EAST PARCEL REDEVELOPMENT
Sleepy Hollow, New York

DRAFT
ENVIRONMENTAL IMPACT STATEMENT

Lead Agency:
Sleepy Hollow Local Development Corporation
28 Beekman Avenue
Sleepy Hollow, NY 10591
Contact: David Schroedel, Chairman
(914) 366-5105

DEIS Preparation:
Planning & Development Advisors
Yonkers, NY 10705
Contact: David B. Smith
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July 25, 2016

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Village Hall
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pDEIS Submission Dates: July 8, 2016, July 25, 2016
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Comment Submission Period Ends: September 30, 2016

Participating Consultants:

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I. Executive Summary

A. Introduction

This Draft Environmental Impact Statement (DEIS) evaluates the potential impacts and proposed mitigation associated with the redevelopment of a tract of land known locally as the East Parcel. Historically, the East Parcel was part of the embayment of the Pocantico River, historically known a "Die Slapering Haven"[1], prior to filling events associated with the introduction of the railroad, and separate filling events associated with prior municipal use as a landfill and use by General Motors to support their former General Motors North Tarrytown Assembly Plant site located west of the existing Metro North rail lines. The East Parcel Redevelopment represents an opportunity to create a new center for community activity including the construction of a contemporary Department of Public Works (DPW) facility to replace the current facility, along with needed recreation and parking resources all tied together by an inter-connected series of roads and pathways. This DEIS is required under the Village's RF – Riverfront Development Zoning District as part of a Special Permit and Riverfront Development Concept Plan (RDCP) approvals. This DEIS is submitted on behalf of the Sleepy Hollow Local Development Corporation (SHLDC) the owner of the East Parcel (refer to Appendix G, Deed of Ownership). The LDC contemplates financing and undertaking the redevelopment and has been designated as the Lead Agency under the New York State Environmental Quality Review Act, as codified pursuant to the Environmental Conservation Law of the State of New York (collectively, the SEQRA Review).

B. Project Location

The East Parcel is an approximately 28 acre parcel of land consisting of two separate tax parcels: Section 115.11 Block 1 Lots 2 and 85. The East Parcel is located at the terminus of Continental Street and is generally 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

[1] Refer to Cultural Resource report included in Append H of this DEIS, page 5

Beekman Avenue, refer to Exhibit I-1 Tax Map Designations and I-2 Project Location.

C. Planning Background and Summary

The redevelopment of the East Parcel has been contemplated for many years, going back to the Village's Waterfront Linkage Study [2] which was prepared in anticipation of the redevelopment of the GM property. The East Parcel planning was informed by the environmental review process conducted by Roseland Property Company[3] as part of the Lighthouse Landing EIS. The planning process also included input from Historic Hudson Valley the owner and operator of the adjacent Philipsburg Manor Restoration. Exhibits I-3 through I-8 provide some historical perspective of East Parcel Planning. It is noted that given existing environmental conditions and deed restrictions on proposed uses, the East Parcel development is somewhat limited in the types of uses that could be constructed. The Deed, refer to Appendix G, limits proposed uses to those customarily undertaken by the Village Department of Public Works or any other Village Department, as well as indoor and outdoor recreation. Prohibited uses include retail, restaurant, office (except ancillary to Village DPW), outdoor storage of vehicles (except ancillary to Village DPW), theater, residential uses, stand-alone day care centers, schools, hospitals, medical offices, and other uses that would typically require cleanup to unrestricted residential use standards under applicable New York law. The LDC has met with representatives of HHV and Edge on Hudson to attempt to incorporate the proposed riverfront development concept plan (RDCP) with the Edge on Hudson property to the west and HHV property to the east.

[2] Village of Sleepy Hollow Waterfront Linkage Study, Sacccardi & Schiff, Inc. August 2002

[3] Roseland Property Company was the prior entity that proposed to redevelop the GM property. Roseland abandoned the development process and GM eventually sold the site to a new set of developers, collectively Lighthouse Landing Ventures, LLC. The GM redevelopment has since been renamed Edge on Hudson.

D. Proposed Action

The LDC is currently considering the following improvements as part of the East Parcel RDCP, refer also Exhibit I-9:

- Construction of a new 38,000 square foot DPW facility (inclusive of the proposed bus repair facility noted below);
- Construction of a new bus garage repair facility for the Tarrytown Union Free School District (approx. 3,850 s.f.);
- Construction of new recreation facilities currently consisting of new recreation fields (1 full size baseball diamond, an all-purpose field, flexible space);
- Construction of new parking facilities to accommodate approximately 585 vehicles;
- Construction of a new overpass connecting the East and West Parcel; and,
- Proposed 10,000 square foot community center with below building parking for approximately 45 vehicles.

Collectively, the improvements described above along with the necessary Special Permit and Riverfront Development Concept Plan constitute the Proposed Action under SEQRA. It is noted that the LDC applied for and received a Filling Permit from the Village of Sleepy Hollow Planning Board (the Planning Board) in anticipation of being able to bring necessary fill material onto the Project Site. Further, the LDC has jointly applied to the Planning Board for a subdivision application and approval to sell to Metro North Railroad an approximately 1.3 acre parcel of land located adjacent to the existing Hudson Line rail tracks and which the proposed parcel contains existing spur lines historically and currently being used by Metro North under a license agreement with the LDC.

E. Required Approvals and Permits

The "involved" agencies under the State Environmental Quality Review Act, and the Permits and approvals they will grant, include:

a. Village of Sleepy Hollow

1. Village Board of Trustees – Riverfront Development Concept Plan, Special Permit Approval for project within the RF District
2. Planning Board – Site Development Plan Approval, Wetland/Watercourse Permit, Subdivision (being considered separately)
3. Tree Commission – Tree Removal Permit
4. Building Department – Building Permit, Development Permit for projects within areas of special flood hazard

b. Westchester County

1. Westchester County Planning Board – Project review under Section 239 of the General Municipal Law
2. Westchester County Department of Health – Review of extensions of the public water supply and sanitary sewer systems
3. Westchester County Department of Environmental Facilities – Review of connection to the county trunk sewer line

c. Metropolitan Transit Authority/Metro-North Railroad

1. Review and approval of construction or demolition activities proposed within adjoining or over the Metro-North property

d. New York State

1. Department of Environmental Conservation – SPDES permit for construction activities; Water Quality Certification for activities noted below acquiring a U.S. Army Corps of Engineers Permit. Conform to Brownfield Cleanup Agreement.
2. Department of Transportation – Review of potential improvements within the right-of-way of Route 9
3. Department of State – Coastal Zone Consistency determination for activities noted below requiring U.S. Army Corps of Engineers Permit

2. Interested Agencies

Other Agencies that will not grant local or state permits or approvals, but have expressed an interest in the project include

a. Village of Sleepy Hollow

1. Village Clerk
2. Village Administrator
3. Village Counsel
4. Department of Public Works
5. Department of Architecture, Development, Building and Code Enforcement

b. United States

Army Corps of Engineers – Permit under Section 404 permit for the filling of wetland ditches associated with the development of the open spaces areas on the East Parcel

c. Other Interested Agencies/Entities

1. School District of the Tarrytowns
2. Town of Mt. Pleasant
3. Historic Hudson Valley

F. Summary of Anticipated Impacts and Proposed Mitigation Measures

Section III of this DEIS describes the existing conditions, the anticipated impacts from the Proposed Action, and proposed measures to mitigate impacts. Principal potential impacts of the Proposed Action relate to site disturbance/construction, traffic and stormwater management. Table E-1, Summary of Anticipated Impacts and Proposed Mitigation Measures, provides an initial review of potential impacts and proposed mitigation associated with the Proposed Action.

Table E-1

Summary of Anticipated Impacts and Proposed Mitigation Measures

Environmental Condition	Anticipated Impacts	Proposed Mitigation Measures
Land Use and Zoning	Proposed uses are principal uses permitted under the RF District	Coordinated non-vehicular circulation system connecting adjacent properties and neighborhoods, comprehensive landscape program
Visual Resources	Proposed overpass would be visible from surrounding properties but would be consistent in height with the existing pedestrian overpass above the Metro North rail tracks.	Landscape buffering proposed at strategic locations along the perimeter of the Project Site to help buffer proposed uses.
Stormwater Management	Proposed Action is anticipated to reduce potential impacts by reducing the extent of impervious surface on the East Parcel.	Incorporation of pervious paving for parking resources to reduce stormwater runoff. Critical infrastructure raised above revised flood plain and incorporates resiliency related to projected sea level rise.
Traffic and Transportation	Increased activity along Continental Street as a result of incorporating the new overpass and activities on the East Parcel.	Intersection improvements at Pocantico Street and US Route 9, selective improvements including widening of Continental Street to accommodate DPW traffic.
Natural Resource	Disturbance to approximately 0.23 acres of previously mapped wetland. Construction over former municipal landfill.	Creation of approx. 0.86 acre wetland mitigation area; venting of proposed structures consistent with the East Parcel Site Management Plan
Construction	Temporary impacts associated with site construction activities related primarily to	Stormwater management techniques to control potential erosion, construction

Environmental Condition	Anticipated Impacts	Proposed Mitigation Measures
	construction related traffic, noise and dust.	mitigation to control dust impacts.
Utilities	Site currently generates no water or sewer use. Proposed Action would include the projected water use of 21,440 gpd and sanitary sewer of 15,720.	Incorporation of low flow fixtures, relocation and upgrade of existing Village sewer main running through the East Parcel.

G. Summary of Alternatives to the Proposed Action

1. No Action Alternative

This alternative would leave the East Parcel in its current condition, a vacant parking lot that served the former automotive assembly plant, and would result in no opportunities to address a community need to construct a contemporary DPW facility and active recreation facilities to serve the Village.

2. Alternative Layouts

During the course of preparing the RDCP, the Applicant's design team prepared two alternatives which generally included less parking for the public and different configurations of field layouts, (refer to Exhibits I-10 and I-11). These alternatives keep the overall concept of providing for a DPW facility, Continental Street Overpass and recreation fields but arranges the location and extent of the facilities in different configurations.

3. Alternative Uses

As part of the Alternative Layout design process described in G.2 above, the Applicants design team evaluated the opportunity to incorporate different uses on the East Parcel, including an indoor recreation facility with community space, an outdoor amphitheater, and artist work space to support proposed activities on the West Parcel and active recreation facilities (playground/tennis courts/basketball courts). The LDC has incorporated some of these elements

into the proposed RDCP and will provide opportunity for additional public input as to prospective recreation and community uses.

4. **Alternative Site Layout That Incorporates Prior Conceptual Plans for Historic Hudson Valley**

   Historic Hudson Valley (HHV) has been an active participant in the planning process for the East Parcel going back to the initial planning associated with the Village of Sleepy Hollow's Waterfront Linkage Study. In general terms, HHV contemplated expansion of its existing Philipsburg Manor Restoration (hereinafter PMR) facility operations. HHV's stated planning objectives included: contiguous land available for expansion of their PMR operation, viewshed protection and buffering, mitigation of impacts, adequate parking for visitors, and continued easy access to PMR. As part of the Final EIS for Lighthouse Landing, HHV submitted conceptual level plans that included a proposed 18th Century tenant farm. Incorporation of these alternative layouts with the Proposed Action would essentially eliminate all proposed uses located north of the proposed Continental Street extension.

5. **Alternative Shared Parking Arrangements**

   As indicated on Exhibits I-10 and I-11, alternative parking arrangements were prepared as part of the initial planning process for the East Parcel. These included parking configurations of varying size from 100 to 265 spaces. The current RDCP includes parking for approximately 500 vehicles which is more in keeping with the stated goals and objectives of Historic Hudson Valley (HHV) relative to their future operation and plans. HHV has submitted an alternative layout for parking of approximately 577 vehicles (Refer to Exhibit IV-5) which includes a mix of pervious and impervious paving treatments. An additional alternative arrangement would be to allow HHV to take ownership of a portion of the East Parcel adjacent to their property for HHV's development of parking. In turn, HHV would be responsible for the construction, upkeep, maintenance and liability associated with the proposed 500± parking. It is

contemplated that the LDC would request a comparable reciprocal agreement with HHV for the use of parking facility to service the proposed recreation resources.

6. **Alternative Access**

   An alternative access being considered by the LDC includes a new at-grade roadway leading to Beekman Avenue. Existing access to Beekman Avenue is provided by a combination of at-grade and an elevated steel viaduct structure. Given the condition of the existing elevated viaduct structure, alternative access being considered would include an at-grade roadway leading from the East Parcel to Beekman Avenue. It is noted that portions of this at-grade alignment run across currently private property which would need to be incorporated as part of a proposed right of way.

7. **Alternative Layout for Tarrytown Union Free School District (TUFSD) Bus Garage**

   As part of the prior planning for the East Parcel during the Lighthouse Landing EIS review, the TUFSD was consulted regarding the potential to include a bus repair garage as part of the East Parcel redevelopment. Those plans included an approximately 3,800 square foot facility. As part of the initial planning for the Proposed Action, the TUFSD submitted an alternate plan that included a much larger (13,750 square foot) facility. The TUFSD has since revised their prospective needs and has submitted a plan for 3,850 square feet which has since been incorporated into the proposed RDCP.

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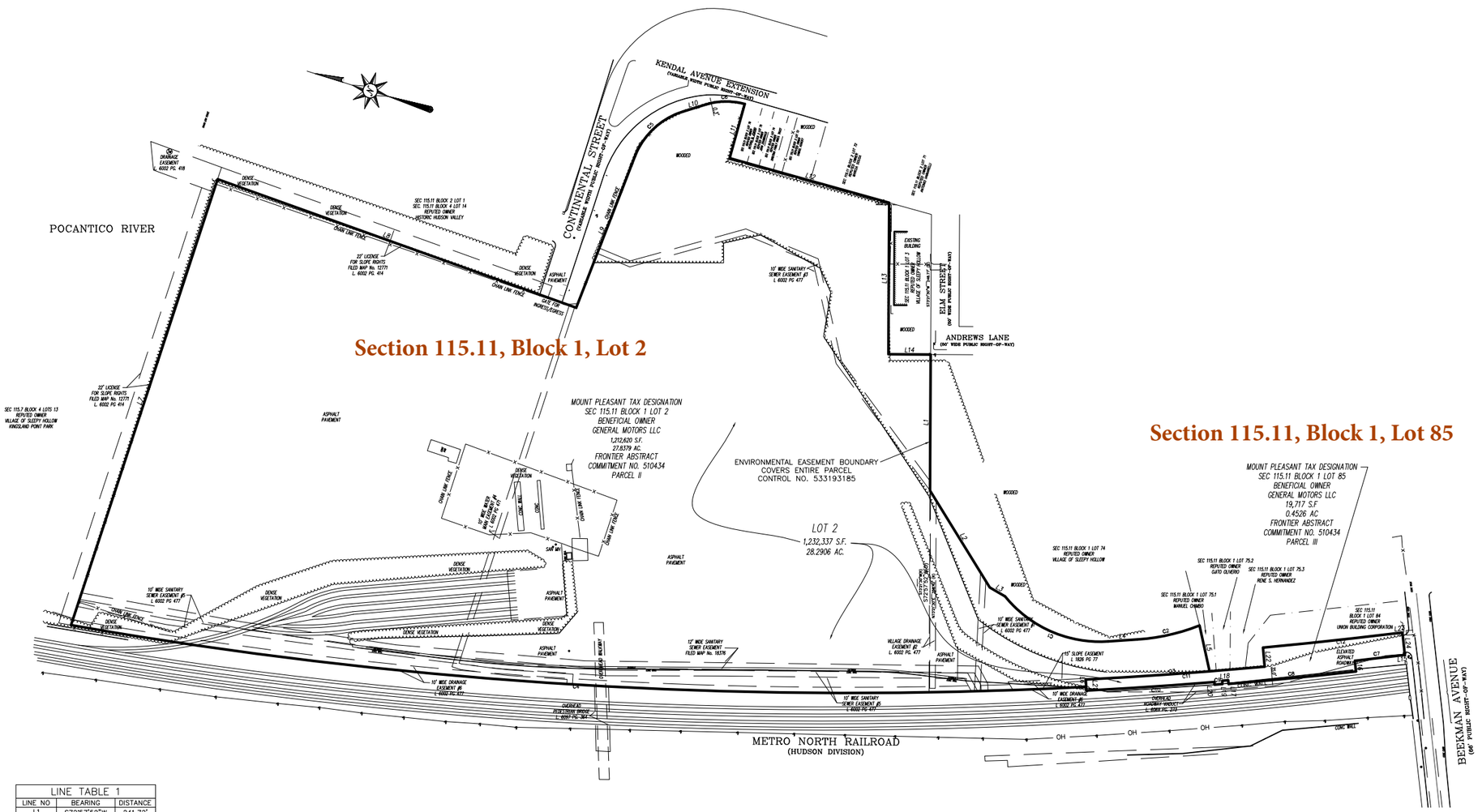
Exhibit I-1 - Tax Map Designation
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation



LINE TABLE 1		
LINE NO	BEARING	DISTANCE
L1	S72°57'52"W	241.72'
L2	S41°01'06"W	202.35'
L3	S12°56'06"W	31.38'
L4	S21°05'34"E	52.00'
L5	S60°20'39"W	83.39'
L6	S69°41'44"W	13.00'
L7	S89°07'56"E	834.01'
L8	S02°25'04"W	676.68'
L9	S86°06'26"E	288.55'
L10	S34°29'16"E	42.32'
L11	S88°16'04"W	100.00'
L12	S01°43'56"E	294.27'
L13	S72°57'52"W	269.30'
L14	S17°02'08"E	75.00'

LINE TABLE 2		
LINE NO	BEARING	DISTANCE
L15	N24°19'14"W	7.34'
L16	S66°16'04"W	19.06'
L17	N67°53'25"E	6.65'
L18	N22°04'27"W	10.90'
L19	S67°58'05"W	5.89'
L20	N68°04'05"E	4.69'
L21	N69°41'44"E	19.61'
L22	N67°24'52"E	34.00'
L23	S24°19'14"E	7.75'
L24	S66°16'16"W	40.00'

CURVE TABLE 1						
CURVE NO.	RADIUS	LENGTH	TANGENT	CH. BRG.	CH. DIST.	DELTA
C1	217.00'	207.47'	112.43'	S06°17'48"W	199.66'	54°46'45"
C2	367.00'	113.78'	57.35'	S29°58'28"E	113.33'	17°45'48"
C3	8004.95'	220.45'	110.23'	N21°05'37"W	220.44'	01°34'40"
C4	8017.95'	1809.99'	908.86'	N13°50'15"W	1806.15'	12°56'03"
C5	134.01'	120.73'	64.81'	S60°17'51"E	116.69'	51°37'10"
C6	122.50'	70.03'	36.00'	S18°06'36"E	69.08'	32°45'20"

CURVE TABLE 2						
CURVE NO.	RADIUS	LENGTH	TANGENT	CH. BRG.	CH. DIST.	DELTA
C7	8010.95'	82.26'	41.13'	N24°01'35"W	82.26'	0°35'18"
C8	8030.01'	227.39'	113.70'	N22°55'16"W	227.39'	1°37'21"
C9	8029.25'	14.00'	7.00'	N21°58'55"W	14.00'	0°06'00"
C10	8024.56'	227.92'	113.97'	N21°07'06"W	227.91'	1°37'38"
C11	8004.95'	318.68'	159.36'	S21°26'42"E	318.65'	02°16'51"
C12	7970.95'	241.37'	120.70'	S23°27'11"E	241.36'	1°44'06"
C13	8004.95'	98.23'	49.11'	S23°14'03"E	98.23'	00°42'11"

IT IS A VIOLATION OF THE STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. UNATHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
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SURVEYOR'S CERTIFICATION

TO: General Motors LLC; Town of Mount Pleasant Industrial Development Agency; Lighthouse Landing Venture LLC

I HEREBY CERTIFY THAT THIS SURVEY HAS BEEN PERFORMED IN THE FIELD UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, BELIEF, AND INFORMATION, THAT THIS SURVEY HAS BEEN PERFORMED IN ACCORDANCE WITH CURRENTLY ACCEPTED ACCURACY STANDARDS. THAT THE PROPERTY LINES AND RELATIONSHIP OF BUILDINGS AND OTHER STRUCTURES TO THE PROPERTY LINES AND THE LAND INDICATED HEREON IS CORRECT, AND THAT THERE ARE NO ENCROACHMENTS OF BUILDINGS OR STRUCTURES ONTO SAID LAND EXCEPT AS SHOWN.

THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.

NOT VALID UNTIL SEALED

9/3/2014
DATE

JACK W. SHOEMAKER
NEW YORK PROFESSIONAL LAND SURVEYOR #50495

OWNER'S ENDORSEMENT

Approved for filing in the Westchester County Clerk's Office, Division of Land Records

General Motors LLC, Beneficial Owner — Date
300 Renaissance Center
MC 482-C19-GRE
Detroit, Michigan 48265-3000

NO JURISDICTION
Westchester County Department of Health
New Rochelle, New York

This map does not constitute a subdivision as defined by Chapter 873, Article X of the Westchester County Sanitary Code. Permission is hereby granted for the filing of this map in the Office of the Westchester County Clerk, Division of Land Records. The appearance of the signature of the Commissioner of Health on this plat is not an endorsement and does not in any way indicate conformance with the Department's Rules and Regulations pertaining to water supply and sewage disposal.
Each purchaser of property shown hereon shall be furnished a true copy of this plat showing this endorsement. Any erasures, changes, additions or alterations of any kind, except the addition of signatures of other approving authority and the date thereof made on this plan after this approval, shall invalidate this approval:

_____ Date: _____
Approved by the Assistant Commissioner of Health on Behalf of the Department of Health

Approved by resolution of the Planning Board of the Village of Sleepy Hollow, New York, on the __ day of _____, 2014, and subject to all requirements and conditions of said resolution. Any change, erasure, modification, or revision of this plat, as approved, shall void this approval. Signed this __ day of _____, 2014, by

_____
Chairman

_____
Secretary

TYPE OF SURVEY: FINAL SUBDIVISION PLAT

FIRST ORDER, LLC
1700 SULLIVAN TRAIL, SUITE 3
EASTON, PA 18040
Phone (610) 438-5840 Fax (610) 438-0004

SITE ADDRESS: 60 CONTINENTAL STREET
199 BEEKMAN AVENUE
SLEEPY HOLLOW, NEW YORK

LIGHTHOUSE LANDING RIVERFRONT DEVELOPMENT
SLEEPY HOLLOW, NEW YORK

JOB NO: 3338

DATE: **MAY 29, 2014**
REVISIONS:

No.	DATE	DESCRIPTION
1	8-25-14	PER ENGINEERS COMMENTS
2	9-03-14	PER ENGINEERS COMMENTS

0' 100' 200' 300'
SCALE: 1" = 100'

SHEET 1 OF 2

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Source: USGS White Plains Quadrangle

Exhibit I - 2

Project Location

East Parcel Redevelopment DEIS

Sleepy Hollow LDC

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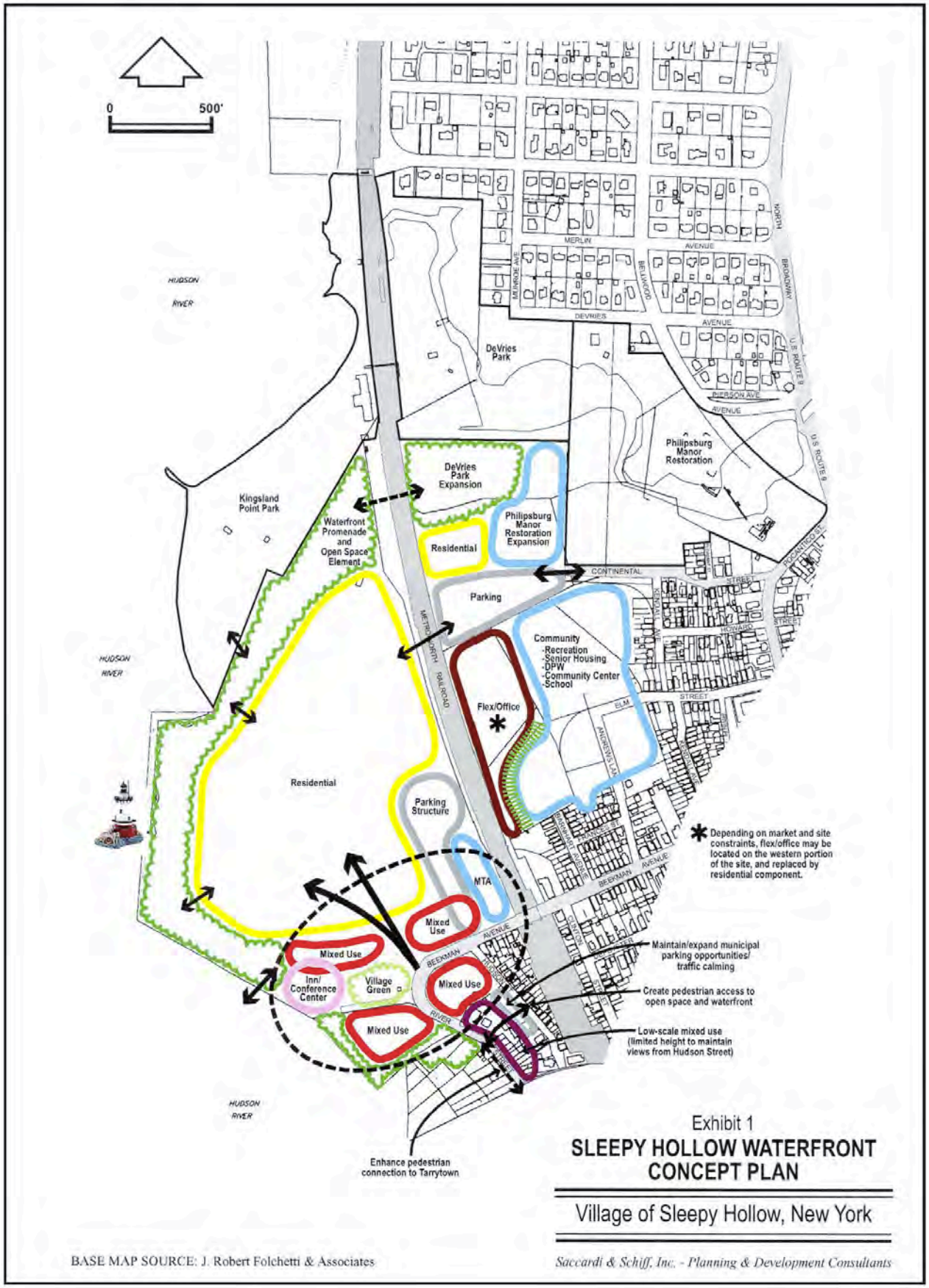

Map Source: Waterfront Linkage Study

Exhibit I-3
Sleepy Hollow Water Front Concept Plan
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Source: Lighthouse Landing DEIS

Exhibit I-4 Illustrative Site Plan Lighthouse Landing DEIS
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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SOURCE: Arnold & Porter, Letter to Sleepy Hollow Village Administrator, June 5, 2003

DIVNEY • TUNG • SCHWALB

PROPOSED SITE PLAN FOR PHILIPSBURG MANOR EXPANSION SITE
LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK
FIGURE NO. III.A-7A

Source: Lighthouse Landing DEIS

Exhibit I-5, Proposed Plan Philipsburg Manor Expansion Site
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Exhibit I-6 East Parcel Redevelopment DEIS

GM ROSELAND PROPERTY COMPANY

DIVNEY • TUNG • SCHWALBE

DEIS ILLUSTRATIVE PLAN

LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

PFEIS FIGURE NO. I-1

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Exhibit I-7 East Parcel Redevelopment DEIS

FEIS ALTERNATIVE PLAN - ILLUSTRATIVE PLAN

LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

FEIS FIGURE NO. II-2

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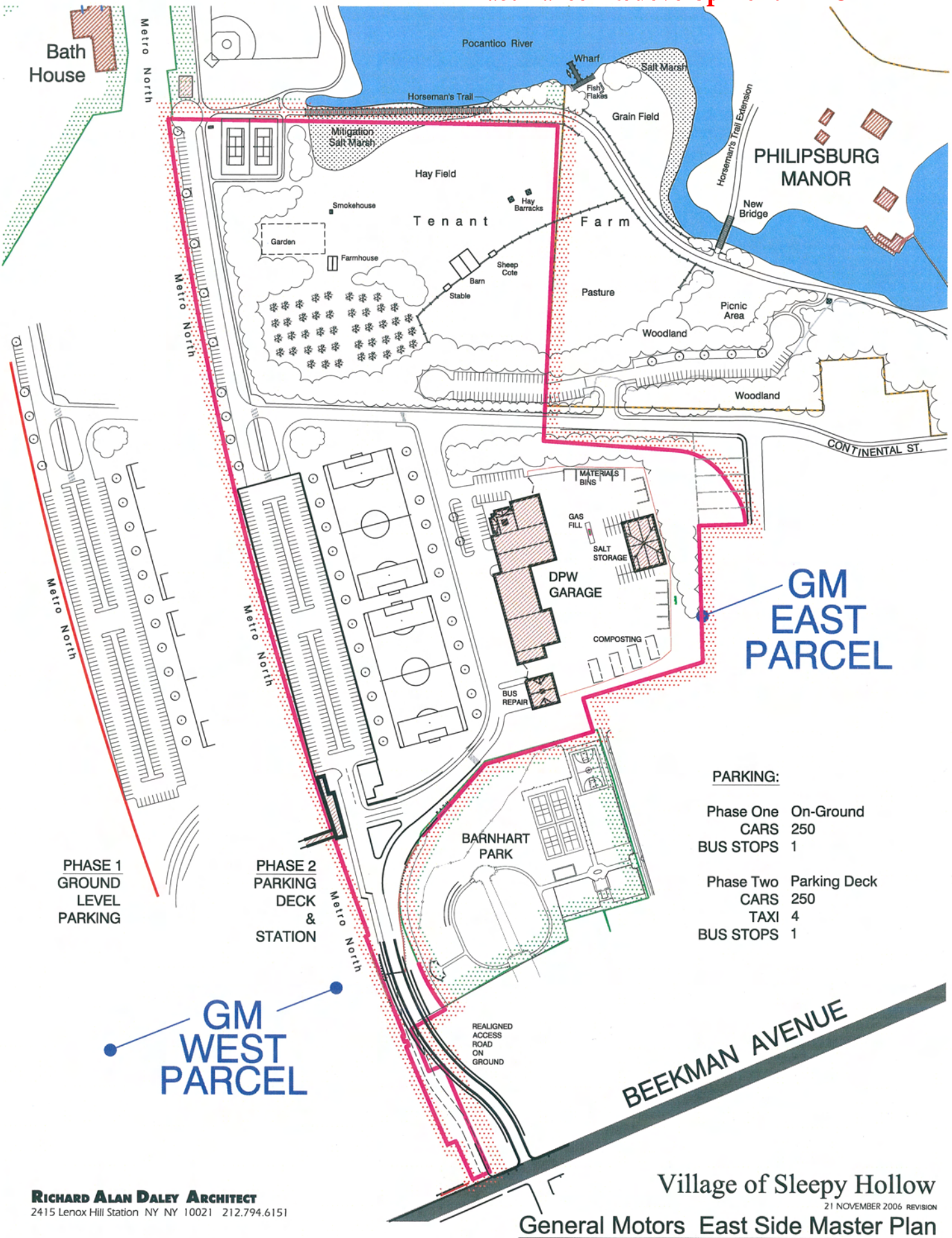
Exhibit I-8
East Parcel Redevelopment DEIS



Richard Alan Daley Architect
2415 Lenox Hill Station NY NY 10021 212.794.6151

Village of Sleepy Hollow
21 NOVEMBER 2006 REVISION
General Motors East Side Master Plan
FEIS FIGURE NO. II.IV–3

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LANDSCAPE DESIGN (DRAFT)

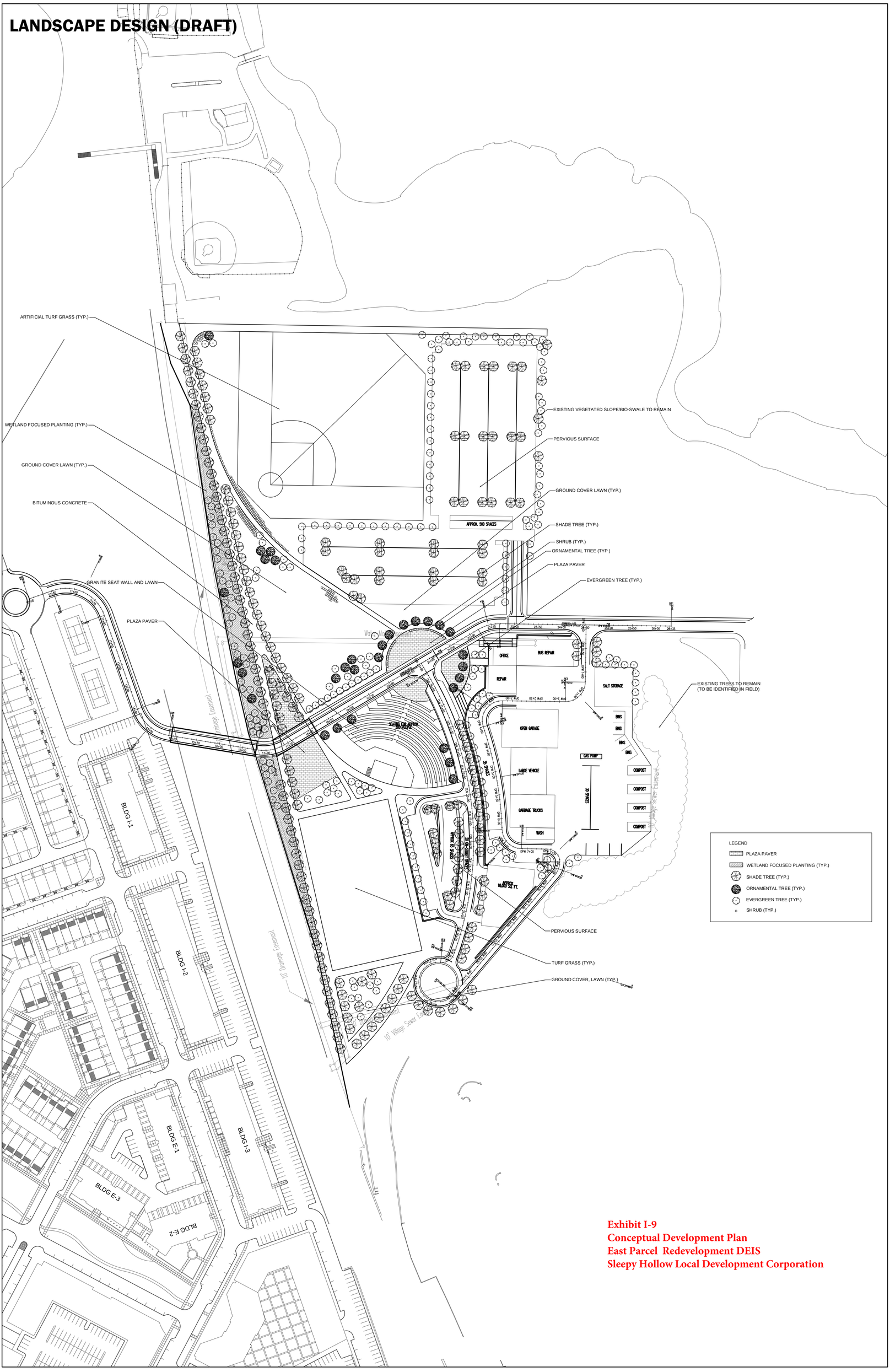

Exhibit I-9
Conceptual Development Plan
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Concept A - Concept Plan Diagram

Exhibit I-10 Alternative Layouts
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Concept B - Concept Plan Diagram

Exhibit I-11 Alternative Layouts
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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II. Description of Proposed Action

A. Project Location

The Project Site (also known locally as the East Parcel) consists of two separate tax parcels totaling approximately 28.29 acres, located in the Village of Sleepy Hollow, Westchester County, New York identified as Tax Section 115.11, Block 1, Lots 2 and 85 on the Town of Mt. Pleasant Tax Map. Refer to Exhibit II-1, Tax Parcel Plan. The Project Site is generally bounded by the Metro-North rail corridor to the west; DeVries Park and Pocantico River to the north; Philipsburg Manor Restoration to the northeast; Continental Street, residential properties and the Sleepy Hollow Senior Center to the east; and Beekman Avenue to the south. Refer to Exhibit II-2 Project Location. The East Parcel was once part of a larger, 96± acre assemblage of properties that made up the former General Motors North Tarrytown Assembly Plant property (the GM Site). Other properties comprising the former GM Site include the approximately 64.5 acre West Parcel and the approximately 1.7 acre South Parcel.

B. Existing Site Character and Site Features

Exhibits II- 3 through II- 3A provide a photo-depiction of the East Parcel and immediate neighborhood. Existing structures/features include an approximately 550 linear foot viaduct access roadway connecting the East Parcel to Beekman Avenue, which is proposed to be demolished and removed. Located in the western portion of the Project Site is an elevated pedestrian overpass that once connected the East and West Parcels allowing GM employees to walk to the Assembly Plant from the East Parcel Parking lot. This structure is proposed to be removed by the developer of the West Parcel. A series of railroad sidings are located in the western portion of the Project Site: in the northwest corner of the East Parcel, there are six existing rail sidings of approximately 570 linear feet that are proposed to be removed; and, a series of three rail sidings running parallel to the existing Hudson Line rail tracks for approximately 1,600 linear feet. At the time of the circulation of this DEIS document, the LDC has entered into a License Agreement (refer to Appendix J of this DEIS) with Metro North Railroad for the use of the three rail sidings which has a land area of approximately 1.354 acres (hereinafter, the MNR Parcel). Metro North has historically used these sidings for railroad layup yard, railroad side track and storage of rail

cars, locomotives, work equipment and associated material, and rail repair. Subdivision proceedings have been commenced before the Village of Sleepy Hollow Planning Board that would eventually allow the LDC to sell the MNR Parcel to Metro North.

With the exception of the eastern most portion of the East Parcel which is steeply-sloped and heavily wooded, the balance of the Project Site is flat and covered in asphalt pavement, a remnant of its prior use as employee parking for the former GM Plant. Given the East Parcel's location in relation to the Pocantico River, portions of the Project Site are prone to flooding. This issue is covered in greater detail in Section III.C, Stormwater Management of this DEIS.

For the past several years, including a time prior to the formal transfer of the East Parcel to the LDC, the Village of Sleepy Hollow DPW has been operating a compost facility for the benefit of the Village. Site activities include the use of trucks to bring material to the East Parcel, mechanical equipment to move and process organic material and the use of tractor-trailer vehicles to move the material from the Project Site. Tractor trailers have informally been using Continental Street for access to and from Pocantico Street and ultimately Route 9. While Continental Street is a one-way street westbound, the larger vehicles use the roadway eastbound so as to avoid the narrow, constricted roadway system along Kendall Avenue and Howard Street. In addition, the operators of the Philipsburg Manor Restoration have used portions of the East Parcel as overflow parking for some of their larger events. Refer to Section III.D, Traffic and Transportation for additional information on traffic and roadway impacts of the Proposed Action.

Noise monitoring was conducted as part of the Lighthouse Landing EIS and in a subsequent session in December 2015 as part of a filling permit application for the East Parcel (refer to Appendix D of this DEIS). Ambient noise measurements taken at Pocantico Street near Continental Street[1] were approximately 60 decibels (DbA) which is consistent with a typical suburban/developed neighborhood. Noise levels in and around the Project Site are

[1] Lighthouse Landing DEIS, page III.K-3

punctuated by spikes associated with passing diesel-electronic trains, Route 9 vehicle traffic and overhead air traffic. Refer to Section III.G – Construction for additional information on construction related impacts.

C. Surrounding Land Use

The East Parcel is located at the terminus of Continental Street. Surrounding land uses include the following (refer also to Exhibit II-4, Existing Land Use): to the north is the 18.6± acre DeVries Park recreation complex which includes two baseball fields (one of which is lighted), playground, pavilion, two paddle tennis courts, storage building, concession stand and associated parking. The East Parcel also abuts a portion of the Pocantico River.

To the East is the overflow parking area for Philipsburg Manor Restoration, the residential neighborhood along Kendall Avenue, Elm Street, Andrews Lane and Barnhart Avenue. The neighborhood to the East is separated from the East Parcel by an approximately 50 foot grade change above the Project Site. Within the neighborhood to the East is the Village of Sleepy Hollow's James F. Galgano Senior Center located at 55 Elm Street and the 2.8± acre Barnhart Park which includes both active and passive recreation facilities.

South of the East Parcel is the Beekman Avenue corridor which has a mix of residential and commercial uses and the former UAW property.

To the West of the Project Site are the active rail lines serving the Metro-North, Amtrak and freight train service. Beyond the Metro-North rail lines is the 68 ± acre Edge-on-Hudson project (what was formerly the site of the GM North Tarrytown Assembly Plant site which was initially proposed as Lighthouse Landing[2]).

[2] Lighthouse Landing was the project name for the redevelopment of the former GM North Tarrytown Assembly Plant. That project includes 1,177 residential units, approximately 125,000 s.f. of commercial space and a 140 key hotel, (SEQR documents can be found at the Village of Sleepy Hollow Web-site http://www.sleepyhollowny.gov/home/pages/general-motors-documents). The ownership of Lighthouse Landing has since changed hands and the project is now known as Edge on Hudson.

The first phase of redevelopment for Edge on Hudson was recently approved and included 306 residential units in a mixed configuration of multi-family apartments, senior housing, condominium and townhouse units along with open space, refer to Exhibit II-5, Phase 1 Site Plan Edge on Hudson.

D. Project Description

During the course of the preliminary planning for the Edge on Hudson property, the Village identified that it was going to need a new, contemporarily designed Department of Public Works (DPW) facility given the growing demand for services from developments like the County House Road subdivision, the Kendal on Hudson Continuing Care Retirement Community, Ichabod's Landing, along with the anticipated demands from Edge on Hudson. The existing DPW facility is located along River Street in the Southwest corner of the Village. The existing facility is significantly under-sized to the point that vehicles and equipment are, or have been stored on the West Parcel (which is now precluded because of the Edge on Hudson development being initiated), on the East Parcel and at the Villages water pumping station on Neperhan Road in the Village of Tarrytown. The proposed DPW building program was developed with input from the DPW and is reflected in Exhibit II-6, Proposed Site Plan. The Proposed Project, at full build-out, would include the following:

1. **DPW Facility.** An approximately 4 acre portion of the East Parcel would be devoted to a new DPW facility, including:
    - An approximately 34,150 square foot facility with the ability to accommodate an estimated 40 vehicles, an open garage, repair garage, a washbay, and offices for DPW staff. The proposed building would be approximately 35 feet high.
    - An approximately 7,200 square foot salt storage shed.
    - An approximately 3,850 square foot bus repair garage for the Tarrytown Union Free School District.
    - Approximately 11 material bins
    - Composting areas
    - Gas filing station

- Parking for approximately 65 vehicles for DPW employees, although it is noted this is significantly more parking than the Village needs for its existing and contemplated DPW workforce.

Detailed elevations have yet to be developed showing the exterior of the proposed DPW facility, however, the LDC has prepared a series of precedent examples of the type of architectural treatment they would like to see incorporated as part of the final design of the new DPW facility. This includes a design treatment that is not utilitarian in concept but respects Sleepy Hollow's rich history such that the main garage takes on more of an image of a series of barns with corresponding coloration, façade and roof treatments when viewed from a distance, refer to Exhibit II-7, Precedent Examples.

2. **Parking Resources.** In the eastern corner of the Project Site is an approximately 5 acre parking facility with the ability to accommodate approximately 500 vehicles. The Sleepy Hollow LDC has made a commitment to work with Historic Hudson Valley (HHV), the operator of the Philipsburg Manor Restoration, to allow for shared use of this parking area so that HHV could host selected special events that would help support their operation and mission. It is contemplated that this parking facility would, on selected occasions, be jointly shared with the adjacent Philipsburg Manor Restoration facility to accommodate parking for their larger events. This can be accomplished by temporarily gating off the access along Continental Street extension and the proposed interior road. Access could then be directed through the existing Philipsburg Manor Restoration overflow parking prior to the event. After the event, all gates could be opened to help better disperse traffic flow. It is contemplated that HHV would be responsible for traffic management during these special events. Additional parking for approximately 85 vehicles is proposed in the southern portion of the East Parcel proximate to a currently contemplated amphitheater and recreation field. An additional 45 parking spaces are proposed to be located below the proposed community center building in the southern portion of the Project Site.

3. **Continental Street Overpass**. As part of the Lighthouse Landing FEIS[3], an evaluation was examined to create an overpass to connect the East and West Parcels so as to enhance circulation to and from the West Parcel to Route 9 and then to the surrounding highway network. Exhibit II-8 provides a conceptual layout and Exhibit II-9 illustrates a general profile of the proposed overpass. It is noted, that as part of the Special Permit and Riverfront Development Concept Plan approval for Lighthouse Landing, an easement area was reserved to allow for the overpass to land on the now Edge on Hudson site and connect with a proposed roadway in the northern end of that site. The proposed overpass would include one lane of traffic in each direction and a sidewalk for pedestrian access. The overpass would be designed to a standard that could accommodate the largest of the DPW trucks. Refer to Section III.B – Visual Resources of this DEIS for a discussion of the relationship of the Proposed Action to surrounding neighborhood.

4. **Site Circulation**. As currently proposed, primary access to the Project Site will be from Continental Street along its current configuration and alignment. As noted above Continental Street is proposed to continue west over the Metro North rail tracks and terminate in the northern portion of the Edge on Hudson site. Access to the new DPW facility will be from Continental Street, roughly opposite the existing access to the Philipsburg Manor Restoration overflow parking facility. Access to the proposed parking facility in the northeast corner of the Project Site would be from Continental Street. Continuing west a separate access road will extend south from the Continental Street extension terminating in a cul-de-sac and providing access to the proposed amphitheater, recreation facilities and community center building. Pedestrian and bicycle access is proposed as part of an interconnected series of trails running throughout the western portion of the Project Site. The proposed trail system would connect to the Village's recreation facilities in DeVries Park in the north with Barnhart Park in the south. The proposed Continental Street Overpass would include a sidewalk for pedestrian access connecting the East and West Parcels. Given the change in

[3] Lighthouse Landing FEIS page II.D-5 and Exhibit II.D-1

elevation it is contemplated that a separate elevated pedestrian walkway would be created connecting the upper level of the proposed Community Center with Barnhart Park and the nearby Senior Center. A portion of the Horseman's Trail runs through the Philipsburg Manor Restoration property and is subject to closure when that property is not in operation. It is proposed that an alternative route for the Horseman's Trail be created using the proposed new sidewalk system along Continental Street leading out to Route 9.

5. **Recreation and Cultural Facilities**. In the western portion of the Project Site north and south of the proposed Continental Street overpass has been devoted to active recreation fields/facilities. Currently contemplated north of the Continental Street Overpass is a full size baseball diamond and an open space area that could be used for non-organized play. South of the overpass there is room for an additional multi-purpose field, or as an alternative other active recreation uses (e.g., court sports). At the intersection of Continental Street and the Southern Access Road is a proposed multi-purpose amphitheater/outdoor performance space which is contemplated to accommodate approximately 300 people. Surrounding this intersection is a proposed pedestrian plaza and public gathering space which has yet to be programmed. In addition, there is a proposed artist workspace that would be created to support other efforts by the Village to expand artistic and cultural efforts proposed to be located on open space in the West Parcel. In the southern portion of the Project Site, just south of the proposed DPW facility, is a proposed 10,000 s.f. Community Center building. Programming for the proposed Community Center is to be determined in coordination with Village of Sleepy Hollow.

E. Utilities

The East Parcel has an existing 18-inch water main that traverses the Project Site. The water main enters the site from Continental Street and then cuts across the East Parcel, passes under the Metro-North rail lines and terminates at the West Parcel.

There are two sanitary sewer mains located on the East Parcel: (1) a 24 inch reinforced concrete pipe (RCP) trunk sanitary sewer (the County Trunk Line) owned by Westchester County. The County Trunk Line runs along the western edge of the East Parcel adjacent to the Metro-North rail lines before turning west and connecting to a 30 inch RCP that crosses under the Metro-North rail lines to the West Parcel; and, (2) a 24 inch line (the Village Line) that runs along the eastern portion of the property and follows along the bottom of the hillside eventually connecting to the County Trunk Line where the County Trunk Line cross under the Metro-North rail line to the West Parcel. It is currently proposed to relocate the Village line so that it follows the proposed southern access road and ultimately connects to the existing 30 County Trunk Line.

F. Stormwater Management

The East Parcel collects drainage from the paved surfaces by a series of ditches and swales that directs stormwater directly into the Pocantico River. Limited water quality treatment is provided by onsite catch basins, and there are no detention measures of any kind on the East Parcel. It is noted that the proposed plan will convert approximately 17 acres from impervious to pervious as the existing asphalt is scarified and covered with pervious fill material. Water quality will be provided using bio-swales and bio-retention areas or rain gardens in selected locations. It was noted in the Lighthouse Landing DEIS[4] that 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. These ditches were likely constructed for stormwater management purposes during the operation of the Project Site as part of the former GM operations. These ditches appear to connect to the Pocantico River via a pipe that extends off the property to the north. The proposed plan includes the use of porous pavement treatment on the proposed parking area to be located in the northeastern corner of the Project Site.

[4] Lighthouse Landing DEIS, p. III.B-36, 01/11/05

G. Construction and Site Disturbance

Much of the East Parcel was formerly an embayment of the Hudson River, proximate to the mouth of the Pocantico River. By the early 1920's the then Village of North Tarrytown purchased the property for use as municipal landfill and then continued to add soil and fill on top of the refuse and throughout the rest of the low-lying areas of the East Parcel to reclaim the area for use as school athletic fields[5]. Due to prior Site use, the East Parcel is subject to a Site Management Plan (SMP) under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC), refer to Appendix F for a copy of the SMP.

As part of the SMP, redevelopment of the East Parcel will require:

(1) The use of a demarcation barrier consisting of either a geotextile fabric or a structural surface (e.g. concrete or asphalt) over soil of historic fill material.

(2) a final barrier cap system throughout the entire site consisting of either or a combination of:

-minimum two foot thick soil cover
-pavement
-permanent buildings or similar structures underground

(3) any new underground utility lines will also need to have a trench constructed to separate the historic fill from the new fill surrounding the new utility line

(4) any new buildings will incorporate a soil vapor intrusion mitigation system to mitigate the potential intrusion of methane gas into indoor air space

(5) Given the deteriorated condition of the existing viaduct, the LDC has proposed to demolish the existing above grade structure that connects the East Parcel with Beekman Avenue. Based on the viaduct's condition, the LDC and determined that it would be cost prohibitive to rehabilitate the existing structure to meet contemporary design

[5] Former General Motors Assembly Plant East Parcel Site, Site Management Plan, Arcadis, December 2013, page 3

standards for use by the DPW. Demolition of the existing viaduct structure is proposed to be coordinated with the rebuilding of the Beekman Avenue Bridge by the developers of the West Parcel.

(6) The LDC has already received a filling permit from the Village of Sleepy Hollow Planning Board to bring fill material onto the East Parcel for processing. The NYSDEC case officer assigned to the East Parcel has signed off on this import of fill, refer to Appendix I of this DEIS. Distribution of the fill material consistent with the objectives of the SMP would precede Project Site development as part of a Site Plan approval from the Village of Sleepy Hollow Planning Board.

(7) The first phase of construction activities would be to prepare the approximately 4 acre portion of the East Parcel for development of the new DPW facility. This includes site grading to respond to the SMP and location within a mapped floodplain, creating an access way from Continental Street as it enters the East Parcel to the DPW site, installation of utilities and construction of new buildings consistent with SMP requirements.

(8) Depending on timing, the overpass connecting the East and West Parcel would be the next development component that would include the construction of the ramps heading up to the bridge and installation of the bridge itself.

(9) It is proposed that the installation of the recreation fields, the proposed 500 space parking field would be commenced at approximately the same time as the construction of the proposed DPW facility. Access roads connecting the recreation fields and parking facilities would be completed at this time. Depending on the extent of the proposed program the Village intends on constructing, the community center building could be built out as part of this phase.

(10) As part of the East Parcel construction process, disturbance to existing wetlands associated with the drainage ditches in the western portion of the East Parcel would be

required. As mitigation, a new wetland mitigation area of approximately 0.84 acres is proposed to be created along the western portion of the Project Site.

H. Purpose, need and benefits of the Proposed Action

As part of an initial comprehensive evaluation of the redevelopment contemplated for the RF-Riverfront Development District associated with the then proposed Lighthouse Landing project, the Village determined that the existing DPW facility located on River Street would need to be relocated to a new, contemporary facility to accommodate the anticipated growth associated with the RF District Projects (Ichabod's Landing, Rivers Edge and now Edge on Hudson). Current DPW operations are spread out over multiple locations: the current 1.4 ± acre site on River Street; use of a portion of the Village's water pumping station located on Neperan Road in the Village of Tarrytown; and, the East Parcel for composting material operations.

Benefits of the Proposed Action include the consolidation of DPW operations into one location with the ability to store the majority of vehicles indoors and away from the elements. Additional benefits include enhanced circulation allowing for traffic from the West Parcel to use either Beekman Avenue or Continental Street/Pocantico Street to access Route 9. The creation of new recreation facilities will enhance the amenities available to existing and future residents. Further, the 500± vehicle parking facility located in the northeastern portion of the Project Site can be configured so that a shared parking arrangement can be accommodated with the Philipsburg Manor Restoration that would allow them to host larger events with a dedicated parking resource available to them. In addition, benefits to the Village include a new community center, outdoor performance and public gathering space and an enhanced trail network that would more effectively link existing and contemplated public resources located to the north (DeVries Park), the east (Philipsburg Manor Restoration and the Horseman's Trail), the south (Barnhart Park and the Village's Senior Center) and the west (open spaces associated with the new Edge on Hudson development).

I. Required Permits and Approvals, Involved and Interested Agencies

The "involved" agencies under the State Environmental Quality Review Act, and the Permits and approvals they will grant, include:

a. Village of Sleepy Hollow
   1. Village Board of Trustees – Riverfront Development Concept Plan, Special Permit Approval for the Proposed Project within the RF District
   2. Planning Board – Site Development Plan Approval, Wetland/Watercourse Permit, Architectural Review
   3. Tree Commission – Tree Removal Permit
   4. Building Department – Building Permit, Development Permit for projects within areas of special flood hazard

b. Westchester County
   1. Westchester County Planning Board – Project review under Section 239 of the General Municipal Law
   2. Westchester County Department of Health – Review of extensions of the public water supply and sanitary sewer systems
   3. Westchester County Department of Environmental Facilities – Review of connection to the County trunk sewer line

c. Metropolitan Transit Authority/Metro-North Railroad
   1. Review and approval of construction or demolition activities proposed within adjoining or over the Metro-North property

d. New York State
   1. Department of Environmental Conservation – SPDES permit for construction activities; Water Quality Certification for activities noted below acquiring a U.S. Army Corps of Engineers Permit. Conformance with the DEC approved Brownfield Cleanup Agreement
   2. Department of Transportation – Review of potential improvements within the right-of-way of Route 9 at the intersection of Route 9/Pocantico Street.
   3. Department of State – Coastal Zone Consistency determination for activities noted below requiring U.S. Army Corps of Engineers Permit.

4. U.S. Army Corps of Engineers – Section 404 permit for the filling of wetland ditches associated with the development of open space areas on the East Parcel.

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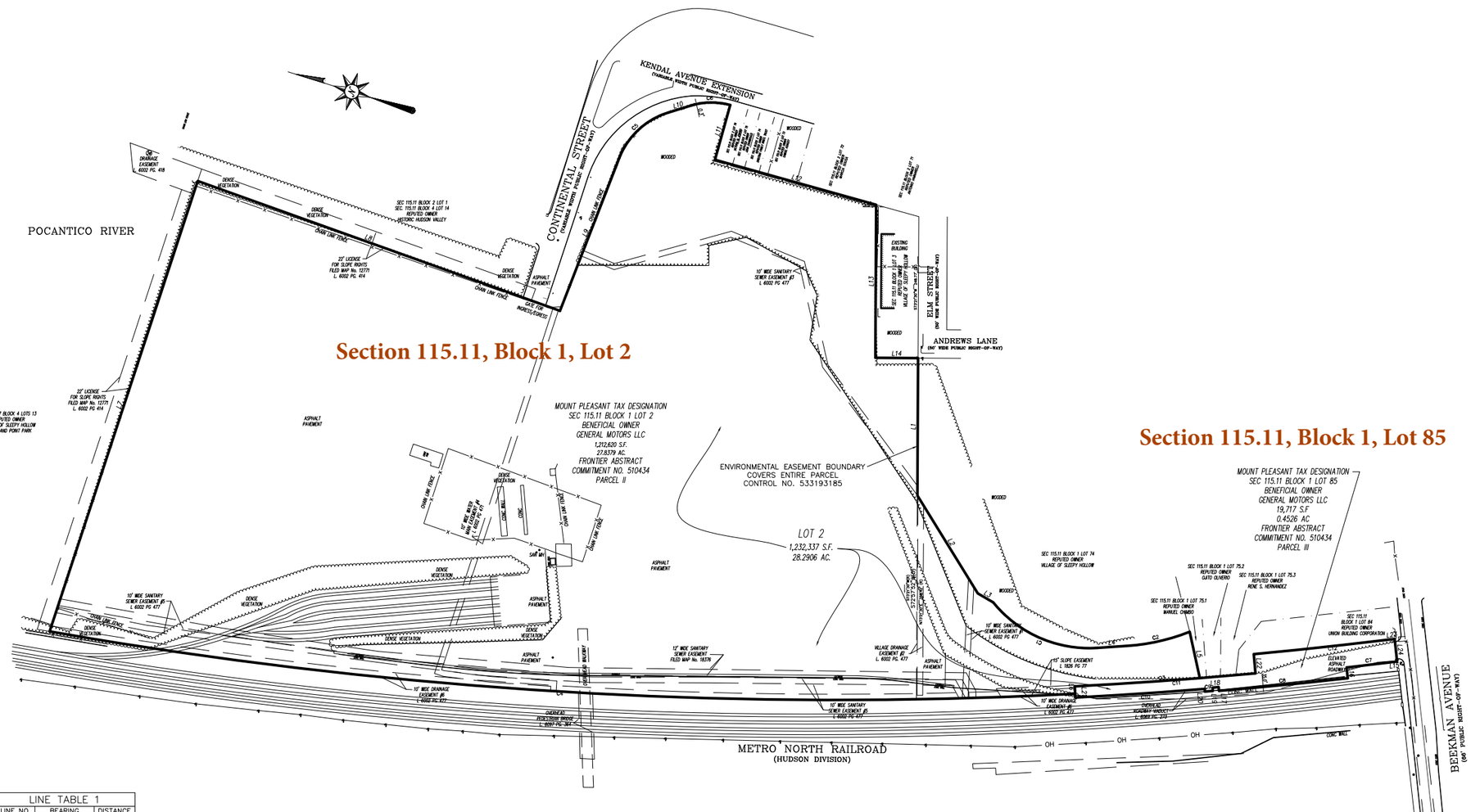
Exhibit II-1 - Tax Map Designation
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation



LINE TABLE 1		
LINE NO	BEARING	DISTANCE
L1	S72°57'52"W	241.72'
L2	S41°01'06"W	202.35'
L3	S12°56'06"W	31.38'
L4	S21°05'34"E	52.00'
L5	S60°20'39"W	83.39'
L6	S69°41'44"W	13.00'
L7	S89°07'56"E	834.01'
L8	S02°25'04"W	676.68'
L9	S86°06'26"E	288.55'
L10	S34°29'16"E	42.32'
L11	S88°16'04"W	100.00'
L12	S01°43'56"E	294.27'
L13	S72°57'52"W	269.30'
L14	S17°02'08"E	75.00'

LINE TABLE 2		
LINE NO	BEARING	DISTANCE
L15	N24°19'14"W	7.34'
L16	S66°16'04"W	19.06'
L17	N67°53'25"E	6.65'
L18	N22°04'27"W	10.90'
L19	S67°58'05"W	5.89'
L20	N68°04'05"E	4.69'
L21	N69°41'44"E	19.61'
L22	N67°24'52"E	34.00'
L23	S24°19'14"E	7.75'
L24	S66°16'16"W	40.00'

CURVE TABLE 1						
CURVE NO.	RADIUS	LENGTH	TANGENT	CH. BRG.	CH. DIST.	DELTA
C1	217.00'	207.47'	112.43'	S06°17'48"W	199.66'	54°46'45"
C2	367.00'	113.78'	57.35'	S29°58'28"E	113.33'	17°45'48"
C3	8004.95'	220.45'	110.23'	N21°05'37"W	220.44'	01°34'40"
C4	8017.95'	1809.99'	908.86'	N13°50'15"W	1806.15'	12°56'03"
C5	134.01'	120.73'	64.81'	S60°17'51"E	116.69'	51°37'10"
C6	122.50'	70.03'	36.00'	S18°06'36"E	69.08'	32°45'20"

CURVE TABLE 2						
CURVE NO.	RADIUS	LENGTH	TANGENT	CH. BRG.	CH. DIST.	DELTA
C7	8010.95'	82.26'	41.13'	N24°01'35"W	82.26'	0°35'18"
C8	8030.01'	227.39'	113.70'	N22°55'16"W	227.39'	1°37'21"
C9	8029.25'	14.00'	7.00'	N21°58'55"W	14.00'	0°06'00"
C10	8024.56'	227.92'	113.97'	N21°07'06"W	227.91'	1°37'38"
C11	8004.95'	318.68'	159.36'	S21°26'42"E	318.65'	02°16'51"
C12	7970.95'	241.37'	120.70'	S23°27'11"E	241.36'	1°44'06"
C13	8004.95'	98.23'	49.11'	S23°14'03"E	98.23'	00°42'11"

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SURVEYOR'S CERTIFICATION

TO: General Motors LLC; Town of Mount Pleasant Industrial Development Agency; Lighthouse Landing Venture LLC

I HEREBY CERTIFY THAT THIS SURVEY HAS BEEN PERFORMED IN THE FIELD UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, BELIEF, AND INFORMATION, THAT THIS SURVEY HAS BEEN PERFORMED IN ACCORDANCE WITH CURRENTLY ACCEPTED ACCURACY STANDARDS. THAT THE PROPERTY LINES AND RELATIONSHIP OF BUILDINGS AND OTHER STRUCTURES TO THE PROPERTY LINES AND THE LAND INDICATED HEREON IS CORRECT, AND THAT THERE ARE NO ENCROACHMENTS OF BUILDINGS OR STRUCTURES ONTO SAID LAND EXCEPT AS SHOWN.

THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.

NOT VALID UNTIL SEALED

9/3/2014
DATE

JACK W. SHOEMAKER
NEW YORK PROFESSIONAL LAND SURVEYOR #50495

OWNER'S ENDORSEMENT

Approved for filing in the Westchester County Clerk's Office, Division of Land Records

General Motors LLC, Beneficial Owner — Date
300 Renaissance Center
MC 482-C19-GRE
Detroit, Michigan 48265-3000

NO JURISDICTION
Westchester County Department of Health
New Rochelle, New York

This map does not constitute a subdivision as defined by Chapter 873, Article X of the Westchester County Sanitary Code. Permission is hereby granted for the filing of this map in the Office of the Westchester County Clerk, Division of Land Records. The appearance of the signature of the Commissioner of Health on this plat is not an endorsement and does not in any way indicate conformance with the Department's Rules and Regulations pertaining to water supply and sewage disposal.
Each purchaser of property shown hereon shall be furnished a true copy of this plat showing this endorsement. Any erasures, changes, additions or alterations of any kind, except the addition of signatures of other approving authority and the date thereof made on this plan after this approval, shall invalidate this approval:

_____ Date: _____
Approved by the Assistant Commissioner of Health on Behalf of the Department of Health

Approved by resolution of the Planning Board of the Village of Sleepy Hollow, New York, on the __ day of _____, 2014, and subject to all requirements and conditions of said resolution. Any change, erasure, modification, or revision of this plat, as approved, shall void this approval. Signed this __ day of _____, 2014, by

_____
Chairman

_____
Secretary

TYPE OF SURVEY: FINAL SUBDIVISION PLAT

FIRST ORDER, LLC
1700 SULLIVAN TRAIL, SUITE 3
EASTON, PA 18040
Phone (610) 438-5840 Fax (610) 438-0004

SITE ADDRESS: 60 CONTINENTAL STREET
199 BEEKMAN AVENUE
SLEEPY HOLLOW, NEW YORK

LIGHTHOUSE LANDING RIVERFRONT DEVELOPMENT
SLEEPY HOLLOW, NEW YORK

JOB NO: 3338

DATE: **MAY 29, 2014**
REVISIONS:

No.	DATE	DESCRIPTION
1	8-25-14	PER ENGINEERS COMMENTS
2	9-03-14	PER ENGINEERS COMMENTS

0' 100' 200' 300'
SCALE: 1" = 100'

SHEET 1 OF 2

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Source: USGS White Plains Quadrangle

Exhibit II - 2

Project Location

East Parcel Redevelopment DEIS

Sleepy Hollow LDC

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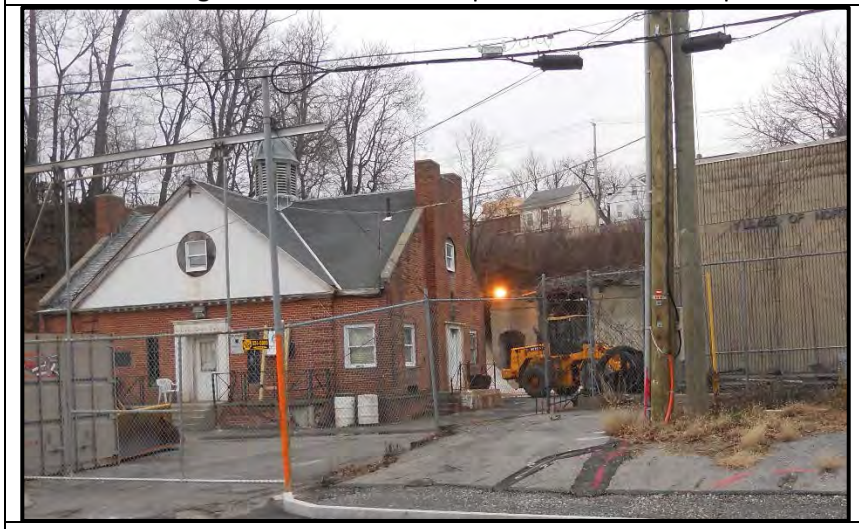
The existing DPW facility is located off of River Street across from Horan's Landing Park which was once part of the DPW complex

Due to lack of available indoor space many of the existing vehicles and equipment must be stored outside exposed to the elements



The existing salt shed is inadequately sized for the needs of the community

Due to lack of available space at the existing DPW facility, vehicles need to be stored off-site on the GM West Parcel and Pump Station

Exhibit II-3 Existing Conditions
East Parcel Redevelopment DEIS

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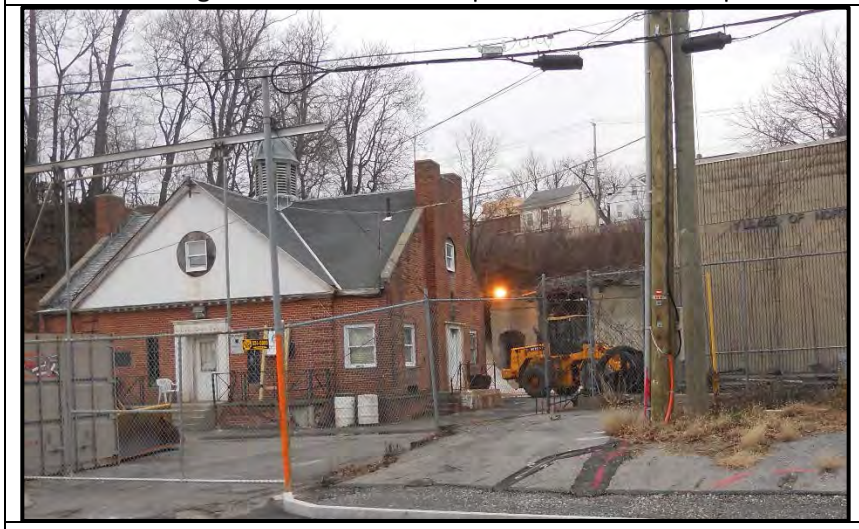

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Exhibit II-3 Existing Conditions
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Photo-location Key Map

Exhibit II- 3A

Existing Conditions Photo-documentation

East Parcel Redevelopment DEIS

Sleepy Hollow LDC

1. View north along Pocantico Street to Route 9

2. Upper Continental Street looking north towards Pocntico Street

3. View west along Continental Street towards Pleasant Street

4. View west along Continental Street from Pleasant Street

5. View east from lower Continental Street towards Kendall Street

6. View west on lower Continental Street towards the East Parcel gate

7. Continental Street terminus at existing gate to the East Parcel

8. Existing access to HHV overflow parking

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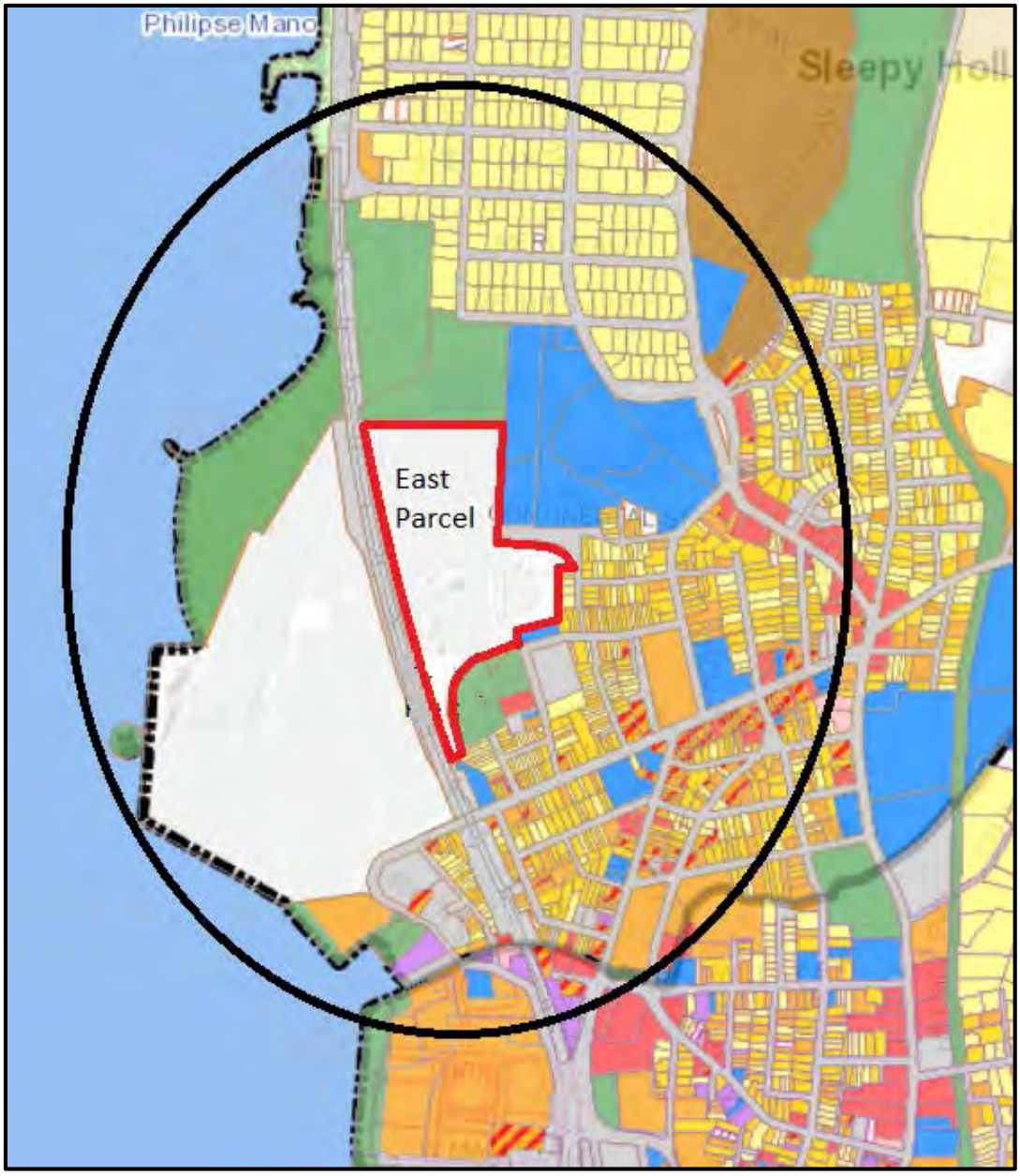

Source: Westchester County GIS

Exhibit II-4

Existing Land Use

East Parcel Redevelopment Draft Environmental Impact Statement

Planning & Development Advisors

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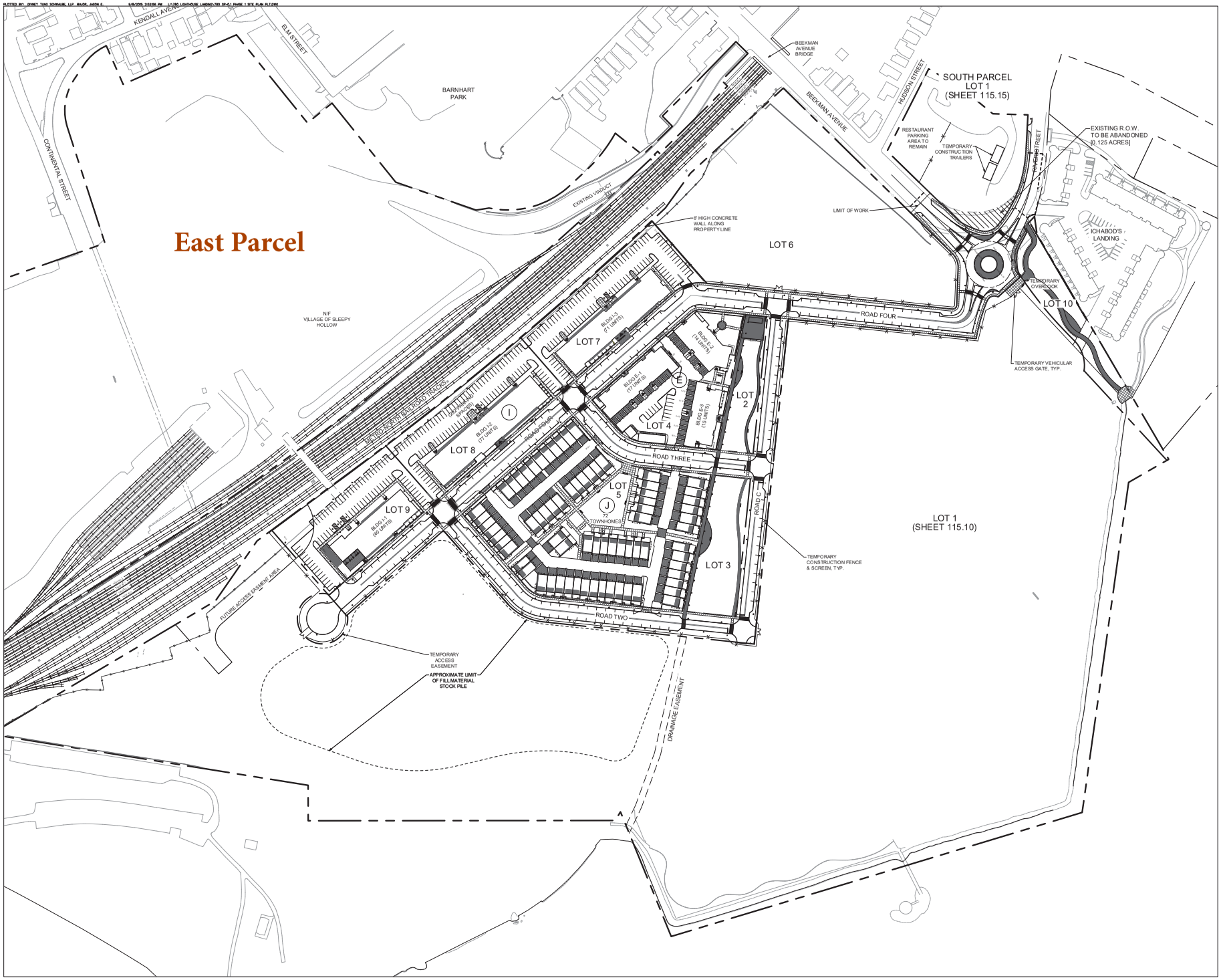

EDGE-ON-HUDSON

Sleepy Hollow, NY

OWNER / APPLICANT

Lighthouse Landing Venture LLC
1270 Avenue of the Americas, Suite 301
New York, NY 10020

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

ARCHITECT / LANDSCAPE ARCHITECT

BARR & MORRISON
Architecture · Interiors
Landscape Architecture

10 East 40th Street
New York, NY 10016

ARCHITECT

Minno & Wasko
80 Lambert Lane, Suite 105
Lambertville, NJ 08530

TRAFFIC ENGINEER

TRC Engineers, Inc.
7 Skyline Drive
Hawthorne, NY 10532

SURVEYOR

Control Point Associates, Inc.
35 Technology Drive, 1st Floor
Warren, NJ 07059

0 40 80 160

SCALE: 1" = 80'

NOTE: ALL SITE DESIGN CONCEPTS AND INFORMATION INDICATED ON THIS DRAWING, AS INSTRUMENTS OF SERVICE, ARE AND SHALL BE THE PROPERTY OF DIVNEY TUNG SCHWALBE, LLP. THE DRAWING WAS CREATED AND DEVELOPED FOR USE ON, AND IN CONNECTION WITH, THE SPECIFIED PROJECT INDICATED HEREON AND SHALL NOT BE USED BY OR DISCLOSED TO ANY PERSON OR ENTITY WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF DIVNEY TUNG SCHWALBE, LLP.

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REVISIONS

NO.	DATE	ISSUE
1	7/15/15	REVISED FOR PLANNING BOARD COMMENTS
2	8/3/15	REVISED FOR PLANNING BOARD COMMENTS

DRAWING TITLE:

PHASE 1 SITE PLAN

DRAWN BY:	CHECKED BY:
JEB	AVT/MSG
PROJECT NO. 780	DATE 05/07/15

DRAWING NO.

SP-0.1

Exhibit II-5 Edge on Hudson Phase 1 Site Plan

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LANDSCAPE DESIGN (DRAFT)

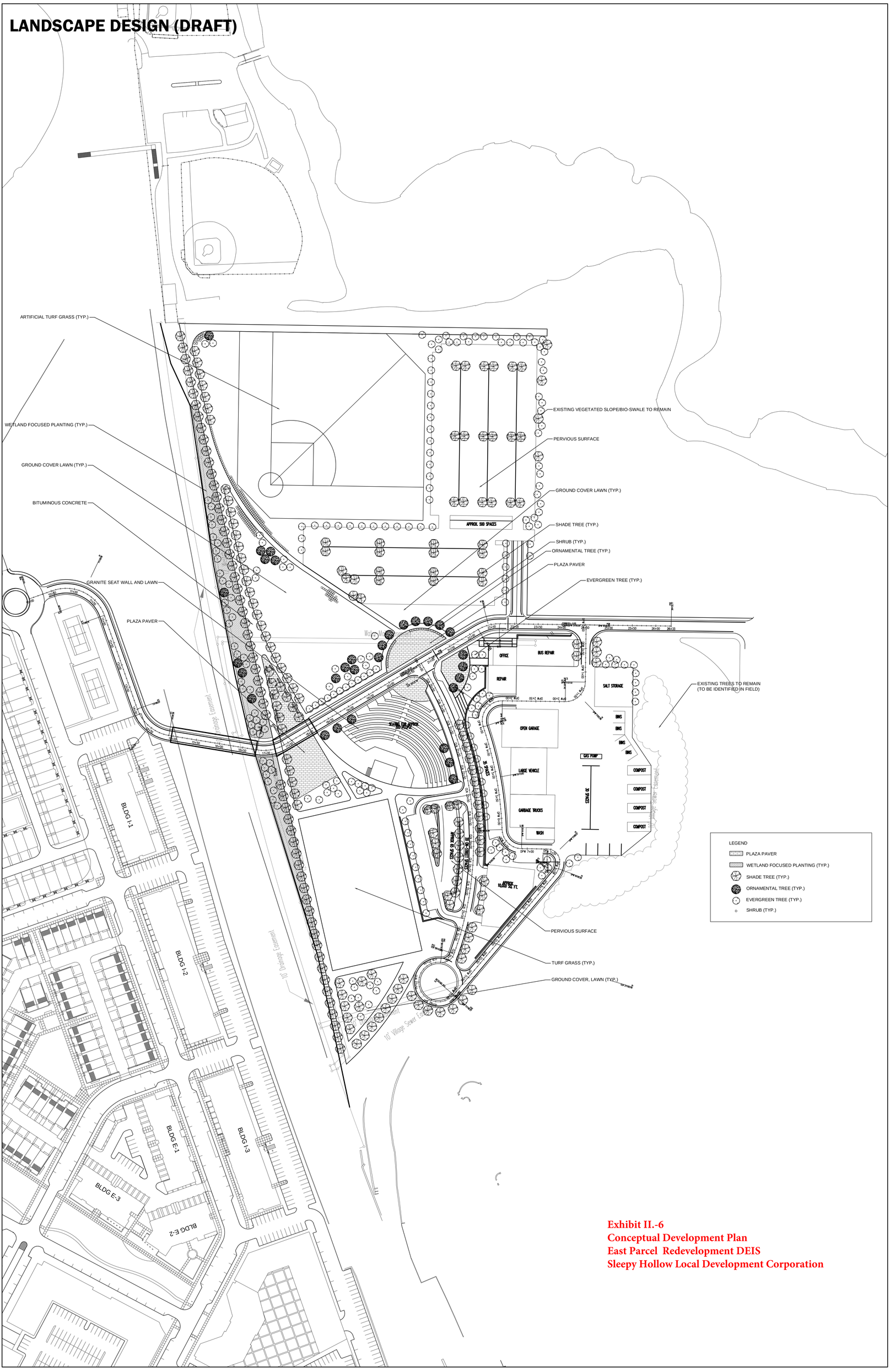

Exhibit II.-6
Conceptual Development Plan
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Figure 1 Representative example of proposed Main DPW Building, source Morton Buidlings

Figure 2 Representative example of interior of proposed DPW building source: Morton Buildings

Figure 3 Representative example of proposed school bus repair garage source: Morton Buildings

Figure 4 Representative example of proposed salt storage shed source: Summit Engineering, Inc.

Exhibit II-7

Representative Examples of Proposed DPW Buildings

East Parcel Redevelopment DEIS

Sleepy Hollow LDC

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Exhibit II-9, Precedent Examples - Bridge Structure and Under Bridge Flex Space
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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III. Existing Environmental Conditions, Anticipated Impacts and Proposed Mitigation

A. Land Use and Zoning

1. Existing Conditions Land Use

Exhibit III. A-1 Existing Land Use, illustrates existing land use conditions within an approximate ¼-mile radius of the Project Site. To the immediate north of the East Parcel is the DeVries Park recreation facility which includes ballfields (one of which is lighted), playground, pavilion, storage building, concession, and paddle tennis courts and associated parking. A portion of the Pocantico River is adjacent to the northern portion of the Project Site. Beyond the Pocantico River is the low density Philipse Manor residential neighborhood. To the east is a higher density residential neighborhood along Continental Street, Howard Street Kendall Avenue and Pleasant Street. Non-residential uses include Barnhart Park, the James Galgano Senior Center, and the Elm Street municipal parking facility. Further east is the Route 9 corridor which consists of automotive, office and other commercial uses. South of the Project Site is the Beekman Avenue corridor which is a mix of higher density residential uses, mixed use with first floor commercial and the former UAW property.

The Project Site is located directly adjacent to the Philipsburg Manor Restoration property. The following description was provided by Historic Hudson Valley (HHV) which owns and operates the facility.

Philipsburg Manor was once the center of a 52,000-acre commercial empire that encompassed most of Westchester County, Philipsburg Manor is today a National Historic Landmark. Its mill and manor house are both iconic structures, serving as a visual representation of the greater Village's history.

In the early 2000s, supported by the National Endowment for the Humanities, HHV completed a major reinterpretation that changed the focus at Philipsburg Manor, where enslaved Africans were the backbone of labor during the site's colonial era, to emphasize the story of slavery in the colonial north, giving the site national prominence

as the only living history museum in the north where reinterpreting 18th-century slavery is a major focus.

To accomplish this mission, Philipsburg Manor welcomes thousands of schoolchildren each year through New York State curriculum based programs, is open to the general public for tours, and has a robust calendar of special events including Horseman's Hollow, a haunted attraction in October inspired by Washington Irving's The Legend of Sleepy Hollow. It also serves as the visitor center for Kykuit, the Rockefeller estate[1].

Easily and directly accessible via Route 9, Philipsburg Manor is by every metric Sleepy Hollow's largest cultural institution and welcomes close to 110,000 visitors annually to the Village. It attracts an additional 175,000 to "Greater Sleepy Hollow" country, many of whom spend time and money in the Village of Sleepy Hollow[2]. HHV's promotional efforts give wide visibility to not only its own programs but to the Village as a destination.

While some of these HHV visitors are local, many are day trippers and overnight guests who enjoy extended time here, spending money locally. Last year, more than two-thirds of the nearly 28,000 visitors to Horseman's Hollow at Philipsburg Manor, one of HHV's largest events, came from outside Westchester and Rockland. That figure is even greater than the 33,000 Kykuit visitors who visit Sleepy Hollow and the Kykuit Visitor Center at Philipsburg Manor in a steady stream during its May-November season[3].

As a result of their point of entry to Sleepy Hollow through the portal of Philipsburg Manor based programs, these visitors spend money in the community. More than half of these visitors eat locally, 25% shop in town, and nearly 25% are staying nearby

[1] Westchester Magazine calls Kykuit Westchester's top cultural attraction, and the Westchester County Office of Tourism and Film cites it as a primary draw for the county as a whole.
[2] Historic Hudson Valley sales and survey data.
[3] Historic Hudson Valley sales and survey data.

overnight[4]. At a minimum, that equates to about 50,000 restaurant meals and many thousands of register transactions at locations other than Philipsburg Manor.

2. Existing Conditions - Zoning

The existing zoning districts located within a quarter-mile of the Project Site include the following, refer also to Exhibit III.A-2 Existing Zoning:

RF – Riverfront Development District

P – Parks

C-1 – General Commercial

C-2 – Central Commercial

R-2 – One Family Residential Low Density

R-5 – Multiple Residence, Medium Density

R-4A One and Two Family Residence/ Neighborhood Commercial

PP – Open Parking

CEM – Cemetery

[4] Historic Hudson Valley sales and survey data.

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Table III.A-1
Selected Zoning Dimensional Requirements

			Minimum Lot Size			Maximum Lot Coverage		Required Yards and Open Spaces					
										Side			
District	Permitted Principal Uses	Permitted Accessory Uses	Use	Area	Width (feet)	Use	Area (percent)	Use	Front (feet)	One (feet)	Both (feet)	Rear (feet)	Maximum Height (feet)
R-2, One-Family Residence/Low Density	1-family residence Public park Public school	Garage for not more than 3 automobiles Home profession Identification sign Community or private swimming pool*	Residence Public park Public school	10,000 square feet 1 acre 5 acres	75 100 200	All uses	20	Residence use Public school	30 50	10 25	25 50	25 50	35
R-4A, One- and Two-Family Residence/Neigh-borhood Commercial	As in R-4 Stores and shops for retail business and personal and business services which principally serve the needs of the immediate residential neighborhood Restaurant, delicatessen or other similar food service establishment	As in R-4 Business sign Off-street parking lot or garage Antennas, including satellite dish antennas	Residence Other Commercial uses	4,000 square feet As in R-4 No minimum	40 As in 4 No minimum	Residence use Other uses Commercial use on a single lot	35 30 60	Residence uses Other uses Commercial use on single lot	20 As in R-4 20	3 As in R-4 3	12 As in R-4 12	25 As in R-4 20	35 35 35
R-5, Multiple Residence/ Medium Density	As in R-4, plus Attached dwellings* Church, including parish house, convent and rectory Multiple dwelling Planned residence development group Social club or lodge Senior housing community[9]	As in R-4, plus Off-street parking lot or garage Antennas, including satellite dish antennas	1- or 2-family residence, social club Multiple dwellings 1st 3 dwelling units Each additional unit Other Church, attached dwelling, planned	4,000 square feet 5,000 square feet 1,500 square feet As in R-4 10,000 square feet	40 50 As in R-4 100	As in R-4, plus Multiple dwelling on Planned residence development Other uses	As in R-4 30 20 35	Residence uses, except Attached dwellings: side yard requirements apply to side units only Other uses	20 25	5 10	15 20	25 25	45
C-1, Highway Commercial	Sale of new or used automobiles* Gasoline service station* Motor vehicle repair shop* Commercial recreation facility Public utility installation Stores and shops for retail business and personal or business services Planned commercial development group Offices Restaurants, delicatessens and other food service establishments, excluding fast-food restaurants and drive-through restaurants* Mixed-use (commercial and residential) developments	Business sign Off-street parking lot or garage used exclusively for the parking of motor vehicles Antennas, communicatio towers, antenna towers, monopoles, associated buildings, structures and equipment	No minimum, except Gasoline service station Interior lot Corner lot	10,000 square feet 5,000 square feet	100 50	Commercial use or mixed-use (commercial and residential) development on a single lot Planned development group	60 35	Commercial use or mixed-use (commercial and residential) development, plus Landscaped buffer area as specified in § 450-36C	20	None	None	20	35

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District	Permitted Principal Uses	Permitted Accessory Uses	Minimum Lot Size			Maximum Lot Coverage		Required Yards and Open Spaces					Maximum Height (feet)
			Use	Area	Width (feet)	Use	Area (percent)	Use	Front (feet)	Side One (feet)	Side Both (feet)	Rear (feet)	
C-2, Central Commercial	As in R-5, plus Banks, offices, restaurants and similar community service activities Stores and shops for retail business and personal and business services Commercial recreation facility Printing and publishing plant Planned commercial development group Restaurant, delicatessen or other food service establishment* Tavern or bar* Car wash Mixed-use (commercial and residential) development*	As in C-1 Antennas, communications towers, antenna towers, monopoles, associated buildings, structures and equipment	Commercial uses, excluding car wash Car wash Residence and other R-5 uses Mixed use	No minimum 10,000 square feet As in R-5 No minimum	No minimum 100 As in R-5 No minimum	Commercial use Residence use Mixed use	As in C-1 As in R-4 No minimum FAR-14	Commercial use Residence use Mixed use	None As in R-4 None	None As in R-4 None	None As in R-4 None	20 As in R-4 Where a mixed use is abutting a residential district, the yard requirement shall be 25, the last 10 of which must be landscaped	45
CEM, Cemetery	Operation of a cemetery for the interment of human remains in graves, tombs or vaults	Crematorium, administrative office, garage for maintenance equipment, caretaker's residence and other facilities appurtenant to such use Directional and identification signs		3 acres			None	None					35
P, Parks	Public park or reservation National historic site Museum or historic restoration	Off-street parking, limited retail and service uses, garage and maintenance structures, administration building, bath house and rest rooms, directional and identification signs, recreation facilities, picnic shelter, excavation for archeological purposes in connection with historic restoration		1 acre			5	None					35
PP, Public Parking	Paved parking lot for employees, customers, and visitors of adjacent commercial or industrial use Temporary storage of manufactured vehicles awaiting delivery	Guard shelter, facilities for fueling and lubricating new vehicles, directional signs		None			None	None					25

Table source: Village of Sleepy Hollow Code of Regulations

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Table III.A-2
RF- Dimensional Requirements

RF District Requirement	Standard	Proposed
Min. Lot Size	20 acres	28.29
Building Height	65 feet	35 feet
Max. Building Coverage	35%	3.93%
Max. FAR	0.8	0.047
Max. Impervious Coverage of Gross Development Area	70%	31.42%
Min. Open Space of Gross Development Area	15%	42.5%

Source: Village of Sleepy Hollow Zoning Code; calculations compiled by WSP

3. Prior Planning Studies

The Village of Sleepy Hollow has a long history of land use planning for its waterfront and specifically the former General Motors North Tarrytown Assembly Plant properties and surrounding area. Summarized below are various planning and environmental review documents that have contributed to the project planning parameters that have led to the development of the East Parcel Riverfront Development Concept Plan.

a. **Sleepy Hollow Local Waterfront Redevelopment Program (LWRP)** – adopted November 19, 1996

The LWRP is a comprehensive planning document that covers the entire Village of Sleepy Hollow. The document was prepared, in part, in anticipation of the redevelopment of the former GM site and to ensure that the redevelopment was in keeping with the goals and objectives of the Village including that the former GM

property be part of the economic future of the Village and that development be integrated into the overall fabric of the Village and not become an enclave. The Village's LWRP includes some passing references to the East Parcel including:

- The incorporation of a possible Greenway trail/promenade along the Pocantico River to the Philipsburg Manor Restoration facility (p. IV-10 and IV-14)
- 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 lives caused by flooding and erosion.
- 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 (page III-34).
- Policy 21D – 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 (page III-43).
- 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 publically owned properties. The LWRP identifies specific viewsheds throughout the Village that are important to the character of the community. Specific viewsheds associated with the Proposed Action include the following (page III-50):
    - Philipsburg Manor Upper Mills Historical Site as viewed from U.S. Route 9.

- DeVries Field Park adjacent to the Lower Pocantico River and General Motors property.
- View looking west from Elm Street adjacent to the Old Mallory plant site.
- View at the entrance of Barnhart Park looking north.

Future development actions should be undertaken in a manner that recognizes the importance of these viewsheds and provides for their enhancement and protection.

- Policy 33 Best Management Practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters (page III-58).
- Policy 37 – Best Management Practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters (page III-60).

b. **Village of Sleepy Hollow Waterfront Linkage Study (the Linkage Study)** – August 2002

The Linkage Study was a Village sponsored planning study to assist the Village and other stakeholders with better visualizing and understanding future development of the Village's RF-Riverfront Development District.

One of the products of the Linkage Study was a Waterfront Concept Plan, refer to Exhibit III. A- 3. Conceptual level planning for the East Parcel considered community uses including:

- Recreation
- DPW
- Senior Housing
- Community Center
- School
- public parking
- DeVries Park expansion

Other uses included:

-Flex/Office
-Philipsburg Manor Restoration Expansion
-Residential

It is noted that the Linkage Study conceptual level planning was prepared in anticipation of the Lighthouse Landing formal submission to the Board of Trustees as part of the formal environmental review process. The Linkage Study did not have the benefit of the subsequent environmental reports and analyses prepared as part of the Lighthouse Landing Environmental Impact Statement (EIS) which have subsequently informed the planning and development process. As noted in DEIS Appendix G Deed to East Parcel, as part of the transfer of the East Parcel to the LDC, certain restrictions were put in place including that the property may only be used for municipal and public uses of the Village of Sleepy Hollow. Prohibited uses include: retail, restaurant, office (except associated with the DPW), theater uses, residential uses, stand-alone day care centers, schools, hospitals, and medical offices.

c. Lighthouse Landing DEIS

The Illustrative Plan prepared as part of the Lighthouse Landing DEIS, provided herewith as Exhibit III. A- 4. The Illustrative Plan from the Lighthouse Landing DEIS, included the following uses for the East Parcel:

- Area for Village DPW Yard;
- Commuter Parking (as part of the initial planning for Lighthouse Landing, a Metro-North train station was proposed);
- Two full size recreation fields, two basketball courts and related parking associated with DeVries Park Expansion; and,
- The balance of the East Parcel was designated for other Village uses.

A separate conceptual site plan was prepared on behalf of the Historic Hudson Valley for an expansion of their Philipsburg Manor facility, refer to Exhibit III.A-5 herein, and included in the Lighthouse Landing DEIS for review and consideration. Uses proposed included an 18th century tenant farm homestead, related outbuildings, interpretive resources and a trail network.

An Open Space Framework Plan was prepared as part of the DEIS to assist the Village in better understanding how future open space that was to be part of the Lighthouse Landing development could be programed and incorporated into the overall fabric of the greater Sleepy Hollow community; that plan is reproduced herewith as Exhibit III.A-6. That plan included the following as it relates to the development of the East Parcel:

- Approximately 5.25 acres devoted to a new DPW facility;
- Expansion of DeVries Park including regulation soccer fields and basketball courts;
- An approximately 400 space parking area that could serve commuters and patrons of the East Parcel recreation uses;
- Pedestrian greenway connecting Barnhart Park, Beekman Avenue and DeVries Field;
- Pedestrian over pass connecting the East and West Parcels.

d. Lighthouse Landing Final Environmental Impact Statement

As part of the response to substantive comments raised by the public including the Village of Sleepy Hollow and Historic Hudson Valley, various alternative plans for the East Parcel and adjacent Philipsburg Manor Restoration were presented and discussed.

- FEIS Illustrative Plan – the Illustrative Plan for the East Parcel was nearly identical to the illustrative plan prepared for the DEIS with the exception of an Alternative Illustrative Plan that included an approximately 0.6 million gallon water tank and pump station, refer to Exhibits III-A 7 and III.A-8. The water storage tank and pump station were proposed in the event the Village was unable to find an appropriate location for a new reservoir expansion. It is noted that the Village is now in the process of constructing a new reservoir facility to augment its existing water supply system.
- FEIS Alternative Plan – Open Space and Public Use Diagram Exhibit III.A-9 of this DEIS. This diagram provided the extent of the total open space

proposed at the time as part of the Lighthouse Landing FEIS. This included riverfront open space as part of the West Parcel, other public open space including a portion of the East Parcel and select inland areas associated with the West Parcel. It is noted that approximately 5 acres of the East Parcel was, at the time, proposed to be used as commuter parking for a then contemplated train station on the West Parcel. The balance of the open space was West Parcel resident's open space and courtyards.

- The Village commissioned a separate conceptual planning study prepared by Richard Alan Daley Architect (the Daley Plan) titled the East Side Master Plan (Lighthouse Landing FEIS Figure IV-3) which provided a more detailed analysis of a proposed layout for the East Parcel DPW facility including details of the proposed DPW garage and bus repair facility, refer to Exhibit III.A-10 of this DEIS. This alternative contemplated two regulation size soccer fields and a 250 space parking facility located immediately adjacent to the Metro North rail lines. It was anticipated at the time that the proposed parking could eventually be decked and serve as commuter parking for a potential future train station. The layout also includes opportunities for possible expansion of Philipsburg Manor Restoration for a tenant farm, parking facility, expansion of recreation facilities.

- As part of the Lighthouse Landing FEIS, Historic Hudson Valley (HHV) prepared their own conceptual plans, (Lighthouse Landing FEIS Figures II-12, II-13 and II-14) reproduced herein as DEIS Exhibits III.A-11 through 13. These plans were prepared by HHV for consideration in the Final EIS for Lighthouse Landing. These plans consist of various land uses including: proposed tenant farm, recreation fields, DPW facility, parking and senior housing and a redesign of DeVries Park to include a pool, soccer field.

Subsequent to the acceptance of the Lighthouse Landing FEIS, HHV prepared a revised site plan for the creation of a proposed tenant farm, refer to Exhibit III.A-14 herein. It is noted that as part of the environmental review process and subsequent adoption of a Site Management Plan by NYS DEC, the concept of a tenant farm has been diminished due to a restriction on the ability to raise crops, produce and livestock on that portion of the East Parcel, refer to DEIS Appendix F, Site Management Plan.

2. Anticipated Impacts and Mitigation

a. Land Use

HHV has expressed an interest as well as the capacity, expertise, and organizational infrastructure to create additional programming at Philipsburg Manor. Parking is a major consideration for how HHV develops, plans, sites, and scales its events. Analysis of current programming shows the need for 600 spaces on peak dates and an additional 100 spaces for future programming[5].

HHV has indicated that if it had to curtail events at Philipsburg Manor that rely on a significant supply of parking, it would not downsize locally but instead shift those events to locations outside of Sleepy Hollow, taking with them at least $1 million in annual economic impact, leaving a significant hole, in HHV's opinion, for many local businesses[6]. In addition, HHV contends this will deal a significant blow to the viability of Philipsburg Manor's education and tour programs. Quite simply,

[5] The "Horseman's Hollow" special event in 2015 had 26,286 scanned (not tickets sold) attendees. This is an average of 2,022 a night, with peak nights nearing 3,000 visitors on site. In addition, Philipsburg Manor is the parking and welcome center host for visitors attending "Irving's Legend" at the Old Dutch Church, which attracts approximately 320 per night. Exit survey data shows that these events combined average roughly 3.75 people per party, who come in roughly 1.5 cars. Thus on the most peak nights, there are about 850 parties, representing 1,275 cars, or about 182 per half hour. HHV has indicated from experience with these events that visitors are on site for 90 minutes on average. Ninety minutes of onsite time translates to 546 cars parked at once, not including staff or vendors, which account for another 50 parking spaces. Inspired by the success of these events and the encouragement of neighboring cultural institutions, Historic Hudson Valley is developing new programming ideas, some of which would overlap with these existing events. Historic Hudson Valley thus needs 600 parking spaces to successfully continue its current programming and an additional 100 spaces for future expansion.

[6] F Historic Hudson Valley sales and survey data.

Historic Hudson Valley relies on revenue generated by special events at Philipsburg Manor to fund educational programming at the site.

Historic Hudson Valley is currently considering additional, new events for Philipsburg Manor that have high visitation potential. To be successful, its strategy relies on its ability to carry these events forward in multiple year engagements. This requires long-term commitments and stability in its infrastructure, including parking.

b. LWRP Consistency Review

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 lives caused by flooding and erosion.

Response: While a portion of the Subject Site is located within a mapped floodway and floodplain, the proposed site design elevates the critical facilities (the DPW and location for the community center) well above the projected flood levels, in addition to taking into account for anticipated climate change (refer to Section III.C - Stormwater Management). In addition, it is noted that the Subject Site, after development, is anticipated to include approximately 17.5 acres of new pervious surface area. Pervious surface treatments will aid in the overall management of stormwater on the Subject Site. A comprehensive erosion control plan has been prepared and will be implemented during the site development phase.

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 (page III-34).

Response: The Proposed Action includes the development of an interior set of pedestrian and non-vehicular trails that directly connect various segments of the Sleepy Hollow community including the East and West Parcels, the DeVries Field recreation complex and Barnhart Park. A portion of the Horseman's Trail could be rerouted through the East Parcel using the proposed trail network to a proposed sidewalk system along reconfigured

Continental Street. The sidewalk system would connect to the existing Village sidewalk system which would provide access to other important cultural sites including the Sleepy Hollow Cemetery, the Old Croton Aqueduct and the Old Dutch Church.

Policy 21D – 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 (page III-43).
Response: See response to Policy 19 above.

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 publically owned properties. The LWRP identifies specific viewsheds throughout the Village that are important to the character of the community. Specific viewsheds associated with the Proposed Action include the following (page III-50):

- Philipsburg Manor Upper Mills Historical Site as viewed from U.S. Route 9.
- DeVries Field Park adjacent to the Lower Pocantico River and General Motors property.
- View looking west from Elm Street adjacent to the Old Mallory plant site.
- View at the entrance of Barnhart Park looking north.

Response: The Proposed Action locates the future DPW facility in a location that is screened from identified viewsheds by way of location and topography. The existing topographic grade change means that the DPW facility would be located below the upper elevations of approximately 65 feet and separated by approximately 100 feet of existing mature vegetation. Landscaping is proposed along the easterly portion of the Project Site adjacent to the existing overflow parking for the Philipsburg Manor Restoration. A

landscape treatment, including wetland focused plantings are proposed along the western property line adjacent to the existing Metro North rail lines. The proposed Continental Street overpass would be the most visible component of the Proposed Action reaching a projected height of approximately 25 feet which is needed to provide required clearance above the Metro North rail lines. Section III.B Visual Resources, provides additional analysis relative to the potential visual impacts associated with the proposed overpass.

Policy 33 - Best Management Practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters (page III-58).
Response: As noted in greater detail in Section III.C, Stormwater Management, of this DEIS, the Proposed Action increases the amount of pervious surface area by approximately 17.5 acres over existing conditions. In addition, the RDCP includes the use of a porous paving treatment for the proposed parking areas which, along with the use of bio-swales reduces stormwater quality impacts to the adjacent receiving waters of the Pocantico River and eventually the Hudson River. In addition, the introduction of the porous paving treatment along with landscaping in the parking areas helps to reduce the heat island effect and impact on the adjacent Pocantico River.

Policy 37 – Best Management Practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters (page III-60).
Response: See response to Policy 33 above.

LWRP Implementation Projects - The incorporation of a possible Greenway trail/promenade along the Pocantico River to the Philipsburg Manor Restoration facility (p. IV-10 and IV-14)
Response: There is currently an informal trail system along the Pocantico River connecting DeVries Park with the Philipsburg Manor Restoration (the Restoration), although the portion of the trailway within the Restoration is closed during the same time the Restoration is closed. The Proposed Action includes a series of pedestrian and non-vehicular trails that connect to DeVries Park and ultimately to a sidewalk system along a proposed reconfigured Continental Street. This proposed trail/sidewalk system to be open

to the public and provide access to Restoration as well as other cultural points of interest including the Old Dutch Church, Old Croton Aqueduct, and Sleepy Hollow Cemetery.

c. Relationship to Approved Projects within the RF District

The Proposed Action has been reviewed against the approved first phase of the Edge on Hudson development, refer to Exhibit II-6, Proposed Riverfront Development Concept Plan. The Edge on Hudson site plan included an easement for the eventual location of an overpass as shown on the subject RDCP. The overpass would eventually land on the West Parcel and terminate at a proposed roundabout. The proposed overpass would provide an additional access for residents and patrons of the West Parcel.

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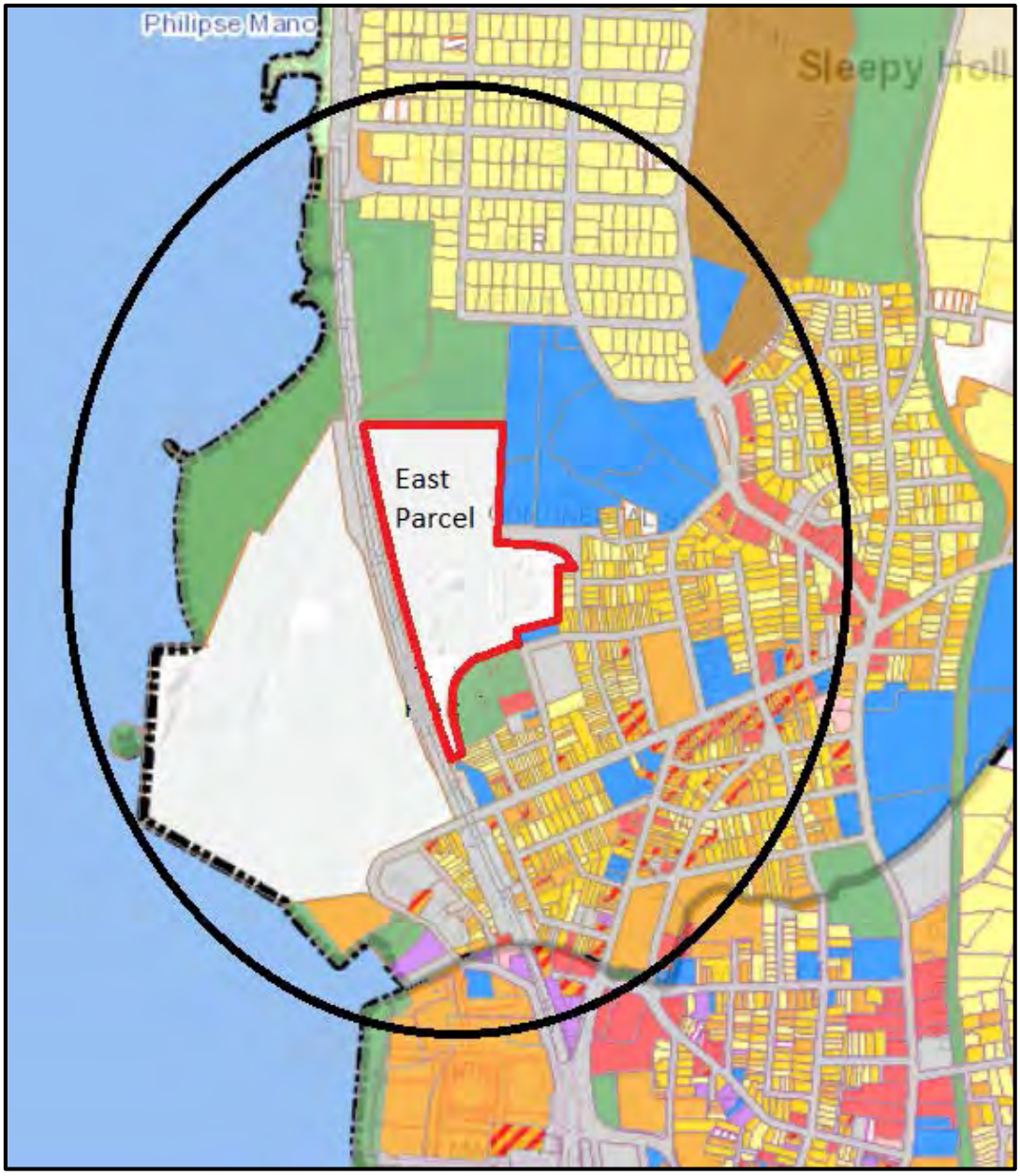

Source: Westchester County GIS

Exhibit III.A-1
Existing Land Use

East Parcel Redevelopment Draft Environmental Impact Statement
Planning & Development Advisors

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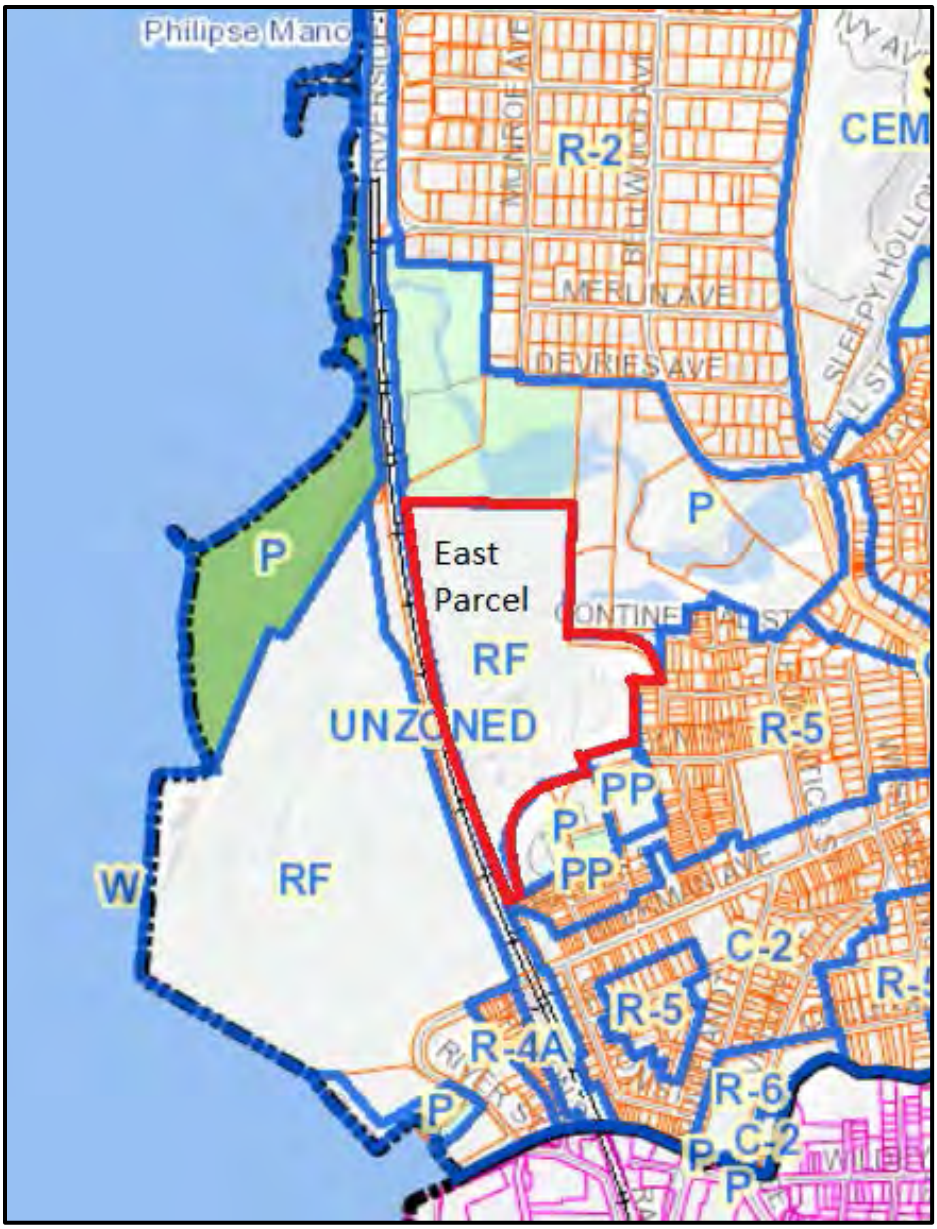

Source: Westchester County GIS

Zoning Designations

P – Parks
PP – Public Parking Area
RF – Riverfront Development
R-2 – One Family Residence Low Density
R-4A – Residence/Commercial 1-2 Family
R-5 – Multiple Residence, High Density
R-6 – Multiple Residence, High Density
C-1 – Highway Commercial
C-2 – Central Commercial

Exhibit III.A-2
Existing Zoning

East Parcel Redevelopment Draft Environmental Impact Statement
Planning & Development Advisors

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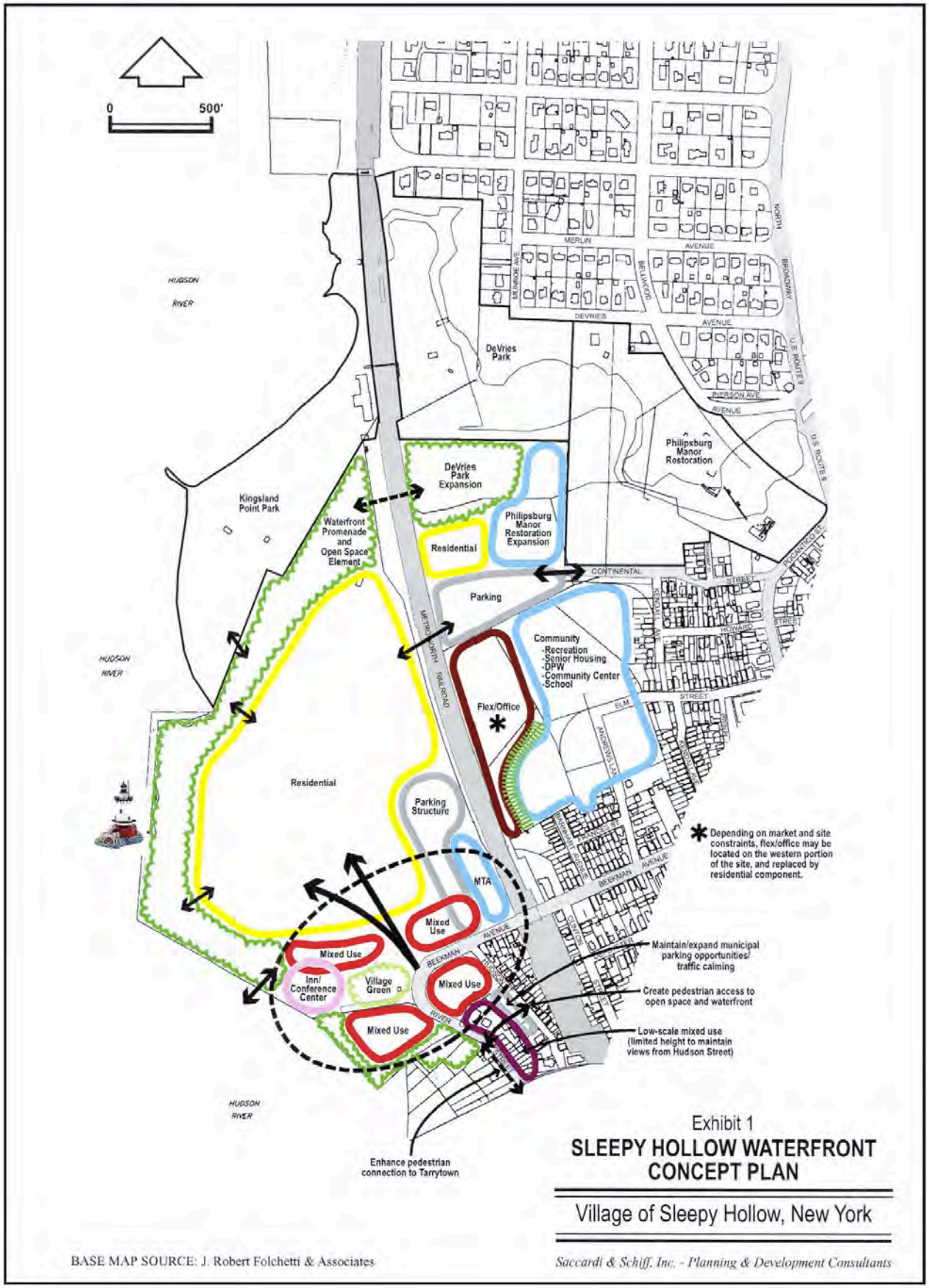

Map Source: Waterfront Linkage Study

Exhibit III.A-3
Sleepy Hollow Water Front Concept Plan
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

Source: Lighthouse Landing DEIS

Exhibit III.A-4 Illustrative Site Plan Lighthouse Landing DEIS
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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SOURCE: Arnold & Porter, Letter to Sleepy Hollow Village Administrator, June 5, 2003

DIVNEY • TUNG • SCHWALB

PROPOSED SITE PLAN FOR PHILIPSBURG MANOR EXPANSION SITE
LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK
FIGURE NO. III.A-7A

Source: Lighthouse Landing DEIS

Exhibit III.A- Proposed Plan Philipsburg Manor Expansion Site
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Source: Lighthouse Landing DEIS

Exhibit III.A-6 Illustrative Site Plan Lighthouse Landing DEIS
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Exhibit III.A-7 East Parcel Redevelopment DEIS

GM ROSELAND PROPERTY COMPANY

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DEIS ILLUSTRATIVE PLAN

LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

PFEIS FIGURE NO. I-1

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Exhibit III.A-8 East Parcel Redevelopment DEIS

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FEIS ALTERNATIVE PLAN - ILLUSTRATIVE PLAN

LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

FEIS FIGURE NO. II-2

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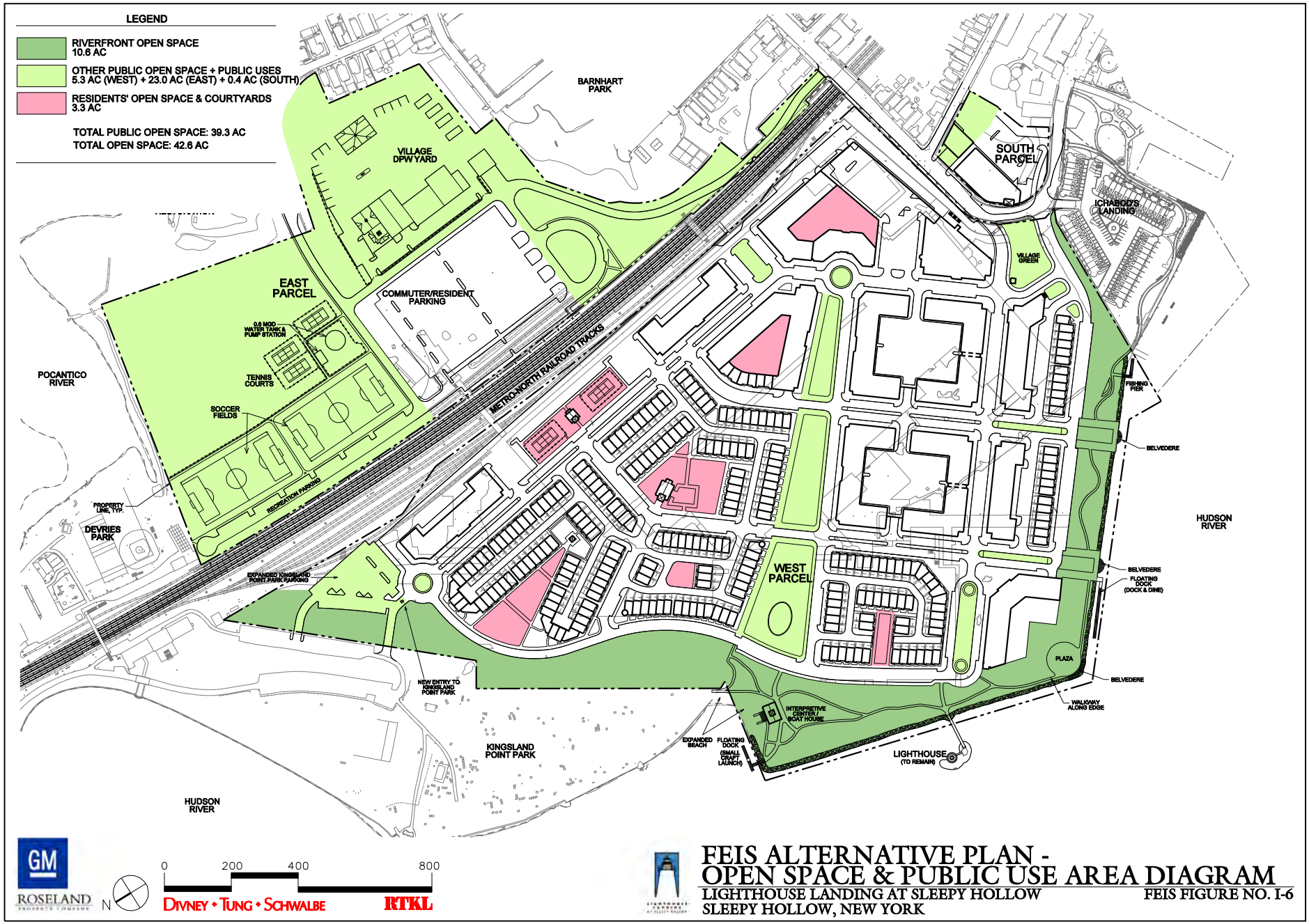
Exhibit III.A-9
East Parcel Redevelopment DEIS



FEIS ALTERNATIVE PLAN - OPEN SPACE & PUBLIC USE AREA DIAGRAM

LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

FEIS FIGURE NO. I-6

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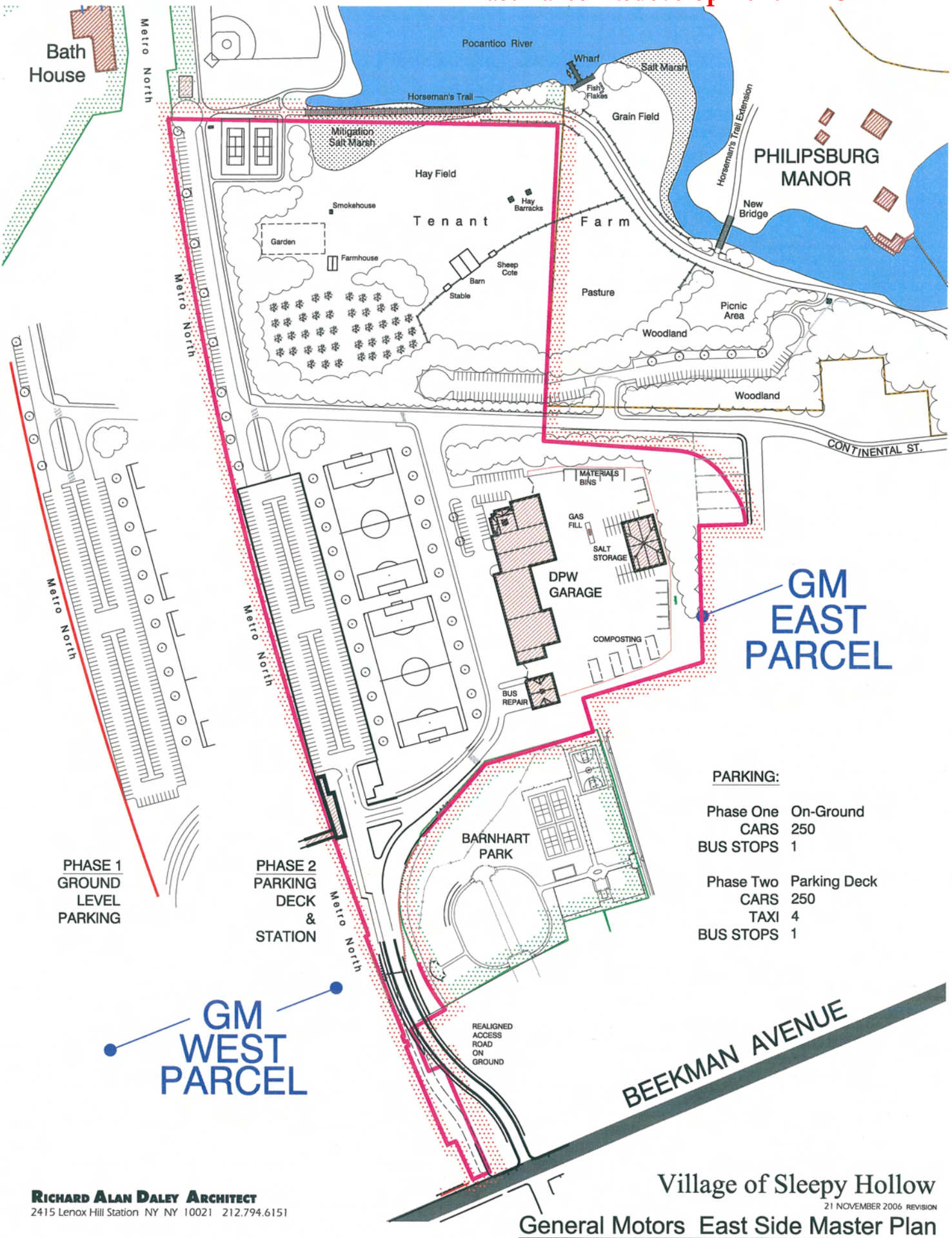
Exhibit III.A-10
East Parcel Redevelopment DEIS



Richard Alan Daley Architect
2415 Lenox Hill Station NY NY 10021 212.794.6151

Village of Sleepy Hollow
21 NOVEMBER 2006 REVISION
General Motors East Side Master Plan
FEIS FIGURE NO. II.IV-3

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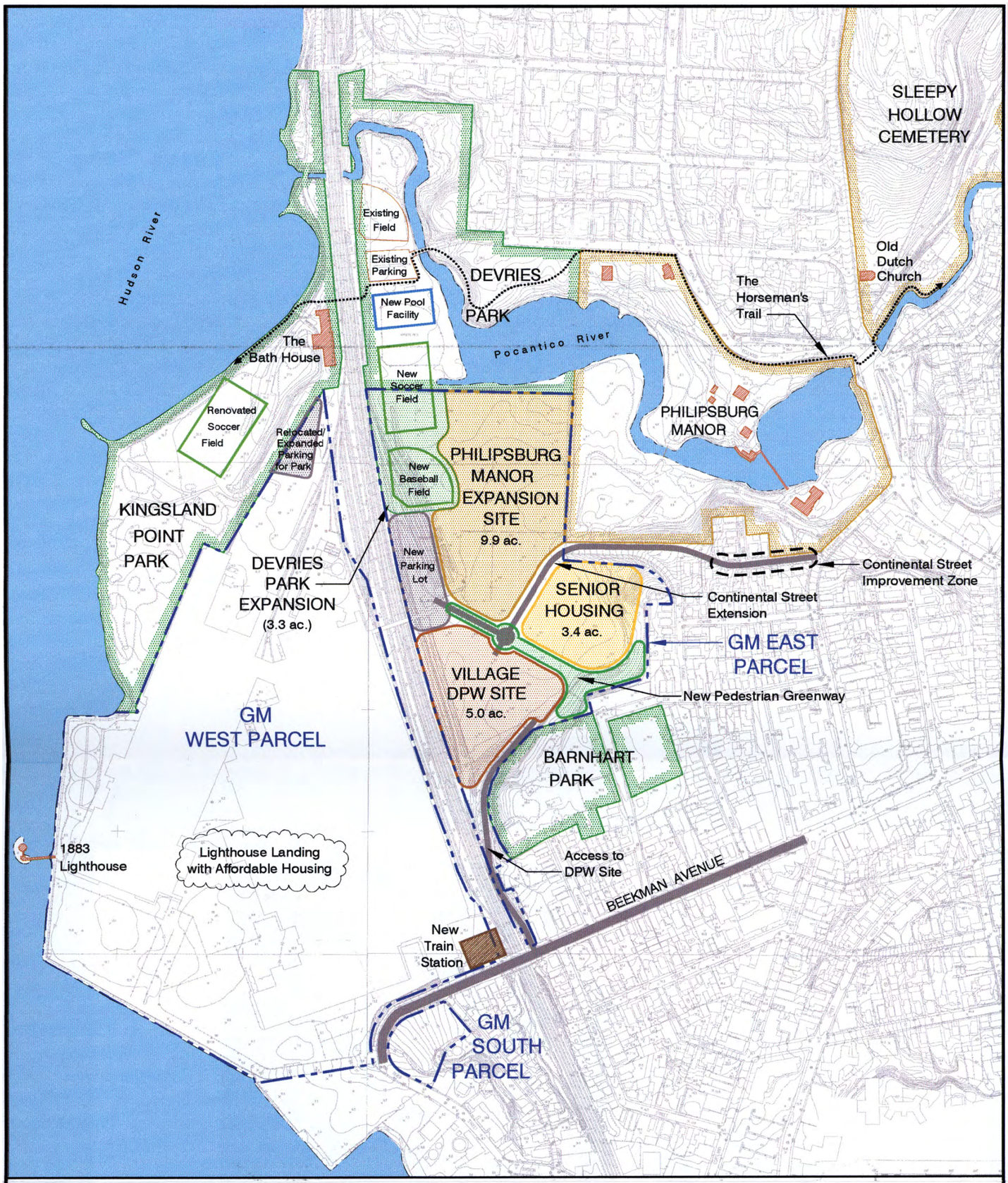

Village of Sleepy Hollow Objectives

- Senior housing
- Affordable housing
- DPW site
- DeVries Park expansion
  - New soccer field
  - New swimming pool
- Dual vehicular access but no through traffic
  - DeVries Park
  - DPW site
- Walking trails (GM site, Kingsland Point Park, DeVries Park, Philipsburg Manor, etc.)
- Shared parking (DeVries Park, DPW, Philipsburg Manor and train commuter facilities)
- Pedestrian bridge over Metro-North R.R. tracks connecting parks
- Pedestrian linkage between GM site and Barnhart Park
- New Metro-North train station

Historic Hudson Valley Objectives

- Contiguous land for Philipsburg Manor expansion (9.9 acres)
- Viewshed protection and buffer screening
- Mitigation of noise impacts
- Adequate parking for visitors
- Continued easy access to Philipsburg Manor

Note:
The total area of the GM East Parcel includes 28.3 acres, a portion of which would also be allocated to shared amenities serving the multiple land uses shown above (e.g., vehicular and pedestrian circulation features, parking, and open space and greenway elements). Approximately 6.7 acres would be available for those purposes based on the above conceptual site plan.

GM East Parcel - Alternative Conceptual Site Plan for Philipsburg Manor Expansion Site and Additional Village of Sleepy Hollow Uses

LIGHTHOUSE LANDING
Sleepy Hollow, New York

FREDERICK P. CLARK ASSOCIATES, INC.
Planning/Development/Environment/Transportation
Scale in Feet
400 0 400

Exhibit C
6/4/03

File: C:\Documents and Settings\PV\MyDocuments\AUTOCAD_Drawings\HistoricHudsonValley\GM_EastParcel.dwg

Source: Historic Hudson Valley DEIS Comment Letter as submitted by Arnold & Porter, LLP, June 5, 2003

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HISTORIC HUDSON VALLEY EXHIBIT C - PHILIPSBURG MANOR EXPANSION SITE
LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

FEIS FIGURE NO. II-12

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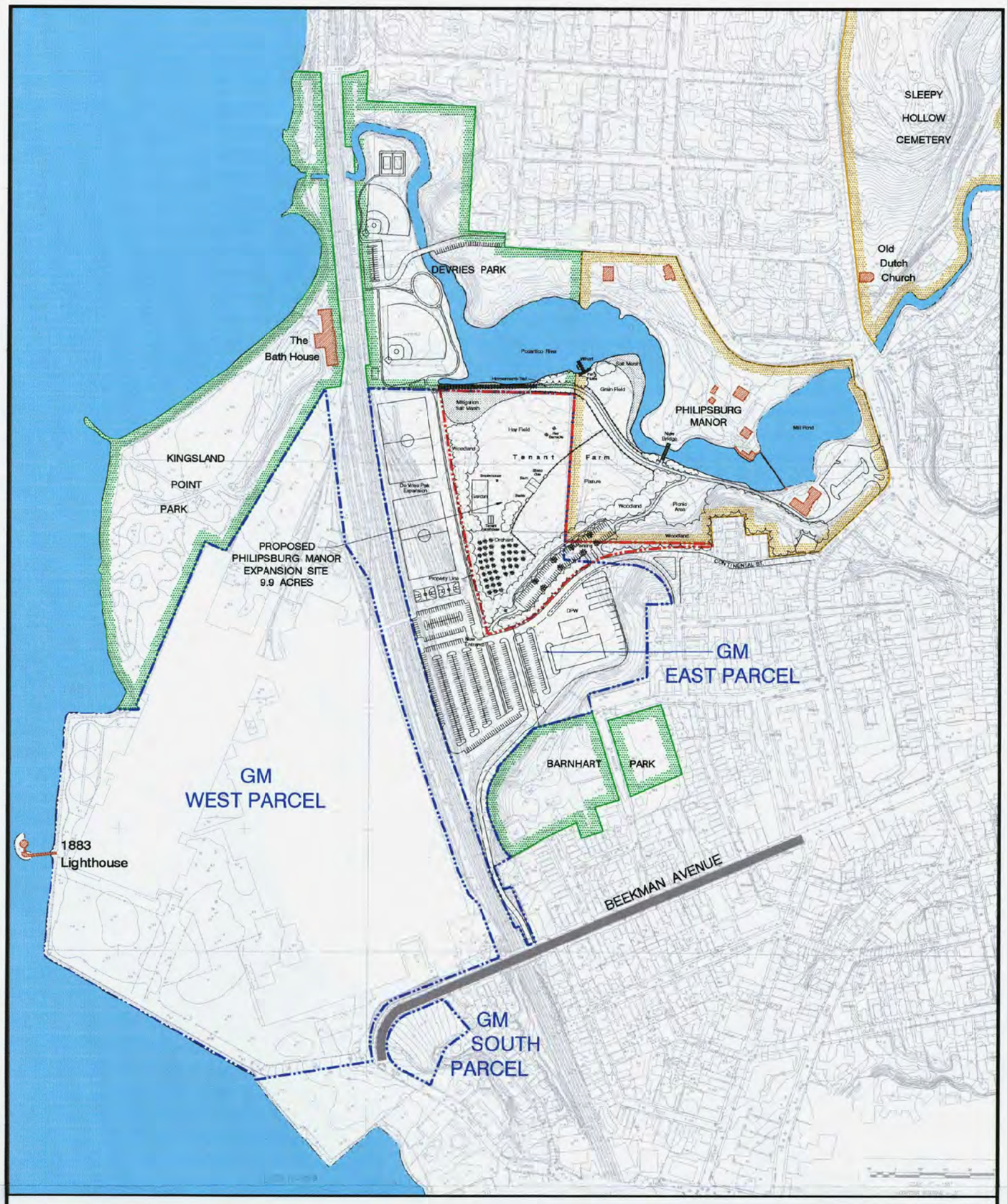

Programmatic Requirements for Expansion Site to Accommodate Proposed 18th Century Tenant Farmstead

Specific Features & Functions of Importance

- 9.9 acres for representational c. 1750 tenant farmstead (scaled to minimal size for authentic re-creation)
- Land components as follows (based on relative proportions in historical lease documents):
  - 3.0 acres for cattle and sheep pasture with sheepcote
  - 2.0 acres for woodland
  - 1.0 acre for hay meadow with hay barracks
  - 1.0 acre for wheat field
  - 1.0 acre for salt meadow
  - 0.8 acres for orchard (e.g., apple and pear trees)
  - 0.5 acres for grain field (e.g., flax, rye, other grains and corn)
  - 0.2 acres for vegetable garden
  - 0.4 acres for tenant farmhouse, barn, stable and smokehouse
- Seasonal demonstrations of plowing, planting, harrowing, haying, harvesting, food preservation and other typical activities
- Walking trail with interpretive signage
- Wharf on Pocantico River for possible future Hudson River Sloop anchorage
- Horseman's Trail Improvements
- Entrance along Village Greenway providing pedestrian access within walking distance to Lighthouse Landing Train Station

Overall Site Planning Objectives

- Contiguous land for Philipsburg Manor expansion
- Viewshed protection and buffer screening
- Mitigation of noise impacts generated by surrounding 21st century land uses
- Adequate parking for visitors for daily usage and special events
- Continued easy vehicular access to Philipsburg Manor

GM East Parcel
Alternative Conceptual Master Plan Including
Proposal for Philipsburg Manor Expansion Site

LIGHTHOUSE LANDING
Sleepy Hollow, New York

FREDERICK P. CLARK ASSOCIATES, INC.
Planning/Development/Environment/Transportation

Scale in Feet
400 0 400

E
3/31/05

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Source: Historic Hudson Valley DEIS Comment Letter as submitted by Arnold & Porter, LLP, April 1, 2005

HISTORIC HUDSON VALLEY EXHIBIT E - PHILIPSBURG MANOR EXPANSION SITE

LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

FEIS FIGURE NO. II-13

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Source: Historic Hudson Valley DEIS Comment Letter as submitted by Arnold & Porter, LLP, April 1, 2005

GM
ROSELAND PROPERTY COMPANY

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HISTORIC HUDSON VALLEY EXHIBIT F - ILLUSTRATIVE PLAN
LIGHTHOUSE LANDING AT SLEEPY HOLLOW
SLEEPY HOLLOW, NEW YORK

FEIS FIGURE NO. II-14

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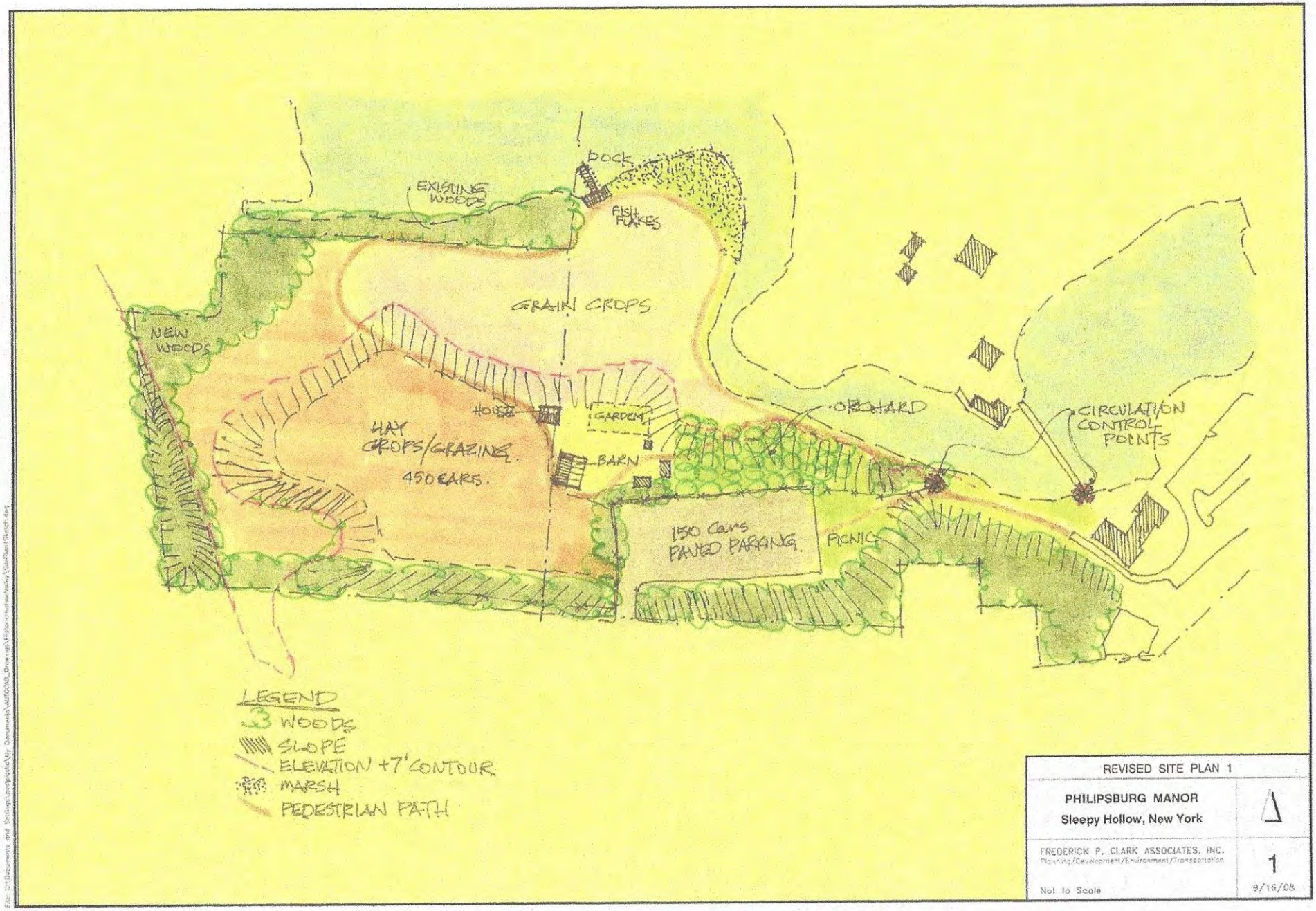

Exhibit III.A-14
Historic Hudson Valley Revised Site Plan
East Parcel Redevelopment DEIS

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III.B - VISUAL RESOURCES

1. Existing Conditions

DEIS Exhibits III.B-1 through III.B-3 provide photo-documentation of existing conditions on the Project Site and from selected areas identified during the EIS Scoping process. It is noted the condition of the Mill Pond Bridge prohibited access and therefor no photo-documentation could be prepared from that location. The Project Site is characterized by broad expanse of asphalt, a remnant of its prior days as a parking resource for the former GM North Tarrytown Assembly Plant. There are existing railroad spurs located in the northeast corner of the Project Site and various piles of material associated with prior DPW activities on the Project Site.

2. Anticipated Impacts and Proposed Mitigation

Detailed elevations have yet to be developed showing the exterior of the proposed DPW facility, however, the LDC has prepared a series of precedent examples of the type of architectural treatment they would like to see incorporated as part of the final design of the new DPW facility. This includes a design treatment that is not utilitarian in concept but respects Sleepy Hollow's rich history such that the main garage takes on more of an image of a series of barns with corresponding coloration, façade and roof treatments when viewed from a distance, refer to Exhibit III.B-4 DPW Precedent Examples.

Provision of View Corridors

The redevelopment concept plan for the East Parcel preserves views and opens up new view corridors to the Hudson River, the opposite shore, and the new Tappan Zee Bridge. This is due in part to the need to raise a considerable portion of the site for the construction of the DPW building and ancillary facilities. The East Parcel Riverfront Development Concept Plan (RDCP) is partially organized around this topographical change and guided by the availability of signature views from the proposed community and recreational facilities. For example, the RDCP plan takes advantage of the East Parcel's future topographical condition by utilizing gradual down slopes from the DPW site. Community seat walls are integrated into a southwest-facing hill adjoining the proposed intersection of

Continental Street extension and the proposed Southern Access Road, which affords those watching an event taking place on the proposed amphitheater stage a backdrop that includes the future Edge-on-Hudson development, as well as the new Tappan Zee Bridge, the Hudson River, and the opposite shore, to the extent they are visible. New views will be provided from the proposed Continental Street Overpass over the Metro-North railroad tracks. Exhibit III.B-5 provides the approximate location of key view corridors within the redevelopment plan for the East Parcel.

The most prominent component of the Proposed Action would be the proposed Continental Street Overpass, which is anticipated to rise to an elevation of approximately 25 feet, which is roughly consistent with the existing pedestrian overpass, which at one time connected the East and West Parcels. In the Applicant's opinion, the proposed Continental Street extension is critical to providing east-west access within the East Parcel, and to ensure there is direct motorized and non-motorized connectivity between the East and West parcels. In order to extend Continental Street to the West Parcel, a new bridge spanning the Metro-North tracks will be required. Due in part to vertical clearance requirements over the railroad, the bridge will be a prominent visual element and visible from most locations within the East Parcel. DEIS Exhibits III.B-6, 7 and 8, Viewshed Analysis, provides some context relative to the relationship of the proposed overpass with surrounding properties, specifically the Philipsburg Manor Restoration. Given the location of the overpass, it is anticipated that it would be observed from the proposed Philipsburg Manor Restoration overflow parking area, but due to topography and existing vegetation, largely obscured from the main portion of the property associated with the area immediately around the existing Mill Building.

As shown in Exhibit III.B-7, the proposed bridge would be partially obstructed from eye level view by existing tree cover, vegetation, and proposed buffer plantings between the overflow parking lot and the East Parcel. Exhibit III.B-8 shows a cross-sectional representation of a future view to the proposed bridge further east from the Philipsburg Manor House. As shown in Exhibit III.B-8, the bridge would be entirely obstructed from eye level view by mature tree cover and vegetation around the Manor House, and tree cover

in the Historic Hudson Valley overflow parking lot. Its visual impact on the Manor House is further lessened by the extensive linear distance from the viewing point to the highest point of the bridge (approximately 1,550 feet).

A conceptual landscape plan has been prepared for the Proposed Action, refer to DEIS Exhibit III.B-9. The Conceptual Landscape Plan proposes a landscape treatment along the eastern property line adjacent to the existing Philipsburg Manor Restoration overflow parking area and a landscape treatment along the western portion of the Project Site adjacent to the existing Metro North rail lines. The treatment along the western property line also includes a fence treatment that would be consistent with Village Code requirements.

Specific details regarding site lighting have yet to be determined but a lighting plan will ultimately be prepared which will conform to Village Code requirements. This includes Section 450-18. H. Design Standards –Lighting which requires all exterior lighting shall be directed downward or otherwise appropriately shielded and designed to minimize excessive light. It shall have an attractive appearance, compatible with the overall project design and waterfront character. Lighting type, number and locations shall be subject to Planning Board review and approval as part of the site plan review. Section 450-43.F Performance Standards – Glare of the Village Code, speaks to this issue further by requiring that there shall be no direct or sky-reflected glare exceeding 1 1/2 foot-candles measured at the boundaries of the lot on which the source is located. This regulation shall not apply to lights which are used solely for the illumination of entrances or exits of driveways leading to a parking lot.

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Exhibit 1 View southwest from HHV Overflow Lot towards existing GM pedestrian connector

Exhibit 2View southwest towards East Parcel from existing HHV Manor House

Exhibit III.B-1 Existing Conditions
East Parcel Redevelopment DEIS
Sleepy Hollow LDC

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Photo-location Key Map

Exhibit III-2

Existing Conditions Photo-documentation

East Parcel Redevelopment DEIS

Sleepy Hollow LDC

1. View north along Pocantico Street to Route 9

2. Upper Continental Street looking north towards Pocntico Street

3. View west along Continental Street towards Pleasant Street

4. View west along Continental Street from Pleasant Street

5. View east from lower Continental Street towards Kendall Street

6. View west on lower Continental Street towards the East Parcel gate

7. Continental Street terminus at existing gate to the East Parcel

8. Existing access to HHV overflow parking

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View north from Barnhart Park across the East Parcel

View south along the hillside bordering the East Parcel

View north across Barnhart Park

View west across East Parcel towards West Parcel

View north along existing viaduct

View west from eastern property line of Philipsburg Manor Restoration

Exhibit III.B-3
Photo-documentation East Parcel Neighborhood
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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Figure 1 Representative example of proposed Main DPW Building, source Morton Buidlings

Figure 2 Representative example of interior of proposed DPW building source: Morton Buildings

Figure 3 Representative example of proposed school bus repair garage source: Morton Buildings

Figure 4 Representative example of proposed salt storage shed source: Summit Engineering, Inc.

Exhibit III.B-4

Representative Examples of Proposed DPW Buildings

East Parcel Redevelopment DEIS

Sleepy Hollow LDC

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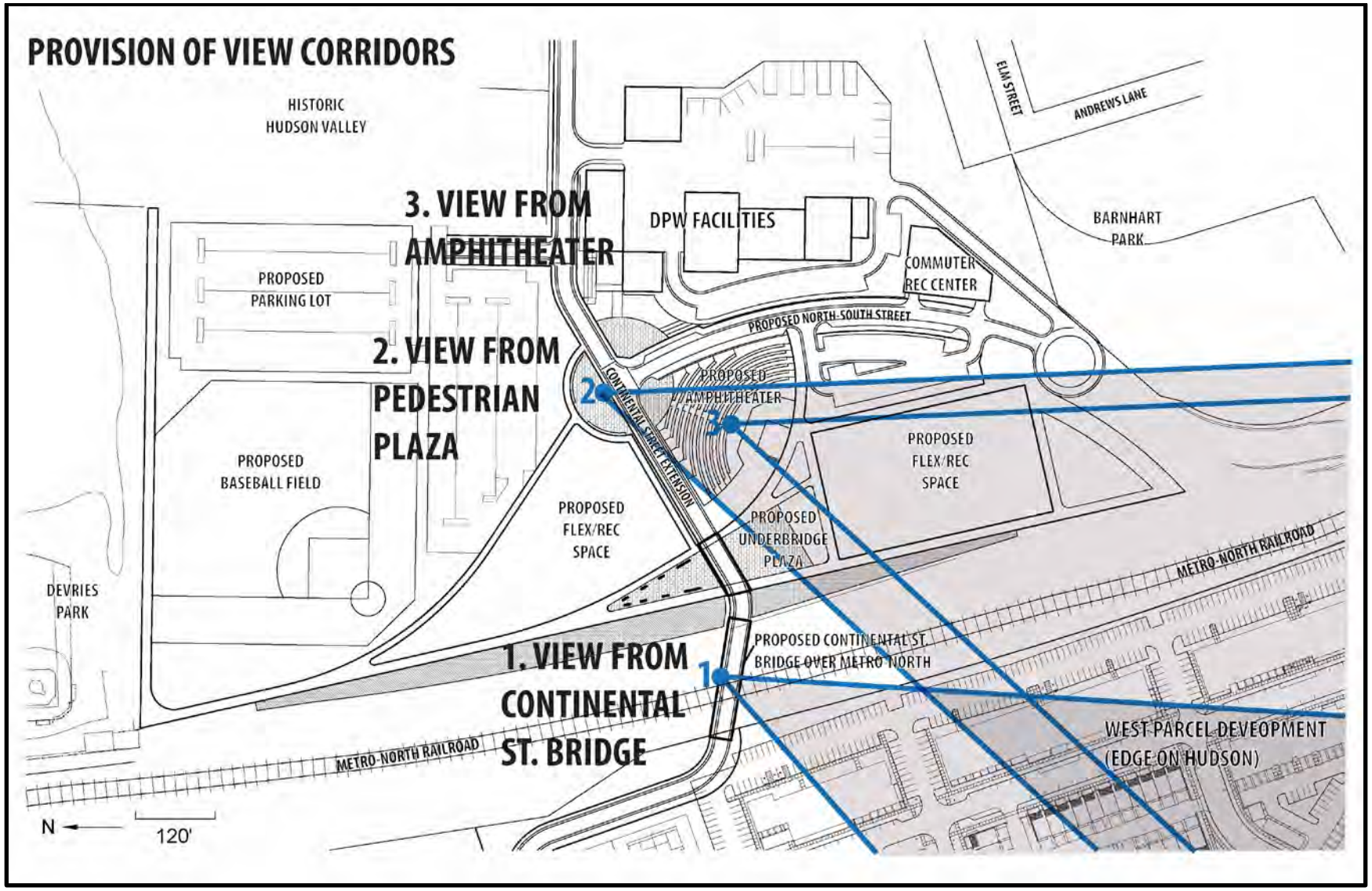

Exhibit III.B-5
View Corridors
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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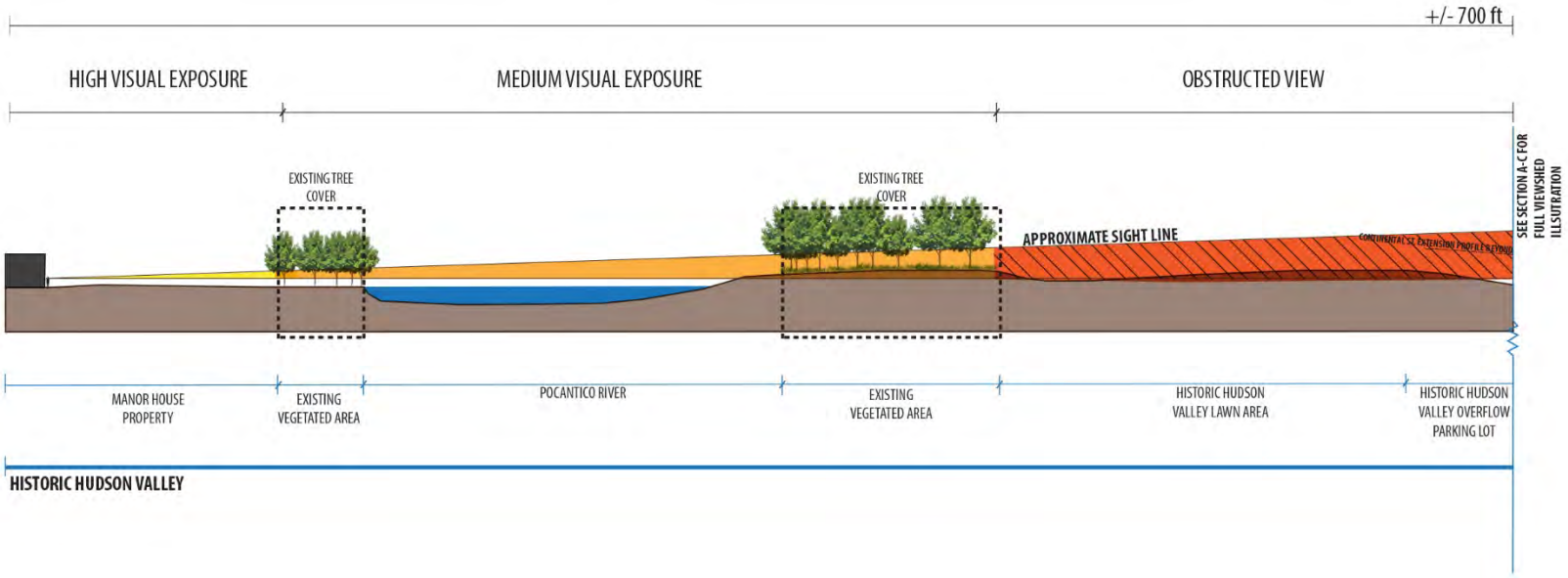

VIEWSHED CATEGORIES

- HIGH VISUAL EXPOSURE
- MEDIUM VISUAL EXPOSURE
- OBSTRUCTED VIEW

VIEWSHED ANALYSIS: VIEW TO BRIDGE FROM MANOR HOUSE

SECTION A-B

Exhibit III.B-6
Viewshed Analysis
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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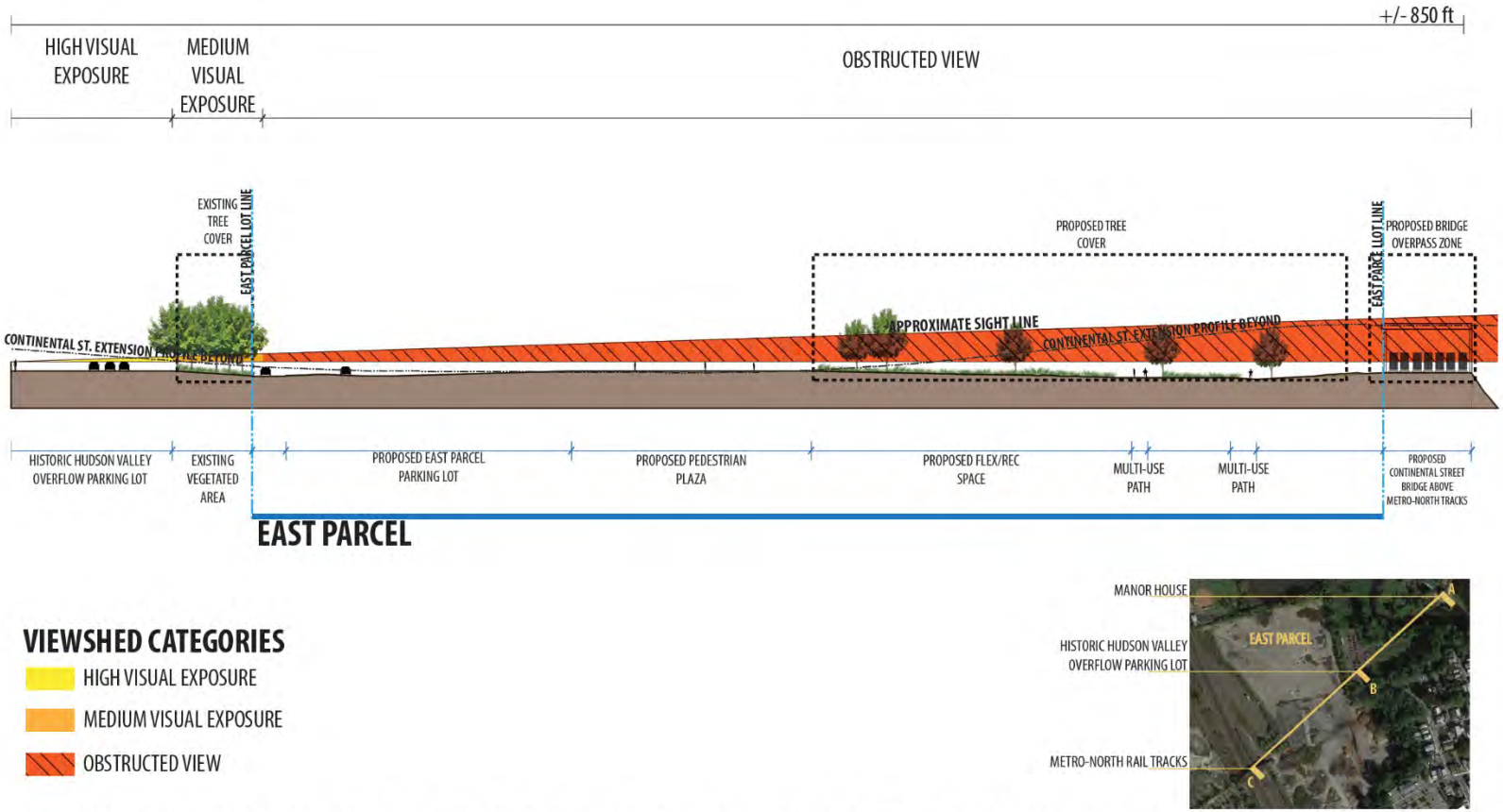

VIEWSHED ANALYSIS: VIEW TO BRIDGE FROM HISTORIC HUDSON VALLEY PARKING LOT
SECTION B-C

Exhibit III.B-7
Viewshed Analysis
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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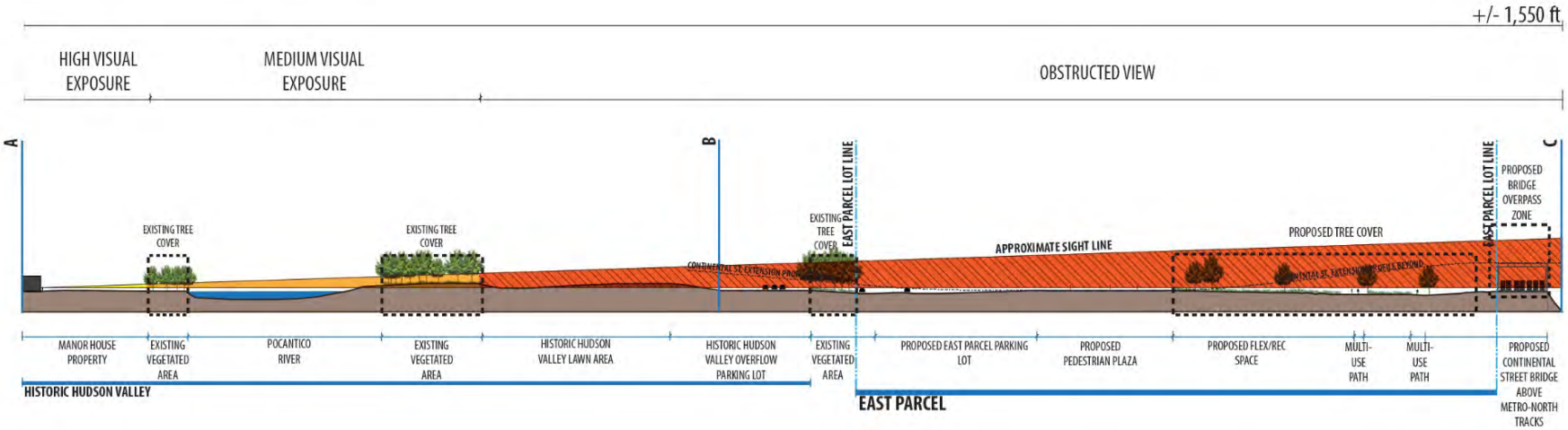

VIEWSHED CATEGORIES

- HIGH VISUAL EXPOSURE
- MEDIUM VISUAL EXPOSURE
- OBSTRUCTED VIEW

VIEWSHED ANALYSIS: FULL VIEW TO BRIDGE FROM MANOR HOUSE

SECTION A-C

Exhibit III.B-8
Viewshed Analysis
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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LANDSCAPE DESIGN (DRAFT)

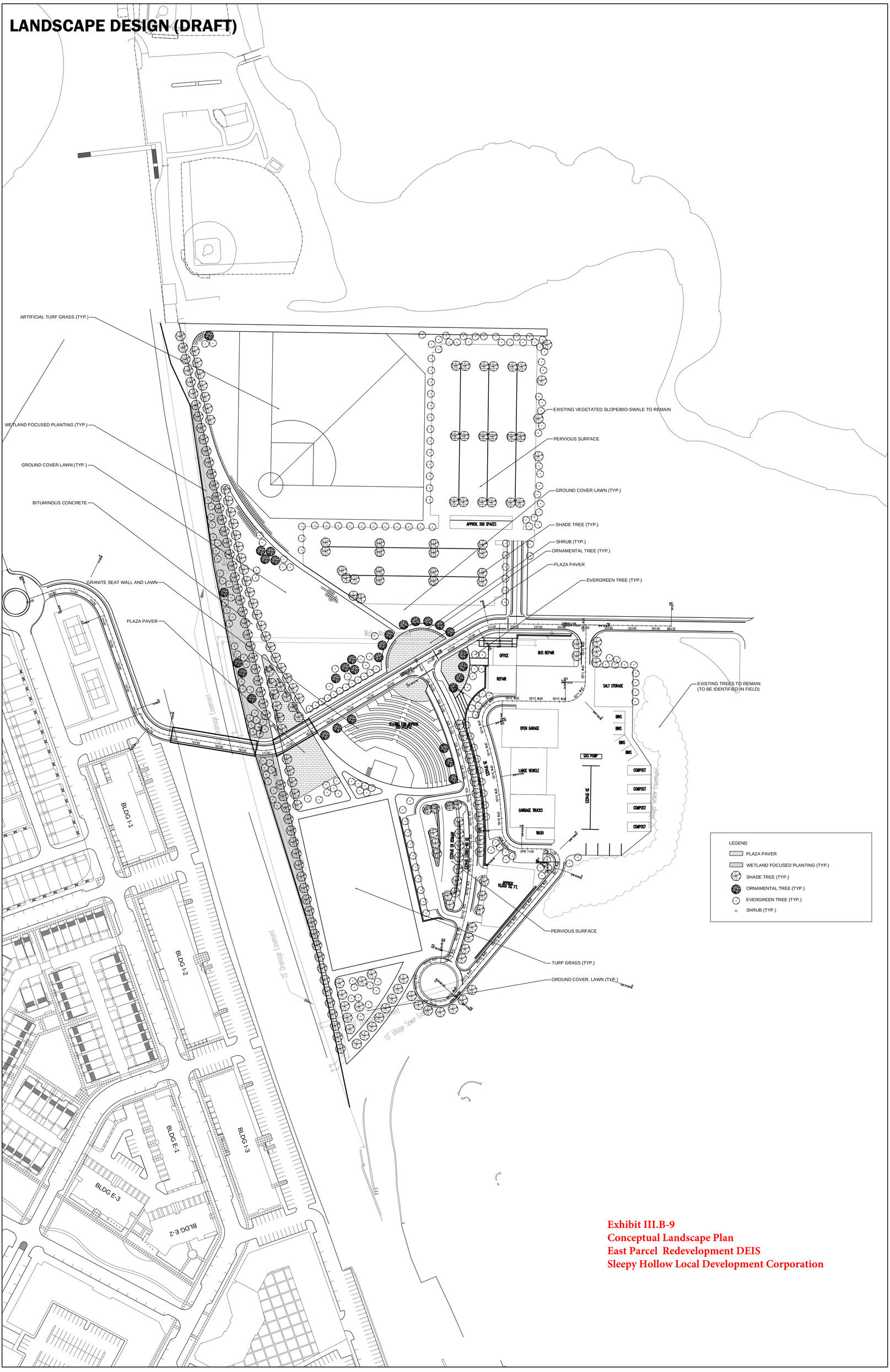

Exhibit III.B-9
Conceptual Landscape Plan
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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C. Stormwater Management

1. Existing Conditions

a. Existing Watersheds

The Subject Site is bounded by a ridgeline that extends from the southeast side to the south at elevation 60 feet to 70 feet above mean sea level (MSL), the Metro North Railroad (MNRR) tracks to the east at elevation 10 feet to 11 feet MSL, the Philipsburg Manor property to the northeast, and Devries Park to the north at elevation 4 feet to 5 feet MSL. This tributary drainage area forms two distinct watersheds that convey stormwater runoff to two discharge points located in the northeast and northwest corners of the East Parcel.

Watershed 1 is formed by a high point near the center of the existing north parking area and consists of approximately 4.1 acres of land consisting of the north half of Continental Street and a section of the existing asphalt parking lot. Watershed 1 is 100 percent impervious and discharges to Discharge Point 1, located to the northeast.

Watershed 2 consists of approximately 28 acres of land that includes existing woods, residential areas, community development and park land areas, parts of the gravel MNRR tracks to the west, and approximately 16.8 acres of existing impervious asphalt surfaces and 1 acre of vegetated areas within the East Parcel. Watershed 2 discharges to Discharge Point 2, located to the northwest.

Refer to **Exhibit III.C-1** for a map of the existing watersheds.

b. Existing Soils and Depth to Water Table

The soils underlying the project area on the East Parcel are considered “urban land” by the Natural Resources Conservation Service (NRCS) Soil Resource Report. The NRCS classification for Urban Land in the project area contains no estimate of depth to groundwater, as soil has been altered or obscured by urban works and structures. Refer to **Exhibit III.C-2,** National Resources Conservation Service (NRCS) Soil Resource Report, for the NRCS soil map. On-site subsurface explorations will be required to confirm soil characteristics and groundwater elevations. Observations during site visits in June 2016 revealed ponding at low points in the paved areas of the northern portion of the Subject Site, which indicates a potentially shallow water table may exist. These observations are consistent with NRCS data for soils to the north and northeast of the project area.

The soils underlying the surrounding developed areas to the north and northeast consist of Fluvaquents, Udorthents, and Urban Land. Fluvaquents are classified as a gravelly loam with a typical depth to water table of 0 feet, at the ground surface. Udorthents are classified as a gravelly loam with a typical depth to water ranging from 18 to 48 inches below grade.

The soils underlying the surrounding developed areas to the east and south of Watershed 2 are comprised of Riverhead Loam, which is a well-drained soil classified as Hydrologic Soil Group A with a depth to water table typically more than 80 inches.

c. Existing Stormwater Infrastructure and Discharge Points

The stormwater infrastructure serving Continental Street within Watershed 1 consists primarily of a curb and gutter which conveys runoff into the Subject Site. Within the Subject Site, it is unclear if any functional stormwater infrastructure exists within Watershed 1. The existing asphalt parking lot within Watershed 1 appears to have settled along its eastern boundary, forming low points which pool water and convey runoff into the adjacent ditch. This low point defines Discharge Point 1 in the stormwater runoff analysis for the Proposed Action. This ditch, which forms a natural boundary separating the Subject Site from the Philipsburg Manor property, flows north for approximately 400 feet before discharging to the Pocantico River.

The stormwater infrastructure serving the Subject Site within Watershed 2 consists of subsurface piping and drainage manholes, combined with an approximately 850 feet long series of pipes and man-made ditches that convey water northward along the west side of the Subject Site. This series of pipes and ditches discharge through closed drainage to a drainage structure located within Devries Park which ultimately discharges to the Pocantico River. Discharge Point 2 is defined as the point where the existing Subject Site drainage system crosses the northwest property line with Devries Park.

d. Existing Stormwater Peak Runoff Flow Rates

Stormwater peak runoff rates were calculated using HydroCAD software, which utilizes hydrology techniques developed by the Soil Conservation Service (SCS/NRCS), combined with standard hydraulic calculations. **Table C1** and **Table C2** show the pre-development peak runoff flow rates and runoff volumes, respectively, for a wide range of design storms.

Table C1: Stormwater Peak Runoff Flow Rates: Existing Conditions (in cubic feet per second, cfs)

Watershed/ Discharge Point	1-year, 24-hour storm	2-year, 24-hour storm	10-year, 24-hour storm	25-year, 24-hour storm	50-year, 24-hour storm	100-year, 24-hour storm
1	12.2	15.3	22.0	26.4	30.9	33.1
2	56.7	75.7	116.3	143.3	170.0	185.4

Table C2: Stormwater Peak Runoff Volumes: Existing Conditions (in acre feet, ac-ft)

Watershed/ Discharge Point	1-year, 24-hour storm	2-year, 24-hour storm	10-year, 24-hour storm	25-year, 24-hour storm	50-year, 24-hour storm	100-year, 24-hour storm
1	0.89	1.13	1.65	1.99	2.34	2.51
2	4.30	5.79	9.05	11.25	13.47	14.59

e. Capacity of Existing Stormwater Infrastructure

Stormwater runoff from Watershed 1 is assumed to discharge overland to Discharge Point 1, as there is no apparent stormwater infrastructure in this area. As discussed in c., above, stormwater runoff from Watershed 2 flows through a series of pipes and man-made ditches before discharging off site. Based on survey data and observations during site visits in June 2016, the last pipes in this system have a capacity to convey from 15 cfs to 47 cfs of flow. Compared to the peak flow rates for Discharge Point 2 presented in **Table C1**, the existing drainage system has insufficient capacity to convey the peak flow for any storm event above and including the 1-year, 24-hour design storm.

f. Existing Stormwater Quality

Stormwater research has long established a relationship between impervious surfaces and pollutant generation. For example, impervious surfaces are known to accumulate pollutants that wash off during rain events, to cause thermal pollution in receiving waters, and to prevent rainfall from recharging groundwater. The Subject Site is currently covered with approximately 20.3 acres of impervious asphalt pavement, which amounts to approximately 71 percent of the Subject Site's surface area.

g. Evaluation of Flood Plain Mapping

In 2014, the Federal Emergency Management Agency (FEMA) published Preliminary Flood Insurance Rate Maps (FIRMs) which provide flood hazard and risk data for the Project Site area. These maps include both coastal and riverine Special Flood Hazard Areas (SFHAs) defined as the areas that are inundated by flood events having a 1-percent chance of being equaled or exceeded in any given year (100-year flood). The 2014 Preliminary FIRM (Refer to **Exhibit III.C-4**) for the project site area was developed using a combination of two distinct hydraulic analyses: 1) a riverine hydraulic analysis (completed in 2006) which terminates at the mouth of the Pocantico River and 2) a coastal analysis (completed in 2014) performed for the Hudson River system.

The riverine analysis shows the 100-year flood extent which covers the East Parcel and is bounded on the west by the Metro-North Railroad. The Base Flood Elevation (BFE) within the East Parcel is equal to 18 feet (NAVD 88) and is shown to be contained by the Metro-North Railroad embankment which prevents flooding of the Village of Sleepy Hollow's West Parcel. The coastal BFEs in the Hudson River vary significantly from 9 feet to 6 feet near the mouth of the Pocantico River. The designation Zone VE suggests wave action greater than 3 feet, while the designation Zone AE implies limited wave action.

For the purpose of the East Parcel Redevelopment Project, WSP|Parsons Brinckerhoff developed a two-dimensional (2D) hydrodynamic model for the site existing conditions in order to refine the understanding of the complex and interrelated coastal and inland flooding conditions occurring at the project site. This model was developed using a high resolution Digital Elevation Model (DEM) and the latest Land Use and Land Cover (LUCL) data for the area. The revised 100-year flood map (see **Exhibit III.C-5)** shows a significantly lower BFE of 14.2 feet (NAVD 88) for the East Parcel and a water elevation of 13.6 ft. within the Hudson River.

The results of the revised hydraulic model will be used to develop the East Parcel Site. A copy of the Hydraulic Study is included in Appendix D.

h. Evaluation of Proposed Action and the Applicability of the Community Risk and Resiliency Act

The Community Risk and Resiliency Act (CRRA) requires decision makers for public projects to account for future physical climate risks caused by storm surge, sea-level rise, and flooding. In January of 2016, the New York State Department of Environmental Conservation (NYSDEC) established regulatory sea-level rise projections according to Chapter 6 of the New York Codes, Rules and Regulations (NYCRR) Part 490. WSP|Parsons Brinckerhoff's hydraulic study incorporates climate change risks into its modeling. 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 over the project design life of 50 years. Low, medium and high risk scenarios were modeled as part of the hydraulic study (see **Table C3**).

Table C4 presents the BFEs for the different climate risk scenarios.

All East Parcel's critical assets, including the DPW Garage and Community Center, will be developed above the flood elevation corresponding to the medium climate risk scenario and depending on the final grade, most likely closer to the high climate risk scenario elevation.

Table C3: Climate Change Parameters used in the WSP|Parsons Brinckerhoff's Hydraulic Model for the 100-year flood event

Projected climate risk severity in 2070	Low	Medium	High
Seal level rise (inches, in)	11.3	24.3	48.7
Increase in riverine peak discharge	5%	10%	25%

Source: WSP Parsons Brinkerhoff

Table C4: Base Flood Elevations at the project's site for the 100-year Flood Event (NAVD 88 ft.)

2014 FEMA FIRM - 100-year flood	Simulated flood events	WSP|Parsons Brinckerhoff 100-year flood	+ low climate risk projection (10th percentile)	+ medium climate risk projection (50th percentile)	+ high climate risk projection (90th percentile)
18		14.2	14.7	15.7	17.7

Source: WSP Parsons Brinkerhoff

2. Proposed Conditions

a. Stormwater Management Plan

A stormwater management plan was developed in accordance with the principles of green infrastructure and redevelopment set forth in the New York State Stormwater Management Design Manual (SMDM), as required for compliance with a Stormwater Pollution Prevention Plan (SWPPP). The Proposed Project will ultimately require a SWPPP, which is a detailed plan verifying how compliance with the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Storm Water Discharges from Construction Activity Permit Number GP-0-15-002 (General Permit) is to be achieved. The General Permit is intended to certify compliance with Section 402 of the Federal Clean Water Act and its Phase II stormwater regulations. A combination of green infrastructure practices and techniques (e.g., pervious pavement, bio-swales, and rain gardens), standard stormwater management practices, and redevelopment will be incorporated into the Proposed Action. The overall concept behind the stormwater management plan is to reduce impervious surfaces, divert offsite drainage around the project area, and to provide appropriate levels of volume reduction and treatment for stormwater runoff generated by the project.

b. Proposed Watersheds

In order to assess the stormwater impacts associated with the proposed plan and provide appropriate mitigation, the project and its tributary drainage areas were divided into 14 separate watersheds. Refer to **Exhibit III.C-3** for a watershed map of the proposed condition.

The upslope limits of watersheds that discharge stormwater from off-site areas through the Proposed Project are unchanged from the pre-development stormwater analysis. Within the project limits, various watersheds were delineated as required by the proposed grades and project layout. These areas include the proposed Department of Public Works (DPW) facility, roadway areas, sidewalk areas, and proposed athletic fields.

The proposed DPW facility will include a vehicle fleet parking, maintenance, and fueling area as well as materials storage including salt for deicing of roadways. Like many typical industrial facilities, this 2.74-acre impervious drainage area may generate runoff with concentrations of

pollutants in excess of those typically found in stormwater. As such, stormwater management from this section of the project is proposed in accordance with the "stormwater hotspot" criteria of the SMDM and includes an oil-water separator to control potential releases of petroleum products prior to discharge into the proposed drainage system.

c. Proposed Stormwater Discharge Points

In the proposed condition, stormwater will continue to be discharged at the same points, Discharge Points 1 and 2, as the pre-development condition.

d. Offsite Drainage

Offsite drainage from the slopes on the east and south side of the project that currently pass through the site are to be diverted around the project area via vegetated diversion swales and then conveyed directly to the Discharge Point 2 in the proposed piping system. Runoff from these undisturbed watersheds requires no treatment, although some degree of treatment, such as volume reduction and settling of sediment, can be expected due the low slope and long flow length of the diversion swales.

e. Green Infrastructure/Low Impact Development

Design of the Subject Site will incorporate green infrastructure practices and techniques to reduce stormwater runoff. The primary green infrastructure practices and techniques used in the proposed site design include the reduction of impervious surfaces, incorporation of rain gardens and permeable pavers, and soil restoration.

The parking area located north of Continental Street is proposed to be constructed of permeable pavers with a 50% surface void space and a subsurface stone reservoir. Permeable pavers are a form of "porous pavement" as described in the SMDM and result in a reduction of runoff volume.

Rain gardens, which are shallow vegetated depressions that capture runoff and allow it to soak into the underlying soil are proposed downslope and adjacent to impervious surfaces.

Soil restoration will occur across the project area where existing impervious surfaces are to be removed. The compacted soil will be deep tilled prior to constructing the proposed open space areas.

f. Redevelopment Criteria

Within the Subject Site, design of the stormwater management infrastructure will also be based on the redevelopment criteria of the SMDM. As discussed Section C.1.f., the project area is approximately 71% of the surface area of the Subject Site and consists of impervious cover with insufficient stormwater controls, which makes the Subject Site ideally suited to the redevelopment design criteria set forth in Chapter 9 of the SMDM. The Proposed Action will result in a 95% and a 54% reduction in impervious surfaces at Discharge Point 1 and Discharge Point 2, respectively. The Proposed Action will result in approximately 11.2 acres of impervious surfaces, including 0.417 acres of "new" impervious area and 10.78 acres of "redeveloped" impervious area, as compared to the 20.3 acres of impervious surfaces that currently exist on the Subject Site. The Proposed Action will also create 17.5 acres of new pervious area on the Subject Site.

Runoff from paved surfaces will be collected by curb and gutter and conveyed via closed drainage to hydrodynamic separation devices for treatment prior to discharge off site. A hydrodynamic separation device is a category of flow-based proprietary alternative stormwater treatment practices that can be used to treat stormwater runoff from redevelopment activities per the SMDM. Two hydrodynamic separation devices are proposed for Proposed Action. One will be located southeast of the proposed amphitheater to treat runoff that is ultimately conveyed to Discharge Point 2, while the other will be located at Discharge Point 1.

g. Standard Stormwater Management Practices

Runoff from the central open space areas will be conveyed overland to the west side of the Subject Site, where it will be conveyed from south to north via a water quality swale designed in accordance with the "wet swale" criteria for Open Channel Systems set forth in the SMDM. This swale will convey runoff to a stormwater control structure that will connect with the closed drainage system at Discharge Point 2.

h. Stormwater Peak Runoff Flow Rates

Stormwater peak runoff rates for the proposed condition were calculated using Autodesk Storm and Sanitary Analysis software, which utilizes hydrology techniques developed by the Soil Conservation Service (SCS/NRCS), combined with standard hydraulic calculations. **Table C5**

and **Table C6** show the post-development peak runoff flow rates and runoff volumes, respectively, for a wide range of design storms.

Table C5: Stormwater Peak Runoff Flow Rates: Proposed Conditions (in cubic feet per second, cfs)

Watershed/Discharge Point	1-year, 24-hour storm	2-year, 24-hour storm	10-year, 24-hour storm	25-year, 24-hour storm	50-year, 24-hour storm	100-year, 24-hour storm
1	3.54	6.49	13.96	19.31	25.02	27.88
2	13.22	19.76	32.32	45.73	56.73	62.51

Source: WSP Parsons Brinkerhoff

Table C6: Stormwater Peak Runoff Volumes: Proposed Conditions (in acre feet, ac-ft)

Watershed/ Discharge Point	1-year, 24-hour storm	2-year, 24-hour storm	10-year, 24-hour storm	25-year, 24-hour storm	50-year, 24-hour storm	100-year, 24-hour storm
1	0.363	0.608	1.24	1.72	2.22	2.48
2	1.934	2.77	4.82	6.32	7.92	8.73

Source: WSP Parsons Brinkerhoff

Compared to existing conditions, the Proposed Action will result in a significant reduction in stormwater peak flow rates and volumes at both discharge points. The percent reduction in stormwater runoff peak flow rate and volume at both discharge point is presented in **Table C7** and **Table C8**, respectively.

Table C7: Percent Decrease in Stormwater Peak Runoff Flow Rates

Design Storm	*DP-1*	*DP-2*
1-year	71%	77%
2	58%	74%
10	37%	72%
25	27%	68%
50	19%	67%
100	16%	66%

Source: WSP Parsons Brinkerhoff

Table C8: Percent Decrease in Stormwater Peak Runoff Volume

Design Storm	*DP-1*	*DP-2*
1-year	59%	92%
2	46%	52%
10	25%	47%
25	14%	44%
50	5%	41%
100	1%	40%

The Subject Site was previously developed, is highly impervious, and lacks effective stormwater management infrastructure. The Proposed Action will result in a significant reduction in stormwater runoff peak flow rates and volumes, which will result in a commensurate increase in water quality.

i. Site Design and its Relationship to Chapter 220 of the Village Code, Flood Damage Prevention and its Relationship to the Local Floodway and flooding conditions and surrounding properties including Devries Park and the Philipsburg Manor Restoration.

The latest version of Chapter 220: Flood Damage Prevention was adopted by the board of Trustees of the Village of Sleepy Hollow 9-18-2017 by L.L. No. 3-2007 (ch. 23 of the 1965 Code). The purpose of this chapter is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions.

Structures located within the FEMA SFHA require floodplain development permits which ensure that the new development protects the community from increased flood hazard and minimizes exposure to flooding. When a regulatory floodway exists, new developments must be shown to not increase the flood level during the 100-year event. Utilities and service equipment must be located at or above the BFE while new construction and substantial improvements must have the lowest floor at or above two feet above the BFE.

Based on revised FEMA BFE described in Section C.1.g above, all critical structures planned within the East Parcel Site will be compliant to Chapter 220. Critical structures and assets will be built 4.8 feet above the revised FEMA BFE and 3.3 feet above the flood elevation corresponding to the medium climate risk scenario. Other recreational spaces will be constructed in the floodplain

below the BFE with pervious material to allow for maximum infiltration and minimum impact of flooding in compliance with Chapter 220.

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Exhibit C-1: Existing Watersheds – East Parcel
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

Source: WSP Parsons Brinkerhoff

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Exhibit C-2: National Resources Conservation Service (NRCS) Soil Resource Report
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

Source: WSP Parsons Brinkerhoff

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Proposed Watersheds - East Parcel

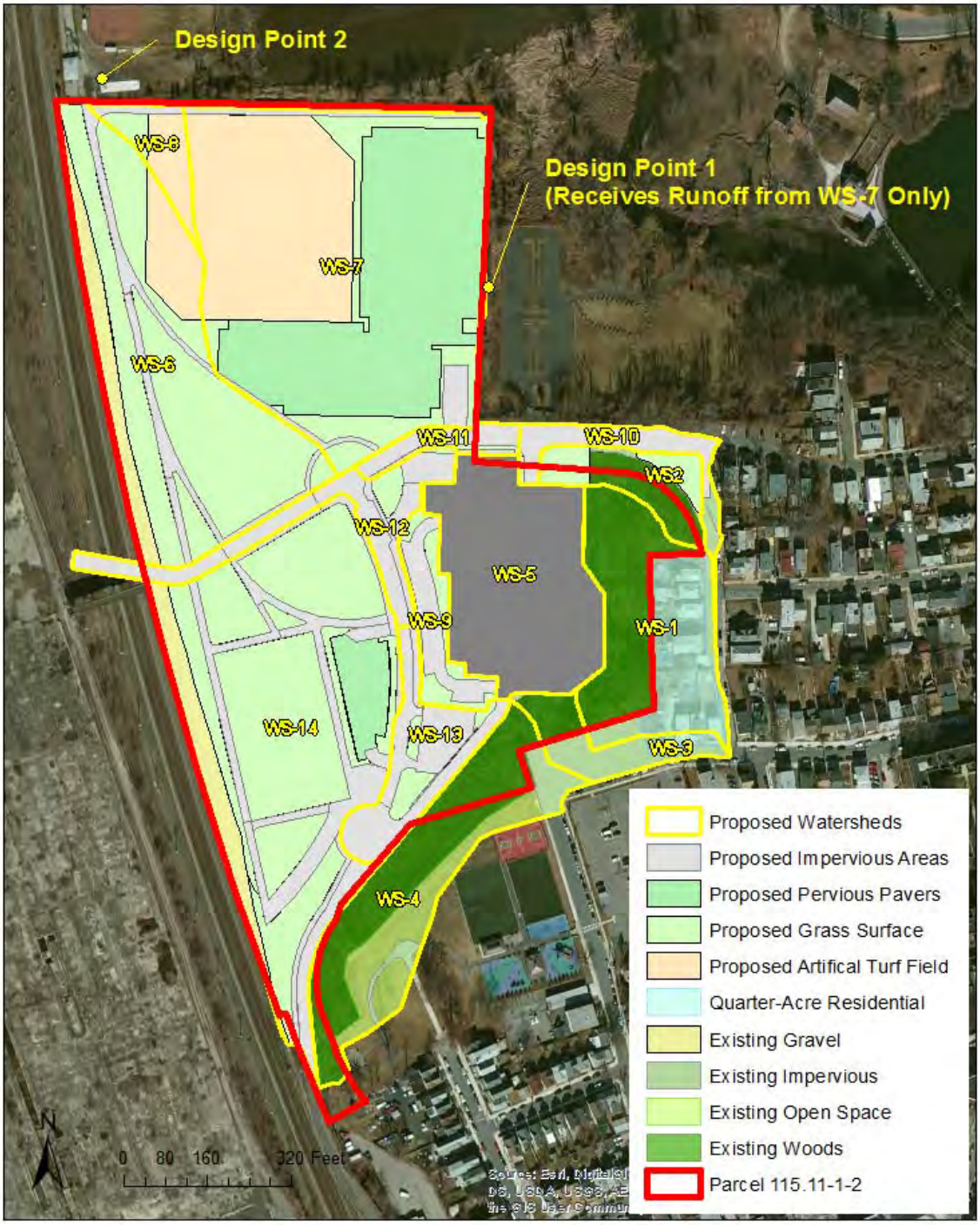

Exhibit C-3: Proposed Watersheds – East Parcel
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

Source: WSP Parsons Brinkerhoff

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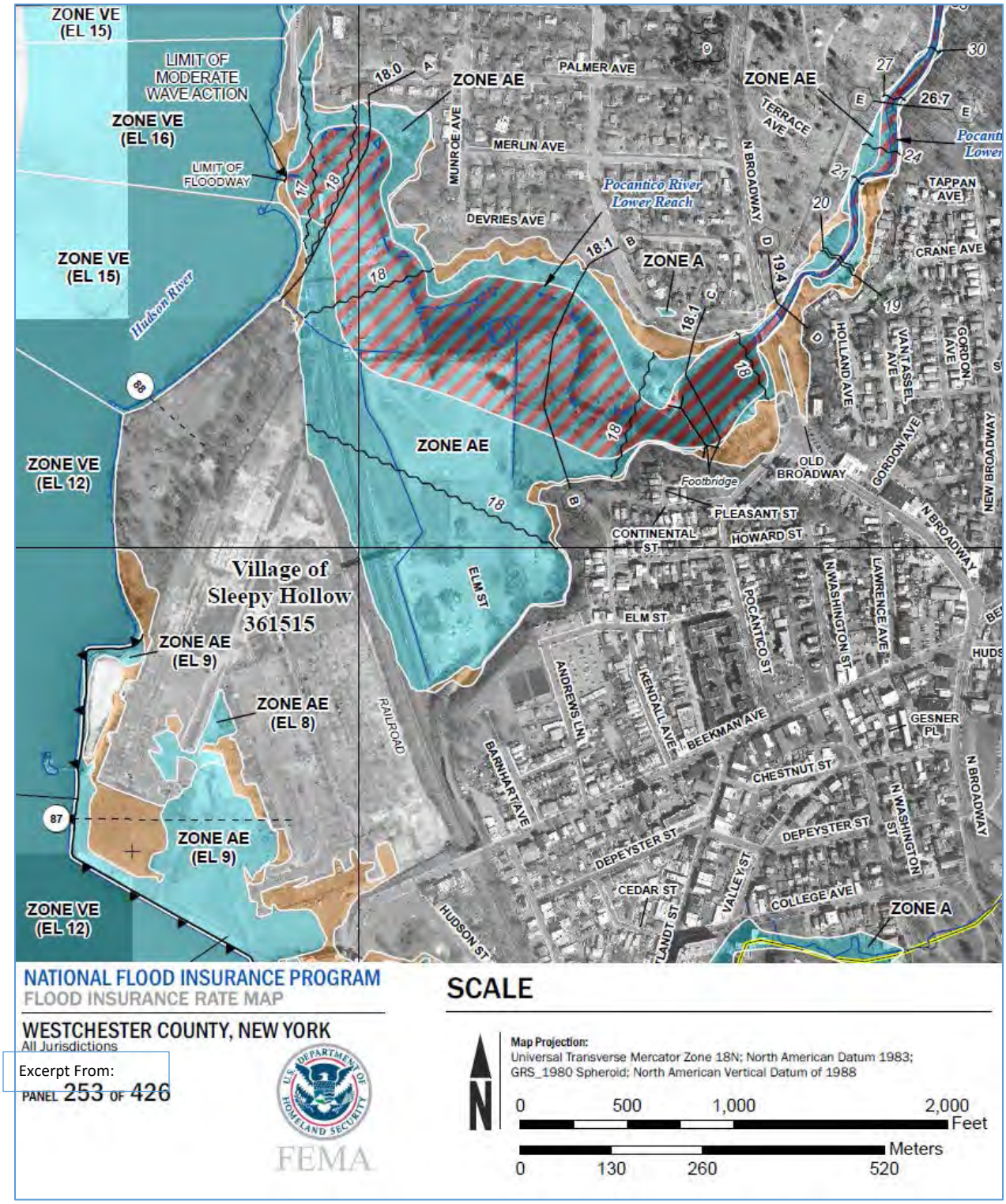

Exhibit C-4: Existing 2014 Preliminary Flood Insurance Rate Map (FIRM) for Sleepy Hollow, NY
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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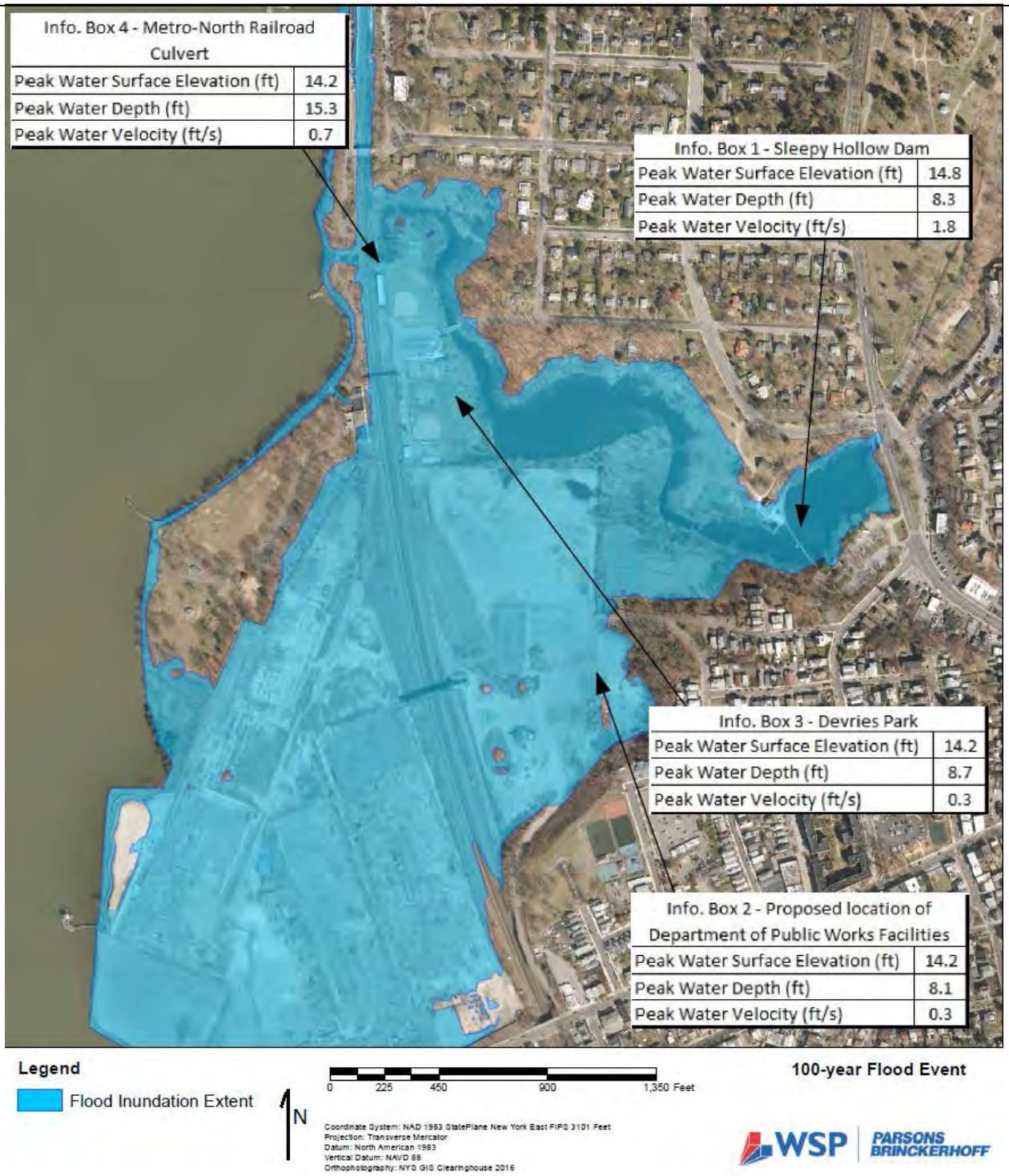

Exhibit III.C-5: 100-year Flood Inundation Extent from WSP|Parsons Brinckerhoff 2D Hydraulic Model
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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III. D – Traffic & Transportation

Traffic & Transportation Executive Summary

VHB Engineering, Surveying and Landscape Architecture, P.C. (VHB) has been retained by the Sleepy Hollow Local Development Corporation (SHLDC) to conduct a traffic impact study documenting the potential traffic impacts associated with the redevelopment of the East Parcel of the former General Motors facility located in the Village of Sleepy Hollow, Westchester County, NY. The traffic impact study quantifies both the existing traffic conditions along area roadways surrounding the site and the projected future traffic conditions expected with and without the proposed redevelopment of the site.

This traffic study has been prepared as part of the Draft Environmental Impact Statement (DEIS) for the proposed action and is in accordance with the requirements of the New York State Environmental Quality Review Act (SEQRA) and the Scoping Document (adopted 1/4/2016) for the proposed action. This document provides a detailed description of the study methodology, analysis, and key findings.

Project Description

The East Parcel is located to the east of the Metro-North Railroad line, south of the Pocantico River and Devries Park, west of Kendall Avenue and north of Barnhart Park and Beekman Avenue. The SHLDC is proposing to construct a new, expanded Department of Public Works (DPW) facility to replace the existing DPW facilities which are situated in multiple locations in the Village. The redevelopment will also include a school bus repair garage for the Tarrytown Union Free School District, three recreation fields for the Village and associated parking (approximately 600 parking spaces will be provided). It is anticipated that the East Parcel's parking areas would be available for use by patrons at the neighboring Philipsburg Manor historic site during special events, which generally occur a few times a year on weekends.

Existing access to the East Parcel is through an extension of Continental Street, which will be maintained and improved from Kendall Avenue to Pocantico Street to accommodate two-way traffic. The existing viaduct from Beekman Avenue to the East Parcel, which is currently closed due to structural issues, is proposed to be demolished. A new overpass will be constructed over the Metro-North railroad tracks, which will connect the East Parcel to the West Parcel of the former GM property and provide a secondary means of egress for the West Parcel.

Study Locations

Per the Scoping Document, the following four key intersections were identified as requiring analysis:

- US Route 9 (Broadway) and Pocantico Street/Old Broadway/Philipsburg Manor driveway
- Pocantico Street and Continental Street
- Continental Street and Pleasant Street
- Continental Street and Kendall Avenue

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\\vhb\proj\WhitePlains\29694.00 East Parcel Redevelopmen\GIS\Project\Aerial Site Location Map with out aerial.mxd

0 170 340 680 Feet

East Parcel Redevelopment | Village of Sleepy Hollow, NY

Site Location

Source Westchester GIS

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Existing & Future Traffic Volumes

To assess existing traffic conditions in the vicinity of the site, peak hour manual turning movement traffic volumes were recorded in February 2016 at the four key intersections. The existing traffic volumes were adjusted for seasonality then grown to account for anticipated increases in background traffic by the time the project is completed, establishing the future traffic volume conditions without the proposed redevelopment of the East Parcel. The future traffic volumes include increases associated with the Edge on Hudson development located on the West and South Parcels, and anticipated development activity in the Village of Tarrytown.

Project-Development Traffic

Traffic anticipated to be generated by the project was forecast based on driveway counts at the existing DPW facilities and on published trip generation data. Based on these projections, the proposed action is projected to generate 23 new vehicular trips during the typical weekday AM peak hour, 87 new trips during the typical weekday PM peak hour and 110 new vehicular trips during the typical Saturday midday peak hour. The proposed connection of the East Parcel to the West Parcel will also provide an alternate means of access to and egress from the Edge on Hudson development on the West Parcel, thereby alleviating traffic conditions on Beekman Avenue.

During events at the sports fields or special events at the neighboring Philipsburg Manor site (during which patrons will use the East Parcel parking areas), as many as 570 vehicles could enter and exit the East Parcel in one hour. The largest traffic-generating events will likely occur on Saturdays. It is noted that Phillipsburg Manor currently has periodic events and many of these trips may already be on the surrounding roadways. For the purposes of this analysis, it was conservatively assumed that event trips would be all newly added to the studied intersections.

The site-generated traffic volumes for a major event were assigned to the area roadways based on the previously-approved distributions for the East Parcel contained in the FEIS for the Edge on Hudson development to yield the future traffic conditions with an event at the proposed development.

Future Traffic Conditions

Capacity analyses were conducted at the study intersections to assess the quality of traffic flow in the study area under existing conditions and future conditions with and without the proposed action. Based on a review of the peak-hour traffic volumes, it was determined that all intersections currently experience good (Level of Service B or better) operating conditons during all three peak hours. In the future without the project but with forecast increases in traffic volumes, longer peak-hour delays will be experienced on the Pocantico Street approach to US Route 9 and this condition will worsen in the future with the redevelopment of the East Parcel. To reduce peak-hour delays, it is recommended that the traffic signal timing be modified by allocating more green time to the Pocantico Street signal phase. This retiming will have a minimal impact on the other movements and is recommended regardless of whether or not the project proceeds.

For the Event peak hour, the analysis indicates that, with the additional Event traffic, significant delays will be experienced on the Pocantico Street approach to US Route 9 and on the Continental Street approach to its unsignalized intersection with Pocantico Street. During events, which will occur only a few times during the year, it is recommended that special traffic management measures be instituted at these locations. These measures will allow visitors to arrive at and depart from these events while still providing adequate capacity to accommodate everyday, non-event traffic.

Parking

The proposed parking program as illustrated on the Riverfront Development Concept Plan (RDCP) includes approximately 500 spaces located in the northeast corner of the Subject Site and proximate to the Philipsburg Manor Restoration (the Restoration) and its existing overflow parking area. It is contemplated that the LDC and Historic Hudson Valley, the entity that operates the Restoration, would enter into a formal arrangement for shared use of the 500± space parking facility for larger event to be held at the Restoration. The 500± space parking area has been laid out so that when there are large events traffic could enter through either the existing Restoration overflow parking lot or through the proposed 500± space parking facility. Additional public parking is provided along the southern access road (approximately 20 spaces), adjacent to the proposed recreation field (65 spaces), and below the proposed community center (approximately 40 spaces). In addition, the RDCP includes approximately 65 parking spaces for DPW employees with the parking separated from the balance of the East Parcel.

Pedestrians and Cyclists

At a minimum, it is recommended that the sidewalk along Continental Street be extended from Pleasant Street into and through the site, and that Continental Street is widened to provide at least one 12-foot wide lane in either direction, to accommodate cyclists. Alternatively, a 10-foot wide shared use bike-pedestrian path could be constructed parallel to Continental Street from Pocantico Street to the site.

Alternatives

Two alternatives to the proposed action were evaluated qualitatively to determine traffic impacts relative to the proposed action. These alternatives are described below.

<u>Alternative Uses - Indoor Recreation Facility with Community Space</u>

This alternative would replace one of the outdoor recreation fields with an indoor recreation facility with community space. The traffic generated by an indoor field would be similar to traffic generated by an outdoor field, however, while the use of outdoor fields typically occurs from spring to autumn, an indoor facility would allow for year-round use in any weather condition.

<u>Alternative with a Larger School Bus Repair Facility</u>

This alternative would replace the proposed 3-bay school bus repair facility with a 12-service bay facility. With the larger facility, it is estimated that, 18 additional trips would be added to the

surrounding street system during the weekday AM and PM peak hours. Given this relatively minor increase, it was determined that the results of the analysis would remain essentially unchanged from the proposed action.

Conclusions

Based on the findings above, is concluded that, with the recommended signal timing modifications and event traffic management measures, the proposed East Parcel redevelopment will not have a significant adverse impact on area traffic operating conditions and will provide improved traffic operating conditions along the lower portion of Beekman Avenue.

Project Description

The East Parcel, as depicted on **Exhibit III.D-1,** is located to the east of the Metro-North Railroad line, south of the Pocantico River and Devries Park, west of Kendall Avenue, and north of Barnhart Park and Beekman Avenue. The East Parcel contains the remains of building footprints and parking areas of the former GM assembly plant, with a portion of the parking area currently used by the DPW for its composting operations. The SHLDC is proposing to construct a new, expanded DPW facility to replace the existing DPW facilities which are situated in multiple locations in the Village. The redevelopment will also include a school bus repair garage for the Tarrytown Union Free School District, three recreation fields for the Village and associated parking (approximately 600 parking spaces will be provided). It is anticipated that the East Parcel's parking areas would be available for use by patrons at the neighboring Philipsburg Manor historic site during special events, which generally occur a few times a year on weekends.

Existing access to the East Parcel is through an extension of Continental Street, which will be maintained. The section of Continental Street between Pleasant Street and Kendall Avenue that is currently restricted to one-way westbound traffic flow is proposed to be widened, allowing Continental Street to have two-way flow for its entire length. This will reduce the amount of vehicles that travel on Kendall Avenue and Howard Street that are destined to Pocantico Street, currently the only travel route available for eastbound vehicles exiting the East Parcel. The existing viaduct from Beekman Avenue to the East Parcel, which is currently closed due to structural deficiencies, is proposed to be demolished. A new overpass is proposed to be constructed over the Metro-North railroad tracks, which will connect the East Parcel to the West Parcel of the former GM property. This overpass will provide a secondary point of egress for the West Parcel, resulting in a shorter travel route from the West Parcel to Pocantico Street and Route 9. The overpass will also provide access to Beekman Avenue from the East Parcel.

Study Methodology

The focus of this study was to evaluate traffic flows and operating conditions on the roadways and intersections projected to be used by motorists traveling to and from the East Parcel redevelopment and to quantify the potential traffic impacts on these roadways and intersections.

As identified in the Scoping Document, the project study area consists of the four intersections listed below.

- US Route 9 (Broadway) and Pocantico Street/Old Broadway/Philipsburg Manor driveway (signalized)
- Pocantico Street and Continental Street (unsignalized)
- Continental Street and Pleasant Street (unsignalized)
- Continental Street and Kendall Avenue (unsignalized)

The greatest cumulative impacts of project-related traffic are likely to occur during the weekday AM and PM peak hours and during the midday peak hour on a Saturday, when ambient traffic activity is greatest and when the project will generate the most traffic. As such, traffic operating conditions at the study intersections were analyzed during these three peak periods.

As detailed hereafter, a review of these detailed analyses revealed that potential traffic impacts for typical operating conditions will be greatest on weekday evenings and that event traffic impacts will be greatest on Saturday afternoons. The specifics of these two peak periods are presented in detail in this report.

Existing Conditions

Evaluation of the traffic impacts associated with the proposed East Parcel Redevelopment requires a thorough understanding of the existing roadway system in the vicinity of the site. The existing conditions observed in the study area include an inventory of roadway and intersection geometry, traffic control devices, traffic signal timings, and the collection of traffic volumes. This information is provided in the following section.

Study Roadways and Intersections

US Route 9 (Broadway) is a state highway that generally runs in a south to north direction within New York State beginning in New York City and continuing to the north to the Town of Champlain, near the Canadian border. In the vicinity of the site, US Route 9 is classified as a principal arterial. Between NY 448 (Bedford Road) and a point approximately 120 feet to the south of its intersection with Pocantico Street, Route 9 is a three-lane roadway (two southbound lanes and one northbound lane). To the north of this point, Route 9 is a four-lane roadway with two travel lanes in each direction. Route 9 is generally 40 feet wide, but widens to 55 feet for a short distance south of Pocantico Street. Within the study area, Route 9 has a posted speed limit of 30 miles per hour (mph) and on-street parking is not permitted along either side of the roadway. The pavement is in generally good condition. Sidewalks are provided on both sides of the road to the south of the Pocantico Street and Old Broadway intersection and on the west side of US Route 9 to the north of the intersection.

Pocantico Street is a 30-foot wide Village roadway that connects US Route 9 to the north with Beekman Avenue to the south. Pocantico Street provides one travel lane in each direction and has a posted speed limit of 25 mph, except between Elm Street and Beekman Avenue where a school zone

speed limit of 15 mph is in effect. The pavement is in generally good condition. Within the limits of the study area, on-street parking is permitted only on the west side of the roadway (with street cleaning restrictions on Mondays and Thursdays from 8AM to 9AM) and sidewalks are provided along both sides of the road.

Continental Street is a Village roadway that runs in an east-west direction, beginning at Pocantico Street to the east and continuing to its terminus at the East Parcel. An overflow parking lot for the adjacent Philipsburg Manor historic site is located at the western end of Continental Street, with all vehicular access to this lot provided via Continental Street. Continental Street provides two-way travel except for the portion between Pleasant Street and Kendall Avenue where only westbound travel is permitted. The roadway varies in width from 18 feet to 42 feet. Between Pocantico Street and Pleasant Street the roadway measures 23 feet wide; in the segment with one-way flow between Pleasant Street and Kendall Avenue, the roadway narrows to a width of 18 feet. To the west of Kendall Avenue, the roadway is 42 feet wide. The pavement is in generally fair to good condition.

On-street public parking is permitted only on the north side of the roadway between Pocantico Street and Pleasant Street (with street cleaning restrictions on Tuesdays and Thursdays from 10AM to 11AM). Between Kendall Avenue and the East Parcel, parking is available on both sides of the street for permit holders only. Parking in the narrow one-way section of Continental Street is not permitted at any time. Sidewalks are provided along both sides of the road, except for the one-way segment where no sidewalks are provided and to the west of Kendall Avenue, where a sidewalk is provided along the south side of Continental Street only.

Kendall Avenue is a Village roadway that runs in a north-south direction, beginning at Continental Street to the north and continuing to the south to Beekman Avenue. The pavement is in generally fair to good condition. Between Continental Street and Howard Street and between Elm Street and Beekman Avenue, Kendall Avenue is a one-way southbound roadway. Kendall Street has two-way traffic flow for a short segment beginning at Howard Street and continuing for approximately 125 feet south to #90 Kendall Avenue; to the south of this point and continuing to Elm Street, Kendall Avenue provides one-way travel in the northbound direction only.

In the vicinity of the proposed project, between Continental Street and Howard Street, the pavement is 24-feet wide and there is on-street parking on both sides of the roadway. Street cleaning restrictions prohibit parking between 9AM and 12PM on the east side on Tuesdays and Thursdays and on the west side on Mondays, Wednesdays and Fridays. Between Continental Street and Howard Street, sidewalks are provided on the west side of Kendall Avenue and on the east side for a short segment starting at Howard Street and continuing for approximately 80 feet to the north to #67 Kendall Avenue.

Howard Street is a 25-foot wide Village roadway that runs in an east-west direction, beginning at Kendall Avenue and continuing to the east to its terminus at North Washington Street. The pavement is in generally fair to good condition. Between Kendall Avenue and Pocantico Street, Howard Street has two-way traffic flow with parking permitted on both sides of the roadway[1]. With vehicles

[1] It is noted that after the adoption of the Scoping Outline and the preparation of the traffic analysis, the Village of Sleepy Hollow approved the redirection of Howard Street from a two-way roadway to a one-way east-bound roadway.

permitted to park along both sides of the roadway, the available travel way measures only 10-feet wide for two-directional flow; effectively making Howard Street a one-way road.

Street cleaning restrictions prohibit parking between 8AM and 12PM on the north side on Tuesdays and Thursdays and on the south side on Mondays, Wednesdays and Fridays. Between Pocantico Street and North Washington Street, Howard Street is a one-way eastbound roadway with parking permitted on both sides of the street, except during street cleaning periods (north side between 9AM and 12PM on Tuesdays and Thursdays; south side between 9AM and 12PM on all days except Tuesdays and Thursdays). Sidewalks are provided on both sides of Howard Street for its entire length.

Descriptions of the four study locations are provided below.

US Route 9 (Broadway) at Pocantico Street/Old Broadway/Philipsburg Manor Driveway

US Route 9 (Broadway) forms the north and south legs to this signalized, five-legged intersection with Pocantico Street, Old Broadway and a driveway to Philipsburg Manor. Each US Route 9 approach provides two lanes; a shared left-turn/through lane and a shared through/right-turn lane. Pocantico Street, Old Broadway and the Philipsburg Manor driveway each provide one shared left-turn/through/right-turn approach lane. The intersection is controlled by a three-phase, semi-actuated traffic signal. The Route 9 approaches operate together during the first signal phase. The Pocantico Street and Old Broadway approaches run concurrently during the second phase followed by the Philipsburg Manor driveway approach which operates during the third signal phase.

Sidewalks are provided on both sides of US Route 9 to the south of the intersection and on the west side to the north of the intersection. Sidewalks are provided on both sides of Pocantico Street. On Old Broadway, a sidewalk runs along the west side of the roadway; on the east side of the roadway, a sidewalk is provided to a point approximately 150 feet to the north of the intersection. Sidewalks are not provided on the Philipsburg Manor driveway. Crosswalks are provided along the north leg of Route 9 and across Old Broadway. There are no pedestrian buttons or displays at the intersection.

Pocantico Street at Continental Street

The Continental Street approach to this unsignalized "T" intersection with Pocantico Street provides one eastbound shared left-turn/right-turn lane. Pocantico Street provides a northbound shared left-turn/through lane and a southbound through/right-turn lane. Exiting movements from Continental Street are controlled by a "Stop" sign.

Sidewalks are provided along both sides of Continental Street and Pocantico Street, however, there are no crosswalks.

Continental Street at Pleasant Street

The Pleasant Street southbound approach to this unsignalized "T" intersection with Continental Street provides one shared left-turn/right-turn lane. Continental Street has one-way westbound traffic flow to the west of Pleasant Street and two-way flow to the east of this intersection. The westbound Continental Street approach provides one shared through/right-turn lane and the intersection is controlled by a "Stop" sign on the Pleasant Street approach. Sidewalks are provided on both sides of Pleasant Street and on both sides of Continental Street to the east of this intersection. There are no crosswalks at this intersection.

Continental Street at Kendall Avenue

Kendall Avenue provides one-way flow in the southbound direction with one receiving lane at this unsignalized "T" intersection with Continental Street. To the east of Kendall Avenue, Continental Street is one-way westbound and has one shared left-turn/through lane. The eastbound approach of Continental Street consists of a channelized right-turn lane. There are no "Stop" or "Yield" signs controlling either the eastbound right-turn movement or the southbound through movement on Kendall Avenue to the south of Continental Street. A sidewalk is provided along Continental Street on the south side of the channelized right-turn lane which continues along the west side of Kendall Avenue. Crosswalks are not provided at this intersection.

Existing Traffic Data

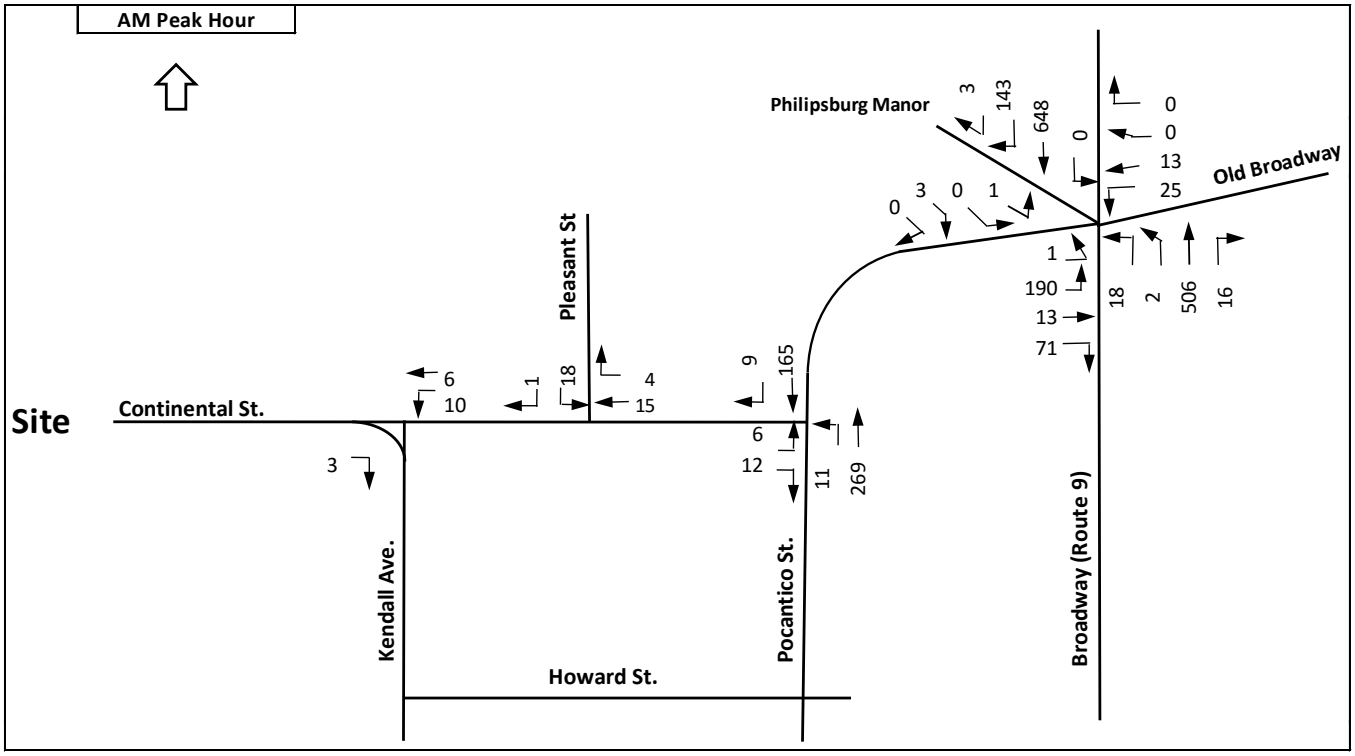
To assess existing traffic conditions in the vicinity of the site, peak hour manual turning movement traffic volume counts were recorded at the four study intersections in February 2016. Automatic traffic recorder (ATR) 24-hour counts were also conducted on Continental Street near the Pocantico Street intersection during the same period as the manual counts. The ATR counts collected traffic volumes and travel speed measurements.

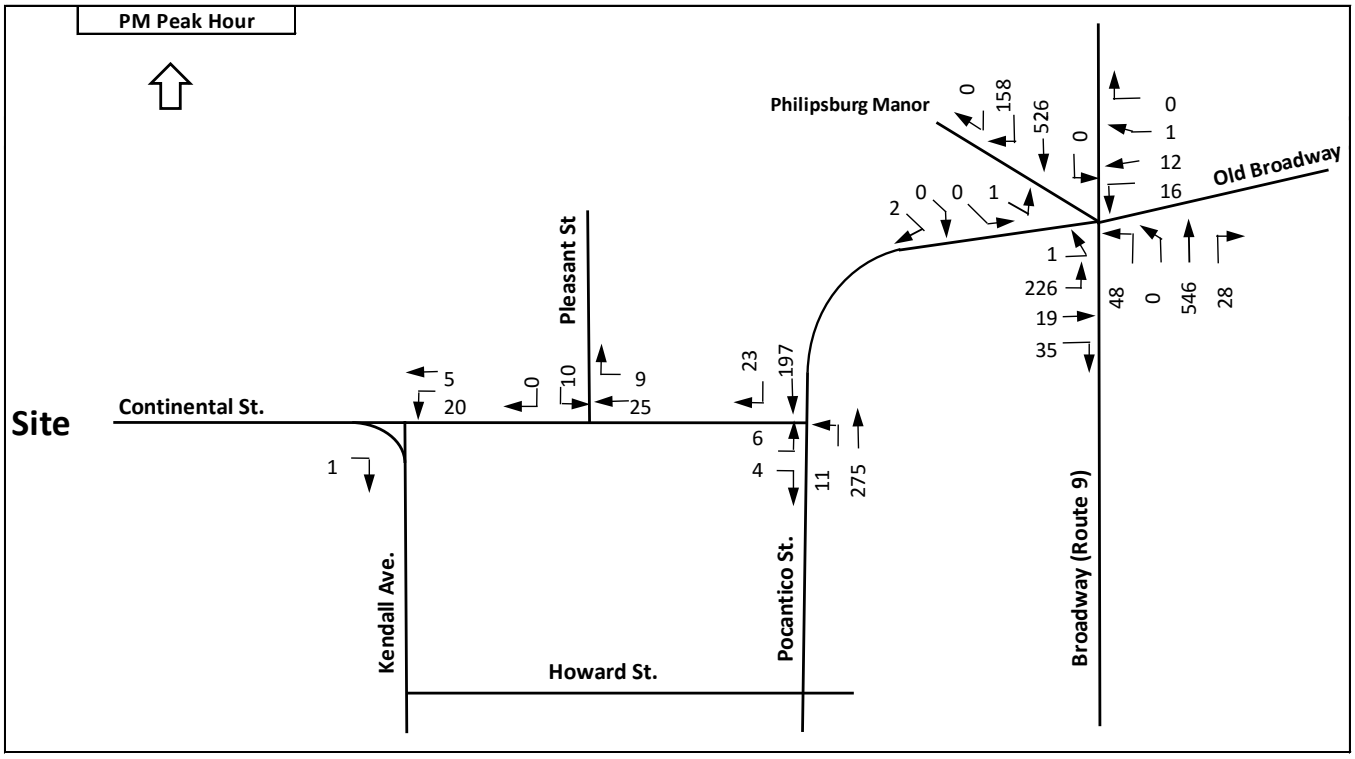
The manual counts were recorded during a typical weekday AM peak period (7:00 to 9:00 AM) and a typical weekday PM peak period (4:00 to 6:30 PM) (when school was in session) and a typical Saturday midday peak period (11:00 AM to 1:30 PM), all in February 2016. . The manual traffic counts included classification (cars, trucks and buses), and tallies of pedestrians and bicyclists.

The traffic counts were tabulated and the peak hours identified as 7:45 to 8:45 AM, 4:45 to 5:45 PM and 12:00 to 1:00 PM for the weekday AM, PM and Saturday midday periods, respectively. The peak hour volumes were compared to the ATR counts along Continental Street which confirmed the peak hours. The manual counts were adjusted as needed to provide for balanced flow between intersections. The balanced volumes were then increased by 7.4 percent to account for seasonality (based on NYSDOT data). The balanced peak hour traffic volumes are depicted on **Exhibits D-2 and D-3**.

A review of the exhibits indicates that, overall, the PM peak hour volumes are slightly higher than the AM peak hour volumes. Both the AM and PM peak hour volumes are higher than the Saturday peak hour volumes. However, in the future, with the projected increases in background traffic and the addition of the Event trips, the Saturday peak hour will have the highest traffic volumes, followed by the PM peak hour. Therefore, this report includes analysis of the weekday PM peak hour and the Saturday Event midday peak hour.

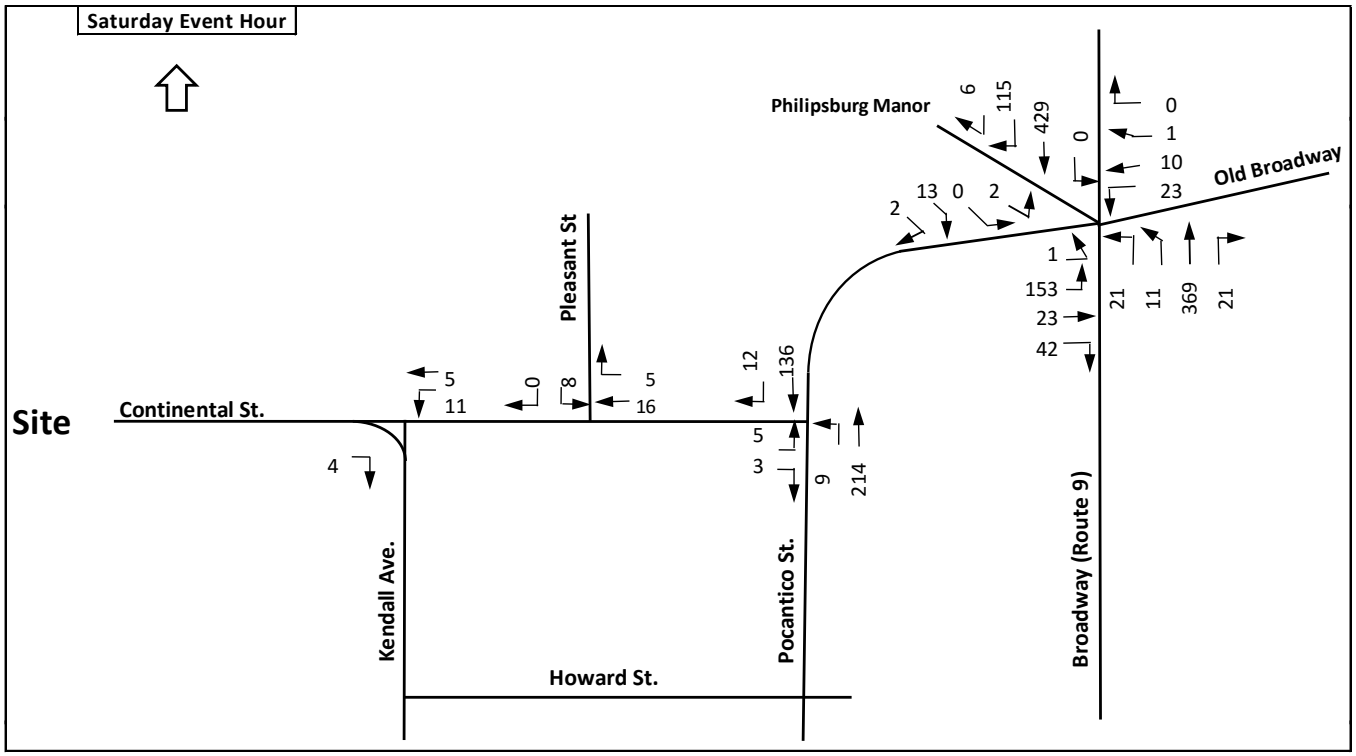
Exhibit D-2 – Existing Traffic Volumes – Weekday AM and PM Peak Hours





Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Exhibit D-3 – Existing Traffic Volumes – Saturday Midday Event Peak Hour



Source: VHB, Engineering, Surveying and Landscape Architecture, PC

A review of the ATR data indicated that weekday traffic volumes on Continental Street just west of Pocantico Street vary from 295 to 373 vehicles per day, with the highest volumes recorded on Thursday. Traffic volumes of 314 and 276 were recorded on Saturday and Sunday, respectively. Daily, traffic volumes vary between next to nothing (between 2:00 am and 4:00 am overnight) to a maximum of 37, 39 and 32 during the weekday AM, PM and Saturday peak hours. The ATR data also indicate an average speed of 12 mph in the eastbound direction and 16 mph in the westbound direction.

Future Conditions

An analysis of future conditions, both with and without the proposed redevelopment of the East Parcel ("Build" and "No-Build" conditions, respectively), was performed for each of the peak hours to evaluate the effect of the proposed action on future traffic in the area, both during typical daily activity as well as for event days. The No-Build condition represents the future traffic conditions that can be expected to occur, if the proposed redevelopment does not materialize. The No-Build condition serves as a comparison to the Build condition, which represents expected future traffic conditions resulting from both project and non-project-generated traffic. The East Parcel redevelopment is anticipated to

be completed in 2018, however, traffic volumes in the study area were projected to the year 2026, reflecting the year when the West Parcel project is expected to be completed.

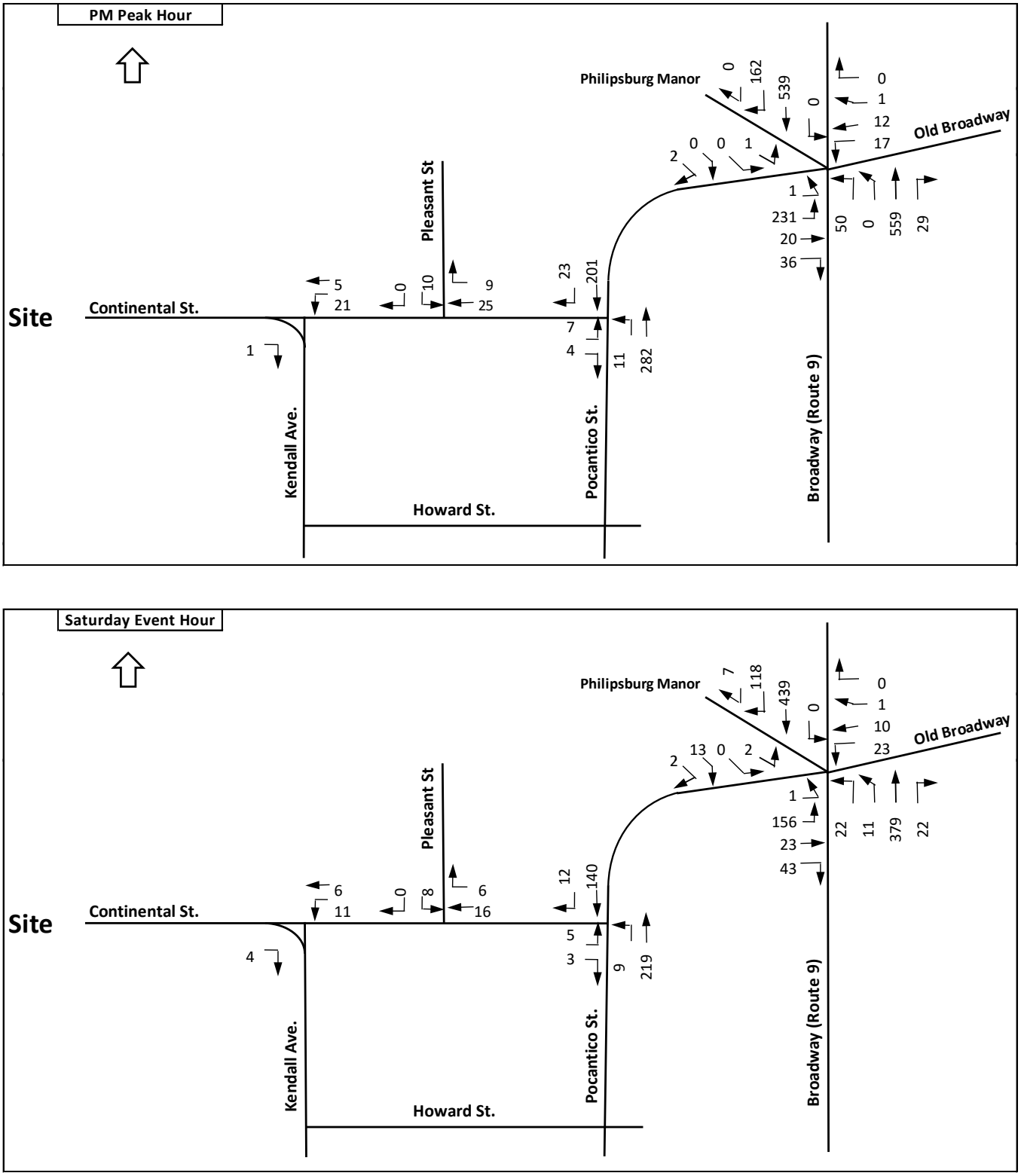
No-Build Condition

Traffic growth is typically a function of the expected land development, economic activity and changes in demographics in the region. To estimate the rate at which traffic can be expected to grow during the study period, both historical growth and planned area developments are reviewed and considered, as described below.

Background Traffic Growth

It was determined that an annual growth rate of 0.25 percent would be appropriate to account for typical, non-development-specific background traffic growth. The existing traffic volumes for all three peak hours were increased by a total of 2.5 percent to represent the grown volumes. The critical PM and Saturday peak hour volumes shown on **Exhibit D-4**.

Exhibit D-4 – Grown Traffic Volumes



Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Planned Vicinity Developments

The Planning Boards of the Villages of Sleepy Hollow and Tarrytown provided information on proposed vicinity developments in the area. The following describes the development projects identified in each Village.

Village of Sleepy Hollow

The Edge on Hudson project (formerly known as Lighthouse Landing) is a proposed mixed-use residential and commercial development to be constructed on the West Parcel of the former GM property. The current development program consists of 1,077 residential units and 207,215 square feet of commercial space. The project will be constructed in multiple phases, with expected completion by 2026. The traffic volumes associated with the Edge on Hudson development were obtained from the traffic study provided in the October 4, 2005 Final Environmental Impact Statement (FEIS) for the project. The FEIS volumes were adjusted based on the currently proposed development size and distributed to the roadways based on the FEIS distribution patterns.

For the No-Build analyses in this report, it was assumed that the East Parcel will be undeveloped and there would be no vehicular connection between the West Parcel and the East Parcel. Therefore, all access to Edge on Hudson would be from the West Parcel access points along Beekman Avenue. For the Build condition, it was assumed that the proposed connection between the East and West Parcels would be constructed and that 36 percent of the Edge on Hudson trips would access the West Parcel using this new connection (via Continental Street through the East Parcel).

Village of Tarrytown

Development activity in Tarrytown includes four projects currently in the concept or approval stages that are in the vicinity of the Tarrytown Railroad Station, expansions to the Tarrytown Honda dealership and JCC on Hudson, the completion of the Hudson Harbor development and a proposed aquatic center located adjacent to Pierson Park. A brief description of each project and the expected trips to be added to the study locations is provided below.

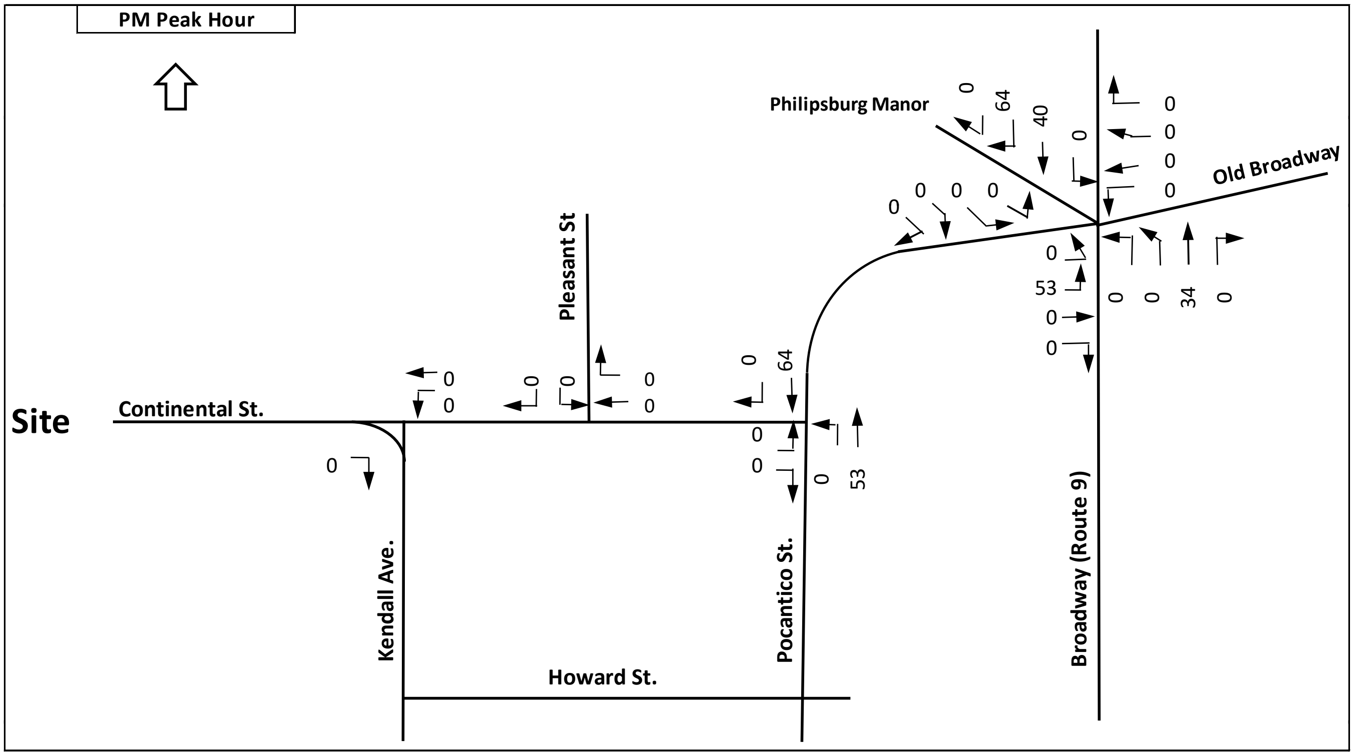
- The Village is beginning the process to consider the redevelopment of several sites near the train station. Development on these sites may include residential, recreational, music/event space and commercial uses. It is not expected that these projects will add significant traffic to the study intersections.
- The Tarrytown Honda automobile dealership is located along the east side of South Broadway, between Walter Street and the I-287 ramps. The owner is proposing to build an expansion to the dealership on a separate parcel to the north of the I-287 ramps, which is currently occupied by the Eldorado West diner. The net increase in trips from the current restaurant use to the auto dealership is not expected to be significant in the East Parcel study area.
- The JCC on Hudson expansion is located next to the Doubletree Hotel on Route 9 south of I-287. This proposed expansion is intended to relieve current overcrowding conditions and is not expected to result in a significant increase in traffic in the East Parcel study area.
- Hudson Harbor (formerly known as Ferry Landing) is located to the west of the Tarrytown Railroad station and currently has 174 of its 238 approved residential units completed (73 percent completed). The traffic to be generated by the remaining 64 units (27 percent) was

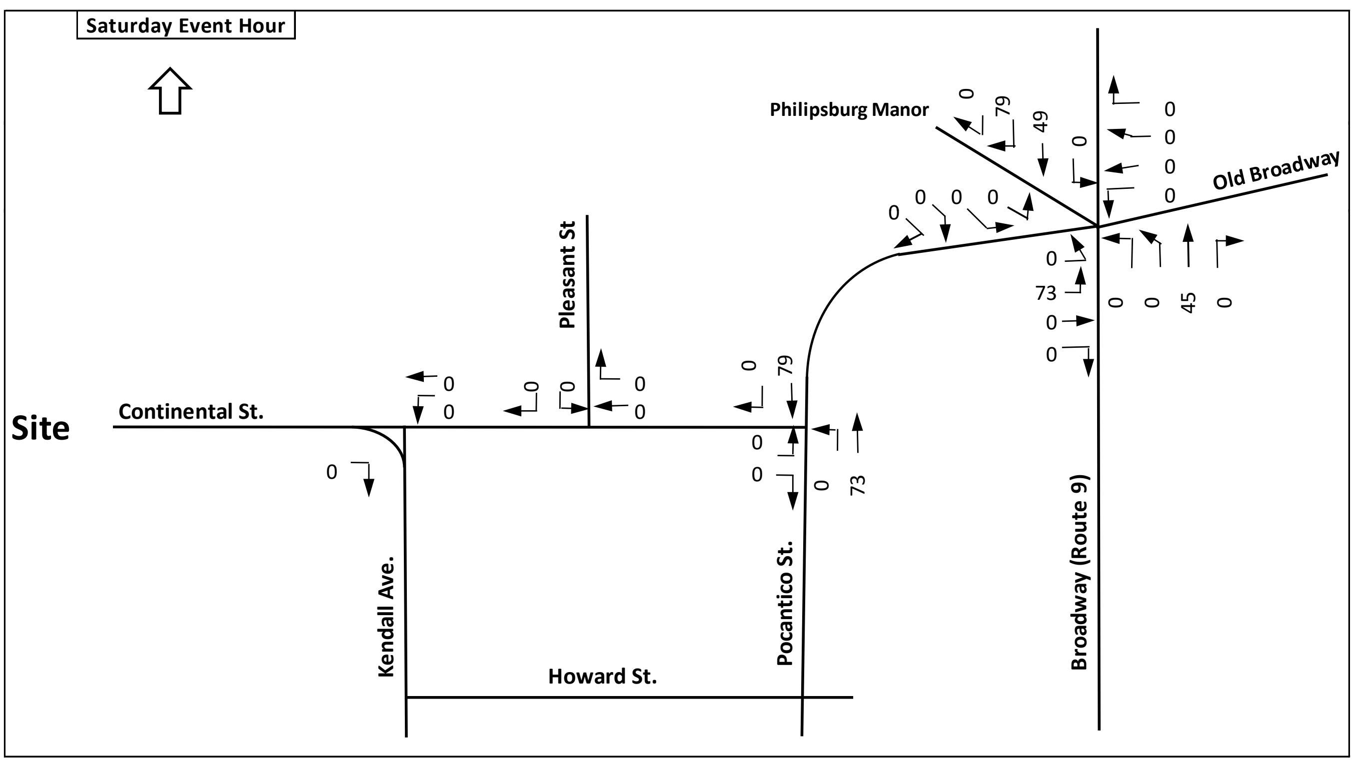
estimated based on the Ferry Landing traffic volumes on Figure 6.5b contained in the FEIS for the Edge on Hudson development.

- The proposed aquatic center will have an outdoor pool and a building housing locker rooms/changing rooms and a fitness center. The Village anticipates that the pool will be used by visitors to other destinations in the area. Therefore, it is not expected that there will be significant traffic generated by the aquatic center and only minimal trips will be seen traveling through the study locations.

The vicinity development traffic volumes from the Sleepy Hollow and Tarrytown projects for the critical PM and Saturday peak hours are shown on **Exhibit D-5.** The volumes shown on Exhibit D-5 were added to the grown traffic volumes shown on **Exhibit D-4** to represent the No-Build traffic volumes, shown on **Exhibit D-6**.

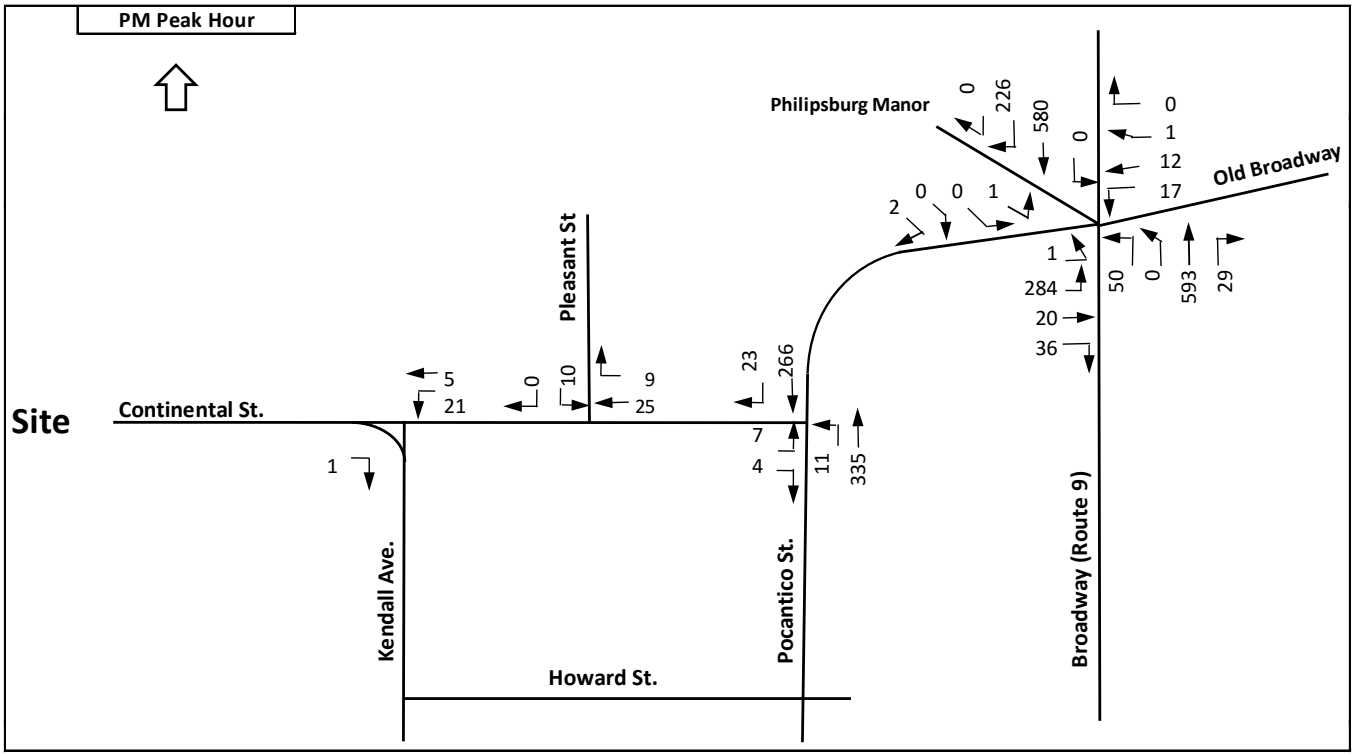
Exhibit D-5 – Vicinity Development Traffic Volumes

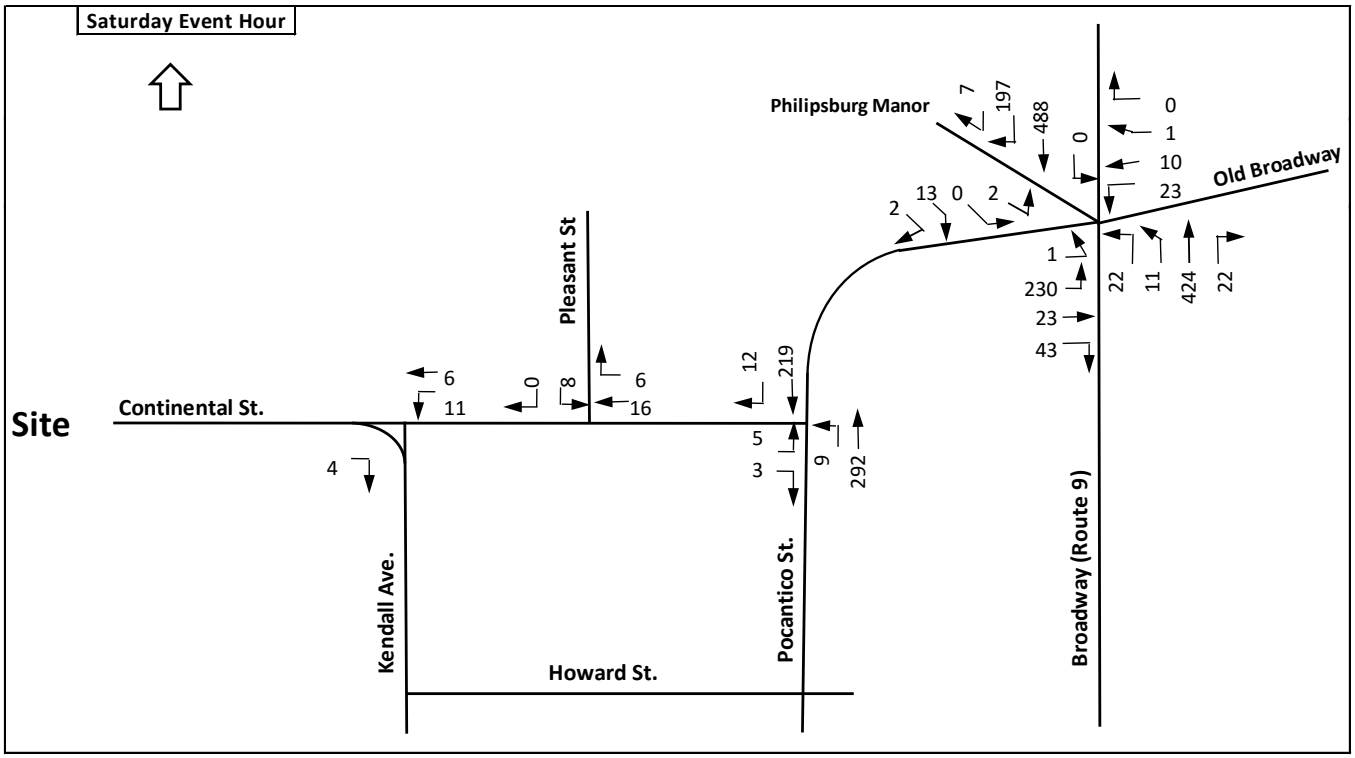




Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Exhibit D-6 - No-Build Traffic Volumes





Source: VHB, Engineering, Surveying and Landscape Architecture, PC

The No-Build volumes from the FEIS for the Edge on Hudson development were compared to the No-Build volumes for the proposed action (less the Edge on Hudson trips). The comparison was performed at the two common study intersections, Route 9 and Pocantico Street/Old Broadway and Pocantico Street and Continental Street. This comparison, shown in Table 1, indicates that the FEIS trips at the Route 9 intersection with Pocantico Street/Old Broadway are higher than the No-Build trips for the proposed action during each peak hour (146 to 275 trips higher). At the Pocantico Street/Continental Street intersection, the No-Build volumes are similar, with the proposed action's No-Build volumes slightly higher (24 trips) during the AM peak hour and slightly lower (29 trips) during the PM peak hour. On Saturday, the volumes are identical.

Table 1 - No-Build Volume Comparison

Intersection	FEIS			Proposed Action			Increase (Decrease) from FEIS		
	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT
US Route 9 (Broadway) & Pocantico St/Old Broadway/Philipsburg Manor Driveway	1864	1897	1572	1718	1684	1297	(146)	(213)	(275)
Pocantico St & Continental St	469	567	399	493	538	399	24	(29)	(0)

Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Site-Generated Traffic

The SHLDC is proposing to construct a new, expanded DPW facility to replace the existing DPW facilities which are situated in multiple locations in the Village. The DPW operations will relocate to the new facility. The redevelopment will also include a school bus repair garage (with 3 service bays) for the Tarrytown Union Free School District and three recreation fields for the Village (two multi-purpose fields and one baseball field). The anticipated project site-generated trips for the uses proposed for the East Parcel were determined based on the methodologies described below.

DPW Facility – The hours of operation for the DPW are Monday through Friday from 6:45 AM to 3:00 PM. The DPW currently has 26 employees which is expected to increase to 35 employees with the larger facility and relocation of operations to the East Parcel. The main DPW facility is located on River Street, opposite Horan's Landing. In addition to the River Street facility, the DPW uses the West Parcel for storage of garbage trucks and the East Parcel for composting operations. The former GM South Parcel is used for DPW employee parking. Employees also park along River Street and at Horan's Landing.

To identify the existing DPW trip generations, traffic counts were conducted by VHB at the above noted locations on Monday February 22, 2016 from 6:30 to 9:00 AM and from 2:00 to 6:00 PM. The traffic counts were tabulated and the peak hours identified. The AM and PM peak hours for the DPW occur earlier than the established roadway peak hours. During the roadway peak hours (7:45-8:45 AM and 4:45-5:45 PM), the DPW generates 23 AM trips and 5 PM trips.

During the DPW peak hours (6:30-7:30 AM and 2:15-3:15 PM), the DPW generates 49 AM trips and 39 PM trips, respectively. Although the Continental Street ATR data are somewhat limited, they indicate that traffic volumes during these hours are approximately 42% and 22% lower that during the busiest hours of traffic activity on the surrounding roadways, respectively. The DPW trips during the roadway peak hour are only 47 percent of the trips at the DPW during the busiest hour of activity at the DPW in the AM and are only 13 percent of trips at the DPW during the busiest hour of activity at the DPW in the PM To represent future DPW trips with the expansion, the existing DPW trips were adjusted based on the increase in employees (from 26 to 35). The expansion will result in 11 new trips during the AM peak roadway hour and 3 new trips during the PM peak roadway hour.

Recreation Fields – Trips associated with the two multi-purpose fields and the baseball field were estimated based on a review of data provided by the 9th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* and on traffic counts collected at similar sites. ITE trip rates for Land Use Code 488 (Soccer Complex), indicate that the three fields would generate 3 trips during the AM peak hour, 53 trips during the PM peak hour and 91 trips during the Saturday peak hour. A review of other studies indicate that multi-purpose fields generate up to 35 trips per field during the peak hour while baseball fields generate slightly fewer trips (30 trips per field). To provide a conservative analysis, the trips generations for the East Parcel ballfields were estimated to be 3 trips during the AM peak hour, 75 trips during the PM peak hour and 110 trips during the Saturday peak hour (higher than the ITE rates).

School Bus Repair Facility – The bus repair facility will have 3 service bays and will be in operation on weekdays. The facility will not be used for storage of school buses. Trip estimates were made based on the number of service bays and employees. It is anticipated that the school bus repair facility will generate 9 trips during the AM and PM peak hours and no trips during the Saturday peak hour.

Saturday Event at Philipsburg Manor – With a large event at the adjoining Philipsburg Manor, overflow parking will be available for event attendees in the East Parcel parking areas which will have 600 parking spaces. To provide for a worst case analysis, it was assumed that two-thirds of the parking area would be turned over during the peak Saturday midday hour, resulting in 570 entering trips and 570 exiting trips. These trips were assigned to the roadways based on the East Parcel distributions. It is noted that Phillipsburg Manor currently has periodic events and many of these trips may already be on the surrounding roadways. For the purposes of this analysis, it was conservatively assumed that event trips would be all newly added to the studied intersections.

For weekday events, it was considered unlikely that there will be the rolling turnover of spaces that is contemplated for the weekend event. Thus, on weekdays it is expected that, at most, there will be either 570 vehicles arriving at an event during the peak hour or 570 vehicles departing from an event during the peak hour. Since this is half of the weekend event trip rate, it was concluded that the weekend (Saturday) event would be the most critical and was, therefore, selected for analysis purposes.

A summary of the trip generation projections for the proposed East Parcel development is presented in **Table 2**. As indicated in this table, the project is projected to generate 23 new vehicle trips during the weekday AM peak hour, 87 new trips during the weekday PM peak hour and 110 new vehicle trips on a typical Saturday. On a Saturday with a large event, the East Parcel will generate 1,140 new trips during the Saturday event peak hour.

Table 2 - Trip Generation Summary

Land Use	New Trips											
	AM Peak Hour			PM Peak Hour			Saturday Typical Peak Hour			Saturday Event Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
DPW Facility Expansion	6	5	11	1	2	3	0	0	0	0	0	0
Recreational Fields	2	1	3	50	25	75	53	57	110	0	0	0
School Bus Repair Facility	6	3	9	3	6	9	0	0	0	0	0	0
Large Event	0	0	0	0	0	0	0	0	0	570	570	1,140
Total New Trips	14	9	23	54	33	87	53	57	110	570	570	1,140

Note: The DPW and school bus repair facilities are closed on weekends. On Saturday during a large event, no activities will be held at the recreational fields.

Source: VHB, Engineering, Surveying and Landscape Architecture, PC

As can be seen from Table 2, the proposed action will generate more traffic on weekday evenings and Weekends than during weekday mornings and that it will generate more traffic when there is a weekend event than at any other time. A review of the counted intersection data revealed that traffic volumes at the studied intersections during the weekday AM peak hour are 7.5% lower than during the weekday PM peak hour and that that traffic volumes at the studied intersections during the midday peak hour on Saturdays are 26% lower than during the weekday PM peak hour. Considered together, it is apparent that the proposed action will have the greatest potential to impact traffic on a typical day during the weekday PM peak hour and on an event day during the midday hour on a Saturday. For this reason and to keep the discussion of changes in traffic volumes resulting from the proposed action focused, even though a complete detailed analysis was conducted of all four peak-hour conditions, only the details of the typical PM and event Saturday conditions are presented in the main body of this report.

In the FEIS for the Edge on Hudson development, the East Parcel development was to consist of a DPW facility and two soccer fields; a slightly smaller development than the proposed action, with one fewer ballfield and no school bus repair facility. This study conservatively used a slightly higher trip generation rate for the ballfields than the FEIS, based on available data. Using the standard ITE rates for ballfields, the increase in trips associated with the current proposal for the East Parcel is 16, 23 and 33 trips during the AM, PM and Saturday peak hours, respectively. This represents an increase of between 2.5 percent and 3 percent of the entire FEIS project traffic. This increase is driven mostly by the addition of the third ballfield and is not considered significant.

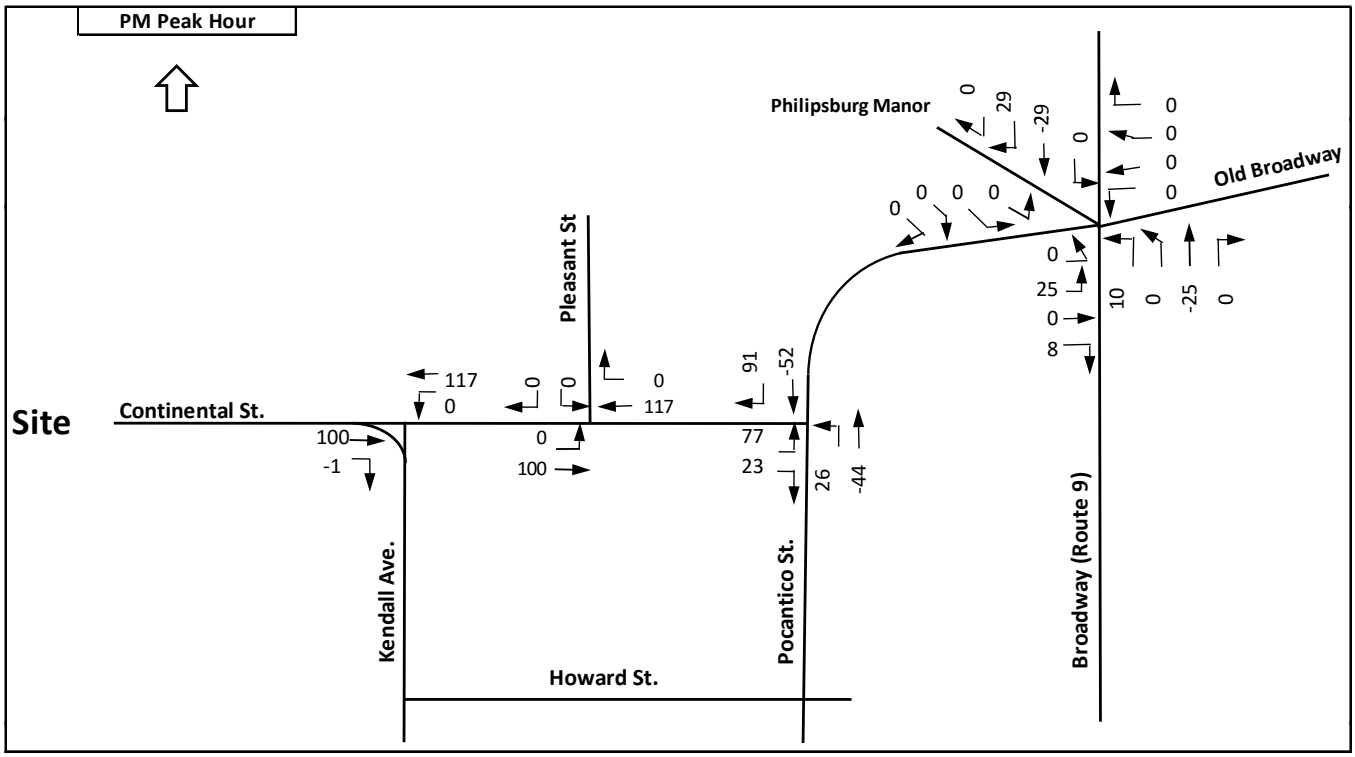
Trip Distribution and Assignment

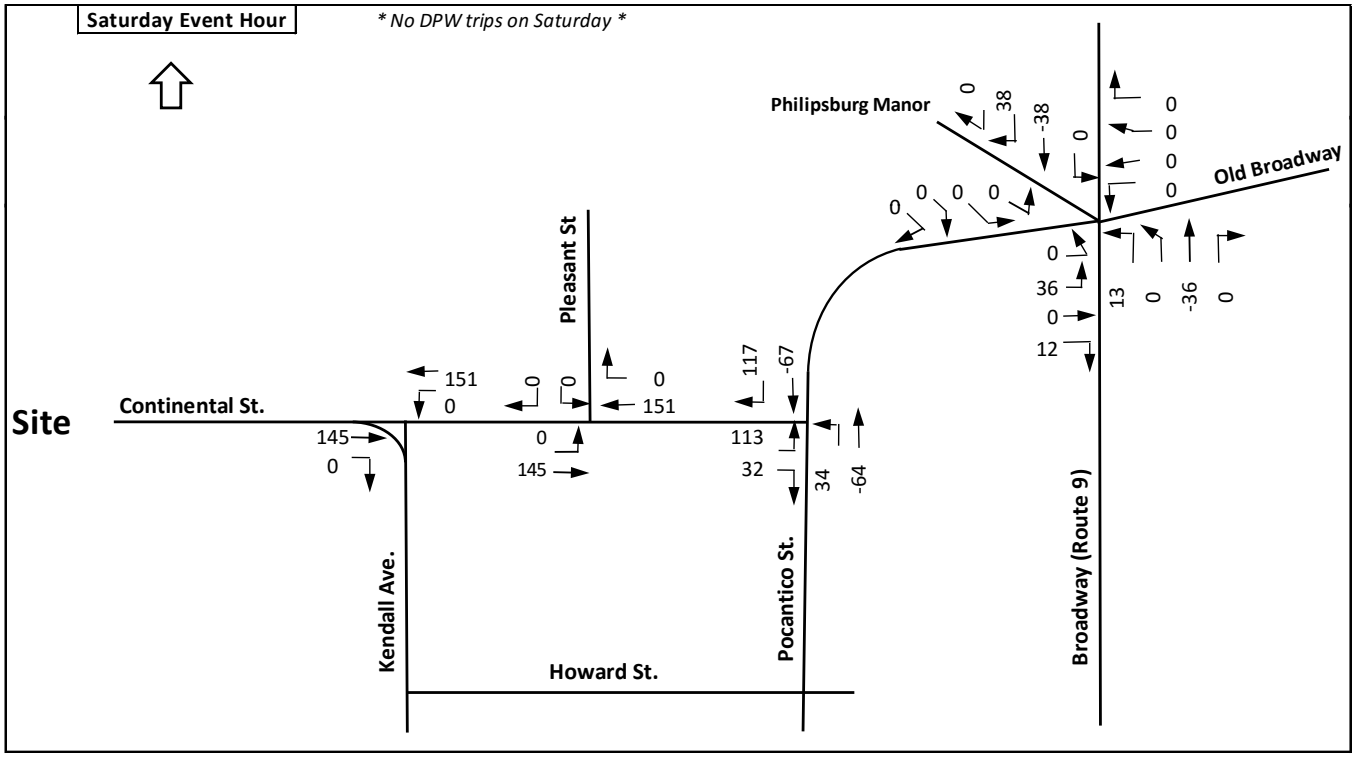
The changes in traffic volumes associated with the proposed action were determined in accordance with the following multi-stepped process:

- Peak-hour traffic volumes generated by the proposed Edge on Hudson development were reallocated to reflect the change in access to this development (construction of the connection between the East and West Parcels and two-way flow on Continental Street) which will result from the proposed action. (It is noted that the construction of the connection between the East and West Parcel is projected to significantly reduce the volume of Edge on Hudson Traffic along Beekman Avenue - particularly between Pocantico Street and River Street. This is an unquantified traffic benefit of the proposed action).
- Peak-hour traffic volumes which currently travel to and from the existing DPW facilities and parking areas were reallocated to reflect that fact that these facilities will now be consolidated on the East Parcel. These trips, which are already on the streets of the Village of Sleepy Hollow and which will be added to by the expansion, have been redistributed based on the proposed East Parcel access modifications.
- The reallocated traffic volumes for the Edge on Hudson development and existing DPW facility for the typical weekday PM peak hour and the Event Saturday peak hour are shown in **Exhibit D-7**.
- Peak-hour traffic volumes generated by the proposed development on the East Parcel (DPW expansion, Bus service facility, sports fields and associated parking as shown in Table 2) were assigned to the studied intersections, as describe below.

Trip arrival and departure patterns, which show how the newly-generated trips will travel to and from the site, were determined based on the distributions for the East Parcel contained in the FEIS for the Edge on Hudson development. The FEIS distributions were adjusted to reflect the proposed overpass connecting the East Parcel with the West Parcel and the proposed two-way traffic flow on Continental Street. The projected directional distribution of trips to and from the proposed development is depicted on **Exhibit D-8** for the arrival and departure distributions.

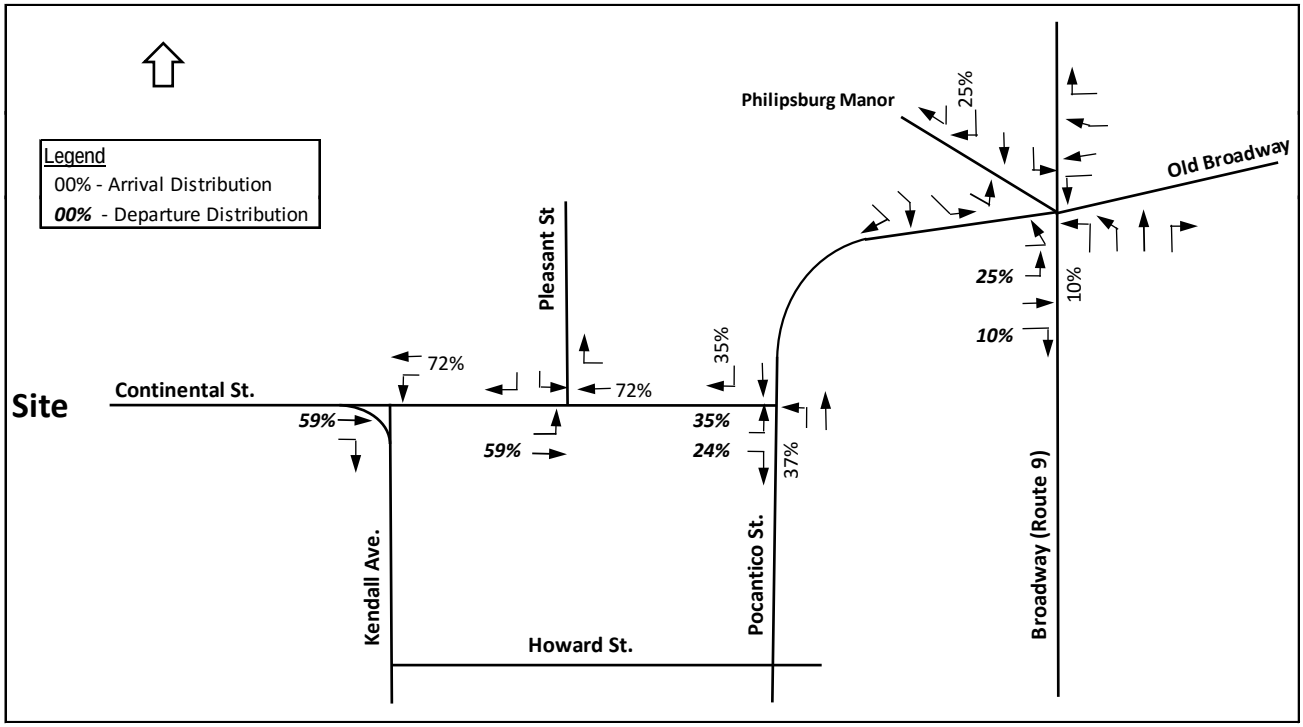
Exhibit D-7 – Reallocated Edge on Hudson and DPW Trips





Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Exhibit D-8 – Arrival and Departure Distributions



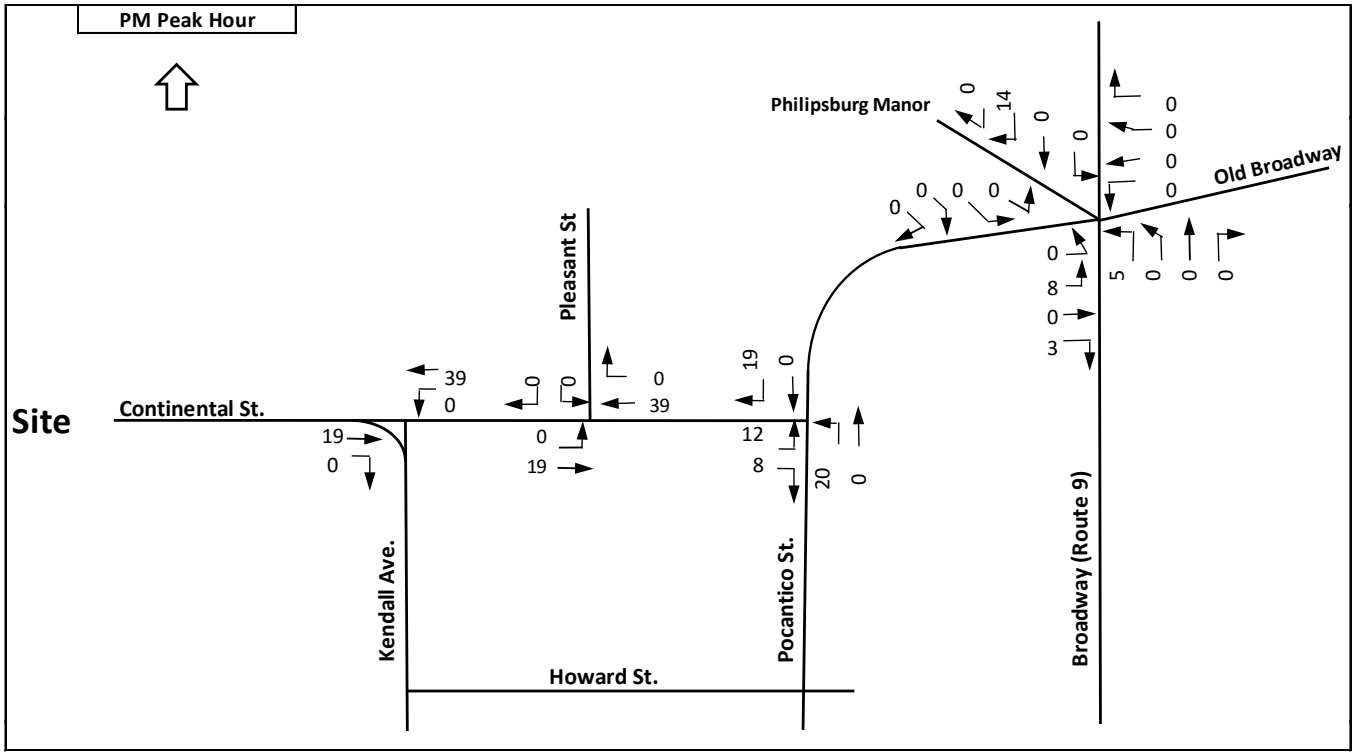
Note: 28 percent of the project's entering trips and 41 percent of the exiting trips will access the East Parcel via the overpass connecting the East Parcel to the West Parcel.

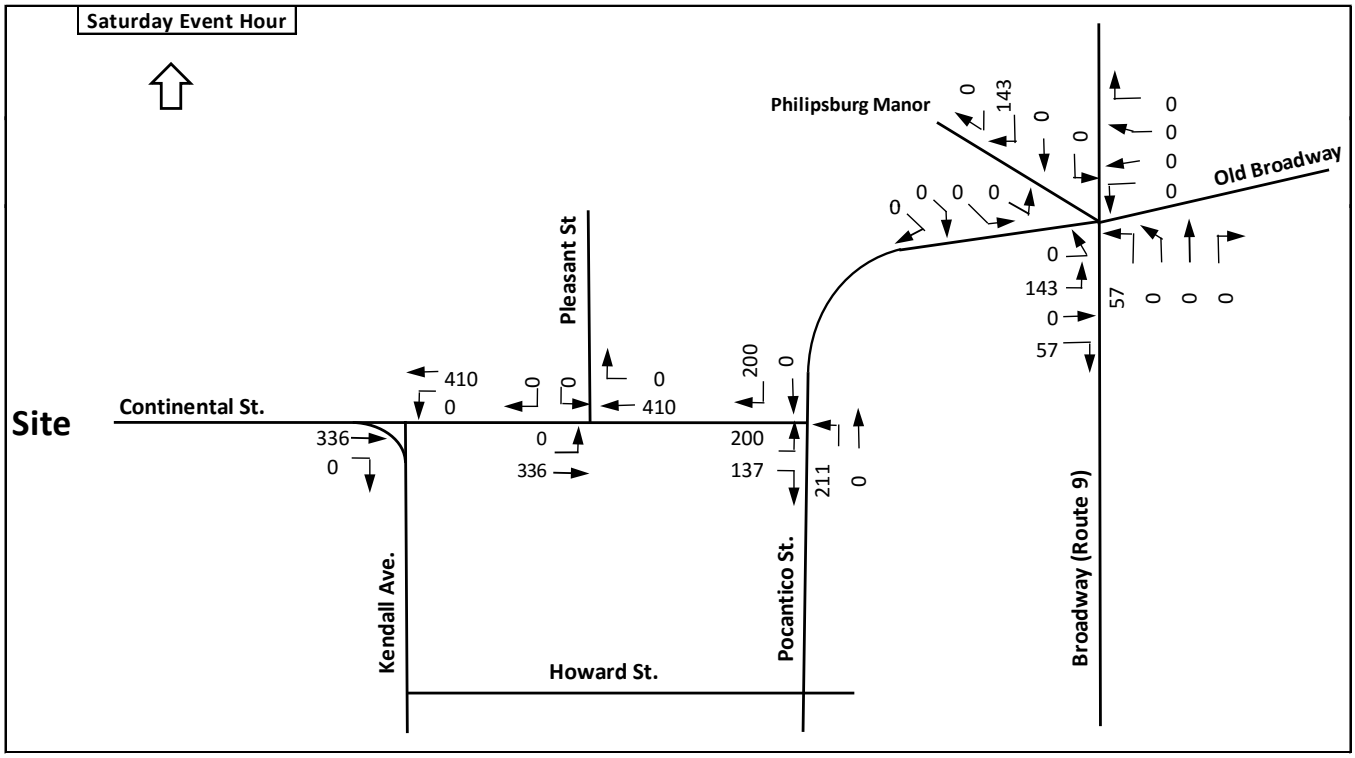
Source: VHB, Engineering, Surveying and Landscape Architecture, PC

As shown in Exhibit D-8, 72 percent of the entering trips and 59 percent of the exiting trips will enter the East Parcel via Continental Street. The remaining 28 percent of entering trips and 41 percent of exiting trips, which are not shown on the exhibit, will access the East Parcel from Beekman Avenue via the new overpass connecting the West Parcel to the East Parcel. The new trips generated by the East Parcel redevelopment during the PM peak hour and Saturday Event peak hour were assigned to the area roadways in accordance with the trip distribution patterns. The resulting new trips added to area roadways are presented on **Exhibit D-9**.

The East Parcel site-generated volumes, reallocated Edge on Hudson traffic volumes and redistributed DPW traffic volumes were all added to the No-Build peak-hour traffic volumes shown on **Exhibit D-5** to establish the Build peak-hour traffic volumes for the PM peak hour and Saturday Event peak hour, which are depicted on **Exhibit D-10**.

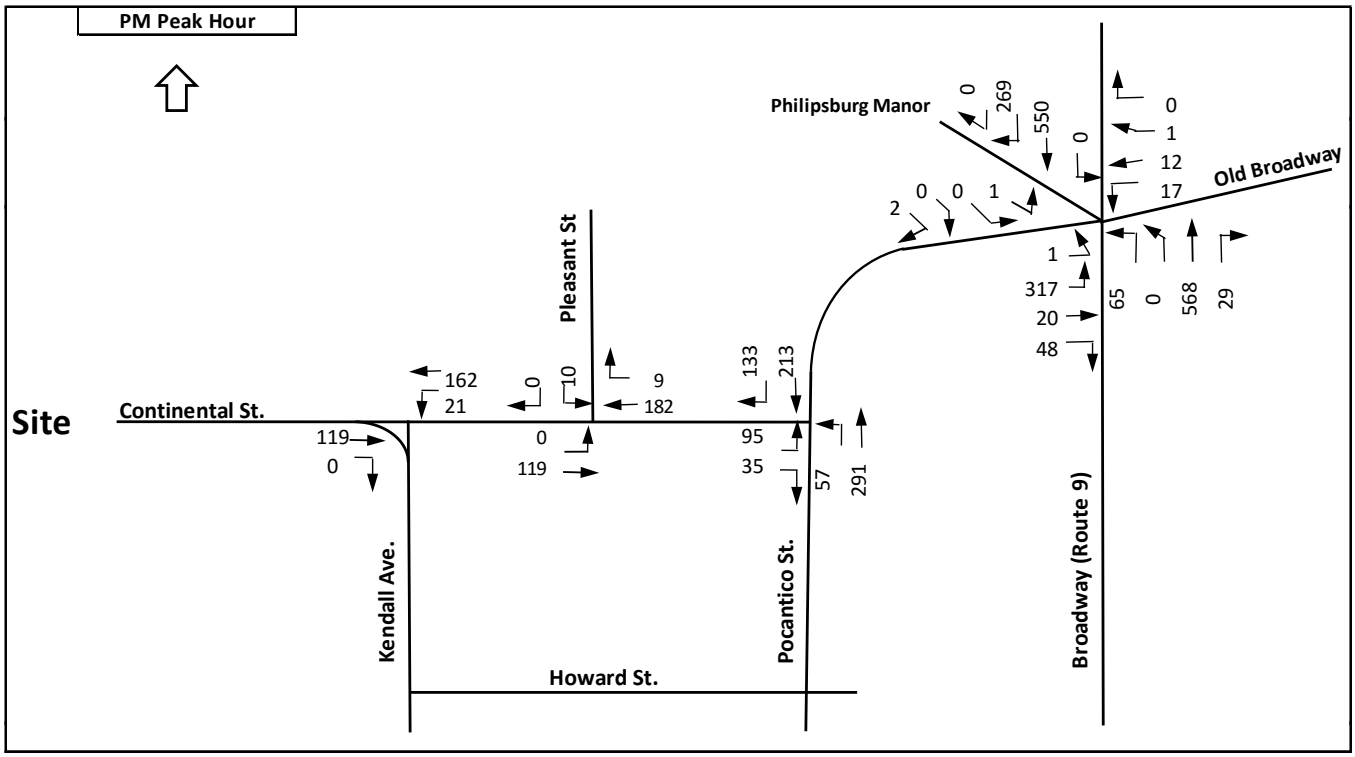
Exhibit D-9 - East Parcel Redevelopment - Project Trips

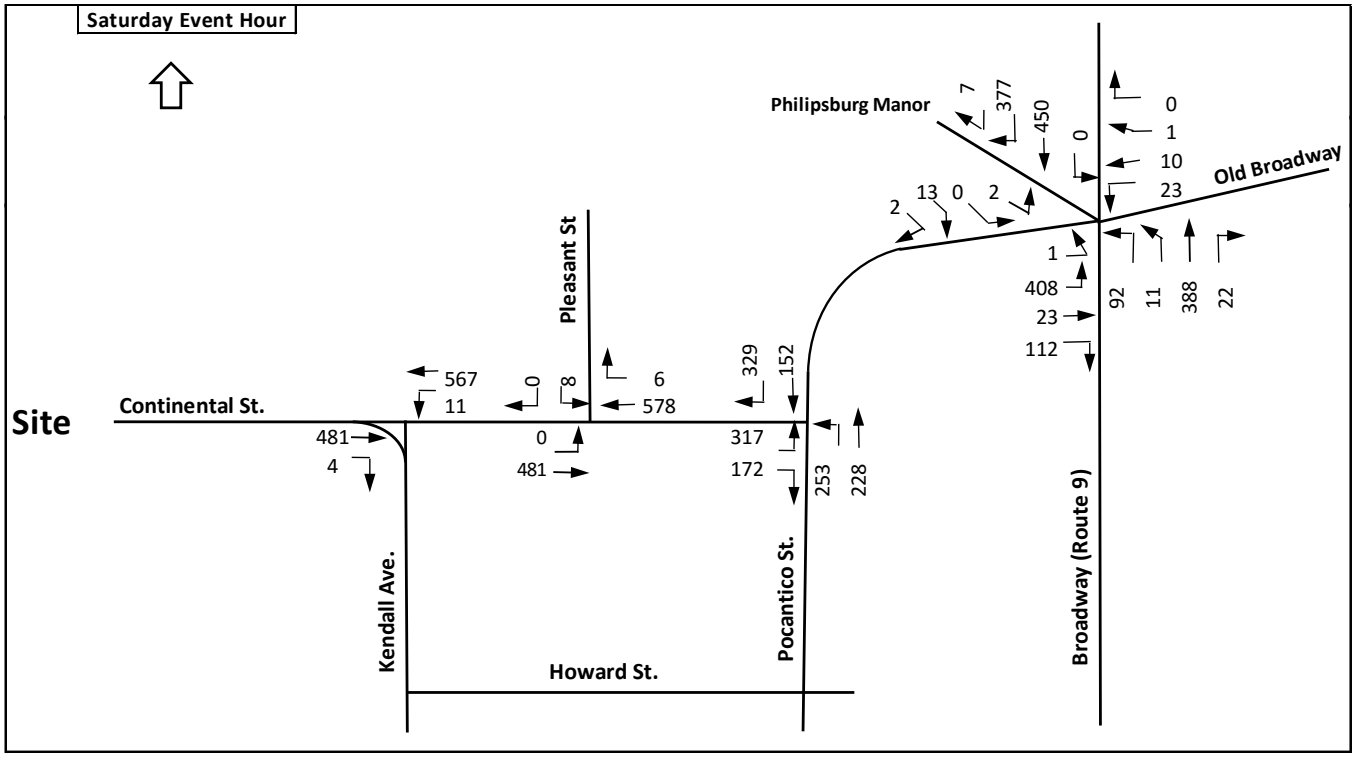




Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Exhibit D-10 – Build Traffic Volumes





Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Traffic Operations

To assess the quality of traffic flow in the study area during the peak hours, intersection capacity analyses were conducted for Existing, No-Build, and Build (with the proposed East Parcel redevelopment) traffic volume conditions. The following section summarizes the methods of capacity analyses used in this study and documents the results.

Method of Capacity Analysis

The intersection capacity analyses were conducted based on the evaluation criteria contained in the 2010 Highway Capacity Manual[2] (HCM). As documented in the HCM, intersection performance is influenced by a number of factors, including: traffic demand; lane configurations; lane widths; turning restrictions; roadway grades; speeds; and signal phasing and timing settings for signalized intersections. The existing physical roadway characteristics and signal phasing and timing settings at the signalized study intersection were determined by collecting field measurements.

Synchro 8 software was used to model the study intersections based on the parameters mentioned above. Synchro 8 software is widely used by traffic engineering professionals, is approved for use by NYSDOT, and is consistent with the procedures in the HCM.

Capacity analyses results are reported using a variety of performance measures, including "Level of Service" (LOS). The level of service designation is an index based on the average control delay experienced by a vehicle traveling through the intersection. Similar to a report card, LOS designations are letter-based, ranging from A to F, with LOS A representing the best operating condition (lowest vehicle delays) and LOS F representing the worst operating condition (highest vehicle delays).

LOS is reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection, and the LOS can be reported for individual turning movements, approaches, or for the intersection as a whole. For unsignalized intersections, the most critical lane group delay on each approach is typically reported and the overall intersection LOS is not calculated. Thus the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or side driveway. As such, LOS is reported only for left-turns from the main street and for all movements from the side street.

Intersection Capacity Analysis

Intersection capacity analyses were conducted for the Existing condition and future No-Build and Build conditions for each of the key intersections. The results of the capacity analyses for the PM and Saturday Event peak hours are summarized in **Table 3**. The detailed Synchro capacity analysis worksheets are contained in the Appendix.

[2] Highway Capacity Manual 2010; Transportation Research Board, National Research Council, Washington, DC (2010).

Table 3 - Capacity Analysis Summary – Weekday PM & Saturday Event Peak Hours

Intersection	Approach	Lane Group	PM Peak Hour						Saturday Event Peak Hour					
			Existing		No-Build		Build		Existing		No-Build		Build	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
US Route 9 (Broadway) & Pocantico St/Old Broadway/Philipsburg Manor Driveway	EB-Philpsbg Mnr	LTR	D	36.3	D	36.3	D	36.3	D	38.8	D	39.3	D	39.3
	EB Pocantico	LTR	D	46.7	E	62.9	F	91.4	D	44.9	D	54.1	F	270.2
	WB Old B'way	LTR	C	23.8	C	23.7	C	23.7	C	27.0	C	26.2	C	26.0
	NB Route 9	LTR	B	10.2	B	11.1	B	11.4	A	9.7	B	11.2	B	13.3
	SB Route 9	LTR	B	10.7	B	12.0	B	12.2	B	10.5	B	12.9	B	14.7
	Intersection		**B**	**17.0**	**C**	**21.3**	**C**	**28.2**	**B**	**17.1**	**C**	**21.0**	**F**	**86.3**
Pocantico St & Continental St (unsignalized)	EB	LR	B	11.2	B	12.4	C	17.1	B	10.3	B	11.5	F	585.0
	NB	LT	A	0.4	A	0.3	A	1.8	A	0.4	A	0.3	A	6.4
	SB	TR	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
Continental St & Pleasant St (unsignalized)	EB	LR					A	0.0					A	0.0
	WB	TR	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
	SB	LR	A	8.7	A	8.7	B	10.7	A	8.7	A	8.7	C	21.5
Continental St & Kendall Ave (unsignalized)	EB	R	A	0.0	A	0.0			A	0.0	A	0.0		
	EB	TR					A	0.0					A	0.0
	WB	LT	A	5.8	A	5.9	A	1.1	A	5.0	A	4.7	A	0.5

Source: VHB, using Synchro 8.0 software. Delay is reported in seconds per vehicle.

Existing Conditions - As indicated in Table 3, under existing conditions, the signalized, five-legged intersection of US Route 9 (Broadway) and Pocantico Street/Old Broadway/Philipsburg Manor driveway currently operates at acceptable level of service (LOS) "B" for each peak hour. Individual movements operate at LOS "D" or better during each peak hour. At each of the three unsignalized intersections, the minor street turning movements operate at acceptable LOS "B" or better for each peak hour. The results of the capacity analyses for the future No-Build and Build conditions for each peak hour are described below.

Future Typical Conditions (PM Peak Hour) - In the future, without the proposed redevelopment (No-Build conditions), but with forecast increases in traffic volumes, longer delays will be experienced on the Pocantico Street approach to the signalized Route 9 intersection and this condition will worsen in the future with the East Parcel redevelopment, primarily because of the connection of the East and West Parcels. To reduce delays under No-Build and Build conditions, it is recommended that the traffic signal timings be modified by allocating more green time to the Pocantico Street signal phase. With the retiming, the delays will be reduced and the intersection will operate at an overall LOS "C" and all movements will operate at LOS "D" or better, as indicated in Table 4.

Table 4 – Capacity Analysis Comparison – with Signal Timing Modifications

Intersection	Approach	Lane Group	PM Peak Hour					
			No-Build		Build		Build with Retiming	
			LOS	Delay	LOS	Delay	LOS	Delay
US Route 9 (Broadway) & Pocantico St/Old Broadway/Philipsburg Manor Driveway	EB-Philpsbg Mnr	LTR	D	36.3	D	36.3	D	36.3
	EB Pocantico	LTR	E	62.9	F	91.4	D	49.3
	WB Old B'way	LTR	C	23.7	C	23.7	C	20.7
	NB Route 9	LTR	B	11.1	B	11.4	B	14.3
	SB Route 9	LTR	B	12.0	B	12.2	B	15.2
	Intersection		**C**	**21.3**	**C**	**28.2**	**C**	**21.9**

Source: VHB, Engineering, Surveying and Landscape Architecture, PC

At the three unsignalized intersections, as shown in Table 3, for the typical PM peak hour, the minor street turning movements will operate at LOS "C" or better under the No-Build and Build conditions.

Future Event Conditions (Saturday Peak Hour) - In the future, without the proposed redevelopment (No-Build conditions), but with forecast increases in traffic volumes, longer delays will be experienced on the Pocantico Street approach to Route 9, as indicated in Table 3. Under Build conditions, with the added Event traffic, there will be a significant increase in delay on the Pocantico Street approach. It is recommended that, as part of an overall "event traffic management plan", on the few days a year with large events occurring (up to 20 events per year expected), traffic management police officers be deployed to accommodate peak hour traffic flows during the busiest hours on event days. Related to the deployment of police officers at this intersection is the recommendation that the signal phasing be modified so that the green phase for the Philipsburg Manor Driveway precede the phase for Pocantico Street. This will make it easier for police officers to direct traffic at events as they can simply allow the Pocantico Street signal phase to be extended into the Broadway signal phase, without using up the entire Broadway phase. With the deployment of police officers (with or without the suggested modification in phase sequencing), the intersection will operate at an overall LOS "C" during large events, as indicated in **Table 5**, below.

Table 5 – Capacity Analysis Comparison – with Event Police Management

			Saturday Event Peak Hour					
			No-Build		Build		Build with Police Control	
			LOS	Delay	LOS	Delay	LOS	Delay
US Route 9 (Broadway) & Pocantico St/Old Broadway/Philipsburg Manor Driveway	EB-Philpsbg Mnr	LTR	D	39.3	D	39.3	D	39.2
	EB Pocantico	LTR	D	54.1	F	270.2	D	45.4
	WB Old B'way	LTR	C	26.2	C	26.0	B	16.1
	NB Route 9	LTR	B	11.2	B	13.3	C	29.4
	SB Route 9	LTR	B	12.9	B	14.7	C	31.3
	Intersection		**C**	**21.0**	**F**	**86.3**	**C**	**34.5**

Source: VHB, Engineering, Surveying and Landscape Architecture, PC

At the three unsignalized intersections, as shown in Table 3, the minor street turning movements will operate at LOS "B" or better under the No-Build condition. With the added event traffic, the minor

street movements will operate at LOS "C" or better with the exception of the Continental Street approach to the Pocantico Street intersection. This approach will operate at LOS "F" under Build conditions. To reduce the delays during the busiest event hours, it is recommended that a police officer also be deployed at this intersection to manage traffic flows. If possible, it is also recommended that the Continental Street approach to Pocantico Street be widened to allow for the construction of a separate left-turn lane on this approach. With the implementation of this widening and if the intersection is converted to all-way STOP control, adequate capacity will be provided to accommodate event traffic without the presence of a police officer.

In summary, as shown in **Table 6**, event traffic volumes can be mitigated and accommodated at this intersection either by the deployment of a police officer to direct traffic or by providing a separate left-turn lane on Continental Street and installing STOP signs on Pocantico Street. In the event that the latter is selected, analysis has determined that it would have little impact on everyday conditions and that LOS "C" conditions would prevail on all approaches.

Table 6 – Capacity Analysis Comparison – Pocantico St. & Continental St. intersection

		Saturday Event Peak Hour							
	Lane	No-Build		Build		Build with Police Control		Build with All-way Stop & EB Widening	
Approach	Group	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB	LR	B	11.5	F	585.0	D	52.8		
EB	L							D	29.8
EB	R							B	12.1
NB	LT	A	0.3	A	6.4	D	51.7	F	51.7
SB	TR	A	0.0	A	0.0	B	10.0	E	38.8

Source: VHB, Engineering, Surveying and Landscape Architecture, PC

Build analyses conducted with the typical AM and Saturday peak hour volumes with the identified improvements revealed that the levels of service experienced during these periods will be identical to the LOS during typical PM peak hour conditions, with similar or slightly better delays.

Pedestrian and Bicycle Evaluation

Since the proposed redevelopment of the East Parcel will provide ball/sports fields, it is recommended that provisions be provided to accommodate cyclists and pedestrians. At a minimum, this should include extending the sidewalk along Continental Street from Pleasant Street into and through the site, and ensuring that Continental Street is widened to provide at least one 12-foot wide lane in either direction, which would provide sufficient room to accommodate cyclists on the roadway. Alternatively, a 10-foot wide shared use bike-pedestrian path could be constructed parallel to Continental Street from Pocantico Street to the site. The Riverfront Development Concept Plan includes a potential pedestrian connection to Barnhart Park proximate to the at grade portion of the existing viaduct.

Disposition of Existing Viaduct

The LDC proposes to demolish the existing viaduct structure given its deteriorated state and cost to effectively rehabilitate the structure to the point where it would be useable for fully loaded DPW trucks. Refer also to Section IV.F Alternatives for additional discussion of alternative site access in the vicinity of the existing viaduct leading out to Beekman Avenue.

Alternatives

Two alternatives to the proposed action were evaluated qualitatively to determine traffic impacts relative to the proposed action. These alternatives are described below.

Alternative Uses - Indoor Recreation Facility with Community Space

This alternative would replace one of the outdoor recreation fields with an indoor recreation facility with community space. The traffic generated by an indoor field would be similar to traffic generated by an outdoor field, however, while the use of outdoor fields typically occurs from spring to autumn, an indoor facility would allow for year-round use in any weather condition.

Alternative with a Larger School Bus Repair Facility

This alternative would replace the proposed 3-bay school bus repair facility with a 12-service bay facility. With the larger facility, it is estimated that, during the AM peak hour, the number of project trips for the proposed action would increase from 23 to 41. During the PM peak hour, the number of trips would increase from 87 to 105. On Saturdays, the repair facility is closed, therefore, the Saturday peak hour trips for the project would remain unchanged at 110 trips. Given the minor increase in AM and PM peak hour project trips (18 trip increase each peak hour), the results of the analysis would remain basically the same as for the proposed action.

Conclusions

Based on the results of the analyses conducted for the purpose of this report, VHB has arrived at the following conclusions:

- The proposed action will add 23 new trips to the surrounding roadways during the typical weekday AM peak hour, 87 new trips during the typical weekday PM peak hour and 110 new trips during the typical Saturday peak hour.
- During special events, it is conservatively estimated that a maximum of 1,140 trips (many of which may already be on the surrounding roadways) will be added to the surrounding roadways during the Saturday Event peak hour.
- The combined background traffic and project traffic are highest during the weekday PM peak hour and the Saturday Event peak hour.
- During the PM peak hour under future Build conditions with the project, the site-generated traffic will result in minimal increases in delays at all locations except for the the Pocantico Street approach to US Route 9, where increases in delays will occur with or without the project.
- To reduce the PM peak hour delays, it is recommended that the signal timings be modified at the Route 9 and Pocantico Street/Old Broadway intersection.
- During the Saturday Event peak hour under future Build conditions with the project, the site-generated traffic will result in significant increases in delays at the Pocantico Street approach to US Route 9 and the Continental Street approach to Pocantico Street. All other locations will experience acceptable operating conditions.
- During events, which will occur only a few times during the year, it is anticipated that special traffic management measures will be instituted to coordinate and manage traffic flow which will alleviate the calculated delays.
- It is recommended that the reconstruction of Continental Street to accommodate two-way traffic also include accommodations for cyclists and pedestrians.
- Evaluation of two alternatives to the proposed action indicate that neither alternative will result in any appreciable change in the results of the analysis for the proposed action.

Based on these findings, it is concluded that, with the mitigation measures detailed herein, the proposed action will not have a significant adverse impact on area traffic operating conditions.

III.E. Natural Resources

A. Existing Conditions

Text prepared in italic formatting indicates the information was taken from the Lighthouse Landing DEIS submitted and accepted as complete by the Village of Sleepy Hollow as part of the Lighthouse Landing environmental review. Citations have been provided as required.

1. Topography

The overall land topography of the East Parcel is relatively flat with the exception of steep slope areas located along the East Parcel's south and eastern perimeter. The highest ground surface elevations range between elevation 60.0 and 70.0 are found along the parcel's easterly perimeter[1].

2. Soils[2]

Much of the Site was formerly part of the Hudson River or the Pocantico River. In the 1920's, the shoreline of the Pocantico River was near the Metro North railroad tracks. In 1927, the path of the Pocatnico River was diverted to the north, away from the Site. From the 1920's through the 1960's, a series of bulkheads along with large quantities of fill, were used to extend the shoreline to the west. It is believed that prior to some of the filing operations, organic river deposits were removed by dredging.

Near grade, the Site is covered in a layer of fill consisting of loose to medium compact sand or silty sand that is typically 10 ft. to 30 ft. thick. The fill contains some debris and is typically loose below the groundwater elevation.

Through most of the site, a layer of soft gray organic clay underlies the fill layer. This clay is located along the former Pocantico River bed and is highly compressible with layers of peat. In areas outside of the riverbed, a denser layer of glacial varved silt and clay underlies the fill layer. Thickness of the organics layer (up to 5 ft.) and the varved silt and clay layer (up to 40 ft.) vary widely across the site. In some locations, a layer of medium compact sand separates the organics layer from the varved silt and clay layer.

Below the clay and organics lies a layer of glacial till consisting of compact to very compact silty sand with gravel and occasional cobbles and boulders. The thickness of the till layer is typically between 1 ft. and 10 ft.

Areas containing highly compressible organic soils have special requirements for future construction loads. Structures and roadways constructed over organic soils must surcharged prior to construction to minimize future settlements under sustained additional loading.

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[1] Lighthouse Landing DEIS, January 11, 2005, page III.B-4
[2] Ibid. page III.B-6

3. Surficial Geology

During the Pleistocene Epoch (between 2,000,000 and 10,000 years ago), the Lower Hudson Valley region was subject to a series of advancing and retreating continental ice sheets, causing large fluctuations in sea level. Retreating glaciers left behind gravelly deposits (till) that lie above bedrock in much of the region, refer also to Section III. – Soils for a detailed description.

Bedrock is directly below the layer of till, and consists of sound to weathered gneiss.[3] The elevation of bedrock on the site is typically in the range of 15 ft. to 75 ft. below sea level. Bedrock elevations are higher up (up to sea level) near the former General Motors Administration Building at the corner of Beekman Avenue and Hudson Street and near Kingsland Point Park[4].

Because the Village of Sleepy Hollow (North Tarrytown) used the East Parcel for a period of time as a landfill, sampling for methane gas in the subsurface (below the parking lot) was conducted. The results indicate that methane, a colorless and odorless gas from the natural decompensation of organic material in municipal refuse is trapped under the asphalt surface of most of this parcel. Methane was not found in unpaved areas of the East Parcel because the gas naturally dissipates to the atmosphere in the absence of pavement or other similar barriers[5].

4. Wetlands

Wetlands are lands where water saturation is the dominant factor determining the nature of the soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands are transitional areas between terrestrial and aquatic systems. In the general project area, wetlands may be regulated by the U. S. Army Corps of Engineers (ACOE), the New York State Department of Environmental Conservation (DEC), and the Village of Sleepy Hollow The State regulates freshwater wetlands of 12.4 areas in size or greater, and smaller freshwater wetlands of unusual local significance. The State regulates tidal wetlands, but none are mapped north of the Tappan Zee Bridge. The ACOE and the Village of Sleepy Hollow regulate wetlands (as defined by the respective jurisdictions) regardless of size[6].

A wetland survey was performed (by EcolSciences)in accordance with the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Federal manual for Identifying and Delineating Jurisdictional Wetlands (Federal

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[3] *Portions paraphrased from Foundation Assessment General Motors Assembly Plant North Tarrytown, NY by Mueser Rutledge Consulting Engineers, December 19, 1996. The description of the subsurface geology is based on approximately 250 existing borings made on the site between the 1930's and the present.*

[4] Lighthouse Landing DEIS, January 2005, page III.B-14

[5] Ibid., page III.B-13

[6] Ibid., page III.B-36

Interagency Committee for Wetland Delineation, 1989), both of which generally require a coincidence of hydric soils, positive hydrological indicators, and a prevalence of hydrophytic vegetation for a determination that an area is a wetland (i.e., all three factors must be present, absent unusual circumstances such as man-made disturbance)[7].

On-site wetlands are limited to a series of man-made drainage ditches within the East Parcel located between the existing railroad tracks and siding and asphalt parking areas. These ditches appear to connect to the Pocantico River, which is tributary to the Hudson River, via a pipe that extends off the property to the north. As a result of this connection and based on the observation of killifish (which normally occur in tidal waterways) in the ditches, it is likely that the ditches are tidally influenced. The Hudson River is known to be tidally influenced to approximately the Troy Lock (River Mile 150). In addition, it was observed that a portion of the northeast corner of the property adjacent to the Pocantico River, is flooded by the tides. This area contains wetland vegetation on sediment deposited over pavement. Killifish were also observed in this area. This area was not identified as jurisdictional wetlands due to the presence of pavement[8].

Under the New York Natural Heritage Program's ecological community classification system[9]*, the wetlands that were delineated on the Site in association with the East Parcel drainage ditches would fall into the "Ditch/Artificial Intermittent Stream" classification. The ditches were likely dug for stormwater management purposes during the operation of the Site. Vegetation within the wetlands is largely herbaceous species with scattered trees and shrubs along the banks of the ditches. Identified herbaceous species include common reed, cattail, purple loosestrife, soft rush, goldenrod, evening primrose, and mugwort. Identified woody species include black willow, cottonwood, black locust, tree-of-heaven, multiflora rose and summer grape. These ditches appear to connect to the Pocantico River via a pipe that extends off the property to the north and, as noted earlier, are likely tidally influenced*[10].

The wetlands are of low ecological function and quality. Their small size (i.e., 0.23± acres) coupled with their configuration (i.e., linear, narrow and discontinuous) result in limited potential for wetlands to perform typical wetland functions (e.g., flood storage, water quality improvement, groundwater recharge, wildlife habitat, etc.). In addition, the elevations of the pipes connecting the ditches restrict free exchange of water between the ditches and the Pocantico River. These physical characteristics, along with the dominance of exotic/weedy plants and existing impacts due to Stormwater discharges into the ditches, limit the ability of the wetlands to perform these functions. Therefore, the wetlands are of

[7] Ibid. page III.B-36
[8] Ibid. page III.B-36
[9] The New York Natural Heritage Program (NHP) published a report entitled Ecological Communities of New York (Carol Reschke editor) in March 1990. This report identifies and characterizes ecological communities of New York State into a total of 218 ecological communities within seven systems.
[10] Lighthouse Landing DEIS, page III.B-37

low ecological quality. Further reducing the quality of the wetlands is the presence of pavement, rather than vegetated buffers, surrounding the ditches.

5. Threatened and Endangered Species

Correspondence received from NYS DEC (refer to Appendix B) indicates that there are no records of any state-listed species on the Subject Site.

B. Anticipated Impacts and Proposed Mitigation

1. Extent of Impact on Various Slope Categories

With the exception of limited portions of the Project along the eastern portion of the Project Site, the balance of the Site will be disturbed to construct the proposed facilities. The majority of the proposed construction activity will be on slopes ranging from 0% - 5%. Only minor impacts are expected to slopes in excess of 5% relating to the construction of the proposed DPW facility.

2. Grading and Erosion Control

Nearly all of the proposed development will be located within the area of the existing pavement, which will be removed or scarified in place and filled over and graded to new elevations, refer to Grading Plan included with the Riverfront Development Concept Plan set.

Soil erosion and sediment control measures will be placed throughout the construction site and maintained as required by a Stormwater Pollution Prevention Plan, prepared in accordance with the NYS DEC regulations, and approved by the NYS DEC under its SPDES General Permit for Stormwater Discharges Construction Activity[11].

The anticipated means used to prevent soil erosion and sedimentation during construction are: siltation fencing and hay bales, drainage inlet filters stone tracking pads (at construction entrances), diversion swales, stone outlet structures, erosion control fabric, sedimentation basins(if required) and soil stabilization using temporary vegetative cover. These temporary structures and practices will be installed and maintained through the duration of the project's construction[12].

As required by the Site Management Plan, on-site grades will need to be raised a minimum of two feet. The grades for the southern portion of the Project Site, south of the proposed Continental Street Extension would be raised a minimum of 12 feet to elevate that portion of the Project Site out of the existing floodplain and to respond to projected sea level rise, see also Section III.C Stormwater Management.

It is anticipated that up to approximately 100,000 cubic yards of fill material will be required to reach the proposed grade elevations of the new construction. Some of the material which will be used to meet this fill demand will come from a prior Filling Permit

[11] Lighthouse Landing DEIS, page III.B-20
[12] Ibid. page III.B-20

issued by the Village of Sleepy Hollow Planning Board. Discussion regarding potential noise impacts and mitigation measures associated with the project's construction activities is presented in Section III.G.

3. Wetlands

The Proposed Action calls for redevelopment of the entire East Parcel including disturbance to the existing 0.23± acres of wetlands. It is noted that the Site Management Plan for the East Parcel, refer to Appendix F of this DEIS, also requires the placement of a minimum of two feet of clean fill of the entirety of the East Parcel as part of a remediation program. As noted above, these ditches have low ecological function and quality, their primary function acting as part of a stormwater management system.

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 the proposed interior pedestrian walkway that runs the length of the East Parcel. Wetland focused plantings will include the following:

4. Landscaping Plan

A conceptual landscaping plan is present as Exhibit III.E-1, and as part of the Riverfront Development Concept Plan set. The landscape plan includes plantings along the boundary of the Subject Site to provide some level of buffering between adjacent uses. Tree plantings are proposed along both access roads. Wetland focused plantings are proposed along the western property line as part of an approximately 0.84 acres wetland mitigation planting program. Exhibit III.E-1, Landscape Plan Precedent Analysis, provides some preliminary evaluation of different landscape and design techniques being contemplated as part of the East Parcel redevelopment. The Conceptual Landscape Plan contemplates the installation of more than 410 new ornamental, shade and evergreen trees throughout the Project Site.

5. Environmental Assessment Summary

The following is a summary from the General Motors East Parcel Site Management Plan (SMP), dated December 2013 and provided in this DEIS as Appendix F. The SMP is part of the remedial program for the Former General Motors Assembly Plant under the New York State Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation. (NYSDEC). The East Parcel was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index #C360070-12-10 which was executed on December 31, 2010 and amended August 20, 2013. The East Parcel SMP includes two plans: an engineering and institutional control plan for implementation and management of institutional controls (IC) and engineering controls (EC); and, a monitoring plan for implementation of site monitoring should active measures be required by NYSDEC and NYSDOH for soil vapor or methane mitigation based on soil vapor intrusion sampling[13].

[13] Arcadis, General Motors LLC Site Management Plan, December 2013, page 2

Historic Conditions[14] (text from Arcadis report Appendix F of this DEIS)

Most of the East Parcel Site (low lying area) was formerly an embayment of the Hudson River, at the former mouth of the Pocantico River. Historical fill material was initially placed in a north-south strip across the embayment during the 1840s to support the construction of a railway between New York City and Albany, leaving much of the low lying area of the Site as isolated marsh land, with the Pocantico River routed through a culvert under the railway. By the late 1800s, the Site was part of the Kingsland Estate. By the early 1920s, local government had acquired the Site. The Village (formerly the Village of North Tarrytown) filled a portion of the East Parcel with municipal refuse during the 1920s. Also during this period, the Pocantico River, which had flowed into the Hudson River immediately south of present day Kingsland Point Park, was diverted north of the site to follow the path of a creek that currently discharges through Kingsland Point Park. The Village continued to add soil fill on top of the municipal refuse and throughout the rest of the low lying area of the parcel during subsequent decades to reclaim this area for use as school athletic fields. Refer to Exhibit III.E-2 Existing Cover and Exhibit III.E-3 East Parcel Fill History.

General Motors Corporation (GMC) acquired the East Parcel from the Village in 1960 and added additional fill, consisting of dredged sands from the Hudson River, and finished the filled area with asphalt or concrete surfaces to reach the current grade throughout most of the parcel. GMC used the East Parcel for employee parking, and temporary storage of newly assembled automobiles. GMC constructed an enclosed pedestrian bridge over the railway to access their assembly plant located on the west side of the tracks, a small brick faced building used as a lounge/break room by personnel readying new vehicles for transport offsite via rail and truck, an overhead viaduct and roadway to provide vehicle access to the lot from Beekman Avenue, rail sidings for loading vehicles onto rail cars, and a paved parking area. The brick building and the mechanical ramps used to access rail cars were removed when the assembly plant was demolished (1997-1999). The entrance to the enclosed pedestrian bridge over the railway remains on the site and is secured to prevent access. The viaduct has been closed to all traffic. The asphalt and concrete surfaces, as well as the vegetated soil and drainage ditches along the perimeter areas are part of the existing cover system. Portions of the asphalt and concrete surfaces have been penetrated by vegetation.

Based on the data presented in the RI and supplemental soil investigation reports, metals found in the East Parcel Site fill at levels above restricted residential Soil Clean-up Objectives (SCOs) were arsenic, barium chromium, copper, lead manganese and mercury. Fill materials containing lead and polycyclic aromatic hydrocarbons (PAHs) at levels above restricted residential SCOs are generally associated with the refuse layer in the former Village landfill area[15]. Refer to Exhibit III.E-4, East Parcel Soil Data.

[14] Ibid. pages 3 and 4
[15] Ibid. page 7

During the supplemental investigation of the proposed donation land, test borings were advanced up to 12 feet bgs (to native sediment) to obtain a more detailed estimation of the village landfill limits. As a result of this investigation, the estimated limits of the former village landfill were refined to the outline shown in Exhibit III.E-3, East Parcel Fill History. The municipal refuse layer, including variable deposits of coal ash, was encountered as shallow as 6 feet below grade where it may be up to 6 feet thick, and as deep as 10 feet below grade where it was found to be less than 2 feet thick. These findings are consistent with the refuse layer encountered in the remedial investigation (RI) and pre-RI investigations[16].

Site-Related Soil Vapor Intrusion

A soil gas survey was performed during the RI to evaluate the general presence or absence of methane gas and volatile organic vapors beneath the existing cover within and around the former Village landfill (refuse) area. The findings are summarized as follows:

Methane

A soil gas survey performed at the East Parcel indicated high levels of methane (70-100% combustible gas) under the asphalt covering over and adjacent to the former Village landfill. Levels less than 1% to 70% were also prevalent under a significant portion of the paved area (see Figure 8). Methane is primarily attributed to decomposition of historic municipal waste, with a possible contribution from decomposition of natural organic matter underlying the historic fill material. No combustible gas was detected in unpaved areas around the perimeter of the asphalt, with the exception of a small area near the junction of the Village and County sanitary sewers in the southwest corner of the low lying area[17].

Volatile Organic Compounds (VOCs) in Soil Vapor

Volatile organic compounds (VOCs) were detected in soil vapor samples throughout the paved areas on the East Parcel. Trace levels of chlorinated VOCs and petroleum-derived VOCs in vapor were detected within the refuse area and beyond the refuse area, consistent with extent of methane[18].

Summary of Remedial Actions

The SMP notes that remedial actions have been performed for the East Parcel including:

- Maintenance of the existing cover system consisting of asphalt, concrete slabs, railroad sidings, and vegetated soil with limited controlled access to minimize human exposure to remaining contaminated soil/fill remaining at the Site.

After redevelopment of the Project Site remedial actions will include:

- Installation of a demarcation barrier over soil or historic fill material;

[16] Ibid. page 7
[17] Ibid. page 8
[18] Ibid. page 8

- Creation of a barrier cap system throughout the Project Site consisting of either or a combination of surface soil cover (minimum of 2 feet thick) for landscaped/naturally vegetated areas, pavement over non-vegetated areas, or permanent buildings.
- Execution and recording of an environmental easement to restrict land use and prevent future exposure to any contamination remaining.
- Development and implementation of the SMP for long term management of remaining contamination as required by the environmental easement, which includes plans for: institutional controls/engineering controls; monitoring; provisions for implementing actions recommended to address potential issues related to soil vapor intrusion and reporting.

In addition, the SMP notes that all new underground utilities constructed within public roads and public right-of-ways that overlay historic fill or soils that do not meet SCOs for restricted residential use, will include an additional highly visible synthetic demarcation barrier throughout the trench to separate historical fill or other material that does not meet SCOs for restricted residential use from the installed approved trench backfill, described below. This additional demarcation barrier will also run beneath the pavement on all new public roads overlying historic fill and soil that does not meet restricted residential SCOs. Although pavement is an acceptable demarcation barrier, the addition of a highly visible barrier beneath the public pavement is intended to alert Village DPW or utility workers who service or make connections to underground utilities that work beneath this demarcation is not permitted without adherence to the Excavation Work Plan[19].

Further, all materials used as backfill for underground utilities installed in public right-of-ways and service laterals during Site development and in the future will meet the Site SCOs for the surface soil cover system. Specifically, where underground utility installation or access requires excavation into existing historic fill or other material that does not meet the SCOs in the SMP, the excavated material will be replaced with approved backfill consisting of existing Site soils meeting the SCOs listed in 6 NYCRR Part 375, Table 375-6.8(b) for “restricted residential” use[20]. Refer to Exhibit III.E-5 Typical Cover Details.

With respect to proposed landscaping, vegetation such as shrubs and trees with root balls that must be placed to a depth beneath the final cover system will be planted to provide a 1-foot minimum buffer around the root ball consisting of approved backfill consisting of existing Site soils meeting the SCOs listed in 6 NYCRR Part 375, Table 375-6.8(b) for “restricted residential” use (refer to Appendix F SMP);or imported soils meeting SCOs for restricted residential use provided in Appendix 5 of DER-10 under “Restricted Residential Use” (see Appendix F, Site Management Plan).

[19] Ibid. page 13
[20] Ibid. page 13

LANDSCAPE DESIGN (DRAFT)

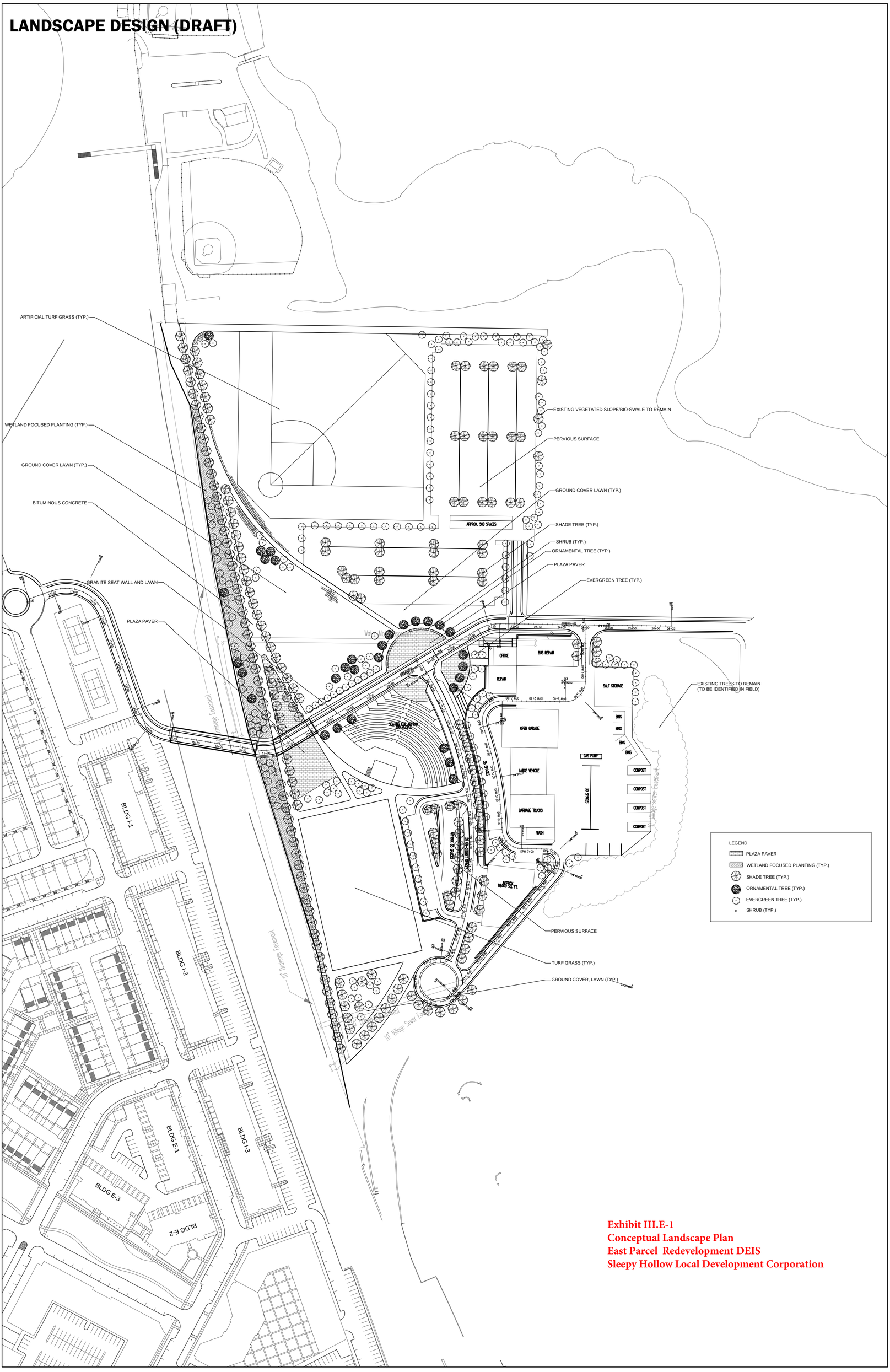

Exhibit III.E-1
Conceptual Landscape Plan
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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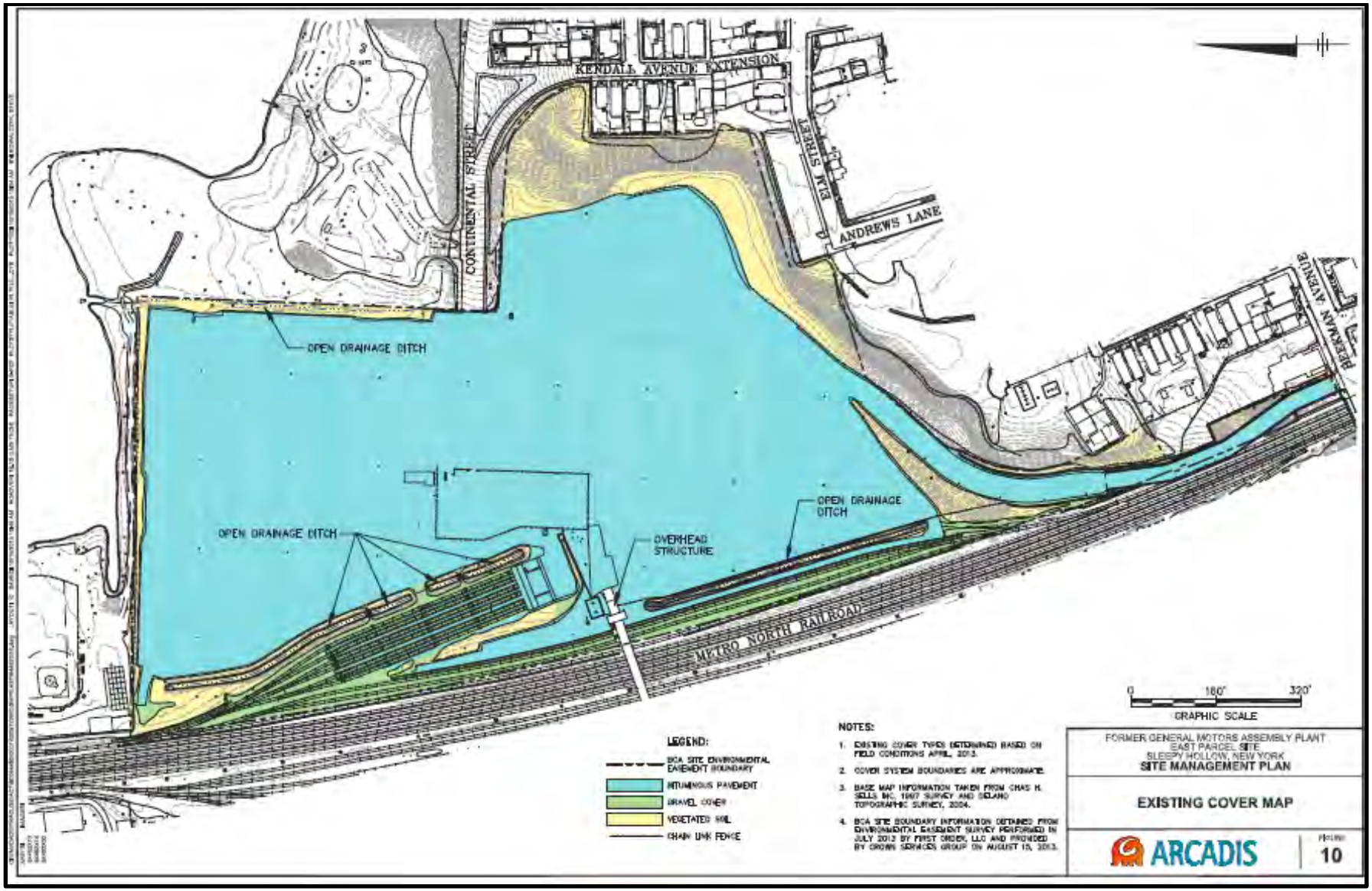

Exhibit III.E-2
East Parcel Existing Cover
East Parcel Redevelopment DEIS
Sleepy Hollow LDC

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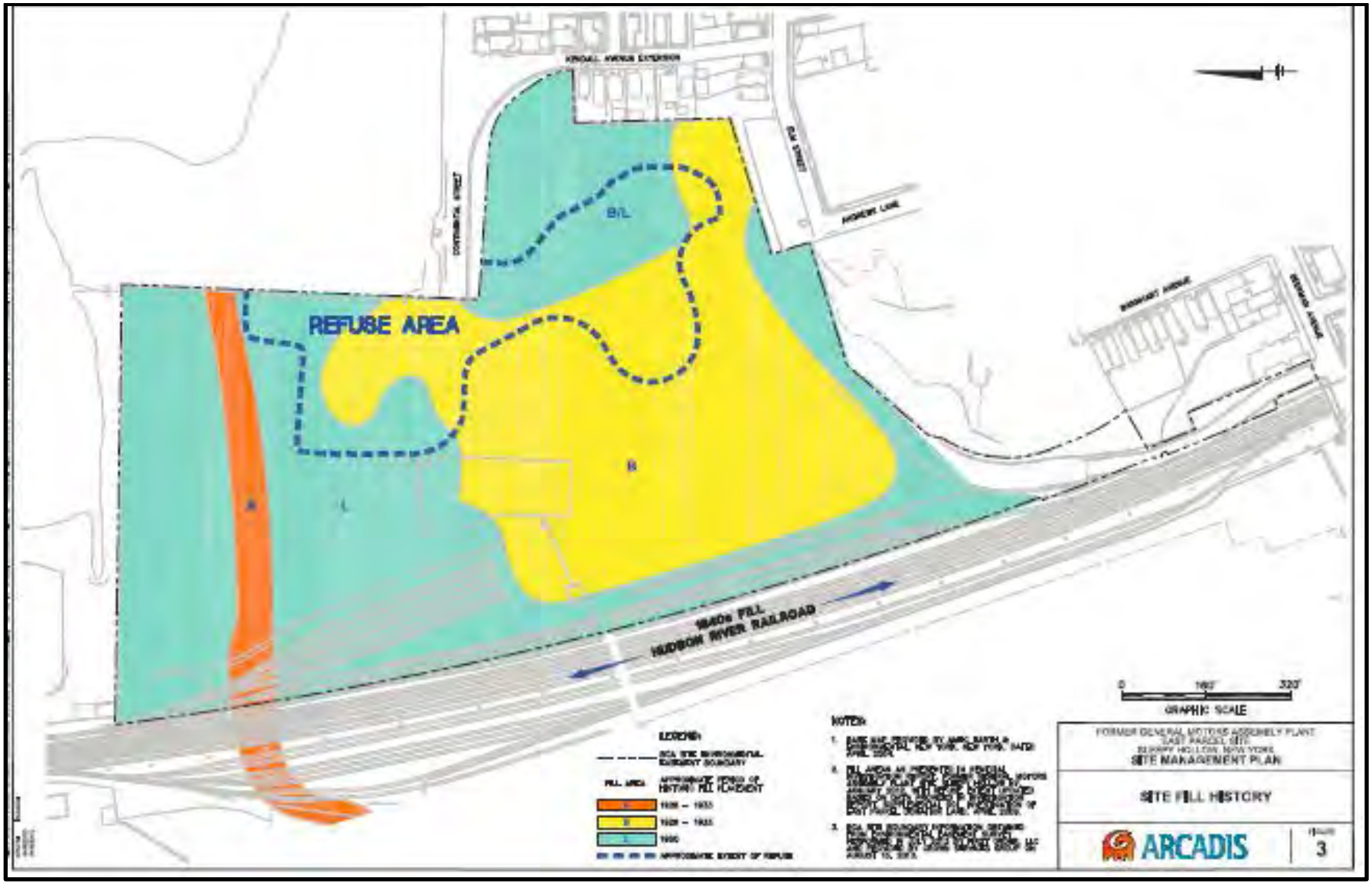

Exhibit III.E-3
East Parcel Site Fill History
East Parcel Redevelopment DEIS
Sleepy Hollow LDC

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Exhibit III.E-4
East Parcel Soil Data
East Parcel Redevelopment DEIS
Sleepy Hollow LDC

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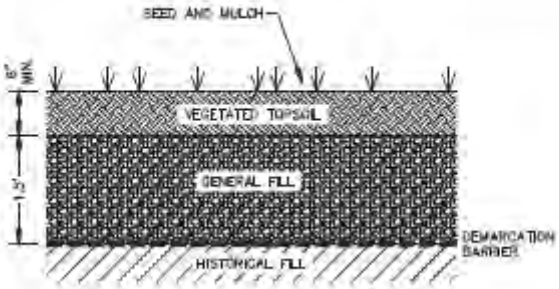
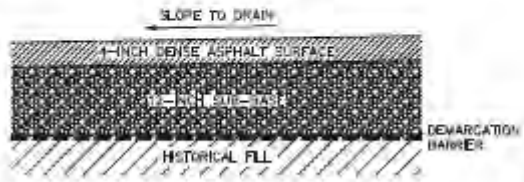


TYPICAL SOIL COVER (1)

NOT TO SCALE

NOTES:

1. DEMARCATION BARRIER WILL BE INSTALLED BELOW SOIL COVER TO IDENTIFY THE INTERFACE BETWEEN THE PERMANENT SURFACE FILL AND HISTORICAL FILL. APPROVED MATERIAL WILL BE HIGHLY VISIBLE COLORED SYNTHETIC GEOTEXTILE MATERIAL.
2. TOP 2 FT OF SOIL COVER SHALL MEET SOIL CLEANUP OBJECTIVES (SCOs) FOR RESTRICTED RESIDENTIAL USE.
3. GENERAL FILL DEPTH CAN BE INCREASED TO ACCOMMODATE PLANTINGS WITH DEEPER ROOT ZONES.

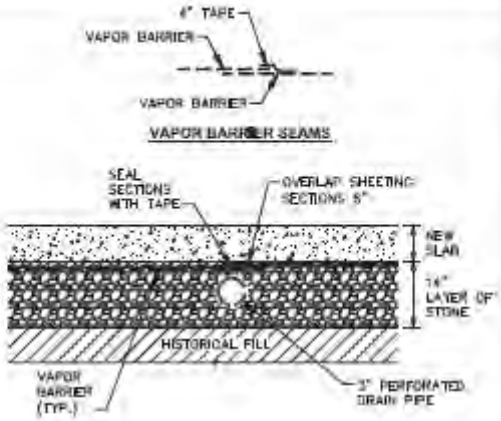


TYPICAL ASPHALT ROAD (2)

NOT TO SCALE

NOTES:

1. SUBBASE WILL CONSIST OF 12 INCHES TYPE 2 MATERIAL WITH COMPACTION TO 95% THROUGHOUT THE SUBBASE.
2. BASE ASPHALT COURSE WILL BE A 2.5-INCH COMPACTED DEPTH. TOP ASPHALT COURSE WILL BE 1.5 INCH COMPACTED DEPTH.
3. DEMARCATION BARRIER WILL BE INSTALLED BELOW COVER SYSTEM TO IDENTIFY THE INTERFACE BETWEEN THE APPROVED PERMANENT COVER SYSTEM AND HISTORICAL FILL. MATERIAL WILL BE HIGHLY VISIBLE COLORED SYNTHETIC GEOTEXTILE MATERIAL.

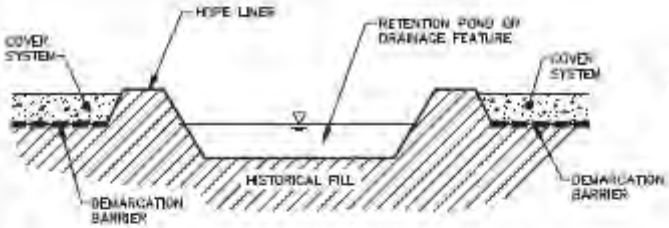


TYPICAL BUILDING SLAB ON GRADE WITH ENVIRONMENTAL VAPOR BARRIER (3)

NOT TO SCALE

NOTES:

1. ENVIRONMENTAL VAPOR BARRIER WILL BE A MINIMUM 15-MIL POLYETHYLENE OR EQUIVALENT REINFORCED POLYETHYLENE, AND WILL MEET ASTM E1745 CLASS A.
2. MINIMUM 6" OVERLAP AT ALL SEAMS.
3. VAPOR COLLECTION PIPING WILL BE 3" PVC PERFORATED DRAIN PIPE.
4. NO DEMARCATION BARRIERS REQUIRED UNDER PERMANENT BUILDING SLABS.

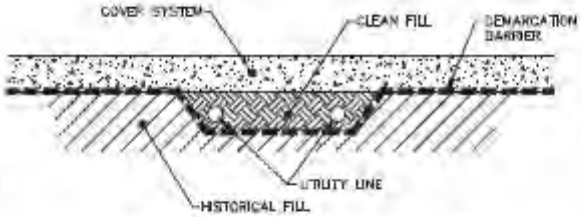


DRAINAGE FEATURE DETAIL (4)

NOT TO SCALE

NOTE:

1. LINER SHALL ALSO SERVE AS DEMARCATION BARRIER.



TYPICAL UTILITY TRENCH (5)

NOT TO SCALE

NOTES:

1. CLEAN BACKFILL WILL BE PLACED AROUND SUBSURFACE UTILITIES. THE USE OF DEMARCATION BARRIER WILL BE USED AROUND CLEAN FILL AREAS, AS SHOWN.
2. UTILITY TRENCHES WILL PROVIDE A MINIMUM OF 1 FT OF APPROVED BACKFILL BETWEEN UTILITY INVERT AND BOTTOM DEMARCATION BARRIER AND MINIMUM OF 2 FT OF APPROVED BACKFILL BETWEEN UTILITY AND SIDEWALL DEMARCATION BARRIER.

FORMER GENERAL MOTORS ASSEMBLY PLANT
EAST PARCEL SITE
SLEEPY HOLLOW, NEW YORK
SITE MANAGEMENT PLAN

TYPICAL COVER DETAILS FOR FINAL COVER TYPES

ARCADIS

11

Exhibit III.E-5
East Parcel Typical Cover Details
East Parcel Redevelopment DEIS
Sleepy Hollow LDC

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H. Cultural Resources

1. Existing Conditions and Historical Background.

It is noted that the Stage 1A Literature Review and Sensitivity Analysis prepared as part of the previous environmental review conducted for the Lighthouse Landing DEIS concluded that the East Parcel lacked the potential to yield prehistoric or historic cultural resources. The recommendation at that time was that no further investigation of prehistoric or historic resources is warranted. The New York State Historic Preservation Office (SHPO) was contacted early on in the subject environmental review process and provided the following response: Based upon this review, it is the New York State Office of Parks, Recreation and Historic Preservation's opinion that your project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places (refer to Appendix A of this DEIS for correspondence from NYSOPRHP).

Based on survey results from the NYSHPO indicate the following properties are listed or eligible for listing on the State or National Register of Historic Places:

Philipsburg Manor - 381 Bellwood Avenue
Tarrytown Lighthouse
Sleepy Hollow Cemetery - 840 North Broadway
Old Dutch Reformed Church of Sleepy Hollow - 430 North Broadway
Philipse Manor Railroad Station – Hudson Line – Riverside Drive
Washington Irving Memorial Bridge – US Route 9
Rescue Hose Co. #1 - 13 Lawrence Avenue
Village Hall - 28 Beekman Avenue
Van Tassel Apartments - 95 Beekman Avenue
Beekman Apartments - 113-115 Beekman Avenue

2. Anticipated Impacts and Mitigation

Consistent with the prior environmental review conducted for this Project Site as part of the Lighthouse Landing EIS, no mitigation measures are proposed. In response to specific concerns raised regarding East Parcel sensitivity during the prior Lighthouse Landing EIS, the Village noted that the level of subsurface disturbance associated with the proposed uses (the DPW garage, recreation fields, etc.) is relatively minimal[1].

As noted in Section III.B of this DEIS, visual impacts to existing historical resources associated with the nearby Philipsburg Manor facility is anticipated to be minimal given the distance, and intervening topography and vegetation which essentially limits any visibility of the proposed Continental Street overpass structure from the Philipsburg Manor House facility. It is noted that additional traffic associated with use of the parking facility by Historic Hudson Valley

[1] Village of Sleepy Hollow Board of Trustees Environmental Findings Lighthouse Landing, page 76

would be in support of that facility and it is not contemplated to be an undue impact, but an enhancement to that facility and allow it to respond to demands for enhanced use.

III.G – Construction

1. Existing Conditions[1]

Much of the Site was formerly part of the Hudson River or the Pocantico River. In the 1920's, the shoreline of the Pocantico River was near the Metro North railroad tracks. In 1927, the path of the Pocatnico River was diverted to the north, away from the Site. From the 1920's through the 1960's, a series of bulkheads along with large quantities of fill, were used to extend the shoreline to the west. It is believed that prior to some of the filing operations, organic river deposits were removed by dredging.

Near grade, the Site is covered in a layer of fill consisting of loose to medium compact sand or silty sand that is typically 10 ft. to 30 ft. thick. The fill contains some debris and is typically loose below the groundwater elevation.

Through most of the site, a layer of soft gray organic clay underlies the fill layer. This clay is located along the former Pocantico River bed and is highly compressible with layers of peat. In areas outside of the riverbed, a denser layer of glacial varved silt and clay underlies the fill layer. Thickness of the organics layer (up to 5 ft.) and the varved silt and clay layer (up to 40 ft.) vary widely across the site. In some locations, a layer of medium compact sand separates the organics layer from the varved silt and clay layer.

Below the clay and organics lies a layer of glacial till consisting of compact to very compact silty sand with gravel and occasional cobbles and boulders. The thickness of the till layer is typically between 1 ft. and 10 ft.

Areas containing highly compressible organic soils have special requirements for future construction loads. Structures and roadways constructed over organic soils must surcharged prior to construction to minimize future settlements under sustained additional loading.

All proposed construction activities will be reviewed by NYS DEC as part of the oversight associated with the East Parcel being a Brownfields Cleanup Program site and in accordance with an approved Site Management Plan (refer to Appendix F of this DEIS). This includes oversight on and proposed site work related to scarification of the existing asphalt parking lot, importation of fill, site excavation, installation of new utility lines, and construction techniques for any new buildings that will include the use of sub-slab depressurization systems to address the venting of potential methane and other vapors associated with the prior use of the East Parcel as a municipal landfill.

[1] Text of existing conditions taken from Lighthouse Landing DEIS, January 11, 2005, page III.B-4 indicated in *italics*.

2. Potential Impacts and Proposed Mitigation

a. Site Preparation

During the initial stages of construction as noted below in d. Conceptual Construction Phasing and Staging will include: establishing a construction staging and parking area setup; establishing a field office(s); installing project signage, sanitary facilities, construction and worker vehicle entrances and implementing site safety measures; installing perimeter site construction fence; implementing initial erosion control measures including silt fence and stabilized construction entrance(s); and scarifying (i.e., excavate trenches in) the asphalt on the East Parcel to release trapped methane vapors.

Importation of fill material. It is noted that the LDC has already received a Fill Permit from the Village of Sleepy Hollow Planning Board in anticipation of fill material being available prior to completion of the subject environmental review and site plan approval. A fill plan is in place and available as Appendix I of this DEIS.

b. Delivery of Materials

For the duration of the construction process, the location of construction worker parking and truck deliveries will be synchronized with the phases of construction to ensure acceptable parking and haul locations. Clear direction to construction locations, such as the project offices, trade contractor offices, material storage areas and parking areas, will be identified and marked out via an on-site signage program.

To the maximum extent practicable the main delivery route for materials to the site will be from Route 117 then proceeding south to Pocatnico Street and then to the Project Site. It is contemplated that for truck deliveries of materials a series of flagmen (up to 3) would be used as part of a traffic maintenance and protection plan along the Pocantico Street/Continental Street route.

c. Construction Traffic

Construction traffic is anticipated to be relatively light. Most heavy equipment will remain on the Project Site for weeks to months depending upon use. The labor force will generally arrive early in the morning prior to peak morning traffic (the peak AM highway hour identified in the Traffic Study for the Project) and depart in the early afternoon, prior to the peak evening traffic (the peak PM highway hour). The construction trip generation will vary depending on the type of site work being undertaken.

Based on initial estimates prepared by the Project Engineer, it is anticipated that the Proposed Project will require approximately 100,000 cubic yards of fill material to be brought to the Site. As noted in the Executive Summary, the Applicant has applied for and received a Fill Permit from the Village of Sleepy Hollow Planning Board, refer to Appendix I of this DEIS. Specific limitations were identified with the Fill Permit that will govern the importation of fill material including:

- The Continental Street sewer line must be videoed through the duration of the Filling Permit (i) every 3 months for the next 12-15 months to monitor possible degradation, cracks, sags, or leaks, and (ii) once to twice a year after the next 12-15 months.
- Construction activities shall be in conformance with the Village of Sleepy Hollow Noise Ordinance.
- The Applicant shall schedule construction trips to and from the Site along Continental Street from Broadway by way of Route 117 and prohibit deliveries on school days prior to 8:30 AM and between 2:30 PM and 3:30 PM.
- In order to reduce the transmission of dust resulting from construction activities, the Fill Provider shall: post a 10 mph speed limit signage on the East Parcel and Continental Street to reduce vehicle speed; cover trucks carrying soil and other dry materials; periodically (at least once per week or as directed by the Building Department) wash paved areas within the construction limit line; apply water, as necessary, during crushing; provide and use a wheel washing area for trucks as directed by the Building Department, and apply water to stockpiles and unpaved roads during dry periods and as directed by the Building Department.

d. Conceptual Construction Phasing and Staging

There is currently no active construction of the Project Site. There are minimal activities associated with the DPW use relative to storage of materials and vehicles on a temporary basis. The following is a general outline of the sequence of activities related to Project and Site development. At this point, the LDC is contemplating the construction of the proposed DPW and the at-grade surface parking as part of the initial phase of development. Depending on timing and additional public feedback related to the specific use of the balance of the Subject Property, subsequent phases would include the construction of the community center, Continental Street Overpass and the balance of the Project Site for recreation or public use purposes.

- Staging and parking area setup;
- Establish field office(s), install project sign, sanitary facilities, and construction and worker vehicle entrances and implement site safety measures;
- Install perimeter site construction fence;
- Implement initial erosion control measures including silt fence and stabilized construction entrance(s). Scarify existing pavement;
- Establish stormwater management practices;
- Establish construction worker parking;
- Prepare construction equipment storage and lay down yard;
- Establish building pad, pavement subgrades and stabilize with aggregate base;

- Begin construction of site infrastructure/utilities;
- Construct proposed DPW facility buildings;
- Construct proposed Continental Street extension and overpass;
- Stabilize all disturbed areas;
- Construct/install site amenities;
- Construct pavement and sidewalks;
- Install permanent soil erosion control practices;
- Install landscaping.

e. Dust and Noise Impacts

The potential emissions during construction activities will be localized and of a temporary nature. The following are mitigation measures that can be used to minimize construction emissions:

- Use of tarps over open-body trucks transporting materials to and within the Site;
- Use of temporary vegetative cover such as annual grasses on soil stockpiles and disturbed areas awaiting additional construction;
- Application of water or other dust suppressant on-site dirt roads during construction to mitigate dust;
- Prohibition of on-site burning of construction wastes;
- Unnecessary idling of internal combustion engines will be prohibited;
- Keeping equipment well maintained
- In the event rock crushing is needed as part of the filling operation, dust suppression will be accommodated by a water mister located on the crusher itself.

During the course of the aforementioned Fill Permit approval, a technical memo was prepared (see also DEIS Appendix D) which provided an evaluation of potential noise impacts associated with contemplated filling operations that included a rock crusher and rock hammer. In addition, a summary of the evaluation the Village of Sleepy Hollow conducted as part of the Lighthouse Landing environmental review was provided including presentation of noise levels from construction equipment comparable to that presented in Table III.G-1, Construction Equipment Noise Emission Levels, below.

Table III.G-1
Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 ft. from Source
Air Compressor	81
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Impact crusher2	86
Jack Hammer	88
Loader	85
Paver	89
Pile Driver (impact)	101
Pile Driver (sonic)	96
Pneumatic Tool	85
Pump	76
Rail Saw	90
Rock Drill	98
Rock Crusher	81[1]
Roller	74
Saw	76
Scarifier	83
Scraper	89
Screener	862
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	88

Source: Federal Transit Authority, Transit Noise and Vibration Impact Assessment, April 1995

1. BBN, 1971; 2. Palomar Aggregates Quarry EIS at 25 feet

The Lighthouse Landing DEIS further notes: *that the anticipated equipment is not used in each phase of construction. Further, equipment used is not generally operated continuously, nor is all of the equipment operated simultaneously. There will therefore be times when no equipment is operating and noise will be at ambient levels.*

Construction activities are also scheduled to occur during daytime hours, when many people are at work or away from home[2] .

The construction noise levels presented in Table No. III.K-8 (from the Lighthouse Landing DEIS) *are those that would be experienced for people outdoors. A building (house) will provide significant attenuation for those who are indoors. Sound levels can be expected to be up to 27 dBA lower indoors with the windows closed. Even in homes with the windows open, indoor sound levels can be reduced by up to 17 dBA (USEPA, 1978). Construction noise will be temporary in nature*[3].

TABLE NO. III.K-8

LIGHTHOUSE LANDING
SLEEPY HOLLOW, NEW YORK

AVERAGE CONSTRUCTION NOISE LEVELS ANTICIPATED BY PHASE (DbA)(1)

Receptor	Existing Measured Daytime L_{eq}(2)	Highest Measured Peak Hour Leq	Distance (Feet)	Concrete Slab Demolition (Max)	Concrete Crushing	Excavation	Foundations(3)	Building Construction	Restoration/ Finishing	Pile Driving (Max)
Clinton Street near Beekman Avenue	59	62	1200	62	53	51 to 61	50	48 to 57	48 to 61	72
Pocantico Street near Continental Street	61	62	2200	57	48	46 to 56	45	43 to 52	43 to 56	67
Beekman Avenue near Cortland Street	66	68	2200	57	48	46 to 59	45	43 to 52	43 to 56	67
Franklin Street near Route 9	61	62	5200	50	41	39 to 49	38	36 to 45	36 to 49	60
North Washington Street near Main Street	64	65	4200	52	43	41 to 51	40	38 to 47	38 to 51	62
Central Avenue near Route 9	68	69	4400	51	42	40 to 50	39	37 to 46	37 to 50	61
Kingsland Point Park	53	55	1000	64	55	53 to 63	52	50 to 59	50 to 63	74

(1) Calculated levels are presented as a range covering the minimum number, to maximum number of construction equipment required at any given time.
(2) Average of all daytime measured noise levels.
(3) No difference between minimum and maximum equipment.

III.K-10

Source: Lighthouse Landing DEIS

Construction noise will have a distinctive character and will be audible out-of-doors in the neighborhood. The nearest homes are approximately 150 feet distant from the nearest proposed limit of disturbance, although it is noted that those homes on Kendall Avenue sit well above the proposed for redevelopment. The interiors of houses typically experience a 15 to 20 dBA reduction in noise from the exterior to the interior.

[2] Lighthouse Landing DEIS, 01/11/05, p. III.K-11
[3] Ibid.

f. Days and Times of Construction

Construction hours will be limited to those permitted by Section 272-5 of the Village Code, which allows construction work between the hours of 8:00 a.m. and 7:00 p.m. weekdays and on Saturdays and holidays between the hours of 9:00 a.m. and 6:00 p.m.

g. Foundation Support for New Structures

Proposed foundations will require a geotechnical evaluation, which will be prepared as part of the specific site plan approval process. The geotechnical evaluation would necessitate soil borings to a depth sufficient to confirm subsurface conditions and bearing capacity. Preliminarily, the bridge abutments/pier may likely be founded on deep pile foundations. Wall systems for the proposed Continental Street Overpass would likely be modular block gravity systems or mechanically stabilized earth-type systems. The buildings themselves are to be constructed on imported fill. Based on preliminary evaluation of Site conditions, shallow foundations would be appropriate, but would be confirmed through the geotechnical evaluation.

Based on the Site Management Plan for the East Parcel, refer to Appendix F, the soil vapor intrusion (SVI) evaluation performed prior to building construction may indicate the need for mitigation measures to eliminate potential methane hazards or exposure to vapors in the proposed structures. At the discretion of the Owner or Remedial Party, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. Under this discretionary approach, the mitigation system for a slab-on-grade foundation design will include a vapor barrier and passive sub-slab depressurization system (SSDS) that is capable of being converted to an active system based on sampling (see Section 2.3.2 for design and approval requirements for SVI mitigation systems)[4].

As described in NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006), active SSDS is a system that uses a fan-powered vent and piping to draw vapors from the soil beneath the building's slab (i.e., essentially creating a vacuum beneath the slab) and discharge them to the atmosphere. This results in lower sub-slab air pressure relative to indoor air pressure, which prevents the infiltration of sub-slab vapors into the building. USEPA has defined passive SSDS as a system designed to achieve lower sub-slab air pressure relative to indoor air pressure by use of a vent pipe routed through the conditioned space of a building and venting to the outdoor air, thereby relying solely on the convective flow of air upward in the vent to draw air from beneath the slab (http://www.epa.gov/radon/pubs/newconst.html)[6].

[4] East Parcel Site Management Plan, Arcadis, December 2013, p. 16
[5] Ibid. page 16
[6] Ibid. page 16

Excavation Work Plan (EWP)

The Site has been remediated for restricted residential use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the cover system will be performed in compliance with a site-specific EWP will be submitted to NYSDEC for review and approval. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Project Site. A sample HASP is included in the SMP that is in current compliance with NYS Division of Environmental Remediation – Technical Guidance for Site Investigation and Remediation (DER-10), and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. A site-specific CAMP, in a format previously approved by NYSDEC for use on the Site, is provided in the SMP. The site-specific CAMP will include a location map for air monitoring stations, prevailing wind directions, and the location of the nearest receptors. Any intrusive construction work will be performed in compliance with the site-specific EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan[7].

h. Coordination with Removal of Existing Pedestrian Connector from East Parcel to West Parcel.

As part of the Special Permit approval for the Edge on Hudson development, the developer of that project is required to remove the remains of the existing pedestrian connector that once connected the East Parcel to the West Parcel. The Edge on Hudson Developer is in the process of making improvements to the Beekman Avenue Bridge that were also required as part of the approvals for the development. It is contemplated that the Edge on Hudson Developer would coordinate the removal of the existing pedestrian connector sometime during the work being done on the Beekman Avenue Bridge to take advantage of contractor time, permitting and other efficiencies related to the use of flagmen for rail safety and oversight. It is noted that the proposed Continental Street Overpass is located proximate to the existing pedestrian connector. In the event that both activities are scheduled to occur at about the same time, the LDC would make the East Parcel available for necessary construction activities required to remove the existing pedestrian connector.

[7] Ibid., page 19

H. Utilities

1. Existing Conditions

a. Water Supply (Domestic and Fire Protection)

Available Capacity of Municipal Water Supply

The Subject Site currently has no water usage. As of 2004, the average daily water demand in the Village was approximately 1.2 million gallons per day (mgd) and the estimated maximum daily demand was approximately 2.0 mgd[1]. Per discussions with the Village of Sleepy Hollow, it is understood that the existing water pressure in the project vicinity is in the order of 100 pounds per square inch (psi), though a specific location was not identified, and there is sufficient supply capacity in the existing municipal system for the proposed Subject Site project.

The existing Department of Publics Works (DPW) Facility currently located at 38 River Street in Sleepy Hollow is planned to be demolished once the new DPW Facility at the Subject Site t is constructed. It is projected that the new DPW Facility will employ approximately ten (10) more personnel than current roster. As such a minimal net gain in water usage (at the DPW Facility only) would be realized.

Existing Infrastructure and Pressure

The Subject Site is served by an 18-inch water main that extends along the Pocantico River and enters the Subject Site at Continental Street. This main then traverses the Subject Site before crossing the Metro-North tracks and ending in the northeastern portion of the West Parcel. A second Village-owned ten (10) inch water supply line exists on Beekman Avenue. Although this existing 10 inch water main does not enter the Subject Site, it could be utilized to loop any proposed water mains in the East Parcel project to improve flow and pressure. However, due to property ownership constraints, an easement would be required to connect the Subject Site project to the existing 10 inch water main on Beekman Avenue.

The Subject Site Riverfront Development Concept Plans (Drawing Nos. SP-2.1 through SP-2.4) illustrate the existing and proposed water distribution mains within the vicinity of the Subject Site project site.

Recent Improvements to Village Municipal Water Supply System

Per the Village, improvements were made to the existing Village-owned pump station located on Neperan Road in the Village of Tarrytown in 2008. The improvements made were to replace the existing centrifugal water pumps to increase pressure and reliability of the municipal water system. The improvement also provided the ability to feed portions of the Village of Briarcliff Manor. At this time, no other improvements to the Neperan Road pump station are planned.

[1] As per Richard Gross, Village of Sleepy Hollow Department of Public Works, June 2004

Additionally, a new water storage tank is under construction to increase the Village's storage capacity. Currently the Village's water storage needs are supplied by an 800,000 gallon tank that is situated on the Rockefeller State Park Reserve in the Town of Mount Pleasant. The new water storage tank will provide an additional 1.6 million gallons of storage capacity (bringing the total Village water storage capacity to 2.4 million gallons) when complete. The new storage tank is located on Lake Road in Pocantico Hills in the Town of Mount Pleasant.

b. Sanitary Sewer (Village and County)

Existing Site Sanitary Sewer

The Subject Site is located in the Westchester County Saw Mill Valley Sewer District. The Subject Site is currently served by both an existing 24" and 30" Westchester County-owned reinforced concrete pipe (RCP) sanitary trunk sewer as well as a 24" Village-owned tile sanitary sewer as shown in the East Parcel Riverfront Development Concept Plans (Dwg. Nos. SP-2.1 through SP-2.4). The 24" County trunk sewer (a.k.a. the Tarrytown Extension) extends along the western edge of the project site parallel to the Metro-North railroad tracks. It then connects to the 30" County trunk sewer before crossing under the Metro-North and then continuing into the West Parcel before going to the Westchester County Tarrytown Pump Station and from there to the Yonkers Joint Wastewater Treatment Plant (YJWWTP).

Available Capacity

The projected average daily wastewater discharge flows from the Subject Site under full buildout were presented to the Westchester County Department of Environmental Facilities (WCDEF). The WCDEF oversee the operations of various facilities with one being the Westchester County sanitary trunk sewer system. Per the WCDEF, The YJWWTP as well as the Tarrytown Pump Station and the Westchester County Trunk Sewer have the capacity to handle the additional sewage flows from the proposed development of the Subject Site.[2]

The existing Department of Publics Works (DPW) Facility (currently located at 38 River Street in Sleepy Hollow) is planned to be demolished once the new DPW Facility at the Subject Site is constructed. It is projected that the new DPW Facility will employ more personnel than the current roster. As such, a minimal net gain in daily wastewater discharges would be realized.

Location of Lines and Elements Serving the Immediate Area

Village sanitary sewer mains currently exist in the immediate area, but will not be impacted by the Proposed Project.

[2] See Appendix B for letter from Marian Pompa, P.E., of the WCDEF, date July, 2016.

c. **Electric Supply**

Description of Existing Services and Providers

The former General Motors (GM) facility was reportedly supplied by Consolidated Edison Electric (Con Ed) with as many as four (4) 13.2 kV primary feeders. However, these feeders were directed to the southeast corner of the West Parcel on Beekman Avenue and not the East Parcel.

Location of Closest Connection Points

Due to property ownership constraints, an easement would be required to connect the East Parcel project facilities to any existing electrical services that exist on Beekman Avenue. As such, the planned point of entry for electrical service is from the existing pole-mounted wires on Continental Avenue. Per Con Ed, there exists a 13.2 kV feeder terminating at the intersection of Continental Street and Kendall Avenue. This 13.2 kV feeder termination is approximately 350 feet east of the Subject Site property line on Continental Street.

d. **Natural Gas Supply**

Description of Existing Services and Providers

According to Con Edison, existing natural gas facilities in the vicinity of the project consist of a high-pressure 8 inch gas main located on Continental Street which then traverses west across the Subject Site and crosses to the West Parcel over the Metro-North tracks via the existing pedestrian bridge. There is also a medium-pressure 12 inch gas main that runs along the north side of Beekman Avenue. Refer to East Parcel Development Plans (Sheets SP-2.1 through SP-2.4) for the location of these existing gas and electric utilities.

Location of Closest Connection Points

Due to property ownership constraints, an easement would be required to connect the Subject Site project facilities to any existing natural gas services that exist on Beekman Avenue. As such, the planned point of connection for natural gas service is along the existing 8” high-pressure gas main that enters the Subject Site from Continental Street.

e. **Telecommunications**

Description of Existing Services and Providers

There exists pole-mounted, overhead telephone service located on Beekman Avenue and Continental Street with Verizon being the telephone service supplier.

Location of Closest Connection Points

Due to property ownership constraints, an easement would be required to connect the Subject Site facilities to any existing telecommunication services that exist on Beekman Avenue. As such, the planned point of entry for telecommunication services is from the existing pole-mounted wires on Continental Avenue.

2. Potential Impacts

a. Water Supply (Domestic and Fire Protection)

Water Demands

The proposed East Parcel project will require approximately 21,440 gallons per day (gpd), with a peak (3X) demand of approximately 45 gallons per minute (gpm). See Table H1: Subject Site Domestic Water Supply Demands for flow evaluations.

Table H1: Subject Site Domestic Water Demands

Uses	Quantity	Units	Flow (gpu)[1]	Water (gpd)
DPW Garage	10[2]	person	15	190
Vehicle Wash	1,495	square feet	4.9	7,325
Community Center	90	person	5	450
Amphitheater	300	person	5	1,350
Baseball Field	1,500	person	5	7,500
195' x 330' Soccer Field[3]	1.5	ac-in	38,510	4,125
Flexible Work Space	100	person	5	500
Total Flow (gpd)				**21,440**
Peak Flow (gpm)[4]				**45**

[1] Flows are displayed in gallons per unit (gpu) and are based upon the 2014 NYSDEC Design Standards for Intermediate Sized Wastewater Treatment Systems.
[2] The projected employee count for the proposed DPW Facility is 35. Currently, there are approximately 25 people employed at the current DPW Facility. Domestic Water Demand reflects increase in employee count only.
[3] Per the 2012 Sports Turf Managers Association (STMA) recommendations, a typical full size soccer grass field requires 1.0 ac-in of water per week for irrigation, with 25% coming from rain events.
[4] Peak flow rate calculated as three (3) times average daily rate and displayed in gallons per minute (gpm).

In order to utilize the noted 100 psi boundary condition in a conservative manner, a hydraulic model was generated which consists of the existing 18" main along Continental Street and the proposed Subject Site project piping. Appropriate pressure boundary conditions were achieved along the existing 18" supply main with the use of external reservoirs in order to simulate the Village water supply. Reservoir levels were set such that the lowest point along the 18" main was pressurized to 100 psi, thus making any model output very conservative.

The computed Domestic Demands were simulated at their respective nodes in the model in order to assess the system's suitability to deliver flows. With average pressures in the order of 100 psi, domestic flows are delivered to the Subject Site project with a negligible effect on the existing system pressures. A model schematic is shown in Exhibit H-1.

Fire Flow

The International Organization for Standardization (ISO) Guidelines for the determination of needed fire flow were used in order to compute a draft target fire flow for the entire development. While fire flow needs of individual buildings will vary, the system was sized in order to deliver the largest estimated fire flow within the Subject Site. This was determined to be the proposed connected Department of Public Works Office Building and Garage with a total estimated needed fire flow of 3,000 gpm.

The computation carried the following assumptions, to be refined in later stages of the project as necessary:

- Joist Masonry Building Construction
- Combustible Occupancy Factor (fuel-containing vehicles services within)
- 62.6 ft. lateral clearance to nearest proposed building (Community Center)
- 101-200 range Length-Height of Facing Wall of Exposure Building
- Fire-resistive, Noncombustible, or Slow Burning Communications opening – Single Class B Fire Door at One End of Passageway to serve as Communications factor
- Fully sprinklered buildings

Fire Flow was simulated at each hydrant (proposed and existing) within the East Parcel, one at a time, with all peak domestic demands concurrently active. The hydraulic analysis indicates that the 18” existing piping is able to deliver the required 3,000 GPM fire flow to any point within the Subject Site via the proposed network of 8” diameter mains. Hydrant flow results from the model for all proposed hydrants are indicated in Table H2 below.

Table H2: Available Fire Flow in the East Parcel

Hydrant	Location	Elev. (ft.)	Hydraulic Grade (ft.)	Pressure (psi)	Required Fire Flow (gpm)	Available Fire Flow @ 20 psi (gpm)
H-1	Baseball Field	7.00	228.78	96	3,000	3,229
H-2	General Site	7.00	228.04	96	3,000	4,866
H-3	Flexible Workspace	9.00	229.54	95	3,000	3,257
H-4	Soccer Field	17.00	230.25	92	3,000	5,049
H-5	DPW Office	21.00	229.10	90	3,000	6,292
H-6	Outdoor Amphitheater	9.00	229.16	95	3,000	5,354
H-7	Community Center	21.00	229.92	90	3,000	4,338
H-8	DPW Garage	21.00	229.46	90	3,000	5,222

[1] Source: Information for Table H2 derived from hydraulic modelling output, Bentley WaterGEMS (version V8i).

As the results indicate, the proposed 8” watermain network is able to deliver 5,222 GPM to the DPW garage with the use of 8” watermains across the Subject Site. The requirement of 3,000 GPM is exceeded at all points within the site. Note that these fire flow requirements are preliminary and should be further refined once accurate architectural information is received. It is also important to note that this model requires calibration to a minimum of two (2) hydrant flow tests (requested previously by WSP), carried out at two locations along the 18” supply main on Continental Avenue, in the vicinity of the Subject Site . The current pipe sizing may change based on the hydrant flow information received.

The model results indicate that pressures along the 18” main will drop from 100 psi to approximately 82 psi under peak domestic demand conditions and 73 psi during a fire flow + peak domestic demand condition. Pressures within the proposed Subject Site will drop down to approximately 69 psi during a fire event. As part of the final water main design for the site, the model will be refined to reflect the final site conditions in the site and will be included in the application for the construction of the public water mains in and around the project.

Since the fire flow calculation was based on basic data and assumptions, a 4,000 GPM value was used to conservatively estimate the impact of fire flow drawdown on the Village supply source. A four-hour demand of 4,000 gpm occurring along with the average demand for the village will result in a drawdown of approximately 310,000 gallons from the village storage tank(s), while the village pump station is operating at its capacity of 5.0 mgd. The water main pipe design will be coordinated with the Village Water Department and the Village Engineer to assure that proper design standards are utilized on the project. As shown on the plans, a series of eight (8) inch diameter mains are sufficient to service the domestic and fire flow demands across the proposed site.

Impacts on Water Supply in Adjoining Areas

Per the Village, the Subject Site will not have a significant impact on water supply in adjoining neighborhoods. An interconnection of the 18-inch main on Continental Street with the 10-inch main on Beekman Avenue would provide a greater amount of reliability for maintaining water and fire flow in the project vicinity, but as previously mentioned would require an easement.

Impacts Related to Construction of Additional Water Infrastructure Within Site and Adjacent Areas

With the exception of a new water main connection to the existing 18-inch main located on Continental Street (and the possible connection to the existing 10" water main on Beekman Avenue with an easement in place), no other water main construction related activities are planned offsite. All onsite water main work within the site will occur as part of the normal construction process. The Applicant does not anticipate any service impacts to the existing Village water distribution system as a result of construction of the new infrastructure either on or off-site required to service the proposed Subject Site. Any required temporary construction related service interruptions to the existing 18" water main would be coordinated with the Village and scheduled during periods with least impact.

b. Sanitary Sewer (Village and County)

Sanitary Flow Analysis

The estimated average daily wastewater discharge for the Subject Site is approximately 15,720 gallons per day (gpd) with a peak rate of flow of 33 gpm. See Table H3 for Average Daily Wastewater Discharge evaluations. As previously stated, the WCDEF has confirmed 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 anticipated flow.

Table H3: Average Daily Wastewater Discharges

Uses	Quantity	Units	Flow[1] (gpu)	Wastewater[2] (gpd)
DPW Garage	10	person	15	170
Vehicle Wash	1,495	square feet	4.9	6,595
Community Center	90	person	5	405
Amphitheater	300	person	5	1,350
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)				**15,720**
Peak Flow (gpm)[4]				**33**

[1] Flows are displayed in gallons per unit (gpu) and are based upon the 2014 NYSDEC Design Standards for Intermediate Sized Wastewater Treatment Systems.
[2] Wastewater flow estimated at 90% of average daily water usage.
[3] Water usage for proposed soccer field is for irrigation only and will not be conveyed to sanitary facilities.
[4] Peak flow rate calculated as three (3) times average daily rate and displayed in gallons per minute (gpm).

Impacts on Existing Infrastructure

No significant impacts to existing facilities are anticipated from this project. There will be a minimal increase in demand at the YJWWTP and conveyance systems to handle the additional sanitary flow.

Impacts Related to Construction of Infrastructure On and Off-site

As part of the development of the Subject Site , and beginning at the existing terminal sanitary sewer manhole on Continental Street, approximately 1,240 linear feet of the existing Village owned 24" tile sewer will be abandoned in place to the existing sanitary manhole that begins the 30" County trunk sewer. As part of the abandonment of this sanitary sewer run, five (5) Village owned sanitary sewer manholes will be removed.

Care during construction will be taken to protect the Westchester County trunk sewer. This will include properly marking out the sewer main and minimizing excavation near the manholes and County trunk sewer. All on-site sewers will be constructed in accordance with Village and County construction standards to minimize stormwater infiltration and leakage and will be tested and approved prior to placing in service.

The proposed Subject Site contains a low-lying area north of Continental Street in which a baseball field and artist's work space are proposed. Because of insufficient gradient, sanitary flows from this area will require a small subsurface pump station to achieve conveyance to the proposed 24" sanitary sewer traversing the site. The anticipated pump

duty point is approximately 0.02 cubic feet per second (cfs) (13,360 gpd) at no more than 15 feet total dynamic head (TDH). Sanitary sewer flows from this proposed pump station will discharge into the proposed 24" sanitary sewer via a 4" diameter cement-lined ductile iron pipe (DIP) forcemain.

It should be noted that a capacity verification of the existing 30" trunk sewer should be performed in order to ensure that there is sufficient capacity to receive the anticipated peak sanitary flow from the Subject Site. An Autodesk Storm & Sanitary software model was created in order to assess the effect of the added flow to the 30" trunk sewer from the Subject Site. The assessment of the impact was determined to be minimal. However, it is not known at this time whether near-capacity of surcharged flow conditions exist in the existing 24" Village-owned sanitary sewer, which conveys wastewater from areas upstream of the Subject Site.

c. Electric Supply

Potential Impacts
It is anticipated that the Subject Site will result in an increase in energy demand for electric.

Anticipated Usage
A preliminary electric demand analysis for the Subject Site has not been performed for inclusion in this DEIS. Upon the completion of the demand analysis for the proposed electric facilities, a load letter will be submitted to Con Edison for a determination on the adequacy of the existing electric facilities to serve the East Parcel project. Loads for electric are typically represented in kilo-volt amps (kVA).

Installation of Service Lines
All electric service lines will be installed below grade within the project limits. The installation of these service lines will be in accordance with Standards and Specifications set for by Con Edison and other applicable agencies.

d. Natural Gas Supply

Potential Impacts
The Subject Site will result in an increase in energy demand for electric and gas.

Anticipated Usage
A preliminary natural gas demand analysis for the Subject Site has not been performed for inclusion in this DEIS. Upon the completion of the demand analysis for the proposed gas facilities, a load letter will be submitted to Con Edison for a determination on the adequacy

of the existing gas facilities to serve the Subject Site. Loads for gas are typically represented in cubic feet per hour (cfh).

Installation of Service Lines
All gas service lines will be installed below grade within the project limits. The installation of these service lines will be in accordance with Standards and Specifications set for by Con Edison and other applicable agencies.

e. Telecommunications

Potential Impacts
No potential impacts are anticipated.

3. Anticipated Mitigation Measures

a. Water Supply (Domestic and Fire Protection)

System and Infrastructure Improvements
The proposed water distribution system will connect with the existing 18-inch water main that enters the east parcel from Continental Street. This connection will provide the project with continuous supply to the new DPW Facility and other future planned uses. The Subject Site will lead to a minor increase in water demand resulting in some increase in pumping costs and maintenance of the Village water infrastructure.

Implementation of Measures to Reduce Demand
The new water system at East Parcel will be constructed in accordance with the Village's and County's construction standards to minimize leakage.

Fixtures installed within the DPW Facility, Community Center and all out-lying facilities will be water conservation fixtures complying with the Plumbing Code of New York State. For example, maximum flow rates will be 1.6 gallons per flush for toilets and 1.0 gallon per flush for urinals. Maximum flow rates for shower heads and sink faucets will be limited to 2.5 gpm and 2.2 gpm, respectively in accordance with the above noted Plumbing Code. Public bathroom faucets will have a maximum flow rate of 0.5 gpm.

b. Sanitary Sewer (Village and County)

System and Infrastructure Improvements
Any planned direct connections to the existing 30" Westchester County trunk sewer will require the Applicant to submit engineering plans to the WCDEF and Westchester County Department of Health (WCDOH) for their review and approval. All new sewer mains installed in the project Site will be sized to accommodate peak sewage flows and will meet the Village's and County's construction standards.

Implementation of Measures to Reduce Demand
All proposed water fixtures will utilize water saving devices to reduce water demand.

c. Electric Supply

System and Infrastructure Improvements
It is planned that Con Edison will serve the East Parcel project from a single point of entry for electric (Continental Street). Con Edison will provide electric service to the DPW Facility and any other planned facilities as needed. This will include off-site improvements as required for the service to the Subject Site. Electric and gas services are proposed to be located underground in a common utility trench, where feasible.

Implementation of Energy Conservation and Efficiency
Measures to Reduce Demand
As part of the proposed development of the Subject Site, efficiency measures to reduce electric demand will be taken in the form of energy conservation features, lighting and appliances.

d. Natural Gas

System and Infrastructure Improvements
It is planned that Con Edison will serve the Subject Site from the existing high-pressure natural gas main that enters the project site from Continental Street. Con Edison will provide gas service to the DPW Facility and any other planned facilities as needed. This will include off-site improvements as required for the service to the Subject Site. Gas and electric services are proposed to be located underground in a common utility trench, where feasible.
Implementation of Energy Conservation and Efficiency
Measures to Reduce Demand
As part of the proposed development of the Subject Site, efficiency measures to reduce gas demand will be taken in the form of energy conservation features and appliances.

e. Telecommunications

Installation of Service Lines
All telecommunication service lines will be installed below grade within the project limits. The installation of these service lines will be in accordance with Standards and Specifications set for by Verizon and other applicable agencies.

According to recent conversations with Verizon, the existing pole-mounted copper cable telephone service facilities located on Continental Avenue are limited and may require upgrades to meet the service demands and capacity requirements of the Subject Site. Verizon is continuing its work to upgrade its infrastructure in the vicinity of the project site by installing new underground fiber optic cable. The Applicant proposes to install all new underground telephone and cable services on the Subject Site. Verizon plans to continue to be the telecommunications service supplier to the Subject Site.

System and Infrastructure Improvements

It is planned that Verizon will serve the Subject Site from a single point of entry for telecommunications (Continental Street). Verizon will provide telecommunication services to the DPW Facility and any other planned facilities as needed. This will include off-site improvements as required for the service to the Subject Site.

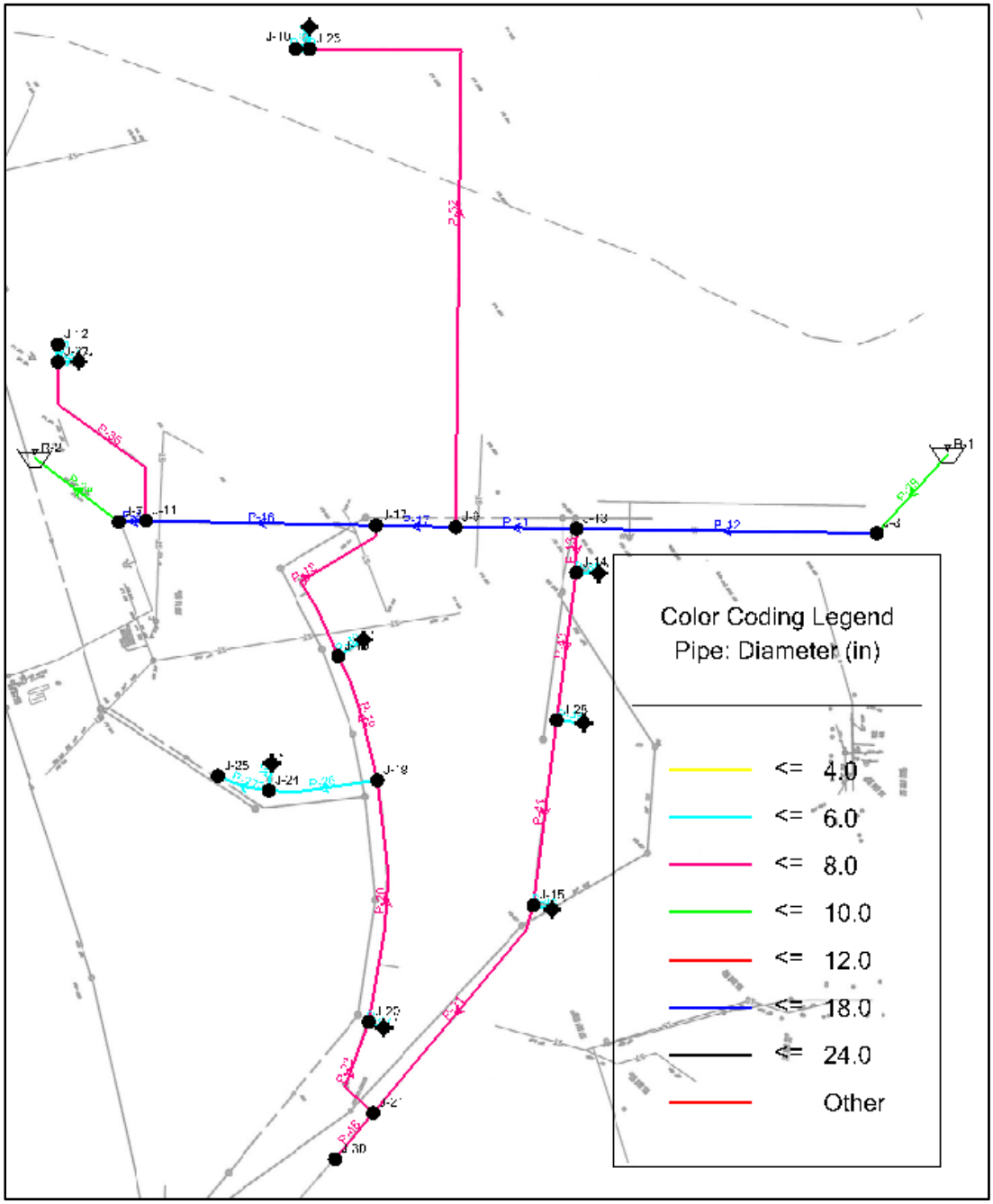

Exhibit H-1: Bentley WaterGEMS
Hydraulic Model of the East Parcel Supply
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

Source: WSP Parsons Brinkerhoff

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1. **No Action Alternative**

   This alternative would leave the East Parcel in its current condition, a vacant parking lot that served the former automotive assembly plant, and would result in no opportunities to address a community need to construct a contemporary DPW facility and active recreation facilities to serve the Village.

2. **Alternative Layouts**

   During the course of preparing the RDCP, the Applicant's design team prepared two alternatives which generally included less parking for the public and different configurations of field layouts, (refer to Exhibits IV-1 through IV-4). These alternatives keep the overall concept of providing for a DPW facility, Continental Street Overpass and recreation fields but arranges the location and extent of the facilities in different configurations. It is noted that the proposed parking configurations of these alternatives does address the parking needs as expressed by Historic Hudson Valley relative to shared use for larger events at the Philipsburg Manor Restoration facility.

3. **Alternative Uses**

   As part of the Alternative Layout design process described in IV.2 above, the Applicant's design team evaluated the opportunity to incorporate different uses on the East Parcel, including an indoor recreation facility with community space, an outdoor amphitheater, and artist work space to support proposed activities on the West Parcel and active recreation facilities (playground/tennis courts/basketball courts). The LDC has incorporated some of these elements into the proposed RDCP and will provide opportunity for additional public input as to prospective recreation and community uses.

4. **Alternative Site Layout That Incorporates Prior Conceptual Plans for Historic Hudson Valley**

   Historic Hudson Valley (HHV) has been an active participant in the planning process for the East Parcel going back to the initial planning associated with the Village of Sleepy Hollow's Waterfront Linkage Study, refer also to Exhibits III.A-11 through 13 for depictions of prior planning studies prepared on behalf of HHV.. In general terms, HHV contemplated expansion

of its existing Philipsburg Manor Restoration (hereinafter PMR) facility operations. HHV's stated planning objectives included: contiguous land available for expansion of their PMR operation, viewshed protection and buffering, mitigation of impacts, adequate parking for visitors, and continued easy access to PMR. As part of the Final EIS for Lighthouse Landing, HHV submitted conceptual level plans that included a proposed 18th Century tenant farm. It is noted that the Site Management Plan (refer to DEIS Appendix F, page 19) prohibits vegetable gardens and farming. Incorporation of these alternative layouts with the Proposed Action would essentially eliminate all proposed uses located north of the proposed Continental Street extension including the approximately 500 spaces of parking, the regulation size baseball diamond, and the proposed flexible event space.

5. Alternative Shared Parking Arrangements

As indicated on Exhibits IV-2 and IV-4, alternative parking arrangements were prepared as part of the initial planning process for the East Parcel. These included parking configurations of varying size from 100 to 265 spaces. The current RDCP includes parking for approximately 500 vehicles which is more in keeping with the stated goals and objectives of Historic Hudson Valley (HHV) relative to their future operation and plans. An alternative arrangement would be to allow HHV to take ownership of a portion of the East Parcel adjacent to their property for HHV's development of parking. In turn, HHV would be responsible for the construction, upkeep, maintenance and liability associated with the proposed 500± parking. It is contemplated that the LDC would request a comparable reciprocal agreement with HHV for the use of parking facility to service the proposed recreation resources.

HHV has also prepared an alternative parking arrangement which has been included for consideration as part of this DEIS, refer to Exhibit IV- 5 Historic Hudson Valley/Sleepy Hollow LDC Shared Parking Concept. Exhibit IV-5 presents an alternative vision for the northern portion of the East Parcel. This layout continues to incorporate the same features that have been depicted in other conceptual plans examined to date, but reinterprets the way in which those features are accommodated on the Project Site and also introduces a few new elements.

Exhibit IV-5 incorporates some additional design modifications and environmental enhancements including:

- Shared parking areas that could accommodate 577 vehicles.

  Unlike the most recently examined conceptual plan for this portion of the East Parcel, which depicted an L- shaped shared parking area (refer to Exhibit I-9, Conceptual Development Plan) that was estimated to accommodate "approximately 500 spaces," the alternative site layout includes two parallel areas for shared HHV/LDC parking that could accommodate 577 Village Code- compliant parking spaces. As before, the site layout continues to show a primary vehicular access to the shared parking areas off the proposed Continental Street extension, but now also depicts potential internal vehicular and pedestrian linkages between the shared parking areas on the East Parcel and the overflow parking lot on the adjacent Philipsburg Manor site (which would likely result in the loss of a few parking spaces if those linkages are made). The existing driveway access to the Philipsburg Manor overflow parking lot near the existing terminus of Continental Street would continue to function and would be regularly used to provide access to the overflow parking lot at times when HHV does not need to use the shared parking areas on the East Parcel. Maintaining ease of access to the overflow parking lot directly from Continental Street on a regular basis is also important because that parking lot is a primary drop-off location for visitors to the Philipsburg Manor site and is also one of the locations where handicapped accessible parking is provided.

  Both parking areas on the East Parcel would be designed with parking bays having a north-south orientation. The parking area labeled "Shared Parking Area #1" would have a capacity of 265 spaces with a paved surface. The parking area labeled "Shared Parking Area #2" would have a capacity of 312 spaces with a grassed surface[1]. It is contemplated

[1] Multiple options exist for creating a grassed surface treatment in areas to be used for parking, including alternatives to grasscrete. Some of those alternatives allow for the establishment of a uniform grassed surface area over a completely concealed structural framework that still meets necessary drainage requirements. Unlike grasscrete, which is an open concrete grid that will always remain visible at the surface even when grass is planted in the openings, the other alternatives with the concealed structural framework would have a surface area that may be better suited for use as a flexible event space where members of the public may regularly gather and be walking around.

that gates or some other suitable type of barriers could need to be installed at strategic locations to ensure that access to one or both shared parking areas can be securely controlled by HHV at times when HHV is using those parking facilities to support events at Philipsburg Manor.

- MLB regulation baseball field

  The alternative site layout provided on Exhibit IV-5 continues to accommodate a regulation size baseball field in the same general location as identified on the most recently examined conceptual plan for this portion of the East Parcel, with ample area provided for spectators to gather behind home plate and the first and third base lines.

- Supplementary parking for baseball field

  Unlike the most recently examined conceptual plan for this portion of the East Parcel, the alternative site layout includes a new conveniently located parking area with 27 spaces and a vehicular turnaround area immediately to the west of the baseball field near DeVries Park.

- Flexible event/ park space

  The alternative site layout continues to include an area that would have a grassed surface and could be used for multiple purposes, but the area available for those purposes would be much larger on the Exhibit IV-5 alternative site layout than the area depicted on Exhibit I-9 Conceptual Layout.

  The selection of Shared Parking Area #2, rather than Shared Parking Area #1, as the area to receive the grassed surface will result in the creation of a large area of “green” space in this portion of the East Parcel, composed of the baseball field and the adjacent grassed areas to the east and south of the baseball field. Not only will stormwater benefits accrue from the use of such a surface treatment, as originally contemplated, but the modified location of the parking area with the grassed surface will allow for multiple such areas to

be located adjacent to each other, thereby creating a substantially larger area of usable open space north of the proposed Continental Street extension. This attractive, naturally landscaped area could function effectively as flexible event/park space, where activities such as picnicking, festivals, and other types of community events could be accommodated in multiple configurations. Though not yet detailed on the alternative site layout, opportunities would also exist to introduce pedestrian circulation features in appropriate locations in order to connect this flexible event/park space to other focal points and activity centers further south on the East Parcel.

6. Alternative Access

An alternative access being considered by the LDC includes a new at-grade roadway leading to Beekman Avenue. Existing access to Beekman Avenue is provided by a combination of at grade and an elevated steel viaduct structure. Given the condition of the existing elevated viaduct structure, extensive renovations would need to be made bring it up to a standard where it could be used for vehicular traffic, although based on existing reports it would still not be able to support the heaviest of the DPW vehicles. Alternative access being considered would include an at-grade roadway leading from the East Parcel to Beekman Avenue. It is noted that portions of this at-grade alignment run across currently private property which would need to be incorporated as part of a proposed right of way.

7. Alternative Layout for Tarrytown Union Free School District (TUFSD) Bus Garage

As part of the prior planning for the East Parcel during the Lighthouse Landing EIS review, the TUFSD was consulted regarding the potential to include a bus repair garage as part of the East Parcel redevelopment. Those plans (refer to Exhibit IV-6, included an approximately 3,800 square foot facility. As part of the initial planning for the Proposed Action, the TUFSD submitted an alternate plan that included a much larger (13,750 square foot) facility, refer to Exhibit IV-7. The TUFSD has since revised their prospective needs and has submitted a plan for 3,850 square feet which has since been incorporated into the proposed RDCP.

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PROGRAM ELEMENTS

Concept A
Central Spine

- Recreational fields:
  - Colt League baseball field (X2)
  - Football/soccer field
  - Basketball courts (X4)
  - Tennis courts (X9)
  - Playground (5,000 sq.ft)
- DPW site (Approx. 120,000 sq.ft)
- Community recreational center site (Approx. 20,000 sq.ft)
- Parking lot (X2): approx. 350 spaces in total
- Pedestrian plaza and artist work space
- Flexible event / passive park space (see following slides)

Concept B
Central Plaza

- Recreational fields:
  - Colt League baseball field
  - Football/soccer field
  - Basketball courts (X4)
- DPW site (Approx. 120,000 sq.ft)
- Community recreational center site (Approx. 26,000 sq.ft)
- Parking lot (X2): approx. 260 spaces in total
- Pedestrian plaza and artist work space
- Central gathering pedestrian plaza
- Amphitheater / outdoor performance space
- Flexible event / passive park space (see following slides)

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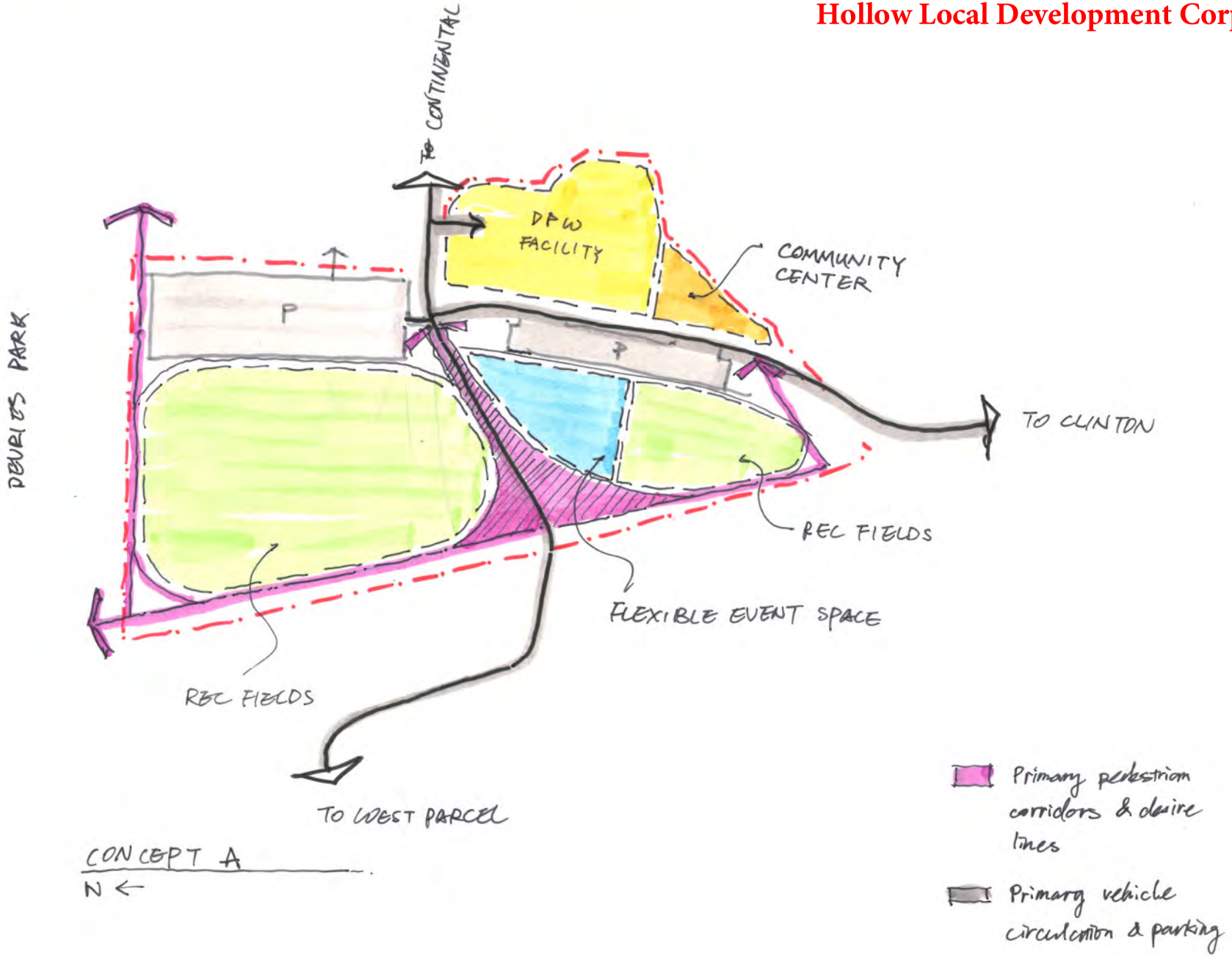
CONCEPT A: PROGRAM ELEMENTS

Exhibit IV-1 Alternative Layouts East Parcel Redevelopment DEIS Sleepy Hollow Local Development Corporation



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Concept A - Concept Plan Diagram

Exhibit IV-2 Alternative Layouts
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

SLEEPY HOLLOW
REDEVELOPMENT OF EAST PARCEL- DEIS ENGINEERING SUPPORT

WSP | PARSONS BRINCKERHOFF

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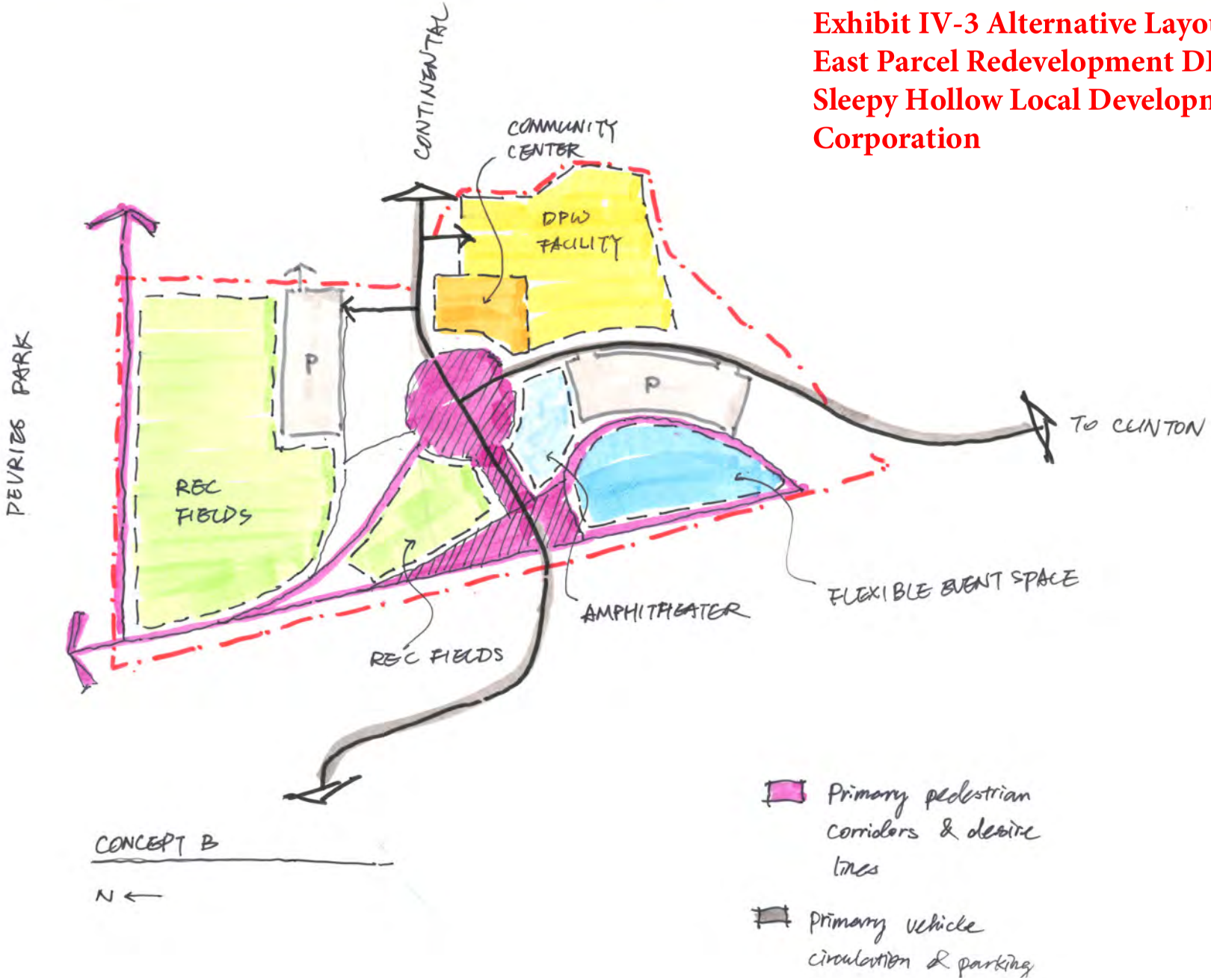
CONCEPT B: PROGRAM ELEMENTS

Exhibit IV-3 Alternative Layouts
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation



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Concept B - Concept Plan Diagram

Exhibit IV-4 Alternative Layouts
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

SLEEPY HOLLOW
REDEVELOPMENT OF EAST PARCEL- DEIS ENGINEERING SUPPORT

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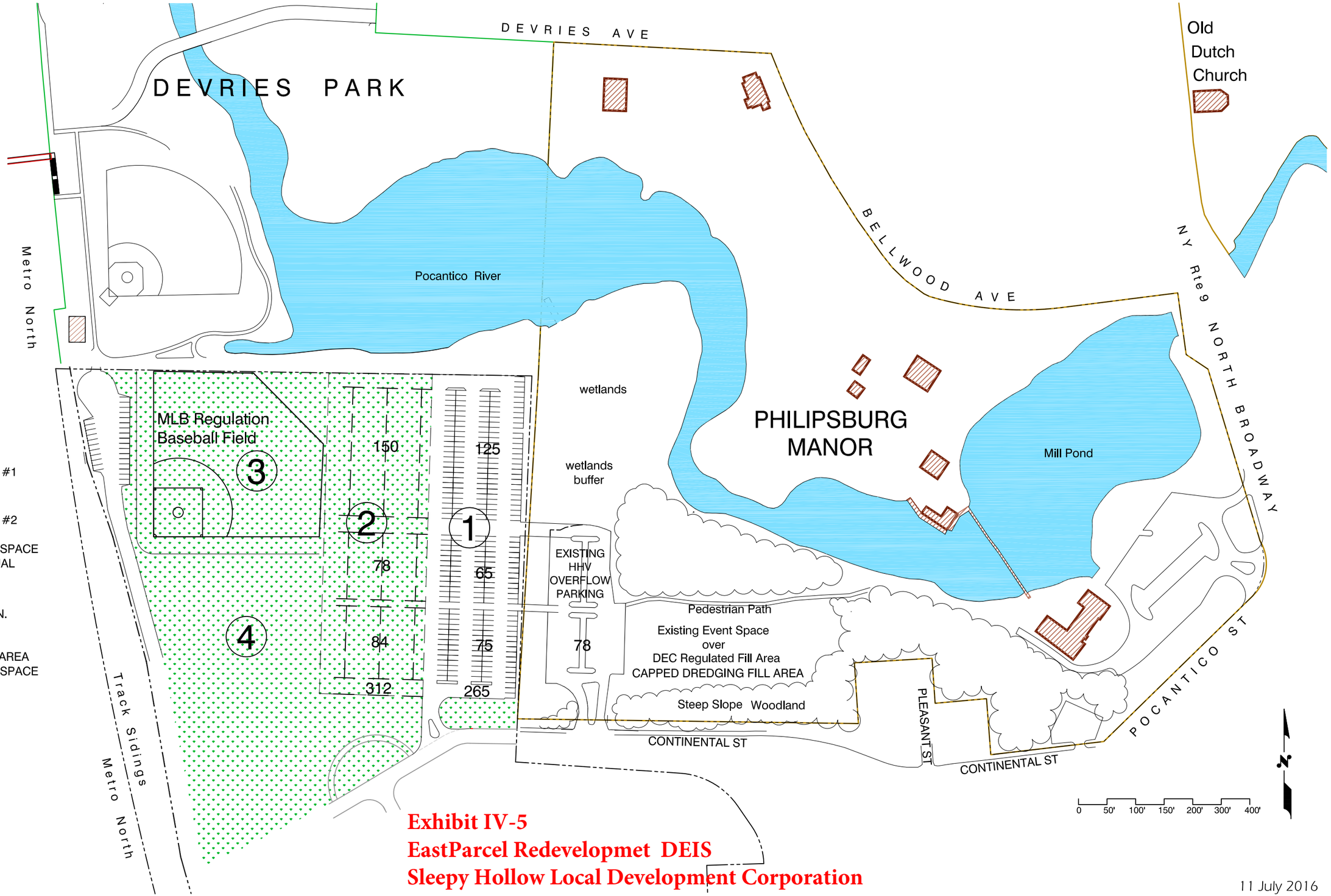

1 SHARED PARKING AREA #1
PAVED

2 SHARED PARKING AREA #2
GRASS
FLEXIBLE EVENT / PARK SPACE
w/ TYPAR MESH OR EQUAL

3 MLB REGULATION
BASEBALL FIELD SHOWN.

4 MULTIPURPOSE GRASS AREA
FLEXIBLE EVENT / PARK SPACE

Exhibit IV-5
EastParcel Redevelopmet DEIS
Sleepy Hollow Local Development Corporation

Historic Hudson Valley / Sleepy Hollow LDC
Shared Parking Concept

11 July 2016

Historic Hudson Valley
Philipsburg Manor
Sleepy Hollow, NY 10591

Richard Alan Daley Architect
2415 Lenox Hill Station NY NY 10021 212.794.6151

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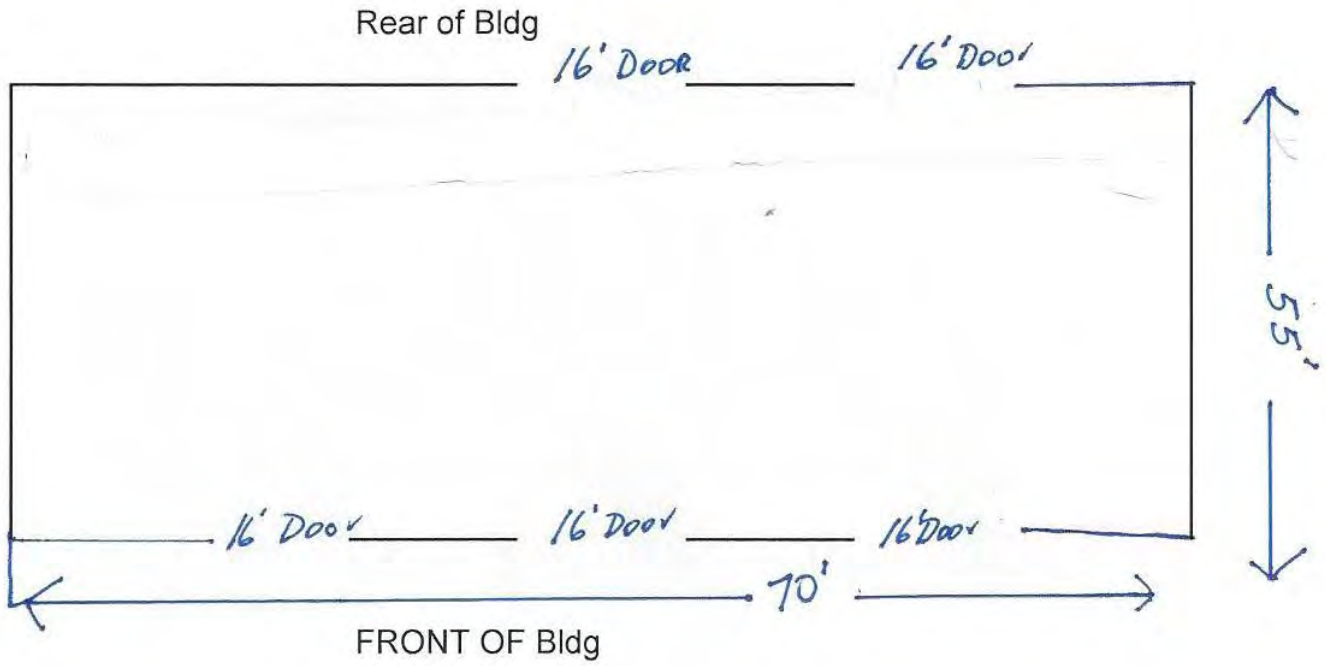

Mr. David Schroedel

Chairman

Sleepy Hollow LDC

This is the foot print of our requested garage

The location of the lifts will depend on which side is more suitable for bathroom/ Power

E-Mail: chughes@tufsd.org

Cell 914 804-7162

Office 914 631-3663

Exhibit IV-6 TUFSD Layout 1
East Parcel Redevelopment DEIS
Sleepy Hollow Local Development Corporation

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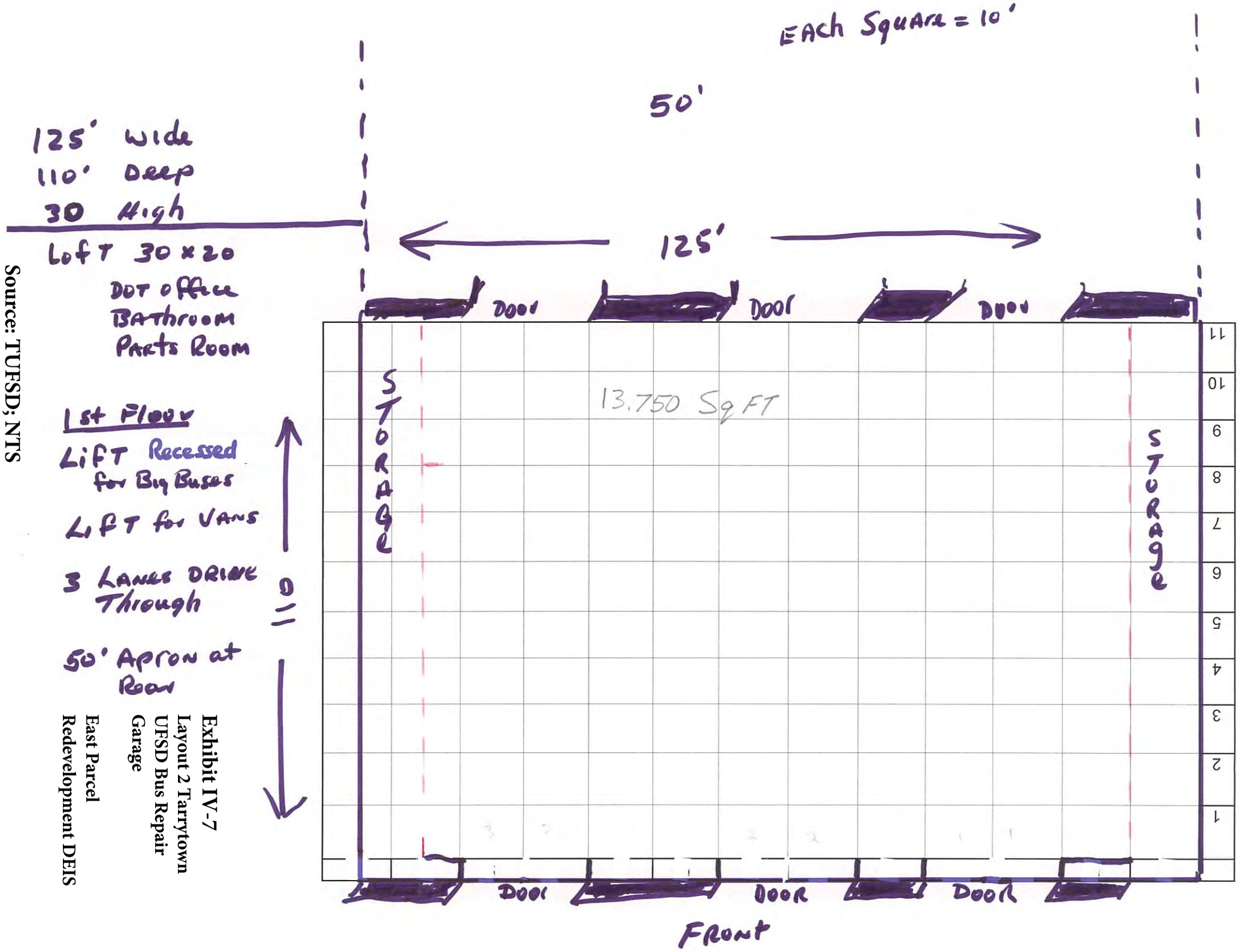

Exhibit IV-7
Layout 2 Tarrytown UFSD Bus Repair Garage
East Parcel Redevelopment DEIS

Source: TUFSD; NTS

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V. ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Development of the Project Site as contemplated under the Proposed Action is anticipated to have certain long-term and short-term impacts, as would any development on the Project Site. The Proposed Project, however, involves the redevelopment of a currently vacant mostly paved site that was formerly used as employee parking for the former GM North Tarrytown Assembly Plant. All significant adverse impacts resulting from implementation of the Proposed Project will be mitigated to the maximum extent practicable.

A. Short-term Impacts

During construction of the Proposed Project, noise levels may increase in the short–term. It is anticipated that the typical types of equipment used on the site would include bulldozers, compressors, front-end loaders, dump trucks and pavers. In order to mitigate potential temporary noise impacts from construction equipment, all equipment used on-site will have to be inspected periodically to ensure that properly functioning muffler systems are used; while on the Project Site, equipment should not idle unnecessarily; and construction activities should be limited to the hours set forth in the Village code, these being 8:00 AM to 7:00 PM on weekdays and 9:00 AM to 6:00 PM on weekends and legal holidays.

Similarly, short-term, temporary air quality impacts associated with construction activities may include fugitive dust, exhaust and emissions from construction vehicles and equipment and increased traffic on local roadways. These impacts are temporary and can be mitigated by using best management construction practices such as wetting the ground, covering stored materials with a tarp to reduce windborne dust, and proper maintenance of equipment. No significant adverse impacts to air quality are anticipated due to construction activities.

Potential for erosion and sedimentation will be controlled to the maximum extent practicable by implementation of all proposed measures on the Erosion and Sedimentation Control Plan developed for the project. This is discussed in Section III.C Stormwater Management, of this DEIS.

Truck traffic to the site will temporarily increase during the construction phase(s) as well, although noise increases due to truck traffic are not anticipated to be significant.

Among positive impacts, implementation of the Proposed Project would result in the additional short term employment for construction and other related workers over the course of the projected buildout program. In addition, construction activities would require the purchasing of goods and services from the local market.

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VI. COMMITMENT OF RESOURCES; EFFECTS ON ENERGY

Construction of the proposed plan for the East Parcel as shown on the Riverfront Development Concept Plan would result in the consumption of gasoline, oil and electricity used in the operation and maintenance of construction equipment.

Once completed the new facilities would need energy for heating, cooling and lighting. Project Site generated vehicular traffic would result in the consumption of fossil fuels. This consumption is anticipated to be typical of similar recreational and municipal uses developments in Westchester County.

Section III.H of this DEIS outlines the energy use from the construction of the Proposed Project. At this stage of the project planning, energy efficiency and GHG reductions can be addressed primarily through design targets. Energy efficiency strategies that result in a minimum of 5% energy cost reduction compared to the New York State Energy Construction Conservation Code will be the target. These could include an improved building envelope, efficient lighting, efficient central heating and cooling equipment, efficient parking lot lighting, and Energy Star appliances.

Once completed the new facilities would need energy for heating, cooling and lighting. Site generated vehicular traffic would result in the consumption of fossil fuels. This consumption is anticipated to be typical of similar developments in Westchester County.

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VII. Growth Inducing Impacts

The Proposed Action calls for the relocation of the Village's existing DPW facility out of its current 1.3± acre site located on River Street. In addition, the Village owns two separate lots adjacent to the existing DPW facility: an approximately 0.4± acre portion of South Parcel[1] what is known as the South Parcel; and, a ±.23 acre parcel located on Hudson Street that is currently used for municipal parking, refer to Exhibit VII-1, Village Properties – River Street Vicinity. Collectively, these three parcels equal approximately 1.93 acres of land that could be repurposed for development consistent with the Village's Riverfront Development District and the Southern Riverfront Development Overlay District.

It is noted that there is currently no proposal by the Village to dispose of the properties or develop them, however, it is not unreasonable to contemplate that, given the location, there would be interest from the development community for redevelopment purposes. It is noted that prior to the redevelopment of the Village Properties an environmental review would need to be conducted for that specific proposal. Given that there is no specific proposal the analysis presented herein is generic in nature. Further, any application for redevelopment would be required to follow the special permit and riverfront development concept plan process and requirements.

The following is a conceptual analysis of development potential for the entirety of the 1.93± acres of Village controlled land. This analysis does not take into account specific design considerations related to access, topography, geology and potential underlying environmental conditions. It is noted that the analysis presented in Table VII-1, Projected Development Program – No Special Permit Request, below utilizes the general development guidelines as outlined in Section 450-33 of the Village Code. For analysis purposes it is assumed that of the potential 31 residential units, all would be two bedroom.

Table VII-1
Projected Development Program – No Special Permit Request

Parcel Size (s.f.)	Min. gross development area per unit	Est. Density (dwelling units)	Max. FAR (0.8) (s.f.)	Development efficiency (80%)	Approx. unit size (s.f.)
84,070	2,200	38	67,256	53,805	1,415

Compiled by Planning & Development Advisors

Selected anticipated impacts associated with a Conceptual Development Program with no special permit request to increase density is presented in Table VII-2, Conceptual Development Analysis No Special Permit Request, below. As part of the preliminary analysis relative to fiscal impacts, recently listed sales for the Rivers Edge condominium development were used for comparison purposes[2]. There were three units listed which totaled approximately 4,500 square feet with a

[1] The South Parcel is part of the development program associated with the Edge on Hudson development.
[2] http://www.zillow.com/homes/for_sale/pmf,pf_pt/condo,townhouse_type/featured_sort/41.083354,-73.860987,41.073714,-73.879441_rect/15_zm/

projected market value of $3,150,000 which equates to an estimated $700 per square foot. Applying this figure to the projected development program yields an approximate total market value of between $37.63 million to $70.61 million. Based on information from the Assessor's page of the Village of Sleepy Hollow Web-site, the Village assesses all real property on a percentage of market value, using an equalization rate. The current equalization rate is 26.80% of market value[3]. Once the assessed value is determined, the tax rate is applied arrive at estimated Village taxes. The current Village tax rate is $33.9581 per $1,000 of assessed value. Based on the estimated market value, noted above the redevelopment scenarios would have an estimated assessed value of $10,087,252 to $18,925,838. Applying the current tax rate to the estimated assessed values for the redevelopment scenarios noted above yields approximate tax revenue to the Village of $342,500 to $642,685 annually.

Table VII-2
Conceptual Development Analysis
No Special Permit Request

Program[1]	Population[2]	Public School Children[3]	Water Use gpd	Sewage [3] gpd	Traffic (peak hour vehicle trips)[4] AM/PM/Sat.	Fiscal[5]
38 2-BR	71	2	10,032	8,360	13/18/13	$342,500

Source: 1. Assumes for sale units; 2. Rutgers University, 2006; 3. NYSDEC; 4. ITE 5. Assessed value per square foot Assessor's Office

It is noted that a prospective developer could request additional density in the way of additional building height, floor area ratio (FAR) and/or reduction of the minimum gross development area per dwelling unit. Table VII-3, Projected Development Program – Special Permit Requested, provides a preliminary calculation as to how density could be increased using special permit requests to the Village Board.

Table VII-3
Projected Development Program – Special Permit Requested

Parcel Size (s.f.)	Min. gross development area per unit[1]	Est. Density (dwelling units)	Max. FAR (1.5) (s.f.)[1]	Development efficiency (80%)	Approx. unit size (s.f.)
84,070	1,000	84	126,105	100,884	1,201

Compiled by Planning & Development Advisors
1. Special Permit requests

[3] http://www.sleepyhollowny.gov/assessor

Selected anticipated impacts associated with a Projected Development Program that includes special permit requests to increase density is presented in Table VII-4, Conceptual Development Analysis Special Permit Requested for Additional Density, below.

Table VII-4
Conceptual Development Analysis
Special Permit Requested for Additional Density

Program[1]	Population[2]	School Children[3]	Water Use gpd	Sewage[3] gpd	Traffic (peak hour vehicle trips)[4] AM/PM/Sat.	Fiscal[4]
84 2-BR	157	4	22,176	18,480	30/39/30	$642,685

Source: 1. Assumes for sale units; 2. Rutgers University, 2006; 3. NYSDEC; 4. ITE 5. Assessed value per square foot Assessor's Office

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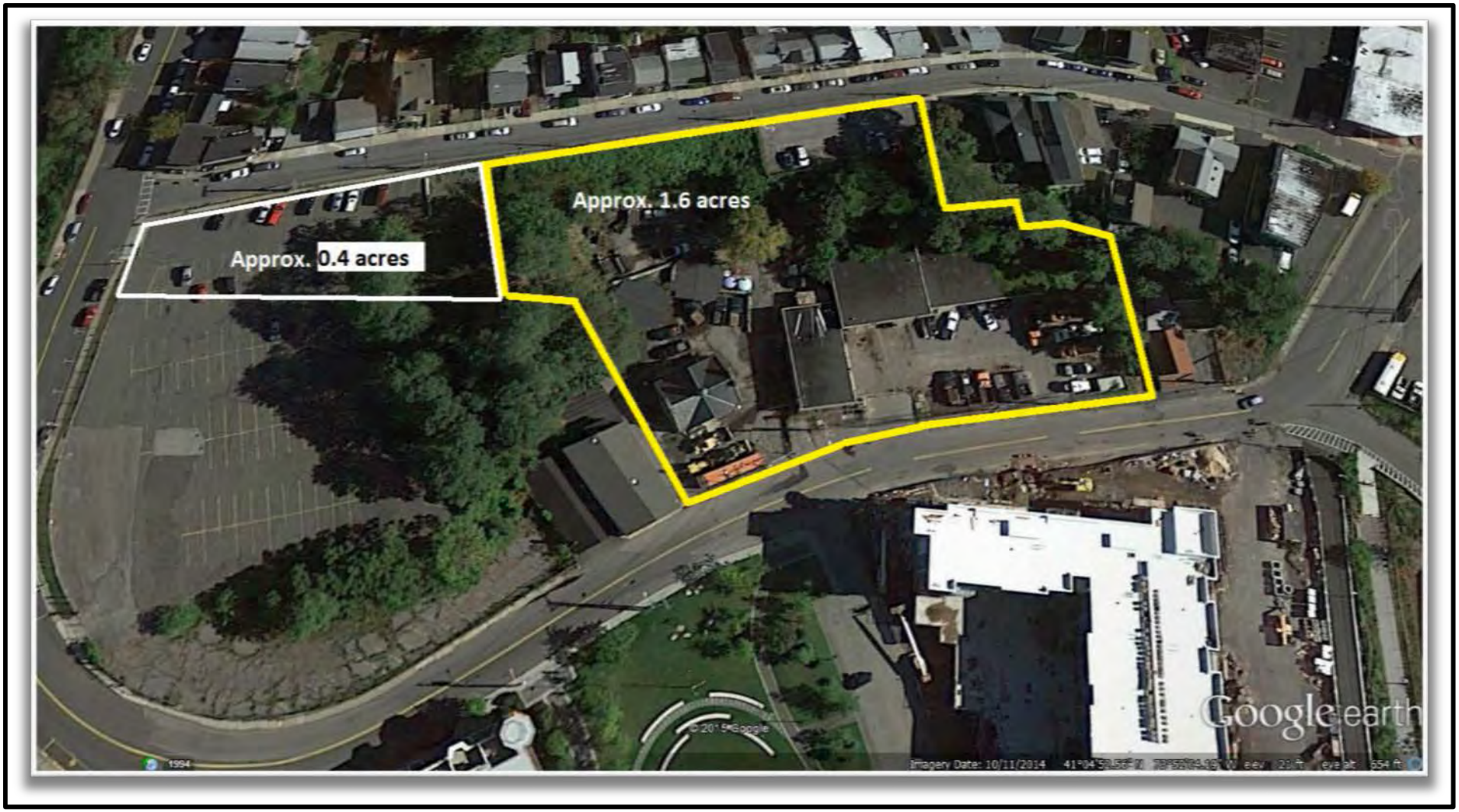

Exhibit VII.-1 Village Properties – River Street Vicinity

East Parcel Redevelopment DEIS

Sleepy Hollow Local Development Corporation

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