17	968.1	4675	52.81	195.2	10.737	139.8	144.5	89.37	202.5	179.6

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TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

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FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC - UST												
Field Sample ID	Screening Value TAGM 4046	S1-UST-B47-A-1	S1-UST-B47-A-2	S1-UST-B48-A-1	S1-UST-B49-A-1	S1-UST-B50-A-1	S1-UST-B51-A-1	S1-UST-B52-A-1	S1-UST-B52-A-2	S1-UST-B53-A-1	S1-UST-B54-A-1	S1-UST-B56-A-1	S1-UST-B57-A-1	S1-UST-B58-A-1
Depth Interval (ft)	(mg/kg)	9.0 - 11.0	9.0 - 11.0	10.0 - 12.0	9.0 - 11.0	9.0 - 11.0	12.0 - 14.0	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0	9.0 - 10.0	10.0 -11.0	10.0 -11.0	10.0 - 12.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
1,2,4-TRICHLOROBENZENE	3.4													
1,2-DICHLOROBENZENE	7.9													
1,3-DICHLOROBENZENE	1.6													
1,4-DICHLOROBENZENE	8.5													
2,4,5-TRICHLOROPHENOL	0.1													
2,4,6-TRICHLOROPHENOL	NA													
2,4-DICHLOROPHENOL	0.4													
2,4-DIMETHYLPHENOL	NA													
2,4-DINITROPHENOL	0.2 or MDL													
2,4-DINITROTOLUENE	NA													
2,6-DINITROTOLUENE	1													
2-CHLORONAPHTHALENE	NA													
2-CHLOROPHENOL	0.8													
2-METHYLNAPHTHALENE	36.4													
2-METHYLPHENOL	0.1 or MDL													
2-NITROANILINE	0.43 or MDL													
2-NITROPHENOL	0.33 or MDL													
3,3'-DICHLOROBENZIDINE	NA													
3+4-METHYLPHENOL	0.9													
3-NITROANILINE	0.5 or MDL													
4,6-DINITRO-2-METHYLPHENOL	NA													
4-BROMOPHENYL PHENYL ETHER	NA													
4-CHLORO-3-METHYLPHENOL	0.24 or MDL													
4-CHLOROANILINE	0.22 or MDL													
4-CHLOROPHENYL PHENYL ETHER	NA													
4-NITROANILINE	NA													
4-NITROPHENOL	0.1 or MDL													
ACENAPHTHENE	50	1.9 J	2.4	4.4 J	1.9 J	1.6 J	ND	1.7 J	0.87 J	0.19 J	13	ND	3.1 J	1.4 J
ACENAPHTHYLENE	50													
ANTHRACENE	50	1.2 J	2.1	ND	ND	0.57 J	ND	0.84 J	ND	0.11 J	4.8	ND	2.8 J	0.79 J
BENZO(A)ANTHRACENE	0.224 or MDL	0.88 J	1.8 J	ND	ND	ND	ND	0.3 J	ND	ND	3	ND	3.7 J	1.3 J
BENZO(A)PYRENE	0.061 or MDL	0.59 J	1.1 J	ND	ND	ND	ND	ND	ND	ND	2.8	ND	3.6 J	1.2 J
BENZO(B)FLUORANTHENE	0.22 or MDL	0.47 J	1.1 J	ND	ND	ND	ND	ND	ND	ND	1.6 J	ND	3 J	0.87 J
BENZO(G,H,I)PERYLENE	50	0.32 J	0.71 J	ND	ND	ND	ND	ND	ND	ND	1.6 J	ND	2.8 J	0.9 J
BENZO(K)FLUORANTHENE	0.22 or MDL	0.46 J	0.96 J	ND	ND	ND	ND	ND	ND	ND	1.6 J	ND	2.7 J	0.84 J
BENZYL ALCOHOL	50													
BIS(1-CHLOROISOPROPYL) ETHER	NA													

See Notes on Page 14.

TABLE 5
SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC - UST												
Field Sample ID	Screening Value TAGM 4046	S1-UST-B47-A-1	S1-UST-B47-A-2	S1-UST-B48-A-1	S1-UST-B49-A-1	S1-UST-B50-A-1	S1-UST-B51-A-1	S1-UST-B52-A-1	S1-UST-B52-A-2	S1-UST-B53-A-1	S1-UST-B54-A-1	S1-UST-B56-A-1	S1-UST-B57-A-1	S1-UST-B58-A-1
Depth Interval (ft)	(mg/kg)	9.0 - 11.0	9.0 - 11.0	10.0 - 12.0	9.0 - 11.0	9.0 - 11.0	12.0 - 14.0	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0	9.0 - 10.0	10.0 -11.0	10.0 -11.0	10.0 - 12.0
SVOCs (mg/Kg) TCL, STARS, PAHs														
BIS(2-CHLOROETHOXY)METHANE	NA													
BIS(2-CHLOROETHYL) ETHER	NA													
BIS(2-ETHYLHEXYL) PHTHALATE	50													
BUTYL BENZYL PHTHALATE	50													
CARBAZOLE	NA													
CHRYSENE	0.4	1.1 J	2.3	ND	ND	0.33 J	ND	0.55 J	0.22 J	0.056 J	2.9	0.044 J	4.1 J	1.4 J
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38 J	ND	1 J	ND
DIBENZOFURAN	6.2													
DIETHYL PHTHALATE	7.1													
DIMETHYL PHTHALATE	2													
DI-N-BUTYL PHTHALATE	8.1													
DI-N-OCTYL PHTHALATE	50													
FLUORANTHENE	50	2	4.5	ND	1.2 J	0.48 J	ND	0.79 J	0.39 J	0.098 J	6.5	0.066 J	7.2	2.3 J
FLUORENE	50	1.9 J	3	3.2 J	2.2 J	1.5 J	ND	1.2 J	0.55 J	0.17 J	7.3	ND	3.7 J	0.76 J
HEXACHLOROBENZENE	0.41													
HEXACHLOROBUTADIENE	NA													
HEXACHLOROCYCLOPENTADIENE	NA													
HEXACHLOROETHANE	NA													
INDENO(1,2,3-CD)PYRENE	3.2	0.3 J	0.66 J	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	2.5 J	0.72 J
ISOPHORONE	4.4													
NAPHTHALENE	13	ND	1.1 J	ND	ND	ND	ND	1.7 J	ND	ND	31	ND	ND	0.5 J
NITROBENZENE	0.2 or MDL													
N-NITROSODIMETHYLAMINE	NA													
N-NITROSODI-N-PROPYLAMINE	NA													
N-NITROSODIPHENYLAMINE	NA													
PENTACHLOROPHENOL (PCP)	1 or MDL													
PHENANTHRENE	50	4.7	8.8	1.9 J	6 J	1.8 J	ND	0.73 J	ND	0.42 J	17	ND	9.3	1 J
PHENOL	0.03 or MDL													
PYRENE	50	2.5	5.2	1.7 J	2.2 J	0.74 J	ND	1.2 J	0.45 J	0.18 J	11	ND	6.7	2.8 J
Total C-PAHs	10	3.8	7.92	ND	ND	0.33	ND	0.85	ND	0.056	13.58	0.044	20.6	6.33
Total Semi-Volatile	500	18.42	35.73	11.2	13.5	7.02	ND	9.01	2.48	1.224	105.78	0.11	56.2	16.78

Notes:
Constituents with Levels above TAGM 4046 Guidance.
NA = Not available or not established.
MDL = Method Detection Limit.
ND = Not Detected.
J = Estimated value.

TABLE 6
VOLATILE COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use Screening Value TAGM 4046	PAOC 2, 4, 6, 7, 17									PAOC 45		PAOC 37		
Field Sample ID		SI-2-B1-A-1	SI-4-B1-A-1	SI-6-B1-A-1	SI-6-B1-A-2	SI-7-B1-A-1	SI-7-B17-D-1	SI-7-B18-D-1	SI-29-B14-BC-1	SI-17-B1-A-1	SI-45-B1-A-1	SI-45-B2-A-1	SI-37-B3-A-1	SI-37-B3-B-1	SI-37-B4-A-1
Depth Interval (ft)	(mg/kg)	4.0 - 5.0	6.0 - 6.5	9.0 - 10.0	9.0 - 10.0	8.5 - 9.0	14.0 - 15.0	14.0 - 15.0	2.0 - 3.0	8.5 - 9.0	8.0 - 8.5	10 - 10.4	8.0 - 8.5	6.0 - 6.5	7.5 - 8.0
VOCs (mg/Kg) TCL and STARs															
1,1,1-TRICHLOROETHANE (TCA)	0.8	ND	ND	ND	ND	ND				ND					
1,1,2,2-TETRACHLOROETHANE	0.6	ND	ND	ND	ND	ND				ND					
1,1,2-TRICHLOROETHANE	NA	ND	ND	ND	ND	ND				ND					
1,1-DICHLOROETHANE (1,1-DCA)	0.2	ND	ND	ND	0.0026 J	ND				ND					
1,1-DICHLOROETHENE (1,1-DCE)	0.4	ND	ND	ND	ND	ND				ND					
1,2-DICHLOROETHANE	0.1	ND	ND	ND	ND	ND				ND					
1,2-DICHLOROPROPANE	NA	ND	ND	ND	ND	ND				ND					
1,2,4-TRIMETHYLBENZENE	10						ND	ND	ND		ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	3.3						ND	ND	ND		0.001 J	ND	ND	ND	ND
2-BUTANONE (MEK)	0.3	ND	ND	0.013 J	0.032 J	ND				0.0032 J					
2-HEXANONE	NA	ND	ND	ND	ND	ND				ND					
4-METHYL-2-PENTANONE (MIBK)	1	ND	ND	ND	ND	ND				ND					
4-ISOPROPYLTOLUENE	NA						ND	ND	ND		ND	ND	ND	ND	ND
ACETONE	0.2	0.012 J	ND	0.08 J	0.2 J	0.21				0.012 J					
BENZENE	0.06 or MDL	ND	1.4	0.0022 J	0.019 J	0.017 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	NA	ND	ND	ND	ND	ND				ND					
BROMOFORM	NA	ND	ND	ND	ND	ND				ND					
BROMOMETHANE	NA	ND	ND	ND	ND	ND				ND					
CARBON DISULFIDE	2.7	0.0036 J	ND	0.0017 J	0.0094 J	0.021 J				0.0022 J					
CARBON TETRACHLORIDE	0.6	ND	ND	ND	ND	ND				ND					
CHLOROBENZENE	1.7	ND	ND	ND	ND	ND				ND					
CHLOROETHANE	1.9	ND	ND	ND	ND	ND				ND					
CHLOROFORM	0.3	ND	ND	ND	ND	ND				ND					
CHLOROMETHANE	NA	ND	ND	ND	ND	ND				ND					
CIS-1,2-DICHLOROETHENE	NA	ND	ND	ND	ND	ND				ND					
CIS-1,3-DICHLOROPROPENE	NA	ND	ND	ND	ND	ND				ND					
DIBROMOCHLOROMETHANE	NA	ND	ND	ND	ND	ND				ND					
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.1	ND	ND	ND	0.0017 J	ND				ND					
ETHYLBENZENE	6	ND	0.86	ND	0.0066 J	0.012 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	2.3						ND	ND	ND		ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	0.12						ND	ND	ND		ND	ND	ND	ND	ND
NAPHTHALENE	13						ND	ND	ND		ND	ND	ND	ND	ND
N-BUTYLBENZENE	10						ND	ND	1.2		ND	ND	ND	ND	ND
N-PROPYLBENZENE	3.7						ND	ND	ND		0.002 J	ND	ND	ND	ND
M,P-XYLENES	1.2 (total xylenes)	ND	3.1	0.0016 J	0.0082 J	0.025 J	ND	ND	0.25 J	ND	ND	ND	ND	ND	ND
O-XYLENE	1.2 (total xylenes)	ND	0.54 J	ND	0.002 J	0.021 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	10						ND	ND	2.6		ND	ND	ND	ND	ND
STYRENE	NA	ND	ND	ND	ND	ND			ND	ND					
TERT-BUTYLBENZENE	10						ND	ND	0.51 J		ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	1.4	ND	ND	ND	ND	ND				ND					
TOLUENE	1.5	ND	0.37 J	ND	0.0068 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	1.3	ND	ND	ND	ND	ND				ND					
TRANS-1,3-DICHLOROPROPENE	NA	ND	ND	ND	ND	ND				ND					
TRICHLOROETHENE (TCE)	0.7	ND	ND	ND	ND	ND				ND					
VINYL CHLORIDE	0.2	ND	ND	ND	ND	ND				ND					

See Notes on Page 5.

TABLE 6
VOLATILE COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use Screening Value TAGM 4046	PAOC 37												PAOC 39	
Field Sample ID		SI-37-B4-A-2	SI-37-B4-B-1	SI-37-B7-A-1	SI-37-B7-B-1	SI-37-B8-A-1	SI-37-B8-B-1	SI-37-B12-A-1	SI-37-B12-B-1	SI-37-B13-A-1	SI-37-B13-B-1	SI-37-B17-A-A	SI-37-B18-A-1	SI-39-B1-A-1	SI-39-B2-A-1
Depth Interval (ft)	(mg/kg)	7.5 - 8.0	5.0 - 5.5	6.0 - 6.5	9.0 - 9.5	5.0 - 5.4	11.0 - 11.4	6.6 - 7.0	7.6 - 8.0	5.5 - 6.0	7.5 - 8.0	8.5 - 9.0	9.0 - 10.0	4.0 - 4.5	7.0 - 8.0
VOCs (mg/Kg) TCL and STARs															
1,1,1-TRICHLOROETHANE (TCA)	0.8														
1,1,2,2-TETRACHLOROETHANE	0.6														
1,1,2-TRICHLOROETHANE	NA														
1,1-DICHLOROETHANE (1,1-DCA)	0.2														
1,1-DICHLOROETHENE (1,1-DCE)	0.4														
1,2-DICHLOROETHANE	0.1														
1,2-DICHLOROPROPANE	NA														
1,2,4-TRIMETHYLBENZENE	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	0.0036	0.54
1,3,5-TRIMETHYLBENZENE	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.6	ND	0.0081	1.8
2-BUTANONE (MEK)	0.3														
2-HEXANONE	NA														
4-METHYL-2-PENTANONE (MIBK)	1														
4-ISOPROPYLTOLUENE	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	0.2														
BENZENE	0.06 or MDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	NA														
BROMOFORM	NA														
BROMOMETHANE	NA														
CARBON DISULFIDE	2.7														
CARBON TETRACHLORIDE	0.6														
CHLOROBENZENE	1.7														
CHLOROETHANE	1.9														
CHLOROFORM	0.3														
CHLOROMETHANE	NA														
CIS-1,2-DICHLOROETHENE	NA														
CIS-1,3-DICHLOROPROPENE	NA														
DIBROMOCHLOROMETHANE	NA														
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.1														
ETHYLBENZENE	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4	ND	ND	0.63
METHYL TERT-BUTYL ETHER	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0019	ND
N-BUTYLBENZENE	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	0.0014	ND
N-PROPYLBENZENE	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	0.0065	1.7
M,P-XYLENES	1.2 (total xylenes)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	1.2 (total xylenes)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.2	ND	0.0034	0.54
SEC-BUTYLBENZENE	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	0.004	0.96
STYRENE	NA														
TERT-BUTYLBENZENE	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	1.4														
TOLUENE	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0024	ND
TRANS-1,2-DICHLOROETHENE	1.3														
TRANS-1,3-DICHLOROPROPENE	NA														
TRICHLOROETHENE (TCE)	0.7														
VINYL CHLORIDE	0.2														

See Notes on Page 5.

TABLE 6
VOLATILE COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 39							PAOC 43		PAOC 21				
Field Sample ID	Screening Value TAGM 4046	SI-39-B3-A-1	SI-39-B4-A-1	SI-39-B5-A-1	SI-39-B5-A-2	SI-39-B6-A-1	SI-39-B7-A-1	SI-39-B8-A-1	SI-43-B18-B-1	SI-43-B20-A-1	SI-21-B1-A-1	SI-21-B1-A-2	SI-21-B2-A-1	SI-21-B3-A-1	SI-21-B4-A-1
Depth Interval (ft)	(mg/kg)	8.0 - 8.5	10 - 11	8.0 - 8.5	8.0 - 8.5	4.0 - 4.5	4.5 - 5.0	5.0 - 5.5	16.0 - 17.0	12.0 - 13.0	6.5 - 7.0	6.5 - 7.0	8.0 - 8.5	1.5 - 2.0	6.5 - 7
VOCs (mg/Kg) TCL and STARs															
1,1,1-TRICHLOROETHANE (TCA)	0.8								ND	ND					
1,1,2,2-TETRACHLOROETHANE	0.6								ND	ND					
1,1,2-TRICHLOROETHANE	NA								ND	ND					
1,1-DICHLOROETHANE (1,1-DCA)	0.2								ND	ND					
1,1-DICHLOROETHENE (1,1-DCE)	0.4								ND	ND					
1,2-DICHLOROETHANE	0.1								ND	ND					
1,2-DICHLOROPROPANE	NA								ND	ND					
1,2,4-TRIMETHYLBENZENE	10	6.3	2.9	4.3 J	8.3 J	ND	0.0016 J	ND	ND	ND	ND	ND	0.22	0.0054 J	0.0057
1,3,5-TRIMETHYLBENZENE	3.3	11	1.7	1.9 J	3.9 J	ND	ND	ND	ND	ND	ND	ND	0.064	0.0031 J	ND
2-BUTANONE (MEK)	0.3								0.047 J	ND					
2-HEXANONE	NA								ND	ND					
4-METHYL-2-PENTANONE (MIBK)	1								ND	ND					
4-ISOPROPYLTOLUENE	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.059	ND	ND
ACETONE	0.2								0.19 J	ND					
BENZENE	0.06 or MDL	0.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	NA								ND	ND					
BROMOFORM	NA								ND	ND					
BROMOMETHANE	NA								ND	ND					
CARBON DISULFIDE	2.7								ND	ND					
CARBON TETRACHLORIDE	0.6								ND	ND					
CHLOROBENZENE	1.7								ND	ND					
CHLOROETHANE	1.9								ND	ND					
CHLOROFORM	0.3								ND	ND					
CHLOROMETHANE	NA								ND	ND					
CIS-1,2-DICHLOROETHENE	NA								ND	ND					
CIS-1,3-DICHLOROPROPENE	NA								ND	ND					
DIBROMOCHLOROMETHANE	NA								ND	ND					
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.1								ND	ND					
ETHYLBENZENE	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0033 J	ND
ISOPROPYLBENZENE	2.3	5.7	1.1	3 J	5.4 J	ND	ND	ND	ND	0.34 J	ND	ND	0.009	ND	ND
METHYL TERT-BUTYL ETHER	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	13	1.7	ND	ND	ND	ND	0.033 J	0.0024	ND	1	0.067	0.061	19	0.02 J	0.62
N-BUTYLBENZENE	10	ND	6.8	5.9 J	14 J	ND	ND	ND	ND	1.7	0.0016	0.0031	25	0.0046 J	0.11
N-PROPYLBENZENE	3.7	12	5.8	8.1 J	16 J	ND	ND	ND	ND	0.42 J	ND	ND	0.033	ND	ND
M,P-XYLENES	1.2 (total xylenes)	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.014	0.014 J	ND
O-XYLENE	1.2 (total xylenes)	4.5	2.1	3.8 J	7.6 J	ND	ND	ND	ND	ND	ND	ND	0.013	0.016 J	ND
SEC-BUTYLBENZENE	10	10	3.6	4 J	8.4 J	ND	ND	ND	0.019 J	0.98	ND	ND	0.097	ND	ND
STYRENE	NA								ND	ND					
TERT-BUTYLBENZENE	10	ND	ND	ND	ND	ND	ND	ND	0.041 J	0.22 J	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	1.4								ND	ND					
TOLUENE	1.5	0.86	0.35	1 J	2 J	ND	ND	ND	ND	ND	ND	ND	ND	0.0015 J	ND
TRANS-1,2-DICHLOROETHENE	1.3								ND	ND					
TRANS-1,3-DICHLOROPROPENE	NA								ND	ND					
TRICHLOROETHENE (TCE)	0.7								ND	ND					
VINYL CHLORIDE	0.2								ND	ND					

See Notes on Page 5.

TABLE 6
VOLATILE COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC 7						PAOC 47						
Field Sample ID	Screening Value TAGM 4046	SI-7-B7-D-1	SI-7-B8-C-1	SI-7-B27-D-1	SI-7-B29-E-1	SI-7-B30-D-1	SI-7-B31-D-1	SI-47-B1-B-1	SI-47-B2-A-1	SI-47-B3-B-1	SI-47-B3-B-2	SI-47-B5-A-1	SI-47-B12-A-1	SI-47-B15-A-1
Depth Interval (ft)	(mg/kg)	8.5 - 9.0	9.0 - 9.5	6.0 - 7.0	12.0 - 13.0	6.0 -7.0	6.5 - 7.5	6.0 -7.0	6.5 -7.0	9.0 - 9.5	9.0 - 9.5	4.0 -4.6	4.5 - 5.0	4.6 - 5.0
VOCs (mg/Kg) TCL and STARs														
1,1,1-TRICHLOROETHANE (TCA)	0.8	ND	ND					ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	0.6	ND	ND					ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE (1,1-DCA)	0.2	ND	ND					ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE (1,1-DCE)	0.4	ND	ND					ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	0.1	ND	ND					ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	10	ND	18	0.47 J	0.0023 J	0.36 J	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	3.3	ND	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE (MEK)	0.3	ND	0.5 J					ND	0.004 J	ND	ND	ND	ND	0.0046 J
2-HEXANONE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	1	ND	ND					ND	ND	ND	ND	ND	ND	ND
4-ISOPROPYLTOLUENE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
ACETONE	0.2	ND	ND					ND	0.018 J	ND	ND	0.0058 J	ND	0.029 J
BENZENE	0.06 or MDL	ND	0.56 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
BROMOFORM	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	2.7	ND	ND					ND	0.0021 J	ND	ND	ND	ND	0.0035 J
CARBON TETRACHLORIDE	0.6	ND	ND					ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	1.7	ND	ND					ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	1.9	ND	ND					ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	0.3	ND	ND					ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.1	ND	ND					ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	6	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	2.3	56 J	4.9	ND	0.022	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	13	2.1 J	8.1	20	0.028	1.2	ND	0.0031 J	0.0012 J	ND	ND	ND	ND	ND
N-BUTYLBENZENE	10	100 J	2	ND	0.028	1.3	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	3.7	110 J	1.7	ND	0.038	0.67 J	ND	ND	ND	ND	ND	ND	ND	ND
M,P-XYLENES	1.2 (total xylenes)	ND	9.8	0.19 J	0.0019 J	0.36 J	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	1.2 (total xylenes)	ND	5.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	10	85 J	1.8	ND	0.022	1.7	ND	ND	ND	ND	ND	ND	ND	ND
STYRENE	NA	ND	2.1					ND	ND	ND	ND	ND	ND	ND
TERT-BUTYLBENZENE	10	6 J	0.24 J	ND	ND	0.26 J	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	1.4	ND	ND					ND	ND	ND	ND	ND	ND	ND
TOLUENE	1.5	ND	1.3	ND	0.0001 J	ND	ND	0.0033 J	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	1.3	ND	ND					ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	NA	ND	ND					ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	0.7	ND	ND					ND	0.045	ND	ND	0.0013 J	ND	0.027 J
VINYL CHLORIDE	0.2	ND	ND					ND	ND	ND	ND	ND	ND	ND

See Notes on Page 5.

TABLE 6
VOLATILE COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC - UST												
Field Sample ID	Screening Value TAGM 4046	S1-UST-B47-A-1	S1-UST-B47-A-2	S1-UST-B48-A-1	S1-UST-B49-A-1	S1-UST-B50-A-1	SI-UST-B51-A-1	S1-UST-B52-A-1	S1-UST-B52-A-2	SI-UST-B53-A-1	SI-UST-B54-A-1	SI-UST-B56-A-1	SI-UST-B57-A-1	SI-UST-B58-A-1
Depth Interval (ft)	(mg/kg)	9.0 - 11.0	9.0 - 11.0	10.0 - 12.0	9.0 - 11.0	9.0 - 11.0	12.0 - 14.0	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0	9.0 - 10.0	10.0 - 11.0	9.0 - 9.5	10.0 - 12.0
VOCs (mg/Kg) TCL and STARs														
1,1,1-TRICHLOROETHANE (TCA)	0.8													
1,1,2,2-TETRACHLOROETHANE	0.6													
1,1,2-TRICHLOROETHANE	NA													
1,1-DICHLOROETHANE (1,1-DCA)	0.2													
1,1-DICHLOROETHENE (1,1-DCE)	0.4													
1,2-DICHLOROETHANE	0.1													
1,2-DICHLOROPROPANE	NA													
1,2,4-TRIMETHYLBENZENE	10	0.18 J	0.85 J	0.81 J	0.49 J	0.62 J	ND	0.39 J	0.53 J	ND	ND	ND	0.5 J	0.0031 J
1,3,5-TRIMETHYLBENZENE	3.3	ND	ND	ND	ND	0.21 J	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE (MEK)	0.3													
2-HEXANONE	NA													
4-METHYL-2-PENTANONE (MIBK)	1													
4-ISOPROPYLTOLUENE	NA	0.2 J	0.37 J	ND	0.28 J	0.18 J	ND	ND	ND	0.16 J	ND	ND	ND	ND
ACETONE	0.2													
BENZENE	0.06 or MDL	0.53 J	3.4	0.42 J	1.1	ND	ND	ND	ND	ND	ND	ND	0.2 J	ND
BROMODICHLOROMETHANE	NA													
BROMOFORM	NA													
BROMOMETHANE	NA													
CARBON DISULFIDE	2.7													
CARBON TETRACHLORIDE	0.6													
CHLOROBENZENE	1.7													
CHLOROETHANE	1.9													
CHLOROFORM	0.3													
CHLOROMETHANE	NA													
CIS-1,2-DICHLOROETHENE	NA													
CIS-1,3-DICHLOROPROPENE	NA													
DIBROMOCHLOROMETHANE	NA													
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.1													
ETHYLBENZENE	6	ND	0.36 J	0.87 J	0.59 J	0.37 J	ND	0.25 J	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	2.3	3.8	8.6	ND	7.1	1.8	ND	0.34 J	0.91 J	2.6	0.011 J	ND	3.8	0.012 J
METHYL TERT-BUTYL ETHER	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	13	ND	1.1 J	ND	ND	ND	ND	1.7 J	ND	ND	31	ND	ND	0.5 J
N-BUTYLBENZENE	10	2.5	4.5	2.7	0.32	1.5	ND	ND	0.67 J	2.1	ND	ND	2.8	ND
N-PROPYLBENZENE	3.7	4.9	11	2.3	9.2	2.1	ND	0.59 J	0.78 J	3.2	ND	ND	4.2	0.0041 J
M,P-XYLENES	1.2 (total xylenes)	0.77	3.1	2.1	1.4	0.49 J	ND	0.71 J	0.64 J	0.26 J	ND	ND	0.73 J	0.0041 J
O-XYLENE	1.2 (total xylenes)	ND	0.37 J	ND	0.18 J	ND	ND	ND	ND	ND	ND	ND	0.18 J	ND
SEC-BUTYLBENZENE	10	1.5	3.2	3.9	2.5	2.1	ND	1.6	5.4	1.5	0.11	0.06	2.5	0.013
STYRENE	NA													
TERT-BUTYLBENZENE	10	ND	0.42 J	ND	0.35 J	0.31 J	ND	0.22 J	0.64 J	0.18 J	0.06	0.018 J	0.32 J	0.0062 J
TETRACHLOROETHENE (PCE)	1.4													
TOLUENE	1.5	ND	0.47 J	1.2 J	0.44 J	ND	ND	0.25 J	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	1.3													
TRANS-1,3-DICHLOROPROPENE	NA													
TRICHLOROETHENE (TCE)	0.7													
VINYL CHLORIDE	0.2													

See Notes on Page 5.

TABLE 6
VOLATILE COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Notes:
Constituents with Levels above TAGM 4046 Guidance.
MDL = Method Detection Limit.
NA = Not available or not established.
ND = Not Detected.
J = Estimated value.

TABLE 7
PESTICIDE AND PCB COMPOUND ANALYSIS OF SOIL/MILLINGS

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use Screening Value TAGM 4046 (mg/kg)	PAOC 2, 4, 6, 7, 17						Millings						
Field Sample ID		SI-2-B1-A-1	SI-4-B1-A-1	SI-6-B1-A-1	SI-6-B1-A-2	SI-7-B1-A-1	SI-17-B1-A-1	SI-14-S1-A-1	SI-14-S1-A-2	SI-14-S2-A-1	SI-15-S1-A-1	SI-15-S2-A-1	SI-32-S1-A-1	SI-32-S2-A-1
Depth Interval (ft)		4 - 5	6 - 6.5	9 - 10	9 - 10	8.5 - 9	8.5 - 9	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
TCL Pesticides (mg/Kg)														
4,4'-DDD	2.9	ND	ND	ND	ND	ND	ND							
4,4'-DDE	2.1	ND	ND	ND	ND	ND	ND							
4,4'-DDT	2.1	ND	ND	ND	ND	ND	ND							
ALDRIN	0.041	ND	ND	ND	ND	ND	ND							
ALPHA-BHC	0.11	ND	ND	ND	ND	ND	ND							
ALPHA-CHLORDANE	NA	ND	ND	ND	ND	ND	ND							
BETA-BHC	0.2	ND	ND	ND	ND	ND	ND							
DELTA-BHC	0.3	ND	ND	ND	ND	ND	ND							
DIELDRIN	0.044	ND	ND	ND	ND	ND	ND							
ENDOSULFAN I	0.9	ND	ND	ND	ND	ND	ND							
ENDOSULFAN II	0.9	ND	ND	ND	ND	ND	ND							
ENDOSULFAN SULFATE	1	ND	ND	ND	ND	ND	ND							
ENDRIN	0.1	ND	ND	ND	ND	ND	ND							
ENDRIN ALDEHYDE	NA	ND	ND	ND	ND	ND	ND							
ENDRIN KETONE	NA	ND	ND	ND	ND	ND	ND							
GAMMA-BHC (LINDANE)	0.06	ND	ND	ND	ND	ND	ND							
GAMMA-CHLORDANE	0.54	ND	ND	ND	ND	ND	ND							
HEPTACHLOR	0.1	ND	ND	ND	ND	ND	ND							
HEPTACHLOR EPOXIDE	0.02	ND	ND	ND	ND	ND	ND							
METHOXYCHLOR	NA	ND	ND	ND	ND	ND	ND							
TOXAPHENE	NA	ND	ND	ND	ND	ND	ND							
TCL PCBs (mg/Kg)														
AROCLOR 1016	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1221	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1232	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1242	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1248	NA	ND	ND	ND	ND	ND	ND	0.42	0.31	1.8	ND	0.34	0.44	0.66
AROCLOR 1254	NA	ND	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1260	NA	ND	ND	ND	ND	ND	ND	0.47 J	0.38 J	2.6 J	ND	0.98	0.4	0.75
Total PCBs	1 / 10	ND	0.07	ND	ND	ND	ND	0.89	0.69	4.4	ND	1.32	0.84	1.41

Notes:
Constituents with Levels above TAGM 4046 Guidance.
NA = Not available or not established.
ND = Not Detected.
SB = Site Background.
Total PCB Screening Values are 1 mg/kg (ppm) for surface and 10 mg/kg (ppm) for subsurface (below 1 foot).

TABLE 8
INORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC-2, 4, 6, 7, 17						Millings						
Field Sample ID	Screening Value TAGM 4046	SI-2-B1-A-1	SI-4-B1-A-1	SI-6-B1-A-1	SI-6-B1-A-2	SI-7-B1-A-1	SI-17-B1-A-1	SI-14-S1-A-1	SI-14-S1-A-2	SI-14-S2-A-1	SI-15-S1-A-1	SI-15-S2-A-1	SI-32-S1-A-1	SI-32-S2-A-1
Depth Interval (ft)	(mg/kg)	4.0 - 5.0	6.0 - 6.5	9.0 - 10.0	9.0 - 10.0	8.5 - 9.0	8.5 - 9.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0
TAL Inorganic Compounds (mg/Kg)														
ALUMINUM	SB	2550	2630	8640	6220	6630	5440	7850	8540	8460	7420	7130	8000	8100
ANTIMONY	SB	ND	110	ND	ND	27.7	ND	6.5	ND	ND	ND	64.9	ND	ND
ARSENIC	7.5 or SB	4.1 J	12.4 J	7.4 J	21.2 J	15.1 J	4.8 J	11.5	6.6	5.1	4.8	11.9	5.4	6.2
BARIUM	300 or SB	48.4	3140	134	209	1300	18.4	326 J	228 J	204 J	181 J	304 J	297 J	197 J
BERYLLIUM	0.16 or SB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM	1 or SB	ND	8.1	ND	ND	13.7	ND	1.2	1.1	1.2	1.9	2.6	1.7	1.8
CALCIUM	SB	16700 J	9000 J	3250 J	2380 J	17700 J	4540 J	106000	111000	108000	79600	67100	97400	125000
CHROMIUM	10 or SB	12	62.7	17.4	17.6	64.8	10.5	28.3 J	28.5 J	21.3 J	35.3 J	71.7 J	24.1 J	25.1 J
COBALT	30 or SB	7	ND	7.9	ND	8.7	ND	5.8	5.6	ND	7.8	10.1	6.2	6
COPPER	25 or SB	17.2	93.4	100	186	995	15.2	39.1 J	47.3 J	30 J	57 J	133 J	61.1 J	60.4 J
IRON	2000 or SB	15400	29900	21100	41900	46700	13200	27800 J	20300 J	15400 J	28000 J	41700 J	16800 J	19900 J
LEAD	500 or SB	59.9 J	6610 J	311 J	359 J	1750 J	19.6 J	288	248	171	214	1900	213	175
MAGNESIUM	SB	5060	1720	2910	1210	3160	3100	13500	9570	17200	9460	19800	12500	11900
MANGANESE	SB	51.9	158	146	106	274	147	780	412	293	289	446	340	313
NICKEL	13 or SB	10.6	13.5	21.3	18.1	36.8	10.3	15.5	16.4	13.3	19.4	39.3	19	19.7
POTASSIUM	SB	666	498	1580	1000	671	1010	825	825	1000	1280	1500	999	952
SELENIUM	2 or SB	ND	1.8	ND	1.1 J	3.7	ND	ND	ND	ND	ND	ND	ND	ND
SILVER	SB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SODIUM	SB	286	2960	316	354	550	199	468	419	472	559	653	488	491
THALLIUM	SB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VANADIUM	150 or SB	12.4 J	11.5 J	22.6 J	20.7 J	59.4 J	20.7 J	23.9	24	23.9	25.3	56.2	28.2	31.6
ZINC	20 or SB	34.6	2440	203	104	719	53.5	552	430	378	468	564	776	651
MERCURY	0.1	ND	0.24	0.1	0.07	3.3	0.07	0.43	0.51	0.29	0.09	0.14	0.24	4.6
SOLIDS, TOTAL (%)	NA													
CYANIDE (mg/Kg)	Site-specific	ND	ND	ND	ND	ND	ND							

See Notes on Page 4.

TABLE 8
INORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use Screening Value TAGM 4046 (mg/kg)	PAOC-47													
Field Sample ID		SI-47-B1-A-1	SI-47-B1-A-2	SI-47-B1-B-1	SI-47-B2-A-1	SI-47-B2-B-1	SI-47-B3-A-1	SI-47-B3-B-1	SI-47-B4-A-1	SI-47-B4-B-1	SI-47-B5-A-1	SI-47-B5-B-1	SI-47-B5-B-2	SI-47-B6-A-1	SI-47-B 1
Depth Interval (ft)		3.0 - 4.0	3.0 - 4.0	6.0 -7.0	6.5 -7.0	12.0 - 12.5	4.0 - 4.5	9.0 - 9.5	4.5 - 5.0	8.0 - 8.5	4.0 -4.6	11.2 - 12.0	11.2 - 12.0	5.4 - 6.0	9.0 - 9
TAL Inorganic Compounds (mg/Kg)															
ALUMINUM	SB														
ANTIMONY	SB														
ARSENIC	7.5 or SB														
BARIUM	300 or SB														
BERYLLIUM	0.16 or SB														
CADMIUM	1 or SB														
CALCIUM	SB														
CHROMIUM	10 or SB	25.6	28.6	33.4	1740	81.9	38.1	11.3	44.5	21.6	17.4	21.3	22.5	12.8	25.3
COBALT	30 or SB														
COPPER	25 or SB														
IRON	2000 or SB														
LEAD	500 or SB														
MAGNESIUM	SB														
MANGANESE	SB														
NICKEL	13 or SB														
POTASSIUM	SB														
SELENIUM	2 or SB														
SILVER	SB														
SODIUM	SB														
THALLIUM	SB														
VANADIUM	150 or SB														
ZINC	20 or SB														
MERCURY	0.1														
SOLIDS, TOTAL (%)	NA														
CYANIDE (mg/Kg)	Site-specific														

See Notes on Page 3.

TABLE 8
INORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use Screening Value TAGM 4046 (mg/kg)	
Field Sample ID		6-B-
Depth Interval (ft)		.6
TAL Inorganic Compounds (mg/Kg)		
ALUMINUM	SB	
ANTIMONY	SB	
ARSENIC	7.5 or SB	
BARIUM	300 or SB	
BERYLLIUM	0.16 or SB	
CADMIUM	1 or SB	
CALCIUM	SB	
CHROMIUM	10 or SB	
COBALT	30 or SB	
COPPER	25 or SB	
IRON	2000 or SB	
LEAD	500 or SB	
MAGNESIUM	SB	
MANGANESE	SB	
NICKEL	13 or SB	
POTASSIUM	SB	
SELENIUM	2 or SB	
SILVER	SB	
SODIUM	SB	
THALLIUM	SB	
VANADIUM	150 or SB	
ZINC	20 or SB	
MERCURY	0.1	
SOLIDS, TOTAL (%)	NA	
CYANIDE (mg/Kg)	Site-specific	

TABLE 8
INORGANIC COMPOUND ANALYSIS OF SOIL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use	PAOC-47													
Field Sample ID	Screening Value TAGM 4046	SI-47-B7-A-1	SI-47-B7-B-1	SI-47-B8-A-1	SI-47-B8-B-1	SI-47-B9-A-1	SI-47-B10-A-1	SI-47-B11-A-1	SI-47-B12-A-1	SI-47-B13-A-1	SI-47-B15-A-1	SI-47-B-20-A-1	SI-47-B-22-A-1	SI-47-27A	SI-47-28A
Depth Interval (ft)	(mg/kg)	6.0 - 6.5	12.4 - 13.0	5.0 - 5.5	10.0 - 10.5	6.0 - 6.5	3.5 - 4.0	3.5 - 4.0	4.5 - 5.0	7.0 - 7.5	4.6 - 5.0	4.0 - 5.0	4.5 - 5.0	0 - 0.5	0 - 0.5
TAL Inorganic Compounds (mg/Kg)															
ALUMINUM	SB														
ANTIMONY	SB														
ARSENIC	7.5 or SB														
BARIUM	300 or SB														
BERYLLIUM	0.16 or SB														
CADMIUM	1 or SB														
CALCIUM	SB														
CHROMIUM	10 or SB	12.2	42.4	10.1	8.7	28.7	33.9	1470	16.3	10.4	3750	22.1	212	32	35.3
COBALT	30 or SB														
COPPER	25 or SB														
IRON	2000 or SB														
LEAD	500 or SB														
MAGNESIUM	SB														
MANGANESE	SB														
NICKEL	13 or SB														
POTASSIUM	SB														
SELENIUM	2 or SB														
SILVER	SB														
SODIUM	SB														
THALLIUM	SB														
VANADIUM	150 or SB														
ZINC	20 or SB														
MERCURY	0.1														
SOLIDS, TOTAL (%)	NA														
CYANIDE (mg/Kg)	Site-specific														

Notes:
Constituents with Levels above TAGM 4046 Guidance.
J = Estimated value.
ND = Not Detected.
SB = Site Background.

TABLE 9
CONFIRMATION OF EMCON SOIL SAMPLING RESULTS -PAOCS 2, 4, 6, 7, AND 17

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use Screening Value TAGM 4046 (mg/kg)	PAOC 2			PAOC 4			PAOC 6			PAOC 7			PAOC 17		
Soil Boring ID		SI-2-B1-A-1	2D	RPD (%)	SI-4-B1-A-1	4B	RPD (%)	SI-6-B1-A-1	6C	RPD (%)	SI-7-B1-A-1	7B	RPD (%)	SI-17-B1-A-1	17A	RPD (%)
Sample Depth Interval (ft bgs)		4 - 5	5 - 7		6 - 6.5	4 - 6		9 - 10	6-8		8.5 - 9	3-3.5		8.5 - 9	4-4.5	
SVOCs (mg/Kg) TCL, STARS, PAHs																
2-METHYLNAPHTHALENE	36.4	0.43 J	14	188	7.2	ND		0.19 J	ND		0.74	ND		ND	ND	
ACENAPHTHENE	50	ND	ND		0.92 J	ND		ND	ND		1.6	ND		0.17 J	ND	
ACENAPHTHYLENE	50	0.2 J	ND		ND	ND		ND	ND		ND	ND		0.11 J	ND	
ANTHRACENE	50	0.15 J	ND		0.67 J	ND		0.069 J	5	191	1.1	ND		0.16 J	ND	
BENZO(A)ANTHRACENE	0.224 or MDL	1.2	ND		1.3 J	ND		0.26 J	9.9	186	0.76	ND		0.49	ND	
BENZO(A)PYRENE	0.061 or MDL	0.84	ND		1.6 J	ND		0.29 J	6.7	179	0.62	ND		0.49	ND	
BENZO(B)FLUORANTHENE	0.22 or MDL	1.1	ND		1.7	ND		0.27 J	12	190	0.6	ND		0.4 J	ND	
BENZO(G,H,I)PERYLENE	50	0.7	ND		1 J	ND		0.2 J	ND		0.37 J	ND		0.31 J	ND	
BENZO(K)FLUORANTHENE	0.22 or MDL	1	ND		1.3 J	ND		0.21 J	8.9	186	0.59	ND		0.41 J	ND	
BIS(2-ETHYLHEXYL) PHTHALATE	50	ND	ND		ND	ND		ND	ND		1.3	9.9	154	ND	ND	
BUTYL BENZYL PHTHALATE	50	ND	ND		ND	ND		ND	ND		ND	7		ND	ND	
CARBAZOLE	50	0.16 J	ND		ND	ND		ND	ND		0.33 J	ND		ND	ND	
CHRYSENE	0.4	1.6	ND		2	ND		0.38 J	12	185	0.78	ND		0.57	ND	
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL	0.21 J	ND		ND	ND		ND	ND		ND	ND		ND	ND	
DIBENZOFURAN	6.2	0.21 J	ND		ND	ND		0.064 J	ND		1.3	ND		ND	ND	
DI-N-BUTYL PHTHALATE	8.1	0.054 J	46	200	9.4	ND		0.067 J	5.5	193	0.17 J	ND		ND	4300B	
DI-N-OCTYL PHTHALATE	50	ND	5.5		ND	ND		ND	ND		ND	ND		ND	ND	
FLUORANTHENE	50	2.3	5.3	79	2.8	ND		0.39 J	22	190	3.1	ND		0.66	ND	
FLUORENE	50	ND	ND		1 J	ND		ND	ND		1.8	ND		0.068 J	ND	
INDENO(1,2,3-CD)PYRENE	3.2	0.63	ND		0.83 J	ND		0.17 J	ND		0.28 J	ND		0.28 J	ND	
NAPHTHALENE	13	0.33 J	8.8	186	4.7	100	182	0.13 J	4.9	187	0.88	ND		ND	ND	
PHENANTHRENE	50	0.79	8.1	164	2.8	ND		0.4 J	24	191	6.2	ND		0.57	ND	
PYRENE	50	2.3	6.3	93	2.9	ND		0.47	22	188	2	ND		0.93	ND	
Total C-PAHs	10	6.58			8.73			1.58	49.5	184	3.63			2.64		
Total Semi-Volatile	500	14.204	94	147	42.12	100	81	3.56	132.9	187	24.73	16.9	38	5.618		
VOCs (mg/Kg) TCL and STARs																
1,1,1-TRICHLOROETHANE (TCA)	0.8	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1,2,2-TETRACHLOROETHANE	0.6	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
2-BUTANONE (MEK)	0.3	ND	ND		ND	ND		0.013 J	ND		ND	ND		0.0032 J	ND	
2-HEXANONE	NA	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
4-METHYL-2-PENTANONE (MIBK)	1	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
ACETONE	0.2	0.012 J	0.84	194	ND	ND		0.08 J	0.18	11	0.21	ND		0.012 J	0.29	184
BENZENE	0.06 or MDL	ND	ND		1.4	ND		0.0022 J	ND		0.017 J	ND		ND	ND	
CARBON DISULFIDE	2.7	0.0036 J	ND		ND	ND		0.0017 J	ND		0.021 J	ND		0.0022 J	ND	
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.1	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
ETHYLBENZENE	6	ND	ND		0.86	ND		ND	ND		0.012 J	ND		ND	ND	
M,P-XYLENES	1.2 (total xylenes)	ND	ND		3.1	18	141	0.0016 J	ND		0.025 J	ND		ND	ND	

See Notes on Page 2.

TABLE 9
CONFIRMATION OF EMCON SOIL SAMPLING RESULTS -PAOCS 2, 4, 6, 7, AND 17

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

IWP Sample Area Description	Unrestricted Use Screening Value TAGM 4046 (mg/kg)	PAOC 2			PAOC 4			PAOC 6			PAOC 7			PAOC 17		
Soil Boring ID		SI-2-B1-A-1	2D	RPD (%)	SI-4-B1-A-1	4B	RPD (%)	SI-6-B1-A-1	6C	RPD (%)	SI-7-B1-A-1	7B	RPD (%)	SI-17-B1-A-1	17A	RPD (%)
Sample Depth Interval (ft bgs)		4 - 5	5 - 7		6 - 6.5	4 - 6		9 - 10	6-8		8.5 - 9	3-3.5		8.5 - 9	4-4.5	
O-XYLENE	1.2 (total xylenes)	ND	ND		0.54 J	ND		ND	ND		0.021 J	ND		ND	ND	
TOLUENE	1.5	ND	0.091		0.37 J	ND		ND	0.17	185	ND	ND		ND	ND	
TCL Pesticides (mg/Kg)																
4,4'-DDE	2.1	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
4,4'-DDT	2.1	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
ALPHA-BHC	0.11	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
TCL PCBs (mg/Kg)																
AROCLOR 1254	1/10	ND	ND		0.069	ND		ND	ND		ND	ND		ND	ND	
TAL Inorganic Compounds (mg/Kg)																
ALUMINUM	SB	2550	2870	12	2630	8480	105	8640	1610	118	6630	8190	21	5440	6850	23
ANTIMONY	SB	ND	<7.50		110	132	18	ND	<7.21		27.7	<1.10		ND	<7.85	
ARSENIC	7.5 or SB	4.1 J	6.91	51	12.4 J	13	5	7.4 J	10.2	70	15.1 J	2.1	151	4.8 J	1.47	106
BARIUM	300 or SB	48.4	90.3	60	3140	2100	40	134	181	14	1300	65.5	181	18.4	43.2	81
BERYLLIUM	0.16 or SB	ND	<0.625		ND	<.629		ND	<0.601		ND	<0.549		ND	<0.654	
CADMIUM	1 or SB	ND	<0.625		8.1	14.4	56	ND	<0.601		13.7	<0.549		ND	<0.654	
CALCIUM	SB	16700 J	11000	41	9000 J	17200	63	3250 J	7540	104	17700 J	1810	163	4540 J	2540	56
CHROMIUM	10 or SB	12	12.9	7	62.7	297	130	17.4	8.23	73	64.8	17.1	116	10.5	15.8	40
COBALT	30 or SB	7	<6.25		ND	15.4		7.9	<6.01		8.7	6.72	26	ND	<6.54	
COPPER	25 or SB	17.2	26.9	44	93.4	244	89	100	35.6	136	995	97.9	164	15.2	20.2	28
IRON	2000 or SB	15400	18000	16	29900	--		21100	17500	82	46700	20300	79	13200	14500	9
LEAD	500 or SB	59.9 J	159	91	6610 J	3640	58	311 J	138	89	1750 J	100	178	19.6 J	7.23	92
MAGNESIUM	SB	5060	2450	70	1720	6770	119	2910	558	74	3160	4460	34	3100	3050	2
MANGANESE	SB	51.9	57.6	10	158	441	94	146	32	107	274	216	24	147	138	6
NICKEL	13 or SB	10.6	10.3	3	13.5	49.8	115	21.3	8.6	71	36.8	16.9	74	10.3	13.4	26
POTASSIUM	SB	666	474	34	498	4250	158	1580	683	38	671	998	39	1010	1590	45
SELENIUM	2 or SB	ND	2.93		1.8	16.7	161	ND	3.34	101	3.7	<0.549		ND	5.06	
SILVER	SB	ND	<1.25		ND	1.6		ND	<1.20		ND	<1.10		ND	<1.31	
SODIUM	SB	286	460	47	2960	--		316	--		550	85.7	146	199	128	43
THALLIUM	SB	ND	<1.25		ND	<1.26		ND	<1.20		ND	<1.10		ND	<1.31	
VANADIUM	150 or SB	12.4 J	14.8	18	11.5 J	38	107	22.6 J	11	61	59.4 J	16	115	20.7 J	19.6	5
ZINC	20 or SB	34.6	108	103	2440	--		203	26.8	118	719	159	128	53.5	31	53
MERCURY	0.1	ND	<0.188		0.24	<0.189		0.1	0.835	169	3.3	<0.165		0.07	<0.196	
CYANIDE (mg/Kg)	Site-specific	ND	<1.25		ND	5.52		ND	1.84		ND	<1.10		ND	<1.31	

Notes:

Constituents with Levels above TAGM 4046 Guidance.

NA = Not available or not established.

MDL = Method Detection Limit.

ND = Not Detected.

J = Estimated value.

SB = Site Background.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells												
Field Sample ID		OW-06-1	OW-6-1	OW-06-2	OW-07-1	OW-7-1	OW-8-1	OW-10-1	OW-11-1	OW-12-1	OW-20-1	OW-22-1	OW-24-1	OW-24-2
		Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered
Date		5/21/04	5/21/04	5/20/04	5/21/04	5/20/04	5/26/04	10/30/03	10/29/03	5/21/04	10/29/03	5/21/04	10/30/03	10/30/03
TAL Inorganic Compounds (µg/L)														
ALUMINUM	NA	ND	195	ND	ND	103	ND	ND	ND	ND	2140	148	356	228
ANTIMONY	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ARSENIC	25	ND	ND	ND	ND	ND	ND	ND	ND	10.5	ND	ND	ND	ND
BARIUM	1,000	ND	21.8	ND	ND	ND	102	6560	1180	330	521	155	62.5	59.3
BERYLLIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CALCIUM	NA	22200	28600	21700	133000	151000	80900	78300	84200	43400	210000	55500	61500	60600
CHROMIUM	50	ND	ND	ND	ND	ND	ND	11.3	ND	ND	ND	ND	538	554
COBALT	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COPPER	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	26.2	ND	ND	ND
IRON	300	133	666	146	ND	155	2650	33900	16100	8950	174	2700	427	283
LEAD	25	ND	7.8	ND	ND	ND	ND	11.3	5.1	ND	81.7	13.5	ND	ND
MAGNESIUM	NA	8300	9220	8350	7390	7320	23900	22800	20200	8860	568	10000	15400	15000
MANGANESE	300	86	177	84.5	80.3	52.9	452	170	659	414	ND	96.4	25.6	18.8
NICKEL	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
POTASSIUM	NA	13200	15600	14100	18300	31000	18800	21400	8550	10100	65500	43700	3310	3190
SELENIUM	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SILVER	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SODIUM	20,000	24900	41900	27000	19000	14200	121000	398000	43300	48600	101000	111000	51400	51100
THALLIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VANADIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ZINC	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34.7	ND	ND
MERCURY	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes on Page 8.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells												
Field Sample ID		OW-24-1	OW-24-2	OW-25-1	OW-26T-1	OW-26T-1	OW-34-1	OW-34-1-F	OW-34-2	OW-34-2-F	OW-40-1	OW-42-1	OW-45-1	OW-45-1-F
		Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Unfiltered	Unfiltered	Filtered
Date		05/03/04	05/03/04	10/30/03	10/30/03	10/30/03	7/29/04	7/29/04	7/26/04	7/26/04	5/20/04	5/20/04	5/20/04	5/20/04
TAL Inorganic Compounds (µg/L)														
ALUMINUM	NA			546	2600	581					ND	ND	309	ND
ANTIMONY	3			ND	ND	ND					ND	ND	ND	ND
ARSENIC	25			ND	ND	ND					ND	ND	ND	ND
BARIUM	1,000			88.9	371	281					619	1020	1380 J	1550 J
BERYLLIUM	NA			ND	ND	ND					ND	ND	ND	ND
CADMIUM	5			ND	ND	ND					ND	ND	ND	ND
CALCIUM	NA			179000	36900	35000					61900	42900	38100	38900
CHROMIUM	50	195	197	ND	ND	ND	39	41.5	42.1	42.5	ND	ND	ND	ND
COBALT	NA			ND	ND	ND					ND	ND	ND	ND
COPPER	200			ND	20.1	ND					ND	ND	ND	ND
IRON	300			757	5320	1720					827	2670	4160	4560
LEAD	25			ND	88.1	22.1					ND	ND	68.2	ND
MAGNESIUM	NA			29800	4630	3890					31300	29700	18900 J	21300 J
MANGANESE	300			4040	200	162					160	98	195	209
NICKEL	100			ND	ND	ND					ND	ND	ND	ND
POTASSIUM	NA			2750	2910	2580					17800	18400	19600 J	22500 J
SELENIUM	10			ND	ND	ND					ND	ND	ND	ND
SILVER	50			ND	ND	ND					ND	ND	ND	ND
SODIUM	20,000			65600	13500	13100					115000	97100	70600 J	87300 J
THALLIUM	NA			ND	ND	ND					ND	ND	ND	ND
VANADIUM	NA			ND	ND	ND					ND	ND	ND	ND
ZINC	NA			ND	162	45.4					ND	ND	37.7	ND
MERCURY	0.7			ND	ND	ND					ND	ND	ND	ND

See Notes on Page 8.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells												
Field Sample ID		OW-45-1	OW-45-1	OW-45-1-F	OW-46-1	OW-46-2	OW-47-1	OW-47-1-F	OW-47-1	OW-47-1-F	OW-47-1	OW-48-1	OW-49-1	OW-49-1
		Unfiltered	Unfiltered	Filtered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Unfiltered	Unfiltered	Unfiltered
Date		7/14/04	7/19/04	7/14/04	5/20/04	5/20/04	5/20/04	5/20/04	7/14/04	7/14/04	7/29/04	5/20/04	5/20/04	7/14/04
TAL Inorganic Compounds (µg/L)														
ALUMINUM	NA	197	ND	ND	200	231	121	ND	ND	ND	157	204	884	ND
ANTIMONY	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ARSENIC	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BARIUM	1,000	1360	781	1330	ND	ND	4430	4220	5040	4860	5510	389	669	642
BERYLLIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CALCIUM	NA	42200	50500	41500	46100	46600	45800	45600	48700	48200	52500	31900	76100 J	78600
CHROMIUM	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.4	ND
COBALT	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COPPER	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
IRON	300	4570	2940	3890	696	736	1350	876	1410	1370	1520	708	4620	4440
LEAD	25	38.5	14.3	ND	ND	ND	32.7	ND	6.8	ND	21.2	ND	116	9.8
MAGNESIUM	NA	16800	14800	16600	11800	11600	23400	23100	27100	28500	24300	22400	130000 J	137000
MANGANESE	300	237	212	224	280	277	163	165	187	196	134	184	1410 J	1470
NICKEL	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
POTASSIUM	NA	17200	14300	17000	9820	9110	13700	14000	15500	15500	15500	18200	47300 J	46100
SELENIUM	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SILVER	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SODIUM	20,000	57100	44200	56500	22600	19700	47700	47700	79200	86400	57300	80600	749000 J	82900
THALLIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VANADIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ZINC	NA	31.4	ND	ND	ND	ND	ND	ND	ND	ND	20.9	ND	63.8	ND
MERCURY	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes on Page 8.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells										PAOC 47		
Field Sample ID		OW-49-1	OW-49-1-F	OW-49-1-F	OW-50-1	OW-51-1	OW-51-1-F	OW-51-1	OW-51-1	OW-51-1-F	OW-51-2	SI-47-B1W-1	SI-47-B1W-1-	SI-47-B2W-1
		Unfiltered	Filtered	Filtered	Unfiltered	Unfiltered	Filtered	Unfiltered	Unfiltered	Filtered	Unfiltered	Unfiltered	Filtered	Unfiltered
Date		7/27/04	7/27/04	7/27/04	5/20/04	5/20/04	5/20/04	7/14/2004	7/27/04	7/27/04	7/27/04	05/03/04	05/03/04	05/04/04
TAL Inorganic Compounds (µg/L)														
ALUMINUM	NA	151	ND	ND	599	721	ND	133	215	ND	328			
ANTIMONY	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
ARSENIC	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
BARIUM	1,000	623	632	623	123	572	595	187	173	194	180			
BERYLLIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
CADMIUM	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
CALCIUM	NA	88300	80900	94900 J	23400	51400	53500	33600	33000	33900	33700			
CHROMIUM	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	60	15.5	1130
COBALT	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
COPPER	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
IRON	300	5060	4520	3720	716	1090	192	274	271	ND	425			
LEAD	25	27.2	ND	ND	ND	9 J	ND	ND	ND	9.2 J	ND			
MAGNESIUM	NA	162000	144000	176000 J	14600	70000	77400	15300	8340	16300	8960			
MANGANESE	300	1670	1520	1870 J	61.7	586	625	127	62.4	127	69.2			
NICKEL	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
POTASSIUM	NA	51400	47300	54400	34700	18600	18700	9280	9570	9340	9150			
SELENIUM	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
SILVER	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
SODIUM	20,000	1030000	884000	104000 J	111000	407000	428000	91600	48400	96700	48700			
THALLIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
VANADIUM	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
ZINC	NA	ND	ND	ND	ND	26.1	ND	ND	40.7	ND	ND			
MERCURY	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			

See Notes on Page 8.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 47												
Field Sample ID		SI-47-B2W-1-	SI-47-B3W-1	SI-47-B3W-1-	SI-47-B4W-1	SI-47-B4W-1-	SI-47-B5W-1	SI-47-B5W-1-	SI-47-B6W-1	SI-47-B6W-1-	SI-47-B7W-1	SI-47-B7W-1 DISS	SI-47-B7W-1	SI-47-B7W-1-F
		Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
Date		05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/24/04	05/24/04
TAL Inorganic Compounds (µg/L)														
ALUMINUM	NA													
ANTIMONY	3													
ARSENIC	25													
BARIUM	1,000													
BERYLLIUM	NA													
CADMIUM	5													
CALCIUM	NA													
CHROMIUM	50	1130	1910	1950	598	14.4	210	100	40.4	31.1	30100	29000	28400	42100
COBALT	NA													
COPPER	200													
IRON	300													
LEAD	25													
MAGNESIUM	NA													
MANGANESE	300													
NICKEL	100													
POTASSIUM	NA													
SELENIUM	10													
SILVER	50													
SODIUM	20,000													
THALLIUM	NA													
VANADIUM	NA													
ZINC	NA													
MERCURY	0.7													

See Notes on Page 8.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 47												
Field Sample ID		SI-47-B8W-1	SI-47-B8W-1 DISS	SI-47-B8W-1	SI-47-B8W-1-F	SI-47-B14W-1	SI-47-B14W-1-F	SI-47-B14W-2	SI-47-B14W-2-F	SI-47-B15W-1	SI-47-B15W-1-F	SI-47-B13W-1	SI-47-B13W-1F	SI-47-B16W-1
		Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered
Date		05/04/04	05/04/04	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	7/29/04	7/29/04	7/29/04
TAL Inorganic Compounds (µg/L)														
ALUMINUM	NA													
ANTIMONY	3													
ARSENIC	25													
BARIUM	1,000													
BERYLLIUM	NA													
CADMIUM	5													
CALCIUM	NA													
CHROMIUM	50	1380	1660	4550	3640	25.4	23.5	24.4	23	4210	4130	130	130	ND
COBALT	NA													
COPPER	200													
IRON	300													
LEAD	25													
MAGNESIUM	NA													
MANGANESE	300													
NICKEL	100													
POTASSIUM	NA													
SELENIUM	10													
SILVER	50													
SODIUM	20,000													
THALLIUM	NA													
VANADIUM	NA													
ZINC	NA													
MERCURY	0.7													

See Notes on Page 8.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 47										
Field Sample ID		SI-47-B16W-1-F	SI-47-B17W-1	SI-47-B17W-1-F	SI-47-B18W-1	SI-47-B18W-1 F	SI-47-B19W-1	SI-47-B19W-1-F	SI-47-B27-W1	SI-47-B27-W1 DISSOLVED	SI-47-B28-W1	SI-47-B28-W1 DUPLICATE
		Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Unfiltered
Date		7/29/04	7/29/04	7/29/04	7/29/04	7/29/04	7/29/04	7/29/04	10/5/2004	10/5/2004	10/5/2004	10/5/2004
TAL Inorganic Compounds (µg/L)												
ALUMINUM	NA											
ANTIMONY	3											
ARSENIC	25											
BARIUM	1,000											
BERYLLIUM	NA											
CADMIUM	5											
CALCIUM	NA											
CHROMIUM	50	ND	11.3	ND	ND	ND	ND	ND	391	466	150	147
COBALT	NA											
COPPER	200											
IRON	300											
LEAD	25											
MAGNESIUM	NA											
MANGANESE	300											
NICKEL	100											
POTASSIUM	NA											
SELENIUM	10											
SILVER	50											
SODIUM	20,000											
THALLIUM	NA											
VANADIUM	NA											
ZINC	NA											
MERCURY	0.7											

See Notes on Page 8.

TABLE 10
TAL INORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 47			
Field Sample ID		SI-47-B28-W1 DISSOLVED	SI-47-B28-W1 DISSOLVED DUPLICATE	SI-B29-B36	SI-B29-B36 DISSOLVED
		Filtered	Filtered	Unfiltered	Filtered
Date		10/5/2004	10/5/2004	10/6/2004	10/6/2004
TAL Inorganic Compounds (µg/L)					
ALUMINUM	NA				
ANTIMONY	3				
ARSENIC	25				
BARIUM	1,000				
BERYLLIUM	NA				
CADMIUM	5				
CALCIUM	NA				
CHROMIUM	50	149	150		
COBALT	NA				
COPPER	200				
IRON	300				
LEAD	25			75.2	ND
MAGNESIUM	NA				
MANGANESE	300				
NICKEL	100				
POTASSIUM	NA				
SELENIUM	10				
SILVER	50				
SODIUM	20,000				
THALLIUM	NA				
VANADIUM	NA				
ZINC	NA				
MERCURY	0.7				

Notes:
(1) 6 NYCRR Part 703, Class GA Standards and TOGS 1.1.1 Guidance.
Constituents with Levels above Standards or Guidance.
J = Estimated value.
NA = Not available or not established.
ND = Not Detected.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Groundwater (UST; POAC 21 & 39)[2]											
Field Sample ID		SI-GWI-B1W-1	SI-GWI-B2W-1	SI-GWI-B2W-2	SI-GWI-B3W-1	SI-GWI-B4W-1	SI-GWI-B5W-1	SI-GWI-B6W-1	SI-GWI-B7W-1	SI-GWI-B8W-1	SI-GWI-B9W-1	SI-GWI-B10W-1	SI-GWI-B11W-1
Date		10/27/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003
Volatile Organic Compounds (STARs) (µg/L)													
1,1,1-TRICHLOROETHANE (TCA)	5												
1,1,2,2-TETRACHLOROETHANE	5												
1,1,2-TRICHLOROETHANE	1												
1,1-DICHLOROETHANE (1,1-DCA)	5												
1,1-DICHLOROETHENE (1,1-DCE)	5												
1,2,4-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2
1,2-DICHLOROETHANE	0.6												
1,2-DICHLOROPROPANE	1												
1,3,5-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE (MEK)	NA												
2-HEXANONE	50												
P-ISOPROPYLTOLUENE	5	ND	1.4	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	NA												
ACETONE	50												
BENZENE	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50												
BROMOFORM	50												
BROMOMETHANE	5												
CARBON DISULFIDE	60												
CARBON TETRACHLORIDE	5												
CHLOROBENZENE	5												
CHLOROETHANE	5												
CHLOROFORM	7												
CHLOROMETHANE	NA												
CIS-1,2-DICHLOROETHENE	5												
CIS-1,3-DICHLOROPROPENE	0.4												
DIBROMOCHLOROMETHANE	NA												
DICHLOROMETHANE	5												
ETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5
ISOPROPYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
M,P-XYLENES	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	10	ND	2.4	1.1	ND	ND	2	ND	ND	ND	2.1	1.2	140
N-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19
N-PROPYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31
O-XYLENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8
STYRENE	5												
TERT-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	5												
TOLUENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5												
TRANS-1,3-DICHLOROPROPENE	0.4												
TRICHLOROETHENE (TCE)	5												
VINYL CHLORIDE	2												

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Groundwater (UST; POAC 21 & 39)[2]											
Field Sample ID		SI-GWI-B1W-1	SI-GWI-B2W-1	SI-GWI-B2W-2	SI-GWI-B3W-1	SI-GWI-B4W-1	SI-GWI-B5W-1	SI-GWI-B6W-1	SI-GWI-B7W-1	SI-GWI-B8W-1	SI-GWI-B9W-1	SI-GWI-B10W-1	SI-GWI-B11W-1
Date		10/27/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003
Semi-Volatile Organic Compounds (STARs) (µg/L)													
1,2,4-TRICHLOROBENZENE	5												
1,2-DICHLOROBENZENE	3												
1,3-DICHLOROBENZENE	3												
1,4-DICHLOROBENZENE	3												
2,4,5-TRICHLOROPHENOL	NA												
2,4,6-TRICHLOROPHENOL	NA												
2,4-DICHLOROPHENOL	1												
2,4-DIMETHYLPHENOL	50												
2,4-DINITROPHENOL	10												
2,4-DINITROTOLUENE	5												
2,6-DINITROTOLUENE	5												
2-CHLORONAPHTHALENE	10												
2-CHLOROPHENOL	NA												
2-METHYLNAPHTHALENE	NA												
2-METHYLPHENOL	1												
2-NITROANILINE	5												
2-NITROPHENOL	NA												
3,3'-DICHLOROBENZIDINE	5												
3+4-METHYLPHENOL	NA												
3-NITROANILINE	5												
4,6-DINITRO-2-METHYLPHENOL	NA												
4-BROMOPHENYL PHENYL ETHER	NA												
4-CHLORO-3-METHYLPHENOL	NA												
4-CHLOROANILINE	5												
4-CHLOROPHENYL PHENYL ETHER	NA												
4-NITROANILINE	5												
4-NITROPHENOL	NA												
ACENAPHTHENE	20	ND	1.6 J	2.2 J	ND	2 J	1.4 J	8.2 J	ND	ND	7 J	1.1 J	37
ACENAPHTHYLENE	NA												
ANTHRACENE	50	ND	2 J	3.4 J	1.1 J	8.3 J	1.5 J	21	ND	ND	12 J	ND	26
BENZ(A)ANTHRACENE	0.002	ND	3.4 J	6.1 J	2.9 J	25	5.2 J	50	ND	2 J	24	1.1 J	27
BENZO(A)PYRENE	ND	ND	3.1 J	5.3 J	3 J	27	4.9 J	48	ND	1.7 J	25	1.4 J	20
BENZO(B)FLUORANTHENE	0.002	ND	2.4 J	4.4 J	2.2 J	20	4.3 J	38	ND	1.6 J	19 J	1.3 J	17
BENZO(G,H,I)PERYLENE	NA	0.99 J	2.1 J	3.4 J	2.4 J	19 J	3.5 J	32	ND	1.2 J	19 J	1.1 J	13
BENZO(K)FLUORANTHENE	0.002	ND	2.5 J	4.6 J	2.2 J	22	3.9 J	39	ND	1.7 J	20 J	1.2 J	18
BENZYL ALCOHOL	NA												
BIS(1-CHLOROISOPROPYL) ETHER	5												
BIS(2-CHLOROETHOXY)METHANE	5												
BIS(2-CHLOROETHYL) ETHER	1												
BIS(2-ETHYLHEXYL) PHTHALATE	5												
BUTYL BENZYL PHTHALATE	50												
CARBAZOLE	NA												
CHRYSENE	0.002	1 J	3.7 J	6.5 J	3.4 J	28	5.8 J	52	ND	2.4 J	26	1.5 J	28
DIBENZ(A,H)ANTHRACENE	NA	ND	ND	1.2 J	ND	6.8 J	1.2 J	12	ND	ND	6.5 J	ND	4.5 J
DIBENZOFURAN	NA												

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Groundwater (UST; POAC 21 & 39)[2]											
Field Sample ID		SI-GWI-B1W-1	SI-GWI-B2W-1	SI-GWI-B2W-2	SI-GWI-B3W-1	SI-GWI-B4W-1	SI-GWI-B5W-1	SI-GWI-B6W-1	SI-GWI-B7W-1	SI-GWI-B8W-1	SI-GWI-B9W-1	SI-GWI-B10W-1	SI-GWI-B11W-1
Date		10/27/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003
DIETHYL PHTHALATE	50												
DIMETHYL PHTHALATE	50												
DI-N-BUTYL PHTHALATE	50												
DI-N-OCTYL PHTHALATE	50												
FLUORANTHENE	50	ND	8 J	14	4.3 J	44	8.2 J	110	ND	3.7 J	46	2.6 J	93
FLUORENE	50	ND	ND	1.4 J	ND	2 J	ND	7.1 J	ND	ND	10 J	ND	42
HEXACHLOROBENZENE	0.04												
HEXACHLOROBUTADIENE	0.5												
HEXACHLOROCYCLOPENTADIENE	5												
HEXACHLOROETHANE	5												
INDENO(1,2,3-CD)PYRENE	0.002	ND	2 J	3.1 J	1.9 J	18 J	3.2 J	30	ND	1.1 J	16 J	ND	12
ISOPHORONE	50												
NAPHTHALENE	10	ND	1.1 J	1.9 J	ND	ND	5.3 J	6.7 J	ND	ND	7 J	1.1 J	99
PHENANTHRENE	50	1.2 J	5.7 J	12	2.9 J	19 J	3.5 J	78	ND	1.3 J	36	1.5 J	140
N-NITROSODIMETHYLAMINE	NA												
N-NITROSODI-N-PROPYLAMINE	NA												
N-NITROSODIPHENYLAMINE	NA												
PENTACHLOROPHENOL (PCP)	1												
PHENOL	1												
PYRENE	50	1 J	6.7 J	11	4.4 J	43	8.1 J	81	ND	3.6 J	44	2.4 J	60

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC	PAOC 37		PAOC 39	PAOC 45	PAOC 47							
Field Sample ID	Standards and Guidance (1)	SI-37-B1W-1	SI-37-B1W-2	SI-39-B4W-1	SI-45-B1W-1	SI-47-B1W-1	SI-47-B2W-1	SI-47-B3W-1	SI-47-B4W-1	SI-47-B5W-1	SI-47-B6W-1	SI-47-B7W-1	SI-47-B8W-1
Date	(µg/L)	10/29/2003	10/29/2003	10/29/2003	10/29/2003	05/03/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04
Volatile Organic Compounds (STARs) (µg/L)													
1,1,1-TRICHLOROETHANE (TCA)	5					ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5					ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1					ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE (1,1-DCA)	5					ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE (1,1-DCE)	5					ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	3.8	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	0.6					ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	1					ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5	4.6	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE (MEK)	NA					ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	50					ND	ND	ND	ND	ND	ND	ND	ND
P-ISOPROPYLTOLUENE	5	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	NA					ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50					ND	ND	ND	7.5 J	ND	ND	ND	ND
BENZENE	1	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50					ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50					ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5					ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	60					ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5					ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	5					ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	5					ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	7					ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	NA					ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	5					ND	4.2 J	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	0.4					ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	NA					ND	ND	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	5					ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	5	1.7	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
M,P-XYLENES	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	10	8.1	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	5	7.6	3.4	9.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	5	8.1	3.8	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	5	2.1	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	4	2	7.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
STYRENE	5					ND	ND	ND	ND	ND	ND	ND	ND
TERT-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	5					ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5					ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.4					ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	5					ND	14	2.1 J	ND	16	6	9.8	1.3 J
VINYL CHLORIDE	2					ND	ND	ND	ND	ND	ND	ND	ND

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 37		PAOC 39	PAOC 45	PAOC 47							
Field Sample ID		SI-37-B1W-1	SI-37-B1W-2	SI-39-B4W-1	SI-45-B1W-1	SI-47-B1W-1	SI-47-B2W-1	SI-47-B3W-1	SI-47-B4W-1	SI-47-B5W-1	SI-47-B6W-1	SI-47-B7W-1	SI-47-B8W-1
Date		10/29/2003	10/29/2003	10/29/2003	10/29/2003	05/03/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04
Semi-Volatile Organic Compounds (STARs) (µg/L)													
1,2,4-TRICHLOROBENZENE	5												
1,2-DICHLOROBENZENE	3												
1,3-DICHLOROBENZENE	3												
1,4-DICHLOROBENZENE	3												
2,4,5-TRICHLOROPHENOL	NA												
2,4,6-TRICHLOROPHENOL	NA												
2,4-DICHLOROPHENOL	1												
2,4-DIMETHYLPHENOL	50												
2,4-DINITROPHENOL	10												
2,4-DINITROTOLUENE	5												
2,6-DINITROTOLUENE	5												
2-CHLORONAPHTHALENE	10												
2-CHLOROPHENOL	NA												
2-METHYLNAPHTHALENE	NA												
2-METHYLPHENOL	1												
2-NITROANILINE	5												
2-NITROPHENOL	NA												
3,3'-DICHLOROBENZIDINE	5												
3+4-METHYLPHENOL	NA												
3-NITROANILINE	5												
4,6-DINITRO-2-METHYLPHENOL	NA												
4-BROMOPHENYL PHENYL ETHER	NA												
4-CHLORO-3-METHYLPHENOL	NA												
4-CHLOROANILINE	5												
4-CHLOROPHENYL PHENYL ETHER	NA												
4-NITROANILINE	5												
4-NITROPHENOL	NA												
ACENAPHTHENE	20	ND	ND	2.4 J									
ACENAPHTHYLENE	NA												
ANTHRACENE	50	ND	ND	4.2 J									
BENZ(A)ANTHRACENE	0.002	ND	2 J	7.7 J									
BENZO(A)PYRENE	ND	ND	1.8 J	8 J									
BENZO(B)FLUORANTHENE	0.002	ND	2 J	7 J									
BENZO(G,H,I)PERYLENE	NA	ND	1.6 J	7.1 J									
BENZO(K)FLUORANTHENE	0.002	ND	1.6 J	6.1 J									
BENZYL ALCOHOL	NA												
BIS(1-CHLOROISOPROPYL) ETHER	5												
BIS(2-CHLOROETHOXY)METHANE	5												
BIS(2-CHLOROETHYL) ETHER	1												
BIS(2-ETHYLHEXYL) PHTHALATE	5												
BUTYL BENZYL PHTHALATE	50												
CARBAZOLE	NA												
CHRYSENE	0.002	ND	2.2 J	8.4 J									
DIBENZ(A,H)ANTHRACENE	NA	ND	ND	1.8 J									
DIBENZOFURAN	NA												

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC	PAOC 37		PAOC 39	PAOC 45	PAOC 47							
Field Sample ID	Standards and Guidance (1)	SI-37-B1W-1	SI-37-B1W-2	SI-39-B4W-1	SI-45-B1W-1	SI-47-B1W-1	SI-47-B2W-1	SI-47-B3W-1	SI-47-B4W-1	SI-47-B5W-1	SI-47-B6W-1	SI-47-B7W-1	SI-47-B8W-1
Date	(µg/L)	10/29/2003	10/29/2003	10/29/2003	10/29/2003	05/03/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04	05/04/04
DIETHYL PHTHALATE	50												
DIMETHYL PHTHALATE	50												
DI-N-BUTYL PHTHALATE	50												
DI-N-OCTYL PHTHALATE	50												
FLUORANTHENE	50	1.4 J	5.6 J	17									
FLUORENE	50	ND	ND	1.4 J									
HEXACHLOROBENZENE	0.04												
HEXACHLOROBUTADIENE	0.5												
HEXACHLOROCYCLOPENTADIENE	5												
HEXACHLOROETHANE	5												
INDENO(1,2,3-CD)PYRENE	0.002	ND	1.4 J	5.5 J									
ISOPHORONE	50												
NAPHTHALENE	10	ND	ND	ND									
PHENANTHRENE	50	2.1 J	3.1 J	6.8 J									
N-NITROSODIMETHYLAMINE	NA												
N-NITROSODI-N-PROPYLAMINE	NA												
N-NITROSODIPHENYLAMINE	NA												
PENTACHLOROPHENOL (PCP)	1												
PHENOL	1												
PYRENE	50	ND	4 J	15									

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC	PAOC 47									
Field Sample ID	Standards and Guidance (1)	SI-47-B7W-1	SI-47-B8W-1	SI-47-B14W-1	SI-47-B14W-2	SI-47-B15W-1	SI-47-B16W-1	SI-47-B17W-1	SI-47-B18W-1	SI-47-B19W-1	SI-47-B13W-1
Date	(µg/L)	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	7/27/2004	7/26/2004	7/26/2004	7/26/2004	7/26/2004
Volatile Organic Compounds (STARs) (µg/L)											
1,1,1-TRICHLOROETHANE (TCA)	5	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE (1,1-DCA)	5	ND	ND	ND	ND	ND	ND	6.8	ND	ND	ND
1,1-DICHLOROETHENE (1,1-DCE)	5	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND					
1,2-DICHLOROETHANE	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND					
2-BUTANONE (MEK)	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P-ISOPROPYLTOLUENE	5	ND	ND	ND	ND	ND					
4-METHYL-2-PENTANONE (MIBK)	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50	ND	ND	ND	ND	ND	ND	7	ND	ND	ND
BENZENE	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	5	ND	ND	ND	ND	ND					
M,P-XYLENES	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10	ND	ND	ND	ND	ND					
NAPHTHALENE	10	ND	ND	ND	ND	ND					
N-BUTYLBENZENE	5	ND	ND	ND	ND	ND					
N-PROPYLBENZENE	5	ND	ND	ND	ND	ND					
O-XYLENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	ND	ND	ND	ND	ND					
STYRENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TERT-BUTYLBENZENE	5	ND	ND	ND	ND	ND					
TETRACHLOROETHENE (PCE)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	5	21	6.3	ND	ND	11	ND	ND	ND	13	1.9 J
VINYL CHLORIDE	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC	PAOC 47									
Field Sample ID	Standards and Guidance (1) (µg/L)	SI-47-B7W-1	SI-47-B8W-1	SI-47-B14W-1	SI-47-B14W-2	SI-47-B15W-1	SI-47-B16W-1	SI-47-B17W-1	SI-47-B18W-1	SI-47-B19W-1	SI-47-B13W-1
Date		05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	7/27/2004	7/26/2004	7/26/2004	7/26/2004	7/26/2004
Semi-Volatile Organic Compounds (STARs) (µg/L)											
1,2,4-TRICHLOROBENZENE	5										
1,2-DICHLOROBENZENE	3										
1,3-DICHLOROBENZENE	3										
1,4-DICHLOROBENZENE	3										
2,4,5-TRICHLOROPHENOL	NA										
2,4,6-TRICHLOROPHENOL	NA										
2,4-DICHLOROPHENOL	1										
2,4-DIMETHYLPHENOL	50										
2,4-DINITROPHENOL	10										
2,4-DINITROTOLUENE	5										
2,6-DINITROTOLUENE	5										
2-CHLORONAPHTHALENE	10										
2-CHLOROPHENOL	NA										
2-METHYLNAPHTHALENE	NA										
2-METHYLPHENOL	1										
2-NITROANILINE	5										
2-NITROPHENOL	NA										
3,3'-DICHLOROBENZIDINE	5										
3+4-METHYLPHENOL	NA										
3-NITROANILINE	5										
4,6-DINITRO-2-METHYLPHENOL	NA										
4-BROMOPHENYL PHENYL ETHER	NA										
4-CHLORO-3-METHYLPHENOL	NA										
4-CHLOROANILINE	5										
4-CHLOROPHENYL PHENYL ETHER	NA										
4-NITROANILINE	5										
4-NITROPHENOL	NA										
ACENAPHTHENE	20										
ACENAPHTHYLENE	NA										
ANTHRACENE	50										
BENZ(A)ANTHRACENE	0.002										
BENZO(A)PYRENE	ND										
BENZO(B)FLUORANTHENE	0.002										
BENZO(G,H,I)PERYLENE	NA										
BENZO(K)FLUORANTHENE	0.002										
BENZYL ALCOHOL	NA										
BIS(1-CHLOROISOPROPYL) ETHER	5										
BIS(2-CHLOROETHOXY)METHANE	5										
BIS(2-CHLOROETHYL) ETHER	1										
BIS(2-ETHYLHEXYL) PHTHALATE	5										
BUTYL BENZYL PHTHALATE	50										
CARBAZOLE	NA										
CHRYSENE	0.002										
DIBENZ(A,H)ANTHRACENE	NA										
DIBENZOFURAN	NA										

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC	PAOC 47									
Field Sample ID	Standards and Guidance (1)	SI-47-B7W-1	SI-47-B8W-1	SI-47-B14W-1	SI-47-B14W-2	SI-47-B15W-1	SI-47-B16W-1	SI-47-B17W-1	SI-47-B18W-1	SI-47-B19W-1	SI-47-B13W-1
Date	(µg/L)	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	7/27/2004	7/26/2004	7/26/2004	7/26/2004	7/26/2004
DIETHYL PHTHALATE	50										
DIMETHYL PHTHALATE	50										
DI-N-BUTYL PHTHALATE	50										
DI-N-OCTYL PHTHALATE	50										
FLUORANTHENE	50										
FLUORENE	50										
HEXACHLOROBENZENE	0.04										
HEXACHLOROBUTADIENE	0.5										
HEXACHLOROCYCLOPENTADIENE	5										
HEXACHLOROETHANE	5										
INDENO(1,2,3-CD)PYRENE	0.002										
ISOPHORONE	50										
NAPHTHALENE	10										
PHENANTHRENE	50										
N-NITROSODIMETHYLAMINE	NA										
N-NITROSODI-N-PROPYLAMINE	NA										
N-NITROSODIPHENYLAMINE	NA										
PENTACHLOROPHENOL (PCP)	1										
PHENOL	1										
PYRENE	50										

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 47			Onsite Groundwater Monitoring Wells			
Field Sample ID		SI-47-B27-W1	SI-47-B28-W1	SI-47-B28-W1 DUPLICATE	OW-3-1	OW-3-2	OW-08-1	OW-10-1
Date		10/5/2004	10/5/2004	10/5/2004	5/25/2004	5/25/2004	5/19/2004	10/30/03
Volatile Organic Compounds (STARs) (µg/L)								
1,1,1-TRICHLOROETHANE (TCA)	5	ND	ND	ND				
1,1,2,2-TETRACHLOROETHANE	5	ND	ND	ND				
1,1,2-TRICHLOROETHANE	1	ND	ND	ND				
1,1-DICHLOROETHANE (1,1-DCA)	5	ND	ND	ND				
1,1-DICHLOROETHENE (1,1-DCE)	5	ND	ND	ND				
1,2,4-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	4
1,2-DICHLOROETHANE	0.6	ND	ND	ND				
1,2-DICHLOROPROPANE	1							
1,3,5-TRIMETHYLBENZENE	5				ND	ND	ND	ND
2-BUTANONE (MEK)	NA	ND	ND	ND				
2-HEXANONE	50	ND	ND	ND				
P-ISOPROPYLTOLUENE	5	ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	NA							
ACETONE	50	ND	6.0 J	ND				
BENZENE	1	ND	ND	ND	ND	ND	ND	9.8
BROMODICHLOROMETHANE	50	ND	ND	ND				
BROMOFORM	50	ND	ND	ND				
BROMOMETHANE	5	ND	ND	ND				
CARBON DISULFIDE	60	ND	ND	ND				
CARBON TETRACHLORIDE	5	ND	ND	ND				
CHLOROBENZENE	5	ND	ND	ND				
CHLOROETHANE	5	ND	ND	ND				
CHLOROFORM	7	ND	ND	ND				
CHLOROMETHANE	NA	ND	ND	ND				
CIS-1,2-DICHLOROETHENE	5	ND	2.3 J	ND				
CIS-1,3-DICHLOROPROPENE	0.4	ND	ND	ND				
DIBROMOCHLOROMETHANE	NA	ND	ND	ND				
DICHLOROMETHANE	5	ND	ND	ND				
ETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	5				ND	ND	ND	20
M,P-XYLENES	5				ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10				ND	ND	ND	2.6
NAPHTHALENE	10				ND	ND	ND	1.5
N-BUTYLBENZENE	5				ND	ND	ND	5.8
N-PROPYLBENZENE	5	ND	ND	ND	ND	ND	ND	35
O-XYLENE	5	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5				ND	ND	ND	3.9
STYRENE	5	ND	ND	ND				
TERT-BUTYLBENZENE	5				ND	ND	ND	1.1
TETRACHLOROETHENE (PCE)	5	ND	ND	ND				
TOLUENE	5	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5	ND	ND	ND				
TRANS-1,3-DICHLOROPROPENE	0.4	ND	ND	ND				
TRICHLOROETHENE (TCE)	5	ND	15	16				
VINYL CHLORIDE	2	ND	ND	ND				

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 47			Onsite Groundwater Monitoring Wells			
Field Sample ID		SI-47-B27-W1	SI-47-B28-W1	SI-47-B28-W1 DUPLICATE	OW-3-1	OW-3-2	OW-08-1	OW-10-1
Date		10/5/2004	10/5/2004	10/5/2004	5/25/2004	5/25/2004	5/19/2004	10/30/03
Semi-Volatile Organic Compounds (STARs) (µg/L)								
1,2,4-TRICHLOROBENZENE	5							
1,2-DICHLOROBENZENE	3							
1,3-DICHLOROBENZENE	3							
1,4-DICHLOROBENZENE	3							
2,4,5-TRICHLOROPHENOL	NA							
2,4,6-TRICHLOROPHENOL	NA							
2,4-DICHLOROPHENOL	1							
2,4-DIMETHYLPHENOL	50							
2,4-DINITROPHENOL	10							
2,4-DINITROTOLUENE	5							
2,6-DINITROTOLUENE	5							
2-CHLORONAPHTHALENE	10							
2-CHLOROPHENOL	NA							
2-METHYLNAPHTHALENE	NA							
2-METHYLPHENOL	1							
2-NITROANILINE	5							
2-NITROPHENOL	NA							
3,3'-DICHLOROBENZIDINE	5							
3+4-METHYLPHENOL	NA							
3-NITROANILINE	5							
4,6-DINITRO-2-METHYLPHENOL	NA							
4-BROMOPHENYL PHENYL ETHER	NA							
4-CHLORO-3-METHYLPHENOL	NA							
4-CHLOROANILINE	5							
4-CHLOROPHENYL PHENYL ETHER	NA							
4-NITROANILINE	5							
4-NITROPHENOL	NA							
ACENAPHTHENE	20				ND	2.1 J	ND	
ACENAPHTHYLENE	NA							
ANTHRACENE	50				2.1 J	4.6 J	ND	
BENZ(A)ANTHRACENE	0.002				9.7 J	21	ND	
BENZO(A)PYRENE	ND				11	23	ND	
BENZO(B)FLUORANTHENE	0.002				9 J	21	ND	
BENZO(G,H,I)PERYLENE	NA				9.7 J	20	ND	
BENZO(K)FLUORANTHENE	0.002				10 J	20	ND	
BENZYL ALCOHOL	NA							
BIS(1-CHLOROISOPROPYL) ETHER	5							
BIS(2-CHLOROETHOXY)METHANE	5							
BIS(2-CHLOROETHYL) ETHER	1							
BIS(2-ETHYLHEXYL) PHTHALATE	5							
BUTYL BENZYL PHTHALATE	50							
CARBAZOLE	NA							
CHRYSENE	0.002				11	23	ND	
DIBENZ(A,H)ANTHRACENE	NA				3.5 J	5.8 J	ND	
DIBENZOFURAN	NA							

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	PAOC 47			Onsite Groundwater Monitoring Wells			
Field Sample ID		SI-47-B27-W1	SI-47-B28-W1	SI-47-B28-W1 DUPLICATE	OW-3-1	OW-3-2	OW-08-1	OW-10-1
Date		10/5/2004	10/5/2004	10/5/2004	5/25/2004	5/25/2004	5/19/2004	10/30/03
DIETHYL PHTHALATE	50							
DIMETHYL PHTHALATE	50							
DI-N-BUTYL PHTHALATE	50							
DI-N-OCTYL PHTHALATE	50							
FLUORANTHENE	50				19	40	ND	
FLUORENE	50				ND	1.6 J	ND	
HEXACHLOROBENZENE	0.04							
HEXACHLOROBUTADIENE	0.5							
HEXACHLOROCYCLOPENTADIENE	5							
HEXACHLOROETHANE	5							
INDENO(1,2,3-CD)PYRENE	0.002				8.9 J	18	ND	
ISOPHORONE	50							
NAPHTHALENE	10				ND	ND	ND	
PHENANTHRENE	50				9.3 J	20	ND	
N-NITROSODIMETHYLAMINE	NA							
N-NITROSODI-N-PROPYLAMINE	NA							
N-NITROSODIPHENYLAMINE	NA							
PENTACHLOROPHENOL (PCP)	1							
PHENOL	1							
PYRENE	50				18	36	ND	

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-12-1	OW-21-1	OW-22-1	OW-24-1	OW-24-2	OW-24-1	OW-24-2	OW-25-1	OW-25-1
Date		5/21/2004	5/27/2004	5/21/2004	10/30/2003	10/30/2003	05/03/04	05/03/04	10/30/2003	5/21/2004
Volatile Organic Compounds (STARs) (µg/L)										
1,1,1-TRICHLOROETHANE (TCA)	5				ND	ND	ND	ND	ND	
1,1,2,2-TETRACHLOROETHANE	5				ND	ND	ND	ND	ND	
1,1,2-TRICHLOROETHANE	1				ND	ND	ND	ND	ND	
1,1-DICHLOROETHANE (1,1-DCA)	5				ND	ND	ND	ND	ND	
1,1-DICHLOROETHENE (1,1-DCE)	5				ND	ND	ND	ND	ND	
1,2,4-TRIMETHYLBENZENE	5	ND	ND	ND			ND	ND		ND
1,2-DICHLOROETHANE	0.6				ND	ND	ND	ND	ND	
1,2-DICHLOROPROPANE	1				ND	ND	ND	ND	ND	
1,3,5-TRIMETHYLBENZENE	5	ND	ND	ND			ND	ND		ND
2-BUTANONE (MEK)	NA				ND	ND	ND	ND	ND	
2-HEXANONE	50				ND	ND	ND	ND	ND	
P-ISOPROPYLTOLUENE	5	ND	ND	ND			ND	ND		ND
4-METHYL-2-PENTANONE (MIBK)	NA				ND	ND	ND	ND	ND	
ACETONE	50				ND	ND	ND	ND	ND	
BENZENE	1	ND	ND	1.5 J	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50				ND	ND	ND	ND	ND	
BROMOFORM	50				ND	ND	ND	ND	ND	
BROMOMETHANE	5				ND	ND	ND	ND	ND	
CARBON DISULFIDE	60				ND	ND	ND	ND	ND	
CARBON TETRACHLORIDE	5				ND	ND	ND	ND	ND	
CHLOROBENZENE	5				ND	ND	ND	ND	ND	
CHLOROETHANE	5				ND	ND	ND	ND	ND	
CHLOROFORM	7				ND	ND	ND	ND	ND	
CHLOROMETHANE	NA				ND	ND	ND	ND	ND	
CIS-1,2-DICHLOROETHENE	5				8.8	9.1	2.6 J	2.8 J	ND	
CIS-1,3-DICHLOROPROPENE	0.4				ND	ND	ND	ND	ND	
DIBROMOCHLOROMETHANE	NA				ND	ND	ND	ND	ND	
DICHLOROMETHANE	5				ND	ND	ND	ND	ND	
ETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	5	ND	ND	ND			ND	ND		7.9
M,P-XYLENES	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10	ND	ND	ND			ND	ND		ND
NAPHTHALENE	10	ND	ND	ND			ND	ND		ND
N-BUTYLBENZENE	5	ND	ND	ND			ND	ND		ND
N-PROPYLBENZENE	5	ND	ND	ND			ND	ND		5.2
O-XYLENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	ND	ND	ND			ND	ND		2.8 J
STYRENE	5				ND	ND	ND	ND	ND	
TERT-BUTYLBENZENE	5	ND	ND	ND			ND	ND		ND
TETRACHLOROETHENE (PCE)	5				ND	ND	ND	ND	ND	
TOLUENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5				ND	ND	ND	ND	ND	
TRANS-1,3-DICHLOROPROPENE	0.4				ND	ND	ND	ND	ND	
TRICHLOROETHENE (TCE)	5				72	75	33	35	ND	
VINYL CHLORIDE	2				ND	ND	ND	ND	ND	

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-12-1	OW-21-1	OW-22-1	OW-24-1	OW-24-2	OW-24-1	OW-24-2	OW-25-1	OW-25-1
Date		5/21/2004	5/27/2004	5/21/2004	10/30/2003	10/30/2003	05/03/04	05/03/04	10/30/2003	5/21/2004
Semi-Volatile Organic Compounds (STARs) (µg/L)										
1,2,4-TRICHLOROBENZENE	5				ND	ND			ND	
1,2-DICHLOROBENZENE	3				ND	ND			ND	
1,3-DICHLOROBENZENE	3				ND	ND			ND	
1,4-DICHLOROBENZENE	3				ND	ND			ND	
2,4,5-TRICHLOROPHENOL	NA				ND	ND			ND	
2,4,6-TRICHLOROPHENOL	NA				ND	ND			ND	
2,4-DICHLOROPHENOL	1				ND	ND			ND	
2,4-DIMETHYLPHENOL	50				ND	ND			ND	
2,4-DINITROPHENOL	10				ND	ND			ND	
2,4-DINITROTOLUENE	5				ND	ND			ND	
2,6-DINITROTOLUENE	5				ND	ND			ND	
2-CHLORONAPHTHALENE	10				ND	ND			ND	
2-CHLOROPHENOL	NA				ND	ND			ND	
2-METHYLNAPHTHALENE	NA				ND	ND			ND	
2-METHYLPHENOL	1				ND	ND			ND	
2-NITROANILINE	5				ND	ND			ND	
2-NITROPHENOL	NA				ND	ND			ND	
3,3'-DICHLOROBENZIDINE	5				ND	ND			ND	
3+4-METHYLPHENOL	NA				ND	ND			ND	
3-NITROANILINE	5				ND	ND			ND	
4,6-DINITRO-2-METHYLPHENOL	NA				ND	ND			ND	
4-BROMOPHENYL PHENYL ETHER	NA				ND	ND				
4-CHLORO-3-METHYLPHENOL	NA				ND	ND				
4-CHLOROANILINE	5				ND	ND			ND	
4-CHLOROPHENYL PHENYL ETHER	NA				ND	ND				
4-NITROANILINE	5				ND	ND			ND	
4-NITROPHENOL	NA				ND	ND			ND	
ACENAPHTHENE	20	ND	2.1 J	ND	ND	ND			ND	ND
ACENAPHTHYLENE	NA				ND	ND			ND	
ANTHRACENE	50	ND	ND	ND	ND	ND			ND	ND
BENZ(A)ANTHRACENE	0.002	ND	ND	ND	ND	ND			ND	ND
BENZO(A)PYRENE	ND	ND	ND	ND	ND	ND			ND	ND
BENZO(B)FLUORANTHENE	0.002	ND	ND	ND	ND	ND			ND	ND
BENZO(G,H,I)PERYLENE	NA	ND	ND	ND	ND	ND			ND	ND
BENZO(K)FLUORANTHENE	0.002	ND	ND	ND	ND	ND			ND	ND
BENZYL ALCOHOL	NA				ND	ND			ND	
BIS(1-CHLOROISOPROPYL) ETHER	5				ND	ND			ND	
BIS(2-CHLOROETHOXY)METHANE	5				ND	ND			ND	
BIS(2-CHLOROETHYL) ETHER	1				ND	ND				
BIS(2-ETHYLHEXYL) PHTHALATE	5				ND	5.4 J			ND	
BUTYL BENZYL PHTHALATE	50				ND	ND			ND	
CARBAZOLE	NA				ND	ND			ND	
CHRYSENE	0.002	ND	ND	ND	ND	ND			ND	ND
DIBENZ(A,H)ANTHRACENE	NA	ND	ND	ND	ND	ND			ND	ND
DIBENZOFURAN	NA				ND	ND			ND	

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-12-1	OW-21-1	OW-22-1	OW-24-1	OW-24-2	OW-24-1	OW-24-2	OW-25-1	OW-25-1
Date		5/21/2004	5/27/2004	5/21/2004	10/30/2003	10/30/2003	05/03/04	05/03/04	10/30/2003	5/21/2004
DIETHYL PHTHALATE	50				ND	ND			ND	
DIMETHYL PHTHALATE	50				ND	ND			ND	
DI-N-BUTYL PHTHALATE	50				ND	ND			ND	
DI-N-OCTYL PHTHALATE	50				ND	ND				
FLUORANTHENE	50	ND	ND	ND	ND	ND			ND	ND
FLUORENE	50	ND	ND	ND	ND	ND			ND	ND
HEXACHLOROBENZENE	0.04				ND	ND			ND	
HEXACHLOROBUTADIENE	0.5				ND	ND			ND	
HEXACHLOROCYCLOPENTADIENE	5				ND	ND			ND	
HEXACHLOROETHANE	5				ND	ND			ND	
INDENO(1,2,3-CD)PYRENE	0.002	ND	ND	ND	ND	ND			ND	ND
ISOPHORONE	50				ND	ND			ND	
NAPHTHALENE	10	ND	ND	ND	ND	ND			ND	ND
PHENANTHRENE	50	ND	1.2 J	ND	ND	ND			ND	
N-NITROSODIMETHYLAMINE	NA				ND	ND			ND	
N-NITROSODI-N-PROPYLAMINE	NA				ND	ND				
N-NITROSODIPHENYLAMINE	NA				ND	ND			ND	
PENTACHLOROPHENOL (PCP)	1				ND	ND			ND	
PHENOL	1				ND	ND			ND	
PYRENE	50	ND	1.1 J	ND	ND	ND			1 J	ND

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells											
Field Sample ID		OW-26T-1	OW-27-1	OW-28-1	OW-29-1	OW-30-1	OW-31-1	OW-32-1	OW-32-2	OW-33-1	OW-34-1	OW-34-1	OW-34-2
Date		10/30/03	5/21/2004	5/21/2004	5/20/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	7/26/2004	7/26/2004
Volatile Organic Compounds (STARs) (µg/L)													
1,1,1-TRICHLOROETHANE (TCA)	5											ND	ND
1,1,2,2-TETRACHLOROETHANE	5											ND	ND
1,1,2-TRICHLOROETHANE	1											ND	ND
1,1-DICHLOROETHANE (1,1-DCA)	5											ND	ND
1,1-DICHLOROETHENE (1,1-DCE)	5											ND	ND
1,2,4-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,2-DICHLOROETHANE	0.6											ND	ND
1,2-DICHLOROPROPANE	1											ND	ND
1,3,5-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2-BUTANONE (MEK)	NA											ND	ND
2-HEXANONE	50											ND	ND
P-ISOPROPYLTOLUENE	5	1.8	ND	ND	41	ND	ND	ND	ND	ND	ND		
4-METHYL-2-PENTANONE (MIBK)	NA											ND	ND
ACETONE	50											ND	ND
BENZENE	1	0.71	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50											ND	ND
BROMOFORM	50											ND	ND
BROMOMETHANE	5											ND	ND
CARBON DISULFIDE	60											ND	ND
CARBON TETRACHLORIDE	5											ND	ND
CHLOROBENZENE	5											ND	ND
CHLOROETHANE	5											ND	ND
CHLOROFORM	7											ND	ND
CHLOROMETHANE	NA											ND	ND
CIS-1,2-DICHLOROETHENE	5											ND	ND
CIS-1,3-DICHLOROPROPENE	0.4											ND	ND
DIBROMOCHLOROMETHANE	NA											ND	ND
DICHLOROMETHANE	5											ND	ND
ETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
M,P-XYLENES	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
NAPHTHALENE	10	11	ND	ND	2.3 J	ND	ND	ND	ND	ND	ND		
N-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
N-PROPYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
O-XYLENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
STYRENE	5											ND	ND
TERT-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
TETRACHLOROETHENE (PCE)	5											ND	ND
TOLUENE	5	1	ND	ND	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5											ND	ND
TRANS-1,3-DICHLOROPROPENE	0.4											ND	ND
TRICHLOROETHENE (TCE)	5											ND	ND
VINYL CHLORIDE	2											ND	ND

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells											
Field Sample ID		OW-26T-1	OW-27-1	OW-28-1	OW-29-1	OW-30-1	OW-31-1	OW-32-1	OW-32-2	OW-33-1	OW-34-1	OW-34-1	OW-34-2
Date		10/30/03	5/21/2004	5/21/2004	5/20/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	7/26/2004	7/26/2004
Semi-Volatile Organic Compounds (STARs) (µg/L)													
1,2,4-TRICHLOROBENZENE	5												
1,2-DICHLOROBENZENE	3												
1,3-DICHLOROBENZENE	3												
1,4-DICHLOROBENZENE	3												
2,4,5-TRICHLOROPHENOL	NA												
2,4,6-TRICHLOROPHENOL	NA												
2,4-DICHLOROPHENOL	1												
2,4-DIMETHYLPHENOL	50												
2,4-DINITROPHENOL	10												
2,4-DINITROTOLUENE	5												
2,6-DINITROTOLUENE	5												
2-CHLORONAPHTHALENE	10												
2-CHLOROPHENOL	NA												
2-METHYLNAPHTHALENE	NA												
2-METHYLPHENOL	1												
2-NITROANILINE	5												
2-NITROPHENOL	NA												
3,3'-DICHLOROBENZIDINE	5												
3+4-METHYLPHENOL	NA												
3-NITROANILINE	5												
4,6-DINITRO-2-METHYLPHENOL	NA												
4-BROMOPHENYL PHENYL ETHER	NA												
4-CHLORO-3-METHYLPHENOL	NA												
4-CHLOROANILINE	5												
4-CHLOROPHENYL PHENYL ETHER	NA												
4-NITROANILINE	5												
4-NITROPHENOL	NA												
ACENAPHTHENE	20		ND	ND	ND	ND	ND	ND	ND	ND	1.8 J		
ACENAPHTHYLENE	NA												
ANTHRACENE	50		ND	ND	ND	ND	ND	ND	1.3 J	ND	3.3 J		
BENZ(A)ANTHRACENE	0.002		ND	ND	ND	ND	ND	1.2 J	3.4 J	1.8 J	7.6 J		
BENZO(A)PYRENE	ND		ND	ND	ND	ND	ND	ND	3.4 J	1.8 J	6.6 J		
BENZO(B)FLUORANTHENE	0.002		ND	ND	ND	ND	ND	ND	3.2 J	1.6 J	5.9 J		
BENZO(G,H,I)PERYLENE	NA		ND	ND	ND	ND	ND	ND	2.1 J	1.5 J	4.7 J		
BENZO(K)FLUORANTHENE	0.002		ND	ND	ND	ND	ND	ND	3 J	1.4 J	5.4 J		
BENZYL ALCOHOL	NA												
BIS(1-CHLOROISOPROPYL) ETHER	5												
BIS(2-CHLOROETHOXY)METHANE	5												
BIS(2-CHLOROETHYL) ETHER	1												
BIS(2-ETHYLHEXYL) PHTHALATE	5												
BUTYL BENZYL PHTHALATE	50												
CARBAZOLE	NA												
CHRYSENE	0.002		ND	ND	ND	ND	ND	1.4 J	4.4 J	2.1 J	7.5 J		
DIBENZ(A,H)ANTHRACENE	NA		ND	ND	ND	ND	ND	ND	ND	ND	1.6 J		
DIBENZOFURAN	NA												

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells											
Field Sample ID		OW-26T-1	OW-27-1	OW-28-1	OW-29-1	OW-30-1	OW-31-1	OW-32-1	OW-32-2	OW-33-1	OW-34-1	OW-34-1	OW-34-2
Date		10/30/03	5/21/2004	5/21/2004	5/20/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	5/21/2004	7/26/2004	7/26/2004
DIETHYL PHTHALATE	50												
DIMETHYL PHTHALATE	50												
DI-N-BUTYL PHTHALATE	50												
DI-N-OCTYL PHTHALATE	50												
FLUORANTHENE	50		ND	ND	ND	ND	ND	2.6 J	7.1 J	3.2 J	17		
FLUORENE	50		ND	ND	ND	ND	ND	ND	ND	ND	1.5 J		
HEXACHLOROBENZENE	0.04												
HEXACHLOROBUTADIENE	0.5												
HEXACHLOROCYCLOPENTADIENE	5												
HEXACHLOROETHANE	5												
INDENO(1,2,3-CD)PYRENE	0.002		ND	ND	ND	ND	ND	ND	2 J	1.2 J	4.1 J		
ISOPHORONE	50												
NAPHTHALENE	10		ND	ND	ND	ND	ND	ND	ND	1.9 J	ND		
PHENANTHRENE	50		ND	ND	ND	ND	ND	ND	2.6 J	1.6 J	14		
N-NITROSODIMETHYLAMINE	NA												
N-NITROSODI-N-PROPYLAMINE	NA												
N-NITROSODIPHENYLAMINE	NA												
PENTACHLOROPHENOL (PCP)	1												
PHENOL	1												
PYRENE	50		ND	ND	ND	ND	ND	2.8 J	7.9 J	4 J	16		

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-36-1	OW-37-1	OW-37-2	OW-38-1	OW-39-1	OW-40-1	OW-41-1	OW-42-1	OW-43-1
Date		5/19/2004	5/19/2004	5/19/2004	5/19/2004	5/19/2004	5/20/2004	5/19/2004	5/20/2004	5/19/2004
Volatile Organic Compounds (STARs) (µg/L)										
1,1,1-TRICHLOROETHANE (TCA)	5									
1,1,2,2-TETRACHLOROETHANE	5									
1,1,2-TRICHLOROETHANE	1									
1,1-DICHLOROETHANE (1,1-DCA)	5									
1,1-DICHLOROETHENE (1,1-DCE)	5									
1,2,4-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	0.6									
1,2-DICHLOROPROPANE	1									
1,3,5-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE (MEK)	NA									
2-HEXANONE	50									
P-ISOPROPYLTOLUENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	NA									
ACETONE	50									
BENZENE	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50									
BROMOFORM	50									
BROMOMETHANE	5									
CARBON DISULFIDE	60									
CARBON TETRACHLORIDE	5									
CHLOROBENZENE	5									
CHLOROETHANE	5									
CHLOROFORM	7									
CHLOROMETHANE	NA									
CIS-1,2-DICHLOROETHENE	5									
CIS-1,3-DICHLOROPROPENE	0.4									
DIBROMOCHLOROMETHANE	NA									
DICHLOROMETHANE	5									
ETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	1 J	ND
ISOPROPYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	3 J	ND
M,P-XYLENES	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	10	ND	2 J	1.9 J	ND	ND	3.6 J	9.8 J	47	ND
N-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	1.6 J	ND
N-PROPYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	3.9 J	ND
O-XYLENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	1.9 J	ND
STYRENE	5									
TERT-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	5									
TOLUENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5									
TRANS-1,3-DICHLOROPROPENE	0.4									
TRICHLOROETHENE (TCE)	5									
VINYL CHLORIDE	2									

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-36-1	OW-37-1	OW-37-2	OW-38-1	OW-39-1	OW-40-1	OW-41-1	OW-42-1	OW-43-1
Date		5/19/2004	5/19/2004	5/19/2004	5/19/2004	5/19/2004	5/20/2004	5/19/2004	5/20/2004	5/19/2004
Semi-Volatile Organic Compounds (STARs) (µg/L)										
1,2,4-TRICHLOROBENZENE	5									
1,2-DICHLOROBENZENE	3									
1,3-DICHLOROBENZENE	3									
1,4-DICHLOROBENZENE	3									
2,4,5-TRICHLOROPHENOL	NA									
2,4,6-TRICHLOROPHENOL	NA									
2,4-DICHLOROPHENOL	1									
2,4-DIMETHYLPHENOL	50									
2,4-DINITROPHENOL	10									
2,4-DINITROTOLUENE	5									
2,6-DINITROTOLUENE	5									
2-CHLORONAPHTHALENE	10									
2-CHLOROPHENOL	NA									
2-METHYLNAPHTHALENE	NA									
2-METHYLPHENOL	1									
2-NITROANILINE	5									
2-NITROPHENOL	NA									
3,3'-DICHLOROBENZIDINE	5									
3+4-METHYLPHENOL	NA									
3-NITROANILINE	5									
4,6-DINITRO-2-METHYLPHENOL	NA									
4-BROMOPHENYL PHENYL ETHER	NA									
4-CHLORO-3-METHYLPHENOL	NA									
4-CHLOROANILINE	5									
4-CHLOROPHENYL PHENYL ETHER	NA									
4-NITROANILINE	5									
4-NITROPHENOL	NA									
ACENAPHTHENE	20	ND	ND	ND	ND	ND	6.4 J	19	5.7 J	1.6 J
ACENAPHTHYLENE	NA									
ANTHRACENE	50	ND	ND	ND	ND	ND	1.7 J	18	5.4 J	3.9 J
BENZ(A)ANTHRACENE	0.002	ND	1.7 J	ND	ND	ND	3.8 J	36	12	11
BENZO(A)PYRENE	ND	ND	1.6 J	ND	ND	ND	3.2 J	35	12	11
BENZO(B)FLUORANTHENE	0.002	ND	1.5 J	ND	ND	ND	2.7 J	30	8.6 J	9.4 J
BENZO(G,H,I)PERYLENE	NA	ND	1 J	ND	ND	ND	2.1 J	24	7.5 J	7.8 J
BENZO(K)FLUORANTHENE	0.002	ND	1.5 J	ND	ND	ND	2.9 J	28	8.8 J	8.6 J
BENZYL ALCOHOL	NA									
BIS(1-CHLOROISOPROPYL) ETHER	5									
BIS(2-CHLOROETHOXY)METHANE	5									
BIS(2-CHLOROETHYL) ETHER	1									
BIS(2-ETHYLHEXYL) PHTHALATE	5									
BUTYL BENZYL PHTHALATE	50									
CARBAZOLE	NA									
CHRYSENE	0.002	ND	1.9 J	ND	ND	ND	4 J	44	13	14
DIBENZ(A,H)ANTHRACENE	NA	ND	ND	ND	ND	ND	ND	8.6 J	3.2 J	2.4 J
DIBENZOFURAN	NA									

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-36-1	OW-37-1	OW-37-2	OW-38-1	OW-39-1	OW-40-1	OW-41-1	OW-42-1	OW-43-1
Date		5/19/2004	5/19/2004	5/19/2004	5/19/2004	5/19/2004	5/20/2004	5/19/2004	5/20/2004	5/19/2004
DIETHYL PHTHALATE	50									
DIMETHYL PHTHALATE	50									
DI-N-BUTYL PHTHALATE	50									
DI-N-OCTYL PHTHALATE	50									
FLUORANTHENE	50	ND	3.9 J	1.8 J	ND	ND	9.4 J	68 J	23	20
FLUORENE	50	ND	ND	ND	ND	ND	1.9 J	24	3.3 J	2.2 J
HEXACHLOROBENZENE	0.04									
HEXACHLOROBUTADIENE	0.5									
HEXACHLOROCYCLOPENTADIENE	5									
HEXACHLOROETHANE	5									
INDENO(1,2,3-CD)PYRENE	0.002	ND	ND	ND	ND	ND	1.8 J	20	6.6 J	6.6 J
ISOPHORONE	50									
NAPHTHALENE	10	ND	ND	ND	ND	ND	1.2 J	4.8 J	1.5 J	1.8 J
PHENANTHRENE	50	ND	2.9 J	1.6 J	ND	ND	3.9 J	64 J	14	12
N-NITROSODIMETHYLAMINE	NA									
N-NITROSODI-N-PROPYLAMINE	NA									
N-NITROSODIPHENYLAMINE	NA									
PENTACHLOROPHENOL (PCP)	1									
PHENOL	1									
PYRENE	50	ND	3.4 J	1.5 J	ND	ND	8.7 J	62 J	21	24

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-44-1	OW-45-1	OW-46-1	OW-46-2	OW-47-1	OW-48-1	OW-49-1	OW-50-1	OW-51-1
Date		5/21/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004
Volatile Organic Compounds (STARs) (µg/L)										
1,1,1-TRICHLOROETHANE (TCA)	5		ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5		ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1		ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE (1,1-DCA)	5		ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE (1,1-DCE)	5		ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	0.6		ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	1		ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE (MEK)	NA		ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	50		ND	ND	ND	ND	ND	ND	ND	ND
P-ISOPROPYLTOLUENE	5	ND	1.1 J	ND	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	NA		ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50		6.2 J	ND	ND	ND	7.5 J	ND	ND	ND
BENZENE	1	ND	ND	ND	ND	1.8 J	1.1 J	ND	ND	ND
BROMODICHLOROMETHANE	50		ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50		ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5		ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	60		ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5		ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	5		ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	5		ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	7		ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	NA		ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	5		ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	0.4		ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	NA		ND	ND	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	5		ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5	ND	ND	ND	ND	ND	4.5 J	ND	ND	ND
ISOPROPYLBENZENE	5	ND	ND	ND	ND	2.4 J	2.3 J	ND	ND	ND
M,P-XYLENES	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	10	ND	1.2 J	ND	ND	44	23	ND	ND	1.3 J
N-BUTYLBENZENE	5	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND
N-PROPYLBENZENE	5	ND	ND	ND	ND	2.6 J	ND	ND	ND	ND
O-XYLENE	5	ND	ND	ND	ND	ND	1.8 J	ND	ND	ND
SEC-BUTYLBENZENE	5	ND	ND	ND	ND	1.5 J	ND	ND	ND	ND
STYRENE	5		ND	ND	ND	ND	ND	ND	ND	ND
TERT-BUTYLBENZENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	5		ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5		ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.4		ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	5		ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	2		ND	ND	ND	ND	ND	ND	ND	ND

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-44-1	OW-45-1	OW-46-1	OW-46-2	OW-47-1	OW-48-1	OW-49-1	OW-50-1	OW-51-1
Date		5/21/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004
Semi-Volatile Organic Compounds (STARs) (µg/L)										
1,2,4-TRICHLOROBENZENE	5		ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	3		ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	3		ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	3		ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TRICHLOROPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-TRICHLOROPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
2,4-DICHLOROPHENOL	1		ND	ND	ND	ND	ND	ND	ND	ND
2,4-DIMETHYLPHENOL	50		ND	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROPHENOL	10		ND	ND	ND	ND	ND	0.061 J	ND	ND
2,4-DINITROTOLUENE	5		ND	ND	ND	ND	ND	ND	ND	ND
2,6-DINITROTOLUENE	5		ND	ND	ND	ND	ND	ND	ND	ND
2-CHLORONAPHTHALENE	10		ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLNAPHTHALENE	NA		ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLPHENOL	1		ND	ND	ND	ND	ND	ND	ND	ND
2-NITROANILINE	5		ND	ND	ND	ND	ND	ND	ND	ND
2-NITROPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
3,3'-DICHLOROBENZIDINE	5		ND	ND	ND	ND	ND	ND	ND	ND
3+4-METHYLPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
3-NITROANILINE	5		ND	ND	ND	ND	ND	ND	ND	ND
4,6-DINITRO-2-METHYLPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
4-BROMOPHENYL PHENYL ETHER	NA		ND	ND	ND	ND	ND	ND	ND	ND
4-CHLORO-3-METHYLPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROANILINE	5		ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROPHENYL PHENYL ETHER	NA		ND	ND	ND	ND	ND	ND	ND	ND
4-NITROANILINE	5		ND	ND	ND	ND	ND	ND	ND	ND
4-NITROPHENOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
ACENAPHTHENE	20	ND	5 J	ND	ND	ND	4.6 J	ND	ND	ND
ACENAPHTHYLENE	NA		ND	ND	ND	ND	ND	ND	ND	ND
ANTHRACENE	50	ND	ND	ND	ND	2.4 J	ND	ND	ND	ND
BENZ(A)ANTHRACENE	0.002	ND	ND	ND	ND	1.1 J	ND	ND	ND	2 J
BENZO(A)PYRENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2
BENZO(B)FLUORANTHENE	0.002	ND	ND	ND	ND	ND	ND	ND	ND	2.1 J
BENZO(G,H,I)PERYLENE	NA	ND	ND	ND	ND	ND	ND	ND	ND	1.5 J
BENZO(K)FLUORANTHENE	0.002	ND	ND	ND	ND	ND	ND	ND	ND	1.9 J
BENZYL ALCOHOL	NA		ND	ND	ND	ND	ND	ND	ND	ND
BIS(1-CHLOROISOPROPYL) ETHER	5		ND	ND	ND	ND	ND	ND	ND	ND
BIS(2-CHLOROETHOXY)METHANE	5		ND	ND	ND	ND	ND	ND	ND	ND
BIS(2-CHLOROETHYL) ETHER	1		ND	ND	ND	ND	ND	ND	ND	ND
BIS(2-ETHYLHEXYL) PHTHALATE	5		ND	ND	1.4 J	1.1 J	4.2 J	ND	ND	2.1 J
BUTYL BENZYL PHTHALATE	50		1.7 J	ND	ND	ND	8.3 J	ND	ND	7.8 J
CARBAZOLE	NA		ND	ND	ND	ND	ND	ND	ND	ND
CHRYSENE	0.002	ND	ND	ND	ND	1.1 J	ND	ND	ND	2.4 J
DIBENZ(A,H)ANTHRACENE	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBENZOFURAN	NA		ND	ND	ND	ND	ND	ND	ND	ND

See Notes on Page 24.

TABLE 11
VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards and Guidance (1) (µg/L)	Onsite Groundwater Monitoring Wells								
Field Sample ID		OW-44-1	OW-45-1	OW-46-1	OW-46-2	OW-47-1	OW-48-1	OW-49-1	OW-50-1	OW-51-1
Date		5/21/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004	5/20/2004
DIETHYL PHTHALATE	50		ND	ND	ND	ND	ND	ND	ND	ND
DIMETHYL PHTHALATE	50		ND	ND	ND	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	50		ND	ND	ND	ND	1.9 J	ND	ND	ND
DI-N-OCTYL PHTHALATE	50		ND	ND	ND	ND	ND	ND	ND	ND
FLUORANTHENE	50	ND	1.1 J	ND	ND	4 J	1.9 J	ND	ND	4.1
FLUORENE	50	ND	ND	ND	ND	ND	1.6 J	ND	ND	ND
HEXACHLOROBENZENE	0.04		ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	0.5		ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	5		ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROETHANE	5		ND	ND	ND	ND	ND	ND	ND	ND
INDENO(1,2,3-CD)PYRENE	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPHORONE	50		ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHENANTHRENE	50	ND	ND	ND	ND	1.3 J	ND	ND	ND	2.2 J
N-NITROSODIMETHYLAMINE	NA		ND	ND	ND	ND	ND	ND	ND	ND
N-NITROSODI-N-PROPYLAMINE	NA		ND	ND	ND	ND	ND	ND	ND	ND
N-NITROSODIPHENYLAMINE	NA		ND	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL (PCP)	1		ND	ND	ND	ND	ND	ND	ND	ND
PHENOL	1		ND	ND	ND	ND	ND	ND	ND	ND
PYRENE	50	ND	ND	ND	ND	3.3 J	1.8 J	ND	ND	3.9 J

Notes:
(1) 6 NYCRR Part 703, Class GA Standards and TOGS 1.1.1 Guidance.
(2) Temporary 1 inch wells without sandpack.
Constituents with Levels above Standards or Guidance.
J = Estimated value.
NA = Not available or not established.
ND = Not Detected.

TABLE 12
TCL PESTICIDE AND PCB ANALYSIS OF GROUNDWATER

REMEDIAL INVESTIGATION REPORT FORMER GENERAL MOTORS ASSEMBLY PLANT SITE

Sampling Area Description	NYSDEC Standards & Guidance (1) (ug/l)			
Field Sample ID		OW-24-1	OW-24-2	OW-25-1
Date		10/30/2003	10/30/2003	10/30/2003
TCL Pesticides & PCBs (µg/L)		ND	ND	ND
4,4'-DDD	0.3	ND	ND	ND
T4,4'-DDE	0.2	ND	ND	ND
4,4'-DDT	0.2	ND	ND	ND
ALDRIN	ND	ND	ND	ND
ALPHA-BHC	NA	ND	ND	ND
ALPHA-CHLORDANE	0.05	ND	ND	ND
BETA-BHC	NA	ND	ND	ND
DELTA-BHC	NA	ND	ND	ND
DIELDRIN	0.0004	ND	ND	ND
ENDOSULFAN I	NA	ND	ND	ND
ENDOSULFAN II	NA	ND	ND	ND
ENDOSULFAN SULFATE	NA	ND	ND	ND
ENDRIN	ND	ND	ND	ND
ENDRIN ALDEHYDE	5	ND	ND	ND
ENDRIN KETONE	5	ND	ND	ND
GAMMA-BHC (LINDANE)	NA	ND	ND	ND
GAMMA-CHLORDANE	0.1	ND	ND	ND
HEPTACHLOR	0.04	ND	ND	ND
HEPTACHLOR EPOXIDE	0.03	ND	ND	ND
METHOXYCHLOR	35	ND	ND	ND
TOXAPHENE	0.06	ND	ND	ND
AROCLOR 1016	NA	ND	ND	ND
AROCLOR 1221	NA	ND	ND	ND
AROCLOR 1232	NA	ND	ND	ND
AROCLOR 1242	NA	ND	ND	ND
AROCLOR 1248	NA	ND	ND	ND
AROCLOR 1254	NA	ND	ND	ND
AROCLOR 1260	NA	ND	ND	ND
Total PCBs	0.09	ND	ND	ND

Notes:
(1) 6 NYCRR Part 703, Class GA Standards and TOGS 1.1.1 Guidance.
Constituents with Levels above Standards or Guidance.
J = Estimated value.
NA = Not available or not established.
ND = Not Detected.

TABLE 13
METHANE AND SOIL GAS SURVEY RESULTS - EAST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Location ID	Depth (ft)	Date	Methane (%)	Oxygen (%)	FID (ppm)	Hydrogen Sulfide (ppm)	Hydrogen Sulfide [Jerome] (ppm)	Comments
SG1	1	10/15/2003	0.0	18.6	65.1	1	0.001	WATER AT 1'
SG2	1	10/15/2003	2.6	0.0	0.0	1	0.000	
SG2	2	10/15/2003	3.0	0.0	0.0	1	0.003	
SG2	3	10/15/2003	3.0	0.0	NM	1	0.001	WATER AT 3'
SG2	3	10/15/2003	3.0	0.0	NM	1	0.000	MOVED OVER 6 INCHES TO CONFIRM WATER AT 3'
SG3	1	10/15/2003	13.4	0.0	NM	1	0.000	
SG3	2	10/15/2003	13.7	0.0	NM	1	0.120	
SG3	3	10/15/2003	13.6	0.0	NM	1	0.150	
SG3	4	10/15/2003	14.0	0.0	NM	0	0.002	WATER AT 4'
SG4	1	10/15/2003	0.6	0.0	>9421	0	0.001	
SG4	2	10/15/2003	0.6	0.0	>4345	0	0.000	
SG4	3	10/15/2003	0.9	0.0	>4345	0	0.000	WATER AT 3'
SG5	1	10/17/2003	0.0	18.8	0.0	0	0.002	
SG5	2	10/17/2003	0.0	18.1	0.0	0	0.001	
SG5	3	10/17/2003	0.0	6.6	44.5	0	0.000	
SG5	4	10/17/2003	0.0	6.2	3.6	0	0.001	
SG5	5	10/17/2003	0.0	5.1	3.6	0	0.001	
SG5	6	10/17/2003	-	-	-	-	-	WATER AT 6'
SG6	1	10/16/2003	0.0	18.4	0.0	0	0.000	
SG6	2	10/16/2003	0.0	14.0	0.9	0	0.000	
SG6	3	10/16/2003	0.0	13.1	0.0	0	0.000	
SG6	4	10/16/2003	0.0	12.0	0.0	0	0.000	
SG6	5	10/16/2003	0.0	11.2	0.0	0	0.000	
SG6	6	10/16/2003	0.0	10.9	0.0	0	0.000	
SG6	7	10/16/2003	0.0	13.6	0.0	0	0.001	WATER AT 7'
SG7	1	10/15/2003	31.6	0.0	NM	0	0.002	
SG7	2	10/15/2003	31.8	0.0	NM	0	0.008	
SG7	3	10/15/2003	31.6	0.0	NM	0	0.430	
SG7	4	10/15/2003	31.9	0.0	NM	0	0.930	
SG7	5	10/15/2003	-	-	-	-	-	WATER AT 5'
SG8	1	10/14/2003	57.3	0.0	NM	0	-	
SG8	2	10/14/2003	57.7	0.0	NM	0	-	
SG8	3	10/14/2003	57.7	0.0	NM	0	-	WATER AT 3'
SG8	1	10/15/2003	58.8	0.0	NM	1	0.145	
SG8	2	10/15/2003	59.1	0.0	NM	1	0.091	
SG8	3	10/15/2003	-	-	-	-	-	WATER AT 3'
SG9	1	10/14/2003	46.1	1.2	NM	0	-	
SG9	2	10/14/2003	48.1	0.8	NM	0	-	WATER AT 2'
SG10	1	10/17/2003	13.1	0.0	NM	0	0.000	
SG10	2	10/17/2003	10.1	0.0	NM	0	0.003	
SG10	3	10/17/2003	-	-	-	-	-	WATER AT 3'
SG11	1	10/13/2003	26.6	0.0	NM	1	-	
SG11	2	10/13/2003	28.6	0.0	NM	1	-	
SG11	3	10/13/2003	29.8	0.0	NM	0	-	
SG11	4	10/13/2003	34.6	0.0	NM	0	-	
SG11	5	10/13/2003	5.8	13.3	NM	0	-	WATER AT 5'
SG12	1	10/16/2003	0.0	19.3	0.0	0	0.000	
SG12	2	10/16/2003	0.0	19.1	0.0	0	0.000	

See Note on Page 4.

TABLE 13
METHANE AND SOIL GAS SURVEY RESULTS - EAST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Location ID	Depth (ft)	Date	Methane (%)	Oxygen (%)	FID (ppm)	Hydrogen Sulfide (ppm)	Hydrogen Sulfide [Jerome] (ppm)	Comments
SG12	3	10/16/2003	0.0	18.6	0.0	0	0.000	
SG12	4	10/16/2003	0.0	18.3	0.0	0	0.000	
SG12	5	10/16/2003	0.0	18.2	0.0	0	0.000	
SG12	6	10/16/2003	0.0	17.9	0.0	0	0.000	
SG12	7	10/16/2003	0.0	18.4	0.0	0	0.001	WATER AT 7'
SG13	1	10/16/2003	-	-	-	-	-	SOIL LOOSE; WENT TO 3 FEET
SG13	3	10/16/2003	0.0	17.5	0.0	1	0.000	
SG13	4	10/16/2003	0.0	17.0	0.0	1	0.000	
SG13	5	10/16/2003	0.0	16.5	0.0	0	0.000	
SG13	6	10/16/2003	0.0	16.2	0.0	0	0.000	
SG13	7	10/16/2003	0.0	15.9	0.0	0	0.000	
SG13	8	10/16/2003	0.0	15.7	0.0	0	0.000	
SG13	9	10/16/2003	0.0	15.5	0.0	0	0.000	
SG13	10	10/16/2003	0.0	15.4	0.0	0	0.002	WATER AT 10'
SG13		10/16/2003	0.0	18.2	4.6	1	0.002	
SG14	3	10/16/2003	0.0	20.0	0.0	1	0.003	SG14 THROUGH SOIL/MULCH
SG14	4	10/16/2003	6.7	8.2	NM	1	0.003	
SG14	5	10/16/2003	-	-	-	-	-	WATER AT 5'
SG15	1	10/13/2003	11.7	0.0	NM	1	-	
SG15	2	10/13/2003	26.3	0.0	NM	1	-	
SG15	1	10/16/2003	13.4	0.0	NM	0	0.000	SAMPLES COLLECTED FOR VOC, NMHC
SG16	1	10/13/2003	105.8	0.0	NM	1	-	
SG16	2	10/13/2003	106.8	0.0	NM	0	-	
SG17	1	10/15/2003	38.6	0.0	NM	0	0.002	
SG17	2	10/15/2003	38.8	0.0	NM	0	0.030	
SG17	3	10/15/2003	-	-	-	-	-	WATER AT 3'
SG18	1	10/14/2003	23.6	0.0	NM	0	-	
SG18	2	10/14/2003	23.4	0.0	NM	0	-	
SG18	3	10/14/2003	-	-	-	-	-	WATER AT 3'
SG18	1	10/16/2003	28.1	0.0	NM	0	1.500	SAMPLES COLLECTED FOR SULFUR, VOC, NMHC
SG19	1	10/14/2003	18.8	0.0	NM	1	-	
SG19	2	10/14/2003	19.6	0.0	NM	1	-	
SG19	3	10/14/2003	-	-		-	-	WATER AT 3'
SG20	1	10/14/2003	0.0	17.6	0.0	0	-	
SG20	2	10/14/2003	0.0	17.4	5.8	0	-	
SG20	3	10/14/2003	-	-		-	-	WATER AT 3'
SG21	1	10/15/2003	17.8	0.0	NM	0	0.003	
SG21	2	10/15/2003	82.0	0.0	NM	0	0.110	
SG21	3	10/15/2003	90.8	0.0	NM	0	0.002	WATER AT 3'
SG22	1	10/13/2003	0.1	17.8	126.1	2	-	
SG22	2	10/13/2003	45.8	0.0	NM	1	-	
SG22	3	10/13/2003	63.7	0.0	NM	1	-	
SG22	4	10/13/2003	59.4	0.0	NM	1	-	
SG22	5	10/13/2003	53.0	0.0	NM	1	-	WET AT PROBE TIP
SG22	6	10/13/2003	-	-	-	-	-	WATER AT 6'
SG22	1	10/16/2003	0.0	19.2	870.3	0	0.000	
SG22	2	10/16/2003	33.1	0.0	NM	0	0.000	SAMPLES COLLECTED FOR VOC, NMHC

See Note on Page 4.

TABLE 13
METHANE AND SOIL GAS SURVEY RESULTS - EAST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Location ID	Depth (ft)	Date	Methane (%)	Oxygen (%)	FID (ppm)	Hydrogen Sulfide (ppm)	Hydrogen Sulfide [Jerome] (ppm)	Comments
SG23	1	10/13/2003	36.5	0.0	NM	3	-	
SG23	2	10/13/2003	92.9	0.0	NM	3	-	
SG23	3	10/13/2003	-	-	-	-	-	WATER AT 3'
SG23	1	10/16/2003	91.3	0.0	NM	0	0.000	
SG24	1	10/17/2003	0.0	18.7	10.1	0	0.000	
SG24	2	10/17/2003	0.0	19.1	0.0	0	0.002	WATER AT 2'
SG25	1	10/13/2003	99.5	0.0	NM	3	-	
SG25	2	10/13/2003	99.9	0.0	NM	2	-	
SG25	3	10/13/2003	-	-	-	-	-	WATER AT 3'
SG26	1	10/14/2003	0.0	19.3	5.1	0	-	
SG26	2	10/14/2003	-	-	-	-	-	WATER AT 2'
SG27	1	10/13/2003	0.0	17.6	8.1	3	-	
SG27	2	10/13/2003	-	-	-	-	-	WATER AT 2'
SG28	2	10/17/2003	0.0	17.8	0.0	0	0.000	
SG28	3	10/17/2003	-	-	-	-	-	WATER AT 3'
SG29	1	10/13/2003	65.1	0.0	NM	2	-	
SG29	2	10/13/2003	65.2	0.0	NM	2	-	
SG29	3	10/13/2003	67.9	0.0	NM	2	-	WATER AT 3'
SG30	1	10/14/2003	0.0	16.1	262.0	0	-	
SG30	2	10/14/2003	21.5	0.0	NM	0	-	
SG30	3	10/14/2003	21.9	0.0	NM	0	-	
SG30	4	10/14/2003	22.0	0.0	NM	0	-	
SG30	5	10/14/2003	5.1	13.7	NM	0	-	WATER AT 5'
SG31	1	10/14/2003	36.2	0.8	NM	0	-	
SG31	2	10/14/2003	42.2	0.0	NM	0	-	
SG31	3	10/14/2003	-	-	-	-	-	WATER AT 3'
SG32	1	10/14/2003	0.0	19.2	0.4	0	-	
SG32	2	10/14/2003	15.9	0.2	NM	2	-	
SG32	3	10/14/2003	15.8	0.0	NM	1	-	
SG32	4	10/14/2003	6.3	15.1	NM	1	-	FLOW INDICATOR
SG32	5	10/14/2003	18.3	14.9	NM	0	-	
SG32	6	10/14/2003	2.6	17.6	NM	0	-	WATER AT 6'
SG32	3	10/17/2003	17.8	0.0	NM	0	0.003	SAMPLE COLLECTED FOR VOC, NMHC
SG33	1	10/14/2003	0.0	18.5	0.0	0	-	
SG33	2	10/14/2003	0.0	19.0	0.0	0	-	
SG33	3	10/14/2003	0.0	18.7	0.0	0	-	WATER AT 3'
SG34	1	10/13/2003	0.0	18.0	0.0	2	-	
SG34	2	10/13/2003	0.0	18.3	0.0	2	-	WATER AT 2'
SG34	1	10/14/2003	0.0	19.3	0.0	0	-	
SG34	2	10/14/2003	0.0	18.6	0.0	0	-	WATER AT 2'
SG35	1	10/14/2003	0.0	19.7	0.0	1	-	WATER AT 1'
SG36	1	10/17/2003	81.1	0.0	NM	0	0.032	
SG36	2	10/17/2003	80.8	0.0	NM	0	1.070	
SG36	3	10/17/2003	-	-	-	-	-	WATER AT 3'
SG37	1	10/17/2003	0.0	18.2	0.0	0	0.000	
SG37	2	10/17/2003	36.5	0.0	NM	0	0.170	
SG37	3	10/17/2003	-	-	-	-	-	WATER AT 3'

See Note on Page 4.

TABLE 13
METHANE AND SOIL GAS SURVEY RESULTS - EAST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Location ID	Depth (ft)	Date	Methane (%)	Oxygen (%)	FID (ppm)	Hydrogen Sulfide (ppm)	Hydrogen Sulfide [Jerome] (ppm)	Comments
SG38	1	10/15/2003	29.5	0.0	NM	0	0.041	
SG38	2	10/15/2003	29.3	0.0	NM	0	0.043	
SG38	3	10/15/2003	-	-	-	-	-	WATER AT 3'
SG39	1	10/15/2003	0.0	2.8	15.4	0	0.000	
SG39	2	10/15/2003	0.0	0.0	50.1	0	0.620	
SG39	3	10/15/2003	0.0	0.0	1.6	0	0.003	WATER AT 3'
SG40	1	10/17/2003	59.1	0.0	NM	0	0.000	
SG40	2	10/17/2003	59.4	0.0	NM	0	0.025	
SG40	3	10/17/2003	58.8	0.0	NM	1	1.500	
SG40	4	10/17/2003	81.8	0.0	NM	0	0.004	WATER AT 4'
SG41	1	10/17/2003	0.0	6.1	0.0	0	0.000	WEST OF SG32
SG41	2	10/17/2003	0.0	19.5	0.0	0	0.002	FLOW INDICATOR
SG41	3	10/17/2003	-	-	-	-	-	WATER AT 3'
SG42	1	10/17/2003	0.6	6.6	3499.0	0	0.002	SOUTHWEST OF SG1
SG42	2	10/17/2003	89.4	0.0	NM	0	0.003	
SG42	3	10/17/2003	-	-	-	-	-	WATER AT 3'
SG43	1	10/17/2003	0.0	19.3	0.0	0	0.000	THOUGH BALLAST
SG43	2	10/17/2003	-	-	-	-	-	WATER AT 2'
SG44	1	11/3/2003	0.0	19.1	-	-	-	
SG44	2	11/3/2003	48.0	5.2	-	-	-	
SG44	3	11/3/2003	32.4	0.0	-	-	-	
SG44	4	11/3/2003	-	-	-	-	-	WATER AT 4'
SG45	1	11/3/2003	0.0	18.5	-	-	-	
SG45	2	11/3/2003	0.0	16.2	-	-	-	
SG45	3	11/3/2003	0.0	15.3	-	-	-	
SG45	4	11/3/2003	0.0	14.1	-	-	-	
SG45	5	11/3/2003	0.0	18.5	-	-	-	WATER AT 5'
SG46	1	11/3/2003	0.0	18.9	-	-	-	
SG46	2	11/3/2003	0.0	19.2	-	-	-	
SG46	3	11/3/2003	-	-	-	-	-	WATER AT 3'
SG47	1	11/3/2003	0.0	18.5	-	-	-	
SG47	2	11/3/2003	0.0	17.5	-	-	-	
SG47	3	11/3/2003	0.0	16.7	-	-	-	
SG47	4	11/3/2003	0.0	15.1	-	-	-	WATER AT 4'

Note:
FID = Measurement of total hydrocarbons (including methane) by flame-ionization detector.
NM = Not Measured

TABLE 14
VOLATILE ORGANIC COMPOUND ANALYSIS IN SOIL GAS - EAST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sample ID	SG32	SG15	SG22	SG22 Duplicate	SG18
Location	**NW of landfill**	**Above landfill**	**Above landfill**		**W of landfill**
Volatile Organic Compound (ug/m^3)					
Freon 12	ND	ND	4.4	ND	ND
Freon 113	ND	ND	14	21	ND
Benzene	ND	17	ND	8.4	3.3
Trichloroethene	22	ND	5.5	25	ND
Toluene	26	14	5.8	25	49
Tetrachloroethene	96	ND	12	50	ND
Ethylbenzene	ND	ND	ND	ND	4.4
m,p-Xylene	ND	5.2	ND	ND	16
o-Xylene	ND	ND	ND	ND	6.8
1,3-Butadiene	19	12	ND	ND	ND
Hexane	19	45	26	79	41
Cyclohexane	18	34	18	53	26
Heptane	ND	19	12	33	12
Acetone	87	50	23	73	18
2-Propanol	ND	41	ND	ND	31
2-Butanone (methyl ethyl ketone)	ND	12	ND	ND	ND
Ethanol	ND	15	15	32	12
Methyl-t-butyl ether (MTBE)	ND	14	ND	ND	ND

Note:
All soil gas samples were obtained beneath pavement, within 1-foot of surface.

TABLE 15
METHANE SURVEY RESULTS - WEST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Location ID	Probe Depth (ft)	Date	Time	Methane (%)	Oxygen (%)	PID (ppm)	FID (ppm)	FID Background (PPM)	Ground Surface Description/Notes
MS-1	2'	5/13/2004	7:40	18.0	5.7		NM		CONCRETE SLAB 8", DREW WATER
MS-1A	1'	5/17/2004	8:25	0.0	14.0	1.4	88.0	0.3	CONCRETE SLAB
MS-1A	2'	5/17/2004	8:30	8.1	16.0	0.4	NM		CONCRETE SLAB
MS-1A	3'	5/17/2004	8:35	1.1	19.0	0.1	NM		HIT WATER AT 4'
MS-2	2'	5/13/2004	8:20	2.2	4.7	NM	NM		CONCRETE SLAB 8"
MS-3	2'	5/13/2004	8:10	0.0	19.3	NM	0.0		CONCRETE SLAB 8"
MS-4	2'	5/12/2004	14:10	0.0	18.8	NM	NM		FILL; DREW WATER
MS-4	1'	5/12/2004	14:20	0.0	18.8	NM	25.0		FILL
MS-5	2'	5/13/2004	9:00	0.0	17.1	NM	0.0		CONCRETE SLAB 8"
MS-6	2'	5/13/2004	8:40	0.0	20.0	NM	0.0		CONCRETE SLAB 8", MOVED LOCATION TO AVOID DRAIN
MS-7	2'	5/12/2004	14:00	0.0	18.0	NM	1.2		FILL
MS-8	2'	5/12/2004	13:45	0.0	10.2	NM	3.3		FILL
MS-9	2'	5/12/2004	14:30	0.0	19.8	NM	0.1		ASPHALT
MS-10	VOID (1")	5/13/2004	11:50	0.0	20.0	NM	0.0		CONCRETE, 1" VOID
MS-10	2'	5/13/2004	11:55	0.0	19.4	NM	0.0		FILL
MS-11	2'	5/12/2004	13:25	0.0	11.2	NM	24.0		FILL
MS-12	2'	5/13/2004	9:25	0.0	19.4	NM	0.0		FILL OVER CONCRETE LAYER OVER FILL
MS-13	2'	5/13/2004	9:45	0.0	19.5	NM	0.0		FILL
MS-14	2'	5/13/2004	10:00	0.0	20.2	NM	0.4		FILL
MS-14	3'	5/13/2004	10:05	NM	NM	NM	NM		HIT WATER - NO READINGS
MS-15	2'	5/13/2004	12:50	0.0	19.6	NM	0.0		CONCRETE 11"; NO VOID
MS-15	2' 11"	5/13/2004	13:00	0.0	19.4	NM	0.5	0.0	CONCRETE 11"; NO VOID
MS-16	2'	5/13/2004	12:20	0.0	19.5	NM	0.2	0.4	CONCRETE
MS-16	2' 10"	5/13/2004	12:25	0.0	19.4	NM	0.3	0.3	CONCRETE
MS-17	2'	5/13/2004	10:25	0.0	14.5	NM	0.3		ASPHALT
MS-18	2'	5/13/2004	13:35	0.0	19.5	NM	0.0		CONCRETE 10", NO VOID
MS-18	2' 10"	5/13/2004	13:40	0.0	19.4	NM	0.0	0.0	CONCRETE 10", NO VOID
MS-19	VOID (2")	5/14/2004	10:00	0.0	20.1	NM	0.0	0.0	CONCRETE 10", 2" VOID
MS-19	2' BELOW VOID	5/14/2004	10:10	0.0	19.8	NM	0.0		DEPTH 3' 2" FROM TOP OF SLAB
MS-20	2'	5/14/2004	11:30	0.0	18.8	NM	0.0	0.0	CONCRETE 10", NO VOID
MS-20	2' 10"	5/14/2004	11:35	0.0	18.4	NM	0.0		CONCRETE 10", NO VOID
MS-21A	VOID (4")	5/13/2004	14:20	0.0	19.5	NM	0.0		CONCRETE 10", REFUSAL AT 1.5'
MS-21B	2'	5/13/2004	14:45	0.0	19.2	NM	0.8		CONCRETE 10"
MS-21B	2' 10"	5/13/2004	14:50	0.0	19.9	NM	0.0		CONCRETE 10"
MS-22	2'	5/14/2004	9:30	0.0	20.0	NM	2.4	1.9	CONCRETE 10", NO VOID
MS-22	2' 10"	5/14/2004	9:35	0.0	19.9	NM	3.3	0.5	FILL
MS-23	2'	5/13/2004	11:00	0.0	16.5	NM	0.0		FILL, OLD RAIL BED, HAND PUSHED ROD
MS-24	1'	5/17/2004	8:55	0.0	19.0	0.0	4.5	0.3	FILL
MS-24	2'	5/17/2004	9:00	0.0	19.5	0.3	1.0	0.9	FILL, BROKE THROUGH CONCRETE BETWEEN 1' AND 2'
MS-25	1'	5/17/2004	9:25	6.0	17.0	0.0	NM		ASPHALT
MS-25	2'	5/17/2004	9:50	1.0	19.0	0.0	NM		ASPHALT

See Notes on Page 2.

TABLE 15
METHANE SURVEY RESULTS - WEST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Location ID	Probe Depth (ft)	Date	Time	Methane (%)	Oxygen (%)	PID (ppm)	FID (ppm)	FID Background (PPM)	Ground Surface Description/Notes
MS-26	1'	5/17/2004	10:05	0.2	6.3	1.8	NM		FILL; 2' OFF ASPHALT
MS-26	2'	5/17/2004	10:10	0.1	10.5	0.0	NM		FILL; 2' OFF ASPHALT
MS-27	1'	5/17/2004	10:20	0.0	20.1	0.0	0.0		ASPHALT
MS-27	2'	5/17/2004	10:25	8.1	10.5	0.0	NM		ASPHALT
MS-28	1'	5/17/2004	10:35	0.0	16.0	0.8	171.8		ASPHALT
MS-28	2'	5/17/2004	10:45	0.0	16.0	0.9	9.2		ASPHALT
MS-29	1'	5/17/2004	10:55	0.0	18.7	4.8	752.5		ASPHALT
MS-29	2'	5/17/2004	11:00	0.0	19.8	0.0	0.0		ASPHALT
MS-30	2'	5/17/2004	11:25	0.0	16.2	4.9	87.0		CONCRETE 10"
MS-31	2'	5/17/2004	11:45	0.0	18.4	0.1	0.0		CONCRETE 12"
MS-31	3'	5/17/2004	11:50	0.0	17.0	NM	NM		DREW WATER
MS-32	2'	5/17/2004	12:10	0.0	20.0	0.0	0.0		CONCRETE 10"
MS-32	3'	5/17/2004	12:15	0.0	18.0	0.0	0.0		CONCRETE 10"

Notes:
NM = Not Measured.
PID = Measurement of total volatile organic compounds in soil gas by photo-ionization detector.
FID = Measurement of total hydrocarbons in soil gas (including methane) by flame-ionization detector.

TABLE 16
VOLATILE ORGANIC COMPOUND ANALYSIS IN SOIL GAS - WEST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sample Area Description	Background Samples			Paired Crawl Space Air and Soil Gas Samples																					
Amount (ug/m3) Sample ID Samples ending in "2" are field duplicates (except background samples). Samples marked "Duplicate" are lab duplicates. Samples with "A" are ambient crawl space air, "G" are soil vapor. Compound	SV-BK-1	SV-BK-1 Duplicate	SV-BK-2	SV-1A-1	SV-1G-1	SV-2A-1	SV-2G-1	SV-3A-1	SV-3G-1	SV-4A-1	SV-4G-1	SV-5A-1	SV-5G-1	SV-6A-1	SV-6G-1	SV-7A-1	SV-7G-1	SV-8A-1	SV-8A-2	SV-8A-2 Duplicate	SV-8G-1	SV-8G-2	SV-9A-1	SV-9G-1	SV-9G-1 Duplicate
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	6.1	ND	6.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl Ethyl Ketone)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	12	11	8.4	ND	7.6	9.3	11	14	20	ND	25	8.7	25	8	ND	ND	8.8	ND	ND	ND	9.1	ND	ND	9.6	8.3
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	20	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	3.2	ND	3.1	ND	3.5	ND	4.7	ND	5.4	ND	8.8	16	ND	ND	ND	ND	ND	6.1	6.1
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes on Page 2.

TABLE 16
VOLATILE ORGANIC COMPOUND ANALYSIS IN SOIL GAS - WEST PARCEL

REMEDIAL INVESTIGATION REPORT
FORMER GENERAL MOTORS NORTH TARRYTOWN ASSEMBLY PLANT SITE

Sample Area Description	Sub-Slab and Sub-Pavement Samples																										
Amount (ug/m3) Sample ID Samples ending in "2" are field duplicates (except background samples). Samples marked "Duplicate" are lab duplicates. Samples with "A" are ambient crawl space air, "G" are soil vapor. Compound	SV-10-1	SV-10-1 Duplicate	SV-10-2	SV-11-1	SV-12-1	SV-13-1	SV-14-1	SV-15-1	SV-16-1	SV-16-1 Duplicate	SV-17-1	SV-18-1	SV-19-1	SV-20-1	SV-21-1	SV-22-1	SV-22-2	SV-23-1	SV-24-1	SV-25-1	SV-26-1	SV-27-1	SV-28-1	SV-28-2	SV-29-1	SV-30-1	SV-31-1
1,1,1-Trichloroethane	17	16	16	ND	ND	12	ND	ND	ND	ND	7.3	410	54	28	ND	ND	ND	ND	ND	ND	ND	ND	12	11	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	8.2	ND	ND	ND	83	5.7	5.6	ND	ND	ND	ND	ND	ND	ND	14	58	ND	ND	45	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.3	46	ND	ND	9.5	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	160	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl Ethyl Ketone)	ND	ND	ND	ND	ND	ND	ND	73	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.9 J	38	ND	ND	17	ND	ND	ND	12	ND
2-Propanol	ND	ND	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	420	ND	ND	ND	25	130
4-Ethyltoluene	ND	ND	ND	ND	ND	ND	ND	97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	64	ND	ND	37	ND	ND	ND	ND	ND
Acetone	57	55	57	270	180	99	360	2500	140	140	250	92	290	260	230	43	33	98	840	260	420	130	180	77	57	250	140
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	27	110	ND	14
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	6.3	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	69	9.9	9.2	ND	7.3	ND	ND	17	12
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18	ND	ND	7.5	ND	ND	ND	ND	ND
Freon 11	ND	ND	ND	ND	ND	80	21	ND	ND	ND	ND	31	ND	200	12	ND	ND	ND	ND	14	ND	ND	100	110	9.8	ND	5.2
Freon 12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND	4.5	35	ND	ND	ND	4.9	ND	7.2
Heptane	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	4	4	ND	ND	ND	3.8	ND	ND	ND	ND	21	3.3	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	ND	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	28	ND	ND	ND	ND	ND	ND	58	3.8	ND	29	ND	ND	ND	4.6	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND	ND	ND	ND	73	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	28	ND	ND	13	ND	ND	ND	ND	ND
Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	26	ND	ND	ND	ND	ND	ND	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	140	4.9	5	ND	ND	ND	5.5	ND	ND	ND	ND	72	4.1	ND	10	ND	ND	ND	4.7	ND
Trichloroethene	ND	ND	ND	ND	ND	160	ND	ND	ND	ND	210	2900	2600	6.9	ND	ND	ND	ND	ND	5.8	ND	ND	ND	ND	ND	ND	ND

Notes:

** SV-15-1 drew water into the sampling tubing, but not all the way to the canister. The sample dilution factor is 6.2.

SV-BK-1 background ambient air sample was obtained outside of Body Plant crawl space closest to SV-1 (downwind).

SV-BK-2 background ambient air sample was obtained outside of Body Plant crawl space next to OW-27 (upwind).

Strong skunk smell noted during sampling at SV-6.

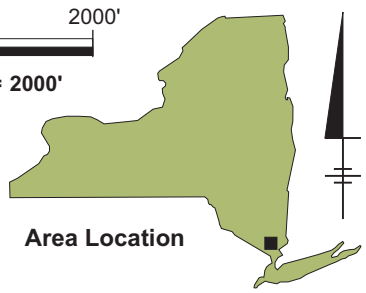
Figures



REFERENCE: BASE MAP USGS 7.5 MIN. QUAD., WHITE PLAINS, NY, 1967, PHOTOREVISED 1979.

2000' 0 2000'

Approximate Scale: 1" = 2000'



FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK

REMEDIAL INVESTIGATION REPORT

SITE LOCATION MAP

ARCADIS

FIGURE
1A

01/26/2012 SYRACUSE, NY-ENV/CAD DJHOWES
B0064462/0001/00024/CDR/64462N01.CDR



SOURCE: EARTH ATTRIBUTES
DATE OF PHOTOGRAPH: APRIL 24, 2000

REFERENCE: FIGURE FROM DEIS FOR LIGHTHOUSE LANDING AT SLEEPY HOLLOW, NOVEMBER 2004, PREPARED BY DIVNEY TUNG SCHWALBE.

N

DIVNEY • TUNG • SCHWALBE

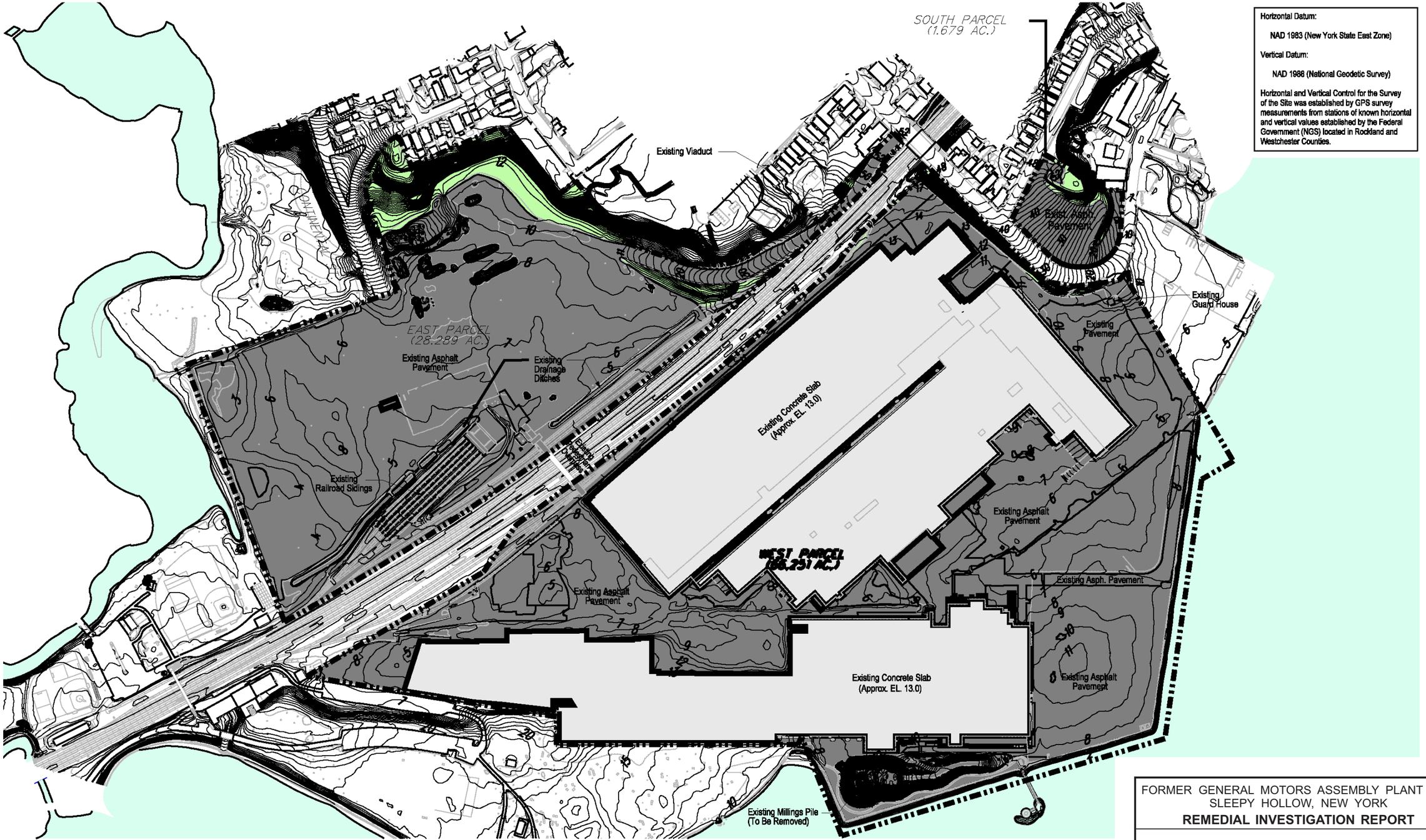
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

EXISTING AERIAL PHOTOGRAPH

ARCADIS

FIGURE
1B

01/26/2011 SYRACUSE, NY-ENV/CAD-DJHOWES
B0064462/0001/00029/CDR/64462G01.CDR



Horizontal Datum:

NAD 1983 (New York State East Zone)

Vertical Datum:

NAD 1988 (National Geodetic Survey)

Horizontal and Vertical Control for the Survey of the Site was established by GPS survey measurements from stations of known horizontal and vertical values established by the Federal Government (NGS) located in Rockland and Westchester Counties.

N

0 275 550

DIVNEY • TUNG • SCHWALBE

REFERENCE: FIGURE FROM DEIS FOR LIGHTHOUSE LANDING AT SLEEPY HOLLOW, NOVEMBER 2004, PREPARED BY DIVNEY TUNG SCHWALBE.

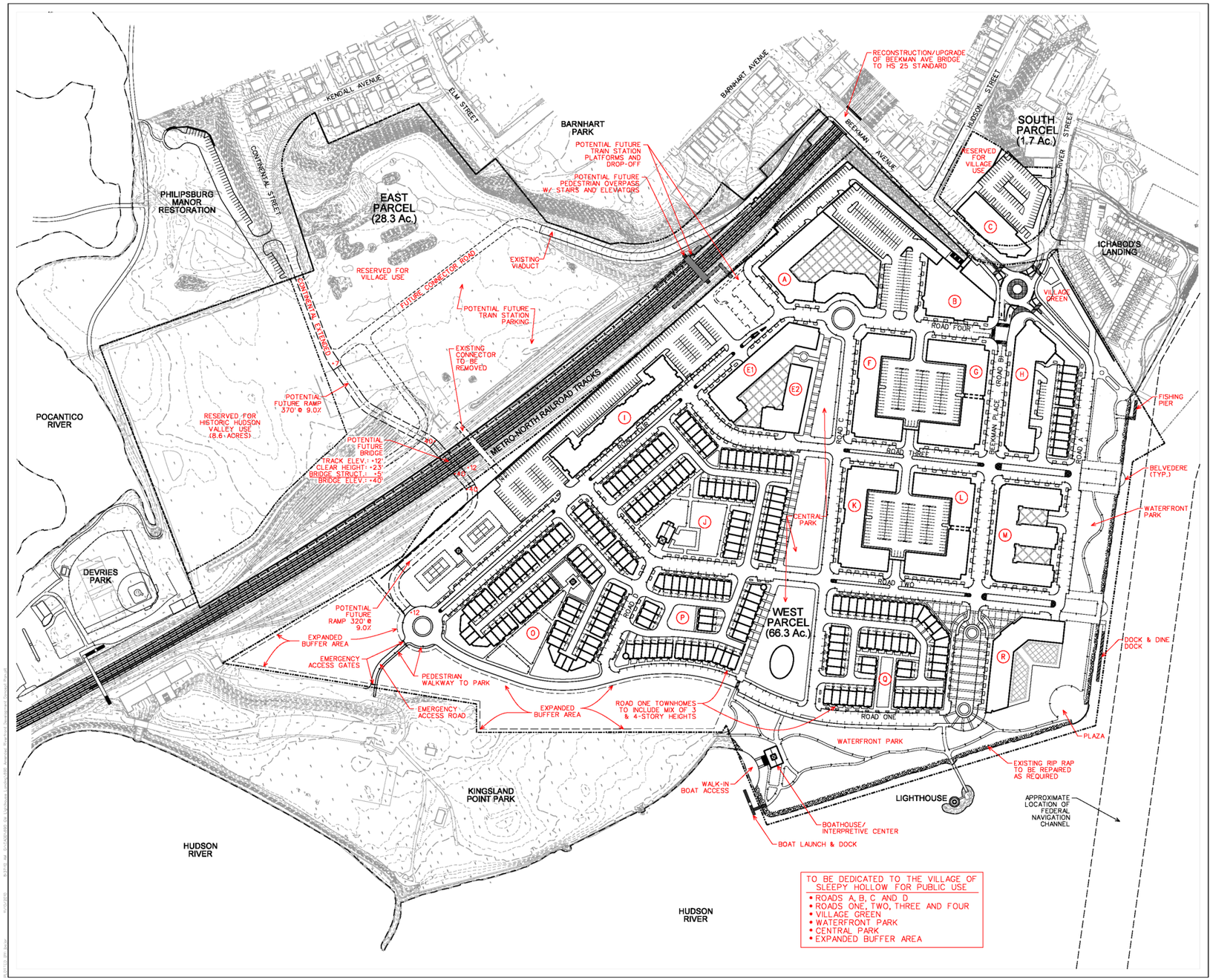
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

EXISTING CONDITIONS

ARCADIS

FIGURE
1C

01/25/2012 SYRACUSE, NY-ENV/CAD-DJHOWES
B0064462/0001/00024/CDR/64462G02.CDR



LIGHTHOUSE LANDING AT SLEEPY HOLLOW
Sleepy Hollow, New York

GENERAL MOTORS CORPORATION
200 Renaissance Center, Detroit, MI 48265

SITE ENGINEER & LANDSCAPE ARCHITECT:
DIVNEY • TUNG • SCHWALBE
Intelligent Land Use
Divney Tung Schwalbe, LLP
One North Broadway
White Plains, NY 10601
P: 914.428.0010
F: 914.428.0017

DRAFT
11/10/10

N
0 50 100 200

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REVISIONS
NO. DATE ISSUE

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Drawing Title:
AMENDED RIVERFRONT DEVELOPMENT CONCEPT PLAN

DRAWN BY: JEB
CHECKED BY: AVT
PROJECT NO. 690
DATE:
DRAWING NO. ARDC-1

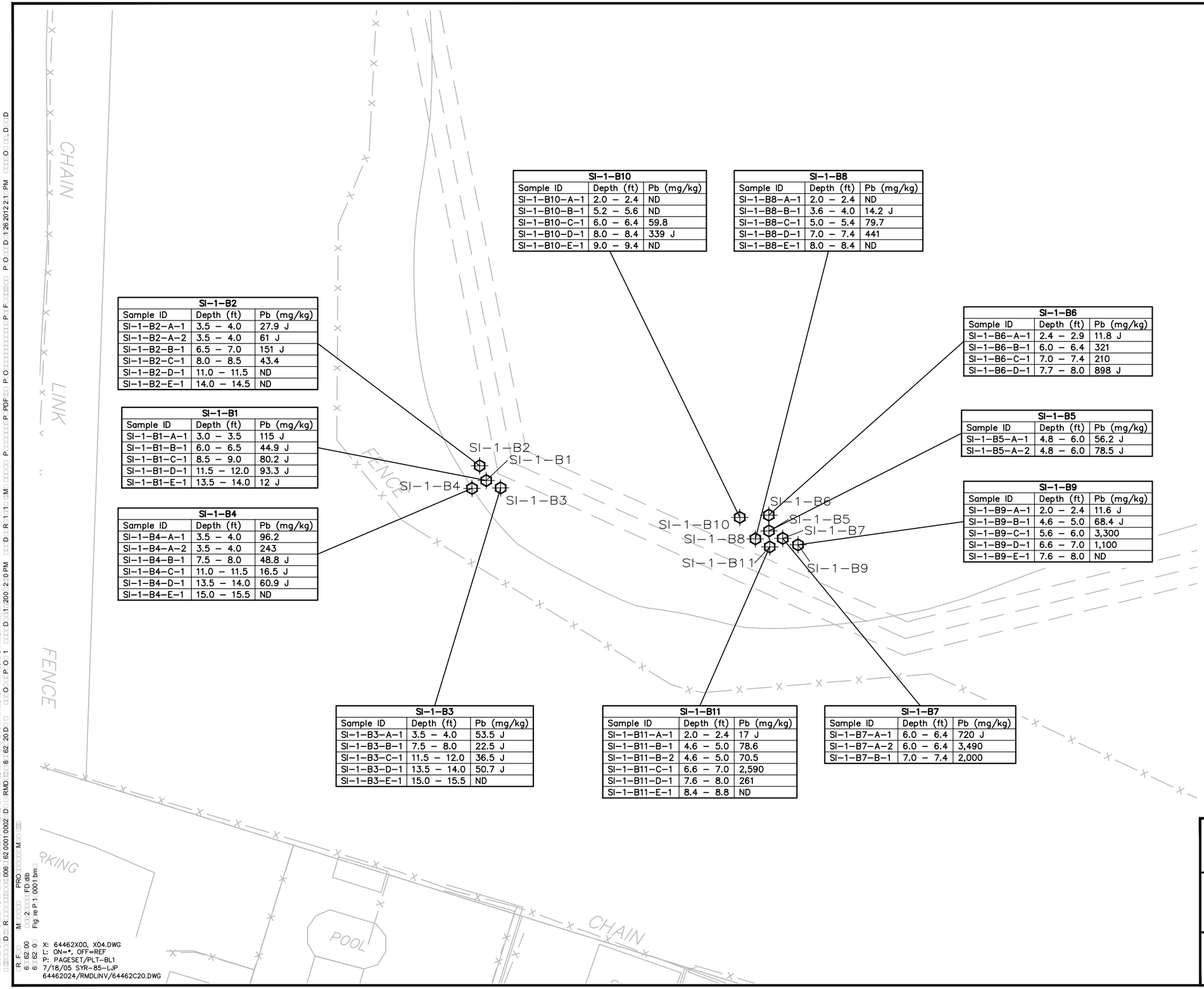
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

AMENDED RIVERFRONT DEVELOPMENT CONCEPT PLAN

ARCADIS

FIGURE
2

01/27/2012 SYRACUSE, NY-ENV/CAD-DJHOWES
B0064462/0001/00024/CDR/64462G04.CDR



SI-1-B10		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B10-A-1	2.0 – 2.4	ND
SI-1-B10-B-1	5.2 – 5.6	ND
SI-1-B10-C-1	6.0 – 6.4	59.8
SI-1-B10-D-1	8.0 – 8.4	339 J
SI-1-B10-E-1	9.0 – 9.4	ND

SI-1-B8		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B8-A-1	2.0 – 2.4	ND
SI-1-B8-B-1	3.6 – 4.0	14.2 J
SI-1-B8-C-1	5.0 – 5.4	79.7
SI-1-B8-D-1	7.0 – 7.4	441
SI-1-B8-E-1	8.0 – 8.4	ND

SI-1-B2		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B2-A-1	3.5 – 4.0	27.9 J
SI-1-B2-A-2	3.5 – 4.0	61 J
SI-1-B2-B-1	6.5 – 7.0	151 J
SI-1-B2-C-1	8.0 – 8.5	43.4
SI-1-B2-D-1	11.0 – 11.5	ND
SI-1-B2-E-1	14.0 – 14.5	ND

SI-1-B6		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B6-A-1	2.4 – 2.9	11.8 J
SI-1-B6-B-1	6.0 – 6.4	321
SI-1-B6-C-1	7.0 – 7.4	210
SI-1-B6-D-1	7.7 – 8.0	898 J

SI-1-B1		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B1-A-1	3.0 – 3.5	115 J
SI-1-B1-B-1	6.0 – 6.5	44.9 J
SI-1-B1-C-1	8.5 – 9.0	80.2 J
SI-1-B1-D-1	11.5 – 12.0	93.3 J
SI-1-B1-E-1	13.5 – 14.0	12 J

SI-1-B5		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B5-A-1	4.8 – 6.0	56.2 J
SI-1-B5-A-2	4.8 – 6.0	78.5 J

SI-1-B9		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B9-A-1	2.0 – 2.4	11.6 J
SI-1-B9-B-1	4.6 – 5.0	68.4 J
SI-1-B9-C-1	5.6 – 6.0	3,300
SI-1-B9-D-1	6.6 – 7.0	1,100
SI-1-B9-E-1	7.6 – 8.0	ND

SI-1-B4		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B4-A-1	3.5 – 4.0	96.2
SI-1-B4-A-2	3.5 – 4.0	243
SI-1-B4-B-1	7.5 – 8.0	48.8 J
SI-1-B4-C-1	11.0 – 11.5	16.5 J
SI-1-B4-D-1	13.5 – 14.0	60.9 J
SI-1-B4-E-1	15.0 – 15.5	ND

SI-1-B3		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B3-A-1	3.5 – 4.0	53.5 J
SI-1-B3-B-1	7.5 – 8.0	22.5 J
SI-1-B3-C-1	11.5 – 12.0	36.5 J
SI-1-B3-D-1	13.5 – 14.0	50.7 J
SI-1-B3-E-1	15.0 – 15.5	ND

SI-1-B11		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B11-A-1	2.0 – 2.4	17 J
SI-1-B11-B-1	4.6 – 5.0	78.6
SI-1-B11-B-2	4.6 – 5.0	70.5
SI-1-B11-C-1	6.6 – 7.0	2,590
SI-1-B11-D-1	7.6 – 8.0	261
SI-1-B11-E-1	8.4 – 8.8	ND

SI-1-B7		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-1-B7-A-1	6.0 – 6.4	720 J
SI-1-B7-A-2	6.0 – 6.4	3,490
SI-1-B7-B-1	7.0 – 7.4	2,000

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL LEAD RESULT >10,000 ppm

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
LEAD (mg/kg)	400

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 30' 60'

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□

REMEDIAL INVESTIGATION REPORT

LEAD IN SOIL – PAOC 1

ARCADIS

F□□R□ 3

D:□□Re d□ D□□RO P Re d□ D□Re d□ D□O t□ P□O t□ PM Re d□ M□O t□ □□O □P O 1 D□ 1 200 2 0 PM □□ D□R 1 1 1□□M□
R F□□
6□62 00 X: 64462X00, X04.DWG
6□62 0□ L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
7/18/05 SYR-85-LJP
64462024/RMDLINV/64462C20.DWG
M□□□□ PRO□□□□

SI-7-B27	
Sample ID	SI-7-B27-D-1
Depth (ft)	6.0 – 7.0
SVOCs (mg/Kg)	
ACENAPHTHENE	3.7 J
ANTHRACENE	4.8
BENZO(A)ANTHRACENE	12
BENZO(A)PYRENE	11
BENZO(B)FLUORANTHENE	9.6
BENZO(G,H,I)PERYLENE	7.3
BENZO(K)FLUORANTHENE	8.9
CHRYSENE	13
DIBENZO(A,H)ANTHRACENE	2.5 J
FLUORANTHENE	26
FLUORENE	3.9 J
INDENO(1,2,3-CD)PYRENE	6.4
NAPHTHALENE	1.9 J
PHENANTHRENE	19
PYRENE	23

SI-7-B17	
Sample ID	SI-7-B17-D-1
Depth Interval (ft)	14.0 – 15.0
VOCs (mg/Kg)	ND

SI-7-B18	
Sample ID	SI-7-B18-D-1
Depth Interval (ft)	14.0 – 15.0
VOCs (mg/Kg)	ND

SI-7-B31	
Sample ID	SI-7-B31-D-1
Depth (ft)	14.0 – 15.0
SVOCs (mg/Kg)	ND

SI-7-B29	
Sample ID	SI-7-B29-E-1
Depth (ft)	12.0 – 13.0
SVOCs (mg/Kg)	
FLUORENE	0.54 J
PYRENE	0.053 J

S1-7-B30	
Sample ID	SI-7-B30-D-1
Depth (ft)	14.0 – 15.0
SVOCs (mg/Kg)	
ACENAPHTHENE	1.6 J
ANTHRACENE	1.3 J
BENZO(A)ANTHRACENE	2.5 J
BENZO(A)PYRENE	2.1 J
BENZO(B)FLUORANTHENE	2.1 J
BENZO(G,H,I)PERYLENE	1.7 J
BENZO(K)FLUORANTHENE	1.6 J
CHRYSENE	3.2 J
FLUORANTHENE	7.2
FLUORENE	2 J
INDENO(1,2,3-CD)PYRENE	1.2 J
NAPHTHALENE	1.1 J
PHENANTHRENE	7.5
PYRENE	6.5

SI-7-B1	
Sample ID	SI-7-B1-A-1
Depth (ft)	8.5 – 9.0
VOCs (mg/Kg)	
ACETONE	0.21
BENZENE	0.017 J
CARBON DISULFIDE	0.021 J
ETHYLBENZENE	0.012 J
M,P-XYLENES	0.025 J
O-XYLENE	0.021 J
SVOCs (mg/Kg)	
2,4-DIMETHYLPHENOL	0.21 J
2-METHYLNAPHTHALENE	0.74
ACENAPHTHENE	1.6
ANTHRACENE	1.1
BENZO(A)ANTHRACENE	0.76
BENZO(A)PYRENE	0.62
BENZO(B)FLUORANTHENE	0.6
BENZO(G,H,I)PERYLENE	0.37 J
BENZO(K)FLUORANTHENE	0.59
BIS(2-ETHYLHEXYL) PHTHALATE	1.3
CARBAZOLE	0.33 J
CHRYSENE	0.78
DIBENZOFURAN	1.3
DI-N-BUTYL PHTHALATE	0.17 J
FLUORANTHENE	3.1
FLUORENE	1.8
INDENO(1,2,3-CD)PYRENE	0.28 J
NAPHTHALENE	0.88
PHENANTHRENE	6.2
PYRENE	2

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL LEAD RESULT >10,000 ppm
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
VOCs (mg/Kg)	
ACETONE	0.2
BENZENE	0.06 or MDL
CARBON DISULFIDE	2.7
ETHYLBENZENE	5.5
M,P-XYLENES	1.2
O-XYLENE	1.2
SVOCs (mg/Kg)	
2,4-DIMETHYLPHENOL	NA
2-METHYLNAPHTHALENE	36.4
ACENAPHTHENE	50
ANTHRACENE	41
BENZO(A)ANTHRACENE	0.224 or MDL
BENZO(A)PYRENE	0.61 or MDL
BENZO(B)FLUORANTHENE	0.220 or MDL
BENZO(G,H,I)PERYLENE	50
BENZO(K)FLUORANTHENE	0.220 or MDL
BIS(2-ETHYLHEXYL) PHTHALATE	50
CARBAZOLE	NA
CHRYSENE	0.4
DIBENZO(A,H)ANTHRACENE	0.014 or MDL
DIBENZOFURAN	6.2
DI-N-BUTYL PHTHALATE	50
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	3.2
NAPHTHALENE	13
PHENANTHRENE	50
PYRENE	50
TOTAL C-PAHs	10
TOTAL SVOCs	500

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 50' 100'

GRAPHIC SCALE

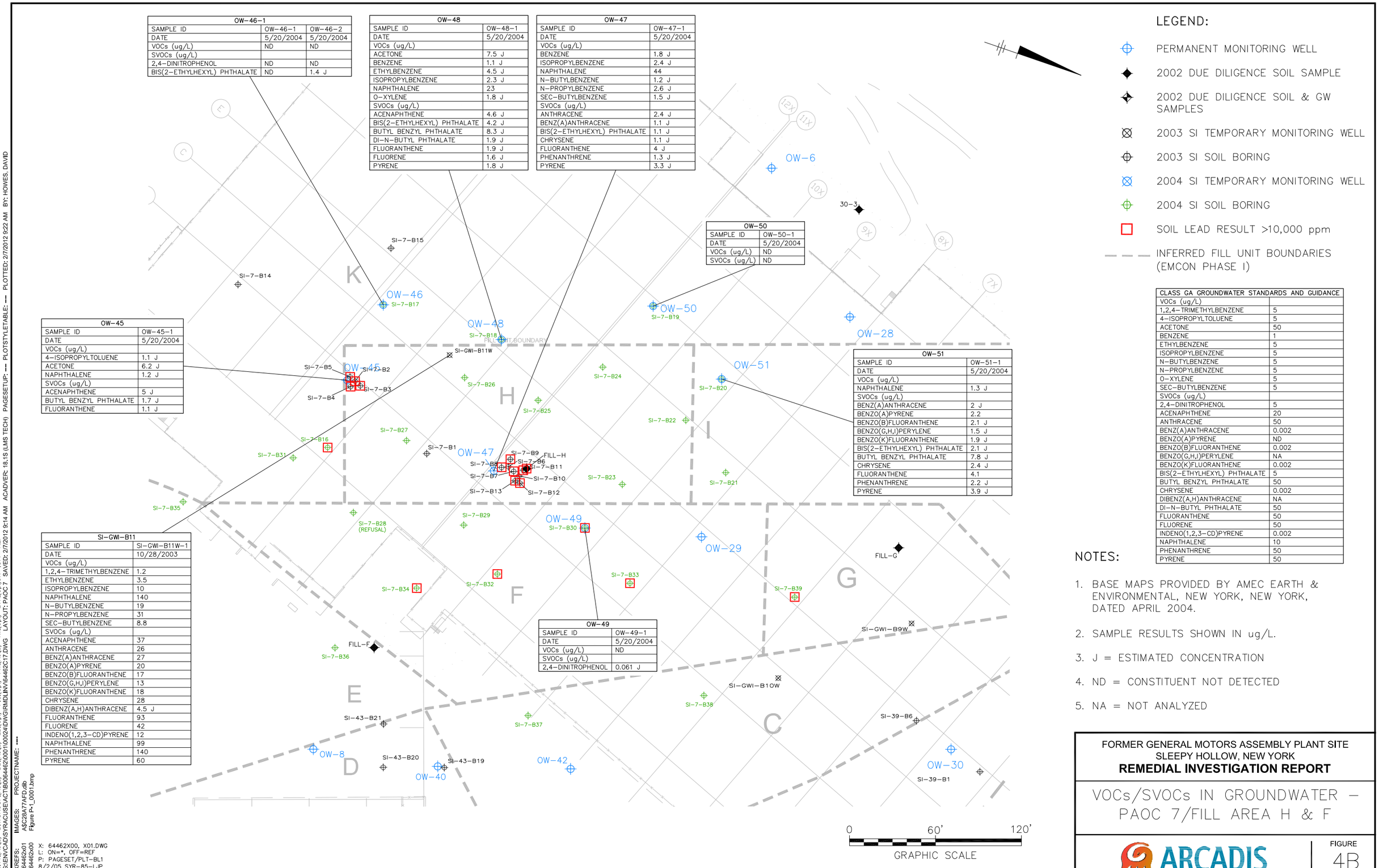
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN SOIL – PAOC 7/FILL AREA H & F

ARCADIS

FIGURE 4A

CITY:(Req'd) DN:/GROUP:(Req'd) DB:(Req'd) LD:(Opt) PIC:(Opt) PM:(Req'd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENV\CAD\SYRACUSE\ACTIVE\64462000\10024\DWG\RMDLINV\64462C16.DWG LAYOUT: PAOC 7 SAVED: 2/7/2012 9:11 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 2/7/2012 9:20 AM BY: HOWES, DAVID
XREFS: 64462x01 64462x00
IMAGES: ASC28A77AFD.dib Figure P-1_0001.bmp
PROJECTNAME: ---
X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
7/18/05 SYR-85-LJP
64462024/RMDLINV/64462C16.DWG



CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
VOCs (ug/L)	
1,2,4-TRIMETHYLBENZENE	5
4-ISOPROPYLTOLUENE	5
ACETONE	50
BENZENE	1
ETHYLBENZENE	5
ISOPROPYLBENZENE	5
N-BUTYLBENZENE	5
N-PROPYLBENZENE	5
O-XYLENE	5
SEC-BUTYLBENZENE	5
SVOCs (ug/L)	
2,4-DINITROPHENOL	5
ACENAPHTHENE	20
ANTHRACENE	50
BENZ(A)ANTHRACENE	0.002
BENZO(A)PYRENE	ND
BENZO(B)FLUORANTHENE	0.002
BENZO(G,H,I)PERYLENE	NA
BENZO(K)FLUORANTHENE	0.002
BIS(2-ETHYLHEXYL) PHTHALATE	5
BUTYL BENZYL PHTHALATE	50
CHRYSENE	0.002
DIBENZ(A,H)ANTHRACENE	NA
DI-N-BUTYL PHTHALATE	50
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	0.002
NAPHTHALENE	10
PHENANTHRENE	50
PYRENE	50

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN ug/L.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

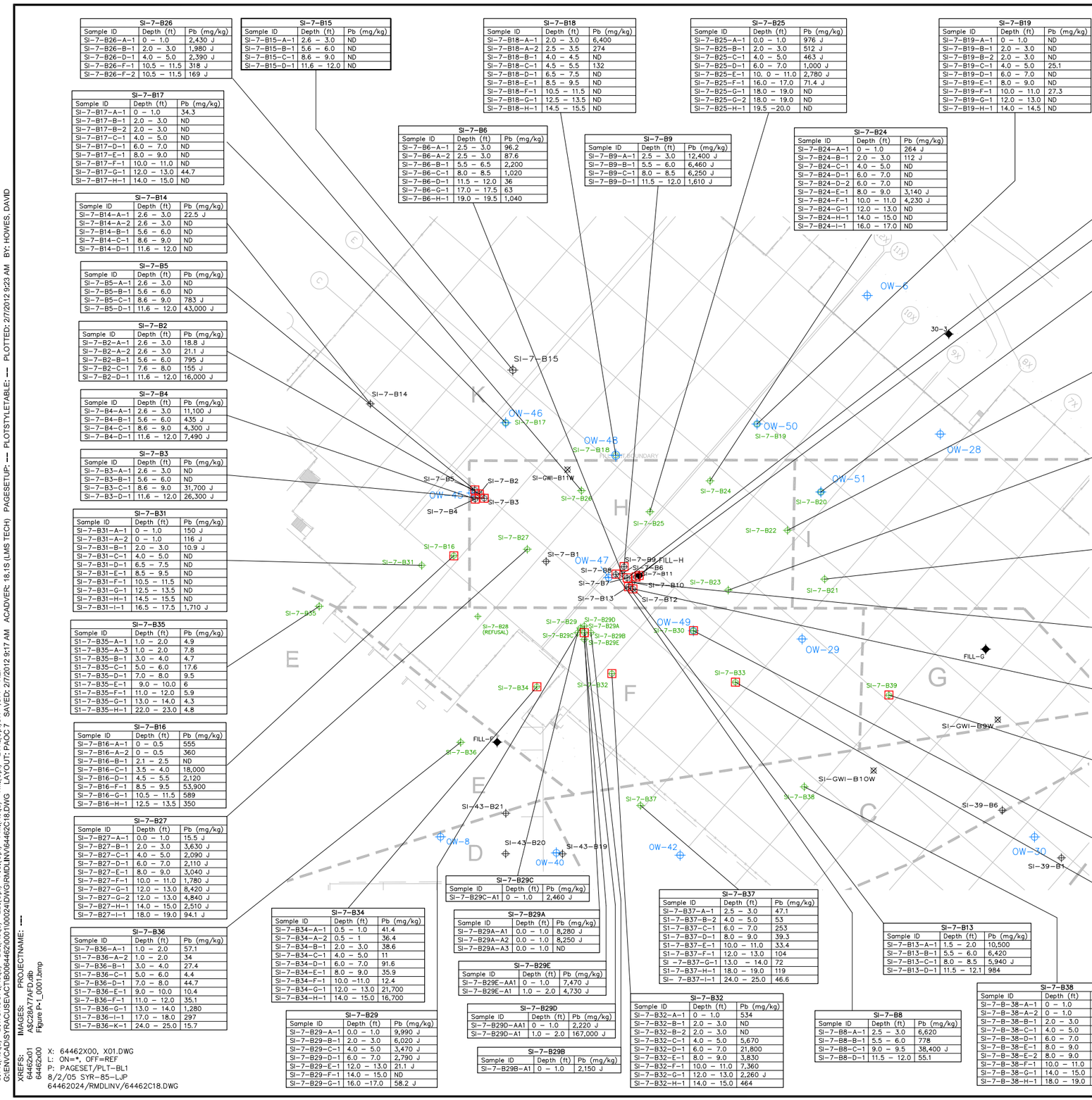
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN GROUNDWATER – PAOC 7/FILL AREA H & F

ARCADIS

FIGURE 4B

CITY:(Read) DIV/GROUP:(Read) DB:(Read) LD:(Opt) PIC:(Opt) PM:(Read) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVITIES\64462\000\100024\DWG\RMDLINV\64462C17.DWG LAYOUT: PAOC 7 SAVED: 2/7/2012 9:14 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 2/7/2012 9:22 AM BY: HOWES, DAVID
XREFS: 64462x01 64462x00
IMAGES: ASC28A77AFD.dib Figure P-1_0001.bmp
PROJECTNAME: ---
X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
8/2/05 SYR-85-LJP
64462024/RMDLINV/64462C17.DWG



SI-7-B26

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B26-A-1	0 – 1.0	2,430 J
SI-7-B26-B-1	2.0 – 3.0	1,980 J
SI-7-B26-D-1	4.0 – 5.0	2,390 J
SI-7-B26-F-1	10.5 – 11.5	318 J
SI-7-B26-F-2	10.5 – 11.5	169 J

SI-7-B15

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B15-A-1	2.6 – 3.0	ND
SI-7-B15-B-1	5.6 – 6.0	ND
SI-7-B15-C-1	8.6 – 9.0	ND
SI-7-B15-D-1	11.6 – 12.0	ND

SI-7-B18

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B18-A-1	2.0 – 3.0	6,400
SI-7-B18-A-2	2.5 – 3.5	274
SI-7-B18-B-1	4.0 – 4.5	ND
SI-7-B18-C-1	4.5 – 5.5	132
SI-7-B18-D-1	6.5 – 7.5	ND
SI-7-B18-E-1	8.5 – 9.5	ND
SI-7-B18-F-1	10.5 – 11.5	ND
SI-7-B18-G-1	12.5 – 13.5	ND
SI-7-B18-H-1	14.5 – 15.5	ND

SI-7-B25

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B25-A-1	0.0 – 1.0	976 J
SI-7-B25-B-1	2.0 – 3.0	512 J
SI-7-B25-C-1	4.0 – 5.0	463 J
SI-7-B25-D-1	6.0 – 7.0	1,000 J
SI-7-B25-E-1	10. 0 – 11.0	2,780 J
SI-7-B25-F-1	16.0 – 17.0	71.4 J
SI-7-B25-G-1	18.0 – 19.0	ND
SI-7-B25-G-2	18.0 – 19.0	ND
SI-7-B25-H-1	19.5 –20.0	ND

SI-7-B19

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B19-A-1	0 – 1.0	ND
SI-7-B19-B-1	2.0 – 3.0	ND
SI-7-B19-B-2	2.0 – 3.0	ND
SI-7-B19-C-1	4.0 – 5.0	25.1
SI-7-B19-D-1	6.0 – 7.0	ND
SI-7-B19-E-1	8.0 – 9.0	ND
SI-7-B19-F-1	10.0 – 11.0	27.3
SI-7-B19-G-1	12.0 – 13.0	ND
SI-7-B19-H-1	14.0 – 14.5	ND

SI-7-B7

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B7-A-1	2.5 – 3.0	248 J
SI-7-B7-A-2	2.5 – 3.0	49.3 J
SI-7-B7-B-1	5.5 – 6.0	6,750
SI-7-B7-C-1	7.5 – 8.0	16,400
SI-7-B7-D-1	8.5 – 9.0	1,120 J

SI-7-B17

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B17-A-1	0 – 1.0	34.3
SI-7-B17-B-1	2.0 – 3.0	ND
SI-7-B17-B-2	2.0 – 3.0	ND
SI-7-B17-C-1	4.0 – 5.0	ND
SI-7-B17-D-1	6.0 – 7.0	ND
SI-7-B17-E-1	8.0 – 9.0	ND
SI-7-B17-F-1	10.0 – 11.0	ND
SI-7-B17-G-1	12.0 – 13.0	44.7
SI-7-B17-H-1	14.0 – 15.0	ND

SI-7-B6

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B6-A-1	2.5 – 3.0	96.2
SI-7-B6-A-2	2.5 – 3.0	87.6
SI-7-B6-B-1	5.5 – 6.5	2,200
SI-7-B6-C-1	8.0 – 8.5	1,020
SI-7-B6-D-1	11.5 – 12.0	36
SI-7-B6-G-1	17.0 – 17.5	63
SI-7-B6-H-1	19.0 – 19.5	1,040

SI-7-B9

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B9-A-1	2.5 – 3.0	12,400 J
SI-7-B9-B-1	5.5 – 6.0	6,460 J
SI-7-B9-C-1	8.0 – 8.5	6,250 J
SI-7-B9-D-1	11.5 – 12.0	1,610 J

SI-7-B24

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B24-A-1	0 – 1.0	264 J
SI-7-B24-B-1	2.0 – 3.0	112 J
SI-7-B24-C-1	4.0 – 5.0	ND
SI-7-B24-D-1	6.0 – 7.0	ND
SI-7-B24-D-2	6.0 – 7.0	ND
SI-7-B24-E-1	8.0 – 9.0	3,140 J
SI-7-B24-F-1	10.0 – 11.0	4,230 J
SI-7-B24-G-1	12.0 – 13.0	ND
SI-7-B24-H-1	14.0 – 15.0	ND
SI-7-B24-I-1	16.0 – 17.0	ND

SI-7-B11

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B11-A-1	2.6 – 3.0	32,300 J
SI-7-B11-B-1	5.6 – 6.0	2,750
SI-7-B11-C-1	0.0 – 0.4	2,060 J

SI-7-B20

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B20-A-1	0 – 1.0	ND
SI-7-B20-A-2	0 – 1.0	23.2 J
SI-7-B20-B-1	2.0 – 3.0	ND
SI-7-B20-C-1	4.0 – 5.0	21.5 J
SI-7-B20-D-1	6.0 – 7.0	17.2 J
SI-7-B20-E-1	8.0 – 9.0	ND
SI-7-B20-F-1	10.0 – 11.0	18 J
SI-7-B20-G-1	12.0 – 13.0	ND
SI-7-B20-H-1	14.0 – 15.0	ND

SI-7-B22

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B22-A-1	0 – 1.0	25.8 J
SI-7-B22-B-1	2.0 – 3.0	1,270 J
SI-7-B22-C-1	4.0 – 5.0	4,460
SI-7-B22-G-1	12.0 – 13.0	ND
SI-7-B22-G-2	12.0 – 13.0	ND
SI-7-B22-H-1	14.0 – 15.	ND

SI-7-B23

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B23-A-1	0.0 – 1.0	2,840 J
SI-7-B23-B-1	2.0 – 3.0	13.3 J
SI-7-B23-C-1	4.0 – 5.0	222 J
SI-7-B23-D-1	6.0 – 7.0	1,430 J
SI-7-B23-E-1	8.0 – 9.0	4,100 J
SI-7-B23-E-2	8.0 – 9.0	2,480 J
SI-7-B23-F-1	10.0 – 11.0	1,030 J
SI-7-B23-G-1	12.0 – 13.0	294 J
SI-7-B23-H-1	14.0 – 15.0	23.2 J
SI-7-B23-I-1	16.0 – 17.0	ND

SI-7-B21

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B21-A-1	0.0 – 1.0	55.2 J
SI-7-B21-B-1	2.0 – 3.0	1,240 J
SI-7-B21-C-1	4.0 – 5.0	8,070 J
SI-7-B21-D-1	6.0 – 7.0	391 J
SI-7-B21-E-1	8.0 – 9.0	229 J
SI-7-B21-E-2	8.0 – 9.0	1,070 J
SI-7-B21-F-1	10.0 – 11.0	3,640 J
SI-7-B21-G-1	12.0 – 13.0	257 J
SI-7-B21-H-1	14.0 – 15.0	18.7 J

SI-7-B10

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B10-A-1	2.8 – 3.2	522 J
SI-7-B10-A-2	2.8 – 3.2	707 J
SI-7-B10-B-1	5.6 – 6.0	6,550 J
SI-7-B10-C-1	8.6 – 9.0	956 J
SI-7-B10-D-1	11.6 – 12.0	1,720 J
SI-7-B10-E-1	12.6 – 13.0	15.8 J

SI-7-B12

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B12-A-1	2.5 – 3.0	314
SI-7-B12-B-1	5.5 – 6.0	3,970
SI-7-B12-C-1	7.5 – 8.0	13,500
SI-7-B12-D-1	9.0 – 9.5	1,100

SI-7-B39

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B-39-A-1	0 – 1.0	420 J
SI-7-B39-B-1	2.0 – 3.0	2,910 J
SI-7-B-39-C-1	4.0 – 5.0	518 J
SI-7-B-39-D-1	6.0 – 7.0	682 J
SI-7-B-39-E-1	8.0 – 9.0	13,700 J
SI-7-B39-F-1	10.0 – 11.0	1,550 J
SI-7-B-39-G-1	12.0 – 13.0	643
SI-7-B-39-H-1	14.0 – 15.0	13.4

SI-7-B30

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B30-A-1	0 – 1.0	2,020 J
SI-7-B30-B-1	2.0 – 3.0	935 J
SI-7-B30-C-1	4.0 – 5.0	3,000 J
SI-7-B30-D-1	6.0 – 7.0	18,300 J
SI-7-B30-F-1	10.0 – 11.0	49,700 J
SI-7-B30-G-1	12.0 – 13.0	34.9 J
SI-7-B30-H-1	14.0 – 15.0	ND

SI-7-B33

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B33-A-1	0.0 – 1.0	55.4
SI-7-B33-B-1	2.0 – 3.0	11,000
SI-7-B33-C-1	4.0 – 5.0	6,460
SI-7-B33-D-1	6.0 – 7.0	5,330
SI-7-B33-E-1	8.0 – 9.0	761
SI-7-B33-F-1	10.0 – 11.0	550
SI-7-B33-G-1	12.0 – 13.0	2,320
SI-7-B33-H-1	15.0 – 16.0	1,090

SI-7-B17

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B17-A-1	0 – 1.0	34.3
SI-7-B17-B-1	2.0 – 3.0	ND
SI-7-B17-B-2	2.0 – 3.0	ND
SI-7-B17-C-1	4.0 – 5.0	ND
SI-7-B17-D-1	6.0 – 7.0	ND
SI-7-B17-E-1	8.0 – 9.0	ND
SI-7-B17-F-1	10.0 – 11.0	ND
SI-7-B17-G-1	12.0 – 13.0	44.7
SI-7-B17-H-1	14.0 – 15.0	ND

SI-7-B14

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B14-A-1	2.6 – 3.0	22.5 J
SI-7-B14-A-2	2.6 – 3.0	ND
SI-7-B14-B-1	5.6 – 6.0	ND
SI-7-B14-C-1	8.6 – 9.0	ND
SI-7-B14-D-1	11.6 – 12.0	ND

SI-7-B5

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B5-A-1	2.6 – 3.0	ND
SI-7-B5-B-1	5.6 – 6.0	ND
SI-7-B5-C-1	8.6 – 9.0	783 J
SI-7-B5-D-1	11.6 – 12.0	43,000 J

SI-7-B2

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B2-A-1	2.6 – 3.0	18.8 J
SI-7-B2-A-2	2.6 – 3.0	21.1 J
SI-7-B2-B-1	5.6 – 6.0	795 J
SI-7-B2-C-1	7.6 – 8.0	155 J
SI-7-B2-D-1	11.6 – 12.0	16,000 J

SI-7-B4

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B4-A-1	2.6 – 3.0	11,100 J
SI-7-B4-B-1	5.6 – 6.0	435 J
SI-7-B4-C-1	8.6 – 9.0	4,300 J
SI-7-B4-D-1	11.6 – 12.0	7,490 J

SI-7-B3

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B3-A-1	2.6 – 3.0	ND
SI-7-B3-B-1	5.6 – 6.0	ND
SI-7-B3-C-1	8.6 – 9.0	31,700 J
SI-7-B3-D-1	11.6 – 12.0	26,300 J

SI-7-B31

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B31-A-1	0 – 1.0	150 J
SI-7-B31-A-2	0 – 1.0	116 J
SI-7-B31-B-1	2.0 – 3.0	10.9 J
SI-7-B31-C-1	4.0 – 5.0	ND
SI-7-B31-D-1	6.5 – 7.5	ND
SI-7-B31-E-1	8.5 – 9.5	ND
SI-7-B31-F-1	10.5 – 11.5	ND
SI-7-B31-G-1	12.5 – 13.5	ND
SI-7-B31-H-1	14.5 – 15.5	ND
SI-7-B31-I-1	16.5 – 17.5	1,710 J

SI-7-B35

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B35-A-1	1.0 – 2.0	4.9
SI-7-B35-A-3	1.0 – 2.0	7.8
SI-7-B35-B-1	3.0 – 4.0	4.7
SI-7-B35-C-1	5.0 – 6.0	17.6
SI-7-B35-D-1	7.0 – 8.0	9.5
SI-7-B35-E-1	9.0 – 10.0	6
SI-7-B35-F-1	11.0 – 12.0	5.9
SI-7-B35-G-1	13.0 – 14.0	4.3
SI-7-B35-H-1	22.0 – 23.0	4.8

SI-7-B16

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B16-A-1	0 – 0.5	555
SI-7-B16-A-2	0 – 0.5	360
SI-7-B16-B-1	2.1 – 2.5	ND
SI-7-B16-C-1	3.5 – 4.0	18,000
SI-7-B16-D-1	4.5 – 5.5	2,120
SI-7-B16-F-1	8.5 – 9.5	53,900
SI-7-B16-G-1	10.5 – 11.5	589
SI-7-B16-H-1	12.5 – 13.5	350

SI-7-B27

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B27-A-1	0.0 – 1.0	15.5 J
SI-7-B27-B-1	2.0 – 3.0	3,630 J
SI-7-B27-C-1	4.0 – 5.0	2,090 J
SI-7-B27-D-1	6.0 – 7.0	2,110 J
SI-7-B27-E-1	8.0 – 9.0	3,040 J
SI-7-B27-F-1	10.0 – 11.0	1,780 J
SI-7-B27-G-1	12.0 – 13.0	8,420 J
SI-7-B27-G-2	12.0 – 13.0	4,840 J
SI-7-B27-H-1	14.0 – 15.0	2,510 J
SI-7-B27-I-1	18.0 – 19.0	94.1 J

SI-7-B36

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B36-A-1	1.0 – 2.0	57.1
SI-7-B36-A-2	1.0 – 2.0	34
SI-7-B36-B-1	3.0 – 4.0	27.4
SI-7-B36-C-1	5.0 – 6.0	4.4
SI-7-B36-D-1	7.0 – 8.0	44.7
SI-7-B36-E-1	9.0 – 10.0	10.4
SI-7-B36-F-1	11.0 – 12.0	35.1
SI-7-B36-G-1	13.0 – 14.0	1,280
SI-7-B36-I-1	17.0 – 18.0	297
SI-7-B36-K-1	24.0 – 25.0	15.7

SI-7-B34

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B34-A-1	0.5 – 1.0	41.4
SI-7-B34-A-2	0.5 – 1	36.4
SI-7-B34-B-1	2.0 – 3.0	38.6
SI-7-B34-C-1	4.0 – 5.0	11
SI-7-B34-D-1	6.0 – 7.0	91.6
SI-7-B34-E-1	8.0 – 9.0	35.9
SI-7-B34-F-1	10.0 –11.0	12.4
SI-7-B34-G-1	12.0 – 13.0	21,700
SI-7-B34-H-1	14.0 – 15.0	16,700

SI-7-B29

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B29-A-1	0.0 – 1.0	9,990 J
SI-7-B29-B-1	2.0 – 3.0	6,020 J
SI-7-B29-C-1	4.0 – 5.0	3,470 J
SI-7-B29-D-1	6.0 – 7.0	2,790 J
SI-7-B29-E-1	12.0 – 13.0	21.1 J
SI-7-B29-F-1	14.0 – 15.0	ND
SI-7-B29-G-1	16.0 –17.0	58.2 J

SI-7-B29C

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B29C-A1	0 – 1.0	2,460 J

SI-7-B29A

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B29A-A1	0.0 – 1.0	8,280 J
SI-7-B29A-A2	0.0 – 1.0	8,250 J
SI-7-B29A-A3	0.0 – 1.0	ND

SI-7-B29E

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B29E-AA1	0 – 1.0	7,470 J
SI-7-B29E-A1	1.0 – 2.0	4,730 J

SI-7-B29D

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B29D-AA1	0 – 1.0	2,220 J
SI-7-B29D-A1	1.0 – 2.0	167,000 J

SI-7-B29B

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B29B-A1	0 – 1.0	2,150 J

SI-7-B37

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B37-A-1	2.5 – 3.0	47.1
S1-7-B37-B-2	4.0 – 5.0	53
SI-7-B37-C-1	6.0 – 7.0	253
SI-7-B37-D-1	8.0 – 9.0	39.3
SI-7-B37-E-1	10.0 – 11.0	33.4
SI-7-B37-F-1	12.0 – 13.0	104
SI -7-B37-G-1	13.0 – 14.0	72
SI-7-B37-H-1	18.0 – 19.0	119
SI- 7-B37-I-1	24.0 – 25.0	46.6

SI-7-B32

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B32-A-1	0 – 1.0	534
SI-7-B32-B-1	2.0 – 3.0	ND
SI-7-B32-B-2	2.0 – 3.0	ND
SI-7-B32-C-1	4.0 – 5.0	5,670
SI-7-B32-D-1	6.0 – 7.0	21,800
SI-7-B32-E-1	8.0 – 9.0	3,830
SI-7-B32-F-1	10.0 – 11.0	7,360
SI-7-B32-G-1	12.0 – 13.0	2,260 J
SI-7-B32-H-1	14.0 – 15.0	464

SI-7-B13

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B13-A-1	1.5 – 2.0	10,500
SI-7-B13-B-1	5.5 – 6.0	6,420
SI-7-B13-C-1	8.0 – 8.5	5,940 J
SI-7-B13-D-1	11.5 – 12.1	984

SI-7-B8

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B8-A-1	2.5 – 3.0	6,620
SI-7-B8-B-1	5.5 – 6.0	778
SI-7-B8-C-1	9.0 – 9.5	38,400 J
SI-7-B8-D-1	11.5 – 12.0	55.1

SI-7-B38

Sample ID	Depth (ft)	Pb (mg/kg)
SI-7-B-38-A-1	0 – 1.0	13.9 J
SI-7-B-38-A-2	0 – 1.0	11.4 J
SI-7-B-38-B-1	2.0 – 3.0	103 J
SI-7-B-38-C-1	4.0 – 5.0	16.7 J
SI-7-B-38-D-1	6.0 – 7.0	18.9 J
SI-7-B-38-E-1	8.0 – 9.0	6.2 J
SI-7-B-38-E-2	8.0 – 9.0	21.8 J
SI-7-B-38-F-1	10.0 – 11.0	ND
SI-7-B-38-G-1	14.0 – 15.0	156
SI-7-B-38-H-1	18.0 – 19.0	19.9 J

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL LEAD RESULT >10,000 ppm
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
LEAD (mg/kg)	400

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 80' 160'

GRAPHIC SCALE

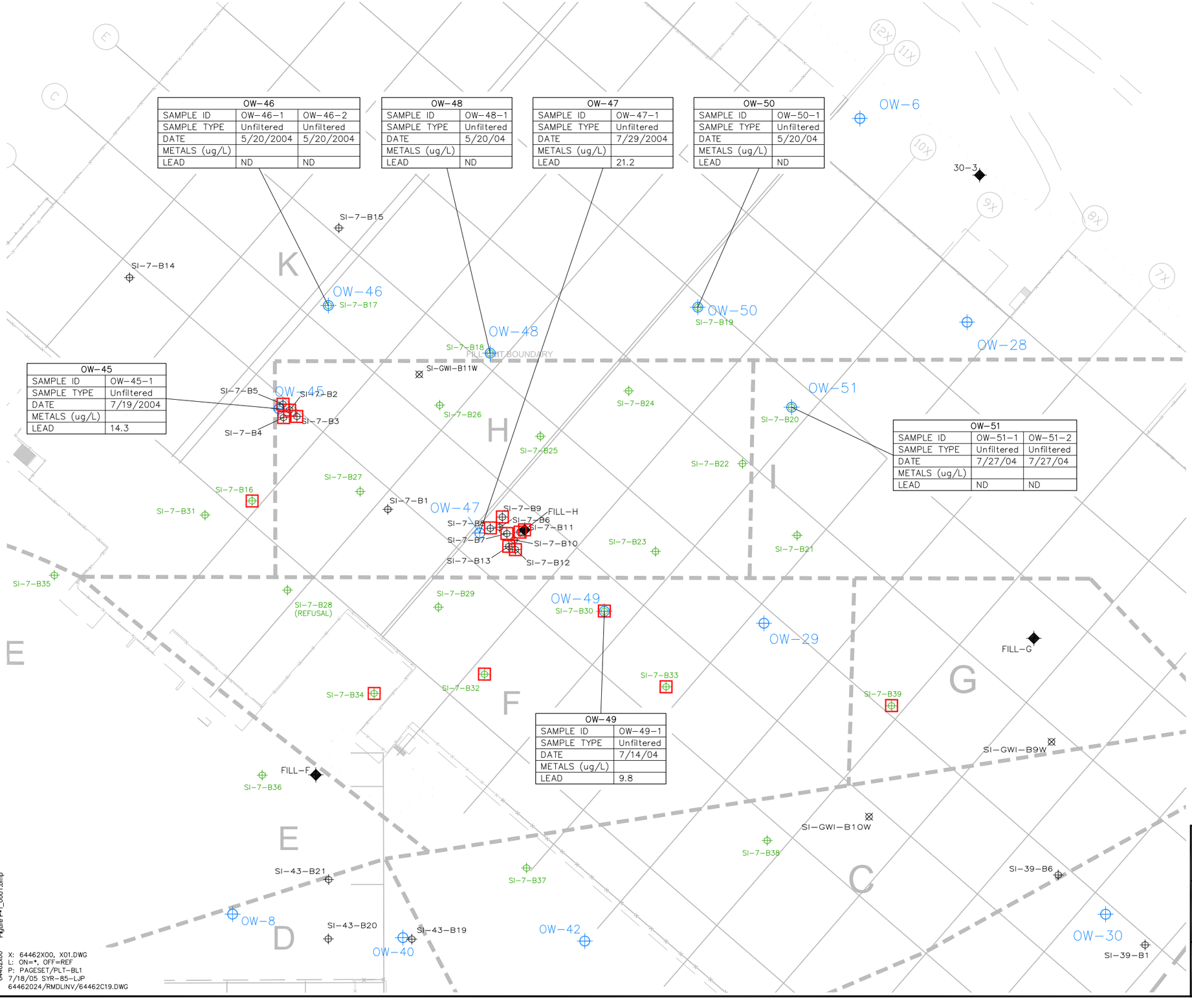
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

LEAD IN SOIL – PAOC 7/
FILL AREA H & F

ARCADIS

FIGURE
4C

CITY:(Read) DIV/GROUP:(Read) DB:(Read) LD:(Opt) PIC:(Opt) PM:(Read) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENV\CAD\SYRACUSE\ACTIVE\64462000\10024\DWG\RMDLINV\64462C18.DWG LAYOUT: PAOC 7 SAVED: 2/7/2012 9:17 AM BY: HOWES, DAVID
PLOTSTYLETABLE: --- PLOTTED: 2/7/2012 9:23 AM BY: HOWES, DAVID
PAGESETUP: --- PROJECTNAME: ---
IMAGES: ASC28A77AFD.dib Figure P-1_0001.bmp
XREFS: 64462x01 64462x00
X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
8/2/05 SYR-85-LJP
64462024/RMDLINV/64462C18.DWG



LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL LEAD RESULT >10,000 ppm
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
LEAD (ug/L)	25

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN ug/L. (SAMPLES WITH LOWEST TURBIDITY SHOWN.)
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 50' 100'
GRAPHIC SCALE

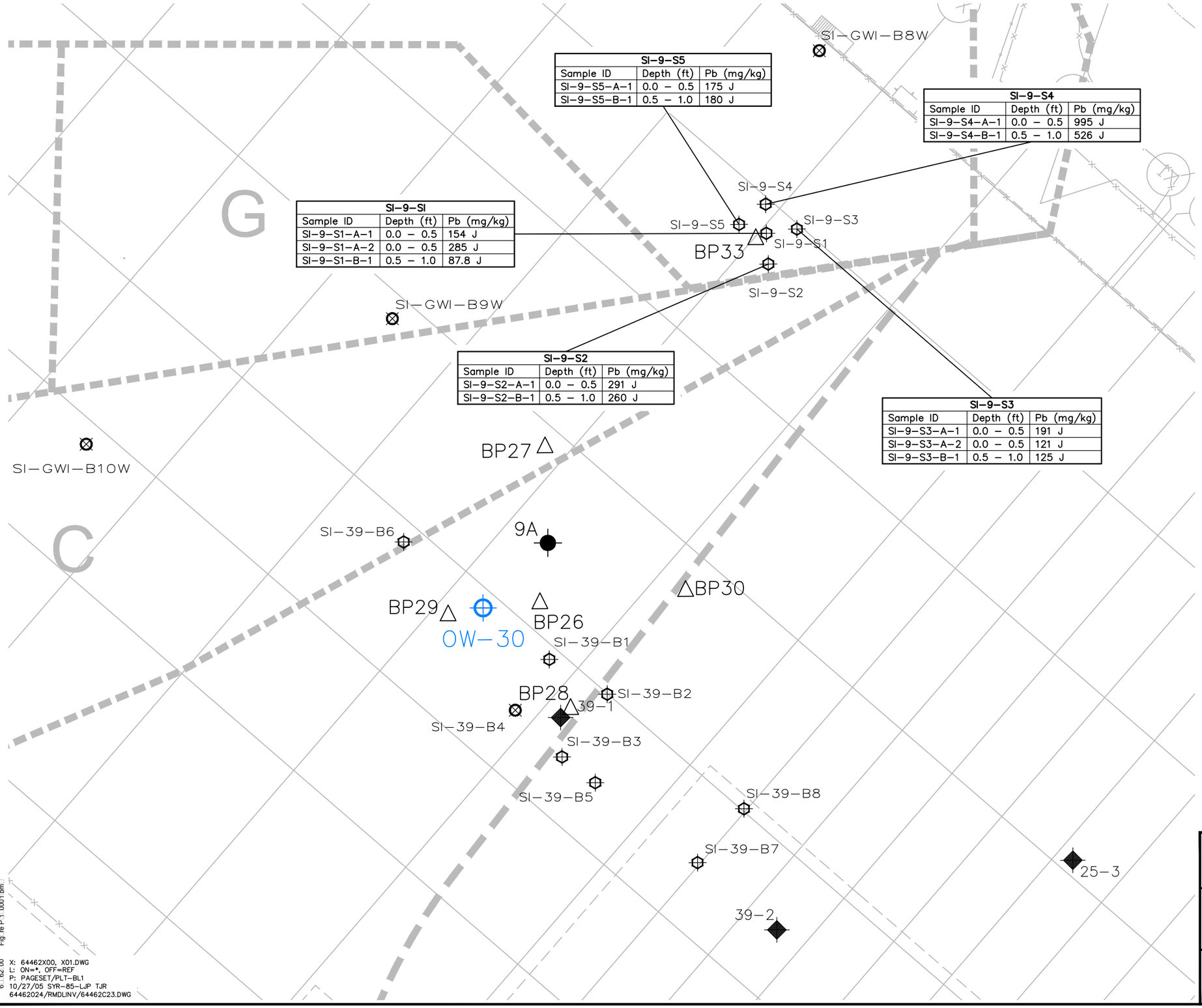
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

LEAD IN GROUNDWATER – PAOC 7/FILL AREA H & F

ARCADIS

FIGURE 4D

CITY:(Read) DIV/GROUP:(Read) DB:(Read) LD:(Opt) PIC:(Opt) PM:(Read) TM:(Opt) LYR:(OptVON="OFF=*REF"
G:\ENV\CADISYRACUSE\ACTIVE\64462\00011\00024\DWG\RMDLINV\64462C19.DWG LAYOUT: PAOC 7 SAVED: 7/18/2005 2:17 PM. ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 2/7/2012 9:19 AM BY: HOWES, DAVID
XREFS: X: 64462X00, X01.DWG
64462x01 L: ON=*, OFF=REF
64462x00 P: PAGESET/PLT-BL1
7/18/05 SYR-85-LJP
64462024/RMDLINV/64462C19.DWG
IMAGES: PROJECTNAME: ---
ASC28A77AFD.dib
Figure P-1_0001.bmp



FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

LEAD IN SOIL – PAOC 9

ARCADIS

F□□R□
5

M□□□□□ PRO□□□□□

SI-21-B1		
Sample ID	SI-21-B1-A-1	SI-21-B1-A-2
Depth (ft)	6.5 - 7.0	6.5 - 7.0
VOCs (mg/Kg)		
NAPHTHALENE	0.067	0.061
N-BUTYLBENZENE	0.0016	0.0031
SVOCs (mg/Kg)		
ACENAPHTHENE	1.9 J	2.1 J
ANTHRACENE	4.9	6.1 J
BENZO(A)ANTHRACENE	12	12
BENZO(A)PYRENE	9	9.1 J
BENZO(B)FLUORANTHENE	8.2	7.8 J
BENZO(G,H,I)PERYLENE	6.1	6.2 J
BENZO(K)FLUORANTHENE	7	7.4 J
CHRYSENE	12	11
DIBENZO(A,H)ANTHRACENE	2.2 J	2.1 J
FLUORANTHENE	27	30
FLUORENE	2 J	1.9 J
INDENO(1,2,3-CD)PYRENE	5.3	5.8 J
NAPHTHALENE	1.2 J	ND
PHENANTHRENE	18	21
PYRENE	23	22

SI-21-B4	
Sample ID	SI-21-B4-A-1
Depth (ft)	6.5 - 7
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.0057
NAPHTHALENE	0.62
N-BUTYLBENZENE	0.11
SVOCs (mg/Kg)	
ACENAPHTHENE	3.5 J
ANTHRACENE	6.9
BENZO(A)ANTHRACENE	13
BENZO(A)PYRENE	9.6
BENZO(B)FLUORANTHENE	8
BENZO(G,H,I)PERYLENE	6.7
BENZO(K)FLUORANTHENE	7.5
CHRYSENE	13
DIBENZO(A,H)ANTHRACENE	2.1 J
FLUORANTHENE	35
FLUORENE	2.7 J
INDENO(1,2,3-CD)PYRENE	5.9
NAPHTHALENE	3.7 J
PHENANTHRENE	39
PYRENE	23

SI-21-B2	
Sample ID	SI-21-B2-A-1
Depth (ft)	8.0 - 8.5
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.22
1,3,5-TRIMETHYLBENZENE	0.064
4-ISOPROPYLTOLUENE	0.059
ISOPROPYLBENZENE	0.009
NAPHTHALENE	19
N-BUTYLBENZENE	25
N-PROPYLBENZENE	0.033
M,P-XYLENES	0.014
O-XYLENE	0.013
SEC-BUTYLBENZENE	0.097
SVOCs (mg/Kg)	
ACENAPHTHENE	1.2 J
ANTHRACENE	2.5 J
BENZO(A)ANTHRACENE	6.9
BENZO(A)PYRENE	6.4
BENZO(B)FLUORANTHENE	5.4
BENZO(G,H,I)PERYLENE	3.9
BENZO(K)FLUORANTHENE	5.5
CHRYSENE	7.2
DIBENZO(A,H)ANTHRACENE	1.4 J
FLUORANTHENE	15
FLUORENE	0.97 J
INDENO(1,2,3-CD)PYRENE	3.7 J
NAPHTHALENE	7.3
PHENANTHRENE	11
PYRENE	11

SI-21-B3	
Sample ID	SI-21-B3-A-1
Depth (ft)	1.5 - 2.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.0054 J
1,3,5-TRIMETHYLBENZENE	0.0031 J
ETHYLBENZENE	0.0033 J
NAPHTHALENE	0.02 J
N-BUTYLBENZENE	0.0046 J
M,P-XYLENES	0.014 J
O-XYLENE	0.016 J
TOLUENE	0.0015 J
SVOCs (mg/Kg)	
ACENAPHTHENE	5.1 J
ANTHRACENE	9.2 J
BENZO(A)ANTHRACENE	16 J
BENZO(A)PYRENE	13 J
BENZO(B)FLUORANTHENE	11 J
BENZO(G,H,I)PERYLENE	8.4 J
BENZO(K)FLUORANTHENE	10 J
CHRYSENE	16 J
DIBENZO(A,H)ANTHRACENE	2.9 J
FLUORANTHENE	40
FLUORENE	4.8 J
INDENO(1,2,3-CD)PYRENE	8.1 J
PHENANTHRENE	31
PYRENE	27

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
VOCs (mg/kg)	
1,2,4-TRIMETHYLBENZENE	10
1,3,5-TRIMETHYLBENZENE	3.3
4-ISOPROPYLTOLUENE	5
ETHYLBENZENE	5.5
ISOPROPYLBENZENE	2.3
M,P-XYLENES	1.2
NAPHTHALENE	13
N-BUTYLBENZENE	10
N-PROPYLBENZENE	3.7
O-XYLENE	1.2
SEC-BUTYLBENZENE	10
TOLUENE	1.5
SVOCs (mg/kg)	
ACENAPHTHENE	50
ANTHRACENE	50
BENZO(A)ANTHRACENE	0.224 or MDL
BENZO(A)PYRENE	0.061 or MDL
BENZO(B)FLUORANTHENE	0.220 or MDL
BENZO(G,H,I)PERYLENE	50
BENZO(K)FLUORANTHENE	0.220 or or MDL
CHRYSENE	0.4
DIBENZO(A,H)ANTHRACENE	0.0143 or MDL
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	3.2
NAPHTHALENE	13
PHENANTHRENE	50
PYRENE	50

LEGEND - WEST PARCEL:

- PERMAMENT MONITORING WELL
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SUBSURFACE SOIL-VAPOR SAMPLE (COVERED BY SLAB OR PAVEMENT)
- SUBSURFACE SOIL-VAPOR SAMPLE (UNCOVERED SOIL SURFACE)
- CRAWLSPACE AIR SAMPLE
- METHANE SURVEY MEASUREMENT POINT
- DUE DILIGENCE SOIL SAMPLE (2002)
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)
- PAOC OUTLINE

SI-21-B1
SI-21-B4
SI-21-B2
21-1
SI-21-B3
SI-47-B13
SV-17
SI-47-B16
OW-24
SI-47-B21
SI-47-B7
SI-47-B11
SI-47-B15
SI-47-B22
SI-47-B10
SV-18
SI-47-B9
SI-47-B20
SI-47-B24
SI-47-B6
25-1
SI-47-B16A
SV-19
40-20
OW-34
SI-UST-B46
SI-GWI-B2W
SI-21-B10
SI-21-B11
SI-GWI-B3W
GT-2
MS-11
SI-UST-B24
SI-UST-B23
SI-UST-B22

0 30' 60'
GRAPHIC SCALE

FORM□R □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN SOIL - PAOC 21

ARCADIS

F□□R□ 6A

X: 64462X00, X01.DWG
L: ON=*, OFF=REF, |PROP*, |TR_PAINTL
P: PAGESET/SYR-BL
10/25/05 SYR-85-LJP GMS TJR
64462024/RMDLINV/64462C25.DWG

R: F□□
6□62.00
6□62.01
M□□□□ PRO□
□□2□□□FD dib
Fig re P 1 0001 bm□

□Re d□ D□□RO P□Re d□ D□Re d□ □D□O t□ P□□O t□ PM□Re d□ M□O t□ □R□O t□O□□OFF□R□F□ □□□□D 10 26 200□10□0 M □□ D□R 1 1□IM□□□□ P□□□□P□PDF□□ P□O□□□□□□□□P□F□□□□D□ P□O□□D 12 8 2012 2 1 PM □□□O□□D□□D

SI-47-B16
SI-47-B21
OW-24
SI-47-B13
SI-47-B7
SI-47-B11
SI-47-B15
SI-47-B22
SI-47-B10
SV-17
SV-18
21-2
SI-47-B9
SI-21-B1
SI-21-B4
SI-21-B2
SI-47-B20
SI-47-B24
21-1
SI-47-B6
SI-21-B3

OW-34			
SAMPLE ID	OW-34-1	OW-34-1	OW-34-2
DATE	5/21/2004	7/26/2004	7/26/2004
VOCs (ug/L)	ND	ND	ND
SVOCs (ug/L)		NA	NA
ACENAPHTHENE	1.8 J		
ANTHRACENE	3.3 J		
BENZ(A)ANTHRACENE	7.6 J		
BENZO(A)PYRENE	6.6 J		
BENZO(B)FLUORANTHENE	5.9 J		
BENZO(G,H,I)PERYLENE	4.7 J		
BENZO(K)FLUORANTHENE	5.4 J		
CHRYSENE	7.5 J		
DIBENZ(A,H)ANTHRACENE	1.6 J		
FLUORANTHENE	17		
FLUORENE	1.5 J		
INDENO(1,2,3-CD)PYRENE	4.1 J		
PHENANTHRENE	14		
PYRENE	16		

SI-GWI-B2W		
SAMPLE ID	SI-GWI-B2W-1	SI-GWI-B2W-2
DATE	10/28/2003	10/28/2003
VOCs (ug/L)		
4-ISOPROPYLTOLUENE	1.4	1.4
NAPHTHALENE	2.4	1.1
SVOCs (ug/L)		
ACENAPHTHENE	1.6 J	2.2 J
ANTHRACENE	2 J	3.4 J
BENZ(A)ANTHRACENE	3.4 J	6.1 J
BENZO(A)PYRENE	3.1 J	5.3 J
BENZO(B)FLUORANTHENE	2.4 J	4.4 J
BENZO(G,H,I)PERYLENE	2.1 J	3.4 J
BENZO(K)FLUORANTHENE	2.5 J	4.6 J
CHRYSENE	3.7 J	6.5 J
DIBENZ(A,H)ANTHRACENE	ND	1.2 J
FLUORANTHENE	8 J	14
FLUORENE	ND	1.4 J
INDENO(1,2,3-CD)PYRENE	2 J	3.1 J
NAPHTHALENE	1.1 J	1.9 J
PHENANTHRENE	5.7 J	12
PYRENE	6.7 J	11

25-1
SI-47-B16A
SV-19
OW-34
40-20
SI-UST-B46
SI-GWI-B2W
SI-21-B10
SI-21-B11
SI-GWI-B3W
GT-2
MS-11
SI-UST-B24
SI-UST-B23
SI-UST-B22

LEGEND - WEST PARCEL:

- PERMAMENT MONITORING WELL
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SUBSURFACE SOIL-VAPOR SAMPLE (COVERED BY SLAB OR PAVEMENT)
- SUBSURFACE SOIL-VAPOR SAMPLE (UNCOVERED SOIL SURFACE)
- CRAWLSPACE AIR SAMPLE
- METHANE SURVEY MEASUREMENT POINT
- DUE DILIGENCE SOIL SAMPLE (2002)
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)
- PAOC OUTLINE

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
VOCs (ug/L)	
4-ISOPROPYLTOLUENE	5
NAPHTHALENE	10
SVOCs (ug/L)	
ACENAPHTHENE	20
ANTHRACENE	50
BENZ(A)ANTHRACENE	0.002
BENZO(A)PYRENE	ND
BENZO(B)FLUORANTHENE	0.002
BENZO(G,H,I)PERYLENE	NA
BENZO(K)FLUORANTHENE	0.002
CHRYSENE	0.002
DIBENZ(A,H)ANTHRACENE	NA
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	0.002
NAPHTHALENE	10
PHENANTHRENE	50
PYRENE	50

0 30' 60'
GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN GROUNDWATER - PAOC 21

ARCADIS

F□□R□
6B

X: 64462X00, X01.DWG
L: ON=*, OFF=REF, |PROP*, |TR_PAINTL
P: PAGESET/SYR-BL
10/25/05 SYR-85-LJP GMS TJR
64462024/RMDLINV/64462C25.DWG

□□□Re d □ D□□RO□P□Re d □ D□□Re d □ D□O t□ P□□O t□ PM Re d □M O t□ □R O 1 0 □□OFF □R F□
M□□□□ PRO□□□□ P□□□□P PDF□ P O□□□□□□□□P□F□□□□□ P O□□D 1 26 2012 2 1 PM □□□□O□□, D□□D
□R F□□ □□2 □□□FD db
6□ 62 00 Fig re P-1 0001 bm□
6□ 62 01
□□□□□□□□

SI-29-B2		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B2-A-1	1.6 – 2.0	466 J
SI-29-B2-B-1	3.6 – 4.0	872 J
SI-29-B2-C-1	5.6 – 6.0	207 J
SI-29-B2-D-1	8.0 – 8.4	451 J

SI-29-B4		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B4-A-1	0 – 0.4	58 J
SI-29-B4-B-1	1.6 – 2.0	119
SI-29-B4-C-1	4.0 – 4.8	4,490 J
SI-29-B4-D-1	6.0 – 6.4	173 J

SI-29-B24		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B24A	0.2 – 1.5	369
SI-29-B24B	1.5 – 2.5	11.9
SI-29-B24C	4.0 – 4.9	168
SI-29-B24D	6.0 – 8.0	10.6

SI-29-B28		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B28A	0.2 – 1.1	41.8
SI-29-B28B	1.3 – 2.7	ND

SI-29-B29		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B29A	0.2 – 1.0	46.4
SI-29-B29B	1.2 – 2.1	ND

SI-29-B25		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B25A	0.2 – 2.0	266
SI-29-B25C	4.0 – 6.0	120
SI-29-B25D	6.0 – 8.0	6.22

SI-29-B35		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B35A	0.2 – 0.7	24.4
SI-29-B35B	0.7 – 2.2	ND

SI-29-B15		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B15-A-1	1.0 – 2.0	9,310 J
SI-29-B15-B-1	3.0 – 4.0	39,200 J
SI-29-B15-B-2	3.0 – 4.0	7,780 J
SI-29-B15-C-1	5.0 – 6.0	14,100 J
SI-29-B15-D-1	7.0 – 8.0	1,000

SI-29-B1		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B1-A-1	0.0 – 0.4	92 J
SI-29-B1-A-2	0.0 – 0.4	337 J
SI-29-B1-B-1	3.6 – 4.0	726 J
SI-29-B1-C-1	5.6 – 6.0	4,760 J
SI-29-B1-D-1	7.6 – 8.0	357 J

SI-29-B9		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B9-A-1	1.0 – 2.0	8,830 J
SI-29-B9-B-1	3.0 –4.0	70.6 J
SI-29-B9-B-2	3.0 – 4.0	711 J
SI-29-B9-C-1	5.0 – 6.0	3,600 J
SI-29-B9-D-1	7.0 – 8.0	174 J
SI-29-B9-E-1	9.0 – 10.0	389 J

SI-29-B30		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B30A	0.2 – 2.2	420
SI-29-B30C	4.0 – 6.0	19.7

SI-29-B26		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B26A	0.2 – 2.0	749
SI-29-B26C	4.5 – 6.0	479
SI-29-B26D	6.0 – 8.0	ND

SI-29-B3		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B3-A-1	1.6 – 2.0	26.9 J
SI-29-B3-A-2	1.6 – 2.0	26.7 J
SI-29-B3-B-1	3.6 – 4.0	4,720 J
SI-29-B3-C-1	5.6 – 6.0	1,500 J
SI-29-B3-D-1	7.6 – 8.0	212 J

SI-29-B5		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B5-A-1	2.5 – 3.0	6,260
SI-29-B5-B-1	3.5 – 4.0	23,800
SI-29-B5-C-1	5.5 – 6.0	3,750
SI-29-B5-D-1	7.5 – 8.0	11,400

SI-29-B6		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B6-A-1	2.5 – 3.0	293
SI-29-B6-A-2	2.5 – 3.0	167
SI-29-B6-B-1	3.5 – 4.0	533
SI-29-B6-C-1	5.0 – 5.5	26,000
SI-29-B6-D-1	6.0 – 6.5	9,040

SI-29-B17		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B17-A-1	2.0 – 3.0	87.3
SI-29-B17-B-1	4.0 – 5.0	90,000
SI-29-B17-C-1	6.0 – 7.0	14,600
SI-29-B17-D-1	7.0 – 8.0	8,890

SI-29-B34		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B34A	0.2 – 1.0	135
SI-29-B34C	4.0 – 5.0	10.7

SI-29-B13		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B13-A-1	2.0 – 3.0	16.2
SI-29-B13-B-1	4.0 – 5.0	13,900
SI-29-B13-C-1	6.0 – 7.0	3,390
SI-29-B13-D-1	8.0 – 9.0	149 J
SI-29-B13-E-1	10.0 – 11.0	5,760 J
SI-29-B13-F-1	12.0 – 13.0	53.4 J
SI-29-B13-G-1	14.0 – 15.0	191 J
SI-29-B13-H-1	16.0 – 17.0	17.1 J

SI-29-B18		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B18-A-1	1.0 – 2.0	429 J
SI-29-B18-B-1	3.0 – 4.0	155 J
SI-29-B18-C-1	5.0 – 6.0	8,120 J
SI-29-B18-C-2	5.0 – 6.0	451 J
SI-29-B18-D-1	7.0 – 8.0	1,600 J

SI-29-B31		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B31A	0.2 – 1.6	185
SI-29-B31C	4.0 – 6.0	236

SI-29-B14		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B14-A-1	2.0 – 3.0	113 J
SI-29-B14-B-1	4.0 – 5.0	125 J
SI-29-B14-C-1	6.0 – 7.0	367 J
SI-29-B14-D-1	8.0 – 9.0	15,100 J
SI-29-B14-E-1	10.0 – 11.0	76.8 J

SI-29-B10		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B10-A-1	1.0 – 2.0	3,780 J
SI-29-B10-B-1	3.0 – 4.0	8,760 J
SI-29-B10-C-1	5.0 – 6.0	25,300 J
SI-29-B10-C-2	5.0 – 6.0	4,040 J
SI-29-B10-D-1	7.0 – 8.0	52.9 J
SI-29-B10-E-1	9.0 – 10.0	179 J

SI-29-B12		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B12-A-1	1.0 – 2.0	25,100
SI-29-B12-B-1	3.0 – 4.0	162
SI-29-B12-C-1	5.0 – 6.0	1,620
SI-29-B12-D-1	7.0 – 8.0	1,460
SI-29-B12-E-1	9.0 – 10.0	1,810 J

SI-29-B27		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B27A	0.2 – 2.0	170
SI-29-B27C	5.0 – 5.9	17.4

SI-29-B8		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B8-A-1	2.0 – 2.5	2,400
SI-29-B8-B-1	3.5 – 4.0	410
SI-29-B8-C-1	5.0 – 5.5	7,910
SI-29-B8-D-1	6.0 – 6.5	21,100

SI-29-B32		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B32A	0.2 – 2.0	213
SI-29-B32C	4.0 – 5.4	7.51

SI-29-B11		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B11-A-1	1.0 – 2.0	1,890 J
SI-29-B11-B-1	3.0 – 4.0	15.3 J
SI-29-B11-C-1	5.0 – 6.0	1,170 J
SI-29-B11-D-1	5.0 – 6.0	50,500 J
SI-29-B11-E-1	7.0 – 8.0	2,700 J

SI-29-B16		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B16-A-1	1.0 – 2.0	1,070 J
SI-29-B16-B-1	3.0 – 4.0	80.3 J
SI-29-B16-C-1	5.0 – 6.0	176 J
SI-29-B16-D-1	7.0 – 8.0	3,420 J
SI-29-B16-E-1	9.0 – 10.0	143 J

SI-29-B7		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B7-A-1	2.0 – 2.5	21.9
SI-29-B7-B-1	3.5 – 4.0	867
SI-29-B7-C-1	5.0 – 5.5	7,290
SI-29-B7-D-1	6.0 – 6.5	451

SI-29-B21		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B21-A-1	1.0 – 2.0	6,950
SI-29-B21-B-1	3.0 – 4.0	28,500
SI-29-B21-C-1	5.0 – 6.0	1,570
SI-29-B21-D-1	7.0 – 8.0	140

SI-29-B22		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B-22-A-1	1.0 – 2.0	83.8 J
SI-29-B-22-B-1	3.0 – 4.0	62.4 J
SI-29-B-22-C-1	5.0 – 6.0	7,180 J
SI-29-B-22-D-1	10.0 – 11.0	9,740 J
SI-29-B-22-E-1	13.0 – 14.0	605 J

SI-29-B33		
Sample ID	Depth (ft)	Pb (mg/kg)
SI-29-B33A	0.2 – 2.0	815
SI-29-B33C	4.0 – 5.0	8.65

29-1
29-2
SI-29-B2
SI-29-B1
SI-29-B3
SI-29-B4
OW-11
SI-29-B28
SI-29-B24
SI-29-B35
SI-29-B29
SI-29-B25
SI-29-B30
SI-29-B26
SI-29-B34
SI-29-B9
SI-29-B6
SB-2
SI-29-B8
SI-29-B15
SI-29-B5
SI-29-B36
SI-29-B10
SI-29-B13
SI-29-B31
SI-29-B7
SI-29-B27
SI-29-B16
SI-29-B17
SI-29-B14
SI-29-B12
SI-29-B21
SB-2
SI-4-B1
SI-29-B11
SI-29-B16
SI-29-B19
SI-29-B20
SI-29-B22
SI-29-B32
SI-29-B33
SI-29-B23
SB-1

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL LEAD RESULT >10,000 ppm

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
LEAD (mg/kg)	400

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 30' 60'
GRAPHIC SCALE

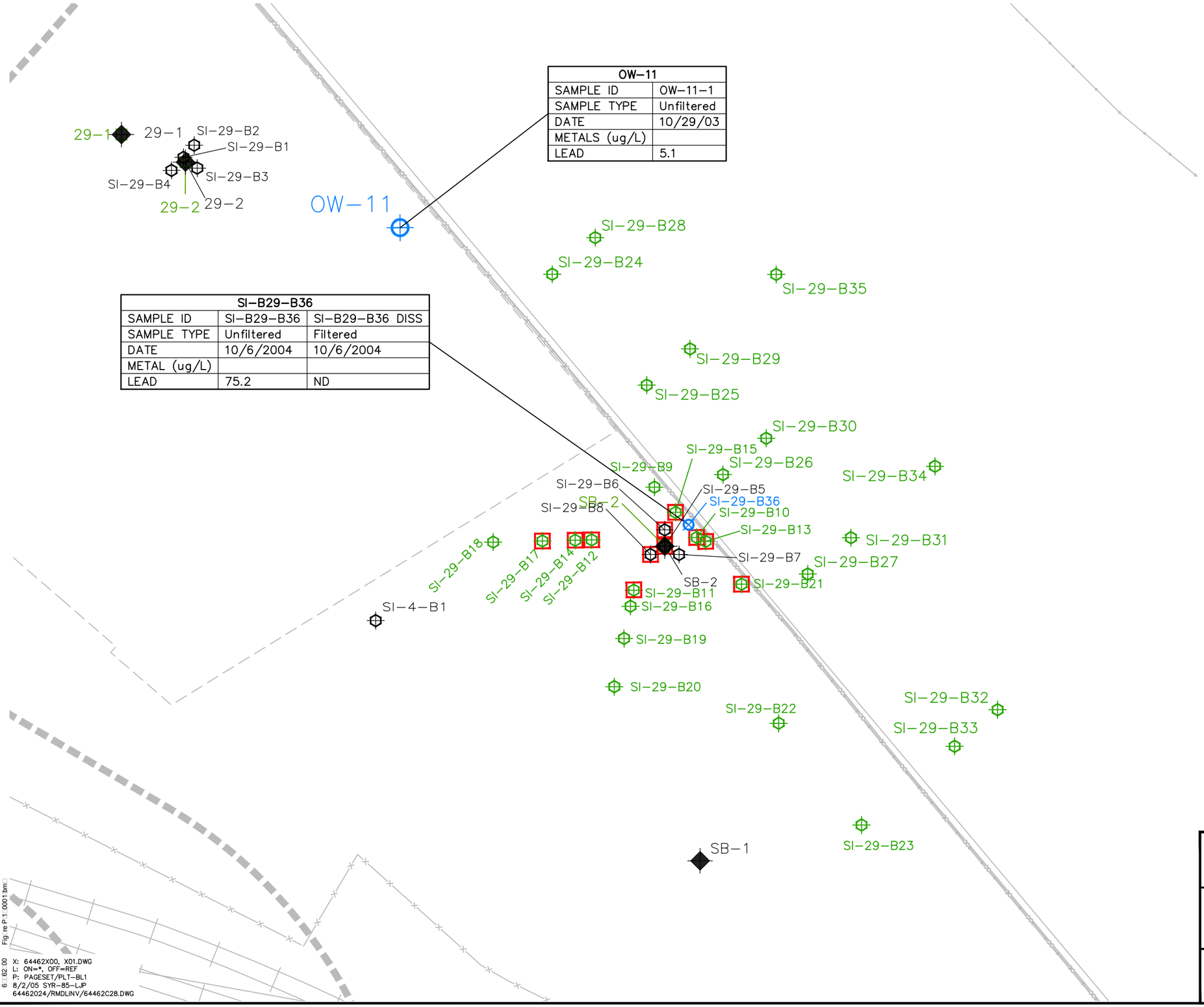
FORMER □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

LEAD IN SOIL – PAOC 29

ARCADIS

7A

M□□□ PRO□□□ M□□□
R: F□□
6□62 01 □□2□□□FD dib
6□62 00 Fig re P 1 0001bm
X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
8/2/05 SYR-85-LJP
64462024/RMDLINV/64462C04.DWG
□□□Re d□ D□□RO□P□Re d□ D□□Re d□ D□O t□ P□□O t□ PM□Re d□ M□O t□ □R□O 1O□□OFF□R F□
□□□Re d□ D□□R□□□□□006□62 0001 0002 D□□RMD□□6□62 0□D□ □□O□P O 29 □□D 2200 21 PM□□□O□D 12620122 1 PM□□□O□D□□



FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

REMEDIAL INVESTIGATION REPORT

LEAD IN GROUNDWATER – PAOC 29

ARCADIS

F□□R□ 7B

R: F□□
6□62.01
6□62.00
M□□□ PRO□□□□□M□□□
□2□□□□FD.dlb
Fig re P-1.0001.bm□
X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT–BL1
8/2/05 SYR–85–LJP
64462024/RMDLINV/64462C28.DWG
D□□RO.P□Re d□ D□□Re d□ D□□RO.P□Re d□ D□□R□□□□□

SI-37-B17	
Sample ID	SI-37-B17-A-A
Depth (ft)	8.5 – 9.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	11
1,3,5-TRIMETHYLBENZENE	8.6
ISOPROPYLBENZENE	5.4
N-BUTYLBENZENE	24
N-PROPYLBENZENE	25
O-XYLENE	9.2
SEC-BUTYLBENZENE	11
SVOCs (mg/Kg)	
ACENAPHTHENE	0.14 J
ANTHRACENE	0.28 J
BENZO(A)ANTHRACENE	0.52
BENZO(A)PYRENE	0.35 J
BENZO(B)FLUORANTHENE	0.29 J
BENZO(G,H,I)PERYLENE	0.23 J
BENZO(K)FLUORANTHENE	0.28 J
CHRYSENE	0.63
DIBENZO(A,H)ANTHRACENE	0.093 J
FLUORANTHENE	1.5
FLUORENE	0.15 J
INDENO(1,2,3-CD)PYRENE	0.21 J
PHENANTHRENE	0.43
PYRENE	0.91

SI-37-B18		
Sample ID	SI-37-B18-A-1	
Depth (ft)	9.0 – 10.0	
VOCs (mg/Kg)	ND	
SVOCs (mg/Kg)	ND	

SI-37-B12		
Sample ID	SI-37-B12-A-1	SI-37-B12-B-1
Depth (ft)	6.6 – 7.0	7.6 – 8.0
VOCs (mg/Kg)	ND	ND
SVOCs (mg/Kg)	ND	ND

SI-37-B13		
Sample ID	SI-37-B13-A-1	SI-37-B13-B-1
Depth (ft)	5.5 – 6.0	7.5 – 8.0
VOCs (mg/Kg)	ND	ND
SVOCs (mg/Kg)	ND	ND

SI-37-B8		
Sample ID	SI-37-B8-A-1	SI-37-B8-B-1
Depth (ft)	5.0 – 5.4	11.0 – 11.4
VOCs (mg/Kg)	ND	ND
SVOCs (mg/Kg)		
ACENAPHTHENE	0.22 J	ND
ANTHRACENE	0.72 J	ND
BENZO(A)ANTHRACENE	2	ND
BENZO(A)PYRENE	1.5	ND
BENZO(B)FLUORANTHENE	1	ND
BENZO(G,H,I)PERYLENE	1.1	ND
BENZO(K)FLUORANTHENE	1	ND
CHRYSENE	2.2	ND
DIBENZO(A,H)ANTHRACENE	0.28 J	ND
FLUORANTHENE	4	ND
FLUORENE	0.29 J	ND
INDENO(1,2,3-CD)PYRENE	0.84	ND
PHENANTHRENE	4	ND
PYRENE	5.3	ND

SI-34-B2			
Sample ID	SI-34-B2-A-1		SI-34-B2-B-1
Depth (ft)	4.5 – 5.0		8.0 – 8.5
SVOCs (mg/Kg)			
ACENAPHTHENE	3.7		ND
ACENAPHTHYLENE	2.2		ND
ANTHRACENE	14		ND
BENZO(A)ANTHRACENE	34		ND
BENZO(A)PYRENE	34		ND
BENZO(B)FLUORANTHENE	23		ND
BENZO(G,H,I)PERYLENE	19		ND
BENZO(K)FLUORANTHENE	22		ND
CHRYSENE	34		ND
DIBENZO(A,H)ANTHRACENE	5.2	J	ND
FLUORANTHENE	72		ND
FLUORENE	3.9		ND
INDENO(1,2,3-CD)PYRENE	15		ND
NAPHTHALENE	0.92 J		ND
PHENANTHRENE	53		ND
PYRENE	86		ND

SI-37-B4			
Sample ID	SI-37-B4-A-1	SI-37-B4-A-2	SI-37-B4-B-1
Depth (ft)	7.5 – 8.0	7.5 – 8.0	5.0 – 5.5
VOCs (mg/Kg)	ND	ND	ND
SVOCs (mg/Kg)			
ACENAPHTHENE	ND	ND	0.34 J
ANTHRACENE	ND	ND	3.1
BENZO(A)ANTHRACENE	ND	ND	11
BENZO(A)PYRENE	ND	ND	8.8
BENZO(B)FLUORANTHENE	ND	ND	7.8
BENZO(G,H,I)PERYLENE	ND	ND	6.6
BENZO(K)FLUORANTHENE	ND	ND	7.4
CHRYSENE	ND	ND	11
DIBENZO(A,H)ANTHRACENE	ND	ND	2.2 J
FLUORANTHENE	ND	ND	21
FLUORENE	ND	ND	0.81 J
INDENO(1,2,3-CD)PYRENE	ND	ND	6.1
NAPHTHALENE	ND	ND	0.57 J
PHENANTHRENE	ND	ND	11
PYRENE	ND	ND	16

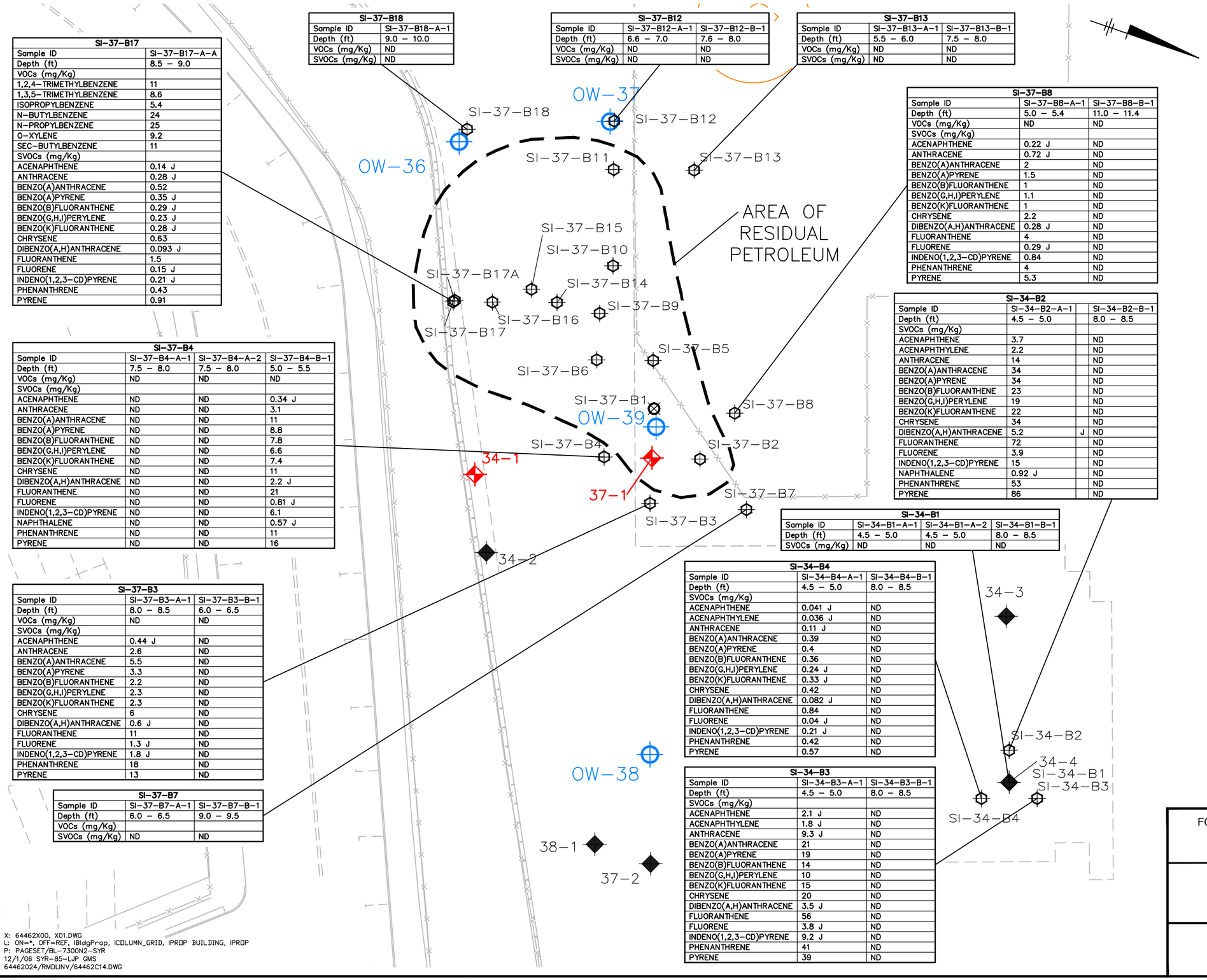
SI-34-B1			
Sample ID	SI-34-B1-A-1	SI-34-B1-A-2	SI-34-B1-B-1
Depth (ft)	4.5 – 5.0	4.5 – 5.0	8.0 – 8.5
SVOCs (mg/Kg)	ND	ND	ND

SI-37-B3		
Sample ID	SI-37-B3-A-1	SI-37-B3-B-1
Depth (ft)	8.0 – 8.5	6.0 – 6.5
VOCs (mg/Kg)	ND	ND
SVOCs (mg/Kg)		
ACENAPHTHENE	0.44 J	ND
ANTHRACENE	2.6	ND
BENZO(A)ANTHRACENE	5.5	ND
BENZO(A)PYRENE	3.3	ND
BENZO(B)FLUORANTHENE	2.2	ND
BENZO(G,H,I)PERYLENE	2.3	ND
BENZO(K)FLUORANTHENE	2.3	ND
CHRYSENE	6	ND
DIBENZO(A,H)ANTHRACENE	0.6 J	ND
FLUORANTHENE	11	ND
FLUORENE	1.3 J	ND
INDENO(1,2,3-CD)PYRENE	1.8 J	ND
PHENANTHRENE	18	ND
PYRENE	13	ND

SI-34-B4		
Sample ID	SI-34-B4-A-1	SI-34-B4-B-1
Depth (ft)	4.5 – 5.0	8.0 – 8.5
SVOCs (mg/Kg)		
ACENAPHTHENE	0.041 J	ND
ACENAPHTHYLENE	0.036 J	ND
ANTHRACENE	0.11 J	ND
BENZO(A)ANTHRACENE	0.39	ND
BENZO(A)PYRENE	0.4	ND
BENZO(B)FLUORANTHENE	0.36	ND
BENZO(G,H,I)PERYLENE	0.24 J	ND
BENZO(K)FLUORANTHENE	0.33 J	ND
CHRYSENE	0.42	ND
DIBENZO(A,H)ANTHRACENE	0.082 J	ND
FLUORANTHENE	0.84	ND
FLUORENE	0.04 J	ND
INDENO(1,2,3-CD)PYRENE	0.21 J	ND
PHENANTHRENE	0.42	ND
PYRENE	0.57	ND

SI-37-B7		
Sample ID	SI-37-B7-A-1	SI-37-B7-B-1
Depth (ft)	6.0 – 6.5	9.0 – 9.5
VOCs (mg/Kg)		
SVOCs (mg/Kg)	ND	ND

SI-34-B3		
Sample ID	SI-34-B3-A-1	SI-34-B3-B-1
Depth (ft)	4.5 – 5.0	8.0 – 8.5
SVOCs (mg/Kg)		
ACENAPHTHENE	2.1 J	ND
ACENAPHTHYLENE	1.8 J	ND
ANTHRACENE	9.3 J	ND
BENZO(A)ANTHRACENE	21	ND
BENZO(A)PYRENE	19	ND
BENZO(B)FLUORANTHENE	14	ND
BENZO(G,H,I)PERYLENE	10	ND
BENZO(K)FLUORANTHENE	15	ND
CHRYSENE	20	ND
DIBENZO(A,H)ANTHRACENE	3.5 J	ND
FLUORANTHENE	56	ND
FLUORENE	3.8 J	ND
INDENO(1,2,3-CD)PYRENE	9.2 J	ND
PHENANTHRENE	41	ND
PYRENE	39	ND



LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLE
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	10
1,3,5-TRIMETHYLBENZENE	3.3
ISOPROPYLBENZENE	2.3
N-BUTYLBENZENE	10
N-PROPYLBENZENE	10
O-XYLENE	1.2
SEC-BUTYLBENZENE	10
SVOCs (mg/Kg)	
ACENAPHTHENE	50
ACENAPHTHYLENE	41
ANTHRACENE	50
BENZO(A)ANTHRACENE	0.224 or MDL
BENZO(A)PYRENE	0.61 or MDL
BENZO(B)FLUORANTHENE	0.220 or MDL
BENZO(G,H,I)PERYLENE	50
BENZO(K)FLUORANTHENE	0.220 or MDL
CHRYSENE	0.4
DIBENZO(A,H)ANTHRACENE	0.014 or MDL
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	3.2
NAPHTHALENE	13
PHENANTHRENE	50
PYRENE	50
TOTAL C-PAHs	10
TOTAL SVOCs	500

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 30' 60'

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□□ □O□□O□, □□□ □OR□

REMEDIAL INVESTIGATION REPORT

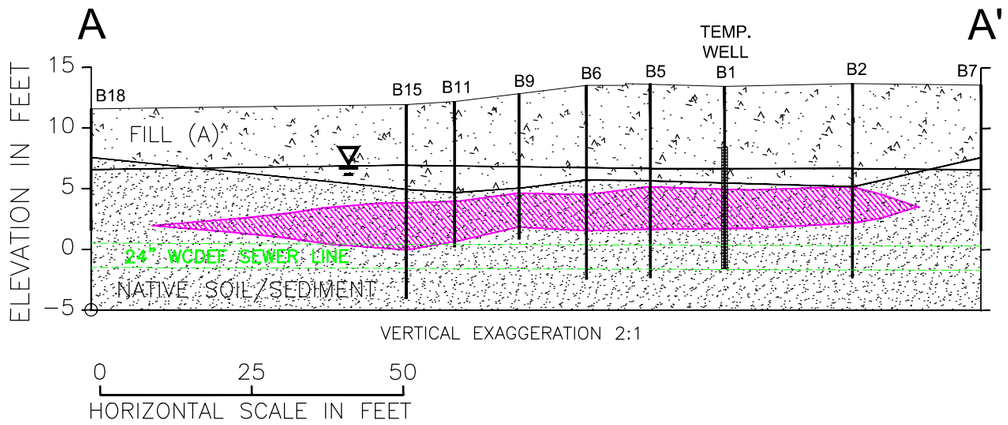
VOCs/SVOCs IN SOIL – PAOC 34 AND 37

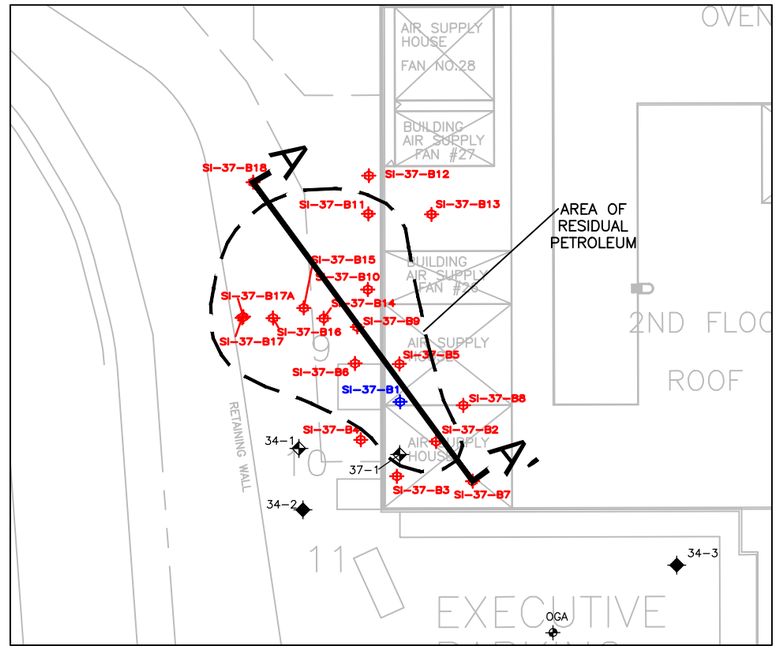
ARCADIS

F□□R□ 8A

□R_F□□ PRO□□□□□□ M□□□
6□62.01 □□2_□□□FD.dlb
6□62.00 Fig re P-1 0001.bm□
X: 64462X00, X01.DWG
L: ON=*, OFF=REF, IBldgProp, ICOLUMN_GRID, IPROP BUILDING, IPROP
P: PAGESET/BL-7300N2-SYR
12/1/06 SYR-85-LJP GMS
64462024/RMDLINV/64462C14.DWG

CROSS–SECTION OF PAOC 37





CROSS SECTION LOCATION MAP

SCALE: 1"=60'

KEY TO UNITS:

F	FILL consisting predominantly of hydraulic fill (f. brown SAND with traces of oyster shells) mixed with crushed stone, concrete, brick fragments, and traces of coal ash, compact.
F	FILL consisting predominantly of coarse grained (i.e., gravelly textured)) coal ash (cinders), along with wood, brick fragments, concrete, metal debris, and glass.
D	Interbedded SILT, silty CLAY, and f–m–c SAND, loose, poorly compacted, stratified (floodplain and bay deposits); lower portion consists of poorly sorted m–f SAND.
D	Stratified f–c SAND, w./ gravelly horizons, loose, poorly sorted (possibly glacial outwash or deltaic deposits)
P	PEAT (marsh deposits) containing up to 25% CLAY by volume, stiff, compact, stratified (undisturbed); contact with underlying clay unit may be gradational.
□□□□	Massive CLAY (marsh deposits), with up to 25% macroscopic organic matter and locallized PEAT–rich horizons, stiff, compact, stratified (undisturbed).
	Evidence of oil contamination observed (e.g., staining, odor, sheen,PID readings >100 ppm).

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

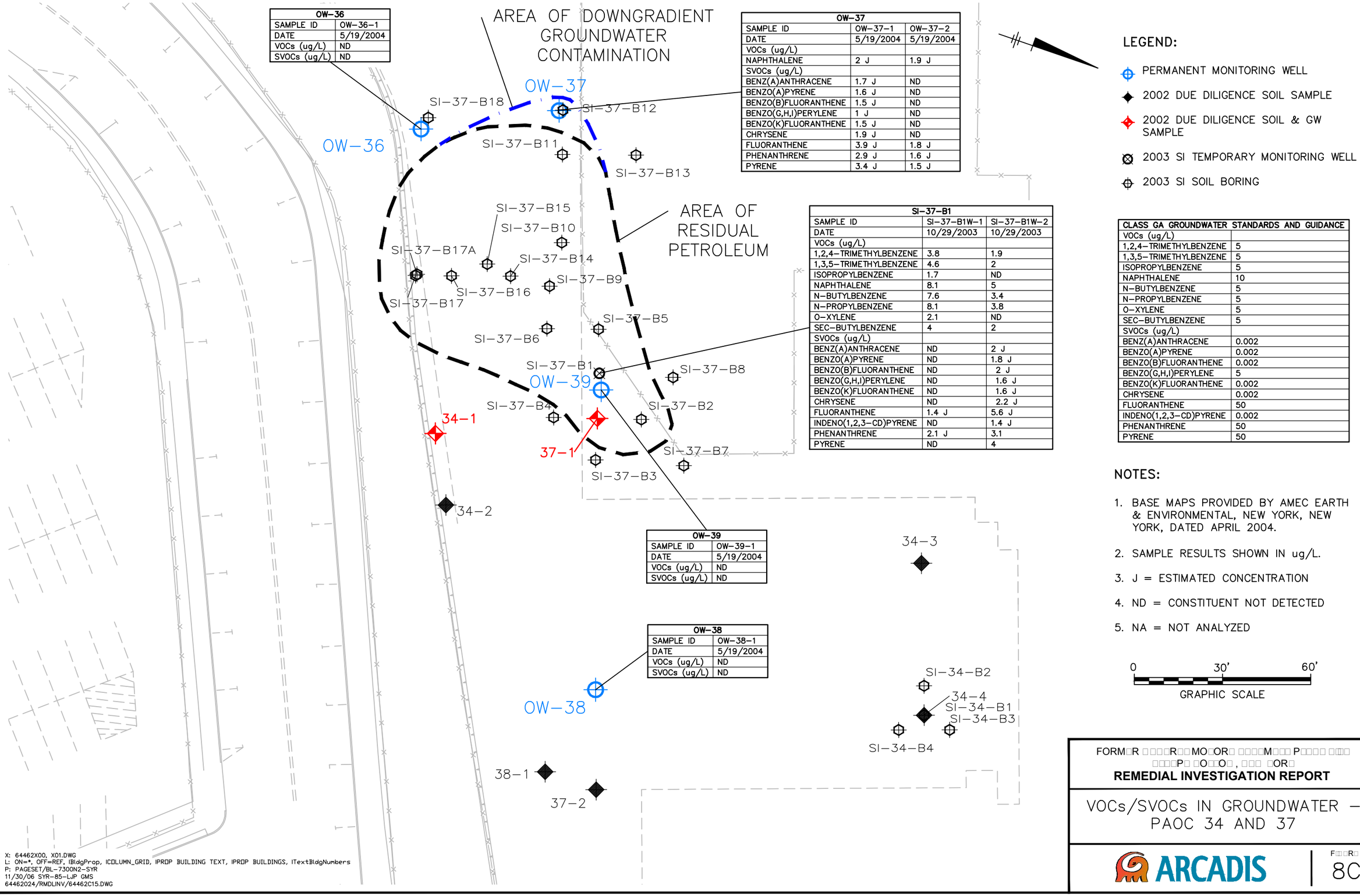
REMEDIAL INVESTIGATION REPORT

SUBSURFACE CROSS–SECTION
PAOC 37

ARCADIS

F□□R□ 8B

D□□RO P□Re d□ D□□Re d□ D□□RMD□□□6□62.0001 0002 D□□ PRO□□□□□M□□□□
D□□R 1 1□□M□□□□ P□□□□□ P□PDF□ P□O□□□□□□□□ P□F□□□□□ P□O□□D 1 26 2012 2 16 PM □□□□O□□□D□□D
□□□□Re d□ D□□RO P□Re d□ D□□Re d□ D□O t□ P□□O t□ PM Re d□ 6□62 0□D□□ M□O t□ □□O□□□□□□□□□□O□□P□□ D 12 1 2006 □20 PM □□□D□R 1 1□□M□□□□ P□□□□□ P□PDF□ P□O□□□□□□□□ P□F□□□□□ P□O□□D 1 26 2012 2 16 PM □□□□O□□□D□□D
R F□□□
6□62 00
6□62 0□
X: 64462X00, X04.DWG
L: ON=*, OFF=REF, !BldgProp, !TextBldgNumbers
P: PAGESET/BL–7300N2–SYR
11/30/06 SYR–85–LJP GMS
64462024/RMDLINV/64462V04.DWG



OW-36	
SAMPLE ID	OW-36-1
DATE	5/19/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-37		
SAMPLE ID	OW-37-1	OW-37-2
DATE	5/19/2004	5/19/2004
VOCs (ug/L)		
NAPHTHALENE	2 J	1.9 J
SVOCs (ug/L)		
BENZ(A)ANTHRACENE	1.7 J	ND
BENZO(A)PYRENE	1.6 J	ND
BENZO(B)FLUORANTHENE	1.5 J	ND
BENZO(G,H,I)PERYLENE	1 J	ND
BENZO(K)FLUORANTHENE	1.5 J	ND
CHRYSENE	1.9 J	ND
FLUORANTHENE	3.9 J	1.8 J
PHENANTHRENE	2.9 J	1.6 J
PYRENE	3.4 J	1.5 J

SI-37-B1		
SAMPLE ID	SI-37-B1W-1	SI-37-B1W-2
DATE	10/29/2003	10/29/2003
VOCs (ug/L)		
1,2,4-TRIMETHYLBENZENE	3.8	1.9
1,3,5-TRIMETHYLBENZENE	4.6	2
ISOPROPYLBENZENE	1.7	ND
NAPHTHALENE	8.1	5
N-BUTYLBENZENE	7.6	3.4
N-PROPYLBENZENE	8.1	3.8
O-XYLENE	2.1	ND
SEC-BUTYLBENZENE	4	2
SVOCs (ug/L)		
BENZ(A)ANTHRACENE	ND	2 J
BENZO(A)PYRENE	ND	1.8 J
BENZO(B)FLUORANTHENE	ND	2 J
BENZO(G,H,I)PERYLENE	ND	1.6 J
BENZO(K)FLUORANTHENE	ND	1.6 J
CHRYSENE	ND	2.2 J
FLUORANTHENE	1.4 J	5.6 J
INDENO(1,2,3-CD)PYRENE	ND	1.4 J
PHENANTHRENE	2.1 J	3.1
PYRENE	ND	4

OW-39	
SAMPLE ID	OW-39-1
DATE	5/19/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-38	
SAMPLE ID	OW-38-1
DATE	5/19/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLE
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
VOCs (ug/L)	
1,2,4-TRIMETHYLBENZENE	5
1,3,5-TRIMETHYLBENZENE	5
ISOPROPYLBENZENE	5
NAPHTHALENE	10
N-BUTYLBENZENE	5
N-PROPYLBENZENE	5
O-XYLENE	5
SEC-BUTYLBENZENE	5
SVOCs (ug/L)	
BENZ(A)ANTHRACENE	0.002
BENZO(A)PYRENE	0.002
BENZO(B)FLUORANTHENE	0.002
BENZO(G,H,I)PERYLENE	5
BENZO(K)FLUORANTHENE	0.002
CHRYSENE	0.002
FLUORANTHENE	50
INDENO(1,2,3-CD)PYRENE	0.002
PHENANTHRENE	50
PYRENE	50

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN ug/L.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 30' 60'

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

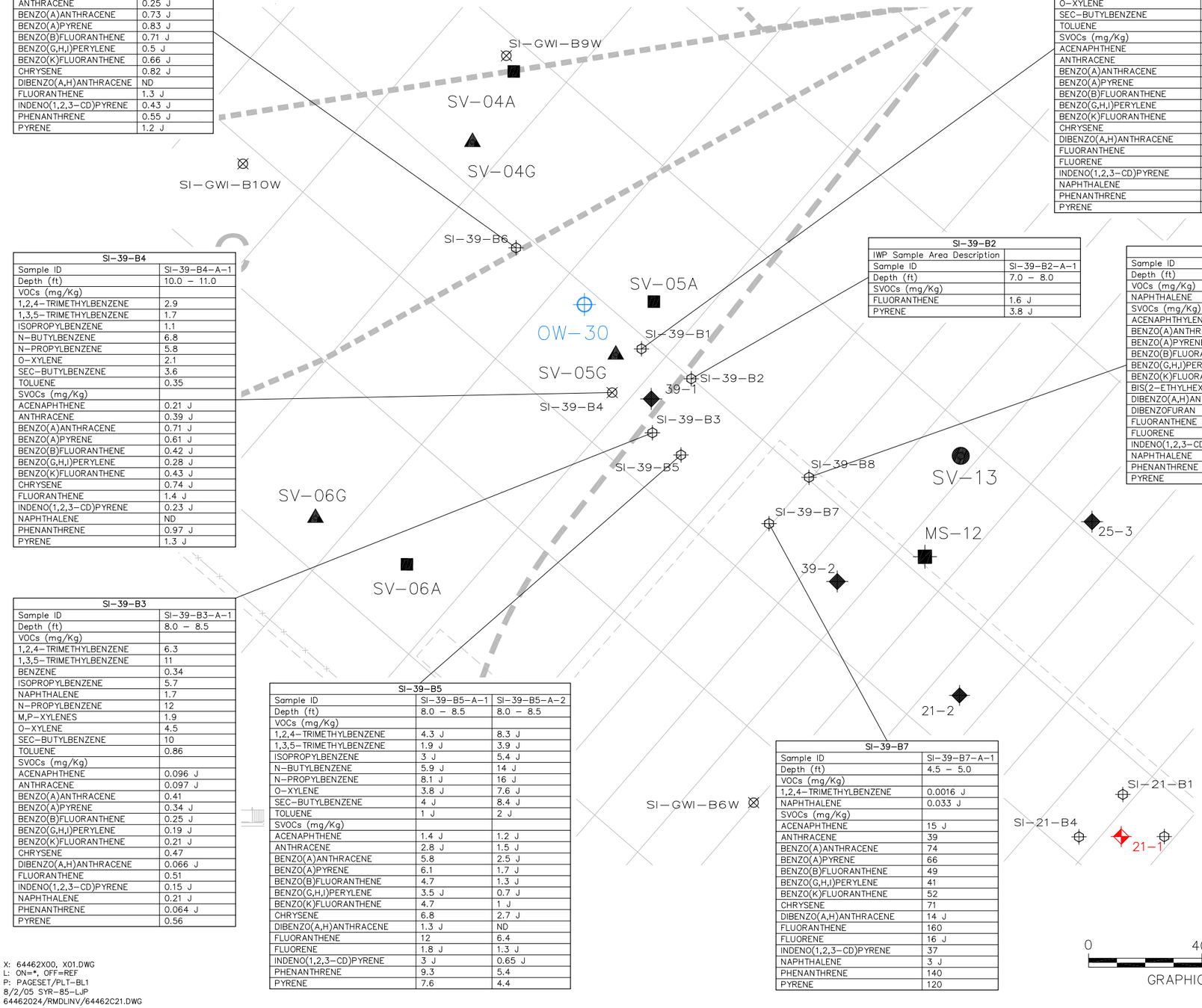
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN GROUNDWATER – PAOC 34 AND 37

ARCADIS

F□□R□ 8C

M□□□□ PRO□□□□ M□ □□□
□R F□
6□62.01
6□62.00
X: 64462X00, X01.DWG
L: ON=*, OFF=REF, IBldgProp, ICOLUMN_GRID, IPROP BUILDING TEXT, IPROP BUILDINGS, ITextBldgNumbers
P: PAGESET/BL-7300N2-SYR
11/30/06 SYR-85-LJP GMS
64462024/RMDLINV/64462C15.DWG



SI-39-B6	
Sample ID	SI-39-B6-A-1
Depth (ft)	4.0 - 4.5
VOCs (mg/Kg)	ND
SVOCs (mg/Kg)	
ACENAPHTHENE	ND
ANTHRACENE	0.25 J
BENZO(A)ANTHRACENE	0.73 J
BENZO(A)PYRENE	0.83 J
BENZO(B)FLUORANTHENE	0.71 J
BENZO(G,H,I)PERYLENE	0.5 J
BENZO(K)FLUORANTHENE	0.66 J
CHRYSENE	0.82 J
DIBENZO(A,H)ANTHRACENE	ND
FLUORANTHENE	1.3 J
INDENO(1,2,3-CD)PYRENE	0.43 J
PHENANTHRENE	0.55 J
PYRENE	1.2 J

SI-39-B4	
Sample ID	SI-39-B4-A-1
Depth (ft)	10.0 - 11.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	2.9
1,3,5-TRIMETHYLBENZENE	1.7
ISOPROPYLBENZENE	1.1
N-BUTYLBENZENE	6.8
N-PROPYLBENZENE	5.8
O-XYLENE	2.1
SEC-BUTYLBENZENE	3.6
TOLUENE	0.35
SVOCs (mg/Kg)	
ACENAPHTHENE	0.21 J
ANTHRACENE	0.39 J
BENZO(A)ANTHRACENE	0.71 J
BENZO(A)PYRENE	0.61 J
BENZO(B)FLUORANTHENE	0.42 J
BENZO(G,H,I)PERYLENE	0.28 J
BENZO(K)FLUORANTHENE	0.43 J
CHRYSENE	0.74 J
FLUORANTHENE	1.4 J
INDENO(1,2,3-CD)PYRENE	0.23 J
NAPHTHALENE	ND
PHENANTHRENE	0.97 J
PYRENE	1.3 J

SI-39-B3	
Sample ID	SI-39-B3-A-1
Depth (ft)	8.0 - 8.5
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	6.3
1,3,5-TRIMETHYLBENZENE	11
BENZENE	0.34
ISOPROPYLBENZENE	5.7
NAPHTHALENE	1.7
N-PROPYLBENZENE	12
M,P-XYLENES	1.9
O-XYLENE	4.5
SEC-BUTYLBENZENE	10
TOLUENE	0.86
SVOCs (mg/Kg)	
ACENAPHTHENE	0.096 J
ANTHRACENE	0.097 J
BENZO(A)ANTHRACENE	0.41
BENZO(A)PYRENE	0.34 J
BENZO(B)FLUORANTHENE	0.25 J
BENZO(G,H,I)PERYLENE	0.19 J
BENZO(K)FLUORANTHENE	0.21 J
CHRYSENE	0.47
DIBENZO(A,H)ANTHRACENE	0.066 J
FLUORANTHENE	0.51
INDENO(1,2,3-CD)PYRENE	0.15 J
NAPHTHALENE	0.21 J
PHENANTHRENE	0.064 J
PYRENE	0.56

SI-39-B5		
Sample ID	SI-39-B5-A-1	SI-39-B5-A-2
Depth (ft)	8.0 - 8.5	8.0 - 8.5
VOCs (mg/Kg)		
1,2,4-TRIMETHYLBENZENE	4.3 J	8.3 J
1,3,5-TRIMETHYLBENZENE	1.9 J	3.9 J
ISOPROPYLBENZENE	3 J	5.4 J
N-BUTYLBENZENE	5.9 J	14 J
N-PROPYLBENZENE	8.1 J	16 J
O-XYLENE	3.8 J	7.6 J
SEC-BUTYLBENZENE	4 J	8.4 J
TOLUENE	1 J	2 J
SVOCs (mg/Kg)		
ACENAPHTHENE	1.4 J	1.2 J
ANTHRACENE	2.8 J	1.5 J
BENZO(A)ANTHRACENE	5.8	2.5 J
BENZO(A)PYRENE	6.1	1.7 J
BENZO(B)FLUORANTHENE	4.7	1.3 J
BENZO(G,H,I)PERYLENE	3.5 J	0.7 J
BENZO(K)FLUORANTHENE	4.7	1 J
CHRYSENE	6.8	2.7 J
DIBENZO(A,H)ANTHRACENE	1.3 J	ND
FLUORANTHENE	12	6.4
FLUORENE	1.8 J	1.3 J
INDENO(1,2,3-CD)PYRENE	3 J	0.65 J
PHENANTHRENE	9.3	5.4
PYRENE	7.6	4.4

SI-39-B1		
Sample ID	SI-39-B1-A-1	SI-39-B2-A-1
Depth (ft)	4.0 - 4.5	7.0 - 8.0
VOCs (mg/Kg)		
1,2,4-TRIMETHYLBENZENE	0.0036	0.54
1,3,5-TRIMETHYLBENZENE	0.0081	1.8
ISOPROPYLBENZENE	ND	0.63
NAPHTHALENE	0.0019	ND
N-BUTYLBENZENE	0.0014	ND
N-PROPYLBENZENE	0.0065	1.7
O-XYLENE	0.0034	0.54
SEC-BUTYLBENZENE	0.004	0.96
TOLUENE	0.0024	ND
SVOCs (mg/Kg)		
ACENAPHTHENE	0.26 J	ND
ANTHRACENE	1.1 J	ND
BENZO(A)ANTHRACENE	3	ND
BENZO(A)PYRENE	3.2	ND
BENZO(B)FLUORANTHENE	2.4	ND
BENZO(G,H,I)PERYLENE	2.1	ND
BENZO(K)FLUORANTHENE	2.3	ND
CHRYSENE	3.3	ND
DIBENZO(A,H)ANTHRACENE	0.64 J	ND
FLUORANTHENE	5	1.6 J
FLUORENE	0.34 J	ND
INDENO(1,2,3-CD)PYRENE	1.7 J	ND
NAPHTHALENE	0.38 J	ND
PHENANTHRENE	2.4	ND
PYRENE	5.1	3.8 J

SI-39-B2	
IWP Sample Area Description	
Sample ID	SI-39-B2-A-1
Depth (ft)	7.0 - 8.0
SVOCs (mg/Kg)	
FLUORANTHENE	1.6 J
PYRENE	3.8 J

SI-39-B8	
Sample ID	
Depth (ft)	SI-39-B8-A-1
VOCs (mg/Kg)	5.0 - 5.5
NAPHTHALENE	0.002
SVOCs (mg/Kg)	
ACENAPHTHYLENE	13 J
BENZO(A)ANTHRACENE	34
BENZO(A)PYRENE	68
BENZO(B)FLUORANTHENE	66
BENZO(G,H,I)PERYLENE	54
BENZO(K)FLUORANTHENE	29
BIS(2-ETHYLHEXYL) PHTHALATE	50
DIBENZO(A,H)ANTHRACENE	67
DIBENZOFURAN	11 J
FLUORANTHENE	160
FLUORENE	13 J
INDENO(1,2,3-CD)PYRENE	27
NAPHTHALENE	3 J
PHENANTHRENE	100
PYRENE	110

SI-39-B7	
Sample ID	SI-39-B7-A-1
Depth (ft)	4.5 - 5.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.0016 J
NAPHTHALENE	0.033 J
SVOCs (mg/Kg)	
ACENAPHTHENE	15 J
ANTHRACENE	39
BENZO(A)ANTHRACENE	74
BENZO(A)PYRENE	66
BENZO(B)FLUORANTHENE	49
BENZO(G,H,I)PERYLENE	41
BENZO(K)FLUORANTHENE	52
CHRYSENE	71
DIBENZO(A,H)ANTHRACENE	14 J
FLUORANTHENE	160
FLUORENE	16 J
INDENO(1,2,3-CD)PYRENE	37
NAPHTHALENE	3 J
PHENANTHRENE	140
PYRENE	120

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
VOCs (mg/Kg)	
1,3,5-TRIMETHYLBENZENE	3.3
BENZENE	0.06 or MDL
ISOPROPYLBENZENE	2.3
M,P-XYLENES	1.2
N-BUTYLBENZENE	10
N-PROPYLBENZENE	10
O-XYLENE	1.2
SEC-BUTYLBENZENE	10
TOLUENE	1.5
SVOCs (mg/Kg)	
ACENAPHTHENE	50
ACENAPHTHYLENE	41
ANTHRACENE	50
BENZO(A)ANTHRACENE	0.224 or MDL
BENZO(A)PYRENE	0.61 or MDL
BENZO(B)FLUORANTHENE	0.220 or MDL
BENZO(G,H,I)PERYLENE	50
BENZO(K)FLUORANTHENE	0.220 or MDL
BIS(2-ETHYLHEXYL) PHTHALATE	50
CHRYSENE	0.4
DIBENZO(A,H)ANTHRACENE	0.014 or MDL
DIBENZOFURAN	6.2
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	3.2
NAPHTHALENE	13
PHENANTHRENE	50
PYRENE	50
TOTAL C-PAHs	10
TOTAL SVOCs	500

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 40' 80'

GRAPHIC SCALE

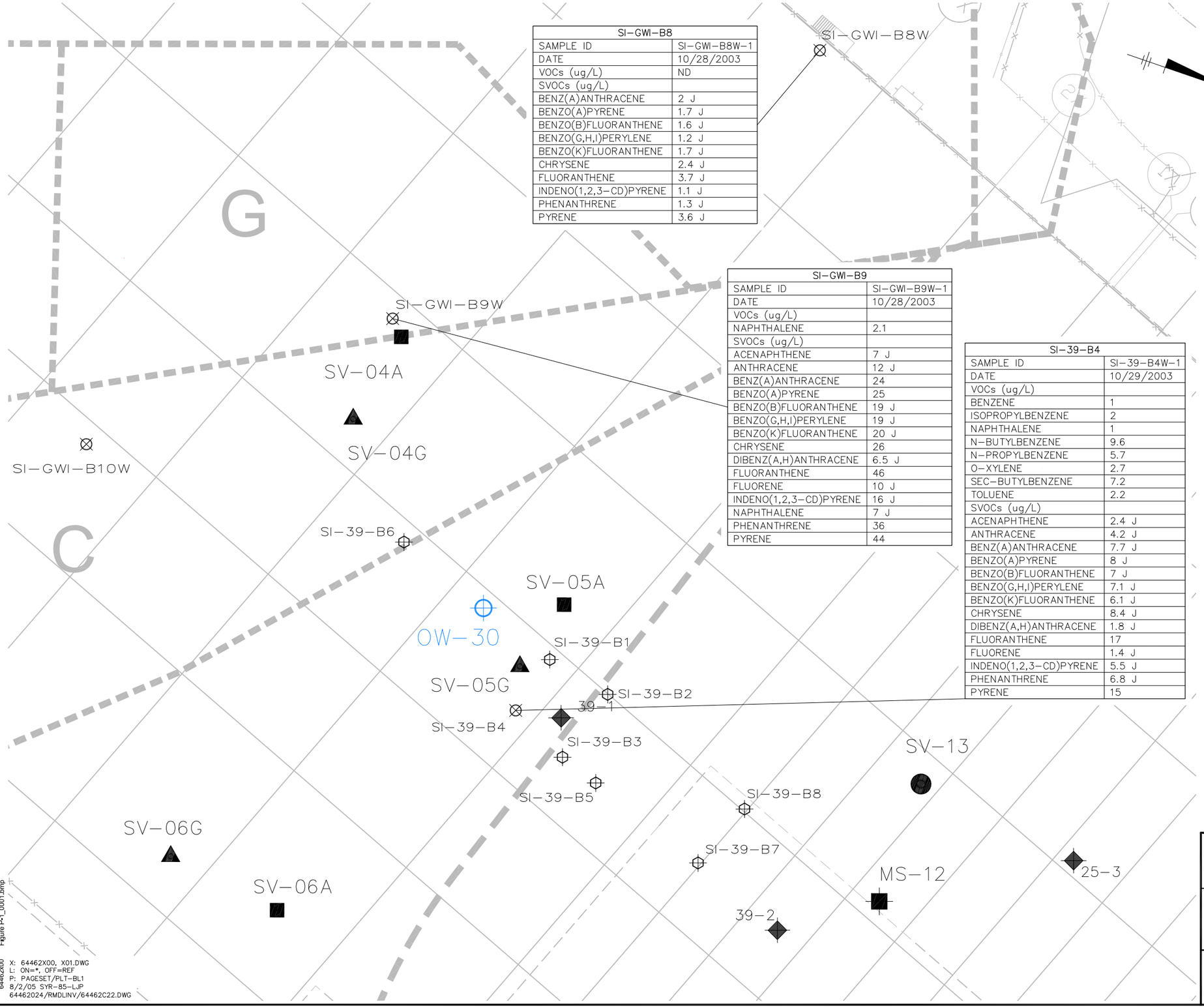
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN SOIL - PAOC 39

ARCADIS

FIGURE 9A

CITY:(Read) DIV/GROUP:(Read) DB:(Read) LD:(Opt) PIC:(Opt) PM:(Read) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENV\CAD\SYRACUSE\ACTIVE\64462\000100024\DWG\RMDLINV\64462C21.DWG LAYOUT: PAOC 39 SAVED: 8/2/2005 2:19 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 2/7/2012 9:25 AM BY: HOWES, DAVID
XREFs: X: 64462X00, X01.DWG
64462x01 L: ON=*, OFF=REF
64462x00 P: PAGESET/PLT-BL1
8/2/05 SYR-85-LJP
64462024/RMDLINV/64462C21.DWG
IMAGES: PROJECTNAME: ---
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Figure P-1_0001.bmp



SI-GWI-B8	
SAMPLE ID	SI-GWI-B8W-1
DATE	10/28/2003
VOCs (ug/L)	ND
SVOCs (ug/L)	
BENZ(A)ANTHRACENE	2 J
BENZO(A)PYRENE	1.7 J
BENZO(B)FLUORANTHENE	1.6 J
BENZO(G,H,I)PERYLENE	1.2 J
BENZO(K)FLUORANTHENE	1.7 J
CHRYSENE	2.4 J
FLUORANTHENE	3.7 J
INDENO(1,2,3-CD)PYRENE	1.1 J
PHENANTHRENE	1.3 J
PYRENE	3.6 J

SI-GWI-B9	
SAMPLE ID	SI-GWI-B9W-1
DATE	10/28/2003
VOCs (ug/L)	
NAPHTHALENE	2.1
SVOCs (ug/L)	
ACENAPHTHENE	7 J
ANTHRACENE	12 J
BENZ(A)ANTHRACENE	24
BENZO(A)PYRENE	25
BENZO(B)FLUORANTHENE	19 J
BENZO(G,H,I)PERYLENE	19 J
BENZO(K)FLUORANTHENE	20 J
CHRYSENE	26
DIBENZ(A,H)ANTHRACENE	6.5 J
FLUORANTHENE	46
FLUORENE	10 J
INDENO(1,2,3-CD)PYRENE	16 J
NAPHTHALENE	7 J
PHENANTHRENE	36
PYRENE	44

SI-39-B4	
SAMPLE ID	SI-39-B4W-1
DATE	10/29/2003
VOCs (ug/L)	
BENZENE	1
ISOPROPYLBENZENE	2
NAPHTHALENE	1
N-BUTYLBENZENE	9.6
N-PROPYLBENZENE	5.7
O-XYLENE	2.7
SEC-BUTYLBENZENE	7.2
TOLUENE	2.2
SVOCs (ug/L)	
ACENAPHTHENE	2.4 J
ANTHRACENE	4.2 J
BENZ(A)ANTHRACENE	7.7 J
BENZO(A)PYRENE	8 J
BENZO(B)FLUORANTHENE	7 J
BENZO(G,H,I)PERYLENE	7.1 J
BENZO(K)FLUORANTHENE	6.1 J
CHRYSENE	8.4 J
DIBENZ(A,H)ANTHRACENE	1.8 J
FLUORANTHENE	17
FLUORENE	1.4 J
INDENO(1,2,3-CD)PYRENE	5.5 J
PHENANTHRENE	6.8 J
PYRENE	15

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
VOCs (ug/L)	
BENZENE	1
ISOPROPYLBENZENE	5
N-BUTYLBENZENE	5
N-PROPYLBENZENE	5
O-XYLENE	5
SEC-BUTYLBENZENE	5
TOLUENE	5
SVOCs (ug/L)	
ACENAPHTHENE	20
ACENAPHTHYLENE	NA
ANTHRACENE	50
BENZ(A)ANTHRACENE	0.002
BENZO(A)PYRENE	ND
BENZO(G,H,I)PERYLENE	NA
BENZO(K)FLUORANTHENE	0.002
CHRYSENE	0.002
DIBENZ(A,H)ANTHRACENE	NA
FLUORANTHENE	50
INDENO(1,2,3-CD)PYRENE	0.002
NAPHTHALENE	10
PHENANTHRENE	50
PYRENE	50

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN ug/L.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 30' 60'

GRAPHIC SCALE

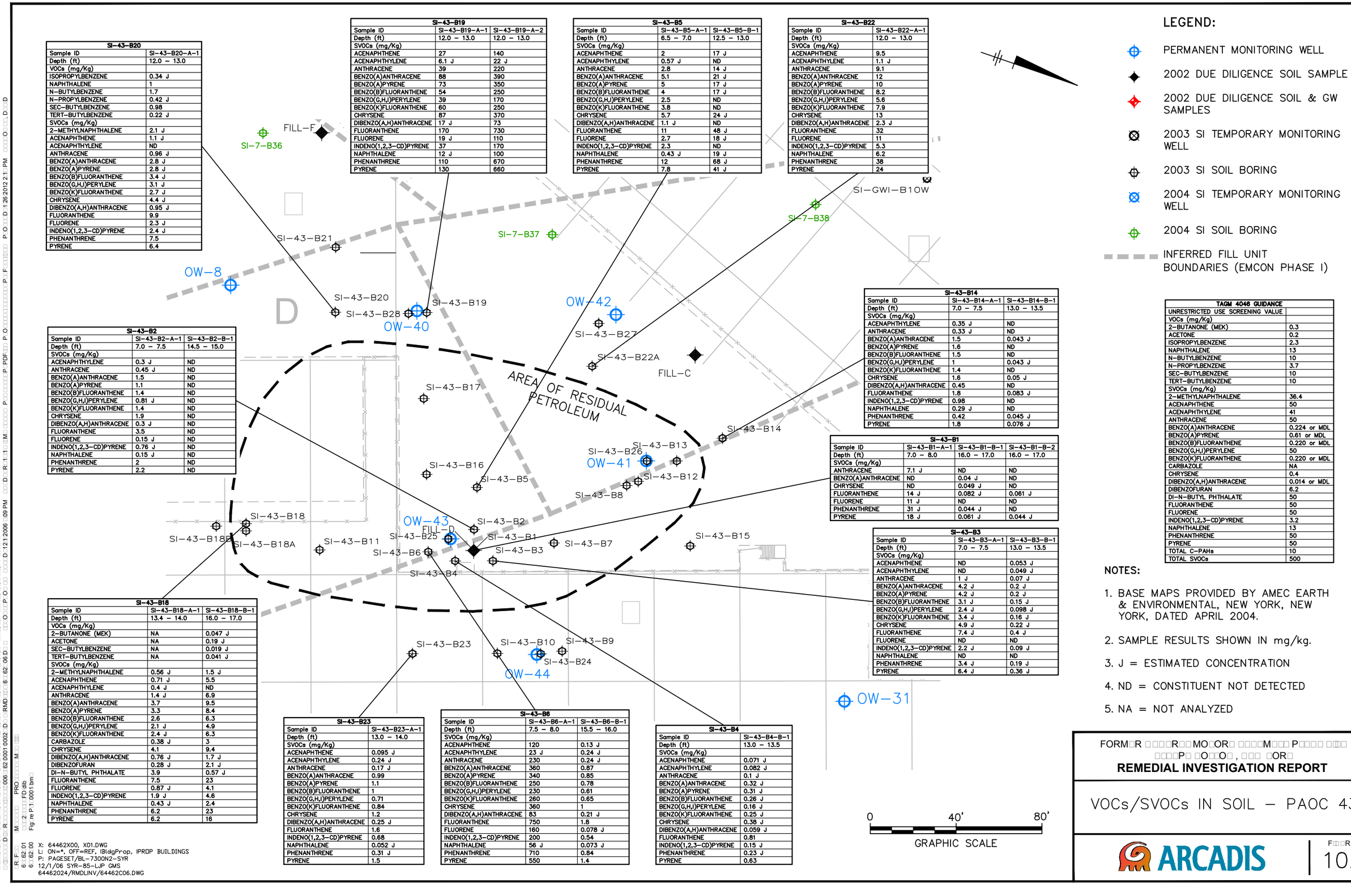
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN GROUNDWATER – PAOC 39

ARCADIS

FIGURE 9B

CITY:(Read) DIVGROUP:(Read) DB:(Read) LD:(Opt) PIC:(Opt) PM:(Read) TM:(Opt) LYR:(Opt)ON=*OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0\64462\000\100024\DWG\RMDLINV\64462C22.DWG LAYOUT: PAOC 39 SAVED: 8/2/2005 2:19 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 2/7/2012 9:29 AM BY: HOWES, DAVID
XREFS:
64462x01 X: 64462X00, X01.DWG
64462x00 L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
8/2/05 SYR-85-LJP
64462024/RMDLINV/64462C22.DWG
IMAGES: PROJECTNAME: ---
ASC28A77AFD.dib
Figure P-1_0001.bmp



SI-43-B20	
Sample ID	SI-43-B20-A-1
Depth (ft)	12.0 - 13.0
VOCs (mg/Kg)	
ISOPROPYLBENZENE	0.34 J
NAPHTHALENE	1
N-BUTYLBENZENE	1.7
N-PROPYLBENZENE	0.42 J
SEC-BUTYLBENZENE	0.98
TERT-BUTYLBENZENE	0.22 J
SVOCs (mg/Kg)	
2-METHYLNAPHTHALENE	2.1 J
ACENAPHTHENE	1.1 J
ACENAPHTHYLENE	ND
ANTHRACENE	0.96 J
BENZO(A)ANTHRACENE	2.8 J
BENZO(A)PYRENE	2.8 J
BENZO(B)FLUORANTHENE	3.4 J
BENZO(G,H,I)PERYLENE	3.1 J
BENZO(K)FLUORANTHENE	2.7 J
CHRYSENE	4.4 J
DIBENZO(A,H)ANTHRACENE	0.95 J
FLUORANTHENE	9.9
FLUORENE	2.3 J
INDENO(1,2,3-CD)PYRENE	2.4 J
PHENANTHRENE	7.5
PYRENE	6.4

SI-43-B19		
Sample ID	SI-43-B19-A-1	SI-43-B19-A-2
Depth (ft)	12.0 - 13.0	12.0 - 13.0
SVOCs (mg/Kg)		
ACENAPHTHENE	27	140
ACENAPHTHYLENE	6.1 J	22 J
ANTHRACENE	39	220
BENZO(A)ANTHRACENE	88	390
BENZO(A)PYRENE	73	350
BENZO(B)FLUORANTHENE	54	250
BENZO(G,H,I)PERYLENE	39	170
BENZO(K)FLUORANTHENE	60	250
CHRYSENE	87	370
DIBENZO(A,H)ANTHRACENE	17 J	73
FLUORANTHENE	170	730
FLUORENE	19 J	110
INDENO(1,2,3-CD)PYRENE	37	170
NAPHTHALENE	12 J	100
PHENANTHRENE	110	670
PYRENE	130	660

SI-43-B5		
Sample ID	SI-43-B5-A-1	SI-43-B5-B-1
Depth (ft)	6.5 - 7.0	12.5 - 13.0
SVOCs (mg/Kg)		
ACENAPHTHENE	2	17 J
ACENAPHTHYLENE	0.57 J	ND
ANTHRACENE	2.8	14 J
BENZO(A)ANTHRACENE	5.1	21 J
BENZO(A)PYRENE	5	17 J
BENZO(B)FLUORANTHENE	4	17 J
BENZO(G,H,I)PERYLENE	2.5	ND
BENZO(K)FLUORANTHENE	3.8	ND
CHRYSENE	5.7	24 J
DIBENZO(A,H)ANTHRACENE	1.1 J	ND
FLUORANTHENE	11	48 J
FLUORENE	2.7	18 J
INDENO(1,2,3-CD)PYRENE	2.3	ND
NAPHTHALENE	0.43 J	19 J
PHENANTHRENE	12	68 J
PYRENE	7.8	41 J

SI-43-B22	
Sample ID	SI-43-B22-A-1
Depth (ft)	12.0 - 13.0
SVOCs (mg/Kg)	
ACENAPHTHENE	9.5
ACENAPHTHYLENE	1.1 J
ANTHRACENE	9.1
BENZO(A)ANTHRACENE	12
BENZO(A)PYRENE	10
BENZO(B)FLUORANTHENE	8.2
BENZO(G,H,I)PERYLENE	5.6
BENZO(K)FLUORANTHENE	7.9
CHRYSENE	13
DIBENZO(A,H)ANTHRACENE	2.3 J
FLUORANTHENE	32
FLUORENE	11
INDENO(1,2,3-CD)PYRENE	5.3
NAPHTHALENE	6.2
PHENANTHRENE	38
PYRENE	24

SI-43-B14		
Sample ID	SI-43-B14-A-1	SI-43-B14-B-1
Depth (ft)	7.0 - 7.5	13.0 - 13.5
SVOCs (mg/Kg)		
ACENAPHTHYLENE	0.35 J	ND
ANTHRACENE	0.33 J	ND
BENZO(A)ANTHRACENE	1.5	0.043 J
BENZO(A)PYRENE	1.6	ND
BENZO(B)FLUORANTHENE	1.5	ND
BENZO(G,H,I)PERYLENE	1	0.043 J
BENZO(K)FLUORANTHENE	1.4	ND
CHRYSENE	1.6	0.05 J
DIBENZO(A,H)ANTHRACENE	0.45	ND
FLUORANTHENE	1.8	0.083 J
INDENO(1,2,3-CD)PYRENE	0.98	ND
NAPHTHALENE	0.29 J	ND
PHENANTHRENE	0.42	0.045 J
PYRENE	1.8	0.076 J

SI-43-B2		
Sample ID	SI-43-B2-A-1	SI-43-B2-B-1
Depth (ft)	7.0 - 7.5	14.5 - 15.0
SVOCs (mg/Kg)		
ACENAPHTHYLENE	0.3 J	ND
ANTHRACENE	0.45 J	ND
BENZO(A)ANTHRACENE	1.5	ND
BENZO(A)PYRENE	1.1	ND
BENZO(B)FLUORANTHENE	1.4	ND
BENZO(G,H,I)PERYLENE	0.81 J	ND
BENZO(K)FLUORANTHENE	1.4	ND
CHRYSENE	1.9	ND
DIBENZO(A,H)ANTHRACENE	0.3 J	ND
FLUORANTHENE	3.5	ND
FLUORENE	0.15 J	ND
INDENO(1,2,3-CD)PYRENE	0.76 J	ND
NAPHTHALENE	0.15 J	ND
PHENANTHRENE	2	ND
PYRENE	2.2	ND

SI-43-B1			
Sample ID	SI-43-B1-A-1	SI-43-B1-B-1	SI-43-B1-B-2
Depth (ft)	7.0 - 8.0	16.0 - 17.0	16.0 - 17.0
SVOCs (mg/Kg)			
ANTHRACENE	7.1 J	ND	ND
BENZO(A)ANTHRACENE	ND	0.04 J	ND
CHRYSENE	ND	0.049 J	ND
FLUORANTHENE	14 J	0.082 J	0.061 J
FLUORENE	11 J	ND	ND
PHENANTHRENE	31 J	0.044 J	ND
PYRENE	18 J	0.061 J	0.044 J

SI-43-B3		
Sample ID	SI-43-B3-A-1	SI-43-B3-B-1
Depth (ft)	7.0 - 7.5	13.0 - 13.5
SVOCs (mg/Kg)		
ACENAPHTHENE	ND	0.053 J
ACENAPHTHYLENE	ND	0.049 J
ANTHRACENE	1 J	0.07 J
BENZO(A)ANTHRACENE	4.2 J	0.2 J
BENZO(A)PYRENE	4.2 J	0.2 J
BENZO(B)FLUORANTHENE	3.1 J	0.15 J
BENZO(G,H,I)PERYLENE	2.4 J	0.098 J
BENZO(K)FLUORANTHENE	3.4 J	0.16 J
CHRYSENE	4.9 J	0.22 J
FLUORANTHENE	7.4 J	0.4 J
FLUORENE	ND	ND
INDENO(1,2,3-CD)PYRENE	2.2 J	0.09 J
NAPHTHALENE	ND	ND
PHENANTHRENE	3.4 J	0.19 J
PYRENE	6.4 J	0.36 J

SI-43-B18		
Sample ID	SI-43-B18-A-1	SI-43-B18-B-1
Depth (ft)	13.4 - 14.0	16.0 - 17.0
VOCs (mg/Kg)		
2-BUTANONE (MEK)	NA	0.047 J
ACETONE	NA	0.19 J
SEC-BUTYLBENZENE	NA	0.019 J
TERT-BUTYLBENZENE	NA	0.041 J
SVOCs (mg/Kg)		
2-METHYLNAPHTHALENE	0.56 J	1.5 J
ACENAPHTHENE	0.71 J	5.5
ACENAPHTHYLENE	0.4 J	ND
ANTHRACENE	1.4 J	6.9
BENZO(A)ANTHRACENE	3.7	9.5
BENZO(A)PYRENE	3.3	8.4
BENZO(B)FLUORANTHENE	2.6	6.3
BENZO(G,H,I)PERYLENE	2.1 J	4.9
BENZO(K)FLUORANTHENE	2.4 J	6.3
CARBAZOLE	0.38 J	3
CHRYSENE	4.1	9.4
DIBENZO(A,H)ANTHRACENE	0.76 J	1.7 J
DIBENZOFURAN	0.28 J	2.1 J
DI-N-BUTYL PHTHALATE	3.9	0.57 J
FLUORANTHENE	7.5	23
FLUORENE	0.87 J	4.1
INDENO(1,2,3-CD)PYRENE	1.9 J	4.6
NAPHTHALENE	0.43 J	2.4
PHENANTHRENE	6.2	23
PYRENE	6.2	16

SI-43-B23	
Sample ID	SI-43-B23-A-1
Depth (ft)	13.0 - 14.0
SVOCs (mg/Kg)	
ACENAPHTHENE	0.095 J
ACENAPHTHYLENE	0.24 J
ANTHRACENE	0.17 J
BENZO(A)ANTHRACENE	0.99
BENZO(A)PYRENE	1.1
BENZO(B)FLUORANTHENE	1
BENZO(G,H,I)PERYLENE	0.71
BENZO(K)FLUORANTHENE	0.84
CHRYSENE	1.2
DIBENZO(A,H)ANTHRACENE	0.25 J
FLUORANTHENE	1.6
INDENO(1,2,3-CD)PYRENE	0.68
NAPHTHALENE	0.052 J
PHENANTHRENE	0.31 J
PYRENE	1.5

SI-43-B6		
Sample ID	SI-43-B6-A-1	SI-43-B6-B-1
Depth (ft)	7.5 - 8.0	15.5 - 16.0
SVOCs (mg/Kg)		
ACENAPHTHENE	120	0.13 J
ACENAPHTHYLENE	23 J	0.24 J
ANTHRACENE	230	0.24 J
BENZO(A)ANTHRACENE	360	0.87
BENZO(A)PYRENE	340	0.85
BENZO(B)FLUORANTHENE	250	0.78
BENZO(G,H,I)PERYLENE	230	0.61
BENZO(K)FLUORANTHENE	260	0.65
CHRYSENE	360	1
DIBENZO(A,H)ANTHRACENE	83	0.21 J
FLUORANTHENE	750	1.8
FLUORENE	160	0.078 J
INDENO(1,2,3-CD)PYRENE	200	0.54
NAPHTHALENE	56 J	0.073 J
PHENANTHRENE	710	0.84
PYRENE	550	1.4

SI-43-B4	
Sample ID	SI-43-B4-B-1
Depth (ft)	13.0 - 13.5
SVOCs (mg/Kg)	
ACENAPHTHENE	0.071 J
ACENAPHTHYLENE	0.082 J
ANTHRACENE	0.1 J
BENZO(A)ANTHRACENE	0.32 J
BENZO(A)PYRENE	0.31 J
BENZO(B)FLUORANTHENE	0.26 J
BENZO(G,H,I)PERYLENE	0.16 J
BENZO(K)FLUORANTHENE	0.25 J
CHRYSENE	0.38 J
DIBENZO(A,H)ANTHRACENE	0.059 J
FLUORANTHENE	0.81
INDENO(1,2,3-CD)PYRENE	0.15 J
PHENANTHRENE	0.23 J
PYRENE	0.63

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
VOCs (mg/Kg)	
2-BUTANONE (MEK)	0.3
ACETONE	0.2
ISOPROPYLBENZENE	2.3
NAPHTHALENE	13
N-BUTYLBENZENE	10
N-PROPYLBENZENE	3.7
SEC-BUTYLBENZENE	10
TERT-BUTYLBENZENE	10
SVOCs (mg/Kg)	
2-METHYLNAPHTHALENE	36.4
ACENAPHTHENE	50
ACENAPHTHYLENE	41
ANTHRACENE	50
BENZO(A)ANTHRACENE	0.224 or MDL
BENZO(A)PYRENE	0.61 or MDL
BENZO(B)FLUORANTHENE	0.220 or MDL
BENZO(G,H,I)PERYLENE	50
BENZO(K)FLUORANTHENE	0.220 or MDL
CARBAZOLE	NA
CHRYSENE	0.4
DIBENZO(A,H)ANTHRACENE	0.014 or MDL
DIBENZOFURAN	6.2
DI-N-BUTYL PHTHALATE	50
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	3.2
NAPHTHALENE	13
PHENANTHRENE	50
PYRENE	50
TOTAL C-PAHs	10
TOTAL SVOCs	500

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN mg/kg.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

FORM□R □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□□ □O□□O□, □□□ □OR□

REMEDIAL INVESTIGATION REPORT

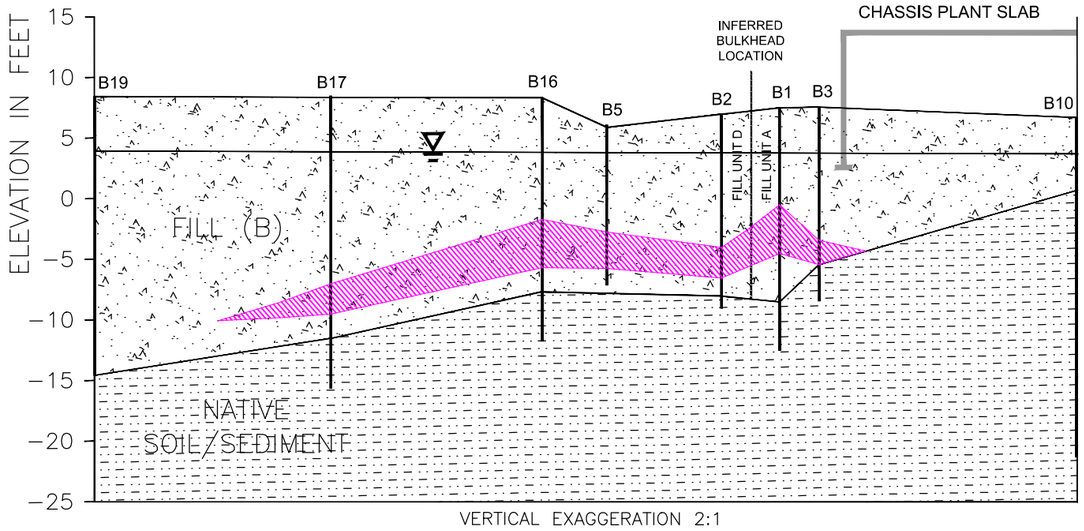
VOCs/SVOCs IN SOIL – PAOC 43

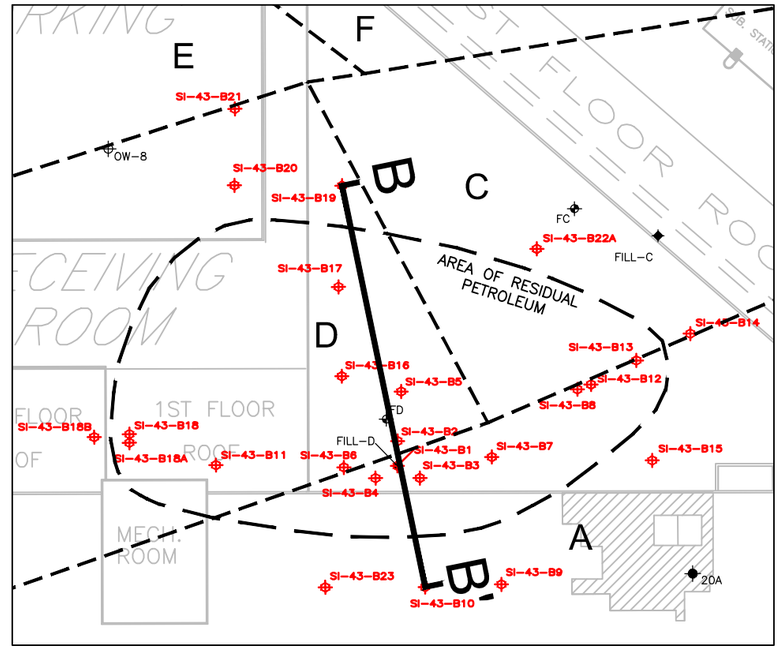
ARCADIS

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12/1/06 SYR-85-LJP GMS
64462024/RMDLINV/64462C06.DWG

CROSS–SECTION OF PAOC 43





CROSS SECTION LOCATION MAP

SCALE: 1"=60'

KEY TO UNITS:

- FILL consisting predominantly of hydraulic fill (f. brown SAND with traces of oyster shells) mixed with crushed stone, concrete, brick fragments, and traces of coal ash, compact.
- FILL consisting predominantly of coarse grained (i.e., gravelly textured)) coal ash (cinders), along with wood, brick fragments, concrete, metal debris, and glass.
- Interbedded SILT, silty CLAY, and f–m–c SAND, loose, poorly compacted, stratified (floodplain and bay deposits); lower portion consists of poorly sorted m–f SAND.
- Stratified f–c SAND, w./ gravelly horizons, loose, poorly sorted (possibly glacial outwash or deltaic deposits)
- PEAT (marsh deposits) containing up to 25% CLAY by volume, stiff, compact, stratified (undisturbed); contact with underlying clay unit may be gradational.
- Massive CLAY (marsh deposits), with up to 25% macroscopic organic matter and localized PEAT–rich horizons, stiff, compact, stratified (undisturbed).
- Evidence of oil contamination observed (e.g., staining, odor, sheen,PID readings >100 ppm).

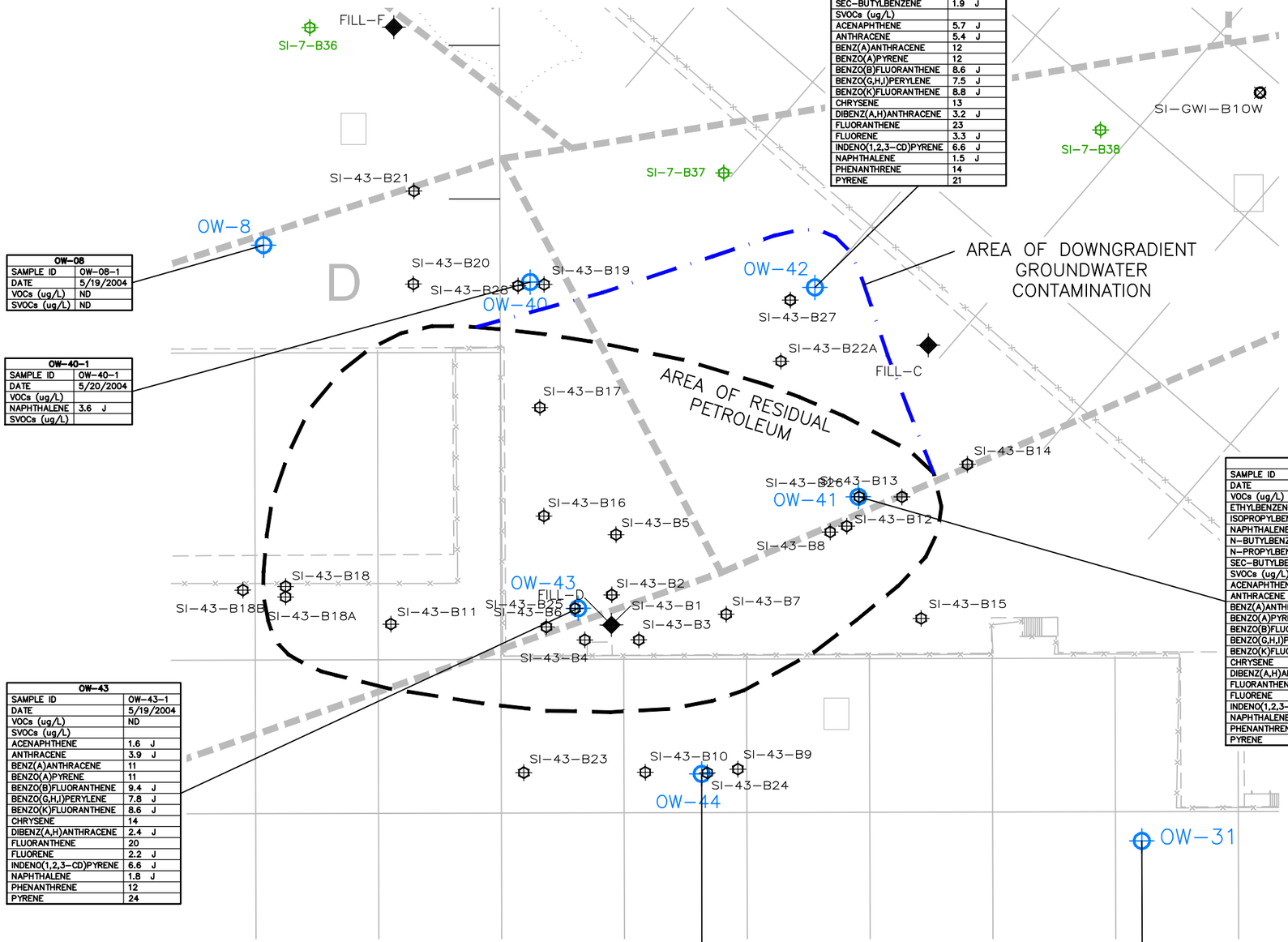
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REMEDIAL INVESTIGATION REPORT

SUBSURFACE CROSS–SECTION
PAOC 43

ARCADIS

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10B

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D□□R□□□□□□□□



OW-08	
SAMPLE ID	OW-08-1
DATE	5/19/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-40-1	
SAMPLE ID	OW-40-1
DATE	5/20/2004
VOCs (ug/L)	
NAPHTHALENE	3.6 J
SVOCs (ug/L)	

OW-42	
SAMPLE ID	OW-42-1
DATE	5/20/2004
VOCs (ug/L)	
ETHYLBENZENE	1 J
ISOPROPYLBENZENE	3 J
NAPHTHALENE	47
N-BUTYLBENZENE	1.6 J
N-PROPYLBENZENE	3.9 J
SEC-BUTYLBENZENE	1.9 J
SVOCs (ug/L)	
ACENAPHTHENE	5.7 J
ANTHRACENE	5.4 J
BENZ(A)ANTHRACENE	12
BENZO(A)PYRENE	12
BENZO(B)FLUORANTHENE	8.6 J
BENZO(G,H,I)PERYLENE	7.5 J
BENZO(K)FLUORANTHENE	8.8 J
CHRYSENE	13
DIBENZ(A,H)ANTHRACENE	3.2 J
FLUORANTHENE	23
FLUORENE	3.3 J
INDENO(1,2,3-CD)PYRENE	6.6 J
NAPHTHALENE	1.5 J
PHENANTHRENE	14
PYRENE	21

OW-41	
SAMPLE ID	OW-41-1
DATE	5/19/2004
VOCs (ug/L)	
ETHYLBENZENE	ND
ISOPROPYLBENZENE	ND
NAPHTHALENE	9.8 J
N-BUTYLBENZENE	ND
N-PROPYLBENZENE	ND
SEC-BUTYLBENZENE	ND
SVOCs (ug/L)	
ACENAPHTHENE	19
ANTHRACENE	18
BENZ(A)ANTHRACENE	36
BENZO(A)PYRENE	35
BENZO(B)FLUORANTHENE	30
BENZO(G,H,I)PERYLENE	24
BENZO(K)FLUORANTHENE	28
CHRYSENE	44
DIBENZ(A,H)ANTHRACENE	8.6 J
FLUORANTHENE	68 J
FLUORENE	24
INDENO(1,2,3-CD)PYRENE	20
NAPHTHALENE	4.8 J
PHENANTHRENE	64 J
PYRENE	62 J

OW-43	
SAMPLE ID	OW-43-1
DATE	5/19/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	
ACENAPHTHENE	1.6 J
ANTHRACENE	3.9 J
BENZ(A)ANTHRACENE	11
BENZO(A)PYRENE	11
BENZO(B)FLUORANTHENE	9.4 J
BENZO(G,H,I)PERYLENE	7.8 J
BENZO(K)FLUORANTHENE	8.6 J
CHRYSENE	14
DIBENZ(A,H)ANTHRACENE	2.4 J
FLUORANTHENE	20
FLUORENE	2.2 J
INDENO(1,2,3-CD)PYRENE	6.6 J
NAPHTHALENE	1.8 J
PHENANTHRENE	12
PYRENE	24

OW-44	
SAMPLE ID	OW-44-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-31	
SAMPLE ID	OW-31-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

LEGEND:

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
VOCs (ug/L)	
ETHYLBENZENE	5
ISOPROPYLBENZENE	5
NAPHTHALENE	10
N-BUTYLBENZENE	5
N-PROPYLBENZENE	5
SEC-BUTYLBENZENE	5
SVOCs (ug/L)	
ACENAPHTHENE	20
ANTHRACENE	50
BENZ(A)ANTHRACENE	0.002
BENZO(A)PYRENE	ND
BENZO(B)FLUORANTHENE	0.002
BENZO(G,H,I)PERYLENE	NA
BENZO(K)FLUORANTHENE	0.002
CHRYSENE	0.002
DIBENZ(A,H)ANTHRACENE	NA
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	0.002
NAPHTHALENE	10
PHENANTHRENE	50
PYRENE	50

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN ug/L.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 40' 80'

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□

REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN GROUNDWATER – PAOC 43

ARCADIS

F□□□R□

10C

R: F□□
6□62.01
6□62.00
X: 64462X00, X01.DWG
L: ON=*, OFF=REF, |BLDGPROP, |PROP BUILDINGS
P: PAGESET/BL-7300N2-SYR
12/1/06 SYR-85-LJP GMS
64462024/RMDLINV/64462C07.DWG

SI–45–B2	
Sample ID	SI–45–B2–A–1
Depth (ft)	10 – 10.4
VOCs (mg/Kg)	ND

SI–45–B2

5–1

26–4

MS–5

SB–5

SI–45–B1

OW–12

SI–45–B1	
Sample ID	SI–45–B1–A–1
Depth (ft)	8.0 – 8.5
VOCs (mg/Kg)	
1,3,5–TRIMETHYLBENZENE	0.0013 J
N–PROPYLBENZENE	0.0016 J

LEGEND – WEST PARCEL:

- PERMAMENT MONITORING WELL
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SUBSURFACE SOIL–VAPOR SAMPLE (COVERED BY SLAB OR PAVEMENT)
- SUBSURFACE SOIL–VAPOR SAMPLE (UNCOVERED SOIL SURFACE)
- CRAWLSPACE AIR SAMPLE
- METHANE SURVEY MEASUREMENT POINT
- DUE DILIGENCE SOIL SAMPLE (2002)
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)
- 6 EMCON TEST PIT (2000)
- PAOC OUTLINE

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
VOCs (mg/kg)	
1,3,5–TRIMETHYLBENZENE	3.3
N–PROPYLBENZENE	3.7

0 20’ 40’

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

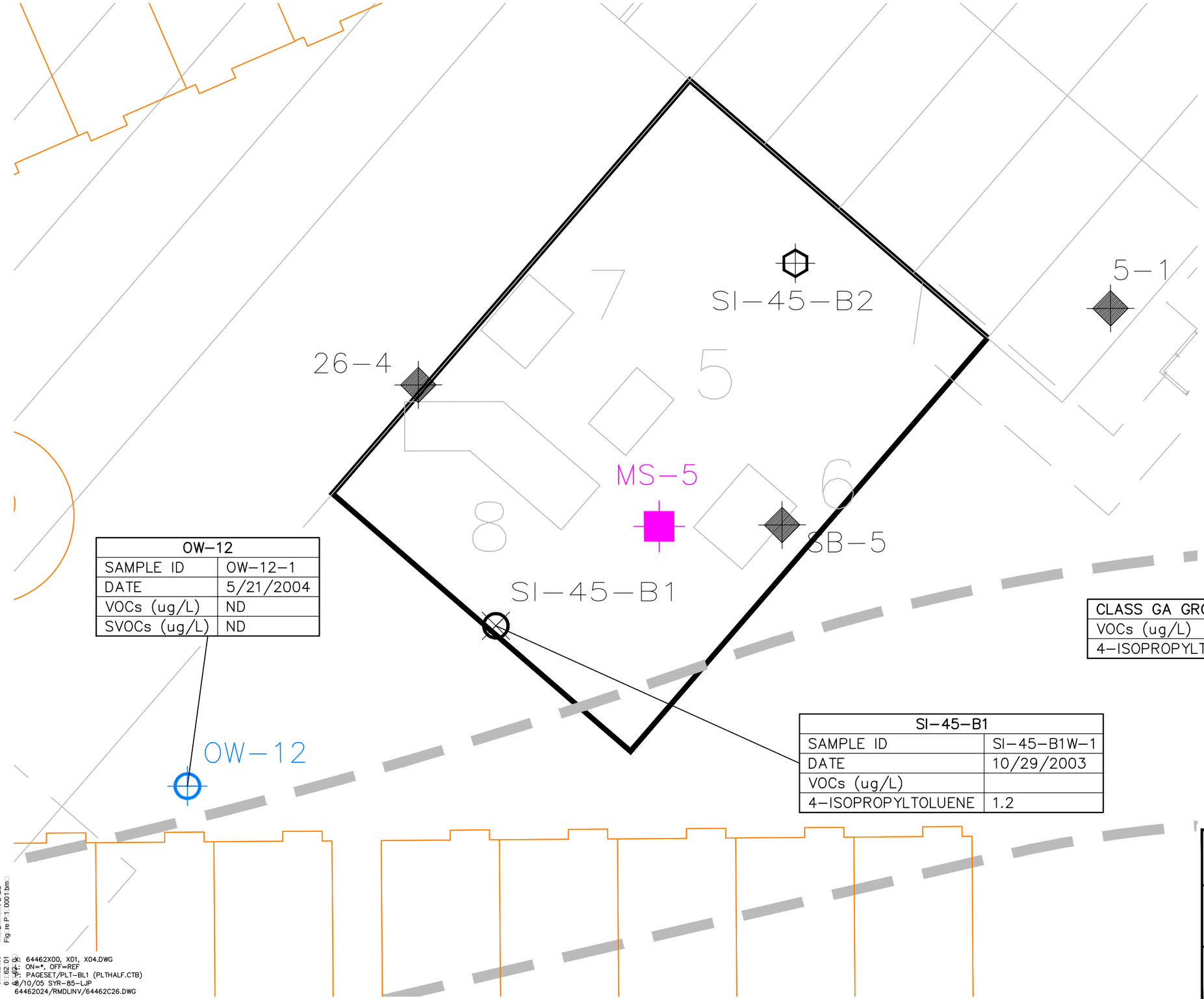
REMEDIAL INVESTIGATION REPORT

VOCs IN SOIL – PAOC 45

ARCADIS

F□□R□ 11A

D□□RO P.Re d□ D□□Re d□ D□O t□ P□□O t□ PM Re d□ M□O t□ □O P□ O□ D 1 26 2012 2 1 PM □□□ O□□, D□□D
M□□□□ PRO□□□□



LEGEND – WEST PARCEL:

- PERMAMENT MONITORING WELL
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SUBSURFACE SOIL–VAPOR SAMPLE (COVERED BY SLAB OR PAVEMENT)
- SUBSURFACE SOIL–VAPOR SAMPLE (UNCOVERED SOIL SURFACE)
- CRAWLSPACE AIR SAMPLE
- METHANE SURVEY MEASUREMENT POINT
- DUE DILIGENCE SOIL SAMPLE (2002)
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)
- 6 EMCON TEST PIT (2000)
- PAOC OUTLINE

OW–12	
SAMPLE ID	OW–12–1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
VOCs (ug/L)	
4–ISOPROPYLTOLUENE	5

SI–45–B1	
SAMPLE ID	SI–45–B1W–1
DATE	10/29/2003
VOCs (ug/L)	
4–ISOPROPYLTOLUENE	1.2

0 20’ 40’

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

VOCs IN GROUNDWATER – PAOC 45

ARCADIS

F□□R□
11B

Re d□ D□□RO P.Re d□ D□□Re d□ D□□Re d□ D□□RMD□□6□62.0001.0002 D□□P□O□t□ P□□O□t□ PM Re d□ 26 D□ □O□P□O□□ M□O□t□ □R□O□t□ □OFF□R F□
□□□□Re d□ D□□R□□□□□□□□006□62.0001.0002 D□□RMD□□6□62.26 D□ □O□P□O□□ M□O□t□ □R□O□t□ □OFF□R F□
R F□□ M□□□□ PRO□□□□□□□□

SI-46-B1		
Sample ID	SI-46-B1-A-1	SI-46-B1-A-2
Depth (ft)	5.6 – 6.0	5.6 – 6.0
Pb (mg/kg)	ND	ND

SI-46-B2	
Sample ID	SI-46-B2-A-1
Depth (ft)	5.6 – 6.0
Pb (mg/kg)	ND

SI-46-B8	
Sample ID	SI-46-B8-A-1
Depth (ft)	4.0 – 6.0
Pb (mg/kg)	15.7

SI-46-B9		
Sample ID	SI-46-B9-A-1	SI-46-B9-A-2
Depth (ft)	4.0 – 5.0	4.0 – 5.0
Pb (mg/kg)	23.1	26.8

SI-46-B10	
Sample ID	SI-46-B10-A-1
Depth (ft)	4.0 – 5.5
Pb (mg/kg)	18.2

TRENCH OUTLINE

TRENCH OUTLINE

SI-46-B1

SI-46-B2

SI-46-B3

SI-46-B4

SI-46-B5

SI-46-B6

SI-46-B7

SI-46-B8

SI-46-B9

SI-46-B10

SI-46-B5	
Sample ID	SI-46-B5-A-1
Depth (ft)	5.0 – 6.0
Pb (mg/kg)	41.8

SI-46-B6	
Sample ID	SI-46-B6-A-1
Depth (ft)	0.0 – 1.0
Pb (mg/kg)	7.3

SI-46-B3	
Sample ID	SI-46-B3-A-1
Depth (ft)	6.0 – 6.5
Pb (mg/kg)	143 J

SI-46-B4	
Sample ID	SI-46-B4-A-1
Depth (ft)	6.0 – 6.5
Pb (mg/kg)	81.5 J

LEGEND – WEST PARCEL:

- PERMAMENT MONITORING WELL
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SUBSURFACE SOIL-VAPOR SAMPLE (COVERED BY SLAB OR PAVEMENT)
- SUBSURFACE SOIL-VAPOR SAMPLE (UNCOVERED SOIL SURFACE)
- CRAWLSPACE AIR SAMPLE
- METHANE SURVEY MEASUREMENT POINT
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)
- INTERIM REMEDIAL MEASURES (AREAS EXCAVATED)

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
LEAD (mg/kg)	400

0 30' 60'

GRAPHIC SCALE

FORM□R □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

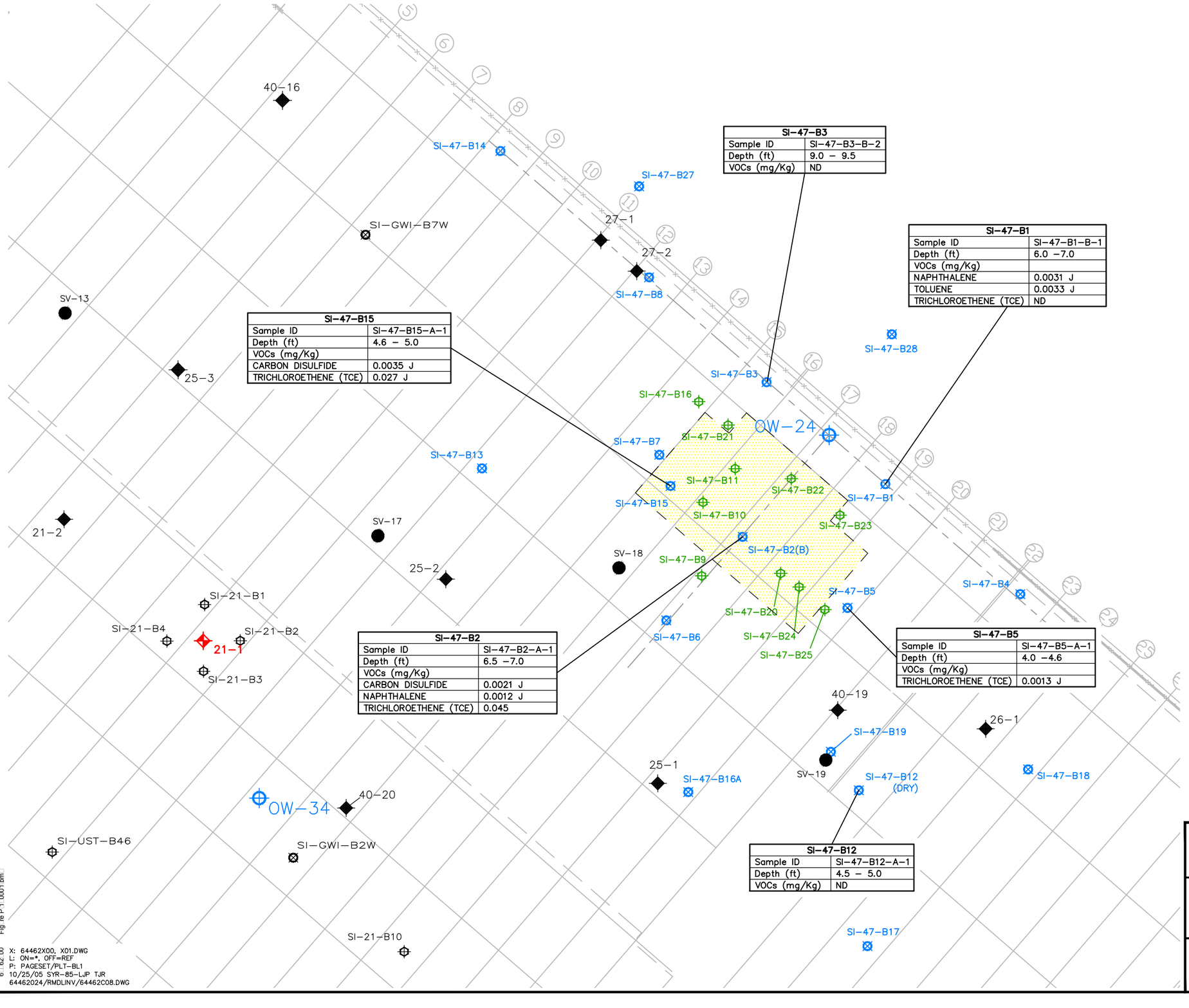
REMEDIAL INVESTIGATION REPORT

LEAD IN SOIL – PAOC 46

ARCADIS

F□□R□ 12

D□□□RO P.Re d□ D□□Re d□ D□□Re d□ D□□Re d□ D□□Re d□ M□□□ PRO□ □□2□□□FD.dlb Fig re P:1 0001.bmp
IR F□□ M□□□□ PRO□ □□2□□□FD.dlb
6□□62.00 6□□62.01 6□□62.02
XR: 64462X00, X01, X04.DWG
LAYER: ON=*, OFF=REF
PLOT: PAGESET/PLT-BL1 (PLTHALF.CTB)
8/2/05 SYR-85-LJP
64462024/RMDLINV/64462C27.DWG



LEGEND;

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL VAPOR SAMPLE
- APPROXIMATE EXTENT OF BURIED PIT

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
SVOCs (mg/Kg)	
CARBON DISULFIDE	2.7
NAPHTHALENE	13
TOLUENE	1.5
TRICHLOROETHENE (TCE)	0.7
TOTAL C-PAHs	10
TOTAL SVOCs	500

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 40' 80'
GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

VOCs IN SOIL - PAOC 47

ARCADIS

F□□R□
13A

D□□R□ D□□RO□P□Re d□ D□□Re d□ D□□O□ P□□O□ PM□Re d□ M□O□ □R□O□O□□OFF□R□F□ D□1026200□10□2□M
□R□F□ PRO□
6□62 01 □□2□FD.db
6□62 00 Fig re P□1 0001 bm□
X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
10/25/05 SYR-85-LJP TJR
64462024/RMDLINV/64462C08.DWG

SI-47-B14		
SAMPLE ID	SI-47-B14W-1	SI-47-B14W-2
DATE	5/24/2004	5/24/2004
VOCs (ug/L)	ND	ND

SI-47-B27	
sAMPLE ID SI-47-B27-W1	
DATE	10/5/2004
VOCs (ug/L)	
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	ND

SI-47-B3	
SAMPLE ID	SI-47-B3W-1
DATE	5/4/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	2.1 J

SI-47-B8		
SAMPLE ID	SI-47-B8W-1	SI-47-B8W-1
DATE	5/4/2004	5/24/2004
VOCs (ug/L)		
1,1,1-TRICHLOROETHANE (TCA)	ND	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND	ND
CIS-1,2-DICHLOROETHENE	ND	ND
TRICHLOROETHENE (TCE)	1.3 J	6.3

SI-47-B28		
sAMPLE ID	SI-47-B28-W1	SI-47-B28-W1 DUPLICATE
Date	10/5/2004	
VOCs (ug/L)		
CIS-1,2-DICHLOROETHENE	2.3 J	ND
TRICHLOROETHENE (TCE)	15	16

SI-47-B7		
SAMPLE ID	SI-47-B7W-1	SI-47-B7W-1
DATE	5/4/2004	5/24/2004
VOCs (ug/L)		
1,1,1-TRICHLOROETHANE (TCA)	ND	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND	ND
CIS-1,2-DICHLOROETHENE	ND	ND
TRICHLOROETHENE (TCE)	9.8	21

OW-24			
SAMPLE ID	OW-24-1	OW-24-2	OW-24-2
DATE	10/30/2003	10/30/2003	5/3/2004
VOCs (ug/L)			
CIS-1,2-DICHLOROETHENE	8.8	9.1	2.8 J
TRICHLOROETHENE (TCE)	72	75	35
SVOCs (ug/L)	ND	ND	NA
BIS(2-ETHYLHEXYL) PHTHALATE	ND	5.4 J	NA

SI-47-B1	
SAMPLE ID	SI-47-B1W-1
DATE	5/3/2004
VOCs (ug/L)	ND

SI-47-B13	
SAMPLE ID	SI-47-B13W-1
DATE	7/26/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	1.9 J

SI-47-B2	
SAMPLE ID	SI-47-B2W-1
DATE	5/4/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	4.2 J
TRICHLOROETHENE (TCE)	14

SI-47-B4	
SAMPLE ID	SI-47-B4W-1
DATE	5/4/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	ND

SI-47-B15	
SAMPLE ID	SI-47-B15W-1
DATE	5/24/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	11

SI-47-B16A	
SAMPLE ID	SI-47-B16W-1
DATE	7/27/2004
VOCs (ug/L)	ND

SI-47-B18	
SAMPLE ID	SI-47-B18W-1
DATE	7/26/2004
VOCs (ug/L)	ND

SI-47-B6	
SAMPLE ID	SI-47-B6W-1
DATE	5/4/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	6

SI-47-B19	
SAMPLE ID	SI-47-B19W-1
DATE	7/26/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	13

SI-47-B17	
SAMPLE ID	SI-47-B17W-1
DATE	7/26/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	1.4 J
1,1-DICHLOROETHANE (1,1-DCA)	6.8
1,1-DICHLOROETHENE (1,1-DCE)	1.8
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	ND

SI-47-B5	
SAMPLE ID	SI-47-B5W-1
DATE	5/4/2004
VOCs (ug/L)	
1,1,1-TRICHLOROETHANE (TCA)	ND
1,1-DICHLOROETHANE (1,1-DCA)	ND
1,1-DICHLOROETHENE (1,1-DCE)	ND
CIS-1,2-DICHLOROETHENE	ND
TRICHLOROETHENE (TCE)	16

SI-47-B14, SI-47-B27, SI-47-B3, SI-47-B8, SI-47-B28, SI-47-B1, SI-47-B13, SI-47-B16, SI-47-B21, SI-47-B7, SI-47-B15, SI-47-B11, SI-47-B22, SI-47-B10, SI-47-B23, SI-47-B2(B), SI-47-B9, SI-47-B5, SI-47-B4, SI-47-B20, SI-47-B6, SI-47-B24, SI-47-B25, SI-47-B19, SI-47-B18, SI-47-B16A, SI-47-B12 (DRY), SI-47-B17, SI-47-B6, SI-47-B19, SI-47-B17, SI-47-B5, SI-21-B1, SI-21-B2, SI-21-B3, SI-21-B4, SI-21-B10, SI-GWI-B7W, SI-GWI-B2W, SI-UST-B46, OW-24, OW-34, 40-16, 40-19, 40-20, 27-1, 27-2, 25-1, 25-2, 25-3, 26-1, 21-1, 21-2, SV-13, SV-17, SV-18, SV-19

LEGEND;

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL VAPOR SAMPLE
- APPROXIMATE EXTENT OF BURIED PIT

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
VOCs (ug/L)	5
1,1,1-TRICHLOROETHANE (TCA)	5
1,1-DICHLOROETHANE (1,1-DCA)	5
1,1-DICHLOROETHENE (1,1-DCE)	5
BIS(2-ETHYLHEXYL) PHTHALATE	5
CIS-1,2-DICHLOROETHENE	5
TRICHLOROETHENE (TCE)	5

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN ug/L.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 50' 100'

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

REMEDIAL INVESTIGATION REPORT

VOCs IN GROUNDWATER – PAOC 47

ARCADIS

F□□R□ 13B

R□□□Re d□ D□□RO P□Re d□ D□□Re d□ D□□ R□□□□

SI-47-B27		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B27A	0 – 0.5	32

SI-47-B8		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B8-A-1	5.0 – 5.5	10.1
SI-47-B8-B-1	10.0 – 10.5	8.7

SI-47-B3		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B3-A-1	4.0 – 4.5	38.1
SI-47-B3-B-1	9.0 – 9.5	11.3

SI-47-B11		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B11-A-1	3.5 – 4.0	1,470

SI-47-B28		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B28A	0 – 0.5	35.3

SI-47-B22		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B-22-A-1	4.5 – 5.0	212

SI-47-B1		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B1-A-1	3.0 – 4.0	25.6
SI-47-B1-A-2	3.0 – 4.0	28.6
SI-47-B1-B-1	6.0 – 7.0	33.4

SI-47-B4		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B4-A-1	4.5 – 5.0	44.5
SI-47-B4-B-1	8.0 – 8.5	21.6

SI-47-B7		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B7-A-1	6.0 – 6.5	12.2
SI-47-B7-B-1	12.4 – 13.0	42.4

SI-47-B13		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B13-A-1	7.0 – 7.5	10.4

SI-47-B15		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B15-A-1	4.6 – 5.0	3,750

SI-47-B10		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B10-A-1	3.5 – 4.0	33.9

SI-47-B9		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B9-A-1	6.0 – 6.5	28.7

SI-47-B20		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B-20-A-1	4.0 – 5.0	22.1

SI-47-B5		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B5-A-1	4.0 – 4.6	17.4
SI-47-B5-B-1	11.2 – 12.0	21.3
SI-47-B5-B-2	11.2 – 12.0	22.5

SI-47-B6		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B6-A-1	5.4 – 6.0	12.8
SI-47-B6-B-1	9.0 – 9.6	25.3

SI-47-B2		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B2-A-1	5.0 – 5.4	1,740
SI-47-B2-B-1	12.0 – 12.5	81.9

SI-47-B12		
Sample ID	Depth (ft)	Cr (mg/kg)
SI-47-B12-A-1	4.5 – 5.0	16.3

LEGEND;

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL VAPOR SAMPLE
- APPROXIMATE EXTENT OF BURIED PIT

TAGM 4046 GUIDANCE	
UNRESTRICTED USE SCREENING VALUE	
CHROMIUM (mg/kg)	10

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
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5. NA = NOT ANALYZED

0 50' 100'

GRAPHIC SCALE

FORM□R □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□O□, □□□ □OR□

REMEDIAL INVESTIGATION REPORT

CHROMIUM IN SOIL – PAOC 47

ARCADIS

F□□R□ 13C

R F□
6 □62.01
6 □62.00

M□□□ PRO□
□□2□□□ FD.dib
Fig re P 1: 0001.bmp

X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
10/25/05 SYR-85-LJP TJR
64462024/RMDLINV/64462C10.DWG

SI-47-B27		
SAMPLE ID	SI-47-B27-W1	SI-47-B27-W1 DISSOLVED
SAMPLE TYPE	Unfiltered	Filtered
DATE	10/5/2004	10/5/2004
TAL METALS (ug/L)		
CHROMIUM	391	466

SI-47-B14				
SAMPLE ID	SI-47-B14W-1	SI-47-B14W-1-F	SI-47-B14W-2	SI-47-B14W-2-F
SAMPLE TYPE	Unfiltered	Filtered	Unfiltered	Filtered
DATE	05/24/04	05/24/04	05/24/04	05/24/04
TAL METAL (ug/L)				
CHROMIUM	25.4	23.5	24.4	23

SI-47-B8				
SAMPLE ID	SI-47-B8W-1	SI-47-B8W-1 DISS	SI-47-B8W-1	SI-47-B8W-1-F
SAMPLE TYPE	Unfiltered	Filtered	Unfiltered	Filtered
DATE	05/04/04	05/04/04	05/24/04	05/24/04
TAL METAL (ug/L)				
CHROMIUM	1,380	1,660	4,550	3,640

SI-47-B13		
SAMPLE ID	SI-47-B13W-1	SI-47-B13W-1F
SAMPLE TYPE	Unfiltered	Filtered
DATE	7/29/04	7/29/04
TAL METAL (ug/L)		
CHROMIUM	130	130

SI-47-B7				
SAMPLE ID	SI-47-B7W-1	SI-47-B7W-1 DISS	SI-47-B7W-1	SI-47-B7W-1-F
SAMPLE TYPE	Unfiltered	Filtered	Unfiltered	Filtered
DATE	05/04/04	05/04/04	05/24/04	05/24/04
TAL METAL (ug/L)				
CHROMIUM	30,100	29,000	28,400	42,100

SI-47-B28				
SAMPLE ID	SI-47-B28-W1	SI-47-B28-W1 DUPLICATE	SI-47-B28-W1	SI-47-B28-W1 DUPLICATE
SAMPLE TYPE	Unfiltered	Unfiltered	Filtered	Filtered
DATE	10/5/2004	10/5/2004	10/5/2004	10/5/2004
TAL METALS (ug/L)				
CHROMIUM	150	147	149	150

SI-47-B3		
SAMPLE ID	SI-47-B3W-1	SI-47-B3W-1
SAMPLE TYPE	Unfiltered	Filtered
DATE	05/04/04	05/04/04
TAL METAL (ug/L)		
CHROMIUM	1,910	1,950

OW-24				
SAMPLE ID	OW-24-1	OW-24-2	OW-24-1	OW-24-2
SAMPLE TYPE	Unfiltered	Unfiltered	Unfiltered	Unfiltered
DATE	10/30/2003	10/30/2003	05/03/04	05/03/04
TAL METALS (ug/L)				
CHROMIUM	538	554	195	197

SI-47-B1		
SAMPLE ID	SI-47-B1W-1	SI-47-B1W-1
SAMPLE TYPE	Unfiltered	Filtered
DATE	05/03/04	05/03/04
TAL METAL (ug/L)		
CHROMIUM	60	15.5

SI-47-B4		
SAMPLE ID	SI-47-B4W-1	SI-47-B4W-1
SAMPLE TYPE	Unfiltered	Filtered
DATE	05/04/04	05/04/04
TAL METAL (ug/L)		
CHROMIUM	598	14.4

SI-47-B5		
SAMPLE ID	SI-47-B5W-1	SI-47-B5W-1
SAMPLE TYPE	Unfiltered	Filtered
DATE	05/04/04	05/04/04
TAL METAL (ug/L)		
CHROMIUM	210	100

SI-47-B15		
SAMPLE ID	SI-47-B15W-1	SI-47-B15W-1-F
SAMPLE TYPE	Unfiltered	Filtered
DATE	05/24/04	05/24/04
TAL METAL (ug/L)		
CHROMIUM	4210	4,130

SI-47-B18		
SAMPLE ID	SI-47-B18W-1	SI-47-B18W-1-F
SAMPLE TYPE	Unfiltered	Filtered
DATE	7/29/04	7/29/04
TAL METAL (ug/L)		
CHROMIUM	ND	ND

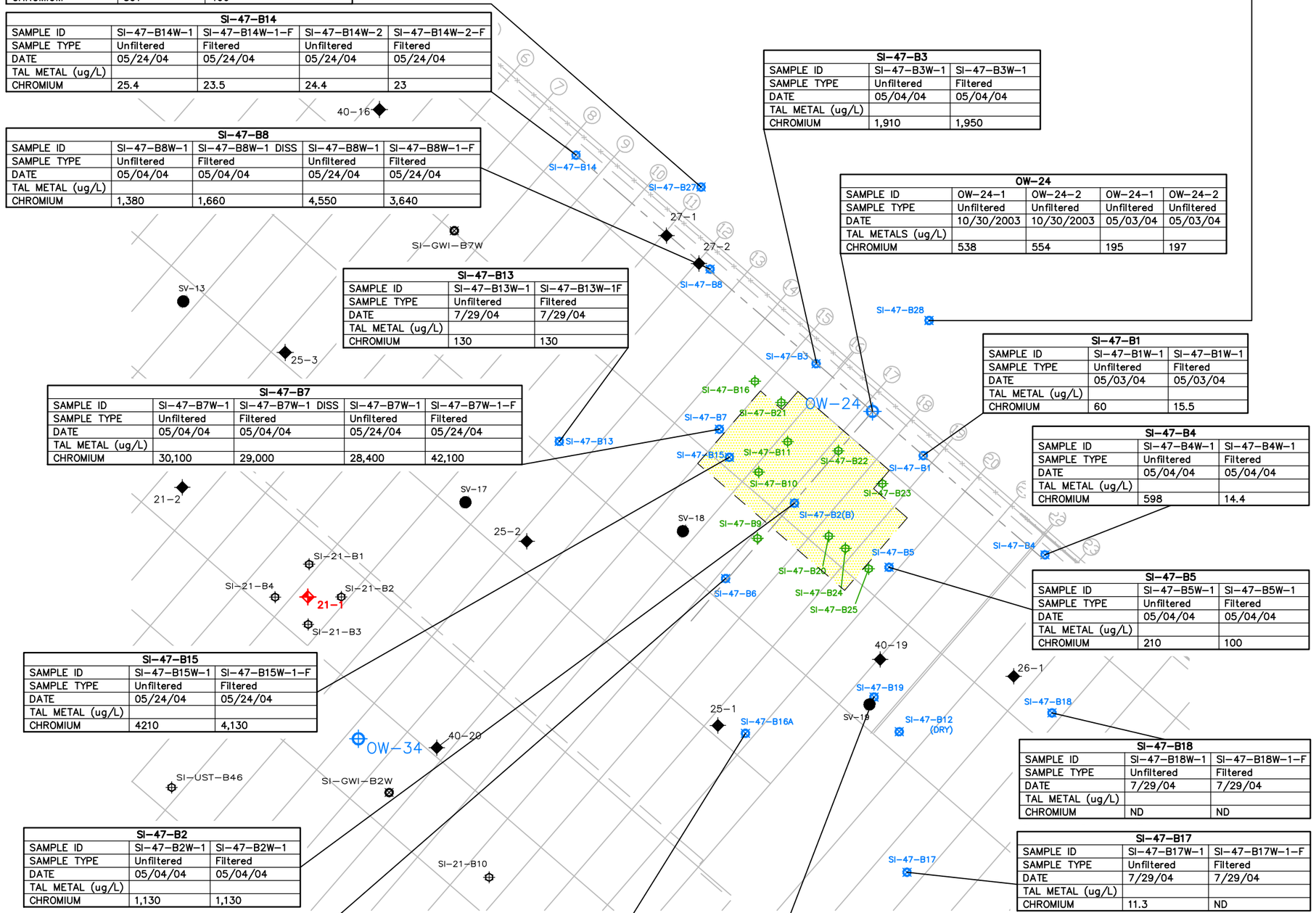
SI-47-B2		
SAMPLE ID	SI-47-B2W-1	SI-47-B2W-1
SAMPLE TYPE	Unfiltered	Filtered
DATE	05/04/04	05/04/04
TAL METAL (ug/L)		
CHROMIUM	1,130	1,130

SI-47-B17		
SAMPLE ID	SI-47-B17W-1	SI-47-B17W-1-F
SAMPLE TYPE	Unfiltered	Filtered
DATE	7/29/04	7/29/04
TAL METAL (ug/L)		
CHROMIUM	11.3	ND

SI-47-B6		
SAMPLE ID	SI-47-B6W-1	SI-47-B6W-1
SAMPLE TYPE	Unfiltered	Filtered
DATE	05/04/04	05/04/04
TAL METAL (ug/L)		
CHROMIUM	40.4	31.1

SI-47-B16A		
SAMPLE ID	SI-47-B16W-1	SI-47-B16W-1-F
SAMPLE TYPE	Unfiltered	Filtered
DATE	7/29/04	7/29/04
TAL METAL (ug/L)		
CHROMIUM	ND	ND

SI-47-B19		
SAMPLE ID	SI-47-B19W-1	SI-47-B19W-1-F
SAMPLE TYPE	Unfiltered	Filtered
DATE	7/29/04	7/29/04
TAL METAL (ug/L)		
CHROMIUM	ND	ND



LEGEND;

- PERMANENT MONITORING WELL
- 2002 DUE DILIGENCE SOIL SAMPLE
- 2002 DUE DILIGENCE SOIL & GW SAMPLES
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- SOIL VAPOR SAMPLE
- APPROXIMATE EXTENT OF BURIED PIT

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE	
CHROMIUM (ug/L)	50

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
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4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 50' 100'

GRAPHIC SCALE

FORM□R □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

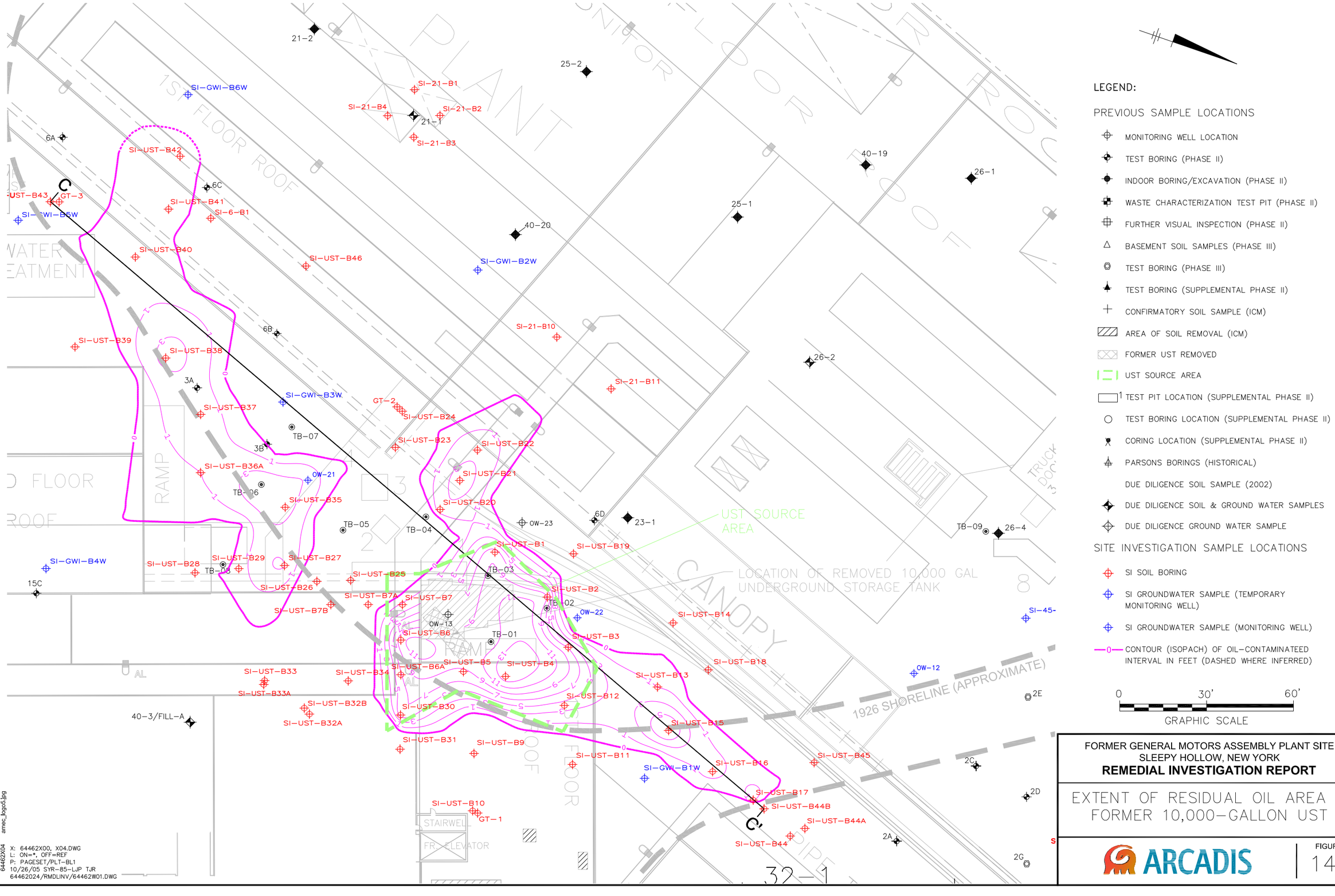
REMEDIAL INVESTIGATION REPORT

CHROMIUM IN GROUNDWATER – PAOC 47

ARCADIS

F□□R□ 13D

D□□□Re d □□□RO P□Re d □□ M□□□□ PRO□□□□

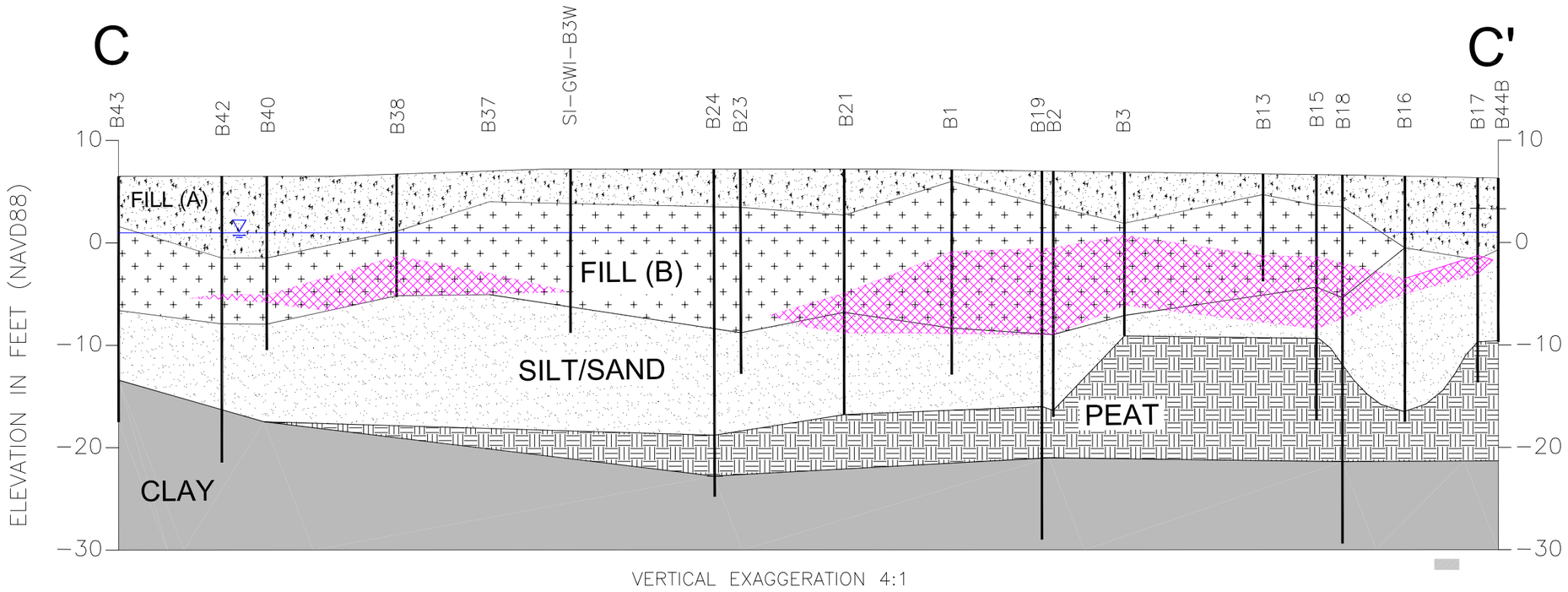


LEGEND:

PREVIOUS SAMPLE LOCATIONS

- MONITORING WELL LOCATION
- TEST BORING (PHASE II)
- INDOOR BORING/EXCAVATION (PHASE II)
- WASTE CHARACTERIZATION TEST PIT (PHASE II)
- FURTHER VISUAL INSPECTION (PHASE II)
- BASEMENT SOIL SAMPLES (PHASE III)
- TEST BORING (PHASE III)
- TEST BORING (SUPPLEMENTAL PHASE II)
- CONFIRMATORY SOIL SAMPLE (ICM)
- AREA OF SOIL REMOVAL (ICM)
- FORMER UST REMOVED
- UST SOURCE AREA
- 1 TEST PIT LOCATION (SUPPLEMENTAL PHASE II)
- TEST BORING LOCATION (SUPPLEMENTAL PHASE II)
- CORING LOCATION (SUPPLEMENTAL PHASE II)
- PARSONS BORINGS (HISTORICAL)
- DUE DILIGENCE SOIL SAMPLE (2002)
- DUE DILIGENCE SOIL & GROUND WATER SAMPLES
- DUE DILIGENCE GROUND WATER SAMPLE

SITE INVESTIGATION SAMPLE LOC



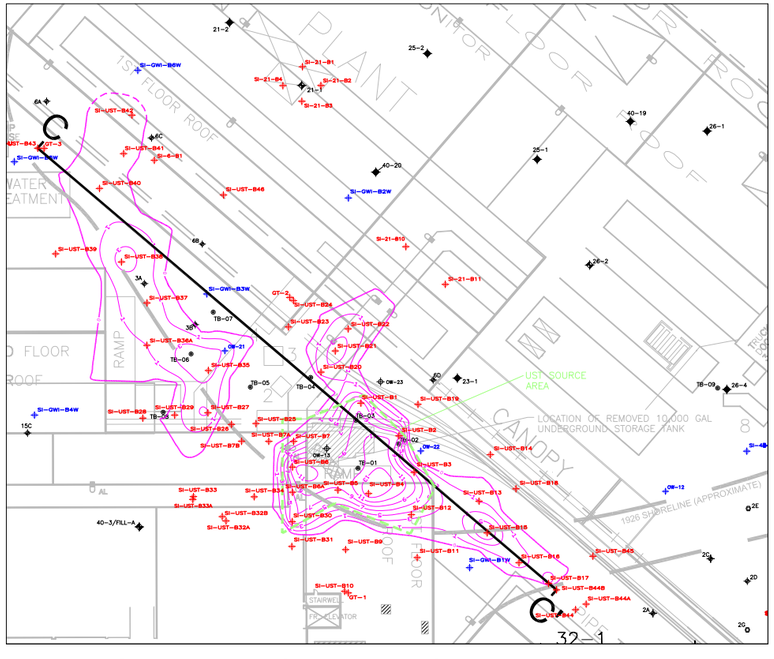
VERTICAL EXAGGERATION 4:1

0 50 100

HORIZONTAL SCALE IN FEET

KEY TO UNITS:

FILL(A)	FILL consisting predominantly of hydraulic fill (f. brown SAND with traces of oyster shells) mixed with crushed stone, concrete, brick fragments, and traces of coal ash, compact.
FILL(B)	FILL consisting predominantly of coarse grained (i.e., gravelly textured)) coal ash (cinders), along with wood, brick fragments, concrete, metal debris, and glass.
SILT/SAND	Interbedded SILT, silty CLAY, and f−m−c SAND, loose, poorly compacted, stratified (floodplain and bay deposits); lower portion consists of poorly sorted m−f SAND.
SAND	Stratified f−c SAND, w./ gravelly horizons, loose, poorly sorted (possibly glacial outwash or deltaic deposits)
PEAT	PEAT (marsh deposits) containing up to 25% CLAY by volume, stiff, compact, stratified (undisturbed); contact with underlying clay unit may be gradational.
CLAY	Massive CLAY (marsh deposits), with up to 25% macroscopic organic matter and locallized PEAT−rich horizons, stiff, compact, stratified (undisturbed).
	Evidence of oil contamination observed (e.g., staining, odor, sheen,PID readings >100 ppm).



CROSS SECTION LOCATION MAP

SCALE: 1"=120'

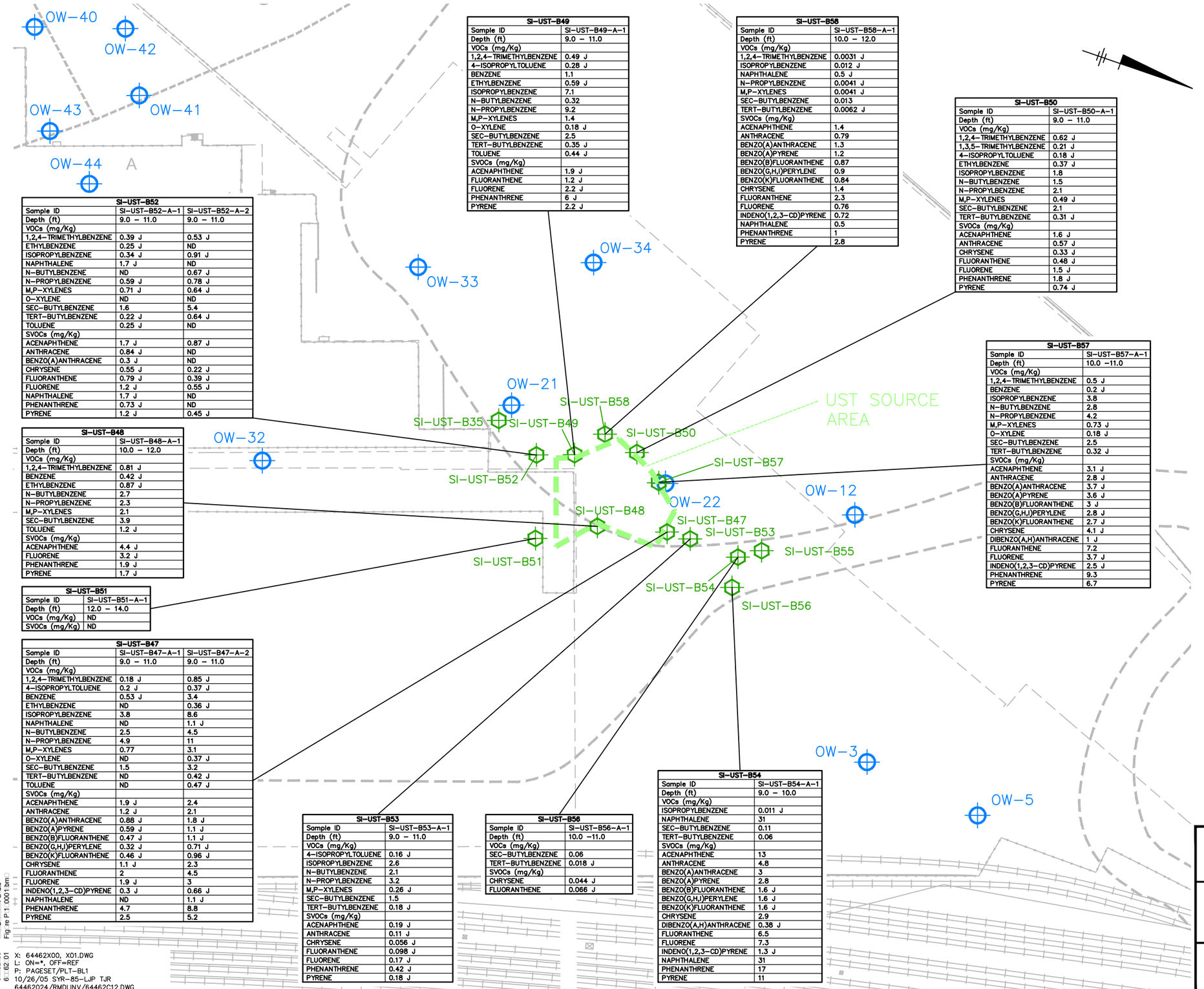
FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

SUBSURFACE CROSS−SECTION
AREA OF FORMER
10,000−GALLON UST

ARCADIS

FIGURE
14B

CITY:(Req'd) DIV/GROUP:(Req'd) DB:(Req'd) LD:(Opt) PIC:(Opt) PM:(Req'd) TM:(Opt) LYR:(On)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVE\00644620001\00024\DWG\RMDLINV\64462V02.DWG LAYOUT: X-SECTION UST SAVED: 10/26/2005 2:48 PM ACADVER: 18.1S
PROJECTNAME: ---
IMAGES:
XREFS:
64462X00 X: 64462X00, X04.DWG
64462X04 L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
10/26/05 SYR-85-LJP TJR
64462024/RMDLINV/64462V02.DWG



SI-UST-B49

Sample ID	SI-UST-B49-A-1
Depth (ft)	9.0 – 11.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.49 J
4-ISOPROPYLTOLUENE	0.28 J
BENZENE	1.1
ETHYLBENZENE	0.59 J
ISOPROPYLBENZENE	7.1
N-BUTYLBENZENE	0.32
N-PROPYLBENZENE	9.2
M,P-XYLENES	1.4
O-XYLENE	0.18 J
SEC-BUTYLBENZENE	2.5
TERT-BUTYLBENZENE	0.35 J
TOLUENE	0.44 J
SVOCs (mg/Kg)	
ACENAPHTHENE	1.9 J
FLUORANTHENE	1.2 J
FLUORENE	2.2 J
PHENANTHRENE	6 J
PYRENE	2.2 J

SI-UST-B58

Sample ID	SI-UST-B58-A-1
Depth (ft)	10.0 – 12.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.0031 J
ISOPROPYLBENZENE	0.012 J
NAPHTHALENE	0.5 J
N-PROPYLBENZENE	0.0041 J
M,P-XYLENES	0.0041 J
SEC-BUTYLBENZENE	0.013
TERT-BUTYLBENZENE	0.0062 J
SVOCs (mg/Kg)	
ACENAPHTHENE	1.4
ANTHRACENE	0.79
BENZO(A)ANTHRACENE	1.3
BENZO(A)PYRENE	1.2
BENZO(B)FLUORANTHENE	0.87
BENZO(G,H,I)PERYLENE	0.9
BENZO(K)FLUORANTHENE	0.84
CHRYSENE	1.4
FLUORANTHENE	2.3
FLUORENE	0.76
INDENO(1,2,3-CD)PYRENE	0.72
NAPHTHALENE	0.5
PHENANTHRENE	1
PYRENE	2.8

SI-UST-B50

Sample ID	SI-UST-B50-A-1
Depth (ft)	9.0 – 11.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.62 J
1,3,5-TRIMETHYLBENZENE	0.21 J
4-ISOPROPYLTOLUENE	0.18 J
ETHYLBENZENE	0.37 J
ISOPROPYLBENZENE	1.8
N-BUTYLBENZENE	1.5
N-PROPYLBENZENE	2.1
M,P-XYLENES	0.49 J
SEC-BUTYLBENZENE	2.1
TERT-BUTYLBENZENE	0.31 J
SVOCs (mg/Kg)	
ACENAPHTHENE	1.6 J
ANTHRACENE	0.57 J
CHRYSENE	0.33 J
FLUORANTHENE	0.48 J
FLUORENE	1.5 J
PHENANTHRENE	1.8 J
PYRENE	0.74 J

SI-UST-B52

Sample ID	SI-UST-B52-A-1	SI-UST-B52-A-2
Depth (ft)	9.0 – 11.0	9.0 – 11.0
VOCs (mg/Kg)		
1,2,4-TRIMETHYLBENZENE	0.39 J	0.53 J
ETHYLBENZENE	0.25 J	ND
ISOPROPYLBENZENE	0.34 J	0.91 J
NAPHTHALENE	1.7 J	ND
N-BUTYLBENZENE	ND	0.67 J
N-PROPYLBENZENE	0.59 J	0.78 J
M,P-XYLENES	0.71 J	0.64 J
O-XYLENE	ND	ND
SEC-BUTYLBENZENE	1.6	5.4
TERT-BUTYLBENZENE	0.22 J	0.64 J
TOLUENE	0.25 J	ND
SVOCs (mg/Kg)		
ACENAPHTHENE	1.7 J	0.87 J
ANTHRACENE	0.84 J	ND
BENZO(A)ANTHRACENE	0.3 J	ND
CHRYSENE	0.55 J	0.22 J
FLUORANTHENE	0.79 J	0.39 J
FLUORENE	1.2 J	0.55 J
NAPHTHALENE	1.7 J	ND
PHENANTHRENE	0.73 J	ND
PYRENE	1.2 J	0.45 J

SI-UST-B57

Sample ID	SI-UST-B57-A-1
Depth (ft)	10.0 –11.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.5 J
BENZENE	0.2 J
ISOPROPYLBENZENE	3.8
N-BUTYLBENZENE	2.8
N-PROPYLBENZENE	4.2
M,P-XYLENES	0.73 J
O-XYLENE	0.18 J
SEC-BUTYLBENZENE	2.5
TERT-BUTYLBENZENE	0.32 J
SVOCs (mg/Kg)	
ACENAPHTHENE	3.1 J
ANTHRACENE	2.8 J
BENZO(A)ANTHRACENE	3.7 J
BENZO(A)PYRENE	3.6 J
BENZO(B)FLUORANTHENE	3 J
BENZO(G,H,I)PERYLENE	2.8 J
BENZO(K)FLUORANTHENE	2.7 J
CHRYSENE	4.1 J
DIBENZO(A,H)ANTHRACENE	1 J
FLUORANTHENE	7.2
FLUORENE	3.7 J
INDENO(1,2,3-CD)PYRENE	2.5 J
PHENANTHRENE	9.3
PYRENE	6.7

SI-UST-B48

Sample ID	SI-UST-B48-A-1
Depth (ft)	10.0 – 12.0
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	0.81 J
BENZENE	0.42 J
ETHYLBENZENE	0.87 J
N-BUTYLBENZENE	2.7
N-PROPYLBENZENE	2.3
M,P-XYLENES	2.1
SEC-BUTYLBENZENE	3.9
TOLUENE	1.2 J
SVOCs (mg/Kg)	
ACENAPHTHENE	4.4 J
FLUORENE	3.2 J
PHENANTHRENE	1.9 J
PYRENE	1.7 J

SI-UST-B51

Sample ID	SI-UST-B51-A-1
Depth (ft)	12.0 – 14.0
VOCs (mg/Kg)	ND
SVOCs (mg/Kg)	ND

SI-UST-B47

Sample ID	SI-UST-B47-A-1	SI-UST-B47-A-2
Depth (ft)	9.0 – 11.0	9.0 – 11.0
VOCs (mg/Kg)		
1,2,4-TRIMETHYLBENZENE	0.18 J	0.85 J
4-ISOPROPYLTOLUENE	0.2 J	0.37 J
BENZENE	0.53 J	3.4
ETHYLBENZENE	ND	0.36 J
ISOPROPYLBENZENE	3.8	8.6
NAPHTHALENE	ND	1.1 J
N-BUTYLBENZENE	2.5	4.5
N-PROPYLBENZENE	4.9	11
M,P-XYLENES	0.77	3.1
O-XYLENE	ND	0.37 J
SEC-BUTYLBENZENE	1.5	3.2
TERT-BUTYLBENZENE	ND	0.42 J
TOLUENE	ND	0.47 J
SVOCs (mg/Kg)		
ACENAPHTHENE	1.9 J	2.4
ANTHRACENE	1.2 J	2.1
BENZO(A)ANTHRACENE	0.88 J	1.8 J
BENZO(A)PYRENE	0.59 J	1.1 J
BENZO(B)FLUORANTHENE	0.47 J	1.1 J
BENZO(G,H,I)PERYLENE	0.32 J	0.71 J
BENZO(K)FLUORANTHENE	0.46 J	0.96 J
CHRYSENE	1.1 J	2.3
FLUORANTHENE	2	4.5
FLUORENE	1.9 J	3
INDENO(1,2,3-CD)PYRENE	0.3 J	0.66 J
NAPHTHALENE	ND	1.1 J
PHENANTHRENE	4.7	8.8
PYRENE	2.5	5.2

SI-UST-B53

Sample ID	SI-UST-B53-A-1
Depth (ft)	9.0 – 11.0
VOCs (mg/Kg)	
4-ISOPROPYLTOLUENE	0.16 J
ISOPROPYLBENZENE	2.6
N-BUTYLBENZENE	2.1
N-PROPYLBENZENE	3.2
M,P-XYLENES	0.26 J
SEC-BUTYLBENZENE	1.5
TERT-BUTYLBENZENE	0.18 J
SVOCs (mg/Kg)	
ACENAPHTHENE	0.19 J
ANTHRACENE	0.11 J
CHRYSENE	0.056 J
FLUORANTHENE	0.098 J
FLUORENE	0.17 J
PHENANTHRENE	0.42 J
PYRENE	0.18 J

SI-UST-B56

Sample ID	SI-UST-B56-A-1
Depth (ft)	10.0 –11.0
VOCs (mg/Kg)	
SEC-BUTYLBENZENE	0.06
TERT-BUTYLBENZENE	0.018 J
SVOCs (mg/Kg)	
CHRYSENE	0.044 J
FLUORANTHENE	0.066 J

SI-UST-B54

Sample ID	SI-UST-B54-A-1
Depth (ft)	9.0 – 10.0
VOCs (mg/Kg)	
ISOPROPYLBENZENE	0.011 J
NAPHTHALENE	31
SEC-BUTYLBENZENE	0.11
TERT-BUTYLBENZENE	0.06
SVOCs (mg/Kg)	
ACENAPHTHENE	13
ANTHRACENE	4.8
BENZO(A)ANTHRACENE	3
BENZO(A)PYRENE	2.8
BENZO(B)FLUORANTHENE	1.6 J
BENZO(G,H,I)PERYLENE	1.6 J
BENZO(K)FLUORANTHENE	1.6 J
CHRYSENE	2.9
DIBENZO(A,H)ANTHRACENE	0.38 J
FLUORANTHENE	6.5
FLUORENE	7.3
INDENO(1,2,3-CD)PYRENE	1.3 J
NAPHTHALENE	31
PHENANTHRENE	17
PYRENE	11

LEGEND:

- PERMANENT MONTIORING WELL
- 2004 SI SOIL BORING
- UST SOURCE AREA

TAGM 4046 GUIDANCE

UNRESTRICTED USE SCREENING VALUE	
VOCs (mg/Kg)	
1,2,4-TRIMETHYLBENZENE	10
BENZENE	0.06 or MDL
CHRYSENE	0.4
FLUORANTHENE	50
ISOPROPYLBENZENE	2.3
M,P-XYLENES	1.2
NAPHTHALENE	13
N-BUTYLBENZENE	50
N-PROPYLBENZENE	50
O-XYLENE	1.2
SEC-BUTYLBENZENE	50
TERT-BUTYLBENZENE	50
SVOCs (mg/Kg)	
ACENAPHTHENE	50
ANTHRACENE	41
BENZO(A)ANTHRACENE	0.224 or MDL
BENZO(A)PYRENE	0.61 or MDL
BENZO(B)FLUORANTHENE	0.220 or MDL
BENZO(G,H,I)PERYLENE	50
BENZO(K)FLUORANTHENE	0.220 or MDL
CHRYSENE	0.4
DIBENZO(A,H)ANTHRACENE	0.014 or MDL
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	3.2
NAPHTHALENE	13
PHENANTHRENE	50
PYRENE	50
TOTAL C-PAHs	10
TOTAL SVOCs	500

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN MG/KG.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 100' 200'

GRAPHIC SCALE

FORM□R □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

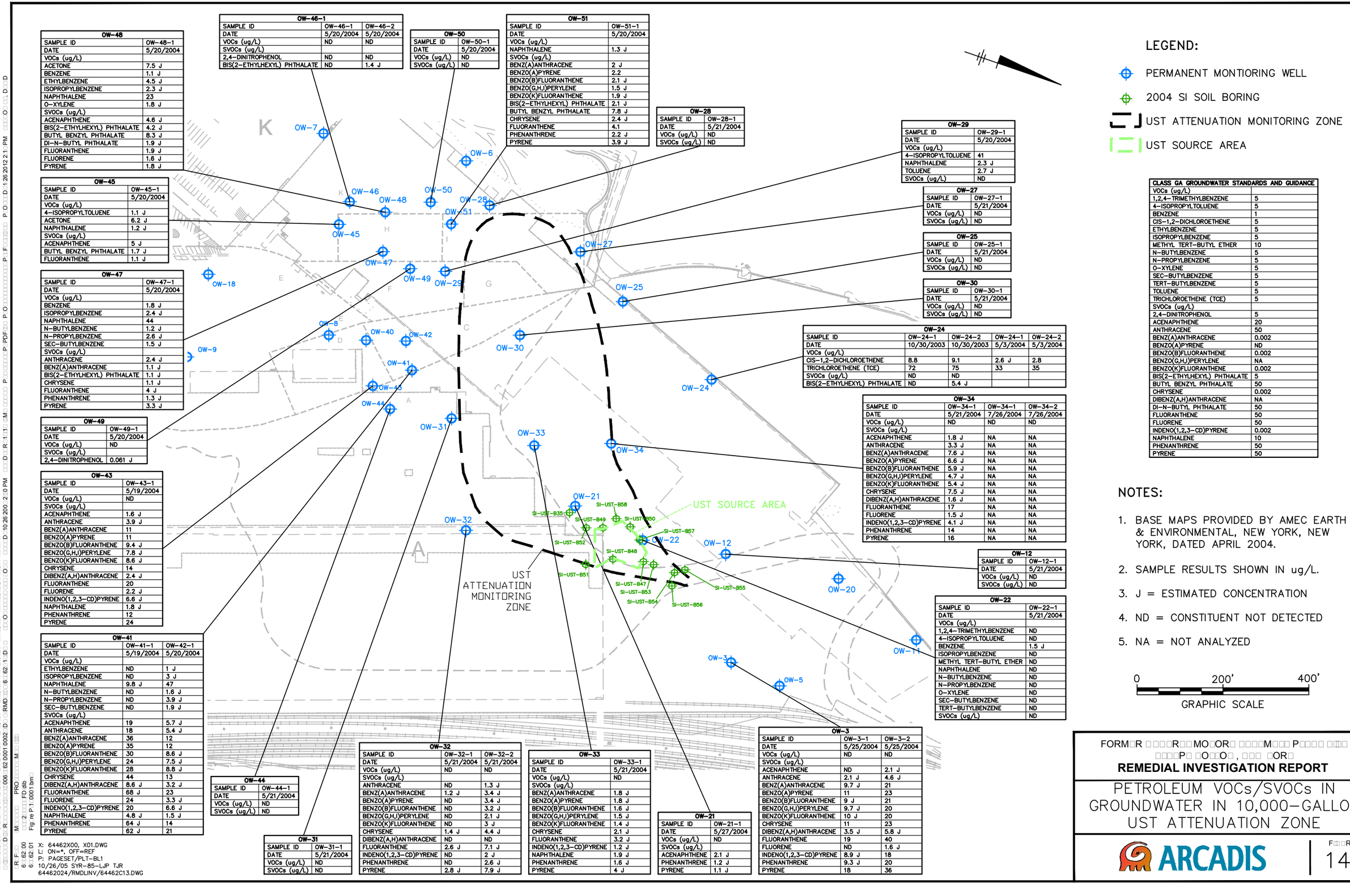
REMEDIAL INVESTIGATION REPORT

VOCs/SVOCs IN SOIL AROUND 10,000-GALLON UST AREA

ARCADIS

F□□R□ 14C

X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
10/26/05 SYR-85-LJP TJR
64462024/RMDLINV/64462C12.DWG



OW-48

SAMPLE ID	OW-48-1
DATE	5/19/2004
VOCs (ug/L)	
ACETONE	7.5 J
BENZENE	1.1 J
ETHYLBENZENE	4.5 J
ISOPROPYLBENZENE	2.3 J
NAPHTHALENE	23
O-XYLENE	1.8 J
SVOCs (ug/L)	
ACENAPHTHENE	4.6 J
BIS(2-ETHYLHEXYL) PHTHALATE	4.2 J
BUTYL BENZYL PHTHALATE	8.3 J
DI-N-BUTYL PHTHALATE	1.9 J
FLUORANTHENE	1.9 J
FLUORENE	1.6 J
PYRENE	1.8 J

OW-46-1

SAMPLE ID	OW-46-1	OW-46-2
DATE	5/20/2004	5/20/2004
VOCs (ug/L)	ND	ND
SVOCs (ug/L)		
2,4-DINITROPHENOL	ND	ND
BIS(2-ETHYLHEXYL) PHTHALATE	ND	1.4 J

OW-50

SAMPLE ID	OW-50-1
DATE	5/20/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-51

SAMPLE ID	OW-51-1
DATE	5/20/2004
VOCs (ug/L)	
NAPHTHALENE	1.3 J
SVOCs (ug/L)	
BENZ(A)ANTHRACENE	2 J
BENZO(A)PYRENE	2.2
BENZO(B)FLUORANTHENE	2.1 J
BENZO(G,H,I)PERYLENE	1.5 J
BENZO(K)FLUORANTHENE	1.9 J
BIS(2-ETHYLHEXYL) PHTHALATE	2.1 J
BUTYL BENZYL PHTHALATE	7.8 J
CHRYSENE	2.4 J
FLUORANTHENE	4.1
PHENANTHRENE	2.2 J
PYRENE	3.9 J

OW-28

SAMPLE ID	OW-28-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-29

SAMPLE ID	OW-29-1
DATE	5/20/2004
VOCs (ug/L)	
4-ISOPROPYLTOLUENE	41
NAPHTHALENE	2.3 J
TOLUENE	2.7 J
SVOCs (ug/L)	ND

OW-27

SAMPLE ID	OW-27-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-25

SAMPLE ID	OW-25-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-30

SAMPLE ID	OW-30-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-45

SAMPLE ID	OW-45-1
DATE	5/20/2004
VOCs (ug/L)	
4-ISOPROPYLTOLUENE	1.1 J
ACETONE	6.2 J
NAPHTHALENE	1.2 J
SVOCs (ug/L)	
ACENAPHTHENE	5 J
BUTYL BENZYL PHTHALATE	1.7 J
FLUORANTHENE	1.1 J

OW-47

SAMPLE ID	OW-47-1
DATE	5/20/2004
VOCs (ug/L)	
BENZENE	1.8 J
ISOPROPYLBENZENE	2.4 J
NAPHTHALENE	44
N-BUTYLBENZENE	1.2 J
N-PROPYLBENZENE	2.6 J
SEC-BUTYLBENZENE	1.5 J
SVOCs (ug/L)	
ANTHRACENE	2.4 J
BENZ(A)ANTHRACENE	1.1 J
BIS(2-ETHYLHEXYL) PHTHALATE	1.1 J
CHRYSENE	1.1 J
FLUORANTHENE	4 J
PHENANTHRENE	1.3 J
PYRENE	3.3 J

OW-24

SAMPLE ID	OW-24-1	OW-24-2	OW-24-1	OW-24-2
DATE	10/30/2003	10/30/2003	5/3/2004	5/3/2004
VOCs (ug/L)				
CIS-1,2-DICHLOROETHENE	8.8	9.1	2.6 J	2.8
TRICHLOROETHENE (TCE)	72	75	33	35
SVOCs (ug/L)	ND	ND		
BIS(2-ETHYLHEXYL) PHTHALATE	ND	5.4 J		

OW-49

SAMPLE ID	OW-49-1
DATE	5/20/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	
2,4-DINITROPHENOL	0.061 J

OW-34

SAMPLE ID	OW-34-1	OW-34-1	OW-34-2
DATE	5/21/2004	7/26/2004	7/26/2004
VOCs (ug/L)	ND	ND	ND
SVOCs (ug/L)			
ACENAPHTHENE	1.8 J	NA	NA
ANTHRACENE	3.3 J	NA	NA
BENZ(A)ANTHRACENE	7.6 J	NA	NA
BENZO(A)PYRENE	6.6 J	NA	NA
BENZO(B)FLUORANTHENE	5.9 J	NA	NA
BENZO(G,H,I)PERYLENE	4.7 J	NA	NA
BENZO(K)FLUORANTHENE	5.4 J	NA	NA
CHRYSENE	7.5 J	NA	NA
DIBENZ(A,H)ANTHRACENE	1.6 J	NA	NA
FLUORANTHENE	17	NA	NA
FLUORENE	1.5 J	NA	NA
INDENO(1,2,3-CD)PYRENE	4.1 J	NA	NA
PHENANTHRENE	14	NA	NA
PYRENE	16	NA	NA

OW-43

SAMPLE ID	OW-43-1
DATE	5/19/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	
ACENAPHTHENE	1.6 J
ANTHRACENE	3.9 J
BENZ(A)ANTHRACENE	11
BENZO(A)PYRENE	11
BENZO(B)FLUORANTHENE	9.4 J
BENZO(G,H,I)PERYLENE	7.8 J
BENZO(K)FLUORANTHENE	8.6 J
CHRYSENE	14
DIBENZ(A,H)ANTHRACENE	2.4 J
FLUORANTHENE	20
FLUORENE	2.2 J
INDENO(1,2,3-CD)PYRENE	6.6 J
NAPHTHALENE	1.8 J
PHENANTHRENE	12
PYRENE	24

OW-12

SAMPLE ID	OW-12-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-22

SAMPLE ID	OW-22-1
DATE	5/21/2004
VOCs (ug/L)	
1,2,4-TRIMETHYLBENZENE	ND
4-ISOPROPYLTOLUENE	ND
BENZENE	1.5 J
ISOPROPYLBENZENE	ND
METHYL TERT-BUTYL ETHER	ND
NAPHTHALENE	ND
N-BUTYLBENZENE	ND
N-PROPYLBENZENE	ND
O-XYLENE	ND
SEC-BUTYLBENZENE	ND
TERT-BUTYLBENZENE	ND
SVOCs (ug/L)	ND

OW-41

SAMPLE ID	OW-41-1	OW-42-1
DATE	5/19/2004	5/20/2004
VOCs (ug/L)		
ETHYLBENZENE	ND	1 J
ISOPROPYLBENZENE	ND	3 J
NAPHTHALENE	9.8 J	47
N-BUTYLBENZENE	ND	1.6 J
N-PROPYLBENZENE	ND	3.9 J
SEC-BUTYLBENZENE	ND	1.9 J
SVOCs (ug/L)		
ACENAPHTHENE	19	5.7 J
ANTHRACENE	18	5.4 J
BENZ(A)ANTHRACENE	36	12
BENZO(A)PYRENE	35	12
BENZO(B)FLUORANTHENE	30	8.6 J
BENZO(G,H,I)PERYLENE	24	7.5 J
BENZO(K)FLUORANTHENE	28	8.8 J
CHRYSENE	44	13
DIBENZ(A,H)ANTHRACENE	8.6 J	3.2 J
FLUORANTHENE	68 J	23
FLUORENE	24	3.3 J
INDENO(1,2,3-CD)PYRENE	20	6.6 J
NAPHTHALENE	4.8 J	1.5 J
PHENANTHRENE	64 J	14
PYRENE	62 J	21

OW-44

SAMPLE ID	OW-44-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	ND

OW-32

SAMPLE ID	OW-32-1	OW-32-2
DATE	5/21/2004	5/21/2004
VOCs (ug/L)	ND	ND
SVOCs (ug/L)		
ANTHRACENE	ND	1.3 J
BENZ(A)ANTHRACENE	1.2 J	3.4 J
BENZO(A)PYRENE	ND	3.4 J
BENZO(B)FLUORANTHENE	ND	3.2 J
BENZO(G,H,I)PERYLENE	ND	2.1 J
BENZO(K)FLUORANTHENE	ND	3 J
CHRYSENE	1.4 J	4.4 J
DIBENZ(A,H)ANTHRACENE	ND	ND
FLUORANTHENE	2.6 J	7.1 J
INDENO(1,2,3-CD)PYRENE	ND	2 J
PHENANTHRENE	ND	2.6 J
PYRENE	2.8 J	7.9 J

OW-33

SAMPLE ID	OW-33-1
DATE	5/21/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	
BENZ(A)ANTHRACENE	1.8 J
BENZO(A)PYRENE	1.8 J
BENZO(B)FLUORANTHENE	1.6 J
BENZO(G,H,I)PERYLENE	1.5 J
BENZO(K)FLUORANTHENE	1.4 J
CHRYSENE	2.1 J
FLUORANTHENE	3.2 J
INDENO(1,2,3-CD)PYRENE	1.2 J
NAPHTHALENE	1.9 J
PHENANTHRENE	1.6 J
PYRENE	4 J

OW-21

SAMPLE ID	OW-21-1
DATE	5/27/2004
VOCs (ug/L)	ND
SVOCs (ug/L)	
ACENAPHTHENE	2.1 J
PHENANTHRENE	1.2 J
PYRENE	1.1 J

OW-3

SAMPLE ID	OW-3-1	OW-3-2
DATE	5/25/2004	5/25/2004
VOCs (ug/L)	ND	ND
SVOCs (ug/L)		
ACENAPHTHENE	ND	2.1 J
ANTHRACENE	2.1 J	4.6 J
BENZ(A)ANTHRACENE	9.7 J	21
BENZO(A)PYRENE	11	23
BENZO(B)FLUORANTHENE	9 J	21
BENZO(G,H,I)PERYLENE	9.7 J	20
BENZO(K)FLUORANTHENE	10 J	20
CHRYSENE	11	23
DIBENZ(A,H)ANTHRACENE	3.5 J	5.8 J
FLUORANTHENE	19	40
FLUORENE	ND	1.6 J
INDENO(1,2,3-CD)PYRENE	8.9 J	18
PHENANTHRENE	9.3 J	20
PYRENE	18	36

CLASS GA GROUNDWATER STANDARDS AND GUIDANCE

VOCs (ug/L)	
1,2,4-TRIMETHYLBENZENE	5
4-ISOPROPYLTOLUENE	5
BENZENE	1
CIS-1,2-DICHLOROETHENE	5
ETHYLBENZENE	5
ISOPROPYLBENZENE	5
METHYL TERT-BUTYL ETHER	10
N-BUTYLBENZENE	5
N-PROPYLBENZENE	5
O-XYLENE	5
SEC-BUTYLBENZENE	5
TERT-BUTYLBENZENE	5
TOLUENE	5
TRICHLOROETHENE (TCE)	5
SVOCs (ug/L)	
2,4-DINITROPHENOL	5
ACENAPHTHENE	20
ANTHRACENE	50
BENZ(A)ANTHRACENE	0.002
BENZO(A)PYRENE	ND
BENZO(B)FLUORANTHENE	0.002
BENZO(G,H,I)PERYLENE	NA
BENZO(K)FLUORANTHENE	0.002
BIS(2-ETHYLHEXYL) PHTHALATE	5
BUTYL BENZYL PHTHALATE	50
CHRYSENE	0.002
DIBENZ(A,H)ANTHRACENE	NA
DI-N-BUTYL PHTHALATE	50
FLUORANTHENE	50
FLUORENE	50
INDENO(1,2,3-CD)PYRENE	0.002
NAPHTHALENE	10
PHENANTHRENE	50
PYRENE	50

LEGEND:

- PERMANENT MONTIORING WELL
- 2004 SI SOIL BORING
- UST ATTENUATION MONITORING ZONE
- UST SOURCE AREA

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN ug/L.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 200' 400'

GRAPHIC SCALE

FORM□R □□□□R□□ MO□OR□ □□□□M□□□ P□□□□ □□□□ □□□□P□ □O□□O□, □□□ □OR□

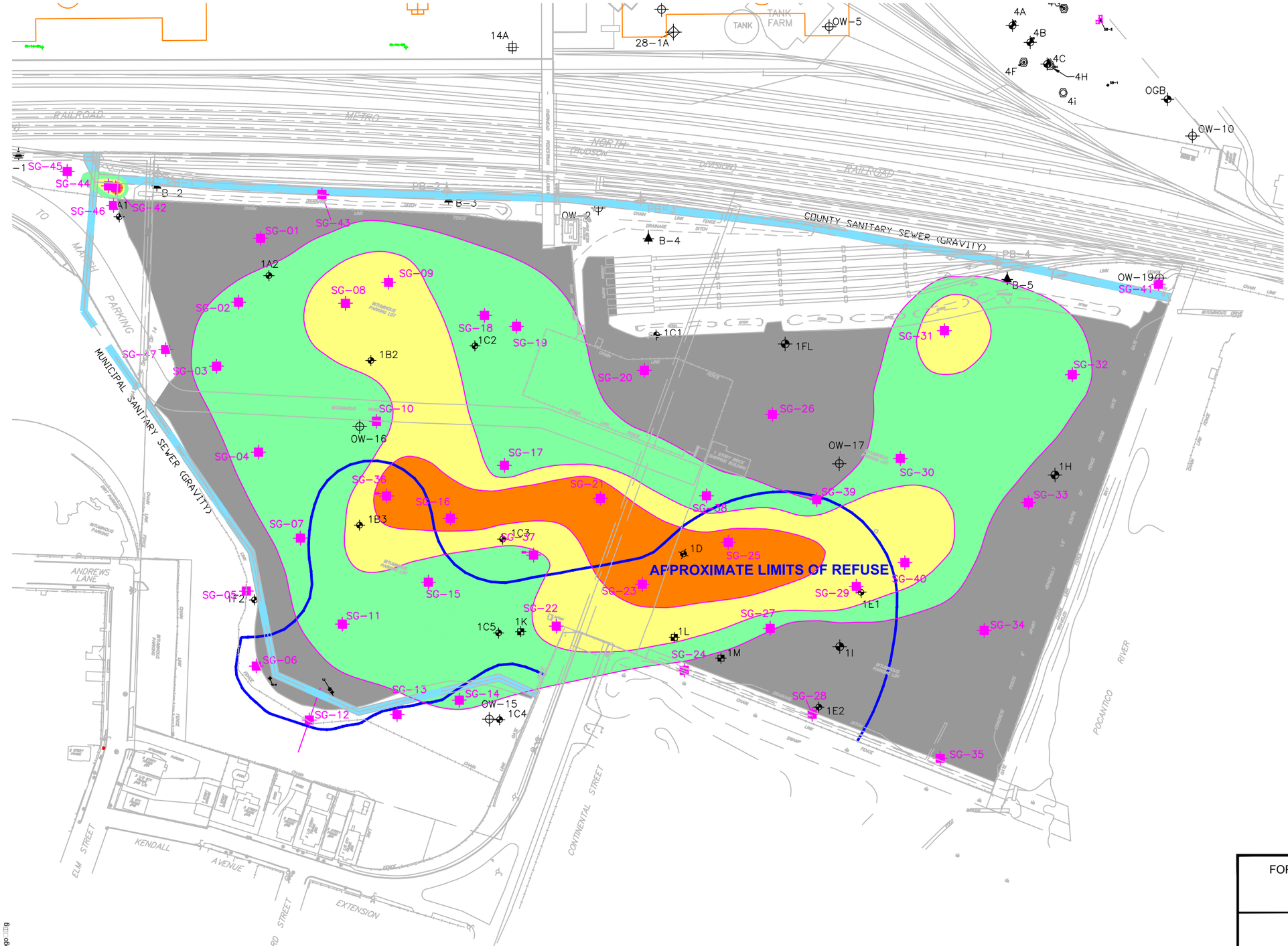
REMEDIAL INVESTIGATION REPORT

PETROLEUM VOCs/SVOCs IN GROUNDWATER IN 10,000-GALLON UST ATTENUATION ZONE

ARCADIS

F□□R□ 14D

Re d: D□□RO P:\Re d: D□□R□ 1:1□□M□□□□ P□□□□□ P.O□ □□□□□□□□ P□F□□□□ P.O□ □□□□□□□□ PM Re d: M.O□□ □R.O□1□O□□OFF□R□F□□ D: 10 28 200 2:0 PM
□R□F□□□ M□□□□□ PRO□□□□□□□□ M□□□
6□62 00 □□2□□□□FD.db
6□62 01 Fig re P□1 0001.bm□
X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
10/26/05 SYR-85-LJP TJR
64462024/RMDLINV/64462C13.DWG



LEGEND:

PREVIOUS SAMPLE LOCATIONS

- MONITORING WELL LOCATION
- TEST BORING (PHASE II)
- INDOOR BORING/EXCAVATION (PHASE II)
- WASTE CHARACTERIZATION TEST PIT (PHASE II)
- FURTHER VISUAL INSPECTION (PHASE II)
- BASEMENT SOIL SAMPLES (PHASE III)
- TEST BORING (PHASE III)
- TEST BORING (SUPPLEMENTAL PHASE II)
- CONFIRMATORY SOIL SAMPLE (ICM)
- 1 TEST PIT LOCATION (SUPPLEMENTAL PHASE II)
- TEST BORING LOCATION (SUPPLEMENTAL PHASE II)
- CORING LOCATION (SUPPLEMENTAL PHASE II)
- PARSONS BORINGS (HISTORICAL)
- DUE DILIGENCE SOIL SAMPLE (2002)
- DUE DILIGENCE SOIL & GROUND WATER SAMPLES
- DUE DILIGENCE GROUND WATER SAMPLE
- SOIL-GAS MEASUREMENT AND/OR SAMPLE LOCATION

- 70–100% METHANE
- 40–70% METHANE
- 0–40% METHANE
- EXTENT OF PAVED AREA

NOTE:

METHANE DATA FROM OCTOBER 2003

0 300’ 600’

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□

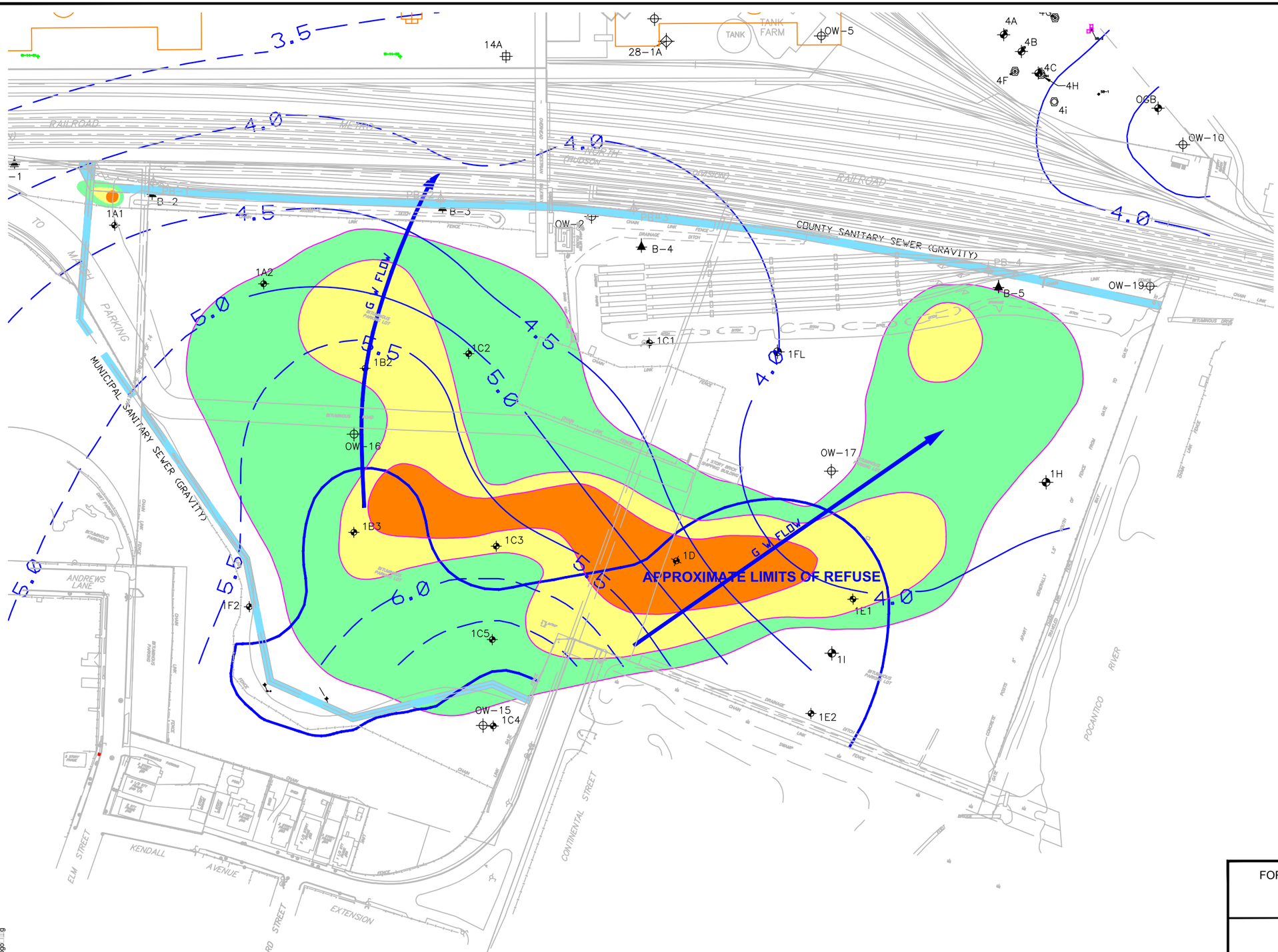
REMEDIAL INVESTIGATION REPORT

METHANE CONTOURS – EAST PARCEL

ARCADIS

F□□R□ 15A

D:\Re d\ D:\R\ D:\Re d\ P:\Re d\ P.PDF P.O 1.26.2012 2:16 PM P.F O.D.D
M PRO
R: F
6 62 00 X: 64462X00, X04.DWG
6 62 0 L: ON=*, OFF=REF
2 FD dlb
mec logo g
P: PAGESET/PLT-BL1
8/2/05 SYR-85-LJP
64462024/RMDLINV/64462W02.DWG



LEGEND:

PREVIOUS SAMPLE LOCATIONS

- MONITORING WELL LOCATION
- TEST BORING (PHASE II)
- INDOOR BORING/EXCAVATION (PHASE II)
- WASTE CHARACTERIZATION TEST PIT (PHASE II)
- FURTHER VISUAL INSPECTION (PHASE II)
- BASEMENT SOIL SAMPLES (PHASE III)
- TEST BORING (PHASE III)
- TEST BORING (SUPPLEMENTAL PHASE II)
- CONFIRMATORY SOIL SAMPLE (ICM)
- 1 TEST PIT LOCATION (SUPPLEMENTAL PHASE II)
- TEST BORING LOCATION (SUPPLEMENTAL PHASE II)
- CORING LOCATION (SUPPLEMENTAL PHASE II)
- PARSONS BORINGS (HISTORICAL)
- DUE DILIGENCE SOIL SAMPLE (2002)
- DUE DILIGENCE SOIL & GROUND WATER SAMPLES
- DUE DILIGENCE GROUND WATER SAMPLE

3.5 GROUNDWATER ELEVATION CONTOUR

- 70–100% METHANE
- 40–70% METHANE
- 0–40% METHANE

NOTES:

1. GROUNDWATER ELEVATIONS FROM MAY 1997.
2. METHANE DATA FROM OCTOBER 2003.

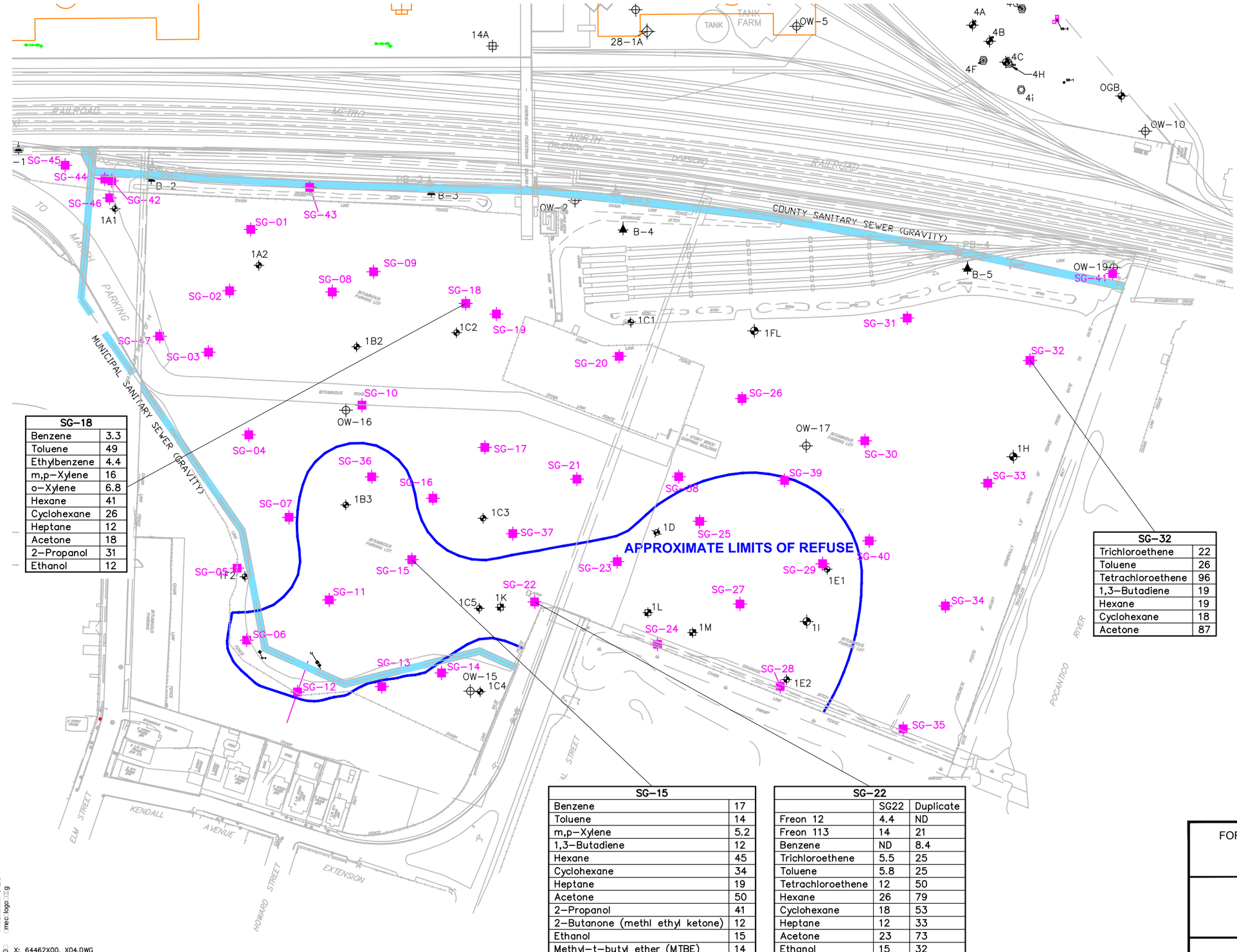
FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

METHANE CONTOURS WITH GROUNDWATER ELEVATION CONTOURS – EAST PARCEL

ARCADIS

F□□R□ 15B

D□□□R□ P□□□□□ P□ PDF□□ P□O□□□□□□ P□F□□□□ P□O□□D□1262012 2:16 PM □□□O□□□D□□D
□□□□R□ P□□□□□ P□ PDF□□ P□O□□□□□□ P□F□□□□ P□O□□D□1262012 2:16 PM □□□O□□□D□□D
D



SG-18	
Benzene	3.3
Toluene	49
Ethylbenzene	4.4
m,p-Xylene	16
o-Xylene	6.8
Hexane	41
Cyclohexane	26
Heptane	12
Acetone	18
2-Propanol	31
Ethanol	12

SG-32	
Trichloroethene	22
Toluene	26
Tetrachloroethene	96
1,3-Butadiene	19
Hexane	19
Cyclohexane	18
Acetone	87

SG-15	
Benzene	17
Toluene	14
m,p-Xylene	5.2
1,3-Butadiene	12
Hexane	45
Cyclohexane	34
Heptane	19
Acetone	50
2-Propanol	41
2-Butanone (methl ethyl ketone)	12
Ethanol	15
Methyl-t-butyl ether (MTBE)	14

SG-22		
	SG22	Duplicate
Freon 12	4.4	ND
Freon 113	14	21
Benzene	ND	8.4
Trichloroethene	5.5	25
Toluene	5.8	25
Tetrachloroethene	12	50
Hexane	26	79
Cyclohexane	18	53
Heptane	12	33
Acetone	23	73
Ethanol	15	32

LEGEND:

PREVIOUS SAMPLE LOCATIONS

- MONITORING WELL LOCATION
- TEST BORING (PHASE II)
- INDOOR BORING/EXCAVATION (PHASE II)
- WASTE CHARACTERIZATION TEST PIT (PHASE II)
- FURTHER VISUAL INSPECTION (PHASE II)
- BASEMENT SOIL SAMPLES (PHASE III)
- TEST BORING (PHASE III)
- TEST BORING (SUPPLEMENTAL PHASE II)
- CONFIRMATORY SOIL SAMPLE (ICM)
- 1 TEST PIT LOCATION (SUPPLEMENTAL PHASE II)
- TEST BORING LOCATION (SUPPLEMENTAL PHASE II)
- CORING LOCATION (SUPPLEMENTAL PHASE II)
- PARSONS BORINGS (HISTORICAL)
- DUE DILIGENCE SOIL SAMPLE (2002)
- DUE DILIGENCE SOIL & GROUND WATER SAMPLES
- DUE DILIGENCE GROUND WATER SAMPLE
- SOIL-GAS MEASUREMENT AND/OR SAMPLE LOCATION

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN UG/M^3.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED
6. VOC DATA FROM OCTOBER 2003

0 300' 600'

GRAPHIC SCALE

FORMER □□□□RO□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□

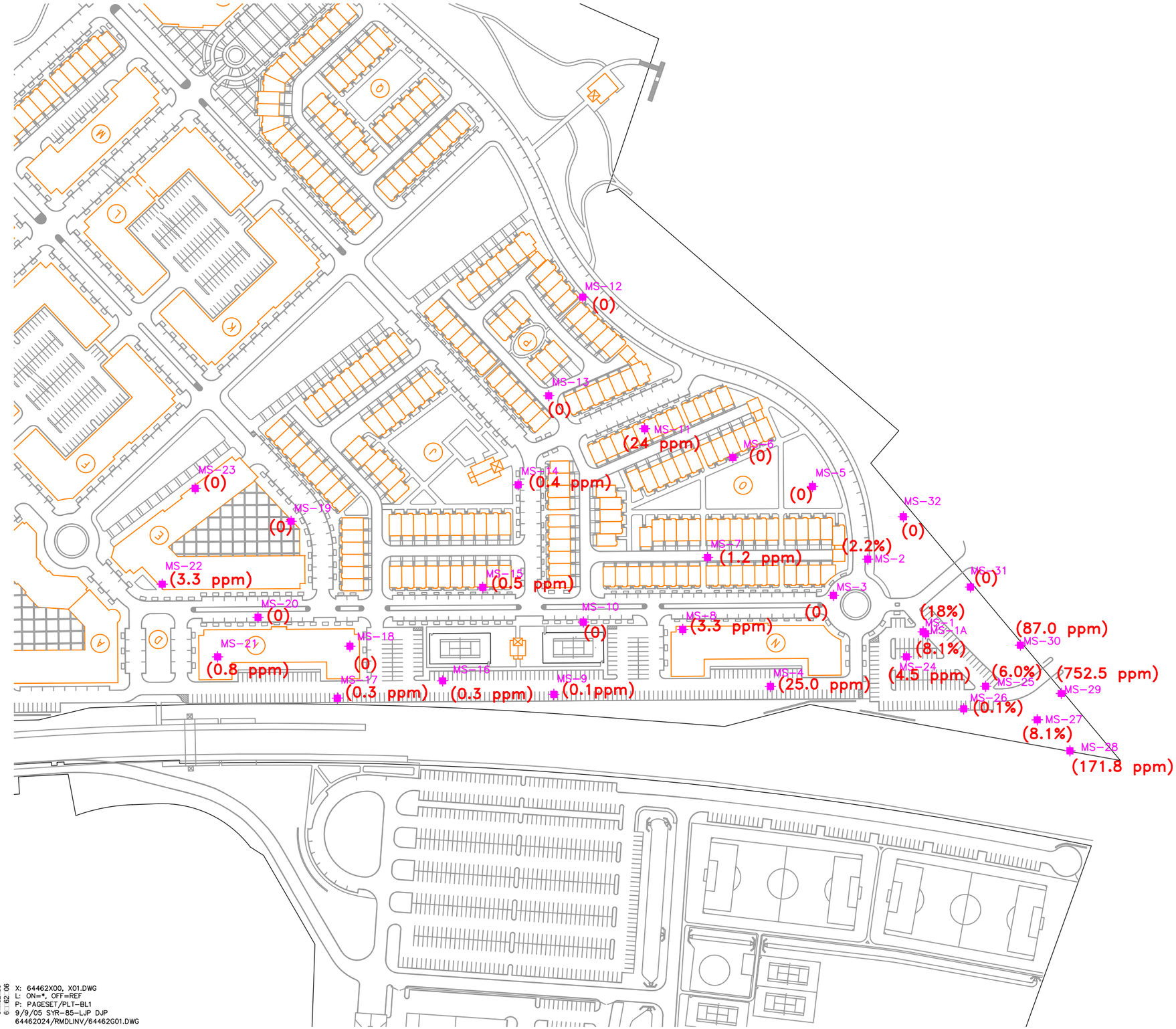
REMEDIAL INVESTIGATION REPORT

VOCs IN SOIL GAS – EAST PARCEL

ARCADIS

F□□R□ 16

D:□□RO□P.Re d□ D□Re d□ D□□R□□□□□006□62.0001□002□D□□RMD□□□6□62.2□D□□ PM□□□M□□□
PRO□□□□□M□□□□
R□F□□□
6□62.00 □□2□□□□FD.dib
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L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
7/27/05 SYR-85-LJP
64462024/RMDLINV/64462C24.DWG
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LEGEND:

- ROSELAND CONCEPTUAL BUILDING LAYOUT
- FILL UNIT BOUNDARY
- METHANE SURVEY MEASUREMENT POINT
- (0.1%) METHANE SURVEY RESULT – MAXIMUM READING OF COMBUSTBLE GAS METER (%) OR FID (PPM)

NOTE:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.

0 200' 400'

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□

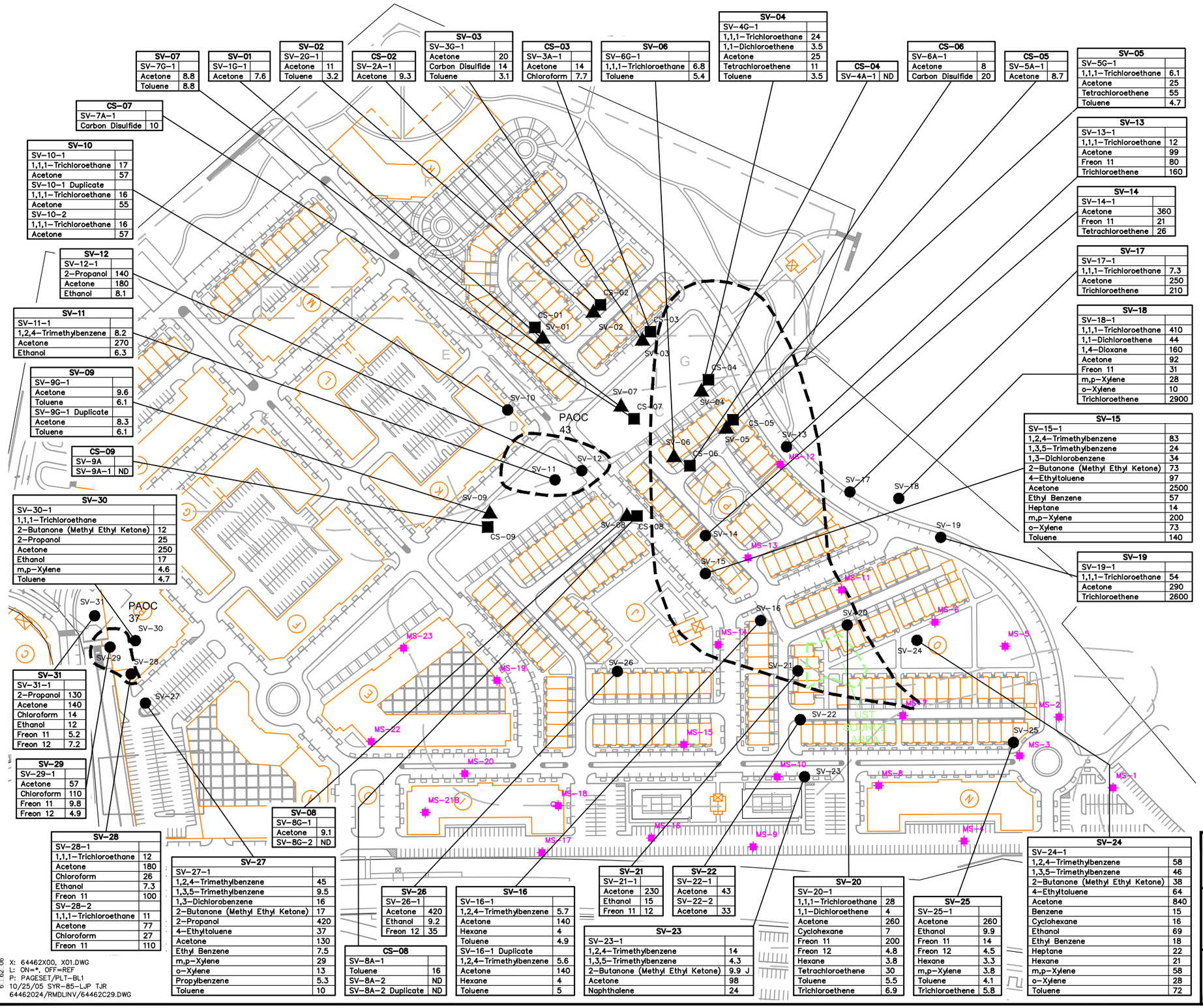
REMEDIAL INVESTIGATION REPORT

METHANE IN SOIL GAS – WEST PARCEL

ARCADIS

F□□R□ 17

X: 64462X00, X01.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL1
9/9/05 SYR-85-LJP DJP
64462024/RMDLINV/64462G01.DWG



SV-07	
SV-7G-1	
Acetone	8.8
Toluene	8.8

SV-01	
SV-1G-1	
Acetone	7.6

SV-02	
SV-2G-1	
Acetone	11
Toluene	3.2

CS-02	
SV-2A-1	
Acetone	9.3

SV-03	
SV-3G-1	
Acetone	20
Carbon Disulfide	14
Toluene	3.1

CS-03	
SV-3A-1	
Acetone	14
Chloroform	7.7

SV-06	
SV-6G-1	
1,1,1-Trichloroethane	6.8
Toluene	5.4

SV-04	
SV-4G-1	
1,1,1-Trichloroethane	24
1,1-Dichloroethene	3.5
Acetone	25
Tetrachloroethene	11
Toluene	3.5

CS-04	
SV-4A-1	ND

CS-06	
SV-6A-1	
Acetone	8
Carbon Disulfide	20

CS-05	
SV-5A-1	
Acetone	8.7

SV-05	
SV-5G-1	
1,1,1-Trichloroethane	6.1
Acetone	25
Tetrachloroethene	55
Toluene	4.7

CS-07	
SV-7A-1	
Carbon Disulfide	10

SV-10	
SV-10-1	
1,1,1-Trichloroethane	17
Acetone	57
SV-10-1 Duplicate	
1,1,1-Trichloroethane	16
Acetone	55
SV-10-2	
1,1,1-Trichloroethane	16
Acetone	57

SV-12	
SV-12-1	
2-Propanol	140
Acetone	180
Ethanol	8.1

SV-11	
SV-11-1	
1,2,4-Trimethylbenzene	8.2
Acetone	270
Ethanol	6.3

SV-09	
SV-9G-1	
Acetone	9.6
Toluene	6.1
SV-9G-1 Duplicate	
Acetone	8.3
Toluene	6.1

CS-09	
SV-9A	
SV-9A-1	ND

SV-30	
SV-30-1	
1,1,1-Trichloroethane	
2-Butanone (Methyl Ethyl Ketone)	12
2-Propanol	25
Acetone	250
Ethanol	17
m,p-Xylene	4.6
Toluene	4.7

SV-31	
SV-31-1	
2-Propanol	130
Acetone	140
Chloroform	14
Ethanol	12
Freon 11	5.2
Freon 12	7.2

SV-29	
SV-29-1	
Acetone	57
Chloroform	110
Freon 11	9.8
Freon 12	4.9

SV-28	
SV-28-1	
1,1,1-Trichloroethane	12
Acetone	180
Chloroform	26
Ethanol	7.3
Freon 11	100
SV-28-2	
1,1,1-Trichloroethane	11
Acetone	77
Chloroform	27
Freon 11	110

SV-08	
SV-8G-1	
Acetone	9.1
SV-8G-2	ND

SV-27	
SV-27-1	
1,2,4-Trimethylbenzene	45
1,3,5-Trimethylbenzene	9.5
1,3-Dichlorobenzene	16
2-Butanone (Methyl Ethyl Ketone)	17
2-Propanol	420
4-Ethyltoluene	37
Acetone	130
Ethyl Benzene	7.5
m,p-Xylene	29
o-Xylene	13
Propylbenzene	5.3
Toluene	10

SV-26	
SV-26-1	
Acetone	420
Ethanol	9.2
Freon 12	35

CS-08	
SV-8A-1	
Toluene	16
SV-8A-2	ND
SV-8A-2 Duplicate	ND

SV-16	
SV-16-1	
1,2,4-Trimethylbenzene	5.7
Acetone	140
Hexane	4
Toluene	4.9
SV-16-1 Duplicate	
1,2,4-Trimethylbenzene	5.6
Acetone	140
Hexane	4
Toluene	5

SV-21	
SV-21-1	
Acetone	230
Ethanol	15
Freon 11	12

SV-22	
SV-22-1	
Acetone	43
SV-22-2	
Acetone	33

SV-23	
SV-23-1	
1,2,4-Trimethylbenzene	14
1,3,5-Trimethylbenzene	4.3
2-Butanone (Methyl Ethyl Ketone)	9.9 J
Acetone	98
Naphthalene	24

SV-20	
SV-20-1	
1,1,1-Trichloroethane	28
1,1-Dichloroethene	4
Acetone	260
Cyclohexane	7
Freon 11	200
Freon 12	4.8
Hexane	3.8
Tetrachloroethene	30
Toluene	5.5
Trichloroethene	6.9

SV-25	
SV-25-1	
Acetone	260
Ethanol	9.9
Freon 11	14
Freon 12	4.5
Hexane	3.3
m,p-Xylene	3.8
Toluene	4.1
Trichloroethene	5.8

SV-24	
SV-24-1	
1,2,4-Trimethylbenzene	58
1,3,5-Trimethylbenzene	46
2-Butanone (Methyl Ethyl Ketone)	38
4-Ethyltoluene	64
Acetone	840
Benzene	15
Cyclohexane	16
Ethanol	69
Ethyl Benzene	18
Heptane	22
Hexane	21
m,p-Xylene	58
o-Xylene	28
Toluene	72

SV-13	
SV-13-1	
1,1,1-Trichloroethane	12
Acetone	99
Freon 11	80
Trichloroethene	160

SV-14	
SV-14-1	
Acetone	360
Freon 11	21
Tetrachloroethene	26

SV-17	
SV-17-1	
1,1,1-Trichloroethane	7.3
Acetone	250
Trichloroethene	210

SV-18	
SV-18-1	
1,1,1-Trichloroethane	410
1,1-Dichloroethene	44
1,4-Dioxane	160
Acetone	92
Freon 11	31
m,p-Xylene	28
o-Xylene	10
Trichloroethene	2900

SV-15	
SV-15-1	
1,2,4-Trimethylbenzene	83
1,3,5-Trimethylbenzene	24
1,3-Dichlorobenzene	34
2-Butanone (Methyl Ethyl Ketone)	73
4-Ethyltoluene	97
Acetone	2500
Ethyl Benzene	57
Heptane	14
m,p-Xylene	200
o-Xylene	73
Toluene	140

SV-19	
SV-19-1	
1,1,1-Trichloroethane	54
Acetone	290
Trichloroethene	2600

LEGEND:

- GROUNDWATER MONITORING/ ATTENUATION ZONES
- PROPOSED NEW BUILDING OUTLINE
- UST SOURCE AREA
- FILL UNIT BOUNDARIES
- SUBSURFACE SOIL-VAPOR SAMPLE (COVERED BY SLAB OR PAVEMENT)
- SUBSURFACE SOIL-VAPOR SAMPLE (UNCOVERED SOIL SURFACE)
- CRAWLSPACE AIR SAMPLE
- METHANE SURVEY MEASUREMENT POINT

NOTES:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.
2. SAMPLE RESULTS SHOWN IN UG/M^3.
3. J = ESTIMATED CONCENTRATION
4. ND = CONSTITUENT NOT DETECTED
5. NA = NOT ANALYZED

0 200' 400'

GRAPHIC SCALE

REVISION NO. 1 (10/26/05)

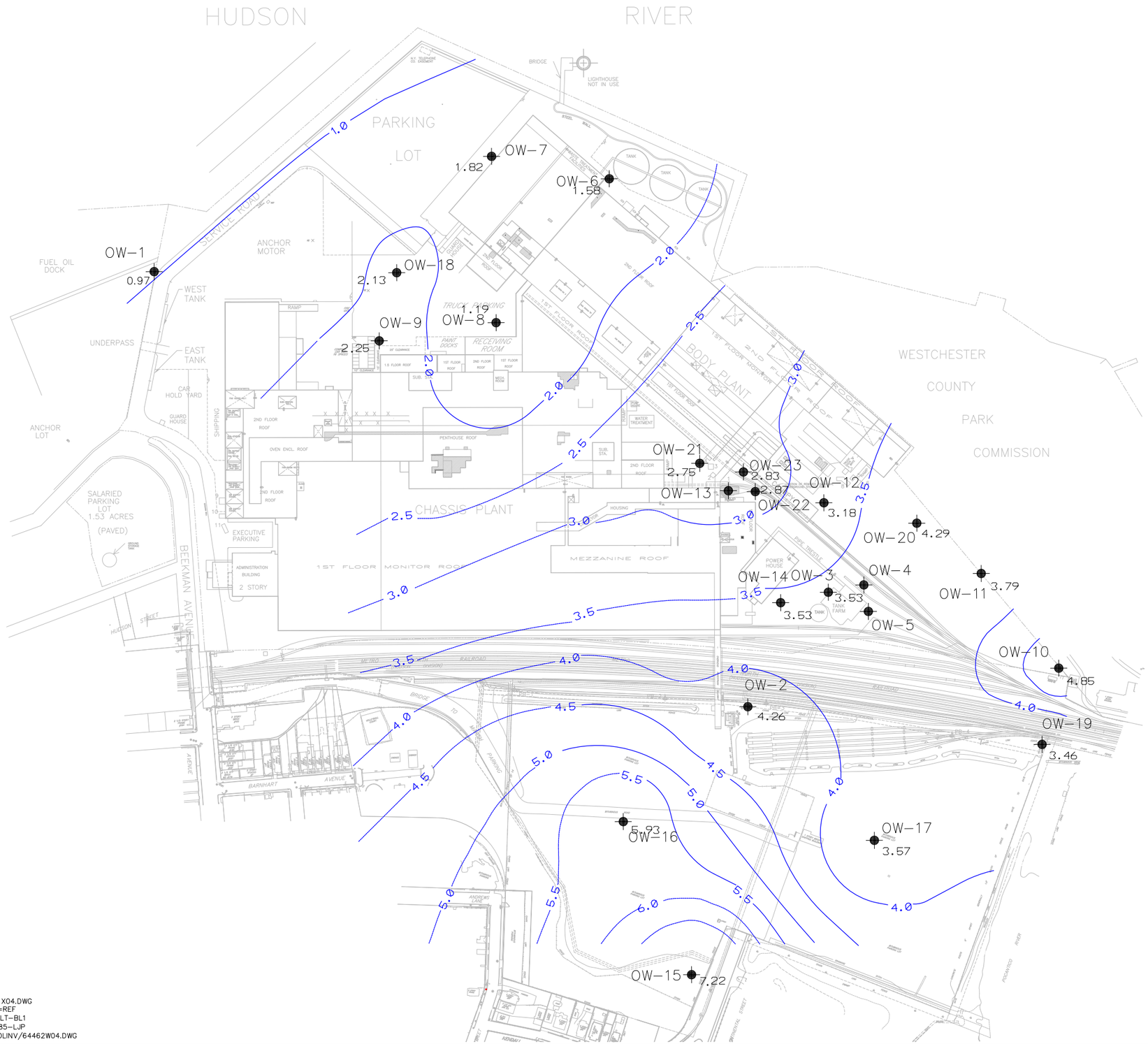
FORMER MOTOR POOL
REMEDIAL INVESTIGATION REPORT

VOCs IN SOIL GAS - WEST PARCEL

ARCADIS

FIGURE 18

R 1:1 M PROJECT MANAGER P PDF P.O. DATE 1.26.2012 16 PM D. 10.26.200 1:28 PM D. R.O.T.O OFF IR F. M.O.t O. D.D.D
R.F. 6 62.00 6 62.06 X: 64462X00, X01.DWG L: ON=*, OFF=REF P: PAGESET/PLT-BL1 10/25/05 SYR-85-LJP TJR 64462024/RMDLINV/64462C29.DWG



LEGEND:

EMCON MONITORING WELL
(PHASE II & III INVESTIGATIONS)

3.0 — GROUND WATER ELEVATION CONTOUR IN FEET (DASHED WHERE INFERRED)

NOTE:

1. BASE MAPS PROVIDED BY AMEC EARTH & ENVIRONMENTAL, NEW YORK, NEW YORK, DATED APRIL 2004.

0 300' 600'

GRAPHIC SCALE

FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

GROUNDWATER ELEVATION CONTOURS
(MAY 1997)

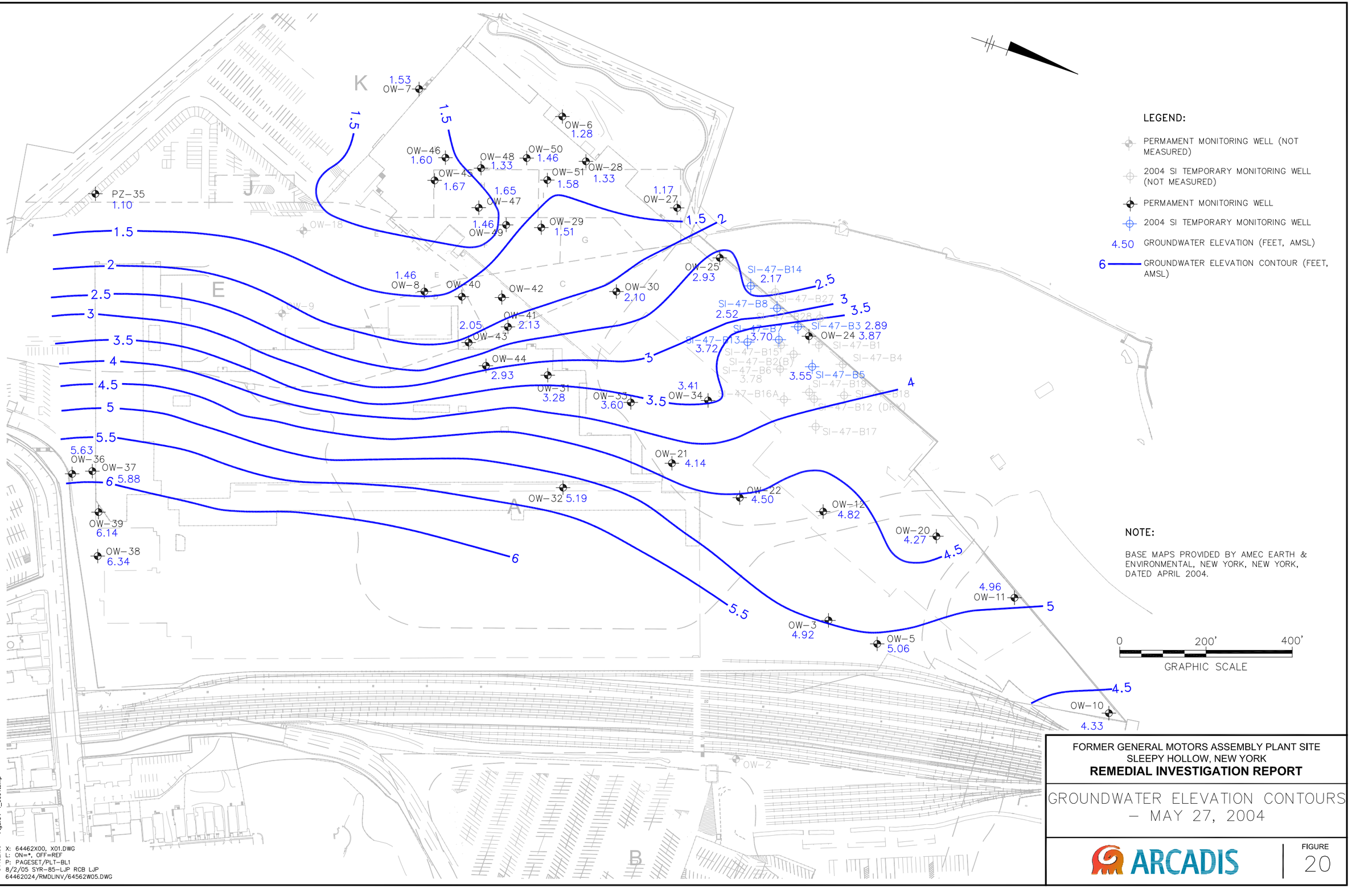
ARCADIS

FIGURE
19

CITY:(Read) DIV/GROUP:(Read) DB:(Read) LD:(Opt) PIC:(Opt) PM:(Read) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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8/2/05 SYR-85-LJP
64462024/RMDLINV/64462W04.DWG

IMAGES: PROJECTNAME: ---
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Figure P-1_0001.bmp



FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK
REMEDIAL INVESTIGATION REPORT

GROUNDWATER ELEVATION CONTOURS – MAY 27, 2004

ARCADIS

FIGURE 20

CITY:(Req'd) DIV/GROUP:(Req'd) DB:(Req'd) LD:(Opt) PIC:(Opt) PM:(Req'd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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8/2/05 SYR-85-LJP RCB LJP
64462024/RMDLINV/64562W05.DWG

LEGEND:

- DITCH/ARTIFICIAL INT STREAM
- EST RIPRAP/ARTIFICIAL SHORE
- RAILROAD
- BRACKISH TIDAL MARSH
- MOWED LAWN
- MOWED LAWN WITH TREES
- OAK-TULIP TREE FOREST
- RED MAPLE-HARDWOOD SWAMP
- RESIDENTIAL/INDUST/COMMERCIAL
- TIDAL RIVER
- URBAN VACANT LOT

0 650 1,300 Feet

GRAPHIC SCALE

FORMER GENERAL MOTORS ASSEMBLY PLANT SITE
SLEEPY HOLLOW, NEW YORK

REMEDIAL INVESTIGATION REPORT

COVERTYPE MAP

ARCADIS

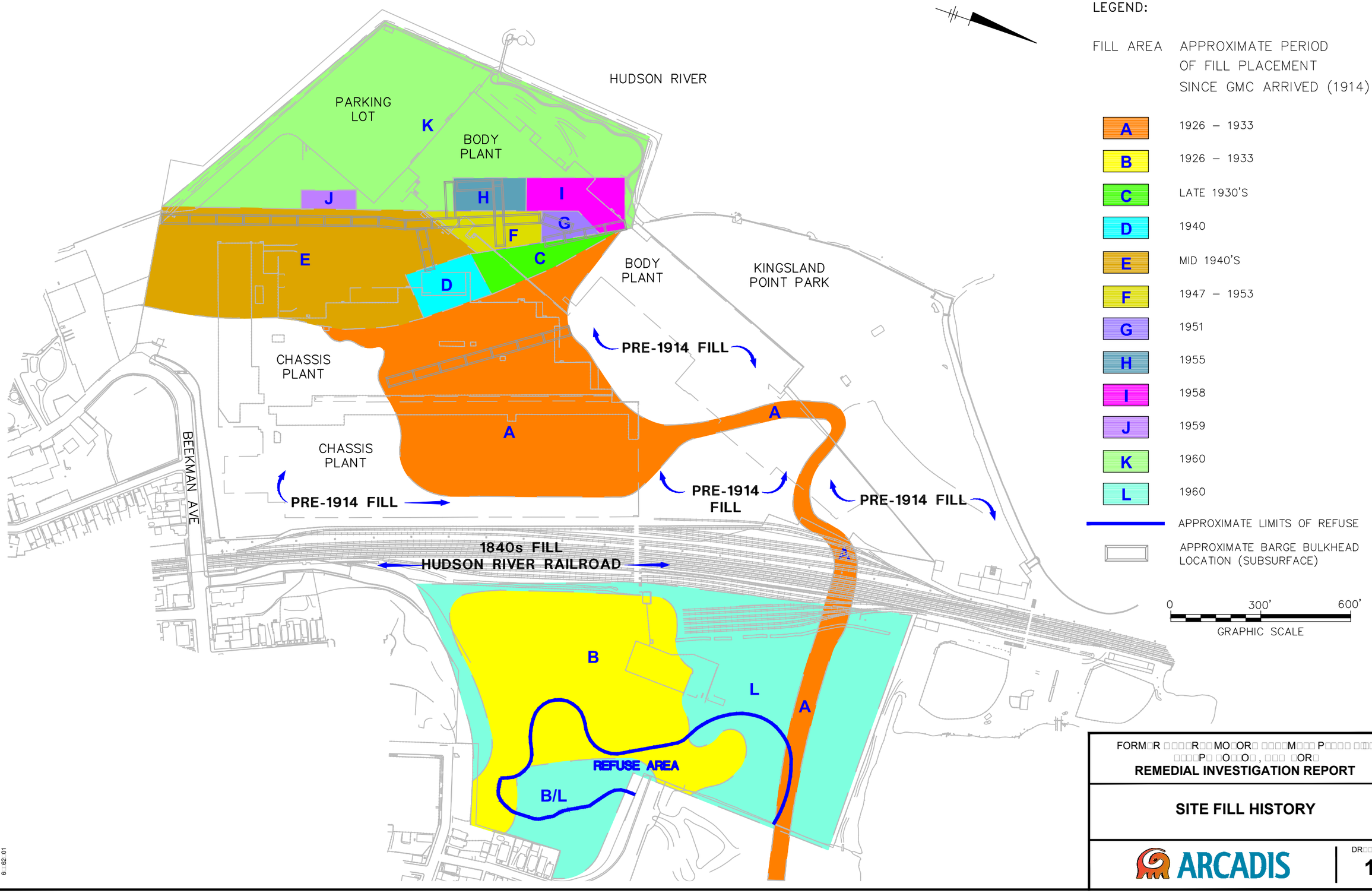
FIGURE 21

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ARCADIS

Drawings

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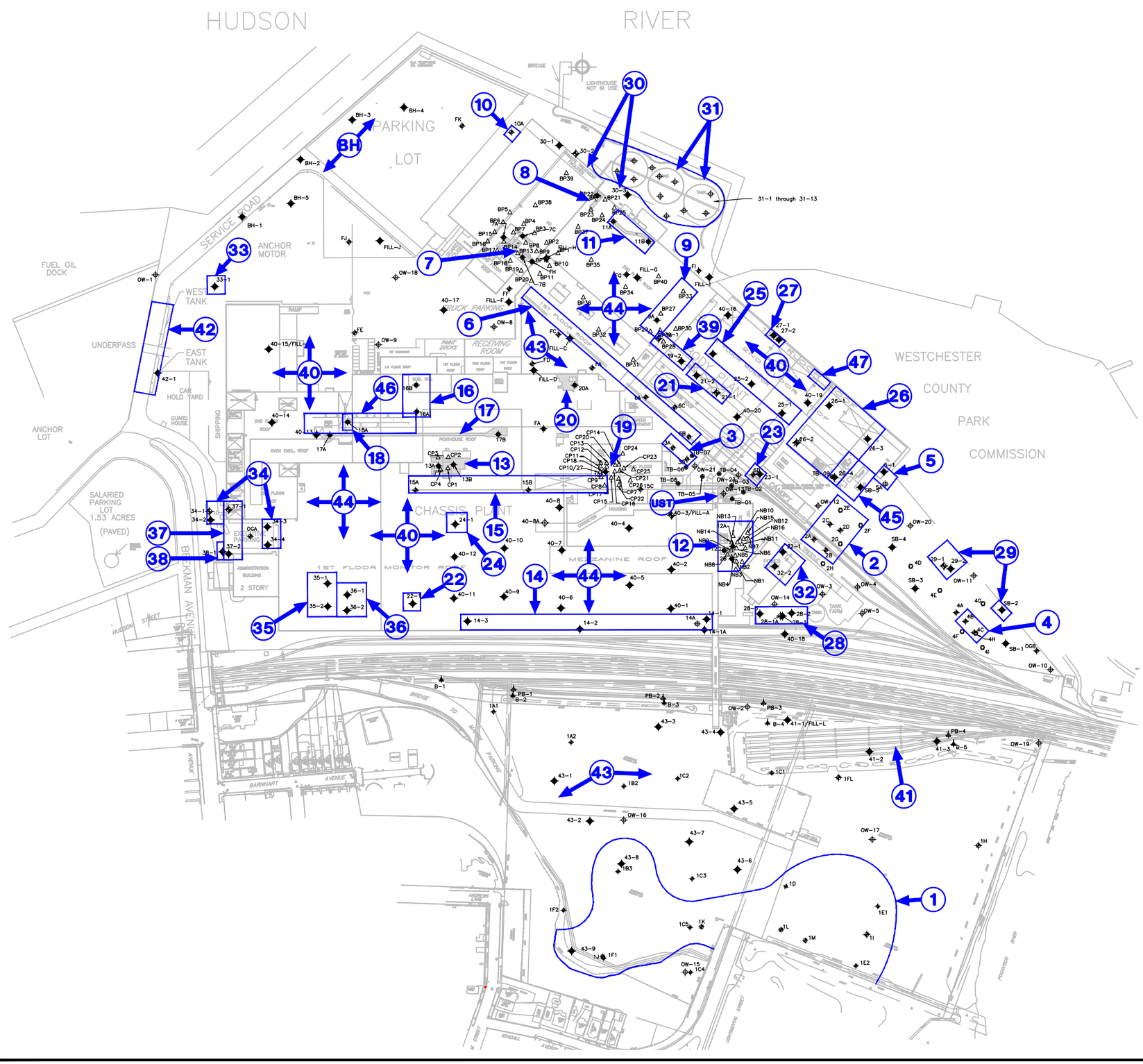
REMEDIAL INVESTIGATION REPORT

SITE FILL HISTORY

ARCADIS

DR□□ □□□

1



LEGEND:

PREVIOUS SAMPLE LOCATIONS

- MONITORING WELL LOCATION
- TEST BORING (PHASE II)
- INDOOR BORING/EXCAVATION (PHASE II)
- WASTE CHARACTERIZATION TEST PIT (PHASE II)
- FURTHER VISUAL INSPECTION (PHASE II)
- BASEMENT SOIL SAMPLES (PHASE III)
- TEST BORING (PHASE III)
- TEST BORING (SUPPLEMENTAL PHASE II)
- CONFIRMATORY SOIL SAMPLE (ICM)
- AREA OF SOIL REMOVAL (ICM)
- TEST PIT LOCATION (SUPPLEMENTAL PHASE II)
- TEST BORING LOCATION (SUPPLEMENTAL PHASE II)
- CORING LOCATION (SUPPLEMENTAL PHASE II)
- PARSONS BORINGS (HISTORICAL)
- DUE DILIGENCE SOIL SAMPLE (2002)
- DUE DILIGENCE SOIL & GROUND WATER SAMPLES
- DUE DILIGENCE GROUND WATER SAMPLE
- (4) POTENTIAL AREA OF CONCERN (PAOC)

0 300’ 600’

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□

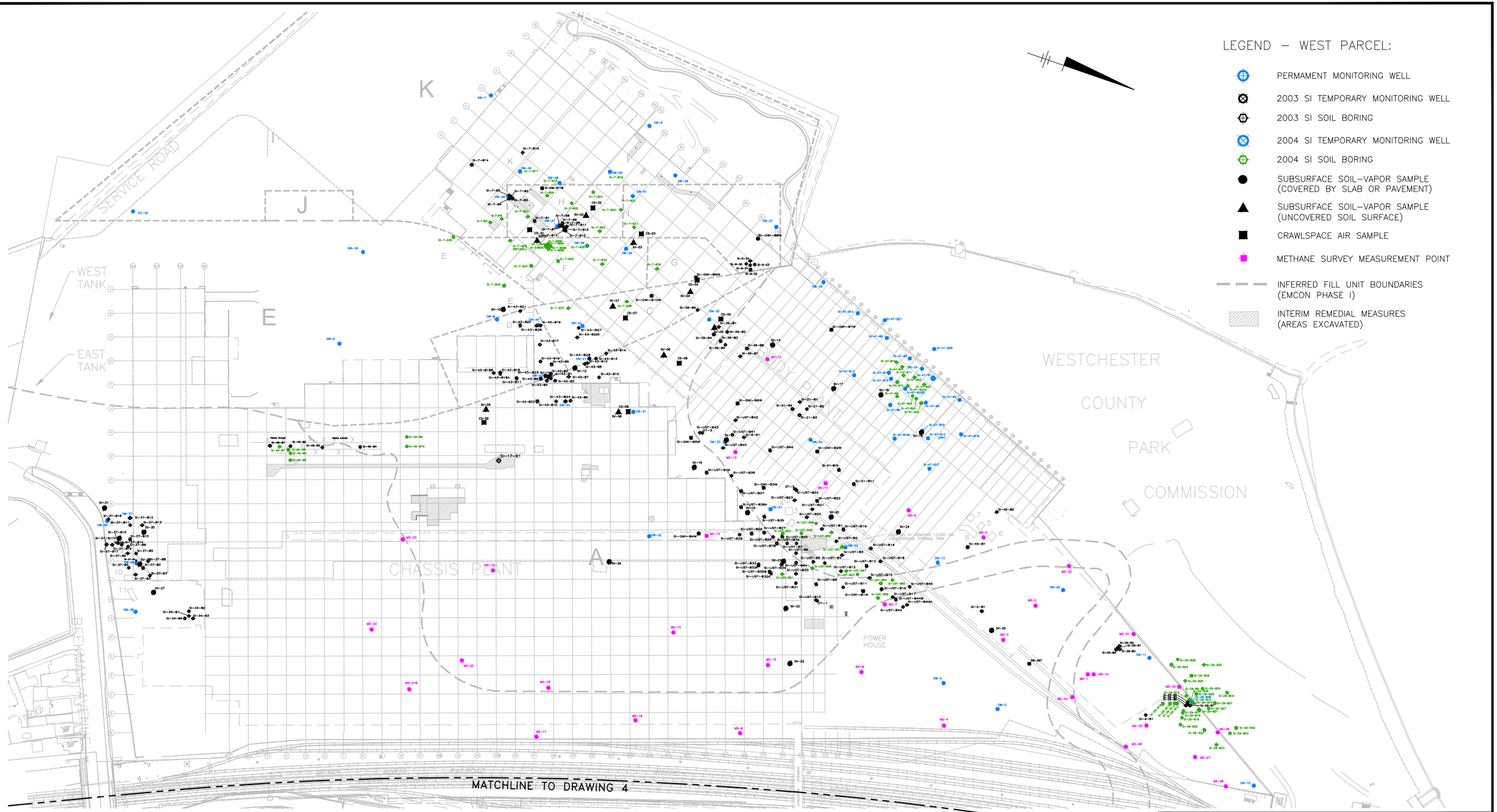
REMEDIAL INVESTIGATION REPORT

POTENTIAL AREAS OF CONCERN AND PREVIOUS SAMPLING LOCATIONS

ARCADIS

DR□□ □□□

2

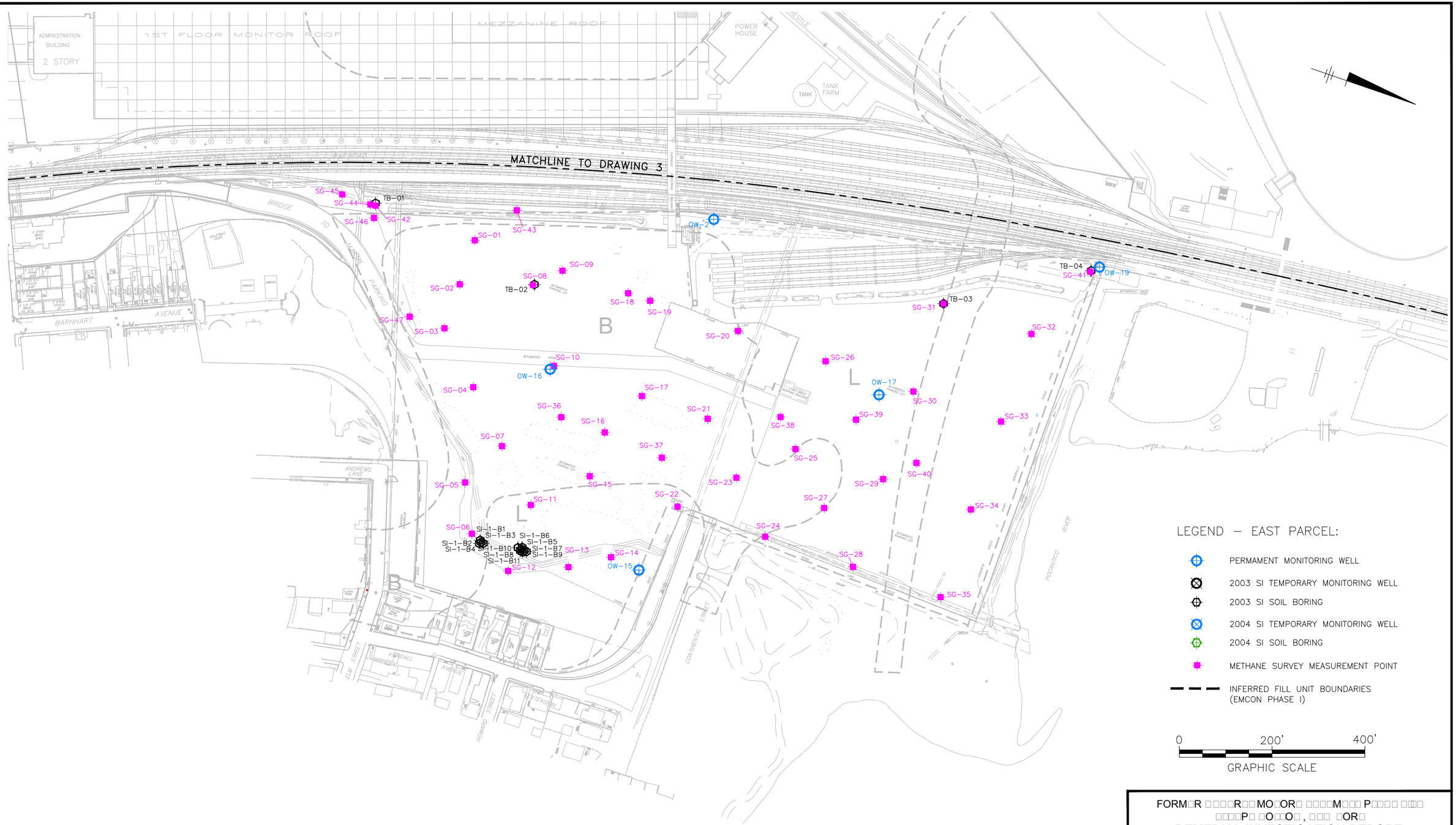


FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

REMEDIAL INVESTIGATION SOIL AND GROUNDWATER SAMPLING LOCATIONS - WEST PARCEL

ARCADIS

DR□□ □□□
3



LEGEND – EAST PARCEL:

- PERMAMENT MONITORING WELL
- 2003 SI TEMPORARY MONITORING WELL
- 2003 SI SOIL BORING
- 2004 SI TEMPORARY MONITORING WELL
- 2004 SI SOIL BORING
- METHANE SURVEY MEASUREMENT POINT
- INFERRED FILL UNIT BOUNDARIES (EMCON PHASE I)

0 200' 400'

GRAPHIC SCALE

FORM□R □□□□R□□MO□OR□ □□□□M□□□ P□□□□ □□□□
□□□□P□ □O□□O□, □□□ □OR□
REMEDIAL INVESTIGATION REPORT

REMEDIAL INVESTIGATION SOIL AND GROUNDWATER SAMPLING LOCATIONS - EAST PARCEL

ARCADIS

DR□□ □□□

4

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Appendix K:
Pollutant Loading Calculations

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POLLUTANT LOADING CALCULATIONS (SIMPLE METHOD) - EAST PARCEL

EXISTING CONDITIONS - TSS

Area ID	A, Total Acres	Impervious Acres	Ia	P	Pj	Rv	R	C*	L
SITE	32.2	25.2	0.783	3.5	0.9	0.754	2.376	69	1193

EXISTING CONDITIONS - TP

Area ID	A, Total Acres	Impervious Acres	Ia	P	Pj	Rv	R	C*	L
SITE	32.2	25.2	0.783	3.5	0.9	0.754	2.376	0.201	3.5

PROPOSED CONDITIONS - TSS (PRIOR TO TREATMENT)

Area ID	A, Total Acres	Impervious Acres	Ia	P	Pj	Rv	R	C*	L	% REDUCTION FROM EXISTING
SITE	32.4	11.2	0.346	3.5	0.9	0.361	1.138	69	575	52%

PROPOSED CONDITIONS - TP (PRIOR TO TREATMENT)

Area ID	A, Total Acres	Impervious Acres	Ia	P	Pj	Rv	R	C*	L	% REDUCTION FROM EXISTING
SITE	32.4	11.2	0.346	3.5	0.9	0.361	1.138	0.201	2	52%

PROPOSED CONDITIONS - TSS (WITH TREATMENT)

Area ID	A, Total Acres	Impervious Acres	Ia	P	Pj	Rv	R	C*	L	TREATMENT TYPE	% REMOVAL**	L AFTER TREATMENT	TREATMENT TYPE	% REMOVAL**	L AFTER TREATMENT	% REDUCTION FROM EXISTING
DPW AREA	2.738	2.738	1.000	3.5	0.9	0.950	2.993	69	128	Hydrodynamic Sep.	50	63.88	Swale	80	12.78	NA
DP-1	7.522	0.25	0.033	3.5	0.9	0.080	0.252	69	30	Hydrodynamic Sep.	50	14.76				NA
DP-2	22.14	8.46	0.382	3.5	0.9	0.394	1.241	69	428	Swale	80	85.68				NA
TOTAL LOAD															113.22	91%

PROPOSED CONDITIONS - TP (WITH TREATMENT)

Area ID	A, Total Acres	Impervious Acres	Ia	P	Pj	Rv	R	C*	L	TREATMENT TYPE	% REMOVAL**	L AFTER TREATMENT	TREATMENT TYPE	% REMOVAL**	L AFTER TREATMENT	% REDUCTION FROM EXISTING
DPW AREA	2.738	2.738	1.000	3.5	0.9	0.950	2.993	0.26	0	Hydrodynamic Sep.	0	0.48	Swale	40	0.29	NA
DP-1	7.522	0.25	0.033	3.5	0.9	0.080	0.252	0.201	0	Hydrodynamic Sep.	0	0.09				NA
DP-2	22.14	8.46	0.382	3.5	0.9	0.394	1.241	0.201	1	Swale	40	0.75				NA
TOTAL LOAD															1.12	100%

* Pollutant loading data pooled from National Urban Runoff Program (NURP), USGS, and NPDES sources for commercial & industrial land use, as reported by Center for Watershed Protection (http://www.stormwatercenter.net/)

** % Removal based on NYSDEC Stormwater Management Design Manual and New Jersey DEP testing verification (accepted by NYSDEC)

The Simple Method estimates pollutant loads for chemical constituents as a product of annual runoff volume and pollutant concentration, as:

$L = 0.226 * R * C * A$ **$R = P * P_j * Rv$**

Where: L = Annual load (lbs)
R = Annual runoff (inches)
C = Pollutant concentration (mg/l)
A = Area (acres)
0.226 = Unit conversion factor

Where: R = Annual runoff (inches)
P = Annual rainfall (inches)
P_j = Fraction of annual rainfall events that produce runoff (usually 0.9)
Rv = Runoff coefficient
Rv=0.05+0.9Ia

P = 1-year, 24-hour storm, per NYSDEC Phosphorus Removal Supplement

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