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KAATERSKILL ASSOCIATES

Environmental Assessment Form and Supplemental Information

for

Astorbuck Parking Lot

50 S. Buckhout Street

VILLAGE OF IRVINGTON, WESTCHESTER COUNTY, N.Y.

PROJECT 208914.01 FEBRUARY 25, 2015

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Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Astorbuck Parking Lot		
Project Location (describe, and attach a general location map): 2 S. Astor Street and 50 S. Buckhout Street Irvington, Westchester County, New York, Tax ID Numbers 2.80-33-6, 2.80-33-8 and 2.80-33-9.		
Brief Description of Proposed Action (include purpose or need): Project includes construction of a parking lot that involves 43 parking spaces south of 50 S. Buckhout Street, construction a concrete sidewalk approximately 710 feet long and 5 feet wide from the proposed parking lot extending in front of the Trent Building, and change property zoning as appropriate.		
Name of Applicant/Sponsor: Astorbuck Properties LLC	Telephone: 914-582-6856 E-Mail: flockenator@gmail.com	
Address: 50 S. Buckhout Street, Suite 100		
City/PO: Irvington	State: New York	Zip Code: 10533
Project Contact (if not same as sponsor; give name and title/role): Same.	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Same.	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Village of Irvington Site Plan Approval	TBD
c. City Council, Town or Village Zoning Board of Appeals ☑Yes ☐No	Town of Irvington Zoning Map Amendment	TBD
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Westchester County Planning Board 239 Review	TBD
f. Regional agencies ☐Yes ☑No		
g. State agencies ☐Yes ☑No		
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☑Yes ☐No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☑Yes ☐No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

Hudson River Estuary Plan

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Location of proposed parking lot is zoned as 1F-5, one family residence district. The small parcel owned by the Village and the parcel owned by Stanford Bridge LLC (the Trent Building) are zoned as Business District.

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☑ Yes ☐ No
If Yes,
i. What is the proposed new zoning for the site? Business District.

C.4. Existing community services.

a. In what school district is the project site located? Irvington Union Free School District.

b. What police or other public protection forces serve the project site?
Irvington Police Department

c. Which fire protection and emergency medical services serve the project site?
Irvington Volunteer Fire Department, Irvington Volunteer Ambulance Corps.

d. What parks serve the project site?
N/A

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial.

b. a. Total acreage of the site of the proposed action? 2.44+/- acres
b. Total acreage to be physically disturbed? 0.42+/- acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 13.1+/- acres

c. Is the proposed action an expansion of an existing project or use? ☑ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % 22+/- Units: Acres

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 4-6 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☑ No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑ Yes ☐ No

If Yes,

i. Purpose of the impoundment: Stormwater Control

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Stormwater

iii. If other than water, identify the type of impounded/contained liquids and their source.
N/A

iv. Approximate size of the proposed impoundment. Volume: TBD million gallons; surface area: TBD acres

v. Dimensions of the proposed dam or impounding structure: TBD height; TBD length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
TBD

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐ Yes ☑ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No
If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☐ No

If Yes, describe: _____

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☐ No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐ Yes ☑ No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☐ No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing lines serve the project site? ☐ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☐ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐ No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐ Yes ☑ No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☐ No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will line extension within an existing district be necessary to serve the project? ☐Yes ☐No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

_____

_____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

_____

_____

- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

_____

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7am-5pm
- Saturday: N/A
- Sunday: N/A
- Holidays: N/A

ii. During Operations:

- Monday - Friday: All
- Saturday: All
- Sunday: All
- Holidays: All

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

During construction noise is expected from 7am to 5pm Monday through Friday.

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n.. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

_____

_____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

_____

_____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

_____

_____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

_____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

_____

_____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☑ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)

☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	1.95	2.25	0.3+/-
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0.49	0.19	0.3+/-
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

John Cardinal O'Connor School, Dows Lane Elementary School, Main Street Middle School, Leisure Time Club (Senior Center)

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☑ Yes – Environmental Site Remediation database Provide DEC ID number(s): 546031

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑ Yes ☐ No

If yes, provide DEC ID number(s): 546031, B00004

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

546031, Hudson River PCB Sediments currently impacts on floodplain sediments unknown.

B00004, Irvington Waterfront Park, Petroleum Spill: a ballpark was built over contamination site therefore minimizing impact.

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

Urban Land	84.6 %
Urban Land Ridgebury Complex	15.4 %
	%

d. What is the average depth to the water table on the project site? Average: 1.5 feet

e. Drainage status of project site soils:

☐	Well Drained:	% of site
☐	Moderately Well Drained:	% of site
☑	Poorly Drained	100 % of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	31 % of site
☑	10-15%:	18 % of site
☑	15% or greater:	51 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name Barney Brook Tributary Classification A
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100 year Floodplain? ☑ Yes ☐ No

k. Is the project site in the 500 year Floodplain? ☑ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:
N/A, by observation.

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): _____
ii. Source(s) of description or evaluation: _____
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

See Attachment K.

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No
If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No
If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No
i. If Yes: acreage(s) on project site? _____
ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☑ Yes ☐ No
If Yes:
i. CEA name: Hudson River
ii. Basis for designation: Exceptional or unique character
iii. Designating agency and date: Date:1-31-90, Agency:Westchester County

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: Lord and Burnham Building, Irvington Historic District

iii. Brief description of attributes on which listing is based:

The Lord and Burnham Building was built by noted greenhouse and conservatories maker, the Historic District contains many significant buildings.

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: VE Macy Park, Taxter Ridge, Juhring Nature Preserve, Scenic Hudson Park, Memorial Park, Old Croton Trailway State Park, Matthiessen Park.

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Local Park, State Park, Trailway

iii. Distance between project and resource: 3.5, 2.8, 2.4, .7, 0.5, 0.5, 0.3 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name _____ Date_____

Signature_____ Title_____

PRINT FORM

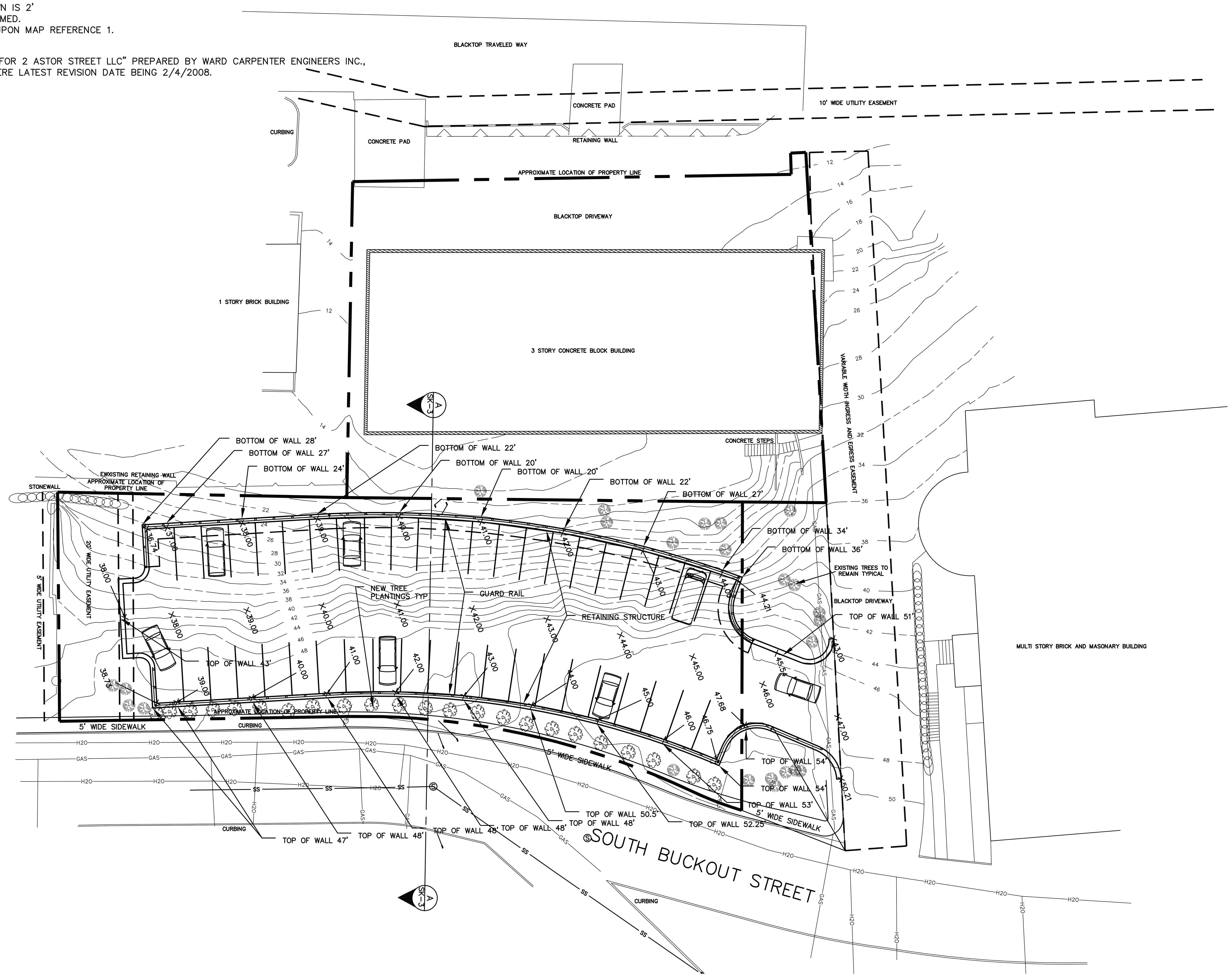
Attachment A

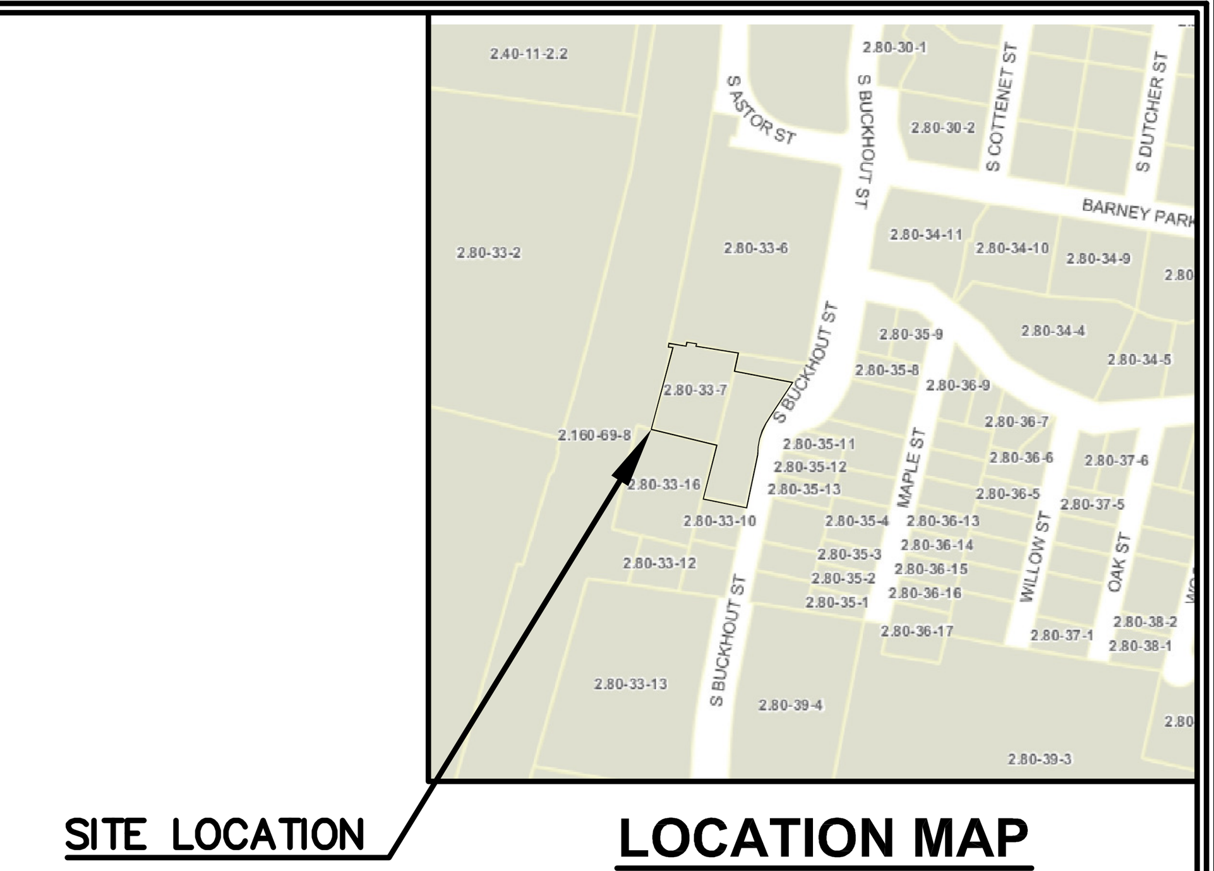
Sketch Plan Revision Dated
February 25, 2015

NOTES:
1) THIS IS NOT A BOUNDARY SURVEY PROPERTY LINES SHOWN FOR ILLUSTRATION PURPOSES ONLY AND ARE BASE UPON MAP REFERENCE 1.
2) SUBJECT TO THE RIGHTS OF THE PUBLIC IN AND TO SOUTH BUCKOUT STREET.
3) SUBJECT TO EASEMENTS AND RIGHTS OF WAYS AFFECTING SUBJECT PARCEL, IF ANY.
4) SUBJECT TO ANY STATEMENT OF FACTS THAT MAY BE CONTAINED IN AN UP TO DATE ABSTRACT OF TITLE OR TITLE REPORT.
5) LOCATION OF UNDERGROUND UTILITIES BASE UPON MAP REFERENCE 1.
6) CONCEPTUAL DESIGN BASED UPON MAPPING PREPARED BY OTHERS AND NO EXISTING CONDITIONS HAVE BEEN VERIFIED IN FIELD.

TOPO NOTES:
1) CONTOUR INTERVAL SHOWN IS 2'
2) MAPPING DATUM IS ASSUMED.
3) TOPOGRAPHY IS BASED UPON MAP REFERENCE 1.

MAP REFERENCE:
1) "SURVEY OF PROPERTY FOR 2 ASTOR STREET LLC" PREPARED BY WARD CARPENTER ENGINEERS INC., DATED 11/2/2007, WITH THERE LATEST REVISION DATE BEING 2/4/2008.





LOCATION MAP

MAGNETIC

LEGEND

◉	*DENOTES IRON ROD SET (IRS)*
○	*" " PROPERTY ANGLE*
○	*" " IRON PIPE (IPF) OR IRON ROD (IRF) FOUND*
▫	*" " CONCRETE MONUMENT (MON)*
	" " TREES AND SHRUBS
OHW	*" " UTILITY POLE AND OVERHEAD UTILITY*
GV GAS	*" " UNDERGROUND GAS LINES*
SS	*" " UNDERGROUND SANITARY SEWER LINES*
WV H2O	*" " UNDERGROUND WATER LINES*
X	*" " WIRE FENCE*
	" " STONE WALL

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS DRAWING ARE VALID ONLY IF THEY BEAR THE SEAL OF THE PREPARER.

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THESE PLANS, SPECIFICATIONS OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL (ARCHITECT, ENGINEER, LANDSCAPE ARCHITECT, SURVEYOR).

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

KAATERSKILL ASSOCIATES

SURVEYORS-ARCHITECTS-ENGINEERS-LANDSCAPE ARCHITECTS-CONSTRUCTION MANAGERS

CAIRO, NY TEL (518)622-9667 WWW.KEAENG.COM

REV	DATE	DESCRIPTION	APP.
2	2/25/15	TITLE BLOCK	WAS
1	12/8/14	ADDED SIDEWALK	WAS

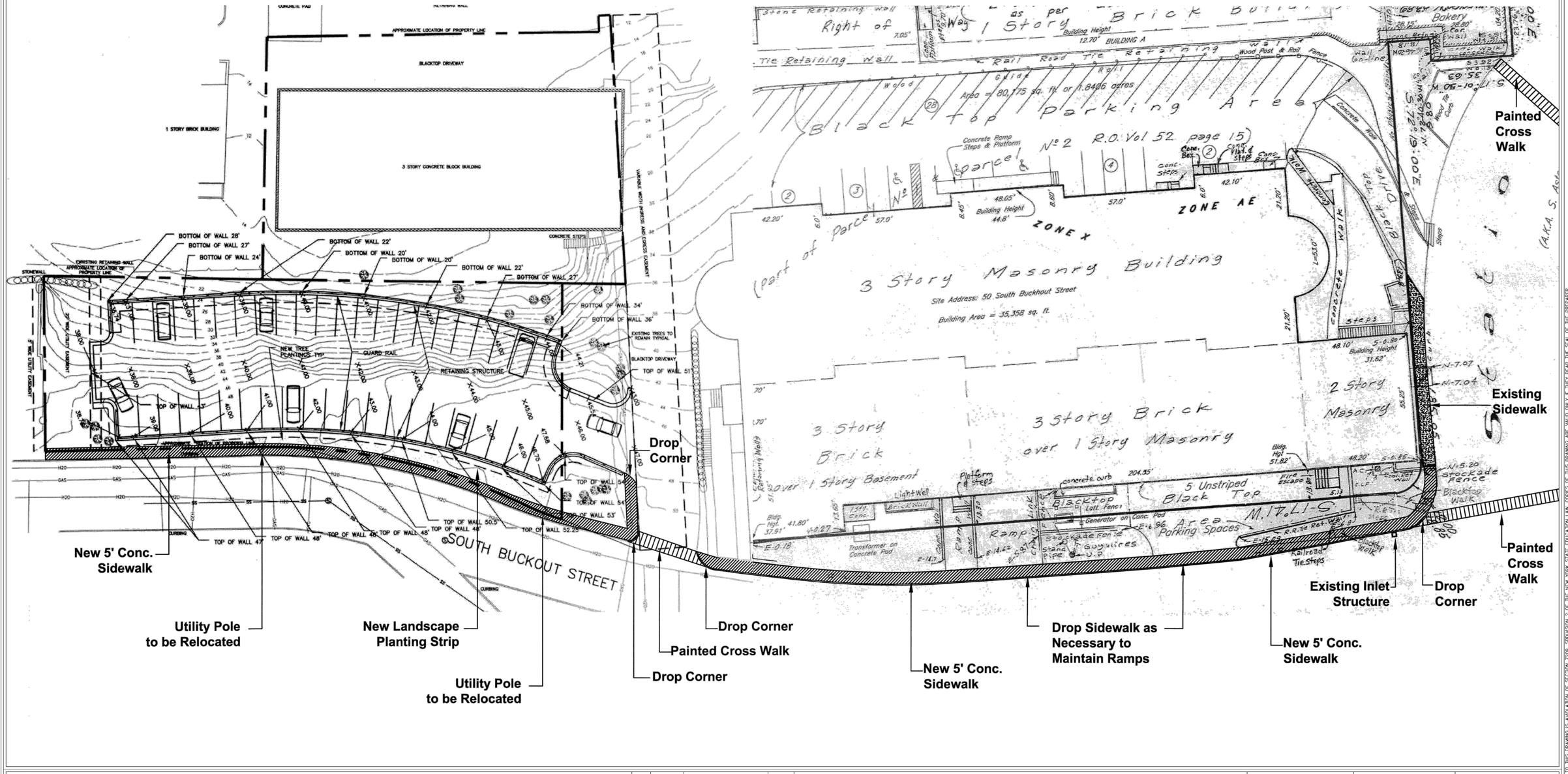
REVISIONS

PROPOSED SITE PLAN
FOR
ASTORBUCK PROPERTIES LLC
SOUTH BUCKOUT STREET
VILLAGE OF IRVINGTON
TOWN OF GREENBURGH
WESTCHESTER COUNTY, NY

SKETCH PLAN

PROJECT:	208914
DATE:	3/14/2014
SCALE:	1"=20'
TAX MAP #:	2.80-33-9
DRAWN BY:	MLS
CHECKED BY:	JWV
FILE:	208914BASE.DWG

DRAWING:
SK-1
SHEET 1 OF 4



KAATERSKILL ASSOCIATES

SURVEYORS-ARCHITECTS-ENGINEERS-LANDSCAPE ARCHITECTS-CONSTRUCTION MANAGERS

CAIRO, NY (518) 622-9667 WWW.KEAENG.COM

REV	DATE	DESCRIPTION	APP.
2	02/25/15	TITLE BLOCK	WAS
1	12/08/14	ADDED SIDEWALK	WAS

REVISIONS

PROPOSED SIDEWALK
FOR
ASTORBUCK PROPERTIES LLC

VILLAGE OF IRVINGTON
TOWN OF GREENBURGH

SOUTH BUCKOUT STREET

WESTCHESTER COUNTY, NY

SCHEMATIC SIDEWALK PLAN

PROJECT:	208914
DATE:	3/14/2014
SCALE:	AS NOTED
TAX MAP #:	2.80-33-9
DRAWN BY:	EFK
CHECKED BY:	EFK
FILE:	Irvington.dwg

STATE OF NEW YORK — WILLIAM A. GRIMSON — 076575 — LICENSED PROFESSIONAL ENGINEER

DRAWING: **SK-2**

SHEET 2 OF 4

A / SK-3 TRANSVERSE SECTION
3/16"=1'-0"

KAATERSKILL ASSOCIATES

SURVEYORS-ARCHITECTS-ENGINEERS-LANDSCAPE ARCHITECTS-CONSTRUCTION MANAGERS

CAIRO, NY (518) 622-9667 WWW.KEAENG.COM

REV	DATE	DESCRIPTION	APP.
2	02/25/15	TITLE BLOCK	WAS
1	12/08/14	ADDED SIDEWALK	WAS

REVISIONS

PROPOSED PARKING LOT
FOR
ASTORBUCK PROPERTIES LLC

VILLAGE OF IRVINGTON
TOWN OF GREENBURGH

SOUTH BUCKOUT STREET

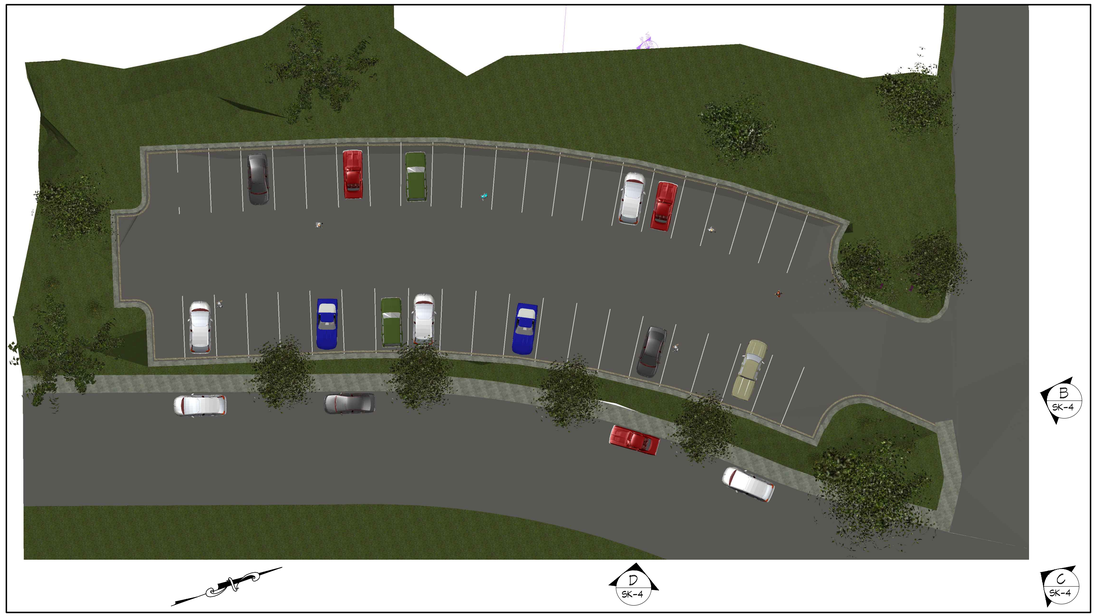
WESTCHESTER COUNTY, NY

TRANSVERSE SECTION

PROJECT:	208914
DATE:	3/14/2014
SCALE:	AS NOTED
DRAWN BY:	KMM
DESIGNED BY:	WAS
CHECKED BY:	WAS
FILE:	208914_Profile-SK-3.dwg

STATE OF NEW YORK
WILLIAM A. GERDNER
076515
LICENSED PROFESSIONAL ENGINEER

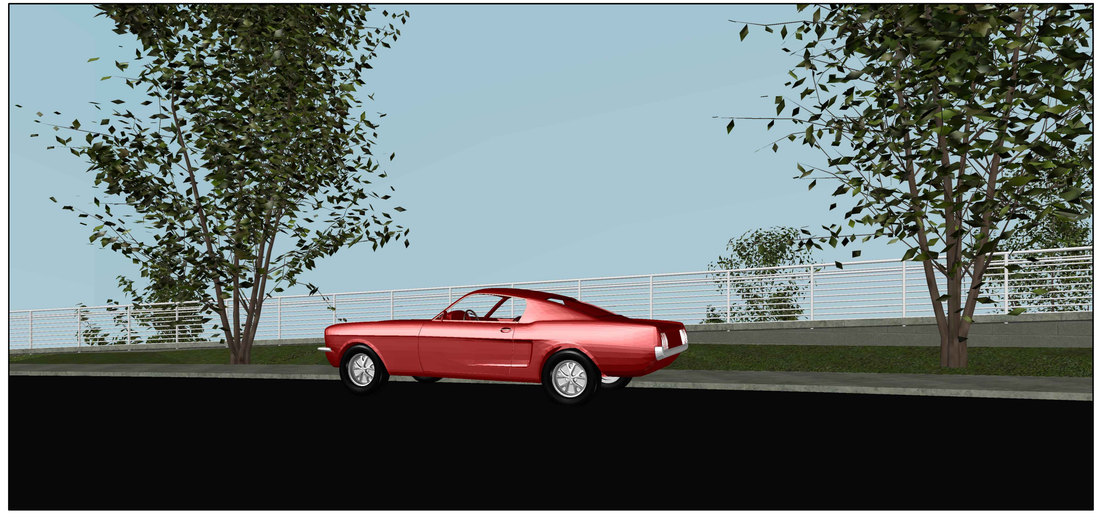
DRAWING:
SK-3
SHEET 3 OF 4



A SK-4 SITE PLAN RENDERING
1"=20'-0"

B SK-4 SOUTHWEST PERSPECTIVE
N.T.S.

C SK-4 SOUTHWEST PERSPECTIVE
N.T.S.



D SK-4 NORTHWEST PERSPECTIVE
N.T.S.

KAATERSKILL ASSOCIATES
SURVEYORS-ARCHITECTS-ENGINEERS-LANDSCAPE ARCHITECTS-CONSTRUCTION MANAGERS
CAIRO, NY (518) 622-9667 WWW.KEAENG.COM

REV	DATE	DESCRIPTION	APP.
2	02/25/15	TITLEBLOCK	WAS
1	12/8/14	ADDED SIDEWALK	WAS

REVISIONS

PROPOSED PARKING LOT
FOR
ASTORBUCK PROPERTIES LLC

VILLAGE OF IRVINGTON
TOWN OF GREENBURGH
SOUTH BUCKOUT STREET
WESTCHESTER COUNTY, NY

PROPOSED RENDERINGS

PROJECT:	208914
DATE:	3/14/2014
SCALE:	AS NOTED
DRAWN BY:	KMM
DESIGNED BY:	WAS
CHECKED BY:	WAS
FILE:	208914 X RENDER.dwg

STATE OF NEW YORK
WILLIAM A. SCHEIDEN
079578
LICENSED PROFESSIONAL ENGINEER

DRAWING:
SK-4
SHEET 4 OF 4

Attachment B

Narrative

ATTACHMENT B

SUPPLEMENTARY NARRATIVE
FOR
FULL ENVIRONMENTAL ASSESSMENT FORM
FOR
ASTORBUCK PARKING LOT.

A. Project and Sponsor Information

The Astorbuck Parking Lot project proposes to construct a parking lot on a vacant lot south 50 S. Buckhout Street, Irvington, Westchester County, New York, Tax ID# 2.80-33-6. The existing condition of the property is a vacant lot. Applicant proposes to create a parking lot with 43 parking spaces to serve the Trent building.

In addition to creating a parking lot, the applicant will also construct a concrete sidewalk from the edge of the parking lot extending to Astor Street along the Trent Building. This sidewalk will be approximately 710 feet long and 5 feet wide.

The proposed location of the property is currently in zone 1F-5, one family residence district according to the Irvington Zoning Map. In order to complete this project, the applicant requests the above mentioned property change zone status to business district. See below for further explanation.

B. Planning and Zoning

The location of the proposed parking lot is currently zoned as 1F-5, Single Family Residence. Under this zoning status the project is not a permitted use. The applicant requests the parcel in question be zoned in the business district. Currently, the business district includes many parcels on Main Street and Astor Street and several parcels adjacent to the proposed lot.

According to Irvington Zoning Law's, Article IX, Business District B- 224-35. Use Regulations A. 6, Properties in the business district can be used for public parking lots. See Attachment D, Zoning Law excerpt.

According to the Irvington Comprehensive Plan, the business district reflects a mix of uses and should be encouraged as it contributes to the strength and vitality of Irvington's center. See Attachment D, Comprehensive Plan excerpt. Allowing parking will benefit the building currently owned by the applicant but will also serve the community. A yoga studio and restaurant are nearby, creating parking for these businesses encourages multi-use which, in the words of the comprehensive plan "contributes to the strength and vitality of Irvington's center."

The parking lot is expected to aid the community by providing adequate parking for existing businesses and decreasing street parking in near residential homes. The parking lot is not expected to increase traffic as it will be serving existing businesses.

C. Proposed Action Site and Acreage

1. Total acreage of the proposed site has been determined by adding the property owned by Hudson Grey, LLC, which is the site of the proposed parking lot, with the property owned by

Hudson Grey, LLC located at 50 S. Buckhout (the Trent building), and a small lot owned by the Town of Irvington which sits in between these two properties. The proposed action includes all three sites because the proposed parking lot is expected to be built on the Hudson Grey property with a sidewalk extending around the front of the Trent building and across the lot owned by the Town of Irvington. The parcel owned by the Town of Irvington will also provide road access.

2. Acreage to be physically disturbed has been determined by measuring the areas of projected work. This includes the land proposed to have a parking lot and sidewalk.

3. Acreage of contiguous lands owned by the applicant has been determined by adding the acreage of all properties in which the partners of Stanford Grey, LLC are also partners or owners. The following properties have been included:
   - Bridge Street Commercial, Lot 2.40-11-2.1
   - Bridge Street Commercial, Lot 2.40-11-2.2
   - Rancid LLC, Lot 2.80-33-16
   - Hudson Grey LLC, Lot 2.80-33-7
   - Hudson Grey LLC, Lot 2.80-33-9
   - Stanford Bridge LLC Lot 2.80-33-6
   - Bridge Street Park LLC Lot 2.40-10-1

4. The proposed action does not appear to be construction according to the question D.1. g. on page 4 of the Long Environmental Assessment Form. The question refers to height of structures and building space. Because proposed action is a parking lot and will not consist of constructing a building, it is not considered construction under this interpretation.

D. Contamination History

According to the New York State Department of Conservation Database, there have been two incidents of contamination within 2000 feet of the project site.

1. Hudson River PCB Sediments, DEC# 546031
   PCB's were discharged from two GE capacitor plants in Hudson Falls and Fort Edward. This resulted in contamination of the Hudson River, some if its tributaries, floodplains surrounding the river and the sediment within them. This project is located within the floodplain of a tributary to the Hudson River and therefore is within the contamination site. According to the NYS DEC website, the nature and extent of floodplain impacts are unknown. Current restrictions apply to catching and consuming fish from contaminated areas. See Attachment J, Site Remediation.
2. Irvington Waterfront Park, DEC# B00004
   Project site is within 2000 feet of Waterfront Park which is a former industrial site. The site is a manmade extension of the shoreline composed of fill containing petroleum and metals. Contaminated soils were consolidated and a ballpark was constructed on the fill area. This remediation has minimized potential for exposure. See Attachment J, Site Remediation.

E. Soil Type

Average depth to bedrock on the project site is less than five (5) feet, depth to water table is one and a half (1.5) feet. This is based on the Westchester County soil survey. Upon site observation it is believed that the water table is greater than one and a half (1.5) feet.

F. Surface Water Features

Project site is adjacent to the Barney Brook Tributary. According to NYS DEC's classifications of the lower Hudson River drainage basin, this stream is considered class A. The proposed project is within the floodplains of Barney Brook Tributary. However it should be noted that the portion of the project site within the floodplain is the rear corner of the existing Trent building. The proposed parking lot is not within the floodplain. See attachment E, FIRM Floodplain Map for reference.

G. Rare and Endangered Species

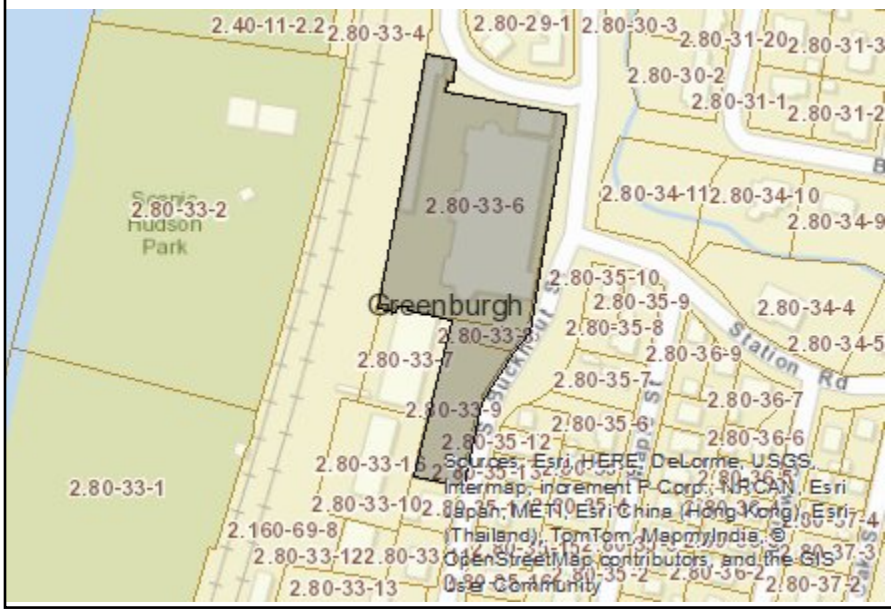
Project site is located within the Hudson River Estuary. This area is significant to many plants and animals, including migratory fish, insects, birds and reptiles. Although many species are listed as potential habitants of this area, it is against DEC policy to issue exact location of the habitat for any rare and endangered species. See Attachment K, Rare and Endangered Species. This policy makes it impossible to know what rare or endangered species reside or make use of the project site.

Attachment C

EAF Mapper Summary Report

EAF Mapper Summary Report

Wednesday, February 25, 2015 1:03 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	546031, B00004
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No

E.2.o. [Endangered or Threatened Species]	Yes
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	Hudson River
E.3.d.ii [Critical Environmental Area - Reason]	Exceptional or unique character
E.3.d.iii [Critical Environmental Area – Date and Agency]	Date:1-31-90, Agency:Westchester County
E.3.e. [National Register of Historic Places]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National Register of Historic Places - Name]	Lord and Burnham Building, Irvington Historic District
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Attachment D

Zoning and Comprehensive Plan Excerpts

conditions as it may deem necessary in approving a PURD in sections so that there is an orderly development of the entire tract in accordance with this article.

§ 224-32. Access to and maintenance of open lands.

A. All residents in a PURD shall have access at all times to all land in the development on which no structures are erected, subject to such reasonable restrictions as the owner or owners of the open land shall impose, except for any private lots in single ownership with individual dwelling units and except that the roads or other open lands in the development may, with the approval of the Planning Board and the Board of Trustees, be dedicated to the Village or other public authority.

B. If any of the dwelling units in a PURD are to be in individual ownership, appropriate provisions shall be made, acceptable to the Village Attorney and the Planning Board, for the ownership and maintenance of the common open space, assuring that the land will continue open as contemplated in this article and suitably maintained.

§ 224-33. (Reserved)

Article VIII. Miscellaneous Regulations Applicable to All Residence and PURD Districts

[Added 2-27-1989 by L.L. No. 3-1989]

§ 224-34. Height of buildings.

[Amended 2-24-2003 by L.L. No. 2-2003]
Except as provided in § **224-8D** hereof and otherwise in this section, no part of any building shall be erected to a height greater than 2 1/2 stories (inclusive of cellar, basement, attic and the like) at any point along the periphery of such building, nor shall such height exceed 35 feet.

§ 224-35. Outdoor lighting.

[Amended 2-18-1992 by L.L. No. 4-1992; 4-1-2013 by L.L. No. 7-2013]

A. Outdoor lighting. Lights used to illuminate the grounds or the exterior of any residence or recreational facility accessory thereto, including, without limitation, swimming pools, tennis courts and paddleball courts, shall be so arranged and shaded as to reflect light away from adjoining premises and to minimize glare. Lights used to illuminate recreational facilities accessory to residences shall not be operated between the hours of 11:00 p.m. and 7:00 a.m.

Article IX. Business District B

§ 224-36. Use regulations.

A. No building or premises shall be used and no building or part of a building shall be erected which is arranged, intended or designed to be used, in whole or in part, for any purpose except the following:

(1) Retail stores, including vending machines, and banks.

(2) Personal service stores, such as but not limited to barbershops, beauty parlors and tailors, provided that, where steam pressure is used in clothespressing, it shall not exceed the equivalent of five rated horsepower.

(3) Hotels with not less than 15 guest rooms and clubs without any limitations as to public or gainful use.

(4) Funeral parlors.

(5) Service establishments furnishing services other than of a personal nature, including but not limited to business or professional offices. Establishments the primary function of which is to furnish a service for other than the residents of the Village of Irvington and the area generally immediately adjacent thereto are prohibited.

(6) Public parking lots, gasoline filling stations and motor vehicle storage, including incidental repair and service, subject to the following requirements:

(a) No driveway to or from any public garage or automobile service station shall be within 200 feet of any school, church, playground, hospital, public library or institution for dependents or children.

(b) No gasoline or oil pump or service appliance, unless within a building, shall be within 15 feet of any street line. All gasoline and similar substances stored in bulk and not to be used on the premises shall be stored underground and not less than 25 feet away from any property line other than a street line.

(c) There shall be no opening in the walls or roof of any public garage, excepting chimney or flue openings and emergency fire doors, within 15 feet of any lot line, unless equipped with wire glass and metal sash and frames.

(d) At least one constantly open ventilating flue or outlet of a cross section of not less than two square feet shall be provided for each floor of a public garage at or near the center thereof.

(e) No major repair work shall be performed in the open, and all automobile parts, dismantled vehicles, used autos for sale or similar articles shall be stored within a building. Gasoline or oil sales, changing of tires and other similar automobile servicing shall not be considered to be major repair work. The requirements of this Subsection **A (6)(e)** shall apply to all existing establishments beginning 24 months following the effective date of this chapter, as well as to those to be erected following such effective date.

(f) No service station and no gasoline or oil pump or automotive service appliance, unless within a building, shall be permitted within 600 feet, measured along or across any street or streets, of an existing service station, outdoor gasoline or oil pump, automotive service appliance or a similar establishment proposed to be erected under a building permit already issued.

(7) Theaters and restaurants, excluding amusement parks or galleries, whether open or enclosed or circuses.

(8) Outlets and pickup stations for laundries and cleaning establishments, excluding washing of wearing apparel or cleaning of wearing apparel or household effects other than where noncombustible solvent is used and where combustible solvent is used only for the incidental removal of spots.

(9) Newspaper printing, including incidental job printing.

(10) Public utility installations needed to serve the Village or the neighborhood, subject to a determination by the Board of Appeals that no other reasonable location in a less restricted district can be used for the purpose contemplated and subject, further, to such conditions as said Board may deem to be appropriate for the protection of adjoining uses and of the character of the district.

(11) Signs, but only in accordance with Article **XXIX** of this chapter.
[Amended 8-16-1999 by L.L. No. 1-1999; 4-1-2013 by L.L. No. 7-2013]

(12) Manufacturing, converting, altering, finishing or assembling of products is prohibited, except where goods so produced or processed are to be sold at retail exclusively on the premises, where an area of not more than 20% of the area devoted to retail sales and fully concealed from any street is so used; where, except in connection with newspaper printing and clothespressing, electrical power not exceeding a total of five rated horsepower is used exclusively, unless the Board of Appeals finds the use of an installation of not over five horsepower other than electric will have no adverse effect on neighboring uses; and where, except as specified below, not more than two employees are engaged in such production or processing. In newspaper and job printing, 10 employees and mechanical power not in excess of 10 rated horsepower may be used.

(13) Accessory buildings and accessory uses customarily incidental to a permitted use.

(14) Dwelling units, provided that the following additional requirements are met:
[Added 7-16-1984; amended 2-27-1989 by L.L. No. 3-1989]

(a) Density. The number of dwelling units may not exceed one per 2,500 square feet of lot area.

(b) Location. Such dwelling units may be located only on the second and any permissible higher story over retail, personal service and service establishments, as listed in Subsection **A(1)**, **(2)** and **(5)** above, located at curb level.

(c) Coverage. For existing buildings, the sum of all areas covered by all principal and accessory buildings, except driveways and parking areas, shall not exceed 70% of the area of the lot, and the sum of all areas covered by all principal and accessory buildings, including parking areas and driveways, shall not exceed 80% of the area of the lot. For new construction or teardowns, total coverage shall not exceed 80% of the area of the lot.
[Amended 10-7-2003 by L.L. No. 22-2003; 4-7-2014 by L.L. No. 9-2014]

(15) Adult entertainment, provided that the following additional requirements are met:
[Added 3-17-1997 by L.L. No. 2-1997]

(a) Purposes and considerations.

[1] In the execution of this subsection it is recognized that there are some uses which, due to their very nature, have serious objectionable characteristics. The objectionable characteristics of these uses are further heightened by their concentration in any one area, thereby having deleterious effects on adjacent areas. Special regulation of these uses is necessary to ensure that these adverse effects will not contribute to the blighting or downgrading of the surrounding neighborhoods or land uses.

[2]

The residential categories are as follows:

- *Low Density*. This category corresponds to Irvington's 1F-40 zoning district, permitting single-family homes on minimum one-acre lots. This district encompasses Irvington's outlying areas, with the exception of the very northern portion of the Village, and contains many of Irvington's parks and conservation areas. **Certain areas** in the southwest portion of the Village and in Matthiessen Park **will be** rezoned to 1F-80 **and 1F-60 as specified in Chapter 3: Land Use.** This category will encompass the new district as well.

- *Low-Medium Density*. This category encompasses the 1F-20 zoning district which permits single-family homes on lots with a minimum area of 20,000 square feet. Together, the low and low-medium density categories comprise the majority of Irvington's land uses.

- *Medium Density*. This category incorporates two zoning districts – 1F-10 and 1F-5, permitting single-family residential uses on minimum 10,000 and 5,000 square foot lots.

- *Medium-High Density*. This category corresponds to Irvington's 2F, Two-Family, district permitting two- and single-family homes. The two-family districts adjoin Irvington's business district and complement the high-density, mixed-use quality of this center.

- *High Density*. This category contains the MF, Multi-Family, district. It corresponds to five existing multi-family developments: three sites along Broadway, the Half Moon Bay development along South Buckhout Street, and the Hudson House property just north of Mercy College.

Business Land Use
This category corresponds to Irvington's B, Business, zoning district located along Main Street from its juncture with South Astor Street to Broadway and along portions of North Buckhout and North Astor Streets. This area is Irvington's village core, as reflected in the mix of municipal uses, retail and service establishments, over-the-store apartments and free-standing homes located there. This mix of uses should be encouraged as it contributes to the strength and vitality of Irvington's center.

Mixed Land Use
This category relates to Irvington's two industrially-zoned (I) districts. Once the center of Irvington's industrial activity, these areas now contain a diversity of uses, including commercial, municipal, parking and to a lesser extent, residential **as permitted by special permit(s)** (in the Burnham Building). **This Plan contemplates the elimination of all industrial uses in the village.**

Education/Religious/Public Facilities
Irvington's institutional uses, including schools, places of worship and private foundations, are located primarily in its residential districts. It is expected that the present uses and present intensity of uses, shown in dark blue on the Future Land Use Map, will continue.

Parks and Recreation
This category refers to Village-, County-, and State-owned lands in the Village **as well as designated private properties, such as that portion of Ardsley Country Club that is within the Village,** that are dedicated **for** park and recreation **uses**. The newest addition to Irvington's parks and recreation network is the 12-acre Scenic Hudson Park, dedicated in 2001, located along the waterfront south of the Main Street area.

Attachment E

FIRM Floodplain Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from digital orthophotography provided by the New York State Office of Cyber Security & Critical Infrastructure Coordination. This information was produced as 20-centimeter resolution natural color orthoimagery from photography dated April 2004.

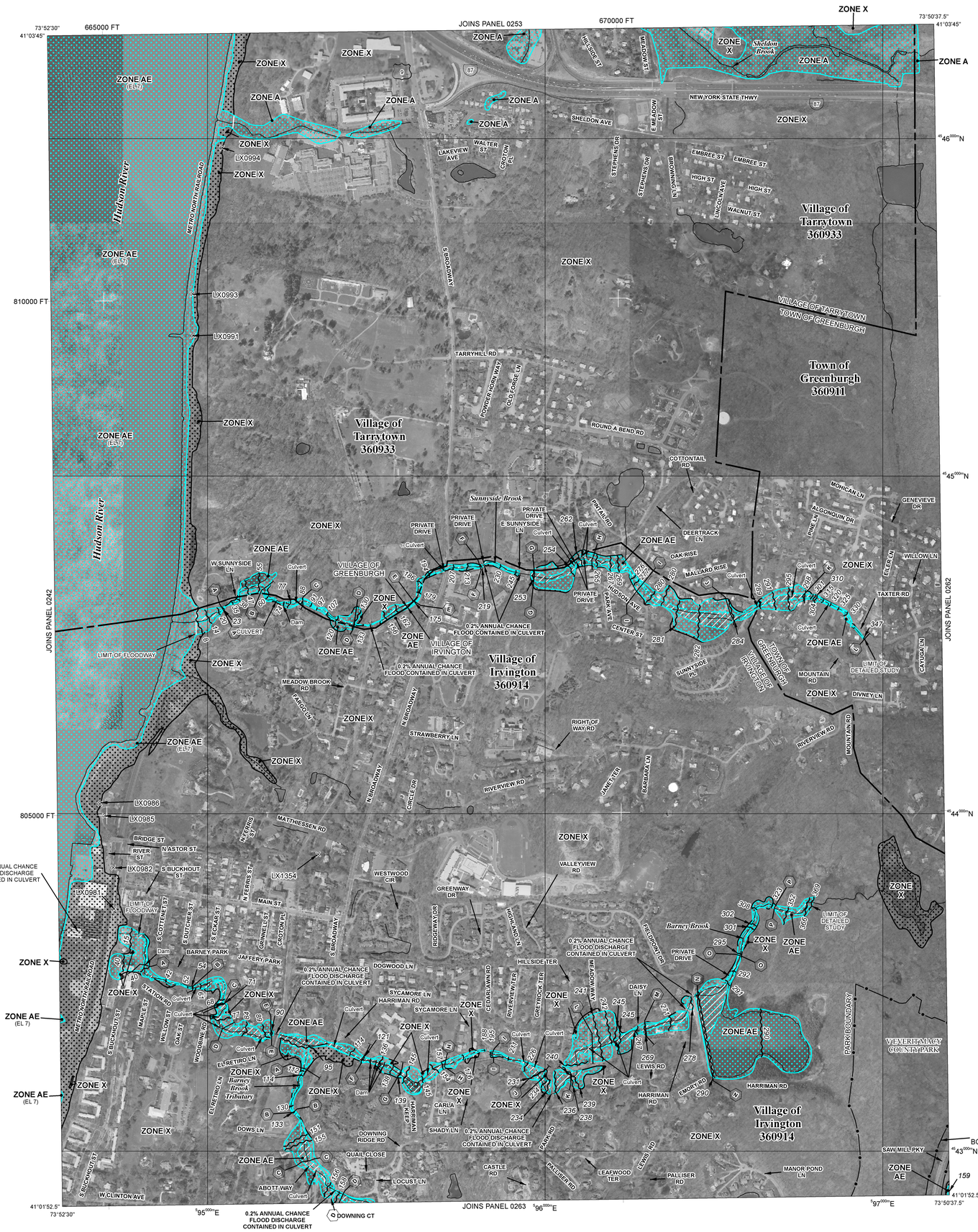
Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 3 — 3 — Limited detail cross section line
- 23 — 23 — Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4576000mN — 1000-meter Universal Transverse Mercator grid values, zone 18N
- 600000 FT — 5000-foot grid ticks: New York State Plane coordinate system, East zone (FIPSZONE 3101), Transverse Mercator projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- ● M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0261F

FIRM

FLOOD INSURANCE RATE MAP

for WESTCHESTER COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

COMMUNITY	NUMBER
GREENBURGH, TOWN OF	360911
IRVINGTON, VILLAGE OF	360914
TARRYTOWN, VILLAGE OF	360933

PANEL 261 OF 426
MAP SUFFIX: F
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36119C0261F

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

Attachment F

Map of Historical Buildings and Archeo-Sensitive Areas

Survey Archaeology Areas (View)

Archaeologically Sensitive Areas

Attachment F: Map of Historical Areas

USN Building Points (View)

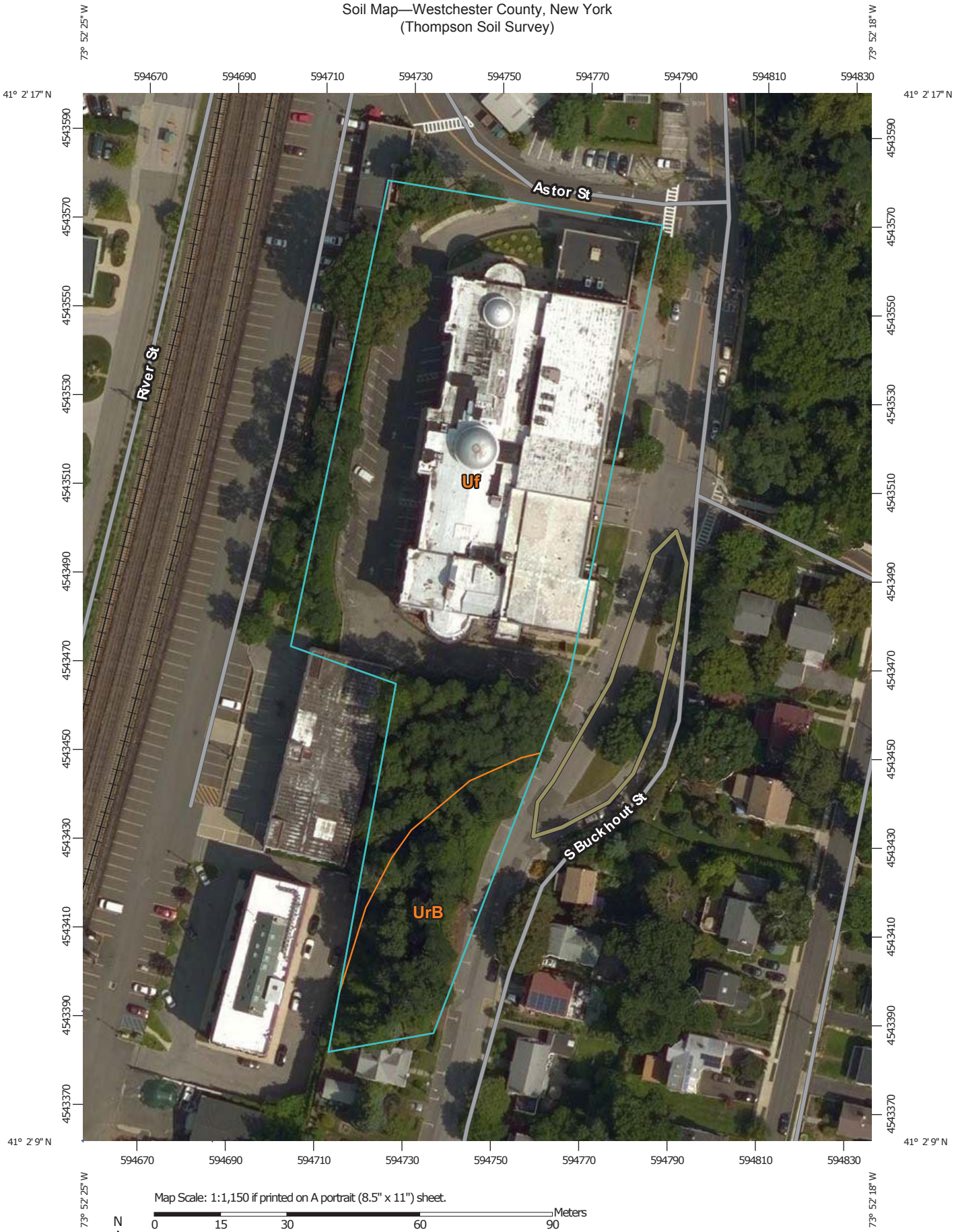
- Eligible
- Listed
- Not Eligible
- Undetermined

LPC Landmarks

Attachment G

Soil Survey and Data

Soil Map—Westchester County, New York
(Thompson Soil Survey)



Map Scale: 1:1,150 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 10, Sep 17, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 21, 2014—Aug 27, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Westchester County, New York (NY119)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
Uf	Urban land	2.0	84.6%
UrB	Urban land-Ridgebury complex, 1 to 8 percent slopes	0.4	15.4%
Totals for Area of Interest		**2.3**	**100.0%**

much as 3 acres in size and make up about 20 percent of the map unit.

The properties and characteristics of the Udorthents are so variable that onsite investigation and evaluation are required to determine the suitability and limitations for proposed uses.

A capability subclass is not assigned.

UdB—Unadilla silt loam, 2 to 6 percent slopes. This soil is gently sloping, very deep, and well drained. It is on stream terraces along valleys. Individual areas are mostly long and narrow and range from about 2 to 10 acres in size.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, very dark grayish brown silt loam

Subsurface layer:
2 to 7 inches, dark brown silt loam
7 to 13 inches, brown very fine sandy loam

Subsoil:
13 to 28 inches, dark yellowish brown very fine sandy loam
28 to 32 inches, light olive brown very fine sandy loam

Substratum:
32 to 60 inches, yellowish brown very fine sandy loam that has light olive brown mottles

Included with this soil in mapping are areas of the moderately well drained Pompton soils, areas of Riverhead and Knickerbocker soils, and areas of soils that are similar to the Unadilla soil but are moderately well drained. Pompton soils are in the more level areas. Riverhead and Knickerbocker soils are more gravelly or more sandy than the Unadilla soil. They commonly are in the higher positions on the landscape. Included areas make up about 15 percent of the map unit and are 0.25 acre to 2.0 acres in size.

Soil properties—

Water table: At a depth of more than 6 feet throughout the year
Permeability: Moderate (0.6-2.0 in/hr) in the surface layer, subsurface layer, and subsoil and moderately rapid or rapid (2.0-20 in/hr) in the substratum
Available water capacity: High
Reaction: Very strongly acid to moderately acid in the surface layer, subsurface layer, and subsoil and strongly acid to mildly alkaline in the substratum
Surface runoff: Medium
Depth to bedrock: More than 60 inches
Erosion hazard: Moderate

Areas of this soil are used for community development, farming, or recreation, or they are forested or covered by brush and nonwoody plants.

No major limitations affect the use of this soil as a site for dwellings with basements or for septic tank absorption fields. Erosion is a hazard during construction. Temporary erosion-control structures should be used during construction.

Local roads and streets are subject to a high potential for frost action. Replacing the upper layers of this soil with more suitable base material can reduce the damage caused by frost heave.

This soil is well suited to crops, hay, and pasture. It can be easily tilled and can be farmed intensively if well managed. Erosion is the main hazard. Contour farming and a system of conservation tillage can help to control erosion. Using cover crops and returning crop residue to the soil can help to maintain soil tilth and increase the rate of water infiltration. Proper stocking rates, rotation grazing, and restricted grazing during very wet periods help to prevent surface compaction and deterioration of the sod cover and help to control erosion.

The potential productivity of this soil for sugar maple is moderate.

The capability subclass is IIe.

Uf—Urban land. This unit consists of areas where at least 60 percent of the land surface is covered with buildings or other structures. The areas include parking lots, shopping centers, industrial parks, and institutional sites. Much of the Urban land is in the business centers of villages and cities. Most areas are long and narrow or are rectangular. The long and narrow areas are mainly along highways. Individual areas of this unit range from 5 to 600 acres in size. Slopes range from 0 to 8 percent.

Included in mapping are small areas of soils that have not been appreciably altered, such as Riverhead, Chatfield, Sutton, and Unadilla soils. The undisturbed soils are in areas between buildings or other structures. Also included are areas of Udorthents in disturbed areas that are not covered by buildings or other structures. Included areas make up 5 to 20 percent of the map unit.

Reclamation is required if Urban land is converted from its present use. The areas of included soils that are not covered by structures are suitable for uses that are compatible with Urban land.

A capability subclass is not assigned.

UhB—Urban land-Charlton complex, 2 to 8 percent slopes. This unit consists of areas of Urban land and the very deep, well drained, and gently sloping Charlton

foundation, and land shaping to divert surface water away from the buildings.

The main limitations on sites for septic tank absorption fields are the slope and the slow or very slow permeability in the substratum. More suitable sites should be selected, or a specially designed system can be installed.

The main limitation on sites for local roads and streets is the slope. Constructing the roads on the contour and land shaping and grading help to overcome this limitation.

A capability subclass is not assigned.

UrB—Urban land-Ridgebury complex, 1 to 8 percent slopes. This unit consists of areas of Urban land and the gently sloping, very deep, poorly drained and somewhat poorly drained Ridgebury soil. It is on the lower parts of hillsides in the uplands and along small drainageways. Individual areas are irregularly shaped or blocky and generally range from 5 to 75 acres in size. They are about 60 percent Urban land, 25 percent Ridgebury soil, and 15 percent other soils.

Typically, the Urban land consists of areas covered by buildings, streets, parking lots, and other structures that make it difficult to identify the soils. The natural soil layers have been altered or mixed with manufactured materials, such as bricks, broken concrete, or cinders.

The typical sequence, depth, and composition of the layers of the Ridgebury soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loam

Subsoil:
8 to 16 inches, brown gravelly fine sandy loam that has light brownish gray and dark yellowish brown mottles
16 to 26 inches, grayish brown gravelly fine sandy loam that has yellowish brown and light olive brown mottles

Substratum:
26 to 34 inches, light olive brown gravelly fine sandy loam that has grayish brown and olive yellow mottles
34 to 60 inches, olive brown gravelly loam that has brownish yellow mottles

Included in mapping are small areas of the poorly drained and very poorly drained Sun soils, areas of the moderately well drained Woodbridge soils, and bouldery areas. Sun soils are in depressions. Woodbridge soils are in the higher areas. Also included are areas of Udorthents adjacent to buildings and other structures. Included areas make up about 15 percent of the map unit and are generally 1 to 3 acres in size.

Properties of the Ridgebury soil—

Water table: Within a depth of 1.5 feet from November through May
Permeability: Moderate or moderately rapid (0.6-6.0 in/hr) in the surface layer and subsoil and slow or very slow (<0.02 in/hr) in the substratum
Available water capacity: Moderate
Reaction: Very strongly acid to slightly acid throughout the profile
Surface runoff: Medium or rapid
Erosion hazard: Severe during construction
Depth to bedrock: More than 60 inches

Most areas of this unit are used for residential or urban development. Trees or brushy plants are in many vacant areas between buildings. Some areas are used for gardens.

The main limitation on sites for dwellings with basements is the wetness. Installing drains around the footings and foundations can lower the water table. Diverting runoff away from the dwellings removes surface water.

The main limitations on sites for septic tank absorption fields are the seasonal wetness and the slow permeability in the dense substratum. Better suited sites should be selected, or an alternative system may be installed. Installing a drainage system around the absorption fields and constructing diversions to intercept water from the higher areas help to overcome the wetness. Enlarging the absorption fields or the trenches below the distribution lines increases the rate at which the effluent is absorbed.

The main limitations on sites for local roads and streets are the wetness and a high potential for frost action. Building on raised fill material, installing a drainage system, and adding coarse grained subgrade or base material to the soil at frost depth help to overcome these limitations.

A capability subclass is not assigned.

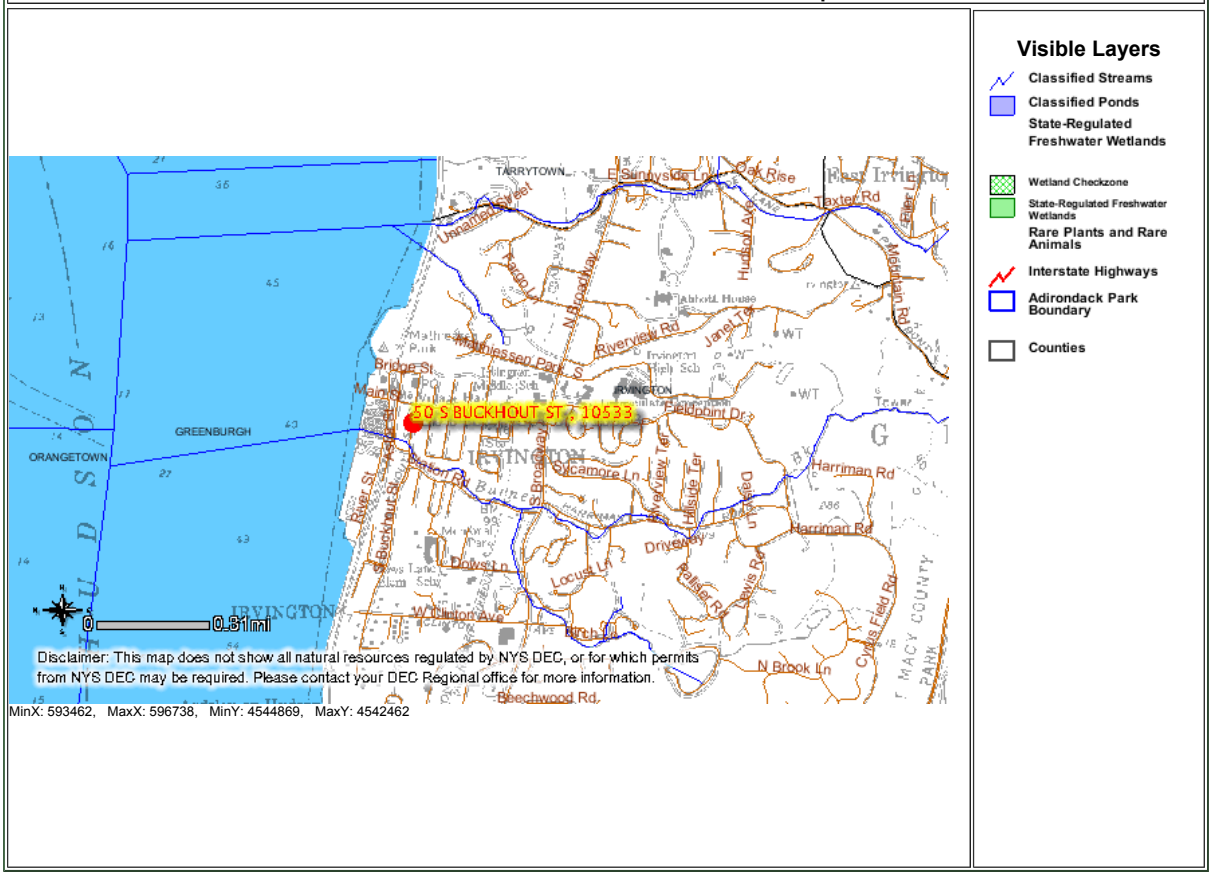
UvB—Urban land-Riverhead complex, 2 to 8 percent slopes. This unit consists of areas of Urban land and the gently sloping, very deep, well drained Riverhead soil. It is in benchlike areas along streams and on broad plains. Individual areas are rectangular or irregularly shaped and range from 2 to 150 acres in size. They are about 50 percent Urban land, 25 percent Riverhead soil, and 25 percent other soils.

Typically, the Urban land consists of areas covered by buildings, streets, parking lots, and other structures that make it difficult to identify the soils. The natural soil layers have been altered or mixed with manufactured materials, such as bricks, broken concrete, or cinders.

Attachment H

Environmental Resource Map

Attachment H: Environmental Resource Map



Disclaimer:This map was prepared by the New York State Department of Environmental Conservation using the most
current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies
in the data and does not necessarily endorse any interpretations or products derived from the data.

Attachment I

Scenic Byway Map

Byways Home
Lists of NYS Byways
Map
Byways Program
Organizers
Contact Us

Map of NYS Byways

The Legend possesses link that will take you to more information about the individual Byways and Parkways.

Attachment J

Site Remediation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Hudson River PCB Sediments
Site Code: 546031
Program: State Superfund Program
Classification: 02
EPA ID Number:

Location

DEC Region: 5
Address: Hudson River, Hudson Falls-NYC Battery
City: Zip: 12180
County:SARATOGA
Latitude: 43.286475666
Longitude: -73.595363441
Site Type:
Estimated Size: 0 Acres

Site Owner(s) and Operator(s)

Current Owner Name: New York State
Current Owner(s) Address:
,ZZ,
Current Owner Name: STATE OF NEW YORK
Current Owner(s) Address:
,ZZ,
Owner(s) during disposal: STATE OF NEW YORK
Current On-Site Operator: NYS Department of Transportation
Stated Operator(s) Address: State Campus - Building 5
Albany,NY 12233

Hazardous Waste Disposal Period

From: 1946 **To:** present

Site Description

Site Location: This site includes the nearly 200-mile stretch of the Hudson River that extends from Hudson Falls in Washington County to the Battery in New York City. The river is part of the Champlain Canal between Fort Edward and Waterford. Site Features: The site includes the main stem of the Hudson River, as well as the associated flood plains, river banks, riverene fringing wetlands, and backwater areas. Current zoning / uses: The river is currently used for recreation, transportation, and as a source of water for drinking and other purposes. The river floodplain areas include all types of land uses, from passive / recreational to residential to commenrcial / industrial. Historical uses: The General Electric Company (GE) discharged PCBs into the river from two capacitor manufacturing plants located in Hudson Falls and Fort Edward starting sometime in 1946. Previous investigations identified 40 areas or 'hot spots' in the upper Hudson that had sediments contaminated with greater than 50 ppm of PCBs. Also included in the definition of this site are five Remnant Deposits or river sediment areas that were exposed when the level of the river was lowered when the Fort Edward Dam was removed in 1973. EPA issued a Record of Decision (ROD) for this National Priorities List site on September 25, 1984 which included: in-place containment of the Remnant Deposits; evaluation of downstream domestic water quality at Waterford, New York; and interim No Action as to the PCB-contaminated river sediment. The 1984 ROD indicated that both the No Action decision for the river sediments and the containment remedy for the Remnant Deposits might be reexamined by EPA in the future. The containment remedy for the Remnant Deposits was performed by GE under a 1990 Consent Decree with EPA. In addition, in 1990, NYSDEC completed the evaluation of downstream domestic water quality at Waterford, New York, which concluded that PCB concentrations were below analytical detection limits after treatment and met standards applicable to public water supplies. In December 1989, EPA announced its decision to initiate a detailed Reassessment Remedial Investigation/Feasibility Study (RI/FS) of the September 1984 decision concerning the PCB contaminated Hudson River sediments. The Reassessment culminated with EPAs issuance of a second ROD for the site in February 2002 which included the dredging of an estimated 2.65 million cubic yards of PCB contaminated sediments from the Upper Hudson River (between Fort Edward and Troy), which was estimated in the ROD to contain about 66,300 kilograms of total PCBs (approximately 65% of the total PCB mass estimated to be present within the Upper Hudson River). The ROD also identified further evaluation of PCB contamination in the flood plains concurrent with the design phase of the project. EPA issued a series of Orders to GE for performance of the engineering design for the project. Project design has been completed for Phase 1 (the first year) of the dredging program, and is ongoing for the remainder of the

project. Phase 1 dredging commenced in May 2009, and was completed in October 2009. As a result of supplemental investigations during design, the estimates of sediment volume and PCB mass to be removed have been revised to a lower volume of sediment (~1.8 million cubic yards) and a higher PCB mass (~113,000 kilograms) to be removed as a result of the project. After completion of Phase 1, EPA reviewed the environmental monitoring and operational data to determine the changes to the project standards and to project design specifications for Phase 2. The changes to the project for Phase 2 were provided to GE in December 2010. GE, in accordance with the Consent Decree for the site, opted to implement Phase 2 of the remedy on 12/31/10. Phase 2 of the remedial project started in 2011, and is anticipated to take five to seven years.

Summary of Project Completion Dates

Projects associated with this site are listed in the Project Completion Dates table and are grouped by Operable Unit (OU). A site can be divided into a number of operable units depending on the complexity of the site and the number of issues associated with a site. Sites are often divided into operable units based on the media to be addressed (such as groundwater or contaminated soil), geographic area, or other factors.

Project Completion Dates

Contaminants of Concern (Including Materials Disposed)

Type of Waste	Quantity of Waste
CADMIUM	UNKNOWN
LEAD	UNKNOWN
PCB-AROCLOR 1016	UNKNOWN
PCB-AROCLOR 1242	UNKNOWN
PCB-AROCLOR 1254	UNKNOWN
POLYCHLORINATED BIPHENYLS (PCB)	UNKNOWN

Site Environmental Assessment

Nature and extent of contamination: Contaminants: The primary constituent of concern is PCBs, discharged from two GE capacitor plants in Hudson Falls and Fort Edward. The upstream extent of contamination is the portion of the river immediately above the Bakers Falls Dam at the GE Hudson Falls plant site. The downstream extent of contamination is the Atlantic Ocean. The commercial mixtures of PCBs discharged from the two GE plant sites changed over time; intially aroclor 1254, changing to aroclor 1242 and then to aroclor 1016. Contaminant Concentrations: PCBs have been found in excess of standards, criteria and

guidance concentrations (SCGs) in sediments, surface water, biota, air, and soils at the Hudson River PCBs site. The primary sources at the plant sites have been almost completely abated through remedial work at the plant sites; as a result, the primary source of PCB to the surface water and biota of the river are the contaminated sediments in the river south of the plant sites. PCB concentrations in sediment range from non-detect to greater than one percent PCB (> 10,000 parts per million). In surface water typically concenrtations range from 2 nanograms per liter (ng/l or parts per trillion) to 100 ng/l, except at times of high flow when scour-driven remobilization of contaminated sediments can cause much higher concentrations in excess of 1 microgram per liter (1 ug/l or part per billion). Investigations are underway to determine the extent of floodplain impacts. To date, PCB concentrations in excess of 500 milligrams per kilogram (mg/kg or part per million) have been found in limited areas. The nature and extent of floodplain soil contamination has not yet been established. Significant threat: PCB contamination in the Hudson River sediments pose a significant threat to human health and/or the environment. Concentrations in PCBs in biota directly attributable to the waste disposal at the site have led the Department of Health to recommend that human consumption of biota be limited over a substantial portion of the Hudson River between Hudson Falls and the Battery in New York City. In the upper Hudson, the fishery is catch and release only, and the NYSDOH advisory is to eat none. The dispoal of PCB into the Hudson River has also led to significant environmental damage as defined in 6 NYCRR Part 375. This site has been included in the Federal National Priorities List (NPL).

Site Health Assessment

Consumption of fish is the major potential route of human exposure to PCBs from this site. Because of site impacts, most fish from the Hudson River downstream of Hudson Falls have elevated PCB levels, particularly near the GE Fort Edward Plant site and the GE Hudson Falls site. Fishing is restricted to catch and release from Hudson Falls to Troy. In addition, there are advisories ("eat none" or "eat no more than 1 meal per month") on consumption of several fish species caught from the Hudson River below the Troy Dam to New York Harbor. There are two downstream public drinking water supply intakes within the Upper Hudson River located in Halfmoon and in Waterford. Plans to protect these public water supplies during dredging are under development. In addition, GE under USEPA oversight will take actions at several properties along the Hudson River in 2007 to address PCB contaminated floodplain soils. These actions vary from deploying signs to installing various covers and are intended to reduce exposures to PCBs in floodplain soils until a permanent remedy is developed. Additionally, plans for further floodplain soil investigations in the Upper Hudson River Floodplain are under development.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Irvington Waterfront Park
Site Code: B00004
Program: Environmental Restoration Program
Classification: C
EPA ID Number:

Location

DEC Region: 3
Address: 29 Bridge Street & 100 Bridge Street
City: Greenburgh Zip: 10530
County:WESTCHESTER
Latitude: 41.036297396
Longitude: -73.874870112
Site Type:
Estimated Size: 12.1 Acres

Site Owner(s) and Operator(s)

Site Description

This is a 12.1 acre Hudson River waterfront site formerly an industrial site. The site is a man-made extension of the shoreline composed of fill containing petroleum and metals. Some abandoned buildings containing asbestos have been demolished and soil waste was consolidated onsite under a geo-composite cover under the brownfields program. A ballpark was constructed on the fill area.

Summary of Project Completion Dates

Projects associated with this site are listed in the Project Completion Dates table and are grouped by Operable Unit (OU). A site can be divided into a number of operable units depending on the complexity of the site and the number of issues associated with a site. Sites are often divided into operable units based on the media to be addressed (such as groundwater or contaminated soil), geographic area, or other factors.

Project Completion Dates

Contaminants of Concern (Including Materials Disposed)

Type of Waste	Quantity of Waste
ARSENIC	UNKNOWN
BENZO(A)ANTHRACENE	UNKNOWN
BENZO(A)PYRENE	UNKNOWN
BENZO(B)FLUORANTHENE	UNKNOWN
BENZO[K]FLUORANTHENE	UNKNOWN
Chrysene	UNKNOWN
indeno(1,2,3-cd)pyrene	UNKNOWN
LEAD	UNKNOWN
MERCURY	UNKNOWN
PYRENE	UNKNOWN
SELENIUM	UNKNOWN

Site Environmental Assessment

The primary contaminants of concern at the site were metals and PAH's. The site has been remediated.

Site Health Assessment

Remedial work at this site has been completed and exposure issues no longer exist in part to institutional and engineering controls established at the site. The potential for exposure by direct contact with contaminated soil is minimal because there is a maintained soil cover on the site. Rehabilitation and improvement of the existing bulkhead has minimized the migration of residual contaminants into surface water and sediment.

For more Information: E-mail Us

Refine This Search

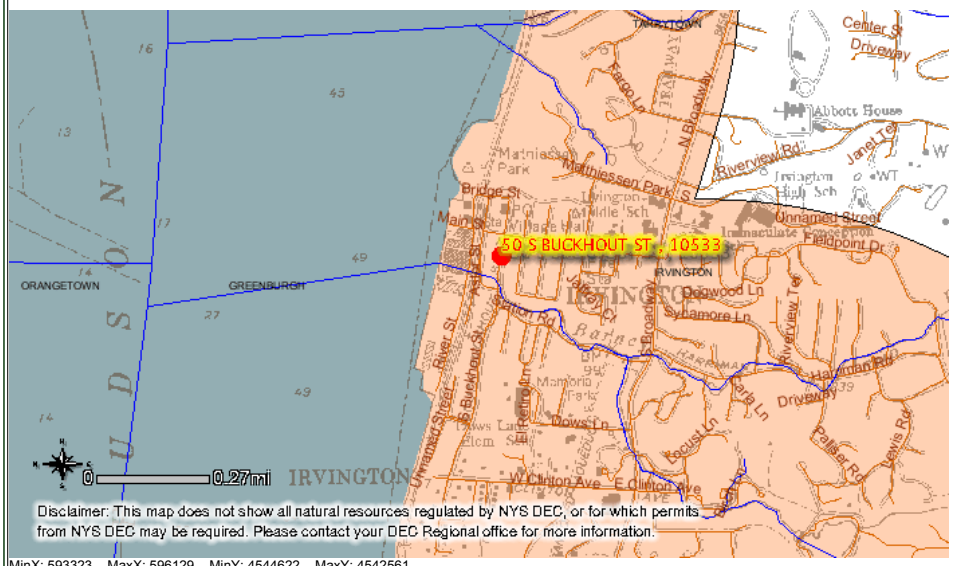
Attachment K

Rare Plants and Animals

[print page] [close window]

Please set your printer orientation to "Landscape".

Attachment K: Rare Plants and Animals Map



MinX: 593323, MaxX: 596129, MinY: 4544622, MaxY: 4542561

Visible Layers

- Classified Streams
- Classified Ponds
- Rare Plants and Rare Animals
- Interstate Highways
- Adirondack Park Boundary
- Counties

Disclaimer:This map was prepared by the New York State Department of Environmental Conservation using the most current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data.

Tell Me More About Rare and Endangered Animals and Plants

The locations shown in the layer **Rare Plants and Rare Animals** are not precise locations. Rather, they show those generalized areas where NY Natural Heritage has information in its databases regarding rare animals and/or rare plants. These generalized areas show the vicinity of actual, confirmed observations and collections of rare animals and rare plants. The precise locations, as well as the name of the animal or plant, are not displayed because some animals and plants can be harmed or disturbed by human activity.

Disclaimer : The locations displayed in this data layer are not the only places in New York with rare animals or rare plants; they are only the places we know about and have documented in the New York Natural Heritage Program's Biodiversity Databases. Not all of New York State has been surveyed, so if your area of interest shows no locations of rare animals or rare plants, we can't definitively say there are no rare plants or animals there; all we can say is that NY Natural Heritage has no information about that area.

The layer **Rare Plants and Rare Animals** includes generalized locations of species that are rare in New York State as a whole. These species include:

- all animals listed by NYS as Endangered or Threatened
- all plants listed by NYS as Endangered or Threatened
- some animals listed by NYS as Special Concern
- some plants listed by NYS as Rare
- some species not officially listed by NYS, but which nevertheless are rare in New York.

Animals and plants listed under New York State regulations as Endangered, Threatened, Special Concern, and Rare are protected under New York State law. Unlisted species, while not under the same level of regulatory protection as listed species, are ranked by NY Natural Heritage as rare in New York State , and therefore are a vulnerable natural resource of conservation concern.

Rare Animals: Displays areas of New York State for which NY Natural Heritage has recent information on animals that are rare in New York , including those listed as Endangered and Threatened by NYS. For most animals, recent means last observed and documented since 1970; for some animals, locations last confirmed between 1950 and 1970 are also included. This layer also includes some locations with significant concentrations of more common animals, such as colonial nesting areas; and a few locations of habitats that have the potential for supporting rare animals.

Rare Plants: Displays areas of New York State for which NY Natural Heritage has recent information on plants that are rare in New York , including those listed as Endangered and Threatened by NYS. For plants, recent means last observed and documented since 1980. This layer also includes a few locations of habitats that have the potential for supporting rare plants.

Old and Potential Records: In addition to the areas displayed in the Rare Plants and Rare Animals layer, this application also provides information on **Old and Potential Records**. When you click on a location with the Identify tool, the results include rare animals that were last observed or documented in the vicinity before 1970, and rare plants that were last observed and documented before 1980, and have not been seen there since. The records upon which these "historical" locations are based go back to the 1800's, and for many of them we do not know the precise locations where the rare animal or plant was observed; often we know only the general area, such as in which town a specimen was collected. **Old and Potential Records** also include a few recent records where the location of the plant or animal is very vague. For these historical and imprecise records, it is not known whether the rare plant or animal still exists at these locations, and/or it is not known precisely where the rare plant or animal was located when it was last observed. However, the rare plant or animal may still occur in the area if habitat and site conditions are favorable. Because of the age and geographic imprecision of these **Old and Potential Records**, the results of the Identify tool also provide the name of the plant or animal, the date it was last observed, its listing status in New York, and a brief description of the location and habitat. Also included in this Old and Potential Records layer are a few significant natural communities known only from historical records or whose precise locations are not known; concentration areas of anadromous fish, such as alewives and herring, in the tidal Hudson River; and concentration areas of wintering waterfowl in large lakes and rivers and in coastal areas of New York State.

In addition to the areas in the above layers, there are other types of areas important for biodiversity which are not included in this application, such as riparian corridors, large forest blocks, concentrations of more common plants and animals, and areas with local significance.

The sources of the records of rare plants and animals in NY Natural Heritage's Biodiversity Databases are data and maps from field surveys (by Heritage staff, NYS DEC staff, private conservation groups, scientific researchers, and others), museum specimens, project reports, contributions from interested parties, and other secondary sources. These records are compiled by NY Natural Heritage. The information is not necessarily the result of comprehensive or site-specific field investigations; in some cases locations have been derived from literature or museum searches or historic records.

More detailed information about some of the rare animals and plants in New York, including biology, identification, habitat, distribution, conservation, and management, are available in NY Natural Heritage's Conservation Guides (animals and plants), NYSDEC's Endangered Species fact sheets (animals), and in the USDA's Plants Database (plants).

For a list of animals that are rare in New York and are included in NY Natural Heritage's Biodiversity Databases, go to NY Natural Heritage's Rare Animal page and click on Rare Animal List.

For a list of plants that are rare in New York and are included in NY Natural Heritage's Biodiversity Databases, go to NY Natural Heritage's Rare Plants page and click on 2006 New York Rare Plant Status Lists.

For a list of the animals listed by the State of New York as Endangered, Threatened, or Special Concern under authority of Article 11 of Environmental Conservation Law, go to the Endangered Species unit page. To read New York State 's regulations regarding Endangered and Threatened species, and Species of Special Concern, go to http://www.dec.ny.gov/regs/3932.html.

For a list of plants listed by the State of New York as Endangered, Threatened, or Rare under authority of Article 9 of Environmental Conservation Law, and to read New York State 's regulations regarding protected native plants, go to http://www.dec.ny.gov/regs/15522.html.

To continue building a comprehensive, up-to-date database of information on the locations of rare species in New York State , we welcome your contributions. If you have information on a rare animal or a rare plant, please fill out and send to us a Natural Heritage Species Reporting Form (pdf - 14kb, 2 pages).

*If there is NOT a proposed action or project, and you have a question regarding the areas shown in the **Rare Plants and Rare Animals** and **Significant Natural Communities** data layers:*
Please contact the New York Natural Heritage Program
625 Broadway, Albany , NY 12233-4757
nathert@gw.dec.state.ny.us

Executive Summary

Purpose

The *Wildlife and Habitat Conservation Framework* describes key plant and animal habitats in the 15 New York State counties bordering the Hudson River Estuary from the Federal Dam at Troy to its confluence with the ocean, an area which contains most of the lower Hudson watershed. It also identifies strategies for the protection of these habitats. The report is intended to assist individuals, non-profit groups, and government officials in developing partnerships to conserve our region's natural heritage, emphasizing voluntary measures and utilizing local home rule. It was developed as part of the *Hudson River Estuary Action Agenda*, led by the New York State Department of Environmental Conservation (NYSDEC).

Plant and Animal Habitat in the Hudson River Estuary Region

The Hudson River begins as a small mountain lake on the side of the state's highest peak, Mt. Marcy, and ends in New York Harbor, one of the world's busiest and most populated metropolitan ports. About halfway along its course it becomes an estuary, an arm of the sea, that provides spawning and nursery grounds for commercially valuable fish, crabs, and shellfish. The River's uplands are covered with forests interspersed with working farms, residential development, and small cities. These lands support a high diversity of species of global and national significance. The Hudson Valley's varied geology creates a tapestry of habitats, such as pine barrens, grasslands, cliffs, mountain ranges, caves, streams, and wetlands, including globally rare freshwater tidal wetlands. This mix of habitats gives the region exceptional importance.

The region, comprising only 13.5% of the land area of the entire state, contains nearly 85% of the bird, mammal, reptile, and amphibian species found in New York State. It is important worldwide for its rich diversity of turtles, and nationwide for its dragonflies and damselflies. It offers opportunities found nowhere else in the state for conservation of amphibian and reptile biodiversity. A number of species use the Hudson Valley as a migration route or as breeding or nursery habitat. This includes migratory fishes such as shad, sturgeon, and striped bass, as well as insects such as the monarch butterfly. Birds as varied as the cerulean warbler, marsh wren, bald eagle, osprey, and ruby-throated hummingbird all spend part of their life cycle in the Valley and part of it in places as far away as Nova Scotia and South America.

The Hudson River Estuary ecosystem is home to a number of species that have their best or only remaining populations in the region. Such species include the northern cricket frog, sable clubtail dragonfly, Kentucky warbler, timber rattlesnake, the bog turtle, Karner blue butterfly, and Indiana bat. Approximately 150 species in the watershed are listed by the NYSDEC as threatened, endangered, or of special concern in New York State. Of the 11 turtle species found in the Hudson Valley, 6 are on state or federal lists of endangered, threatened, or special concern animals, primarily due to habitat loss.

While some species flourish in the Hudson River Valley, others are threatened and some species not now listed as endangered are on the decline. Urbanization and habitat fragmentation are a major concern. Species that require connections between habitat types to complete stages in their life cycles cannot survive if these connections are broken. For example, wood frogs, spotted salamanders, and marbled salamanders require wetlands for breeding and must have adjacent woodlands for their adult stage. Animals that rely on large unbroken tracts of forest, such as the bobcat, wood thrush, cerulean warbler, and red-shouldered hawk can become vulnerable when such forest lands are broken up. Agricultural lands also provide important habitat. Meadows and shrubby fields found on Hudson Valley farms can support species such as the bog turtle, northern harrier, bobolink, meadowlark, and golden-winged warbler. Many of these species are declining in the valley as agricultural land uses decrease.

Pollution and competition with invasive or overabundant species create problems for some species. At least 10 percent of the 3,600 miles of tributary stream habitat in the Hudson Valley are stressed from agricultural and urban runoff, erosion, dams, loss of riparian buffers, and reduced groundwater recharge. Invasive species crowd out native species that serve as food and shelter for many of the regions insects and small animals. Many of these "invasives" take hold where human practices give them an extra boost.

The region is one of the most densely populated areas in the country, and its land is changing fast. According to a report released in 2001 by the Brookings Institution, between 1992 and 1997, urbanized land use in the NYC metropolitan area grew at three times the rate of population growth, and in the Albany Capital District urban land use grew at six times the rate of population growth (Fulton et al. 2001). This rapid land conversion creates an urgent challenge to organizations and agencies faced with finding new ways to include conservation in the region's growth strategy. Protecting habitat does not require that growth stop however, human developments will need to be sensitively placed to maintain important habitats and fit the needs of wildlife species.

Public lands are making an important contribution to biodiversity conservation in the Hudson River Valley, particularly for species that require large forested tracts. A century of open space acquisition has created large intact habitats in the Highlands, the Palisades, the Taconics, and the Catskills. However, 90% or more of the suitable habitat for the region's birds, mammals, amphibians, and reptiles is found on private lands. Furthermore, 23 of these species are not thought to occur at all on public land. While land acquisition will play a role in protecting some of these species, it cannot be the primary strategy. These trends highlight the need for conservation options that can be adopted by interested parties.

Local Conservation Opportunities

Key steps in conserving the richness of the Hudson's heritage can be taken by local planning boards and property owners. Local home rule gives residents the ability to create and maintain the character of their communities and provides great latitude to

communities that want to conserve their natural and biological resources. In order to make informed decisions, communities will need to identify their unique conservation opportunities. Municipalities can then identify critical areas for habitat and natural resource protection and prioritize areas suitable for development. This strategy can increase residential property values, thus providing additional revenue for municipalities. In addition, this approach improves water and air quality and provides a community with space to experience the beauty of nature. By guiding development patterns now, towns can avoid the costs of urban and suburban sprawl and preserve the sensitive wildlife habitat that nurtures the Valley's unique heritage of native plants and animals.

Individual landowners can also take action to protect these important habitats in the Hudson River Valley. Biodiversity conservation can be folded into private land stewardship in order to stem the loss of species and their habitats. With the *Wildlife and Habitat Conservation Framework,* the NYSDEC Hudson River Estuary Program hopes to provide a road map for individuals and communities to make informed decisions about land use and conservation.

The Wildlife and Habitat Conservation Framework

The *Framework* is divided into three parts. Part I provides an overview of the biodiversity issues in the region, discusses the importance of biodiversity in our daily lives, and highlights the major threats to biodiversity. Part II defines significant Hudson Valley habitat types, describes some of the characteristic plants and animals they support, and identifies their unique conservation challenges. Part III proposes various strategies for protecting our resources by working with a variety of partners to meet the needs of both people and of wildlife. It emphasizes approaches that work within New York's long tradition of home rule and property rights.

The information contained in the *Framework* builds upon 10 years of work to catalog the species and habitats of the region that form the ecosystem of the Hudson River Estuary. Since the release of the first *Hudson River Estuary Action Agenda*, NYSDEC has completed a number of wildlife and habitat inventory projects. Many of these studies were conducted in collaboration with state, nonprofit, federal, and academic partners. Collectively, they provide a solid, science-based approach to conservation and a useful source of data for further research and implementation of conservation practices.

On-going inventory projects monitor and predict the distribution of terrestrial vertebrates, breeding birds, amphibians and reptiles, rare plant and animal populations, and exceptional habitat areas. The information collected is used to determine habitats of particular significance in the region. Analyses of the data compiled suggest that the following major habitat types and associated wildlife species are most significant in this region:

- Coastal Habitats

  Coastal habitats include sand beaches, mudflats, coves, salt marshes, tidal wetlands, and tidal creeks. These habitats support waterfowl, colonial wading birds, marine and estuarine fishes, and many species of turtles, molluscs, and raptors, including the nation's symbol of freedom, the bald eagle. Dredge spoil disposal, bulkheads, and construction fill for urban and industrial development have damaged or eliminated large areas of subtidal shallows habitat. In addition, impoundments, dams, and floodplain filling currently block the migration routes for many economically important species that require temporarily flooded riparian wetlands and abandoned channel meanders (oxbows) in order to complete their life cycles. Coastal habitats are also impacted by surrounding land uses, tributary water quality, and recreational activities. Key restoration and preservation strategies should be considered at individual sites to restore native plant communities, restore fish passage and spawning habitat, improve tidal flow, and enhance water quality along our coastlines.

- Wetlands

  The Hudson River Estuary region contains a rich diversity of wetland types, from freshwater tidal swamps and brackish tidal marshes to fens, bogs, and forested wetlands. These habitats are home to a variety of species including the federally-listed black duck, wood frog, the threatened Blanding's turtle, marbled and Jefferson salamanders, muskrat, and beaver. Unfortunately, more than 50% of the wetlands in the region have been lost since European settlement. Wetland conservation strategies should include, where possible, the restoration and protection of wetland hydrology and wetland plant communities, control of invasive species, and management of certain types of wetlands through mowing and grazing. Inland intermittent vernal pools, a common but threatened wetland habitat type, should be identified and conserved along with surrounding critical woodland habitat, and best forest management practices can be used to protect them from pollution and disturbance.

- Tributaries and Riparian Areas

  High quality tributaries, riparian areas, and floodplain forests are important habitat for many species including trout and black bass, salamanders, river otters, beaver, cerulean warbler, and wood turtles. Aquatic animals are highly dependent on riparian areas for shade, leaves (as a source of food), edge-of-channel habitat structure (such as undercut banks), soil stabilization, and woody debris. Removal of riparian areas, modification of stream channels, and increasing impervious surfaces cause some of the changes to watershed hydrology that are putting the water and habitat quality of tributary streams in the Hudson River Valley at risk. Minimizing development in riparian corridors, minimizing the hydrological alteration of stream systems, protecting native floodplain meadows and forests, and restoring natural stream channels will help to protect stream biodiversity. Removal of obsolete dams or the construction of fish passage structures can restore fish migration and sediment and temperature regimes.

- Unfragmented Forest and Habitat Corridors

  Intact forests are summer breeding habitat for migratory songbirds, bobcats, black bear, wood thrush, barred owl, and red-shouldered hawks. Although few examples of "old-growth" lowland forest remain, forests of moderate-sized and moderate-aged trees continue to provide valuable habitat and have the potential to provide mature forest habitat in the future. Many of the biological communities that characterized unfragmented forests are at risk in areas of the Hudson Valley. We can preserve the species that depend on unfragmented forests and habitat corridors by conserving mature lowland forests, concentrating disturbance along the edge of forest blocks, restoring forest fragments in riparian areas, reforesting gaps between disconnected forest tracts, and controlling invasive species while managing for well-developed growth on the forest floor, .

- Open Uplands and Barrens

  This habitat type includes grasslands, shrublands, agricultural lands, and rarer communities such as pitch-pine scrub-oak barrens, and rocky summit grasslands. These areas represent increasingly rare habitat for bobolinks, meadowlarks, grasshopper sparrows, golden-winged warblers, fox, northern harrier (hawks), butterflies, and the state endangered bog turtle. Without management or disturbance, early successional habitats become forest. Many of these animals are now declining due to reforestation or development of lands that were once meadows. Maintenance of early successional habitat should be balanced with the need to conserve stands of unfragmented forest. Control of invasives combined with reintroduction of native species will help to restore degraded sand plains. Conserving large, continuous parcels of open habitat on rocky summits and facilitating infrequent mowing or prescribed fire treatment in lowland areas will help to retain a mix of grasses, woody plants, seedlings, and saplings that provide essential habitat. Outreach to agricultural communities is integral to the preservation of this habitat type.

- Caves and Cliffs

  These habitat types were formed during ancient mountain-building processes or during mining exploration. They are used by rare cliff ferns, bats, peregrine falcons, migrating hawks, and rock-cresses. Approximately 40% of the state occurrences of the eastern small-footed bat and 3 of the 8 federally endangered Indiana bat hibernacula in New York State are found in the Hudson River Valley. Rare cliff plants such as the spleenwort, prickly pear, purple cliffbrake, and three-toothed cinquefoil can be found in the region's mountains. Cliff areas also provide overwintering habitat for many snake species, support the silvery blue and orange tip butterflies, and serve as migration pathways for several hawk species. Cliff and cave inventories should be conducted in the region and conservation measures should be taken to protect sensitive portions of these habitats from land-use practices that can be damaging, such as mining and high volume recreational activities like rock climbing, hiking, and mountain biking.

The *Framework* identifies 23 land areas representing these habitat types in the Hudson Valley that are particularly significant to biodiversity. With almost 89% of the estuary's conservation area in private ownership, landowners, non-profits, sporting clubs, and businesses can play a key role in meeting the goals and targets of the *Hudson River Estuary Action Agenda*. The NYSDEC intends to continue developing a network of partners to improve the overall quality of the Hudson Valley landscape through incentive-based voluntary conservation programs.

Tools are described in this *Framework* that will allow residents to identify habitat areas that provide the highest benefits to the local environmental quality and integrity of the Hudson Valley region. While local residents can best identify the important cultural and environmental features of their communities, there are many partners within the Hudson River Valley that can provide assistance. Grants are available through the Hudson River Estuary Program to carry out habitat assessment, education, and restoration projects. State wildlife biologists are available for consultation, and many non-profit organizations offer technical guidance and services to Hudson River Valley residents, governments, and community groups.

The publication of the *Conservation Framework* is designed to help achieve the objectives of the *Hudson River Estuary Action Agenda* to conserve the rich diversity of plants, animals, and habitats of the Hudson River Estuary region for future generations. Other projects of the Hudson River Estuary Program include technical assistance for local governments in conservation planning and training for local citizens in how to assess biodiversity.

The actions of the Hudson River Estuary Program are wide-ranging — from creating access to clean swimming waters, to upgrading sewage treatment plants, to restoring robust fisheries, and protecting the watershed. Conserving the biodiversity of the Hudson River Valley is a key aspect of this mission.

Overview

Background

The Hudson River Estuary corridor is truly one of the great regions of the world and a special place within the Empire State. It is a region of remarkable beauty, historical and economic significance, and importantly, high biological diversity. From tidal wetlands and coastal ecosystems to high elevation spruce-fir forest, the region boasts a remarkable diversity of habitats, and species that depend on those habitats. Turtles, snakes, bats, frogs, salamanders, birds of prey, songbirds, waterfowl, mollusks, butterflies, old-growth trees, and unique freshwater tidal wetlands are a few examples of an extensive list that describes the biodiversity of the greater Hudson River Estuary ecosystem. Humans are an important part of the environment within the Hudson River ecosystem and are dependent on the region's abundant natural resources. From the rarest to the most common, we must strive to conserve the native plants, wildlife, and ecological communities that make this area so special and at the same time, work with people and communities to ensure that their needs are addressed.

Estuaries are bodies of water, such as rivers or bays, along coasts where the tides carry water inland. In the Hudson River, tides reach as far north as the Federal Dam at Troy and form an estuary. The tidal Hudson River estuary begins as freshwater in Troy, gradually turns brackish near the Hudson Highlands, and becomes noticeable salty at the Tappan Zee Bridge. The Hudson River Estuary corridor, extending from the Troy Dam to the Verrazano Narrows below Manhattan Island, and including the counties bordering the estuary, is the focus of New York State's Hudson River Estuary Program. In order to fully appreciate, understand, and manage the Hudson River Estuary, it is necessary to consider it in the context of its surrounding landscape and watershed. For the Estuary to be healthy, the neighboring lands and forests, and tributary rivers that flow into it must also be healthy.

To date, results from our efforts have revealed that the ecosystems surrounding the Hudson River Estuary support a remarkable array of vegetative cover types. This diversity of land cover is reflected in an abundance of wildlife species, some of which have all or a significant portion of their entire New York range within the Hudson River Estuary corridor. For example, 25 of 31 vegetative cover types identified for all of New York State occur within the 4.2 million acre Hudson River Estuary corridor, an area representing about 13.5% of the land area of New York. For all New York terrestrial vertebrates combined, 86% (308 species) have predicted occurrences from the corridor. Within this total, the Hudson River Estuary corridor provides habitat for 85% (28 species) of New York's amphibian species, 73% (27 species) of New York's reptile species, 87% (199 species) of New York's breeding bird species, and 92% (54 species) of New York's mammal species (Smith et al. 2001).

This remarkable diversity in some instances takes on global significance. In the case of turtles, the Hudson River watershed has a rich diversity of species, many of which are

endangered. The number of species found in the Hudson River watershed is matched in only a few other rivers in the world, including the Suawanee (Florida), Mekong (southeast Asia), and Irrawaddy (Myanmar).

In the last five years, the Biodiversity Program of the Hudson River Estuary Program has completed a number of projects in collaboration with partners to conserve the Hudson River Estuary's rich ecosystem. These collaborative projects include identification and mapping of wildlife habitats from satellite imagery, surveys of rare plant and animal communities and significant ecological communities, monitoring of PCB levels to determine potential affects on nesting eagles, expansion of the Hudson River Valley portion of the NYS Amphibian and Reptile Atlas, initiation of a Hudson River Valley Breeding Bird Atlas to expand and complement the statewide effort, development of a manual and related training for biodiversity assessment, collection and continued analysis of the movement of contaminants in the food chain, grants for conservation and stewardship projects, outreach and technical assistance to Hudson Valley municipalities, surveying bog turtles in the lower Hudson River Watershed, and publication of this conservation framework.

Development of a conservation framework evolved out of the need to provide current information on the biological resources of the area and strategies by which agencies, organizations, and individuals could work collaboratively to achieve realistic conservation goals. This project emphasizes voluntary approaches that can be undertaken in the context of local home rule. No new state regulations are proposed. The conservation of our biological diversity will likely be achieved through a variety of mechanisms, from outreach aimed at land-use planners, to open space protection, to partnerships with landowners to foster conservation practices at home.

Truly effective biodiversity conservation in the Hudson River Estuary corridor will embrace all available conservation tools and will result from empowering people and communities to make informed decisions in their daily lives. Indeed, a conservation program cannot succeed without a high level of public involvement. The Hudson River Estuary Program has initiated a biodiversity outreach and technical assistance program to continue expanding voluntary partnerships with local communities. In addition to training, outreach, and education, biodiversity conservation will be carried forward by projects to develop maps and other informational products that interpret biological survey results; examine the contribution of public lands to biodiversity conservation; continue local training for biodiversity assessment; monitor changes in the region's land use and wildlife communities, and continue to offer grants for conservation and stewardship projects.

Purpose of the Framework

Given the tremendous biological diversity of the region and the complexity of the issues that surround its conservation, a document is needed to identify the biological resources of the Hudson River Estuary corridor and to recommend strategies for the conservation

of those resources. This report should help to coordinate the activities of conservation agencies and organizations in the Hudson River Valley by establishing a framework and approach for biodiversity conservation.

The purpose of the *Wildlife and Habitat Conservation Framework* is to provide a foundation for a coordinated biodiversity conservation program that includes research, management, education, and outreach, and that incorporates conservation considerations into sound land-use planning through the use of a broad range of voluntary measures and conservation tools.

This report establishes a framework that can be applied to:

1) Defining conservation objectives and priorities;

2) Integrating biodiversity conservation considerations into sound land-use planning practices in the context of local home rule;

3) Promoting the use of a broad range of conservation tools, especially measures that can be undertaken voluntarily; and

4) Establishing partnerships among federal, state, and local governments, as well as communities, businesses, private organizations, and individuals.

The *Wildlife and Habitat Conservation Framework* is a product of the Hudson River Estuary Biodiversity Program of the New York State Department of Environmental Conservation (NYSDEC) Hudson River Estuary Program. It was developed under the direction of a steering committee representing more than 20 organizations interested and experienced in biodiversity conservation in the Hudson River Valley (Appendix I).

Intended Audience

We hope that the *Wildlife and Habitat Conservation Framework* is useful for those organizations and individuals working to conserve the biological diversity and uniqueness of the Hudson River Estuary corridor. In particular, it is intended to aide conservationists in establishing coordinated efforts.

While these efforts should evolve at different levels of organization, biodiversity conservation is most effective when it takes place at the local level through a variety of individuals and groups (i.e., citizens, citizens' groups, community organizations, planning boards). Resources are available for these groups as part of the Hudson River Estuary Biodiversity Program.

Overview of the Conservation Framework

This report is organized into three sections, Part I: An Approach to Biodiversity Conservation, Part II: Significant Habitats of the Hudson River Valley, and Part III: Conservation Strategies and Recommendations.

Part I: An Approach to Biodiversity Conservation

Part I provides an overview of the Hudson River Estuary Biodiversity Program and discusses biodiversity conservation within the context of the Hudson River Estuary corridor. The section focuses on the value of biodiversity in our lives, primary threats to biodiversity in the region, and considerations for biodiversity conservation.

Part II: Significant Habitats of the Hudson River Valley

Part II provides an overview of significant habitats in the Hudson River Valley and includes general information on the ecology and conservation of cave and cliff habitats, coastal habitats, open uplands and barrens, tributaries and riparian habitat, unfragmented forests and habitat corridors, and wetlands. Following each description is a list and map of significant biodiversity areas that contain that habitat type. Then, descriptions are provided for each significant biodiversity area in the Hudson River Estuary corridor.

Information presented in Part II is the foundation of a habitat-based approach to biodiversity conservation in the Estuary corridor.

Part III: Conservation Strategies and Recommendations

Part III outlines key program areas and strategies that should be developed or expanded to meet regional conservation goals and address the primary threats to biodiversity in the Hudson River Estuary corridor. The conservation strategies recommended in this document emphasize voluntary measures that can be undertaken in the context of local home rule and individual property rights. Implementation of conservation strategies should occur through a variety of mechanisms involving federal, state, and local governments, as well as private organizations with a common vision for conserving biodiversity.

In general, conservation program areas presented in this document can be grouped into three major categories: biological inventories and ecological research, land management and environmental quality, and education. Some recommendations require a long-term commitment (e.g., ecological monitoring) and may rely substantially on funds provided by state and federal agencies. Other strategies will require broad-based support from a variety of organizations ranging from government agencies to local communities and citizens. Lastly, for some strategies, significant involvement by communities will be required to address issues at the local level.

Periodic Updates

The Hudson River Estuary Biodiversity Program embraces an adaptive approach to biodiversity conservation whereby we learn from both our successes and failures and adjust our approach accordingly, using all available information. It is recommended that the information contained in this report be evaluated every two years and updated as needed.

Conditions in the Hudson River Valley are continually changing. Threats to biodiversity evolve over time; some threats will be resolved through concerted conservation action while new threats could arise. New conservation strategies and actions will need to be undertaken and old strategies discontinued (as appropriate) in response to changing conditions. In addition, available information and knowledge of biodiversity will also grow with time. The databases on which conservation strategies and actions are based are continually updated. Regular updates are essential to maintaining an effective and meaningful conservation program.

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