

**New York Rising Community Reconstruction Program  
PATTERSON CREEK STREAM BANK RESTORATION PROJECT**

**Environmental Assessment**



The New York State Governor's Office of Storm Recovery

June 30, 2016

Revised August 12, 2016

# PATTERSON CREEK STREAM BANK RESTORATION PROJECT

## Environmental Assessment

June 30, 2016

**Project Name:** Patterson Creek Stream Bank Restoration

**Project Location:** Patterson Creek – west of Hooper Road, one section approximately 205 feet in length beginning 85 feet north of Watson Boulevard, and another section approximately 650 feet in length beginning 200 feet north of Smith Drive, Town of Union, Broome County, New York

**HTFC SHARS #:** N/A

**Federal Agency:** US Department of Housing and Urban Development  
**Responsible Entity:** New York State Homes and Community Renewal

**Responsible Agency's Certifying Officer:** Thomas J. King, Assistant General Counsel and Certifying Officer

**Project Sponsor:** Town of Union

**Primary Contact:** Rose A. Sotak, Town Supervisor, 3111 East Main Street, Endwell, NY 13760  
supervisor@townofunion.com (607) 786-2995

**Project NEPA Classification:** 24 CFR 58.36 (Environmental Assessment)

<b>Environmental Finding:</b>	<input checked="" type="checkbox"/> Finding of No Significant Impact - The project will not result in a significant impact on the quality of the human environment.
	<input type="checkbox"/> Finding of Significant Impact - The project may significantly affect the quality of the human environment.
<b>Certification</b>	The undersigned hereby certifies that New York State Homes and Community Renewal has conducted an environmental review of the project identified above and prepared the attached environmental review record in compliance with all applicable provisions of the National Environmental Policy Act of 1969, as amended (42 USC Sec. 4321 et seq.) and its implementing regulations at 24 CFR Part 58.
<b>Signature</b>	 Thomas J. King, Assistant General Counsel and Certifying Officer

**Environmental Assessment Prepared By:** The LiRo Group  
3 Aerial Way  
Syosset, NY 11791

**CERTIFICATION OF NEPA CLASSIFICATION**

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in its 2016 NYS CDBG-DR project, Patterson Creek Stream Bank Restoration are:

Check the applicable classification.

- Exempt as defined in 24 CFR 58.34 (a).
- Categorically Excluded as defined in 24 CFR 58.35(b).
- Categorically Excluded as defined in 24 CFR 58.35(a) and no activities are affected by federal environmental statues and executive orders [i.e., exempt under 58.34(a)(12)].
- Categorically Excluded as defined in 24 CFR 58.35(a) and some activities are affected by federal environmental statues and executive orders.
- "Other" neither exempt (24 CFR 58.34(a)) nor categorically excluded (24 CFR 58.35).
- Part or all of the project is located in an area identified as a floodplain or wetland. For projects located in a floodplain or wetland, evidence of compliance with Executive Orders 11988 and/or 11990 is required.

For activities excluding those classified as "Other", attached is the appropriate Classification Checklist (Exhibit 2-4) that identifies each activity and the corresponding citation.

  
\_\_\_\_\_  
Signature of Certifying Officer

June 30, 2016  
\_\_\_\_\_  
Date

Thomas King  
\_\_\_\_\_  
Print Name

Assistant General Counsel  
\_\_\_\_\_  
Title

## CERTIFICATION OF SEQRA CLASSIFICATION

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in its 2016 NYS CDBG-DR project, Patterson Creek Stream Bank Restoration constitute a(n):

Check the applicable classification:

- Type I Action (6NYCRR Section 617.4)
- Type II Action (6NYCRR Section 617.5)
- Unlisted Action (not Type I or Type II Action)

Check if applicable:

- Environmental Impact Statement (EIS) Prepared
  - Draft EIS
  - Final EIS

  
\_\_\_\_\_  
Signature of Certifying Officer

June 30, 2016  
\_\_\_\_\_  
Date

Thomas King  
\_\_\_\_\_  
Print Name

Assistant General Counsel  
\_\_\_\_\_  
Title

**Description of the Proposed Project** [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The project involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining back yard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. (see **Figures 1 and 2**)

**Statement of Purpose and Need for the Proposal** [40 CFR 1508.9(b)]:

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

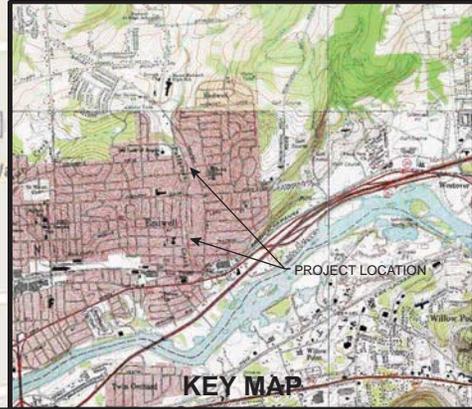
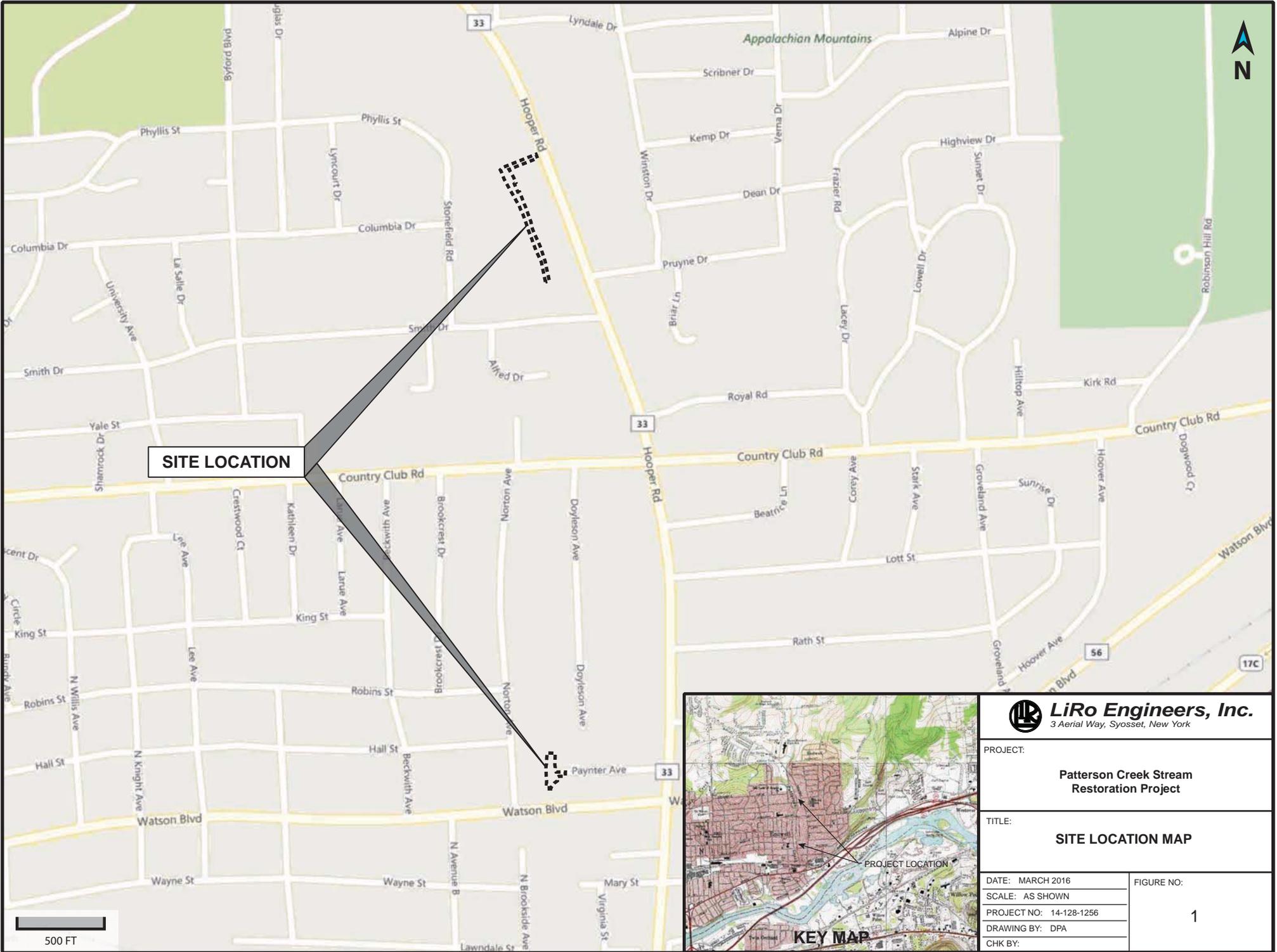
**Existing Conditions and Trends** [24 CFR 58.40(a)]:

Patterson Creek is a channel with eroding stream banks present in several locations. Sediment and debris has a significant role in compromising the hydraulic capacity of Patterson Creek.

**Funding Information**

**Estimated Total HUD Funded Amount:** \$300,000.00

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]:  
\$300,000.00



 <b>LiRo Engineers, Inc.</b> 3 Aerial Way, Syosset, New York	
PROJECT: <b>Patterson Creek Stream Restoration Project</b>	
TITLE: <b>SITE LOCATION MAP</b>	
DATE: MARCH 2016 SCALE: AS SHOWN PROJECT NO: 14-128-1256 DRAWING BY: DPA CHK BY:	FIGURE NO: <p style="text-align: center;">1</p>



## Compliance with 24 CFR 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

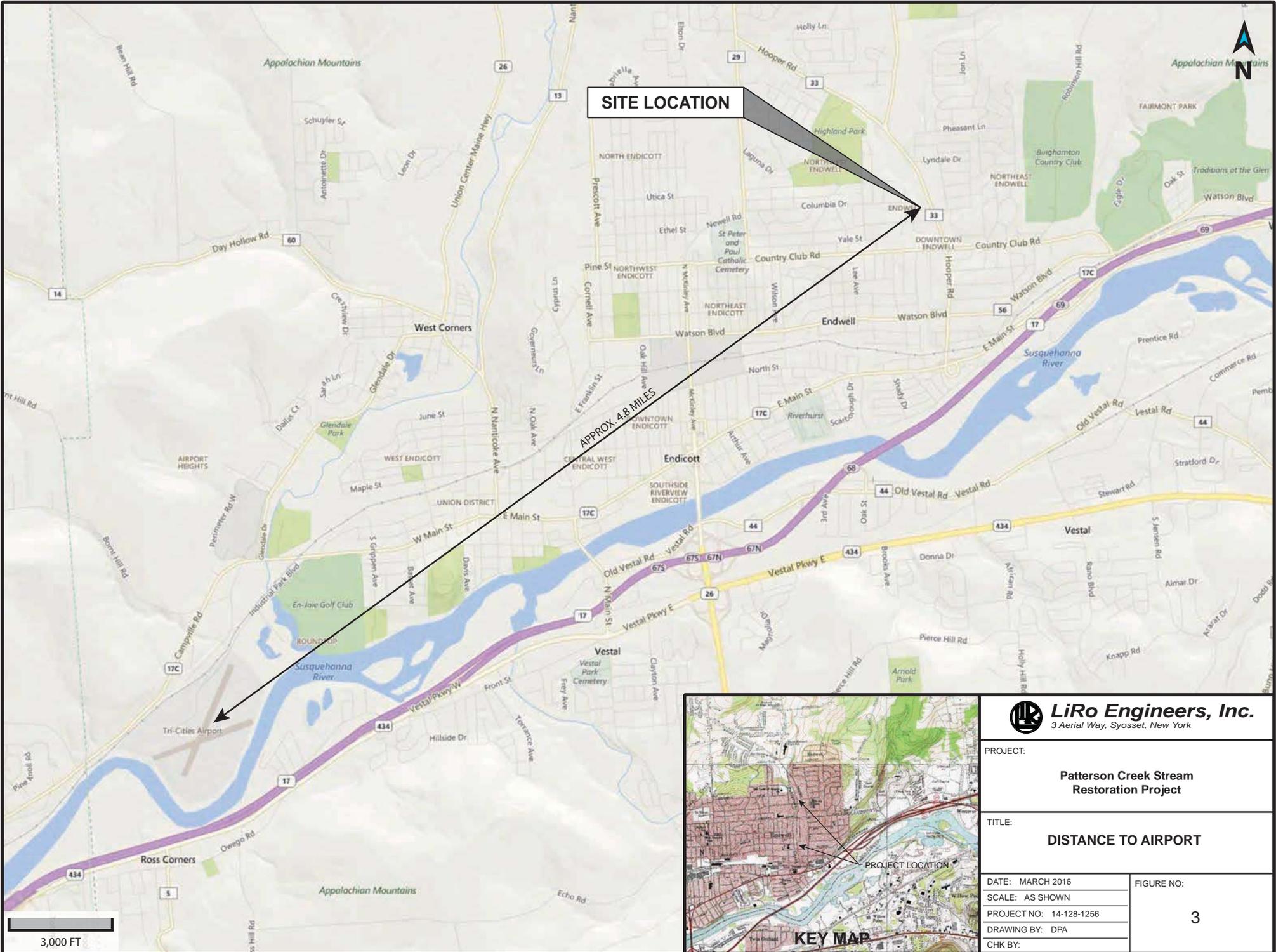
<b>Compliance Factors:</b> Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6</b>		
<b>Airport Hazards</b>  24 CFR Part 51 Subpart D	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	Based on guidance provided by HUD in Fact Sheet #D1, the National Plan of Integrated Airport Systems was reviewed for civilian, commercial service airports within the vicinity of the project site. There are no military or civil airports within 1 mile of the project area. The nearest airport is the Tri-Cities airport, located just under 5 miles from the project site. (see <b>Figure 3</b> ) No impacts would result.
<b>Coastal Barrier Resources</b>  Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	According to the Coastal Barrier Resource System maps, the project site is not located within a coastal barrier resource area; therefore, this standard is not applicable. (see <b>Figure 7</b> )
<b>Flood Insurance</b>  Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	Based on Flood Insurance Map 3600560025B, the project sites are located within a Special Flood Hazard Area. However, the project does not require proof of National Flood Insurance Program (NFIP) insurance. (see <b>Figure 4</b> )
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 &amp; 58.5</b>		
<b>Clean Air</b>  Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	Construction of the project would not generate additional vehicular traffic; therefore, no exceedances of the National Ambient Air Quality Standard (NAAQS) associated with carbon monoxide (CO) or particular matter (PM) would occur. Operation of the proposed project would

		not result in any major new stationary source of air pollutants. The project would not adversely affect the State Implementation Plan (SIP). The proposed project is not located within a nonattainment area where air pollution levels persistently exceed the national ambient air quality standards. (see <b>Figure 8</b> ) No significant impacts on air quality would occur.
<b>Coastal Zone Management</b>  Coastal Zone Management Act, sections 307(c) & (d)	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	The project area is not located within the boundaries of the New York State Coastal Zone. (see <b>Figure 9</b> )
<b>Contamination and Toxic Substances</b>  24 CFR Part 50.3(i) & 58.5(i)(2)	Yes    No <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>There are no known hazardous materials, contaminants, toxic chemicals, gases, or radioactive substances that could affect health and safety within the project area. The proposed project is not anticipated to result in any significant adverse impacts related to toxic, hazardous, or radioactive materials.</p> <p>One remediation site was identified within the NYSDEC Environmental Remediation Database search radius (2,000 feet). The site is part of the State Superfund Program (Site Code 704038). The regulated site is associated with the former IBM facility in Endicott.</p> <p>Site 704038 (Endicott Area-Wide Investigation) includes a groundwater and soil vapor study encompassing most of the town of Union and the Village of Endicott. This study was conducted to determine the extent of the contamination resulting from the 1979 spill from the IBM Facility (Site 704014). The investigation work has been completed and no further action is anticipated at this time.</p>
<b>Endangered Species</b>  Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes    No <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>The USFWS Information, Planning and Conservation (IPaC) online tool Trust Resource List generated for the proposed project on March 17, 2016 (see <b>Appendix A</b>) lists the following Federally-listed species as having the potential to occur within the vicinity of the proposed project: Northern Long-eared Bat (<i>Myotis septentrionalis</i>) (NLEB) – threatened.</p> <p>However, due to the NLEB habitat preferences, the trees being removed on the project site are not likely suitable habitat, as discussed in the</p>

		<p>consultation letter submitted to USFWS on April 28, 2016 (see <b>Appendix A</b>).</p> <p>Nonetheless, due to the potential for active season tree removal, GOSR determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule (see <b>Appendix A</b>).</p> <p>A consultation letter was submitted to NYNHP on April 25, 2016. A response indicating that NYNHP had no records of rare or state-listed animals or plants, or significant natural communities directly at the project site was received on May 20, 2016. (see <b>Appendix A</b> for correspondence)</p>
<p><b>Explosive and Flammable Hazards</b></p> <p>24 CFR Part 51 Subpart C</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>There are no known hazardous operations handling conventional fuels or chemicals of an explosive or flammable nature in the vicinity of the project area. This criterion is applicable to HUD-assisted projects that involve new residential construction, conversion of non-residential buildings to residential use, rehabilitation of residential properties that increase the number of units, or restoration of abandoned properties to habitable condition. As this project involves the placement of heavy stacked stone to mitigate soil erosion along the stream banks, which does not change the existing land use or add residential population, the criterion does not apply and there are no anticipated adverse impacts expected to occur.</p>
<p><b>Farmlands Protection</b></p> <p>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>The proposed project is not located within any Agricultural District. (see <b>Figure 10</b>) It would not cause disturbance of Prime, Unique, or Statewide Important Farmland and would not involve the conversion of farmland to non-agriculture use. Therefore, the proposed project would not violate the Farmland Protection Policy Act.</p>
<p><b>Floodplain Management</b></p> <p>Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p>Yes    No</p> <p><input checked="" type="checkbox"/>   <input type="checkbox"/></p>	<p>Based on Flood Insurance Map 3600560025B (see <b>Figure 4</b>), the project sites are located within a Special Flood Hazard Area. The 8-step process for floodplain management was followed and a local floodplain development permit was issued see <b>Appendix B</b>). If the project encroaches into the Floodway a "No-</p>

		Rise Certification" and supporting technical analysis must be issued prior to construction
<p><b>Historic Preservation</b></p> <p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800; Tribal notification for new ground disturbance.</p>	<p>Yes No</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p>	<p>The New York State Historic Preservation Officer (SHPO) as well as representatives of the Delaware Nation, the Delaware Tribe of Indians, the Oneida Nation of New York, the Onondaga Nation of New York, the Stockbridge-Munsee Community, Band of Mohicans, and the Tuscarora Nation of New York have been consulted in regards to this project, since the project site is located within a buffer area around a recorded archaeological resource, and may be located in an archaeological sensitive area. Furthermore, the project sites are located within the Susquehanna NY State Heritage Area. (see <b>Figure 11</b>)</p> <p>It has been determined that the proposed project has no potential impact on archaeological and/or historic resources. (see <b>Appendix C</b>)</p>
<p><b>Noise Abatement and Control</b></p> <p>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The proposed project would not generate noise within the project area, nor would it introduce any new or rehabilitate any existing noise sensitive uses. Therefore, no significant noise impacts would occur as a result of the proposed project.</p>
<p><b>Sole Source Aquifers</b></p> <p>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<p>Yes No</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p>	<p>The project site is located over the Clinton Street Ballpark Sole Source Aquifer. (see <b>Figure 12</b>) A copy of the Sole Source Aquifer letter sent to the EPA is provided along with the response. (see <b>Appendix D</b>)</p> <p>The proposed project would not result in any indirect or secondary impacts in terms of new development or new demands. The proposed project is not expected to impact the supply or quality of water of any aquifer, or introduce new contaminants into the aquifer.</p>
<p><b>Wetlands Protection</b></p> <p>Executive Order 11990, particularly sections 2 and 5</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>A Protection of Waters permit is required to physically disturb the bed or banks of a stream over 300 linear feet to mitigate the erosion and stabilization mitigation of the creek. Prior to construction the project engineer will also need to secure Clean Water Act Section 401 and 404 authorizations from NYSDEC and USACE.</p>

		The project will adhere to and be in compliance with the guidelines and regulations of Executive Order 11990, in order to minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. (see <b>Figure 4</b> )
<b>Wild and Scenic Rivers</b>  Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	The project area is not located within the vicinity of any designated wild, scenic, or recreational rivers. The Delaware River is the only river in New York that is included in the National Wild and Scenic Rivers System. The proposed project is not located near this river and no adverse impacts are anticipated.
<b>ENVIRONMENTAL JUSTICE</b>		
<b>Environmental Justice</b>  Executive Order 12898	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	The project site is not located in or adjacent to potential justice areas identified by the New York State Department of Environmental Conservation. The proposed project would have no significant adverse environmental impact on the surrounding community and will provide a benefit to the residents. (see <b>Figure 6</b> )



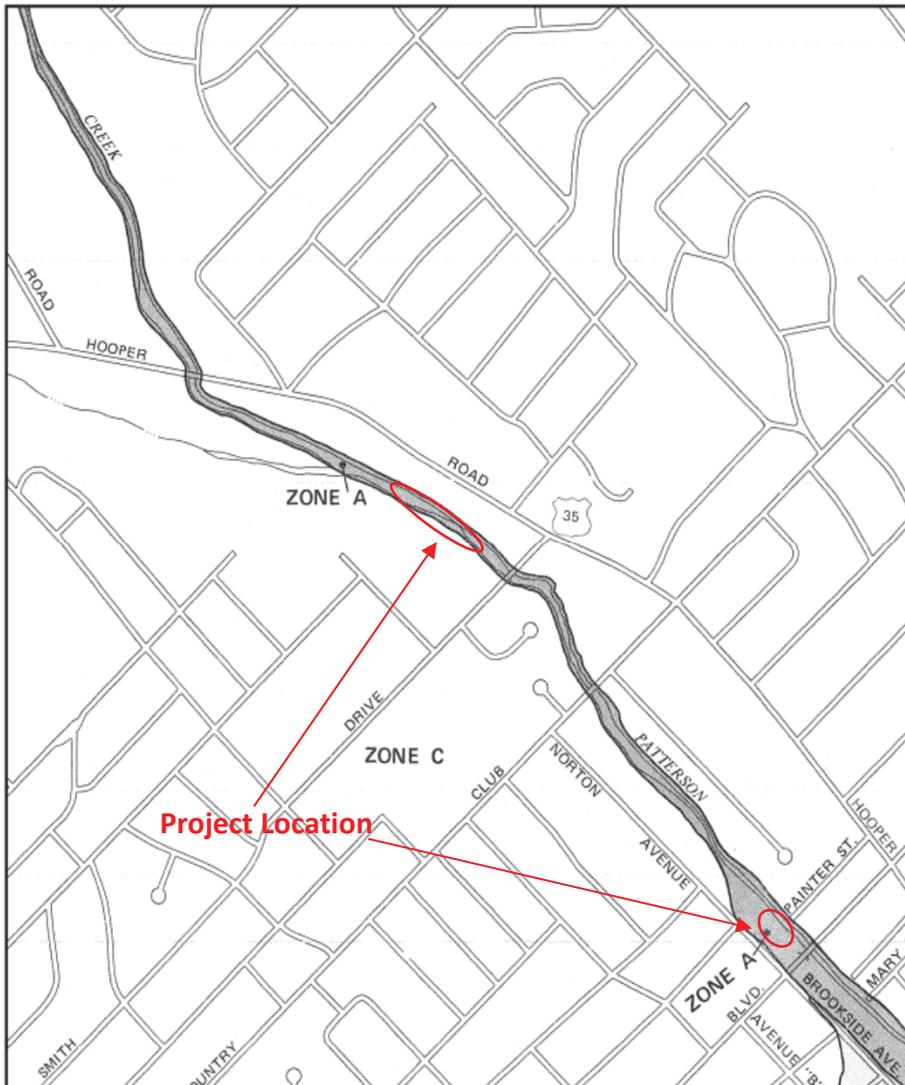
**LiRo Engineers, Inc.**  
3 Aerial Way, Syosset, New York

PROJECT:  
**Patterson Creek Stream Restoration Project**

TITLE:  
**DISTANCE TO AIRPORT**

DATE: MARCH 2016  
SCALE: AS SHOWN  
PROJECT NO: 14-128-1256  
DRAWING BY: DPA  
CHK BY:

FIGURE NO:  
**3**



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM  
FLOOD INSURANCE RATE MAP  
TOWN OF UNION,  
NEW YORK  
BROOME COUNTY**

PANEL 25 OF 35  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER

360056-0025-B

MAP REVISED

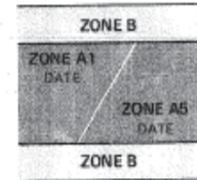
NOVEMBER 21, 1980



federal emergency management agency  
federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

**KEY TO SYMBOLS**



ZONE DESIGNATIONS\* WITH  
DATE OF IDENTIFICATION  
i.e., 12/2/74

Base Flood Elevation Line  
with elevation in feet

513

Base Flood Elevation  
where uniform within zone

(E.L. 987' MSL)

Elevation Reference Mark

RM7 x

River Mile

M1.5

**\*EXPLANATION OF ZONE DESIGNATIONS**

A flood insurance map displays the zone designations for a community according to areas of designated flood hazards. The zone designations used by FIA are:

Zone	Explanation
A	Area of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Area of 100-year shallow flooding; flood depth 1 to 3 feet; product of flood depth (feet) and velocity (feet per second) less than 15.
A1-A30	Area of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Area of 100-year flood to be protected by a flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Area between limits of 100-year flood and 500-year flood; areas of 100-year shallow flooding where depth less than 1 foot.
C	Area outside 500-year flood.
D	Area of undetermined, but possible, flood hazards.
V	Area of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V0	Area of 100-year shallow flooding with velocity; flood depth 1 to 3 feet; product of depth (feet) and velocity (feet per second) more than 15.
V1-V30	Area of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

**Patterson Creek Stream Bank  
Restoration Project  
Union, New York**

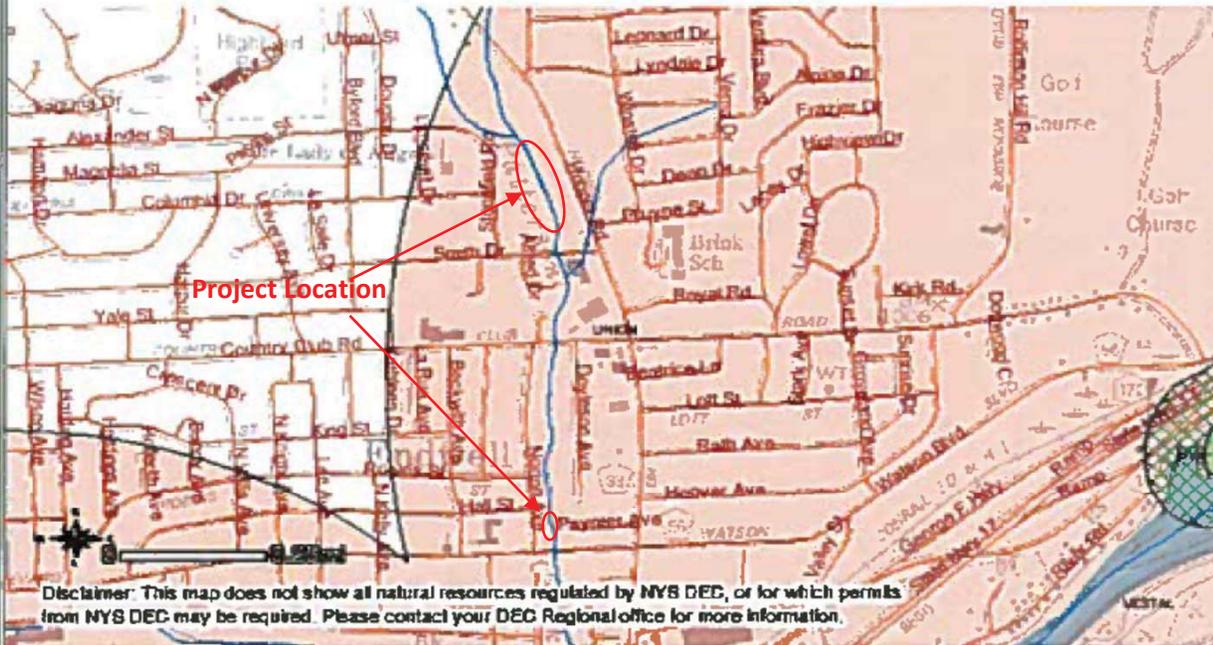


Flood Insurance  
Rate Map  
FIGURE 4

# Patterson Creek Stream Bank Restoration Project

## Visible Layers

-  Classified Streams
-  Classified Ponds
-  State-Regulated Freshwater Wetlands
-  Wetland Checkzone
-  State-Regulated Freshwater Wetlands
-  Rare Plants and Rare Animals
-  Significant Natural Communities Buffered
-  Natural Communities Nearby
-  Significant Natural Communities
-  Interstate Highways
-  Adirondack Park Boundary
-  Counties



MinX: 414279, MaxX: 417388, MinY: 4664015, MaxY: 4662420

**Patterson Creek Stream Bank  
Restoration Project**  
Union, New York



NYSDEC  
Wetlands Map  
FIGURE 5a

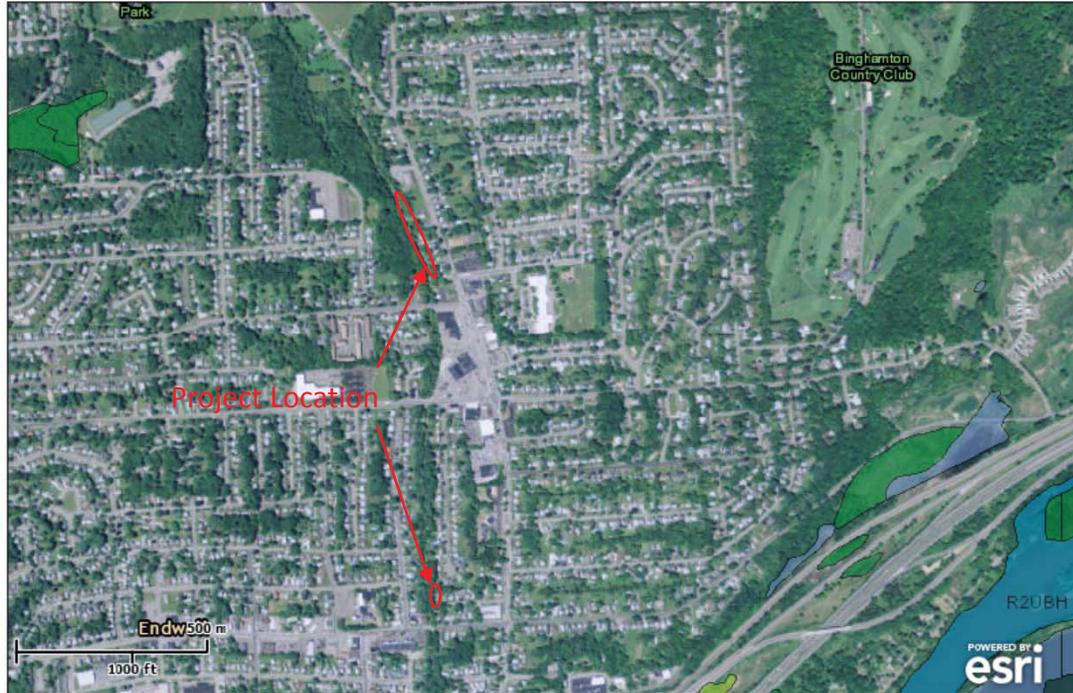




**U.S. Fish and Wildlife Service**  
**National Wetlands Inventory**

**Patterson Creek  
 Stream Bank  
 Restoration**

Mar 15, 2016



**Wetlands**

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

**Riparian**

- Herbaceous
- Forested/Shrub

**Riparian Status**

- Digital Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

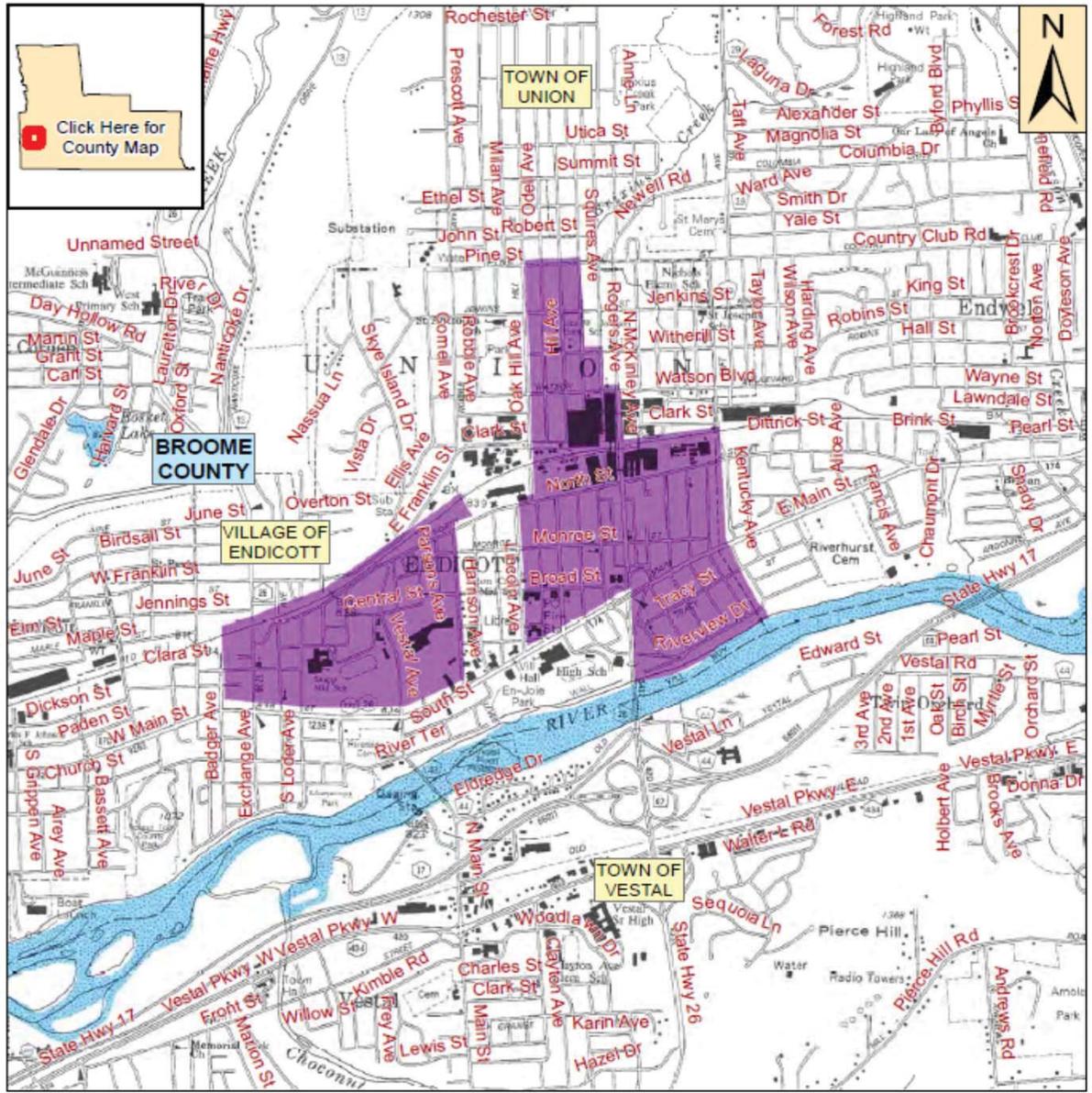


**Patterson Creek Stream Bank  
 Restoration Project**  
 Union, New York



USFWS  
 Wetlands Map  
 FIGURE 5b

# Potential Environmental Justice Areas in the Village of Endicott Broome County, New York



**Legend**

- Potential EJ Area
- County Boundary
- Waterbodies

**Patterson Creek Stream Bank  
Restoration Project**  
Union, New York

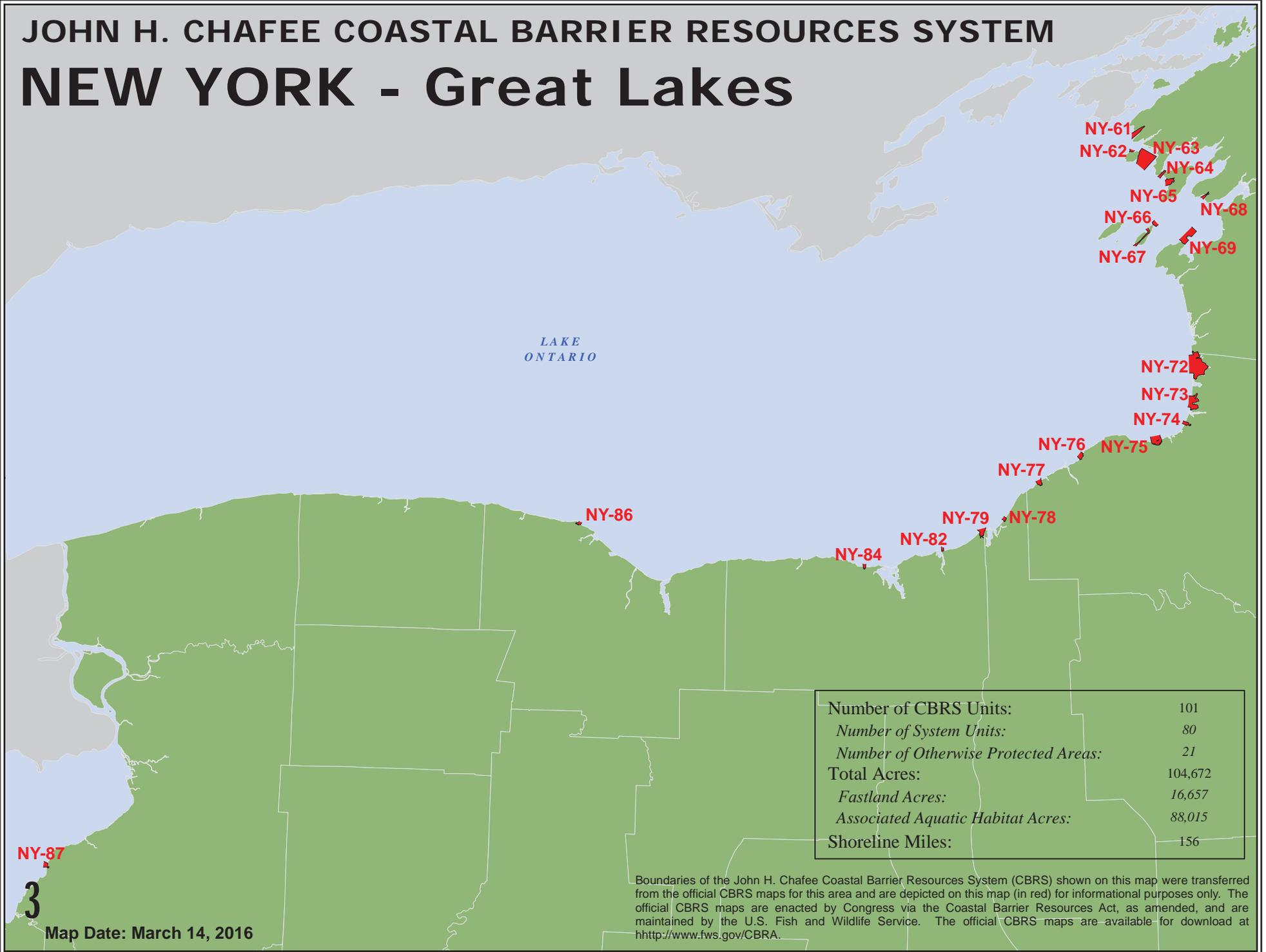


Potential  
Environmental  
Justice Areas  
**FIGURE 6**

Data Source for Potential Environmental Justice Areas:  
U.S. Census Bureau, 2000 U.S. Census

# JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM

## NEW YORK - Great Lakes



Number of CBRS Units:	101
Number of System Units:	80
Number of Otherwise Protected Areas:	21
Total Acres:	104,672
Fastland Acres:	16,657
Associated Aquatic Habitat Acres:	88,015
Shoreline Miles:	156

NY-87

3

Map Date: March 14, 2016

Boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) shown on this map were transferred from the official CBRS maps for this area and are depicted on this map (in red) for informational purposes only. The official CBRS maps are enacted by Congress via the Coastal Barrier Resources Act, as amended, and are maintained by the U.S. Fish and Wildlife Service. The official CBRS maps are available for download at <http://www.fws.gov/CBRA>.

FIGURE 7

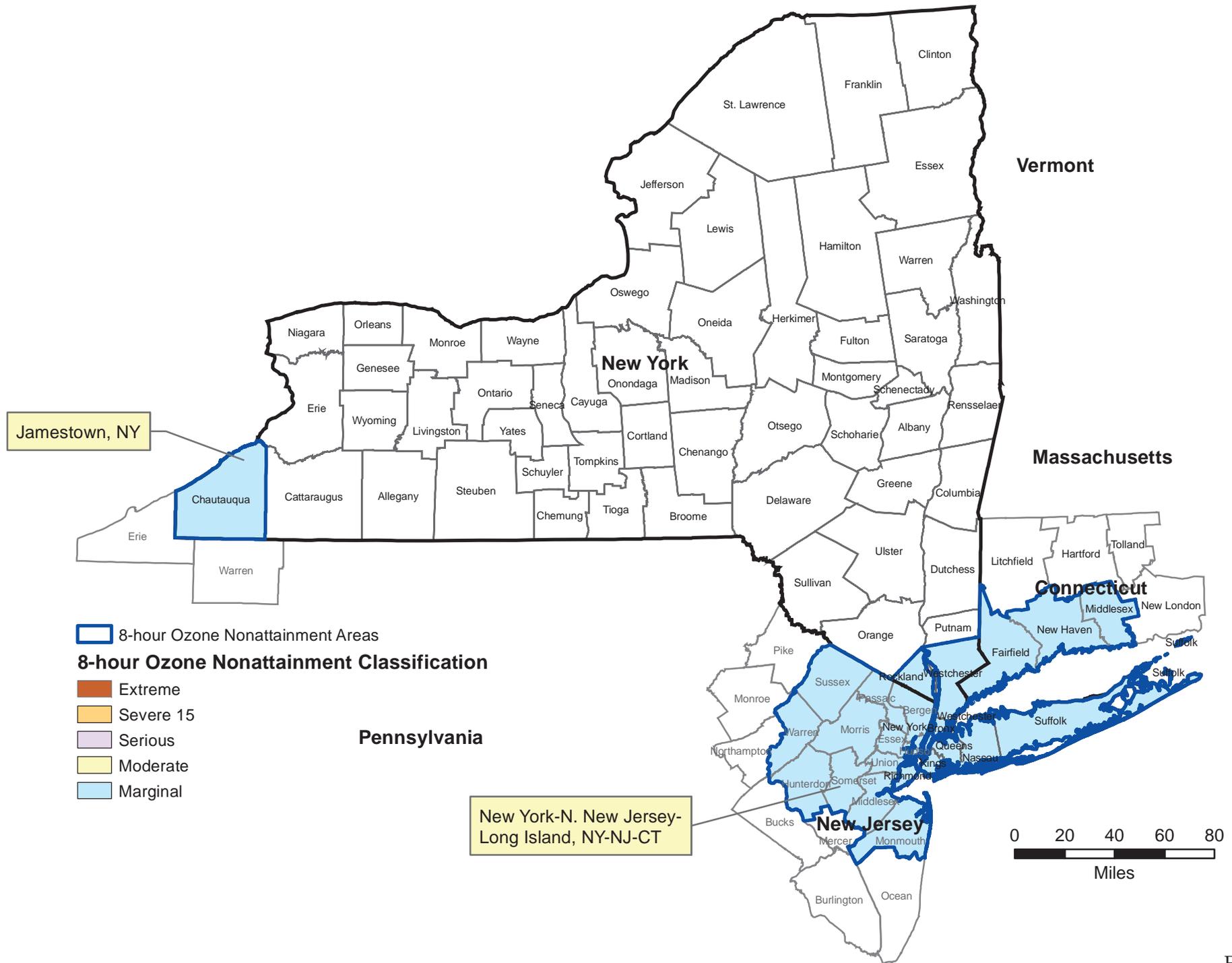


FIGURE 8

## Welcome to the NYS Coastal Boundary Map

🏠 🗺️ 📄 🗣️ Help

🔍 Search

Address:

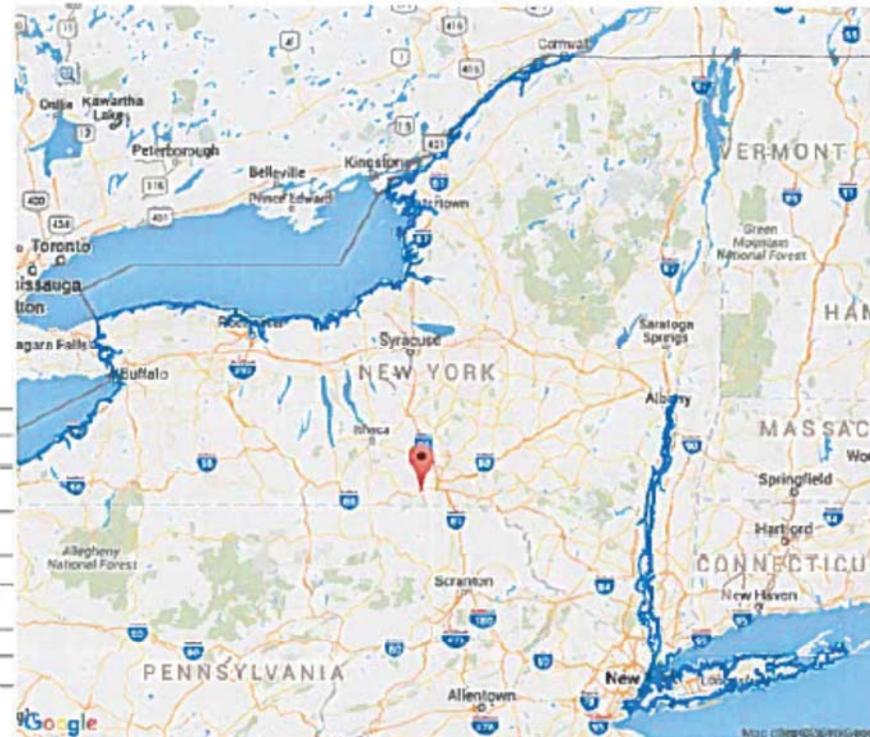
Endicott, ny

Find Address

Please note that the address marker is automatically placed along the street while certain activities may take place along the waterward property boundary. Please make sure to click and drag the marker to the exact location of the proposed activity for an accurate assessment of whether or not the activity would be located within any DOS Special Management Areas.

📄 Layers

- Landward Coastal Boundary
- Scenic Areas
- Local Waterfront Revitalization Areas
- Local Waterfront Revitalization Program Communities
- Significant Coastal Fish and Wildlife Habitats
- DOS Identified Canals
- Long Island Sound CMP (excludes LWRP communities)
- Federally Owned Lands
- Native American Lands



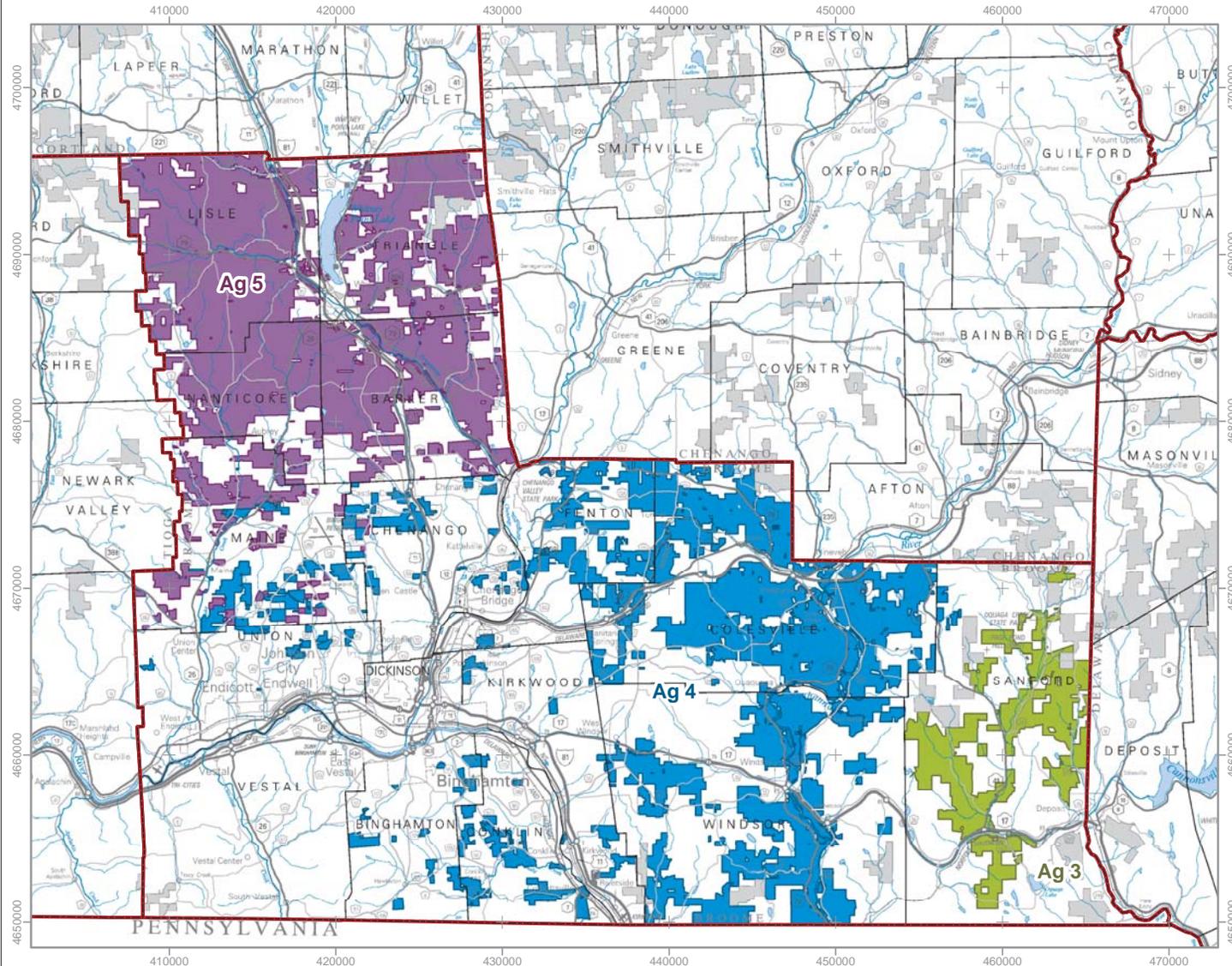
Latitude: 42.803 Longitude: -75.399

The New York State Department of State makes every effort to post accurate and reliable information on this website. The Department of State does not guarantee or warrant that the information on this web site is complete, accurate or current. The information on this website is intended solely for the purpose of electronically providing the public with general coastal consistency related information and convenient access to data resources. The Department of State neither assumes responsibility for the use or application of any material posted on this website nor responsibility for any error, omission or other discrepancy between the electronic and printed versions of documents.

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FIGURE 9

# BROOME COUNTY



**KEY**

- Ag. District 3 ■
- Ag. District 4 ■
- Ag. District 5 ■

**DISTRICT CERTIFICATIONS and TOWNS**

**DISTRICT 3**  
CERTIFIED 5/30/2008  
Sanford

**DISTRICT 4**  
CERTIFIED 10/24/2008  
Binghamton  
Chenango  
Colesville  
Conklin  
Fenton  
Kirkwood  
Maine  
Sanford  
Union  
Windsor

**DISTRICT 5**  
CERTIFIED 12/29/2010  
Barker  
Chenango  
Lisle  
Maine  
Nanticoke  
Triangle

**MAP SOURCE INFORMATION**

Map created at Cornell IRIS (Institute for Resource Information Sciences) <<http://iris.css.cornell.edu>> for the NYS Department of Agriculture and Markets

Agricultural Districts boundary data is available at CUGIR (Cornell University Geospatial Information Repository) website: <<http://cugir.mannlib.cornell.edu>>

Base Map: state250\_bw.tif 1998  
Scale: 1:250,000; County boundaries imported from the file nysshore.e00 from the NYSGIS Clearinghouse website: <<http://www.nysgis.state.ny.us>>

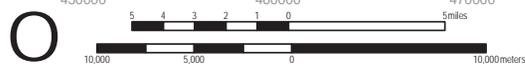
Contains data copyrighted by the NYS Office of Cyber Security

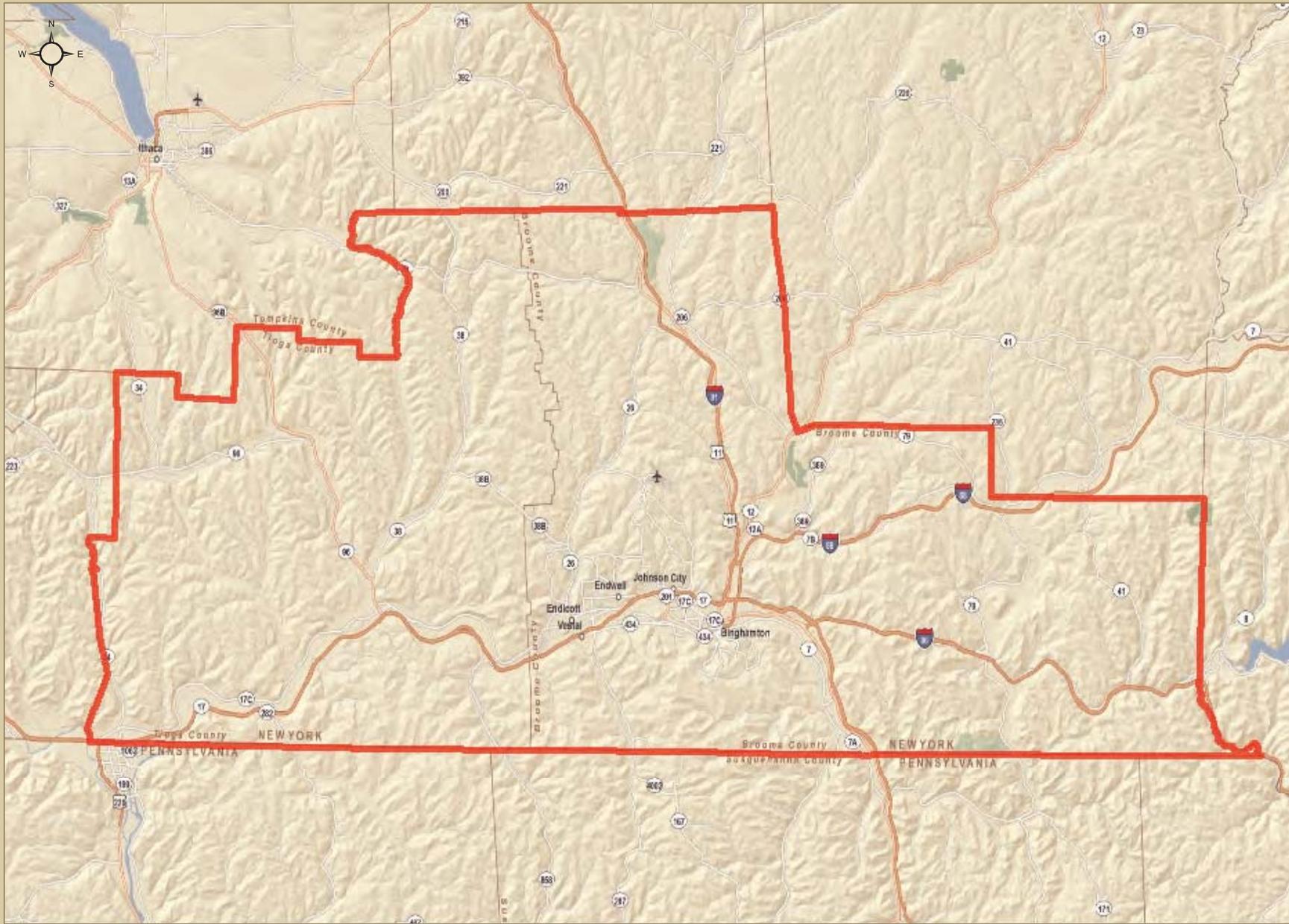
**DISCLAIMER**  
This is a general reference to Agricultural District boundaries; not a legal substitute for actual tax parcel information.

Boundaries as certified prior to January 2011

Open Enrollment Annual Additions are not included in this data. Check with county agencies to confirm the status of individual parcels.

MAP PROJECTION  
UTM Zone 18, NAD83 meters





# NYS Heritage Area Susquehanna



FIGURE 11

# Sole Source Aquifers in New York State



FIGURE 12

**Environmental Assessment Factors** [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

**Impact Codes:** Use an impact code from the following list to make the determination of impact for each factor.

- (1) Minor beneficial impact
- (2) No impact anticipated
- (3) Minor Adverse Impact – May require mitigation
- (4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>LAND DEVELOPMENT</b>		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The proposed project involves the construction of doweled stacked stone walls and grassed slopes above that. The proposed project would be compatible with existing land uses in the surrounding area and would not result in changes to land use. Therefore, no impacts would result.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	During construction, erosion and sediment controls would be utilized. Adherence to DEC/USACE permits will minimize turbidity. Project would halt future erosion along stream.
Hazards and Nuisances including Site Safety and Noise	2	The proposed project would not result in hazards and nuisances. All state and local construction safety procedures would be followed. Therefore, no impacts would result.
Energy Consumption	2	The proposed project would not affect energy generation or distribution. Therefore, no impact would result.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>SOCIOECONOMIC</b>		
Employment and Income Patterns	2	The actions comprising the proposed project are limited to stream bank improvements and would have no potential to affect employment opportunities or income patterns.
Demographic Character Changes, Displacement	2	The proposed project is being undertaken to provide stream bank improvements, including the construction of doweled stacked stone walls and grassed slopes above that. The project is not expected to induce any change in demographic character of the surrounding area, displace individuals or families, eliminate jobs, local businesses, or community facilities, or disproportionately affect particular populations.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>COMMUNITY FACILITIES AND SERVICES</b>		
Educational and Cultural Facilities	2	The proposed project would not introduce any new population that would increase the student population of the area. As a result, the proposed project has no potential to affect educational facilities. In addition, the proposed project would not adversely impact historic/cultural facilities.
Commercial Facilities	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not introduce any new development that would require retail services or other commercial facilities.
Health Care and Social Services	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not significantly impact social services.
Solid Waste Disposal / Recycling	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not introduce any new development that would generate solid waste.
Waste Water / Sanitary Sewers	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not introduce any new development that would generate waste water.
Water Supply	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not introduce any new development that would generate demand for water.
Public Safety - Police, Fire and Emergency Medical	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not introduce any new development that would generate demand for police, fire, or emergency medical services.

Parks, Open Space and Recreation	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not introduce any new development that would generate demand for open space resources.
Transportation and Accessibility	2	The proposed project would not introduce any new development that would require new or improved transportation connections and would not add any new demand on transportation services.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>NATURAL FEATURES</b>		
Unique Natural Features, Water Resources	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not result in any impacts to natural features or water resources.
Vegetation, Wildlife	2	The proposed project is limited to the construction of doweled stacked stone walls and grassed slopes above that to mitigate soil erosion and would not result in any adverse impacts to vegetation or wildlife.
Other Factors	2	N/A

**Additional Studies Performed:**

**Field Inspection (Date and completed by):**

Several site visits and inspections were performed by Delta Engineers, Architects and Land Surveyors.

**List of Sources, Agencies and Persons Consulted** [40 CFR 1508.9(b)]:

- Environmental Protection Agency – Greenbook  
<http://epa.gov/airquality/greenbook>
- Environmental Protection Agency – Region 2 Sole Source Aquifers  
<http://www.epa.gov/region2/water/aquifer/index.html>
- Federal Emergency Management Agency – Flood Map Center  
<https://msc.fema.gov/portal>

- Federal Emergency Management Agency Community Status Book Report – New York  
<http://www.fema.gov/cis.NY.pdf>
- “Hydrologic and Hydraulic Study for Lower Brixius Creek, Prepared for: Town of Union Planning Department,” dated June 11, 2014, prepared by Woitd Engineering and Consulting, P.C.
- National Wild and Scenic Rivers Systems  
<http://www.rivers.gov/maps/new-york.php>
- New York State Department of Agriculture and Markets  
<http://www.agriculture.ny.gov/ap/agsservices/maps>
- New York State Department of Environmental Conservation  
Letter to Thomas J. King, dated March 4, 2016
- New York State Department of Environmental Conservation – County Maps Showing Potential Environmental Justice Areas (Broome County)  
[http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/broomeej.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/broomeej.pdf)
- New York State Department of Environmental Conservation – EAF Mapper  
<http://www.dec.ny.gov/eafmapper/>
- New York State Department of Environmental Conservation – Environmental Site Remediation Database Search  
<https://www.dec.ny.gov/cfm/externalapps/derexternal/index.cfm?pageid=3>
- New York State Department of Environmental Conservation – Environmental Resource Mapper  
<http://www.dec.ny.gov/imsmaps/ERM>
- New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, New York Natural heritage Program – Information Services  
Letter dated April 28, 2016 to Nicholas Conrad
- New York State Department of State Office of Planning and Development – NYS Coastal Boundary Map  
[http://appext20.dos.ny.gov/coastal\\_map\\_public/map.aspx](http://appext20.dos.ny.gov/coastal_map_public/map.aspx)
- New York State Office of Parks, Recreation and Historic Preservation - Cultural Resource Information System  
<https://cris.parks.ny.gov>

- New York State Office of Parks, Recreation and Historic Preservation – Heritage Areas  
<http://www.nysparks.com/historic-preservation>
- New York State Office of Parks, Recreation and Historic Preservation  
Letter dated to Larry Moss, Historic Preservation Technical Specialist
- Delaware Nation  
Letters dated April 27, 2016 to Kerry Holton, President and Chet Brooks, Chief
- Oneida Nation of New York  
Letter dated April 27, 2016 to Ray Halbritter, Nation Representative
- Onondaga Nation of New York  
Letters dated April 27, 2016 to Irving Powless, Chief, Jane Joyal, Attorney at Law, Counsel to Onondaga Nation and Anthony Gonyea, Faithkeeper – Beaver Clan
- Stockbridge – Munsee Community, Board of Mohicans  
Letter dated April 27, 2016 to Shannon Holsey, President
- Tuscarora Nation of New York  
Letter dated April 27, 2016 to Leo Henry, Chief
- United States Department of Housing and Urban Development – Tribal Directory Assessment Tool  
<http://egis.hud.gov/tadat/tribal.aspx>
- United States Environmental Protection Agency  
Letter dated April 22, 2016 to Grace Musemeci, Chief, Environmental Impacts Branch
- United States Fish and Wildlife Service  
Letter dated April 29, 2016 to Robyn A. Niver, Endangered Species Biologist
- United States Fish and Wildlife Service – Coastal Barrier Resources System Mapper  
<http://www.fws.gov/cbra/maps/mapper.html>
- United States Fish and Wildlife Service – IPaC – Information, Planning, and Conservation System  
<http://ecos.fws.gov/ipac>
- United States Fish and Wildlife Service – National Wetlands Inventory – Wetland Mapper  
<http://www.fws.gov/wetlands/Data/Mapper.html>

**List of Permits Obtained or Required:**

- Protection of Waters permit and Water Quality certification from the New York State Department of Environmental Conservation
- Clean Water Act Section 404 permit from the United States Army Corps of Engineers either individual or Nationwide
- Local Floodplain Development Permit

**Public Outreach [24 CFR 50.23 & 58.43]:**

The Broome New York Rising Community Reconstruction (NYRCR) Plan identified projects that could advance a regionally-coordinated plan for resiliency in future flood events and that addresses the specific needs of the six included municipalities, including the Town of Union, to respond and recover from future disasters. Initial project recommendations were generated by the Broome NYRCR Planning Committee, which reflected Broome's diverse population and represented residents, businesses, local and county governments, educational institutions, and community organizations. The Committee conducted seven public meetings during the development of the NYRCR Broome Plan, as well as having three widely advertised public engagement events. In addition to advertised public meetings, stakeholders were encouraged to provide feedback to the Committee throughout the planning process using the NYRCR website and Facebook page.

**Cumulative Impact Analysis [24 CFR 58.32]:**

In the Broome Community Reconstruction Program Plan, the Town of Union identified 10 projects that it would like to implement to help recover and become more resilient. Aside from the proposed stream bank restoration project, the Town is proposing a cloverleaf interchange bio-retention/flood mitigation project, a refuse garage relocation, stormwater outflow pipe backflow prevention, Taft Avenue sanitary sewer basin flow metering, Valleyview Drive drainage improvements, Argone Neighborhood and South Endwell Riverfront trail project, BAE Systems floodwall improvement, Fairmont Park protective measures, and rental housing replacement. Although these projects were proposed by the Town, only the stream bank restoration project is moving forward as of the date of this review. Other projects are expected to move forward in the future.

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The cumulative environmental impacts of the project and others proposed by the Community Reconstruction Program Planning Committee are not expected.

**Alternatives** [24 CFR 58.40(e); 40 CFR 1508.9]

There was a study that analyzed the hydraulic capacity and identified deficiencies of the existing drainage system and the existing stream channel. The study also investigated conceptual improvement options and recommendations regarding possible future projects.

The hydraulic analysis of existing conditions identified that the hydraulic capacity of Patterson Creek is constrained. It was also noted that the hydraulic capacity was significantly reduced as a result of bedload deposits and debris. When examining project alternatives, it was determined that stabilization of stream banks was the most beneficial alternative. The sites selected are ones that experience high levels of flooding and drainage problems.

**No Action Alternative** [24 CFR 58.40(e)]:

Flash flooding and stream bank erosion will continue after several excessive storms, if improvements are not undertaken. Currently, there is chronic and problematic flooding along Patterson Creek. Sediment and debris will also continue to compromise the hydraulic capacity of the creek if no actions are taken. Upgrades are needed to prevent localized flooding and drainage problems. Maintaining the status quo would only contribute to continuing erosion and increased sediment deposit downstream.

**Summary of Findings and Conclusions:**

Proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream. The project will help to strengthen the existing drainage system and resolve existing problems. As shown above in the Environmental Assessment Checklist, no significant land development, neighborhood, socioeconomic, natural resources, community facilities or other direct, indirect, or cumulative impacts would result from the proposed project. As shown in the accompanying Statutory Checklists, the proposed project would comply with all relevant regulations listed in 24 CFR subparts 58.5 and 58.6.

## **Mitigation Measures and Conditions [40 CFR 1505.2(c)]**

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure
<b>Endangered Species</b>  Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	The USFWS Information, Planning and Conservation (IPaC) online planning tool Trust Resource List generated for the proposed project on March 17, 2016 (see <b>Appendix A</b> ) lists the following Federally-listed species as having the potential to occur within the vicinity of the proposed project: Northern Long-eared Bat ( <i>Myotis septentrionalis</i> ) (NLEB) - threatened.  As discussed in the consultation letter submitted to USFWS on April 28, 2016 (see <b>Appendix A</b> ), due to the potential for active season tree removal, GOSR determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.
<b>Sole Source Aquifers</b>  Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	The proposed project is located on the Clinton Street Ballpark Aquifer system. An Initial Screen/Preliminary Review was submitted to the EPA on April 22, 2016 as per the Memorandum of Understanding (MOU) between EPA and HUD dated August 24, 1990. EPA issued its approval under 40 CFR part 149 on April 15, 2016.  (See correspondence in <b>Appendix D</b> )  The project must comply with all local groundwater protection and withdrawal provisions. No negative impacts to the Sole Source Aquifer are anticipated.
<b>Permit Requirements</b>	All permit conditions listed above or otherwise required for activities under the proposed project must be adhered to.

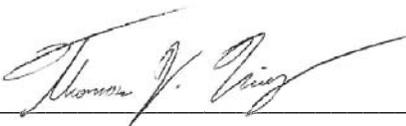
**Determination:**

**Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]

The project will not result in a significant impact on the quality of the human environment.

**Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]

The project may significantly affect the quality of the human environment.

Certifying Officer Signature:  Date: 6/30/16

Name/Title: Thomas J. King / Assistant General Counsel

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

**Standard Conditions for All Projects**

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with NEPA and other laws and Executive Orders.

This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.

**APPENDIX A**

U.S. FISH AND WILDLIFE SERVICE TRUST RESOURCES LIST  
ENDANGERED SPECIES ACT DETERMINATIONS  
NEW YORK NATURAL HERITAGE PROGRAM CORRESPONDENCE

# Patterson Creek Stream Bank Restoration

## *IPaC Trust Resources Report*

Generated March 17, 2016 10:15 AM MDT, IPaC v3.0.0

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



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U.S. Fish & Wildlife Service

# IPaC Trust Resources Report



NAME

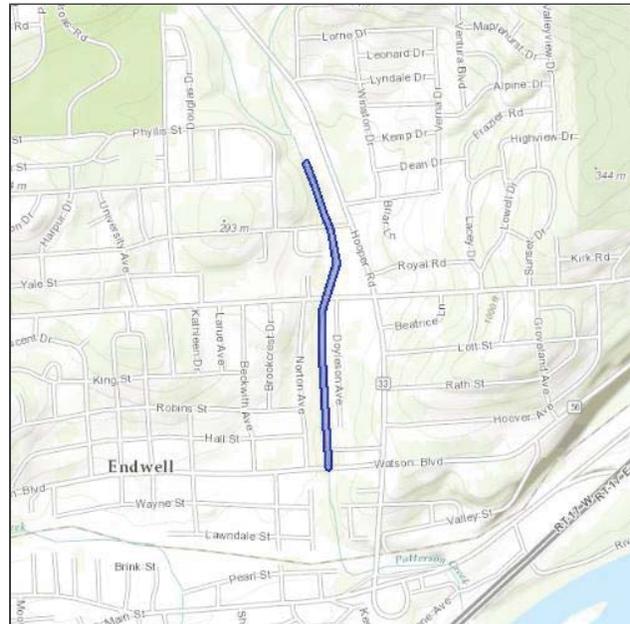
Patterson Creek Stream Bank  
Restoration

LOCATION

Broome County, New York

IPAC LINK

<http://ecos.fws.gov/ipac/project/53POW-2VOFV-FOLC2-3SYNQ-YUXI7U>



## U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

**New York Ecological Services Field Office**

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

## Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the [Endangered Species Program](#) of the U.S. Fish & Wildlife Service.

**This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.**

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

[Section 7](#) of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

**A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.**

The list of species below are those that may occur or could potentially be affected by activities in this location:

### Mammals

**Northern Long-eared Bat** *Myotis septentrionalis* Threatened

CRITICAL HABITAT

**No critical habitat** has been designated for this species.

[https://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?sPCODE=A0JE](https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=A0JE)

### Critical Habitats

**There are no critical habitats in this location**

## Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the [Bald and Golden Eagle Protection Act](#).

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.<sup>[1]</sup> There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern  
<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds  
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data  
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php>

The following species of migratory birds could potentially be affected by activities in this location:

<b>American Bittern</b> <i>Botaurus lentiginosus</i> Season: Breeding <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F3">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F3</a>	Bird of conservation concern
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> Year-round <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B008">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B008</a>	Bird of conservation concern
<b>Black-billed Cuckoo</b> <i>Coccyzus erythrophthalmus</i> Season: Breeding <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HI">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HI</a>	Bird of conservation concern
<b>Blue-winged Warbler</b> <i>Vermivora pinus</i> Season: Breeding	Bird of conservation concern

<b>Canada Warbler</b> <i>Wilsonia canadensis</i> Season: Breeding	Bird of conservation concern
<b>Golden-winged Warbler</b> <i>Vermivora chrysoptera</i> Season: Breeding <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0G4">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0G4</a>	Bird of conservation concern
<b>Kentucky Warbler</b> <i>Oporornis formosus</i> Season: Breeding	Bird of conservation concern
<b>Least Bittern</b> <i>Ixobrychus exilis</i> Season: Breeding <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B092">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B092</a>	
<b>Louisiana Waterthrush</b> <i>Parkesia motacilla</i> Season: Breeding	Bird of conservation concern
<b>Olive-sided Flycatcher</b> <i>Contopus cooperi</i> Season: Breeding <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0AN">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0AN</a>	Bird of conservation concern
<b>Peregrine Falcon</b> <i>Falco peregrinus</i> Season: Breeding <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FU">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FU</a>	Bird of conservation concern
<b>Pied-billed Grebe</b> <i>Podilymbus podiceps</i> Season: Breeding	Bird of conservation concern
<b>Prairie Warbler</b> <i>Dendroica discolor</i> Season: Breeding	Bird of conservation concern
<b>Red-headed Woodpecker</b> <i>Melanerpes erythrocephalus</i> Season: Breeding	Bird of conservation concern
<b>Short-eared Owl</b> <i>Asio flammeus</i> Season: Wintering <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HD">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HD</a>	Bird of conservation concern
<b>Willow Flycatcher</b> <i>Empidonax traillii</i> Season: Breeding <a href="https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F6">https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F6</a>	Bird of conservation concern
<b>Wood Thrush</b> <i>Hylocichla mustelina</i> Season: Breeding	Bird of conservation concern
<b>Worm Eating Warbler</b> <i>Helmitheros vermivorum</i> Season: Breeding	Bird of conservation concern

## Wildlife refuges and fish hatcheries

**There are no refuges or fish hatcheries in this location**

# Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

## DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

## DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

## DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

**There are no wetlands in this location**



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 28, 2016

Robyn A. Niver  
Endangered Species Biologist  
United States Fish and Wildlife Service  
New York Field Office (region 5)  
3817 Luker Road  
Cortland, NY 13045

Re: ESA/MBTA/BGEPA Consultation for Town of Union Patterson Creek Stream Bank Restoration Project, Town of Union, Broome County, New York

Dear Ms. Niver:

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the Department of Housing and Urban Development (HUD), is preparing an Environmental Assessment (EA) for the Town of Union Patterson Creek Stream Bank Restoration Project in the Town of Union, Broome County, New York (the "Proposed Action") (**Attachment 1 and Attachment 2**). Funding is being provided by the HUD Community Development Block Grant Disaster Recovery (CDBG-DR) program.

GOSR is initiating informal consultation with your office concerning the proposed action in accordance with the following laws: Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act of 1940 (BGEPA) (54 Stat. 240, as amended; 16 U.S.C. 668-668c).

## Program Overview

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The Proposed Action involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that,

within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of approximately three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as approximately four trees and a piece of existing concrete sitting in the stream (**Attachment 1 and Attachment 2**).

## Compliance

### **Endangered Species Act**

According to the USFWS Information, Planning and Conservation (IPaC) online planning tool and Trust Resource List generated for the proposed project (**Attachment 3**) the Northern Long-eared bat (NLEB) (*Myotis septentrionalis*) is listed as a threatened species that can be found within the vicinity of the project area. The official species list for the proposed project indicated that there is no critical habitat in the project area. There are currently no known maternity roost trees or hibernacula known to be occupied by NLEB within the vicinity of the project location. The project will include the clearing of approximately seven (7) trees that may take place during the active season (April-October); it will most likely occur during late August. However, due to the NLEB habitat preferences, the trees being removed on the project site are not likely suitable habitat.

The Northern Long-eared bat is a temperate, insectivorous bat whose life cycle can be coarsely divided into two primary phases - reproduction and hibernation. NLEB hibernate in caves or mines during winter and then emerge in early spring, with males dispersing and remaining solitary until mating season at the end of the summer, and pregnant females forming maternity colonies in which to rear young. No caves or mines occur near the project site. Summer habitat of the NLEB generally includes upland and riparian forest within heavily forested landscapes (Ford et al. 2005, Henderson et al. 2008). Roost trees are usually intact forest, close to the core and away from large clearings, roads, or other sharp edges (Menzel et al. 2002, Owen et al. 2003, Carter and Feldhammer 2005). The project site consists of a cleared stream bank lined with residential yards on either side, and the project site is surrounded by residential development.

As indicated on **Attachment 4**, GOSR determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

### **Migratory Bird Treaty Act**

According to the USFWS IPaC Trust Resource Report, there are several migratory birds of concern that could potentially be affected by the proposed project. The project takes place within the Atlantic Flyway. GOSR determined that the project would have no significant adverse impact on migratory birds or their habitat. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance.

### **Bald and Golden Eagle Protection Act**

Bald Eagle (*Haliaeetus leucocephalus*) habitat and breeding sites can be found throughout Broome County; however, the stream and residential yard habitats of the project area do not provide suitable habitat for the eagle. GOSR has determined that the proposed action would have no impact on the Bald Eagle.

If you have questions or require additional information regarding this request, please contact me at (518) 474-0647 or [Alicia.Shultz@nyshcr.org](mailto:Alicia.Shultz@nyshcr.org). Thank you for your time and consideration.

Sincerely,



Alicia Shultz  
Community Developer – Environmental Services  
New York State Homes & Community Renewal  
38-40 State St., 408N  
Hampton Plaza, Albany, NY 12207

### **Enclosures:**

Attachment 1 – Project Location Map  
Attachment 2 – Project Site Map  
Attachment 3 – IpaC Trust Resource Report  
Attachment 4 – NLEB Streamlined Consultation Form

### Literature Cited

Broders, H.G., G.J. Forbes, S. Woodley, and I.D. Thompson. 2006. Range extent and stand selection for forest-dwelling northern long-eared and little brown bats in New Brunswick. *Journal of Wildlife Management* 70: 1174-1184.

Carter, T.C., and G.A. Feldhamer. 2005. Roost tree use by maternity colonies of Indiana bats and northern long-eared bats in southern Illinois. *Forest Ecology and Management* 219:259-268.

Ford, W.M., M.A. Menzel, J.L. Rodriguez, J.M. Menzel, and J.B. Johnson. 2005. Relating bat

species presence to simple habitat measures in a central Appalachian forest. *Biological Conservation* 126: 528-539.

Foster, R.W. and A. Kurta, A. 1999. Roosting ecology of the northern bat (*Myotis septentrionalis*) and comparisons with the endangered Indiana bat (*Myotis sodalis*). *Journal of Mammalogy* 80: 659-672.

Henderson, L.E., L.J. Farrow, and H.G. Broders. 2008. Intra-specific effects of forest loss on the distribution of the forest-dependent northern long-eared bat (*Myotis septentrionalis*). *Biological Conservation* 141:1819-1828.

Menzel, M.A., S.F. Owen, W.M. Ford, J.W. Edwards, P.B. Wood, B.R. Chapman, and K.V. Miller. 2002. Roost tree selection by northern long-eared bat (*Myotis septentrionalis*) maternity colonies in an industrial forest of the central Appalachian mountains. *Forest Ecology and Management* 155:107-114.

Owen, S.F., M.A. Menzel, W.M. Ford, B.R. Chapman, K.V. Miller, J.W. Edwards, and P.B. Wood. 2003. Home-range size and habitat used by the northern myotis (*Myotis septentrionalis*). *American Midland Naturalist* 150:352-359.



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Interim Executive Director

April 22, 2016

Nicholas Conrad  
New York State Department of Environmental Conservation  
Division of Fish, Wildlife & Marine Resources  
New York Natural Heritage Program – Information Services  
625 Broadway, 5th Floor  
Albany, New York 12233-4757

Re: Natural Heritage Compliance Process Request for the Town of Union Patterson  
Creek Stream Bank Restoration Project

Dear Mr. Conrad:

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the Department of Housing & Urban Development (HUD), are currently preparing an Environmental Assessment (EA) for the Town of Union Patterson Creek Stream Bank Restoration Project (see Figure 1). GOSR is acting as HUD's non-federal representative for the purposes of conducting consultation pursuant to Section 7 of the Endangered Species Act. The proposed project includes the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream.

section involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream.

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – New York Field Office (USFWS) notice of the proposed project and to document Endangered Species Act Section 7 compliance.

### **Program Overview**

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

### **Compliance**

According to the USFWS, there is one threatened species that is potentially associated with the project site – the Northern Long eared bat (see attached list). In addition, there are several migratory birds of concern that could potentially be affected by the proposed project (see attached list).

According to information reviewed from the New York State Environmental Resource Mapper, there are no significant natural communities or rare plants or animals that are known to exist on the site. However, as the proposed project would result in the removal of trees, GOSR respectfully requests NYNHP review its records of concern for any rare or state-listed animals or plants, or significant natural communities, at this site or in its immediate vicinity.

If you have questions or require additional information regarding this request, please contact me at (646) 417-4660 or [thomas.king@stormrecovery.ny.gov](mailto:thomas.king@stormrecovery.ny.gov). Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas J. King". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Thomas J. King, Esq.  
Certifying Officer  
Governor's Office of Storm Recovery  
NYS Homes and Community Renewal

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Division of Fish, Wildlife & Marine Resources**  
**New York Natural Heritage Program**  
625 Broadway, 5<sup>th</sup> Floor, Albany, New York 12233-4757  
**Phone:** (518) 402-8935 • **Fax:** (518) 402-8925  
**Website:** [www.dec.ny.gov](http://www.dec.ny.gov)



May 20, 2016

Alicia Shultz  
New York State Homes & Community Renewal  
38-40 State Street, 408N, Hampton Plaza  
Albany, NY 12207

Re: Patterson Creek Stream Bank Restoration Project  
Town/City: Union. County: Broome.

Dear Alicia Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at [www.dec.ny.gov/about/39381.html](http://www.dec.ny.gov/about/39381.html).

Sincerely,

Andrea Chaloux  
Environmental Review Specialist  
New York Natural Heritage Program

## **APPENDIX B**

### **8-STEP PROCESS FOR FLOODPLAIN MANAGEMENT**

# **Floodplain Management & Wetland Protection Plan**

**Governor's Office of Storm Recovery  
U.S. Department of Housing and Urban Development  
Community Development Block Grant – Disaster Recovery**

**Town of Union Patterson Creek Stream Bank Restoration Project  
Town of Union, New York**

Broome County, New York

Date: May 20, 2016

**Executive Order 11988 – Floodplain Management  
Executive Order 11990 – Protection of Wetlands**

**Governor’s Office of Storm Recovery**

**Community Development Block Grant – Disaster Recovery**

**Town of Union Patterson Creek Stream Bank Restoration Project  
Town of Union, New York**

**Broome County, New York Effective Date: May 20, 2016**

This Floodplain Management and Wetlands Protection Plan meets the requirements of 24 CFR Part 55.20 and Executive Orders 11988—Floodplain Management and 11990—Protection of Wetlands - for the Town of Union Patterson Creek Stream Bank Restoration Project (Project) in the Town of Union, Broome County, New York. This Floodplain Management Plan documents the eight-step decision making for the Project and pertains to activities within the Special Flood Hazard Area (SFHA) as defined by the Federal Emergency Management Agency (FEMA), or its successors, pursuant to the National Flood Insurance Program (NFIP), or a successor program, whether advisory, preliminary, or final and wetlands as defined by 24 CFR 55.2(b)(11).

**Description of Proposed Program Activities**

The New York State (NYS) Governor’s Office of Storm Recovery (GOSR), an office of the New York State Housing Trust Fund Corporation, is the “responsible entity” in charge of administering New York State’s share of the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program pursuant to the Disaster Relief Appropriations Act of 2013. The CDBG-DR program is designed to address the needs of New York State (NYS) communities devastated by Superstorm Sandy. To date, this funding has been disbursed in three allocations. On March 5, 2013, HUD published Federal Register Notice 78 Fed. Reg. 14329, which established the requirements and processes for the first \$1.71 billion in federal CDBG-DR aid appropriated by the United States Congress and allocated to NYS for disaster relief. On November 18, 2013, HUD issued a second allocation of \$2.097 billion to NYS under Federal Register Notice 78 Fed. Reg. 69104. On October 16, 2014, HUD issued the third and final allocation of \$600 million to NYS under Federal Register Notice 79 Fed. Reg. 62194.

The Governor’s Office of Storm Recovery (GOSR) is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with HUD regulations under 24 CFR Part 55 - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that Project activity in the floodplain and wetlands would have on the human environment.

The Town of Union is requesting funding from GOSR for the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed

slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The project to be funded with up to approximately \$300,000 from the CDBG-DR program.

### **Executive Orders 11988 and 11990 & 24 CFR Part 55**

Pursuant to 24 CFR §55.20, an 8-step process for floodplain management must be completed for proposed actions taking place in a floodplain or wetland. 24 CFR §55.20 implements Executive Order (EO) 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands). EO 11988 requires federal agencies (or a state agency implementing a federal funding program) to reduce the loss of life and property caused by floods, minimize impacts of floods on human safety, health, and welfare, and preserve the natural and beneficial functions of floodplains. EO 11990 requires federal agencies (or a state agency implementing a federal funding program) to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

In addition, federal agencies are required to demonstrate that consideration of all practicable alternatives has resulted in the reduction or elimination of long- and short-term adverse impacts associated with occupancy and modifications of the floodplain or wetlands. This 8-step process includes assessing all practicable alternatives and incorporating public review.

Projects located within a Special Flood Hazard Area (SFHA) are subject to Executive Order 11988. Information on where SFHAs are located is available on Flood Insurance Rate Maps (FIRMs) published by FEMA. FEMA uses engineering studies to determine the delineation of these areas or zones subject to flooding. The relevant data source for the SFHA is the latest issued FEMA data or guidance, which includes advisory data, such as Advisory Base Flood Elevations (ABFEs) or preliminary and final FIRMs.

### **24 CFR Part 55.20 Eight-Step Process**

#### **Step One: Determine if a Proposed Action is potentially in a wetland or a floodplain**

GOSR is proposing to fund the proposed action within the 100-year Floodplain, as indicated by Flood Insurance Rate Map 3600560025B (see **Exhibit 1**). Projects located within a Special Flood Hazard Area (SFHA) as defined by FEMA are subject to EO 11988. The proposed project is not located in a state or federal designated wetland. Although the project is not located in a designated mapped wetland, it will still adhere to and be in compliance with the guidelines and regulations of Executive Order 11990, in order to minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

**Step Two: Notify public at the earliest possible time of intent to carry out Proposed Action in a floodplain or wetland, and involve the affected and interested public in the decision-making process**

Since the Proposed Action would be located in the floodplain, GOSR must publish an early notice that allows the public an opportunity to provide input into the decision to provide funding for the project. Once the early public notice and comment period is complete, GOSR will assess, consider, and respond to the comments received individually and collectively for the project file.

A 15-day “Early Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain and Wetland” was published in the Binghamton Press & Sun-Bulletin on April 27, 2016. The 15-day period expired on May 13, 2016. (see **EXHIBIT 2**)

**Step Three: Identify and evaluate practicable alternatives to locating Proposed Action in a floodplain or wetland**

There was a hydraulic analysis performed for Patterson Creek. The study analyzed the hydraulic capacity and identified deficiencies of the existing drainage system and the existing stream channel. The study investigated conceptual approaches and recommendations regarding projects to be undertaken. If the proposed action is not followed and an alternative for doing nothing is selected, then erosion will continue to destroy the stream banks. When selecting the proposed action, possible activities and locations were limited due to constraints from the locations of private property lines as well as the slopes present along the edges of the stream. The proposed action was selected as the best means of preventing continued erosion.

Addressing the streambed sedimentation requires work within the floodplain and in the adjacent wetlands along the stream corridor. There are no federal or state mapped wetlands in the project area, however, unmapped riparian buffer is presumed to exist along the Patterson Creek corridor. There are no alternatives that do not involve work in this area.

**Step Four: Identify and evaluate the direct and indirect impacts of the Proposed Action**

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream. The temporary disturbance to the stream is not expected to have any significant negative affect on this riparian buffer area.

**Step Five: Where practicable, design or modify the Proposed Action to minimize the potential adverse impacts to and from the 100-year and to restore and preserve its natural and beneficial functions and values**

Proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project will help to strengthen the existing drainage system and resolve existing problems. As revealed by the hydrologic and hydraulic study, the construction of the proposed project would not impact the 100-year floodplain adversely, but rather, would reduce problems associated with sedimentation. The natural and beneficial functions and values will be undisturbed and preserved. Benefits will be achieved without the creation of impacts or disturbance.

#### **Step Six: Re-evaluate the Proposed Action**

The proposed action has been examined and analyzed, and it has been determined that it is the most beneficial action with the least amount of impact to the environment.

#### **Step Seven: Prepare and provide the public with a finding and explanation of final decision that the floodplain or wetland is the only practicable alternative**

The project involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit.

A 7-day "Final Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain and Wetland" was published in the Binghamton Press & Sun-Bulletin on May 18, 2016. The 7-day period expired on May 25, 2016. (see **EXHIBIT 3**)

#### **Step Eight: Implement the Action**

GOSR has determined that the proposed project will have no direct or indirect adverse impacts to the floodplain and has evaluated and eliminated project alternatives in favor of proceeding with the proposed project. Prior to construction, the Town of Union must apply for and receive a Floodplain Development Permit from the appropriate local floodplain administrator(s).

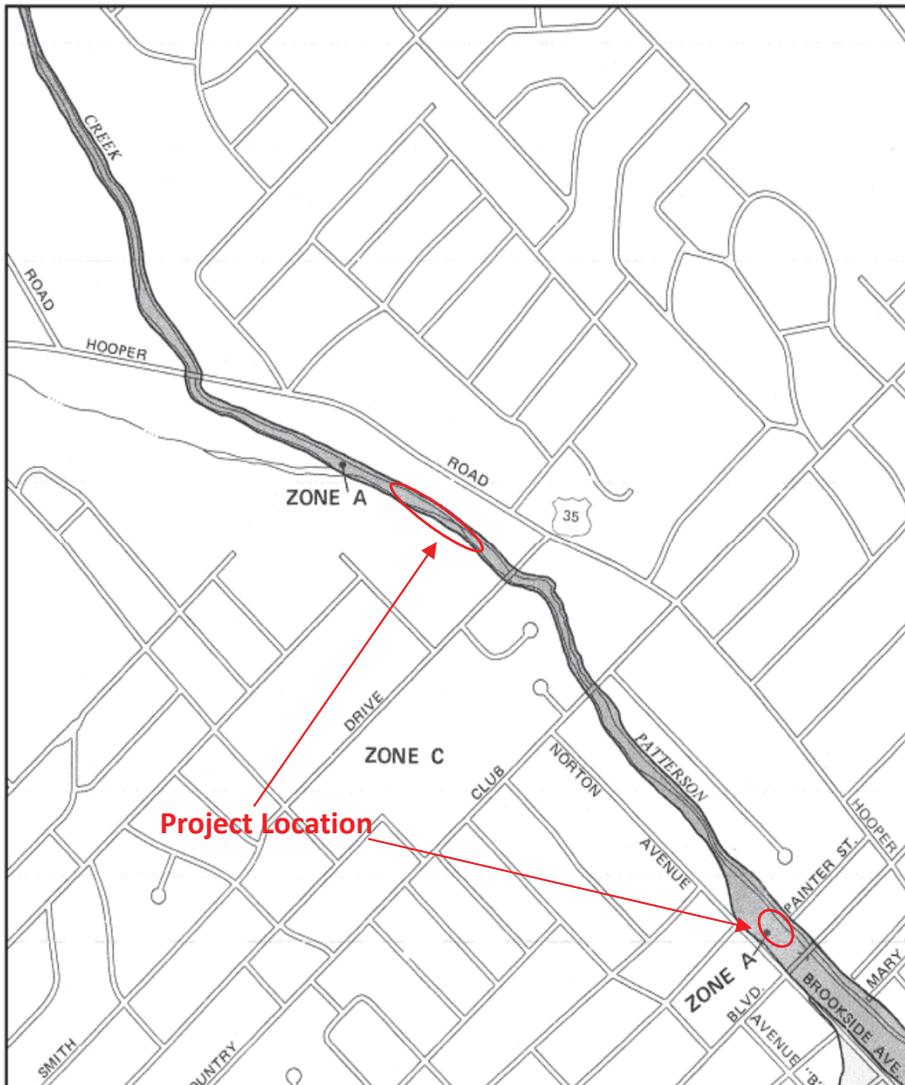
**EXHIBITS**

EXHIBIT 1 Floodplain Map

EXHIBIT 2 Copy of Early Notice

EXHIBIT 3 Copy of Final Notice

**EXHIBIT 1**  
**FLOODPLAIN MAP**



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM  
FLOOD INSURANCE RATE MAP  
TOWN OF UNION,  
NEW YORK  
BROOME COUNTY**

PANEL 25 OF 35  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

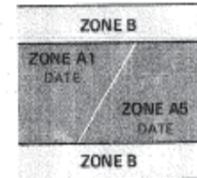
COMMUNITY-PANEL NUMBER  
360056-0025-B  
MAP REVISED  
NOVEMBER 21, 1980



federal emergency management agency  
federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

**KEY TO SYMBOLS**



ZONE DESIGNATIONS\* WITH  
DATE OF IDENTIFICATION  
i.e., 12/2/74

Base Flood Elevation Line  
with elevation in feet

513

Base Flood Elevation  
where uniform within zone

(E.L. 007' MSL)

Elevation Reference Mark

RM7 x

River Mile

M1.5

**\*EXPLANATION OF ZONE DESIGNATIONS**

A flood insurance map displays the zone designations for a community according to areas of designated flood hazards. The zone designations used by FIA are:

Zone	Explanation
A	Area of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Area of 100-year shallow flooding; flood depth 1 to 3 feet; product of flood depth (feet) and velocity (feet per second) less than 15.
A1-A30	Area of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Area of 100-year flood to be protected by a flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Area between limits of 100-year flood and 500-year flood; areas of 100-year shallow flooding where depth less than 1 foot.
C	Area outside 500-year flood.
D	Area of undetermined, but possible, flood hazards.
V	Area of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
VO	Area of 100-year shallow flooding with velocity; flood depth 1 to 3 feet; product of depth (feet) and velocity (feet per second) more than 15.
V1-V30	Area of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

**Patterson Creek Stream Bank  
Restoration Project  
Union, New York**



Flood Insurance  
Rate Map

## **EXHIBIT 2 – COPY OF EARLY NOTICE**

### **EARLY NOTICE AND PUBLIC EXPLANATION OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND**

#### **TOWN OF UNION BRIXIUS CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY**

#### **TOWN OF UNION PATTERSON CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY**

Thomas King, Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery  
99 Washington Avenue, Suite 1224  
Albany, NY 12260

#### **NOTIFICATION OF ACTIVITY IN A FLOODPLAIN**

To: All interested Agencies, Groups, and Individuals

This is to give notice that the Governor's Office of Storm Recovery (GOSR) is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that its activities in the floodplain and wetland would have on the human environment.

#### **Brixius Creek Stream Bank Restoration**

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Brixius Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project involves the placement of heavy stacked stone to mitigate soil erosion along approximately 790 feet of Brixius Creek beginning east of Christopher Street and ending at the western edge of N. McKinley Avenue. Three specific sections have been selected as areas where restoration efforts will be made. Improvements to the stream banks include the placement of stone fill, the construction of earth berms, and the construction of stone check dams. Work includes the construction of a 900 cubic foot debris basin with stone weirs. Also work is to include cleaning the invert of two road crossing culverts (approximately 250 lineal feet). The project involves 0.06 acres located in the floodplain, within the Village of Endicott.

## **Patterson Creek Stream Bank Restoration**

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The project involves 0.9 acres located in the floodplain.

Funding for the projects will be provided by the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.

A floodplains map based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and New York State Department of Environmental Conservation (NYSDEC) data have been prepared for these projects and are available for review at <http://www.stormrecovery.ny.gov/environmental-docs>.

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains or wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances Federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk.

## **PUBLIC COMMENTS**

Any individual, group, or agency may submit written comments on the proposed action or a request for further information to Thomas King, Assistant General Counsel and Certifying Officer, Governor's Office of Storm Recovery, 99 Washington Avenue, Suite 1224, Albany, NY

12260; email: NYSCDBG\_DR\_ER@nyshcr.org. All comments received by **May 13, 2016** will be considered.

Thomas King, Assistant General Counsel and Certifying Officer

April 27, 2016

AFFIDAVIT OF PUBLICATION

State of New York  
City of Binghamton  
County of Broome, ss.:

Stacie Heath being duly sworn, deposes and says that she is the Principal Clerk of the Binghamton Press Company Inc., publisher of the following newspaper printed in Johnson City published in the City of Binghamton New York and of general circulation in the Counties of Broome, Chenango, Delaware, Tioga State of New York and Susquehanna County State of Pennsylvania PRESS & SUN BULLETIN.

A notice of which the annexed is a printed copy, was published on the following dates:  
4/27/2016

Stacie Heath  
Stacie Heath

Sworn to before me this 27<sup>th</sup> day of April, 2016

JoAnn Gilmore  
Notary Public

JoAnn Gilmore  
Notary Public, State of New York  
Tioga County No. 01GI6338551  
Commission expires March 14, 2020



EARLY NOTICE AND PUBLIC EXPLANATION  
OF A PROPOSED ACTIVITY IN A 100-YEAR  
FLOODPLAIN AND WETLAND

TOWN OF UNION BRIDUS CREEK STREAM  
BANK RESTORATION PROJECT  
BROOME COUNTY, NY

TOWN OF UNION PATTERSON CREEK STREAM  
BANK RESTORATION PROJECT  
BROOME COUNTY, NY

Thomas King, Assistant General Counsel and  
Certifying Officer Governor's Office of Storm Re-  
covery  
96 Washington Avenue, Suite 1224  
Albany, NY 12260

NOTIFICATION OF ACTIVITY IN A FLOODPLAIN

To: All interested Agencies, Groups, and Individuals

This is to give notice that the Governor's Office of Storm Recovery (GOSR) is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that its activities in the floodplain and wetland would have on the human environment.

**Bridus Creek Stream Bank Restoration**

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Bridus Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project involves the placement of heavy stacked stone to mitigate soil erosion along approximately 790 feet of Bridus Creek beginning east of Christopher Street and ending at the western edge of N. McKinley Avenue. Three specific sections have been selected as areas where restoration efforts will be made. Improvements to the stream banks include the placement of stone fill, the construction of earth berms, and the construction of stone check dams. Work includes the construction of a 900 cubic foot debris basin with stone weirs. Also work is to include cleaning the invert of two road crossing culverts (approximately 250 linear feet). The project involves 0.06 acres located in the floodplain, within the Village of Endicott.

**Patterson Creek Stream Bank Restoration**

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within

## **EXHIBIT 3 – COPY OF FINAL NOTICE**

### **FINAL NOTICE AND PUBLIC EXPLANATION OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND**

#### **TOWN OF UNION BRIXIUS CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY**

#### **TOWN OF UNION PATTERSON CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY**

The New York Governor's Office of Storm Recovery (GOSR), proposes to provide federal funding to the Town of Union, as Subrecipient, for stream bank restoration work to sections of Brixius Creek and Patterson Creek. GOSR, an office of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), is responsible for the direct administration of the United States Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program in New York State. GOSR proposes to provide CDBG-DR funding to the Town of Union, New York.

#### **Brixius Creek Stream Bank Restoration**

The project involves the placement of heavy stacked stone to mitigate soil erosion along approximately 790 feet of Brixius Creek beginning east of Christopher Street and ending at the western edge of N. McKinley Avenue. Three specific sections have been selected as areas where restoration efforts will be made. Improvements to the stream banks include the placement of stone fill, the construction of earth berms, and the construction of stone check dams. Work includes the construction of a 900 cubic foot debris basin with stone weirs. Also work is to include cleaning the invert of two road crossing culverts (approximately 250 lineal feet). The project involves 0.06 acres located in the floodplain, within the Village of Endicott.

#### **Patterson Creek Stream Bank Restoration**

The project involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The project involves 0.9 acres located in the floodplain.

**Final Notification of Activities in a Floodplain:** This is to give notice that the GOSR has conducted an evaluation as required by Executive Order 11988 and executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management, to determine the potential effects that its activity in the floodplain and wetland would have on the human environment.

A floodplains map based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and New York State Department of Environmental Conservation (NYSDEC) data have been prepared for this project and are available for review at <http://www.stormrecovery.ny.gov/environmental-docs>

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains or wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances Federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk.

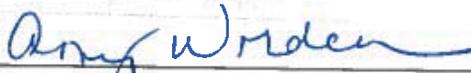
**Floodplain Management Plan:** GOSR has reevaluated the alternatives to Project activities in the floodplain and wetlands and has determined that there is no practicable alternative. A full copy of the Floodplain/Wetlands Management Plan (8-step process) documenting compliance with Executive Order 11988 can be viewed online at <http://www.stormrecovery.ny.gov/environmental-docs>. Any individual, group, or agency may submit written comments on the Floodplain Management Plan to Thomas King, Assistant General Counsel and Certifying Officer, Governor's Office of Storm Recovery, 99 Washington Avenue, Suite 1224, Albany, NY 12260; email: [NYSCDBG\\_DR\\_ER@nyshcr.org](mailto:NYSCDBG_DR_ER@nyshcr.org); or by telephone at (518) 473-0015, Monday through Friday, 9:00 a.m. to 5:00 p.m. All comments received by **May 31, 2016** will be considered.

AFFIDAVIT OF PUBLICATION

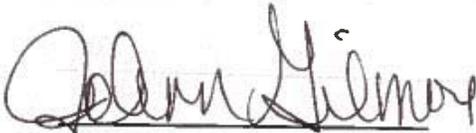
State of New York  
City of Binghamton  
County of Broome, .ss.:

Amy Worden being duly sworn, deposes and says that she is the Principal Clerk of the Binghamton Press Company Inc., publisher of the following newspaper printed in Johnson City published in the City of Binghamton New York and of general circulation in the Counties of Broome, Chenango, Delaware, Tioga State of New York and Susquehanna County State of Pennsylvania PRESS & SUN BULLETIN.

A notice of which the annexed is a printed copy, was published on the following dates:  
**May 24, 2016**

  
Amy Worden

Sworn to before me this 2<sup>nd</sup> day of June, 2016

  
Notary Public

JoAnn Gilmore  
Notary Public, State of New York  
Tioga County No. 01GI6338551  
Commission expires March 14, 2020

FINAL NOTICE AND PUBLIC EXPLANATION OF  
A PROPOSED ACTIVITY IN A 100-YEAR FLOOD  
PLAIN AND WETLAND

TOWN OF UNION BRISIUS CREEK STREAM  
BANK RESTORATION PROJECT  
BROOME COUNTY, NY

TOWN OF UNION PATTERSON CREEK STREAM  
BANK RESTORATION PROJECT  
BROOME COUNTY, NY

The New York Governor's Office of Storm Recovery (GOSR), proposes to provide federal funding to the Town of Union, as Subrecipient, for stream bank restoration work to sections of Brisius Creek and Patterson Creek. GOSR, an office of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), is responsible for the direct administration of the United States Department of Housing and Urban Development (HUD) Community Development Block Grant - Disaster Recovery (CDBG-DR) program in New York State. GOSR proposes to provide CDBG-DR funding to the Town of Union, New York.

**Brisius Creek Stream Bank Restoration**  
The project involves the placement of heavy stacked stone to mitigate soil erosion along approximately 790 feet of Brisius Creek beginning east of Christopher Street and ending at the western edge of N. McKinley Avenue. Three specific sections have been selected as areas where restoration efforts will be made. Improvements to the stream banks include the placement of stone fill, the construction of earth berms, and the construction of stone check dams. Work includes the construction of a 900 cubic foot debris basin with stone weirs. Also work is to include cleaning the invert of two road crossing culverts (approximately 250 lineal feet). The project involves 0.06 acres located in the floodplain, within the Village of Endicott.

**Patterson Creek Stream Bank Restoration**  
The project involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The project involves 0.9 acres located in the floodplain.

Final Notification of Activities in a Floodplain: This is to give notice that the GOSR has conducted an evaluation

<http://www.stormreco>  
Individual, group, or agency  
on the Floodplain Management Plan 1071 from  
tant General Counsel and Certifying Officer, Governor's Office of Storm Recovery, 99 Washington Avenue, Suite 1224, Albany, NY 12260, email: NYSCDBG\_DR\_LEADER@nysher.org, or by telephone at (518) 473-0015, Monday through Friday, 9:00 a.m. to 5:00 p.m. All comments received by May 31, 2016 will be considered.  
5/24/2016

RECEIVED

JUN 07 2016

LIRO ENGINEERS, INC.



# TOWN OF UNION

## Department Of Planning

Paul A. Nelson, Director

May 19, 2016

Paul Nelson, Planning Director  
Town of Union Planning Department  
3111 E. Main Street  
Endwell, NY 13760

Re: Special Permit for Development in the Floodplain  
Patterson Creek Stream Bank Improvements/Restoration  
Repair and stabilization of eroded banks along two sections of Patterson  
Creek at the following locations:

Property Tax Map Numbers between Watson Boulevard and Country Club  
Road:

142.17-1-10 through -12

Property Tax Map Numbers between Smith Drive and the East Side of the  
Creek

Northward: 142.09-1-8 through -17, and 142.09-1-45

Dear Mr. Nelson:

On Tuesday, May 17, 2016, the Town of Union Planning Board approved the Negative Declaration under SEQRA, and the Special Permit for development in the floodplain for the Patterson Creek Restoration project.

Respectfully,

Marina A. Lane  
Senior Planner

Cc: R. Sotak, Supervisor  
L. Caforio, C.P.W.  
G. Springer, Town Clerk  
A. Pope, Town Attorney  
L. Zier, # BC Case# 239-2016-062

3111 East Main Street • Endwell • New York • 13760-5990

Rental Assistance (607) 786-2985 • Planning & Community Development (607) 786-2975 • TTY (607) 786-2915  
Fax (607) 748-0041 • World Wide Web: [www.townofunion.com](http://www.townofunion.com) • E-Mail: [cdbg@townofunion.com](mailto:cdbg@townofunion.com)

**APPENDIX C**

HISTORIC AND ARCHAEOLOGICAL PRESERVATION DETERMINATION



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

May 27, 2016

Mr. Larry Moss  
Historic Preservation Technical Specialist  
New York State Office of Parks, Recreation and Historic Preservation  
Division of Historic Preservation  
Peebles Island  
P.O. Box 189  
Waterford, New York 12188-0189

Re: Section 106 Compliance for Town of Union Patterson Creek Stream Bank Restoration Project (Broome County, NY)

Dear Mr. Moss:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR), an office of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"), is serving as the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and request for consultation.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. A consultation request for the project described herein will also be sent to the Oneida nation of New York, the Delaware Nation, the Delaware Tribe of Indians, the Onondaga Nation of New York, the Stockbridge-Munsee Community, Band of Mohicans, and the Tuscarora Nation of New York. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action.

Area of Potential Effect: GOSR proposes to fund an application for stream bank restoration work to sections of Patterson Creek, west of Hooper Road, one section approximately 205 feet in length beginning 85 feet north of Watson Boulevard, and another section approximately 650 feet in length beginning 200 feet north of Smith Drive, in the Town of Union, New York. A map depicting the area of potential effect is enclosed with this letter.

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

Proposed Project Description: The project includes construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream.

The purpose of this letter is to initiate consultation pursuant to Section 106 of the NHPA per the implementing regulations at 36 Code of Federal Regulations (CFR) Part 800. GOSR respectfully requests your review of the proposed project described herein. If you have any questions or require additional information regarding this request, please feel free to contact me at (646) 417-4660 or via email at [Thomas.King@stormrecovery.ny.gov](mailto:Thomas.King@stormrecovery.ny.gov). Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas J. King". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Thomas J. King  
Assistant General Counsel and Certifying Officer

**Enclosures:**  
Project Location Maps



## Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO  
Governor

ROSE HARVEY  
Commissioner

May 10, 2016

Thomas King  
Governor's Office of Storm Recovery  
99 Washington Ave, Suite 1224  
Albany, NY 12231

Re: HTF/ GOSR/ NY Rising Program  
Patterson Creek Stream Bank Restoration Project  
Patterson Creek, west of Hooper Road, north of Watson Boulevard & north of Smith Drive,  
Town of Union/ Broome County

16PR2808

Dear Mr. King:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with Title 54, Section 306108 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/ Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based on this review, the opinion of the SHPO is that there will be No Historic Properties Affected by the proposed undertaking.

If I can be of further assistance, please contact me at (518) 268-2187 or [Larry.moss@parks.ny.gov](mailto:Larry.moss@parks.ny.gov)

Sincerely,

Larry K Moss, Historic Preservation Technical Specialist  
CC: Mary Barthelme  
Alicia Shultz, NYSDHR  
Christopher Maby, Delta-EAS  
Melanie Osterhout, Ospa Engineering

---

Division for Historic Preservation

P.O. Box 189, Waterford, New York 12188-0189 • (518) 237-8643 • [www.nysparks.com](http://www.nysparks.com)



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Kerry Holton, President  
Delaware Nation  
P.O. Box 825  
Anadarko, OK 73005

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear President Kerry Holton:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. GOSR proposes to provide funding for the restoration of a stream bank along sections of Patterson Creek in the Town of Union, New York. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 302706(b)), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

Area of Potential Effect: GOSR proposes to fund an application for stream bank restoration work to sections of Patterson Creek, west of Hooper Road, one section approximately 205 feet in length beginning 85 feet north of Watson Boulevard, and another section approximately 650 feet in length beginning 200 feet north of Smith Drive, in the Town of Union, New York. A map depicting the area of potential effect is enclosed with this letter.

Proposed Project Description: The project includes the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal

of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream.

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

Pursuant to NHPA Section 106, GOSR has initiated consultation with the State Historic Preservation Office (SHPO) concerning this Project and its potential to affect historic resources that are listed on or eligible for listing on the NRHP. No comments have been received to date. GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Thomas J. King, Esq.  
Deputy General Counsel and Certifying Officer  
Governor's Office of Storm Recovery  
99 Washington Avenue  
Suite 1224  
Albany, New York 12260

If you have any questions or require additional information regarding this request, please feel free to contact me at (646) 417-4660 or via email at [Thomas.King@stormrecovery.ny.gov](mailto:Thomas.King@stormrecovery.ny.gov). Thank you for your time and consideration.

Sincerely,



Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps

**Electronic letter sent to:**

Nekole Alligood, Cultural Preservation Director  
Delaware Nation  
P.O. Box 825  
Anadarko, OK 73005



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Chet Brooks, Chief  
Delaware Tribe of Indians, Delaware Tribal Headquarters  
5100 Tuxedo Blvd  
Bartlesville, OK 74006

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Chief Chet Brooks:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Tribe to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. GOSR proposes to provide funding for the restoration of a stream bank along sections of Patterson Creek in the Town of Union, New York. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 302706(b)), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

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Thomas J. King, Esq.  
Deputy General Counsel and Certifying Officer  
Governor's Office of Storm Recovery  
99 Washington Avenue  
Suite 1224  
Albany, New York 12260

If you have any questions or require additional information regarding this request, please feel free to contact me at (646) 417-4660 or via email at [Thomas.King@stormrecovery.ny.gov](mailto:Thomas.King@stormrecovery.ny.gov). Thank you for your time and consideration.

Sincerely,



Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps

**Electronic letter sent to:**

Susan Bachor  
Delaware Tribe of Indians Historic Preservation Representative  
P.O. Box 64  
Pocono Lake, PA 73005



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Shannon Holsey, President  
Stockbridge-Munsee Community, Band of the Mohicans  
N8476 Moh He Con Nuck Road  
Bowler, WI 54416

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear President Shannon Holsey:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Community to respond with any concerns or comments.

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During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

Pursuant to NHPA Section 106, GOSR has initiated consultation with the State Historic Preservation Office (SHPO) concerning this Project and its potential to affect historic resources that are listed on or eligible for listing on the NRHP. No comments have been received to date. GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Community, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Thomas J. King, Esq.  
Deputy General Counsel and Certifying Officer  
Governor's Office of Storm Recovery  
99 Washington Avenue  
Suite 1224  
Albany, New York 12260

If you have any questions or require additional information regarding this request, please feel free to contact me at (646) 417-4660 or via email at [Thomas.King@stormrecovery.ny.gov](mailto:Thomas.King@stormrecovery.ny.gov). Thank you for your time and consideration.

Sincerely,



Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps

**Electronic letter sent to:**

Bonney Hartley  
THPO, New York Office  
Stockbridge-Munsee Community, Band of the Mohicans  
65 1st Street  
Troy, NY 12180



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Mr. Ray Halbritter, Nation Representative  
Oneida Nation of New York  
5218 Patrick Road  
Verona, New York 13478

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Ray Halbritter:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. GOSR proposes to provide funding for the restoration of a stream bank along sections of Patterson Creek in the Town of Union, New York. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 302706(b)), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

Area of Potential Effect: GOSR proposes to fund an application for stream bank restoration work to sections of Patterson Creek, west of Hooper Road, one section approximately 205 feet in length beginning 85 feet north of Watson Boulevard, and another section approximately 650 feet in length beginning 200 feet north of Smith Drive, in the Town of Union, New York. A map depicting the area of potential effect is enclosed with this letter.

Proposed Project Description: The project includes the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal

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99 Washington Avenue  
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Albany, New York 12260

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Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps

**Electronic letter sent to:**  
Jesse Bergevin, Historic Resources Specialist  
Oneida Indian Nation  
2037 Dream Catcher Plaza  
P.O. Box 662  
Oneida, NY 13421-0662



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Mr. Ray Halbritter, Nation Representative  
Oneida Nation of New York  
5218 Patrick Road  
Verona, New York 13478

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99 Washington Avenue  
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Thomas J. King  
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Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps

**Electronic letter sent to:**  
Jesse Bergevin, Historic Resources Specialist  
Oneida Indian Nation  
2037 Dream Catcher Plaza  
P.O. Box 662  
Oneida, NY 13421-0662



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Irving Powless, Chief  
Onondaga Nation  
RR#1, Box 319-B  
Onondaga Nation via Nedrow, NY 13120

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Chief Irving Powless:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

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Governor's Office of Storm Recovery  
99 Washington Avenue  
Suite 1224  
Albany, New York 12260

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Sincerely,



Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Anthony Gonyea, Faithkeeper-Beaver Clan  
Onondaga Nation  
RR#1, Box 245  
Onondaga Nation via Nedrow, NY 13120

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Mr. Anthony Gonyea:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

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During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

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Governor's Office of Storm Recovery  
99 Washington Avenue  
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Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Ms. Thane Joyal  
Attorney at Law, Counsel to Onondaga Nation  
512 Jamesville Avenue  
Syracuse, NY 13210

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Ms. Thane Joyal:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

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Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

William Fisher, Chief  
Seneca-Cayuga Nation  
PO Box 453220  
Grove, OK 74345-3220

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Chief William Fisher:

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Sincerely,



Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps

**Electronic letter sent to:**  
Paul Barton, THPO Representative  
Seneca-Cayuga Nation  
PO Box 453220  
Grove, OK 74345-3220



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 27, 2016

Leo Henry, Chief  
Tuscarora Nation of New York  
2006 Mt. Hope Road, Tuscarora Nation  
Lewiston, NY 14092

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Chief Leo Henry:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery (“CDBG-DR”) funds from the United States Department of Housing and Urban Development (“HUD”). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. GOSR proposes to provide funding for the restoration of a stream bank along sections of Patterson Creek in the Town of Union, New York. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 302706(b)), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

Area of Potential Effect: GOSR proposes to fund an application for stream bank restoration work to sections of Patterson Creek, west of Hooper Road, one section approximately 205 feet in length beginning 85 feet north of Watson Boulevard, and another section approximately 650 feet in length beginning 200 feet north of Smith Drive, in the Town of Union, New York. A map depicting the area of potential effect is enclosed with this letter.

Proposed Project Description: The project includes the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal

of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream.

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

Pursuant to NHPA Section 106, GOSR has initiated consultation with the State Historic Preservation Office (SHPO) concerning this Project and its potential to affect historic resources that are listed on or eligible for listing on the NRHP. No comments have been received to date. GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Thomas J. King, Esq.  
Deputy General Counsel and Certifying Officer  
Governor's Office of Storm Recovery  
99 Washington Avenue  
Suite 1224  
Albany, New York 12260

If you have any questions or require additional information regarding this request, please feel free to contact me at (646) 417-4660 or via email at [Thomas.King@stormrecovery.ny.gov](mailto:Thomas.King@stormrecovery.ny.gov). Thank you for your time and consideration.

Sincerely,



Thomas J. King  
Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

Enclosures:  
Project Location Maps

**Electronic letter sent to:**

Mr. Bryan Printup, Nation Rep. for Section 106  
Tuscarora Nation of New York  
5226 E. Walmore Road, Tuscarora Nation  
Lewiston, NY 14092

# ONEIDA INDIAN NATION



JESSE J. BERGEVIN  
HISTORIC RESOURCES SPECIALIST

DIRECT DIAL: (315) 829-8463  
FACSIMILE: (315) 829-8473  
E-MAIL: [jbergevin@oneida-nation.org](mailto:jbergevin@oneida-nation.org)

## ONEIDA NATION HOMELANDS

May 9, 2016

Thomas J. King, Esq.  
Deputy General Counsel and Certifying Officer  
Governor's Office of Storm Recovery  
99 Washington Avenue  
Suite 1224  
Albany, New York 12260  
*(Transmitted by email)*

Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Mr. King,

On April 27, 2016, the Oneida Indian Nation (the "Nation") received an email with documentation from the Governor's Office of Storm Recovery regarding the proposal to fund, through the Community Development Block Grant Disaster Recovery Program, stream bank restoration work to sections of Patterson Creek (the "Project") in the Town of Union, New York.

I have reviewed the information provided and it appears the Project lies outside of the Oneida's aboriginal territory.

Please feel free to contact me at (315) 829-8463 with any questions.

Very truly yours,

ONEIDA INDIAN NATION

Jesse J. Bergevin



Delaware Tribe Historic Preservation Representatives  
P.O. Box 64  
Pocono Lake, PA 18347  
[temple@delawaretribe.org](mailto:temple@delawaretribe.org)

May 24, 2016

Governor's Office of Storm Recovery  
Bureau of Environmental Review and Assessment  
Att: Thomas King  
99 Washington Ave., Suite 1224  
Albany, NY 12260

**Re: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project**

Mr. King,

Thank you for sending the Delaware Tribe information regarding the above referenced project. Our review indicates that there are no known religious or culturally significant sites within this area. We have no objection to the project.

We ask that in the event that a concentration of artifacts and/or in the unlikely event any human remains are accidentally unearthed during the course of the project that all work is halted until the Delaware Tribe of Indians is informed of the inadvertent discovery and a qualified archaeologist can evaluate the find.

We appreciate your cooperation and look forward to working together on our shared interests in preserving Delaware cultural heritage. If you have any questions, feel free to contact this office by phone at (610) 761-7452 or by e-mail at [temple@delawaretribe.org](mailto:temple@delawaretribe.org).

Sincerely,

A handwritten signature in black ink on a light-colored background. The signature appears to be "Susan Bachor" written in a cursive style.

Susan Bachor  
Delaware Tribe Historic Preservation Representative

## Barthelme, Mary (STORMRECOVERY)

---

**From:** Bonney Hartley <Bonney.Hartley@mohican-nsn.gov>  
**Sent:** Tuesday, May 10, 2016 11:14 AM  
**To:** Barthelme, Mary (STORMRECOVERY)  
**Subject:** RE: Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

*ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.*

Hello Mary,

I have completed review of the Patterson Creek Stream Bank Restoration Project, Town of Union, Broome County NY. On behalf of Stockbridge-Munsee Mohican Tribe I confirm we do not have significant cultural resource concerns judging from the lack of known cultural sites in the APE. However, as always, should any cultural resources inadvertently be discovered during project construction we request immediate notice.

Thank you,  
Bonney

*Bonney Hartley*

Tribal Historic Preservation Officer  
Stockbridge-Munsee Mohican Tribal Historic Preservation  
New York Office  
65 1st Street  
Troy, NY 12180

(518) 244-3164

[Bonney.Hartley@mohican-nsn.gov](mailto:Bonney.Hartley@mohican-nsn.gov)

[www.mohican-nsn.gov](http://www.mohican-nsn.gov)

*Physical Address: 37 1<sup>st</sup> Street*

---

**From:** Barthelme, Mary (STORMRECOVERY) [mailto:Mary.Barthelme@stormrecovery.ny.gov]  
**Sent:** Wednesday, April 27, 2016 3:16 PM  
**To:** Bonney Hartley  
**Cc:** Shultz, Alicia (NYSHCR)  
**Subject:** Section 106 Compliance for the Town of Union Patterson Creek Stream Bank Restoration Project (Town of Union, Broome County, New York)

Dear Bonney,

Please see the attached updated consultation for the above-mentioned project.

A hard copy is being sent today by mail. Please let me know if you have any questions.

Thank you,

Mary Barthelme

**Mary Barthelme**

Environmental and Historic Preservation Specialist

Bureau of Environmental Review and Assessment

Governor's Office of Storm Recovery

99 Washington Avenue Suite 1224

Albany, New York 12260

Office: (518) 473-0154

Cell: (646) 706-6748

[Mary.Barthelme@stormrecovery.ny.gov](mailto:Mary.Barthelme@stormrecovery.ny.gov)

**APPENDIX D**

SOLE SOURCE AQUIFER



# Governor's Office of Storm Recovery



Andrew M. Cuomo  
Governor

Lisa Bova-Hiatt  
Executive Director

April 22, 2016

Ms. Grace Musemeci  
Chief, Environmental Impacts Branch  
U.S. Environmental Protection Agency  
Region II Main Regional Office  
290 Broadway, 25th Floor New York, NY 10007

RE: CDBG-DR Funding Application, Town of Union Patterson Creek Stream Bank Restoration

Dear Ms. Musemeci:

The New York State Governor's Office of Storm Recovery (GOSR) received a funding application for the Town of Union Patterson Creek Stream Bank Restoration Project, within the Town of Union, Broome County, New York. The project involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream.

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), GOSR is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant - Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD") and is the entity responsible for compliance with the HUD NEPA environmental review procedures set forth in 24 C.F.R. Part 58. 24 C.F.R. Part 58 requires GOSR to review projects for conformance with the Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300(f) et seq., and 21 U.S.C. 349) as amended, and Environmental Protection Agency (EPA) regulations pertaining to Sole Source Aquifers found at 40 C.F.R. Part 149.

In accordance with the Memorandum of Understanding ("MOU") between EPA and HUD dated August 24, 1990, GOSR hereby requests an Initial Screen/Preliminary Review for the Belgrave Water Pollution Control District Outfall Project. Please review the attached documentation, including Attachment 2.A and 3 to the MOU. Responses can be sent to me via email at [Thomas.King@stormrecovery.ny.gov](mailto:Thomas.King@stormrecovery.ny.gov). In accordance with the MOU, a non-response within fifteen days shall constitute a favorable review of the project/activity. If you have any questions, please call me at (518) 473-0015.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas J. King". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Thomas J. King  
Assistant General Counsel and Certifying Officer

Attachments

## **Project Description**

The project involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream.

Figure 1 shows the regional location of the project. Figure 2 shows an aerial view of the project site.

## **Public Water Supply**

The proposed project will not generate any additional demand for water.

There are no public water supply wells located within a one half mile radius of the project location, however, a portion of the project area is located within the Source Water Assessment Program (SWAP) areas for two (2) wells located in the vicinity of the project area.

Figure 3 shows the locations of all public water wells located within a one half mile radius of the project site, as well as in the immediate vicinity.

ATTACHMENT 2.A

**NON-HOUSING/PROJECT ACTIVITY INITIAL SCREEN CRITERIA**

The following list of criteria questions are to be used as an initial screen to determine which **non-housing** projects/activities should be forwarded to the Environmental Protection Agency (EPA) for Preliminary Sole Source Aquifer (SSA) Review. (For housing projects/activities see Attachment 2.B) If any of the questions are answered affirmatively, Attachment 3, SSA Preliminary Review Requirements, should also be completed. The application/final statement, this Attachment, Attachment 3, and any other pertinent information should then be forwarded to EPA at the address below.

Any project/activity not meeting the criteria in this Attachment, but suspected of having a potential adverse effect on the Sole Source Aquifer should also be forwarded.

CRITERIA QUESTIONS	YES	NO	N/A
1. Is the project/activity located within a currently designated or proposed groundwater sensitive area such as a special Ground Water Protection Area, Critical Supply Area, Wellhead Protection Area, etc.? [This information can be obtained from the County or Regional Planning board, the local health department, the State health department or the State environmental agency.]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the project/activity located within a one half mile radius (2640 feet) of a current or proposed public water supply well or wellfield? [This information can be obtained from the local health department, the State health department or the State environmental agency.]	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Will the project/activity include or directly cause (check appropriate items):

	YES	NO	N/A
construction or expansion of solid waste disposal, recycling or conversion facilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
construction or expansion or closure of landfills	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
construction or expansion of water supply facilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
construction or expansion of on-site wastewater treatment plants or sewage trunk lines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
construction or expansion of gas or petroleum trunk lines greater than 1320 feet	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
construction or expansion of railroad spurs or similar extensions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
construction or expansion of municipal sewage treatment plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4. Will the project/activity include storage or handling of any hazardous constituents as listed in Attachment 4, Hazardous Constituents	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Will the project/activity include bulk storage of petroleum in underground or above ground tanks in excess of 1100 gallons? (Please give what assurance they are done in a proper manner.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Will the project/activity require a federal or state discharge elimination permit or modification of an existing permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This attachment was completed by:

Name: Thomas King  
Title: Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery  
Address: 99 Washington Avenue, Suite 1224  
Albany, NY 12260  
Telephone number: (518) 473-0015  
Date: April 22, 2016

ATTACHMENT 3

SSA PRELIMINARY REVIEW INFORMATION REQUIREMENTS

Where currently available, the information in this Attachment should be provided to the Environmental Protection Agency (see address below) along with the application/final statement; Attachment 2.A, Non-Housing Initial Screen Criteria or Attachment 2.B, Housing Initial Screen Criteria; and any other information which may be pertinent to a Sole Source Aquifer review. Where applicable, indicate the source of your information.

<b>I. Project/Activity Location</b>	<b>Enclosed?</b>	
	Yes	No
1. Provide the geographic location and total acreage of the project/activity site. Include a site map which identifies the site in relation to the surrounding area. [Examples of maps which can be used include: 1:24,000 or 1:25,000 U.S. Geological Survey quadrangle sheet, Hagstroms Street Map.]	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. If applicable, identify which groundwater sensitive areas (Special Ground Water Protection Area, Critical Supply Area, Wellhead Protection Area, etc.) the project/activity is located within or adjacent to. [This information may be obtained from the County or Regional planning board, the local health department, the State health department or the State environmental agency.]	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>II. Nature of Project/Activity</b>	<b>Enclosed?</b>	
	Yes	No
3. Provide a general narrative describing the project/activity including but not limited to: type of facility; type of activities to be conducted; number and type of units; number of residents, etc. Provide the general layout of the project/activity site and site-plan if available.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>III. Public Water Supply</b>	<b>Enclosed?</b>	
	Yes	No
4. Provide a description of plans to provide water supply.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5. Provide the location of nearby existing or proposed public water supply wells or wellfields within one half mile radius (2640 feet) of the project/activity. Provide the name of the supplier(s) of those wells or wellfields. This information should be available from the local health department, State health department or the State environmental agency.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
---	-------------------------------------	--------------------------

IV. Wastewater and Sewage Disposal	Enclosed?	
	Yes	No
6. Provide a description of plans to handle wastewater and sewage disposal. If the project/activity is to be served by existing public sanitary sewers provide the name of the sewer district.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Provide a description of plans to handle storm water runoff.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Identify the location, design, size of any on-site recharge basins, dry wells, leaching fields, retention ponds, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. Use, Storage, Transport of Hazardous or Toxic Materials <i>(Applies only to non-housing projects/activities)</i>	Enclosed?	
	Yes	No
9. Identify any products listed in Attachment 4, Hazardous Constituents, of the Housing and Urban Development-Environmental Protection Agency Memorandum of Understanding which may be used, stored, transported, or released as a result of the project not related to construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Identify the number and capacity of underground storage tanks at the project/activity site. Identify the products and volume to be stored, and the location on the site..	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Identify the number and capacity of above ground storage tanks at the project/activity site. Identify the products and volume to be stored, and the location on the site	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This form was completed by:

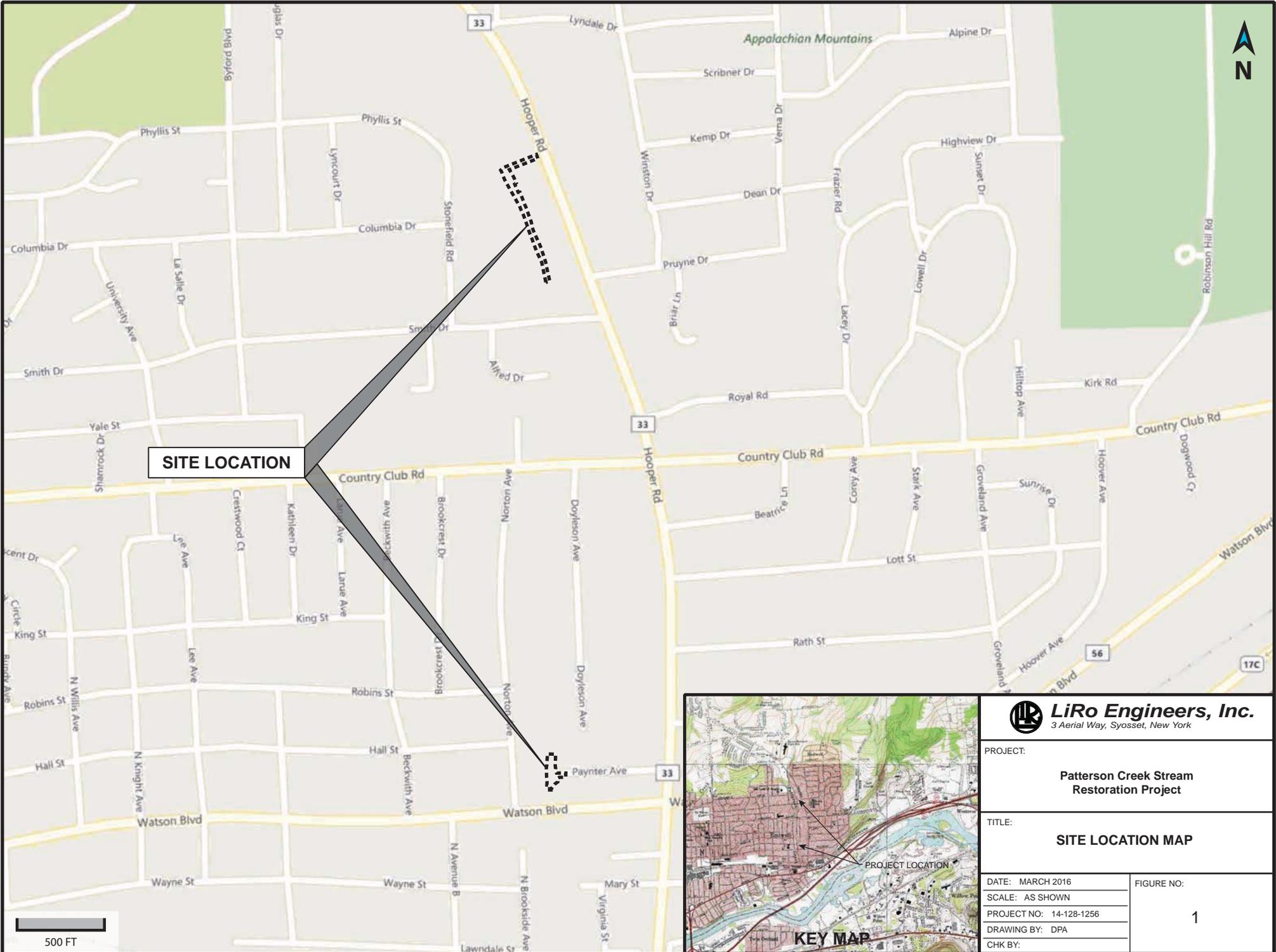
Name: Thomas King

Title: Assistant General Counsel and Certifying Officer  
Governor's Office of Storm Recovery

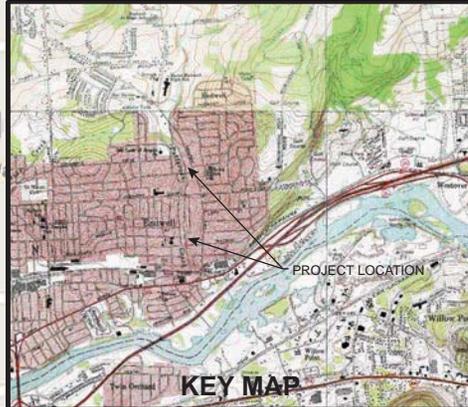
Address: 99 Washington Avenue, Suite 1224  
Albany, NY 12260

Telephone number: (518) 473-0015

Date: April 22, 2016



**SITE LOCATION**



**LiRo Engineers, Inc.**  
3 Aerial Way, Syosset, New York

PROJECT:  
**Patterson Creek Stream Restoration Project**

TITLE:  
**SITE LOCATION MAP**

DATE: MARCH 2016  
SCALE: AS SHOWN  
PROJECT NO: 14-128-1256  
DRAWING BY: DPA  
CHK BY:

FIGURE NO:  
**1**

500 FT





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 2  
290 BROADWAY  
NEW YORK, NY 10007-1866

MAY 12 2016

Mr. Thomas J. King  
Director, Bureau of Environmental Review  
and Assessment  
Assistant General Counsel  
Governor's Office of Storm Recovery  
99 Washington Avenue, Suite 1224  
Albany, NY 12260

Dear Mr. King:

This is in response to your letter dated April 22, 2016 requesting a Sole Source Aquifer (SSA) review of the proposed "Patterson Creek Stream Bank Restoration" project to be located in the Town of Union, Broome County, New York. The project is to receive funding from the U.S. Department of Housing and Urban Development's Community Development Block Grant – Disaster Recovery program (CDBG-DR). The project site is located in the Clinton Street Ballpark Aquifer System, designated by the U.S. Environmental Protection Agency (EPA) as a Sole Source Aquifer on January 14, 1985 (citation 50 CFR 2025). Therefore, our review has been conducted in accordance with Section 1424(e) of the Safe Drinking Water Act (SDWA).

Patterson Creek is a tributary of the Susquehanna River. The project involves work along two non-contiguous sections of Patterson Creek. The creek is approximately 31 feet wide in the two non-adjacent sections where work is proposed. We understand that the two stream segments where restoration work will be done have experienced flooding problems; the sections were selected by the town engineer and other local officials.

Work in the first section of Patterson Creek, approximately 650 feet in length (beginning 200 feet north of Smith Drive) includes the following:

- Construction of a 14-foot high retaining wall consisting of layers of stacked stone pinned to underlying stones by 1-inch diameter steel rebars ("doweled stacked stone");
- Removal of a failing retaining wall;
- Removal of four trees; and
- Removal of a piece of existing concrete sitting in the stream.

Work in the second section of Patterson Creek, approximately 205 feet long, and to the south of the first section (beginning 85 feet north of Watson Boulevard), includes the following:

- Construction of an 8-foot high retaining wall consisting of layers of stacked stone pinned to underlying stones by 1-inch diameter steel rebars ("doweled stacked stone");
- Removal of three trees;

- Removal of a low hanging branch which extends into the stream channel and acts as a debris catch; and
- Removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction.

Both of the aforementioned doweled stacked stone retaining walls will be constructed to a height above the 100 year event, or equal to the adjoining backyard and grassed slope above. We note that the stone masonry will be in compliance with New York State Department of Transportation (NYSDOT) specifications. We understand that fill material – not yet selected by the contractor – will be introduced behind both walls. We note that this material will also meet NYSDOT specifications. The information provided indicates that erosion and sedimentation will be minimized by the use of silt fences and other constructs, and the area will be reseeded. We recommend planting native vegetation in the project area to the extent feasible. Please see our recommendations below on environmentally-friendly landscaping as well as on stormwater and Low Impact Development.

Based on the information provided, the project satisfies the requirements of Section 1424(e) of the SDWA. Please be advised that meeting the requirements of 1424(e) does not preclude the need to meet National Environmental Policy Act (NEPA) requirements to address direct, indirect, and cumulative impacts. This review does not constitute a review under Section 309 of the Clean Air Act; EPA therefore reserves the right to review additional environmental documents on this project.

EPA offers the following for your consideration to reduce environmental impacts and to create a more sustainable project.

*Clean Diesel:*

Implement diesel controls, cleaner fuel, and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other construction activities, including:

- Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and
- Use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts, repowers, or newer, cleaner equipment.

For more information on diesel emission controls in construction projects, please see: <http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf>

*Stormwater:*

We emphasize the importance of Low Impact Development (LID) principles such as minimizing effective imperviousness to create site drainage, and the planting of native and non-invasive vegetation on the project site for stormwater management purposes. Other LID practices can include bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. For further information, please see the following website:

<http://water.epa.gov/polwaste/green/>

*Encourage cost-efficient, environmentally friendly landscaping:*

There are many benefits to making greener landscaping choices. For additional information, please see the following website:

<http://www2.epa.gov/greenerproducts/identifying-greener-landscaping-choices>

*Energy-Efficiency:*

Energy-efficient technologies should be incorporated into all aspects of the project. Please see the following website: <http://www.energystar.gov>

If you have any questions concerning this matter or would like additional information, please feel free to contact Rajini Ramakrishnan of my staff at (212) 637-3731.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Grace Musumeci".

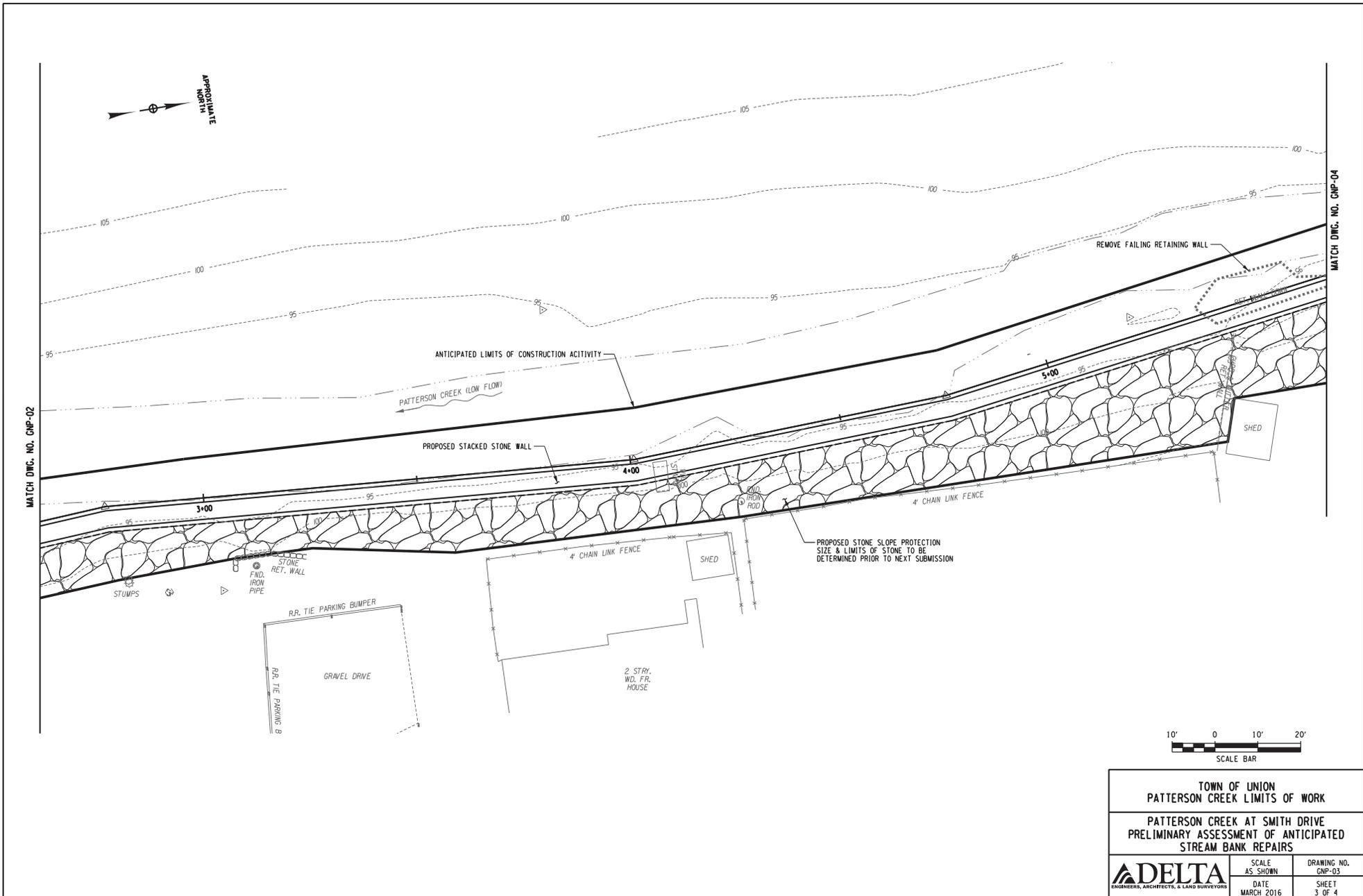
Grace Musumeci, Chief  
Environmental Review Section

**APPENDIX E**  
ENGINEERING DRAWINGS





FILE NAME : I:\2015\2015-438-001 Town of Union Patterson Creek\Drawings\Highway\plans\2015.438.001.sph-gmp-8 PARCEL SITE 02.dwg.dgn  
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 DESIGNED BY : SAS  
 CHECKED BY : CJM  
 APPROXIMATE NORTH

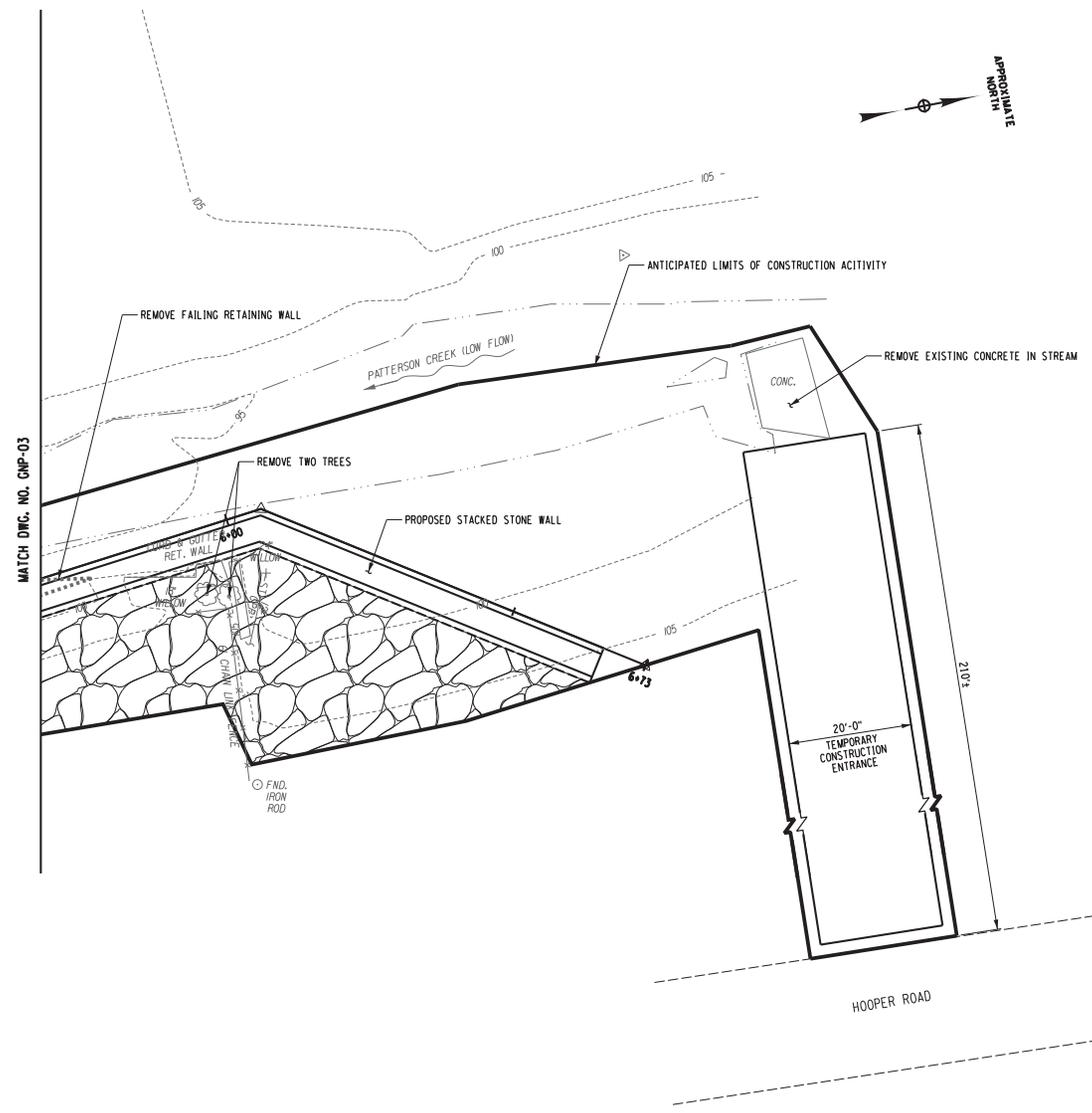


TOWN OF UNION PATTERSON CREEK LIMITS OF WORK	
PATTERSON CREEK AT SMITH DRIVE PRELIMINARY ASSESSMENT OF ANTICIPATED STREAM BANK REPAIRS	
<b>DELTA</b> ENGINEERS, ARCHITECTS, & LAND SURVEYORS	SCALE AS SHOWN
	DRAWING NO. GNP-03
DATE MARCH 2016	SHEET 3 OF 4

MATCH DWG. NO. GNP-02

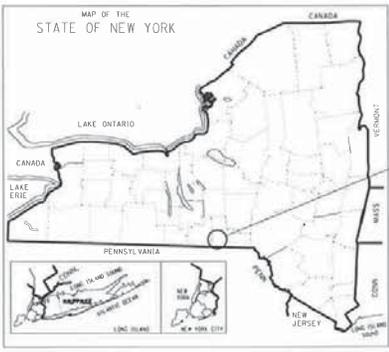
MATCH DWG. NO. GNP-04

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 CHECKED BY : CJM  
 IN CHARGE OF : CJM  
 DESIGNED BY : SAS  
 CHECKED BY : CJM  
 IN CHARGE OF : CJM  
 FILE NAME : I:\2015\2015-439-001 Town of Union Patterson Creek\Drawings\Highway\plans\2015.439.001\_csh-gmp-8 PARCEL SITE.dwg  
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 DESIGN BY : SAS  
 CHECKED BY : CJM  
 IN CHARGE OF : CJM  
 DESIGNED BY : SAS  
 CHECKED BY : CJM  
 IN CHARGE OF : CJM



<b>TOWN OF UNION</b> <b>PATTERSON CREEK LIMITS OF WORK</b>					
<b>PATTERSON CREEK AT SMITH DRIVE</b> <b>PRELIMINARY ASSESSMENT OF ANTICIPATED</b> <b>STREAM BANK REPAIRS</b>					
 <small>ENGINEERS, ARCHITECTS, &amp; LAND SURVEYORS</small>	<table border="1"> <tr> <td>SCALE AS SHOWN</td> <td>DRAWING NO. CNP-04</td> </tr> <tr> <td>DATE MARCH 2016</td> <td>SHEET 4 OF 4</td> </tr> </table>	SCALE AS SHOWN	DRAWING NO. CNP-04	DATE MARCH 2016	SHEET 4 OF 4
SCALE AS SHOWN	DRAWING NO. CNP-04				
DATE MARCH 2016	SHEET 4 OF 4				

FILE NAME: I:\2015\2015-435\201 Town of Union Patterson Creek\Drawings\Highway\2015-435\00\_cps.cvr.dgn  
 USER: jmc  
 IN CHARGE OF: J.M.C.  
 DESIGNED BY: SAS  
 CHECKED BY: C.M.  
 DATE: 7/23/15 AM  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THE DATE OF SUCH ALTERATION, AND THE INITIALS OF THE PERSON WHO MADE SUCH ALTERATION.  
 CHECKED BY: C.M./J.M.



(2) SITES OF WORK

TOWN OF UNION  
COUNTY OF BROOME

PATTERSON CREEK  
STREAM BANK IMPROVEMENTS/RESTORATION  
(2 LOCATIONS)

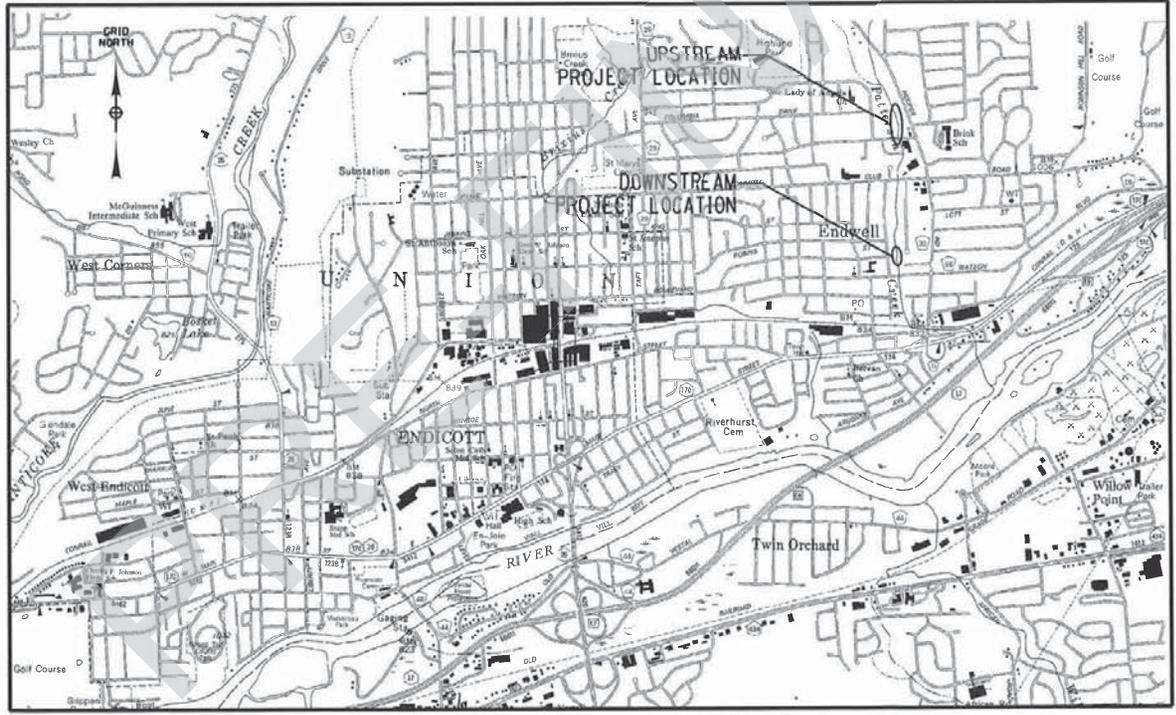
PRE-FINAL PLANS  
XX SHEETS

THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY THE NYSOT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEETS UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE COVERED BY AND IN CONFORMITY WITH THE NYSOT STANDARD SPECIFICATIONS (ENGLISH UNITS) OF MAY 1, 2016, WITH CURRENT ADDITIONS AND MODIFICATIONS, EXCEPT AS MODIFIED ON THESE PLANS AND IN THE PROPOSAL.

CHANGES MADE TO THESE PLANS AND RELATED CONTRACT DOCUMENTS SINCE COMPLETION BY THE CONSULTING ENGINEER MAY BE DETERMINED BY COMPARISON WITH SUCH CONTRACT PLANS AND RELATED DOCUMENTS FILED AT THE TOWN OF UNION OR THOSE FILED AT THE OFFICE OF THE CONSULTING ENGINEER.

CONTRACTOR'S NAME	_____
AWARD DATE	_____
COMPLETION DATE	_____
FINAL ACCEPTANCE DATE	_____
ENGINEER IN CHARGE	_____
FINAL COST TOTAL	_____
FISCAL SHARE	COST(S)



LOCATION MAP  
SCALE: 1"=2500'

THIS PROJECT INCLUDES THE RECONSTRUCTION OF APPROXIMATELY 205 FEET OF THE WESTERN BANK OF PATTERSON CREEK UPSTREAM OF WATSON BLVD. BEGINNING AT THE NORTHERN END OF A CONCRETE RETAINING WALL AND AN ADDITIONAL 650 FEET OF THE EASTERN STREAM BANK OF PATTERSON CREEK, BEGINNING AT THE NORTHERN END OF A STACKED STONE RETAINING WALL, UPSTREAM OF SMITH DRIVE. THIS PROJECT IS LOCATED IN THE TOWN OF UNION, BROOME COUNTY, NEW YORK.

PREPARED AND RECOMMENDED BY

JOSEPH J. MIECZKOWSKI \_\_\_\_\_ DATE \_\_\_\_\_  
 DELTA ENGINEERS, ARCHITECTS & LAND SURVEYORS  
 ENDRELL, NY  
 N.Y.S.P.E. NO. 082669

APPROVED BY

LOUIS V. CAFORIO \_\_\_\_\_ DATE \_\_\_\_\_  
 TOWN OF UNION  
 COMMISSIONER OF PUBLIC WORKS

<b>TOWN OF UNION PATTERSON CREEK STREAM BANK IMPROVEMENTS/RESTORATION</b>		
TITLE SHEET		
	SCALE AS SHOWN	DRAWING NO. COVER
	DATE APRIL 2016	SHEET 1 OF

FILE NAME: I:\2015\2015-435\201 Town of Union Patterson Creek\Drawings\Highway\2015-435\200\_sph.gm.dwg  
 USER: j216605 jh  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, OR LAND SURVEYOR, OR TO INCLUDE THE DATE OF SUCH ALTERATION, AND ANY SUCH ALTERATION, WITHOUT THE APPROVAL AND SIGNATURE OF THE ORIGINAL DESIGNER.  
 DESIGNED BY: SAS  
 CHECKED BY: CJM  
 IN CHARGE OF: CJM

**EROSION CONTROL NOTES**

1. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF PATTERSON CREEK BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION PROCEDURES.
2. ANY DEBRIS OR EXCESS MATERIALS FROM CONSTRUCTION OF THIS PROJECT SHALL BE COMPLETELY REMOVED IMMEDIATELY FROM THE BED AND BANKS OF PATTERSON CREEK TO AN APPROPRIATE UPLAND AREA FOR DISPOSAL.
3. VEGETATED AREAS SHALL BE CONSIDERED AS PERMANENTLY STABILIZED WHEN A MINIMUM UNIFORM VEGETATIVE COVER OF 90 PERCENT IS ESTABLISHED.
4. IN-STREAM CONSTRUCTION ACTIVITIES SHALL ONLY BE PERFORMED DURING LOW-FLOW STREAM CONDITIONS.
5. AT THE END OF EACH WORKDAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS SHALL BE REMOVED AND PROPERLY DISPOSED OF.
6. ALL UNSUITABLE MATERIAL MUST BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION.
7. ALL GRADING AND RESHAPING OF THE EXISTING STREAMBANK AND STREAMBED SHALL BE DONE IN COMPLIANCE WITH THE ENVIRONMENTAL PERMITS ISSUED BY THE JURISDICTIONAL AGENCIES FOR THIS PROJECT.
8. ALL WORK TO BE PERFORMED OUTSIDE OF FLOWING WATER.

**GENERAL NOTES**

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT NOTES EXIST IN THE PLANS THAT REQUIRE INCIDENTAL WORK OR MATERIALS TO BE INCLUDED IN THE PRICE BID FOR ITEMS THAT DO NOT SPECIFY THIS WORK OR MATERIALS IN THE STANDARD OR SPECIAL SPECIFICATIONS. THE CONTRACTOR SHALL READ ALL NOTES IN THE PLANS TO IDENTIFY SUCH INCIDENTAL WORK AND MATERIALS FOR EACH ITEM.
2. THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE TOWN OF UNION, WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE TOWN, THE DAMAGED MATERIALS SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
3. NO WORK SHALL OCCUR OUTSIDE OF THE RIGHT-OF-WAY PRIOR TO THE TOWN OF UNION SECURING AND PROVIDING A COPY OF THE APPROPRIATE EASEMENTS TO THE CONTRACTOR.
4. FIELD CONDITIONS BETWEEN THE STREAM AND ROADWAY MAY HAVE CHANGED SINCE THE SURVEY WAS TAKEN. THE CONTRACTOR SHOULD FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF THERE ARE QUESTIONS OR CLARIFICATION IS NEEDED.
5. NOTIFY DIG SAFELY NEW YORK (DJ.F.P.) 2 FULL WORKING DAYS PRIOR TO ANY EXCAVATION WORK AT 1-800-962-7962 FOR A UTILITY STAKE-OUT.
6. CONSTRUCTION ENTRANCES ARE ANTICIPATED TO BE REQUIRED ON THIS PROJECT. THEY SHALL CONFORM TO NYS DOT STANDARD SHEET 209-05.
7. WORK IN THE STREAM MAY NEED TO BE PHASED, DEPENDING UPON THE FLOW AND DEPTH OF THE STREAM. ALL WORK WITHIN THE STREAM MUST BE PERFORMED IN THE DRY. TEMPORARY WATERWAY DIVERSION STRUCTURES, ITEMS 553.030001 AND 553.030002, ARE INCLUDED IN THE BID PROPOSAL FOR THIS PURPOSE.

**INDEX**

SHEET NUMBER	DESCRIPTION	DRAWING NUMBER
1	TITLE SHEET	COVER
2	INDEX, NOTES, & STANDARD SHEETS	INDEX
3	ABBREVIATIONS	ABB
4	LEGEND, LINE, & POINT SYMBOLLOGY	LEG-01
5	POINT SYMBOLLOGY	LEG-02
6	HORIZONTAL & VERTICAL CONTROL - DOWNSTREAM (PAYNTER AVE.)	CONTROL-01
7	HORIZONTAL & VERTICAL CONTROL - UPSTREAM (SMITH DRIVE)	CONTROL-02
8	PLAN - DOWNSTREAM (PAYNTER AVE.)	PLAN-01
9-12	PLAN - UPSTREAM (SMITH DRIVE)	PLAN-02 THRU PLAN-05
13	PROFILE - DOWNSTREAM (PAYNTER AVE.)	PRO-01
14-16	PROFILE - UPSTREAM (SMITH DRIVE)	PRO-02 THRU PRO-04
17	TYPICAL SECTION	TYP-01
18	MISCELLANEOUS DETAILS	DETAIL-01
19	ESTIMATE OF QUANTITIES	EQO-01
20	CROSS SECTIONS	XS-01 THRU XS-

**STANDARD SHEETS**  
(INCLUDED IN PLAN SET AS REFERENCE)

- 203-02
- 209-05
- 209-06
- 619-01
- 619-04
- 619-10
- 619-11
- 619-12
- 619-60

<b>TOWN OF UNION PATTERSON CREEK STREAM BANK IMPROVEMENTS/RESTORATION</b>		
<b>INDEX, NOTES, &amp; STANDARD SHEETS</b>		
 <b>DELTA</b> ENGINEERS, ARCHITECTS, & LAND SURVEYORS	SCALE NONE	DRAWING NO. INDEX
	DATE APRIL 2016	SHEET 2 OF

FILE NAME: I:\2015\2015-4-29-001 Town of Union Patterson Creek Drawings\Highway\_2015-4-29-001\_cph\_rnd.dwg  
 DATE: 4/29/2016  
 USER: JLS  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR IS DISCLOSED TO BE UNDESIGNED OR UNDESIGNED BY THE ALLEGED DESIGNER.  
 DESIGNED BY: JLS  
 IN CHARGE OF: JLS

CHECKED BY: JLS  
 DATE: 4/29/2016

ALIGNMENT		TOPOGRAPHY (MISCELLANEOUS)		UTILITIES	
ABBR.	DESCRIPTION	ABBR.	DESCRIPTION	ABBR.	DESCRIPTION
AH	AHEAD	ABUT	ABUTMENT	E	ELECTRIC
AZ	AZIMUTH	AOBE	AS ORDERED BY ENGINEER	EMH	ELECTRIC MANHOLE
BK	BACK	ASPH	ASPHALT	G	GAS
B	BASELINE	BDY	BOUNDARY	GP	GUY POLE
BRG	BEARING	BLDG	BUILDING	GSB	GAS SERVICE BOX (HOUSE LINE)
CL	CENTERLINE	BM	BENCH MARK	GV	GAS VALVE (MAIN LINE)
CS	CURVE TO SPIRAL	CC	CENTER TO CENTER	HYD	HYDRANT
e	SUPERELEVATION RATE (CROSS SLOPE)	CONC	CONCRETE	LP	LIGHT POLE
EQ	EQUALITY	CONST	CONSTRUCTION	LPG	LOW PRESSURE GAS
EXT	EXTERNAL	CR	COUNTY ROAD	PP	POWER POLE
HCL	HORIZONTAL CONTROL LINE	D	DEED DISTANCE	SA	SANITARY SEWER
HSD	HEADLIGHT SIGHT DISTANCE	DM	DIRECT MEASUREMENT	SMH	SANITARY MANHOLE
L	LENGTH OF CIRCULAR CURVE	DWY	DRIVEWAY	ST	STORM SEWER
LS	LENGTH OF SPIRAL	EP	EDGE OF PAVEMENT	T	TELEPHONE
LVC	LENGTH OF VERTICAL CURVE	ES	EDGE OF SHOULDER	TCB	TRAFFIC CONTROL BOX
E	CENTER CORRECTION OF VERTICAL CURVE	FEE	FEE ACQUISITION	TELBOX	TELEPHONE BOX
M	MAIN LINE	FEE W/O/A	FEE ACQUISITION WITHOUT ACCESS	TEL P	TELEPHONE POLE
PC	POINT OF CURVATURE	FP	FENCE POST	TMH	TELEPHONE MANHOLE
PI	POINT OF INTERSECTION	FD	FOUNDATION	CTV	CABLE TELEVISION
POL	POINT ON LINE	FL	FENCE LINE	W	WATER
PSD	PASSING SIGHT DISTANCE	GAR	GARAGE	WSB	WATER SERVICE BOX (HOUSE LINE)
PT	POINT OF TANGENT	GR	GRAVEL	WV	WATER VALVE (MAIN LINE)
PVC	POINT OF VERTICAL CURVE	HO	HOUSE	<b>SUBSURFACE EXPLORATION</b>	
PVI	POINT OF VERTICAL INTERSECTION	HWY	HIGHWAY	ABBR.	DESCRIPTION
PVT	POINT OF VERTICAL TANGENT	IP	IRON PIN OR IRON PIPE	AH	HAND AUGER
R	RADIUS	MB	MAIL BOX	CP	CONE PENETROMETER
SC	SPIRAL TO CURVE	MON	MONUMENT	DA	2 1/4 INCHES CASED DRILL HOLE
SSD	STOPPING SIGHT DISTANCE	N&W	NAIL AND WASHER	DM	DRILLING MUD
ST	SPIRAL TO TANGENT	OG	ORIGINAL GROUND	DN	4 INCHES CASED DRILL HOLE
STA	STATION	O/H	OVERHEAD	FH	HOLLOW FLIGHT AUGER
T	TANGENT LENGTH	P	PARCEL	PA	POWER AUGER
TGL	THEORETICAL GRADE LINE	PAV'T	PAVEMENT	PH	PROBE
TS	TANGENT TO SPIRAL	PE	PERMANENT EASEMENT	PT	PERCOLATION TEST HOLE
VC	VERTICAL CURVE	PED POLE	PEDESTRIAN POLE	RP	1 INCH SAMPLER (RETRACTABLE PLUG)
<b>TOPOGRAPHY (DRAINAGE)</b>		PL	PROPERTY LINE	TO BE DEFINED AT THE TIME OF EXPLORATION	
ABBR.	DESCRIPTION	POR	PORCH	SP	SEISMIC POINT
BB	BOTTOM OF BANK (STREAM)	RR	RAILROAD	TP	TEST PIT
BC	BOTTOM OF CURB	RTE	ROUTE	B	BRIDGE
BO	BOTTOM OF OPENING	ROW	RIGHT OF WAY	C	CUT
CAP	CORRUGATED ALUMINUM PIPE	RW	RETAINING WALL	D	DAM
CB	CATCH BASIN	SH	STATE HIGHWAY	F	FILL
CIP	CAST IRON PIPE	SHLDR	SHOULDER	K	CULVERT
CL	CENTERLINE OF STREAM	SPK	SPIKE	W	WALL
CMP	CORRUGATED METAL PIPE	ST	STREET	X	TO BE USED IF ONE OF THE ABOVE CANNOT BE DEFINED AT THE TIME THE EXPLORATION IS MADE
CP	CONCRETE PIPE	STK	STAKE		
CSP	CORRUGATED STEEL PIPE	STY	STORY		
CULV	CULVERT	SW	SIDEWALK		
DIA	DIAMETER	TE	TEMPORARY EASEMENT		
DMH	DRAINAGE MANHOLE	TO	TEMPORARY OCCUPANCY		
DS	DRAINAGE STRUCTURE PIPE	U/G	UNDERGROUND		
D'XING	DITCH CROSSING	WW	WING WALL		
EHW	EXTREME HIGH WATER				
EL	ELEVATION				
ELEV	ELEVATION				
ELW	EXTREME LOW WATER				
ES	END SECTION				
HW	HEADWALL				
INV	INVERT				
MH	MANHOLE				
MHW	MEAN HIGH WATER				
OHW	ORDINARY HIGH WATER				
OLW	ORDINARY LOW WATER				
RCP	REINFORCED CONCRETE PIPE				
SICPP	SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE				
TB	TOP OF BANK (STREAM)				
TC	TOP OF CURB				
TG	TOP OF GRATE				
VCP	VITRIFIED CLAY PIPE				

STANDARD SYMBOL (PLANS)	ITEM PAYMENT UNIT: ESTIMATE OF QUANTITIES SHEET	EQUIVALENT NOMENCLATURE: (SPECS/PROPOSAL)
-	-	INCHES
'	LF	LINEAR FEET
mi	MI	MILES
ft <sup>2</sup>	SF	SQUARE FEET
YD <sup>2</sup>	SY	SQUARE YARD
AC	AC	ACRES
YD <sup>3</sup>	CY	CUBIC YARD
GAL	GAL	GALLON
lb	LB	POUND
TON	TON	TON

<b>TOWN OF UNION PATTERSON CREEK STREAM BANK IMPROVEMENTS/RESTORATION</b>		
<b>ABBREVIATIONS</b>		
	SCALE NONE	DRAWING NO. ABB
	DATE APRIL 2016	SHEET 3 OF



FILE NAME = F:\2015\20150329\001 Town of Union Patterson Creek\Drawings\Highway\2015-4371\001\_cph\_1eg\_02.dwg  
 USER = 4492266  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL BE SO ALTERED, THE DATE OF SUCH ALTERATION, AND THE NAME OF THE PERSON WHO MADE SUCH ALTERATION, SHALL BE INDICATED BY A NOTE ON THE DRAWING.  
 DESIGNED BY: SJS  
 CHECKED BY: LCM  
 IN CHARGE OF: LCM

ALIGNMENT			LANDSCAPE			ROADWAY			TRAFFIC WORK ZONE		
STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION
	AC	CONTROL (CENTERLINE)		LABL	AREA, BRUSH LINE		RCZ.P	CLEAR ZONE		TWZBT.P	BARRIER, TEMPORARY
	AD.P	DETOUR		LAHR	AREA, HEDGE ROW		RG	GUIDE RAIL, MISCELLANEOUS		TWZBT.WL.P	BARRIER, TEMPORARY, W/ WARNING LIGHTS
	AT.P	TRANSITION CONTROL		LAPB	AREA, PLANTING BED		RGB	GUIDE RAIL, BOX BEAM		TWZCD.P	CHANNELIZING DEVICE
<b>BRIDGE</b>				LAWA	AREA, WOODED AREA OUTLINE		RGBM	GUIDE RAIL, BOX BEAM, MEDIAN		TWZPMRC.P	PAVEMENT MARKING REMOVAL OR COVERING
	BR	RAIL		LAWE	AREA, WATERS EDGE		RCC	GUIDE RAIL, CABLE	<b>UTILITIES</b>		
	BSHT	SHEET PILING		LCUT.P	CUT LIMIT		RCCB	GUIDE RAIL, CONCRETE BARRIER	<b>STYLE</b>	<b>NAME</b>	<b>DESCRIPTION</b>
<b>CONTROL</b>				LFILL.P	FILL LIMIT		RCP.P	GUIDE POST		UC	CONDUIT, UNDERGROUND
	CB	BASELINE		LFNC	FENCE		RGW	GUIDE RAIL, W BEAM		UCH	CONDUIT, HANGING
	CBPR	BASELINE, PROJECTION		LTRC	TREE ROW, CONIFEROUS		RGWM	GUIDE RAIL, W BEAM, MEDIAN		UCO	CONDUIT, OVERHEAD
<b>DRAINAGE</b>				LTRD	TREE ROW, DECIDUOUS		RPB	PARKING BUMPER		UE	ELECTRIC LINE, UNDERGROUND
	DCP	CULVERT PIPE		LWH	WALL, H PILE		RRC	RAIL ROAD, CATENARY		UEH	ELECTRIC LINE, HANGING
	DCP.P	CULVERT PIPE (DIR)		LWR	WALL, RETAINING		RRCR	RAIL ROAD, 3RD RAIL		UEO	ELECTRIC LINE, OVERHEAD
	DDG.P	DITCH, GRASS LINED		LWS	WALL, STONE		RRPLS.P	RAIL, PHOTO, LARGE SCALE		UETO	ELECTRIC TRANSMISSION, OVERHEAD
	DDP.P	DITCH, PAVED INVERT	<b>ROW MAPPING</b>				RRPS.S	RAIL, PHOTO, SMALL SCALE		UESS	ELECTRIC, SUBSTATIONS
	DDS.P	DITCH, STONE LINED		MDL	DEED LINE		RRSS	RUMBLE STRIP		UFO	FIBER OPTIC, UNDERGROUND
	DFL.P	FLOW LINE		MEE	EASEMENT, EXISTING		RRSLS.P	RAIL, SURVEY, LARGE SCALE		UF0H	FIBER OPTIC, HANGING
	DSSD	SLOTTED DRAIN		MEP.P	EASEMENT, PERMANENT		RRSLS.S.P	RAIL, SURVEY, SMALL SCALE		UF0D	FIBER OPTIC, OVERHEAD
	DUD.P	UNDERDRAIN		MEPA.P	EASEMENT, PERMANENT, APPROXIMATE	<b>SIGNS</b>				UG	GAS, UNDERGROUND
<b>ENVIRONMENTAL</b>				MET.P	EASEMENT, TEMPORARY		SBLB	BILLBOARDS		UIC	INFORM CABLE, UNDERGROUND
	EBLS	BALE, STRAW		META.P	EASEMENT, TEMPORARY, APPROXIMATE		SM	MULTIPLE POST		UCH	INFORM CABLE, HANGING
	ECT	CURTAIN, TURBIDITY		MFA.P	FEE ACQUISITION, APPROXIMATE		SSO	STRUCTURE, OVERHEAD		UO	OIL LINE, UNDERGROUND
	EDMC	DAM, COFFER		MFS.P	FEE ACQUISITION, SHAPE		SSOC	STRUCTURE, OVHD. CANTILEVER		UOH	OIL LINE, HANGING
	EDMEC.P	DAM, EARTHEN CHECK		MFWOA.P	FEE ACQUISITION, W/O ACCESS	<b>STRIPING</b>				UPBP	POLE, BRACE, PUSH BRACE
	EDMGC.S.P	DAM, GRAVEL BAG/SAND BAG CHECK		MHA	HISTORICAL, ACQUISITION		STB*	BROKEN LINE		UPGW	POLE, GUY WIRE
	EDMPC.P	DAM, PREFABRICATED CHECK		MHB	HIGHWAY BOUNDARY		STDB*	DOUBLE BROKEN LINE		USA	SANITARY SEWER, UNDERGROUND
	EDMSC.P	DAM, STONE CHECK		MHBA	HIGHWAY BOUNDARY, APPROXIMATE		STDL*	DOTTED LINE LONG		USAH	SANITARY SEWER, HANGING
	EFNS	FENCE, SILT		MHBW	HWY BOUNDARY, FACE OF WALL		STDS*	DOTTED LINE SHORT		USAF	SANITARY SEWER, FORCE MAIN, UOHD
	EFNSV	FENCE, SILT & VEGETATION		MHBWOA	HIGHWAY BOUNDARY, W/O ACCESS		STFB*	FULL BARRIER LINE		USAFH	SANITARY SEWER, FORCE MAIN, HANG
	EFNV	FENCE, VEGETATION		MJC	JURISDICTION, CITY		STH*	HATCH LINE		UT	TELEPHONE, UNDERGROUND
	EWAA.P	WETLAND, ADJACENT AREA		MJCY	JURISDICTION, COUNTY		STPB*	PARTIAL BARRIER LINE		LTH	TELEPHONE, HANGING
	EWF	WETLAND, FEDERAL		MJHD	JURISDICTION, HISTORIC DISTRICT		STRCT	ROUNDABOUT, CAT TRACKS		UTO	TELEPHONE, OVERHEAD
	EWF.S	WETLAND, FEDERAL AND STATE		MJLL	JURIS. (GREAT, MILITARY) LOT LINE		STRYL	ROUNDABOUT, YIELD LINE		UTV	CABLE TV, UNDERGROUND
	EWM	WETLAND, MITIGATION AREA		MJN	JURISDICTION, NATION		STSB	STOP BAR		UTVH	CABLE TV, HANGING
	EWS	WETLAND, STATE		MJPB	JURISDICTION, PUBLIC LANDS		STSE*	SOLID, EDGE		UTVO	CABLE TV, OVERHEAD
				MJS	JURISDICTION, STATE		STXL	X WALK, LADDER LINE		UUU	UNKNOWN, UNDERGROUND
				MJT	JURISDICTION, TOWN	<b>TRAFFIC CONTROL</b>				UUH	UNKNOWN, HANGING
				MJV	JURISDICTION, VILLAGE		TCSW	SIGNAL, SPAN WIRE		UUO	UNKNOWN, OVERHEAD
				MPL	PROPERTY LOT LINE					UW	WATER LINE, UNDERGROUND
				MPLA	PROPERTY LOT LINE, APPROXIMATE					UWH	WATER LINE, HANGING
				MSL	SUB LOT LINE					UWO	WATER LINE, OVERHEAD

- THE LEGEND ILLUSTRATES MAPPING FEATURES (EXISTING AND PROPOSED).
- FEATURES ARE SHOWN AS EITHER LINEAR (ROADWAY GUIDELINE, ROADWAY SIDEWALK, UTILITY LINES, ETC.) OR POINT (SIGN, UTILITY POLE, ETC.).
- FEATURES SHOWN ON THE LEGEND AS EXISTING FEATURES ALSO HAVE CORRESPONDING PROPOSED FEATURES.
- PROPOSED FEATURE SYMBOLRY IS IDENTICAL TO EXISTING FEATURE SYMBOLRY EXCLUDING LINE WEIGHT. LINE WEIGHT FOR PROPOSED FEATURES IS THICKER (0.015 IN ON B SIZE DRAWINGS).
- MAPPING FEATURES NOT INCLUDED ON THE LEGEND SHEET DO NOT HAVE A UNIQUE SYMBOLRY (SUCH AS THE PAVEMENT EDGE, PAVEMENT EDGE OF TRAVEL WAY) AND SHOULD BE LABELED ON THE PLANS.
- FEATURES SHOWN AT THE HEAVIER WEIGHT ARE PROPOSED ONLY AND DO NOT HAVE CORRESPONDING EXISTING FEATURES.

**TOWN OF UNION  
PATTERSON CREEK  
STREAM BANK IMPROVEMENTS/RESTORATION**

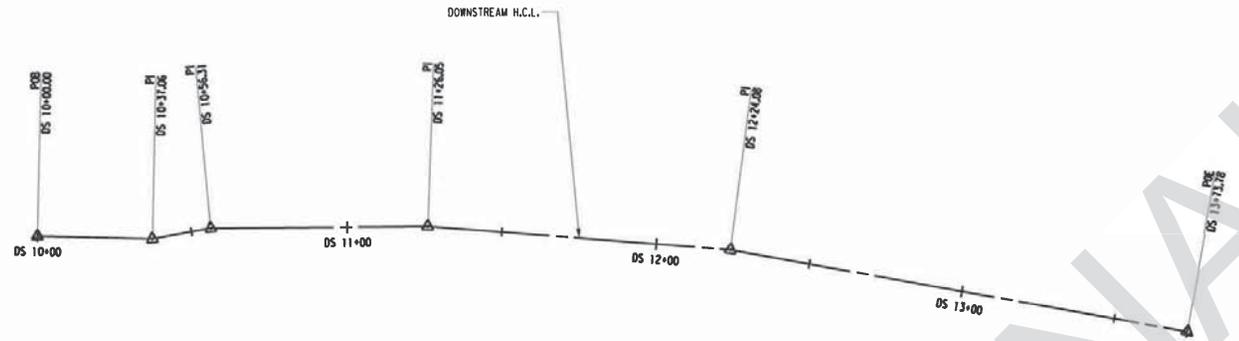
**POINT SYMBOLRY**

	SCALE NONE	DRAWING NO. LEG-02
	DATE APRIL 2016	SHEET 5 OF

FILE NAME : F:\2015\2015-4351\01 Town of Union Patterson Creek\Drawings\Highway\2015-4351\01\_cph.bs\_07.dgn  
 USER : cph  
 IN CHARGE OF : CAM

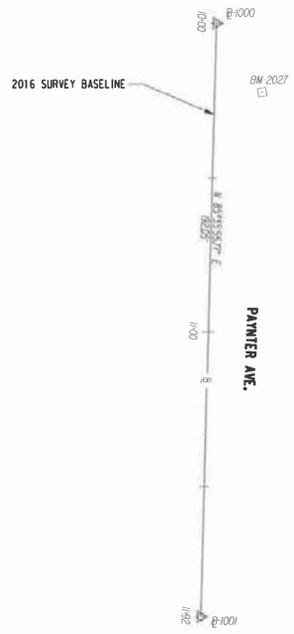
DESIGNED BY : SAS  
 CHECKED BY : CAM  
 DESIGNED BY : SAS  
 CHECKED BY : CAM

DESIGNED BY : SAS  
 CHECKED BY : CAM



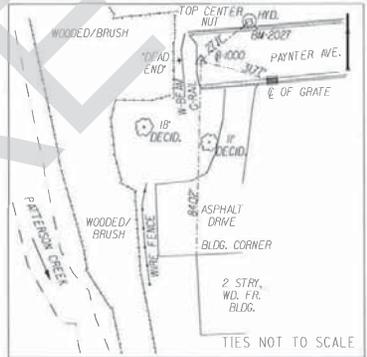
DOWNSTREAM WALL H.C.L.				
H.C.L. POINT	BASELINE STATION	OFFSET (FT.)	NORTHING	EASTING
POB DS 10+00.00	9+11.23 (FTP)	90.71 RT	769643.70	973078.41
P1 DS 10+37.06	9+11.04 (FTP)	53.64 RT	769680.64	973075.38
P2 DS 10+56.31	9+07.07 (FTP)	34.81 RT	769699.12	973069.97
P3 DS 11+26.05	9+04.49 (FTP)	34.88 LT	769768.41	973062.06
P4 DS 12+24.08	9+09.40 (FTP)	132.79 LT	769666.40	973059.44
POE DS 13+73.78	9+32.14 (FTP)	280.76 LT	770015.68	973070.75

FTP = FORWARD TANGENT PRODUCED BACK

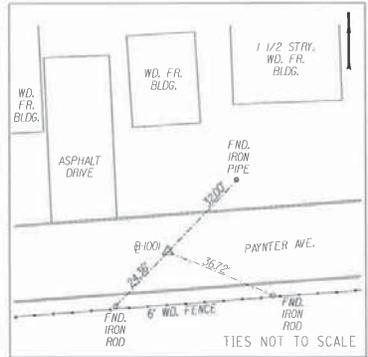


VERTICAL DATUM: NAVD 88

BM	STA.	OFF.	DESCRIPTION	ELEV.
2027	10-22.0	15.1 FT.	CHISELED 'X' IN TOP ROADSIDE BOLT OF HYDRANT, LOCATED 15.1' NORTH OF PAYNTER AVE. CENTERLINE AND 600' WEST OF HOOPER RD. CENTERLINE.	857.48'



SURVEY STA. 10+00.00  
 NAIL SET IN PAVEMENT ON THE WESTERN END OF PAYNTER AVE., 620' ± WEST OF HOOPER RD. CENTERLINE, 88' ± EAST OF PATTERSON CREEK.  
 \*\*NYSPCS - CENTRAL ZONE\*\*  
 N: 769740.96  
 E: 973159.96



SURVEY STA. 11+92.05  
 NAIL SET IN CENTERLINE OF PAYNTER AVE., 430' ± WEST OF HOOPER RD. CENTERLINE, 281' ± EAST OF PATTERSON CREEK.  
 \*\*NYSPCS - CENTRAL ZONE\*\*  
 N: 769755.69  
 E: 973351.45



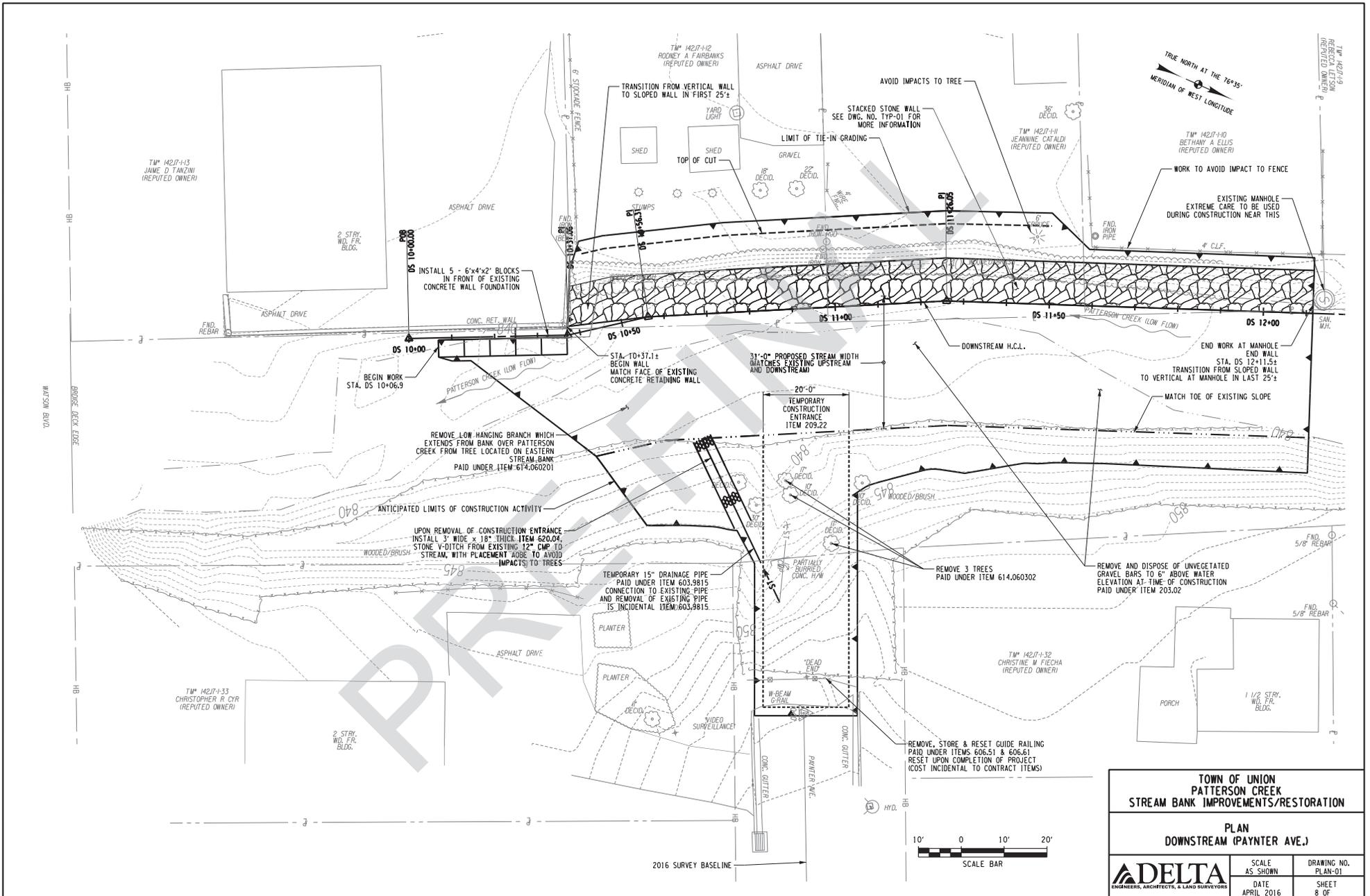
**TOWN OF UNION  
 PATTERSON CREEK  
 STREAM BANK IMPROVEMENTS/RESTORATION**

**HORIZONTAL & VERTICAL CONTROL  
 DOWNSTREAM (PAYNTER AVE.)**

	SCALE AS SHOWN	DRAWING NO. CONTROL-01
	DATE APRIL 2016	SHEET 6 OF 6



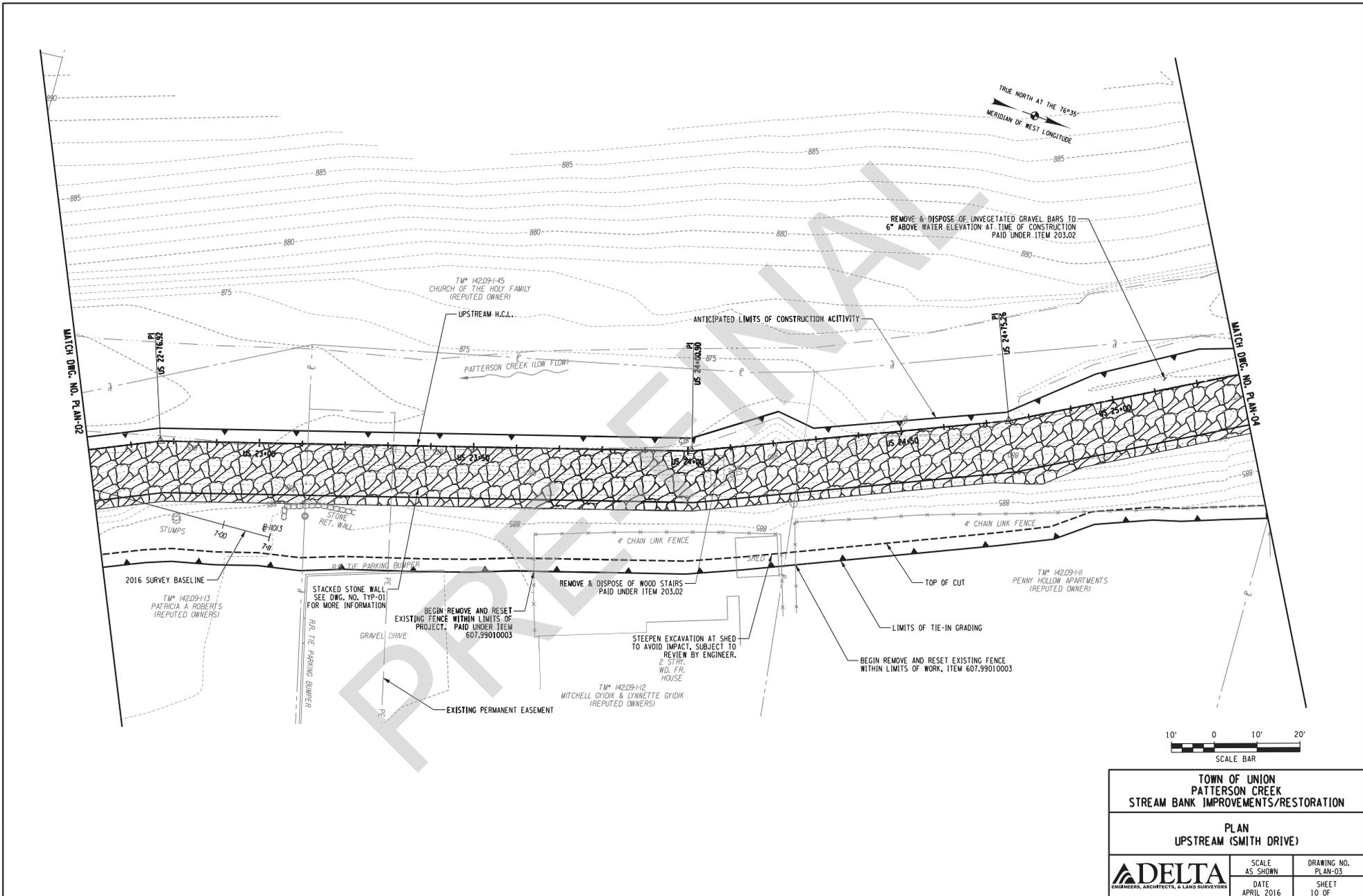
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 DATE: 05/14/2016 2:46:10 PM  
 USER: csmith  
 IN CHARGE OF: CJM  
 DESIGNED BY: SAS  
 CHECKED BY: CJM  
 DRAWN BY: CJM  
 PLOTTED BY: CJM  
 PRINTED BY: CJM  
 I AM NOT PROVIDING A GUARANTEE OR WARRANTY OF ANY KIND FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR. I WILL NOT BE RESPONSIBLE FOR ANY DAMAGE, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING FROM THE USE OF THESE DRAWINGS. THE DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION IS ALSO REQUIRED. THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY: [NAME], [DATE], [REASON]".



<b>TOWN OF UNION PATTERSON CREEK STREAM BANK IMPROVEMENTS/RESTORATION</b>		
<b>PLAN DOWNSTREAM (PAYNTER AVE.)</b>		
 <b>DELTA</b> ENGINEERS, ARCHITECTS, & LAND SURVEYORS	SCALE AS SHOWN	DRAWING NO. PLAN-01
	DATE APRIL 2016	SHEET 8 OF



FILE NAME: I:\2015\2015-435.000 Town of Union Patterson Creek\Drawings\Highway\plans\2015.435.000\_csh.dwg, s8 Parcel SITE: 02-29-04.dwg  
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 IN CHARGE OF: CJM  
 DESIGNED BY: SAS  
 CHECKED BY: CJM  
 DRAWN BY: CJM  
 DATE: 5/14/2016  
 PROJECT: TOWN OF UNION PATTERSON CREEK STREAM BANK IMPROVEMENTS/RESTORATION  
 SHEET: 10 OF 10  
 SCALE: AS SHOWN  
 DATE: APRIL 2016



TOWN OF UNION PATTERSON CREEK STREAM BANK IMPROVEMENTS/RESTORATION		
PLAN UPSTREAM (SMITH DRIVE)		
<b>DELTA</b> ENGINEERS, ARCHITECTS, & LAND SURVEYORS	SCALE AS SHOWN	DRAWING NO. PL AN-03
	DATE APRIL 2016	SHEET 10 OF 10

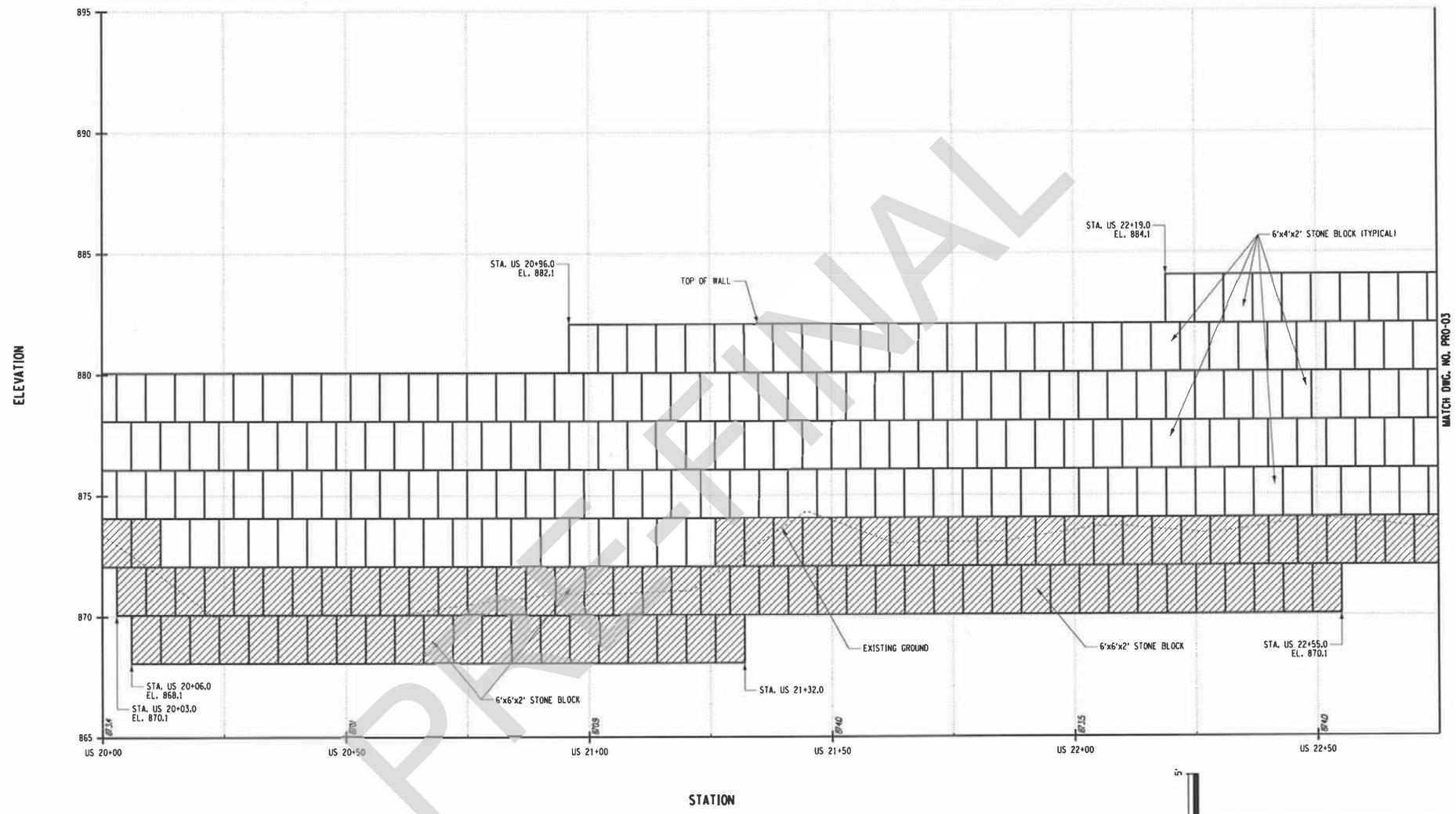






FILE NAME : F:\2015\2015-433-001 Town of Union Patterson Creek\Drawings\Highway\profiles\2015-433-001\_cpl-pro-8 PARCEL SITE.dwg  
 USER : csh  
 DESIGNED BY : SAS  
 CHECKED BY : CAM  
 IN CHARGE OF : CAM  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR IS INCLUDED. THE DATE OF SUCH ALTERATION AND THE NAME OF THE PERSON WHO MADE THE ALTERATION SHALL BE RECORDED IN THE PROJECT RECORDS.

PATTERSON CREEK AT SMITH DRIVE



MATCH DWG. NO. PRO-03

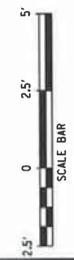
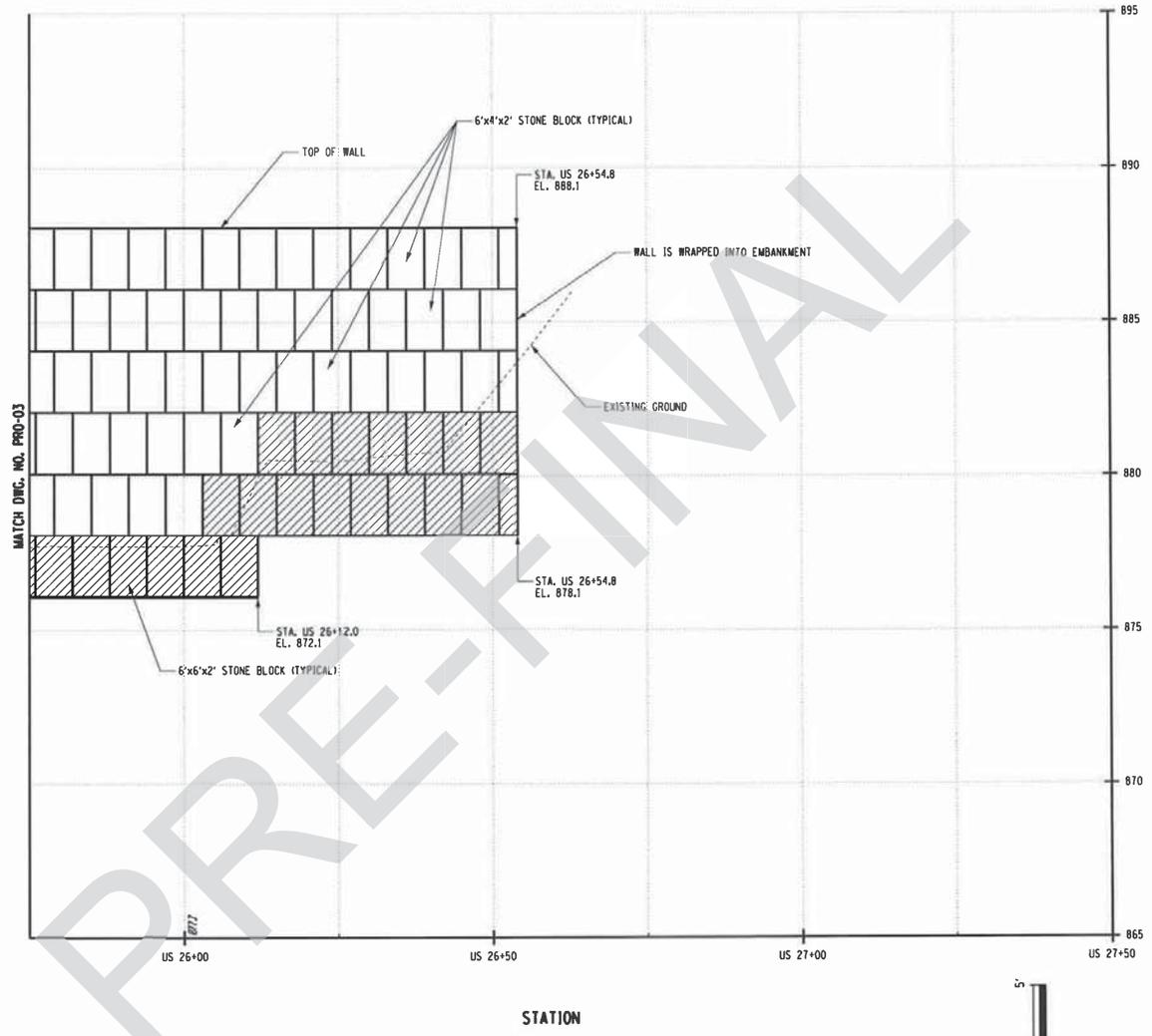


<b>TOWN OF UNION          PATTERSON CREEK          STREAM BANK IMPROVEMENTS/RESTORATION</b>		
<b>PROFILE          UPSTREAM (SMITH DRIVE)</b>		
	SCALE AS SHOWN	DRAWING NO. PRO-02
	DATE APRIL 2016	SHEET 14 OF



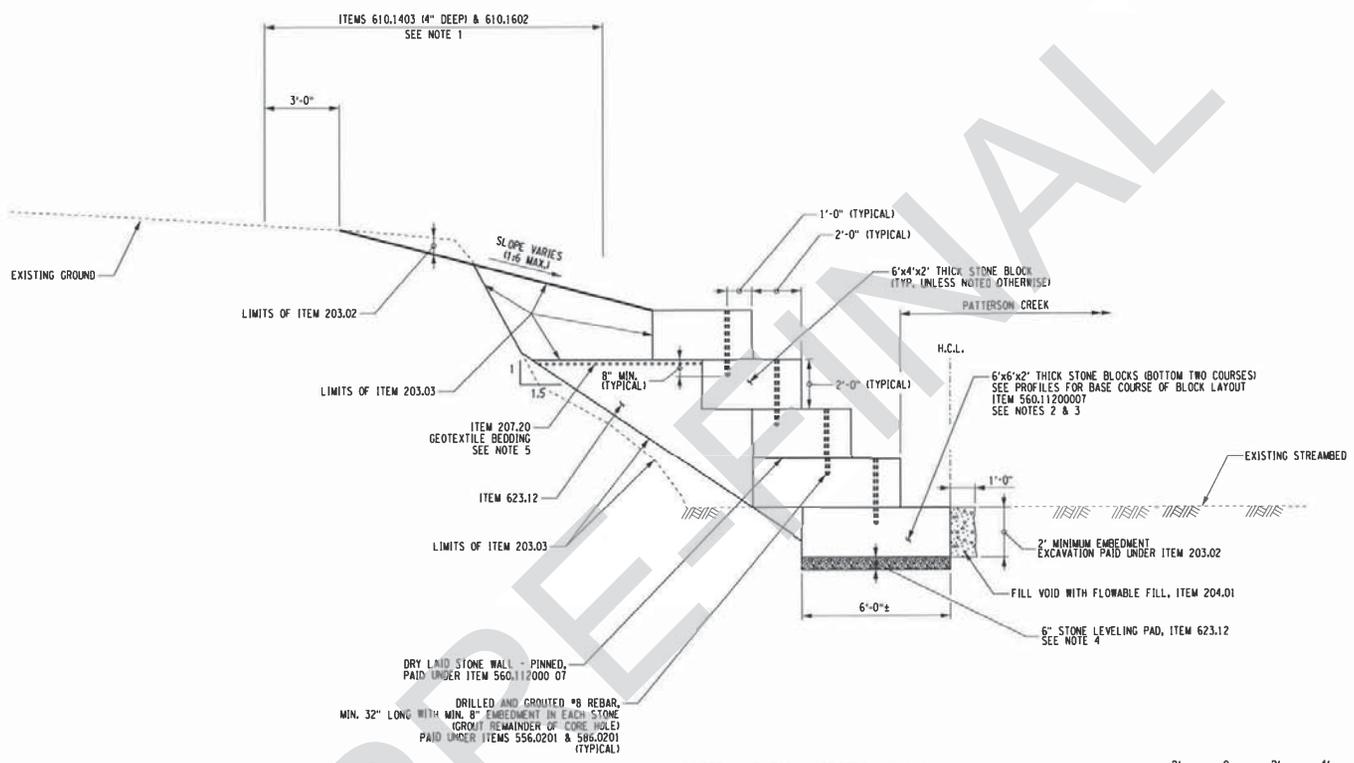
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 DATE : 4/13/2016 12:04:03 PM  
 USER : cnsb  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, FIRM OR COMPANY TO REPRODUCE, COPIY, MIMIC, ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY MANNER, IF AN ITEM BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, OR ANY OTHER PROFESSIONAL SEAL, OR TO BE USED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR IS RESPONSIBLE FOR THE DATE OF SUCH ALTERATION, AND SHALL BE CONSIDERED AS A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR.  
 DESIGNED BY : SAS  
 CHECKED BY : C.M.  
 IN CHARGE OF : C.M.  
 DESIGNED BY : SAS  
 CHECKED BY : C.M.  
 MATCH Dwg. NO. PRO-03

PATTERSON CREEK AT SMITH DRIVE



<b>TOWN OF UNION          PATTERSON CREEK          STREAM BANK IMPROVEMENTS/RESTORATION</b>		
<b>PROFILE          UPSTREAM (SMITH DRIVE)</b>		
	SCALE AS SHOWN	DRAWING NO. PRO-04
	DATE APRIL 2016	SHEET 16 OF

FILE NAME: I:\2016\2016\_435\001\_Town of Union Patterson Creek\0-aw\sp\highway\p\creek\2016\_435\001\_sph-up\_01.8\_PARELL SITE.dwg.dgn  
 USER: csnobly  
 DATE: 4/13/2016 12:00:57 PM  
 IN CHARGE OF: I. C.J.M.  
 DESIGNED BY: S.A.S.  
 CHECKED BY: I. C.J.M.  
 I. C.J.M. IS THE AUTHORIZED ENGINEER RESPONSIBLE FOR THE DESIGN OF THIS PROJECT AND WILL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THE DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION SHALL BE MAINTAINED IN THE PROJECT RECORDS. THE DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION SHALL BE MAINTAINED IN THE PROJECT RECORDS.



**UPSTREAM TYPICAL SECTION @ A-A**  
 LOOKING DOWNSTREAM @ SMITH DRIVE LOCATION  
 LOOKING UPSTREAM @ PAYNTER AVE. LOCATION

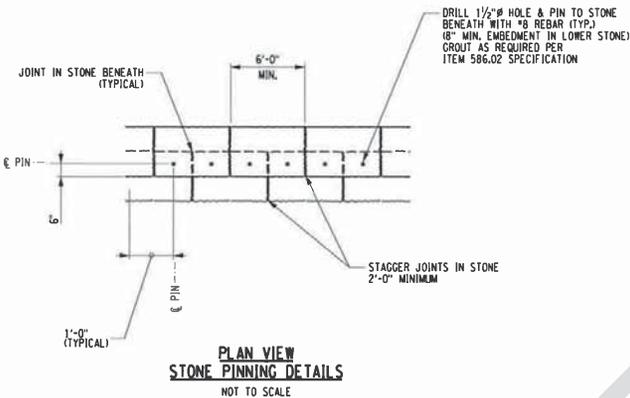


ITEM	DESCRIPTION	UNIT	NOTES:
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	1. THE SEED MIX TO BE USED ON THIS PROJECT IS 50% PERENNIAL RYEGRASS, 30% CREEPING RED FESCUE, 20% KENTUCKY BLUEGRASS, APPLIED AT A RATE OF 6.0 POUNDS OF SEED MIXTURE PER 1000 SQUARE FEET. METHOD NO. 2 SHALL BE USED AS OUTLINED IN THE NYS DOT STANDARD SPECIFICATIONS FOR GROUND PREPARATION AND SEEDING OPERATIONS. 2. SEE DWG. NO. DETAIL-01 FOR WALL PINNING DETAILS.
203.03	EMBANKMENT IN PLACE	CY	
204.01	CONTROLLED LOW STRENGTH MATERIAL (CLSM)	CY	
207.20	GEOTEXTILE BEDDING	CY	
556.0201	UNCOATED BAR REINFORCEMENT FOR CONCRETE STRUCTURES	LB	
560.11200007	DRILLED AND GROUTED #9 REBAR	EA	3. NOMINAL STONE DIMENSIONS SHALL BE WITHIN A TOLERANCE OF ±6" AND MINIMUM STONE DIMENSIONS SHALL BE AS INDICATED. HEAVY STONE PIECES SHALL BE SUCH THAT THEY CAN BE LAID IN PLACE TO OBTAIN GOOD LINE AND GRADES AND CLOSE PLACEMENT LOCATION WITH ADJACENT LAID STONE PIECES. THE STONE SHALL HAVE RELATIVELY FLAT SIDES, AND BE RECTANGULAR IN SHAPE. EACH TIER OF THE WALL SHALL CONSIST OF A SINGLE STONE FROM BACK TO FRONT. WALL ALIGNMENT AND STEP DIMENSIONS ON THE FRONT (EXPOSED) FACE OF THE WALL SHALL CONTROL, WITH VARIATIONS IN STONE DIMENSIONS APPLIED TO THE REAR (BURIED) FACE OF THE WALL. UNDER-SIZING OF THE STONE HEIGHT WILL BE PERMITTED FOR THE TOP COURSE ONLY TO MATCH BACK OF WALL GRADES. 4. ITEM 623.12 SHALL MEET THE REQUIREMENTS OF MATERIAL DESIGNATION 703-0201, 703-0202 OR 703-0204 WITH A PRIMARY SIZE DESIGNATION OF 2. 5. GEOTEXTILE BEDDING SHALL CONFORM TO STRENGTH CLASS 2 FOR MONOFILAMENT WOVEN, OR STRENGTH CLASS 1 FOR COMBINATION MONOFILAMENT/FIBRILLATED YARN-WOVEN, USE BEDDING CLASS B.
586.0201	UNCOATED BAR REINFORCEMENT FOR CONCRETE STRUCTURES	EA	
610.1403	TOPSOIL - LAMNS	CY	
610.1602	TURF ESTABLISHMENT - LAMNS	SY	
623.12	CRUSHED STONE (IN-PLACE MEASURE)	CY	

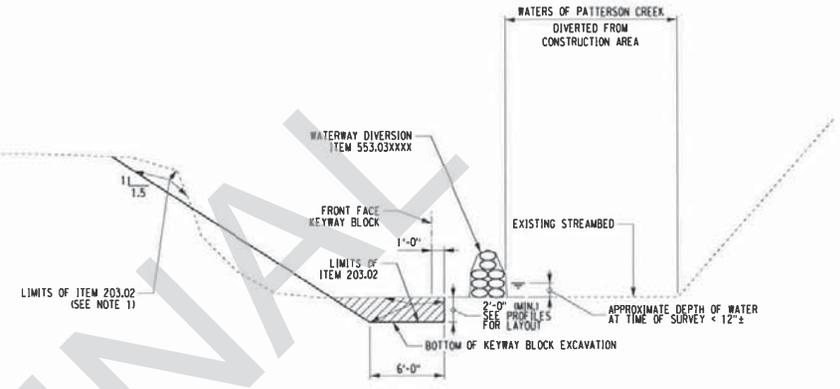
**TOWN OF UNION  
 PATTERSON CREEK  
 STREAM BANK IMPROVEMENTS/RESTORATION**

**TYPICAL SECTION**

<b>DELTA</b> ENGINEERS, ARCHITECTS, & LAND SURVEYORS	SCALE AS SHOWN	DRAWING NO. 11P-01
	DATE APRIL 2016	SHEET 17 OF



- NOTES:
1. COST FOR DRILLING HOLES, FURNISHING AND INSTALLING PINS SHALL BE INCLUDED IN THE PRICE BID FOR ITEMS 556.0201 & 586.0201.
  2. A MINIMUM OF 2 PINS PER STONE IS REQUIRED UNLESS IT IS THE TOP STONE, IN WHICH CASE ONE PIN IS REQUIRED.
  3. PIN REQUIREMENTS ARE BASED ON NOMINAL 2" THICK STONE COURSES AND SPECIFIED STONE DIMENSIONS. ANY MODIFICATION TO THESE DIMENSIONS WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.



- NOTES:
1. LIMITS OF EXCAVATION ARE TO BE MINIMIZED BASED ON THE REQUIREMENTS TO PROVIDE A 1:1.5 SLOPE. FIELD CONDITIONS MAY DICTATE THAT ONLY A PORTION OF THE BACK SLOPE NEEDS TO BE EXCAVATED TO ACCOMMODATE THIS.
  2. HATCHED AREA SHALL BE REMOVED AFTER DEWATERING EQUIPMENT IS IN OPERATION. COST OF ANY DEWATERING TO BE INCLUDED IN PRICE BID FOR ITEMS 553.030001 & 553.030002.
  3. EXCAVATION AREA SHALL BE MAINTAINED IN A DEWATERED CONDITION UNTIL BASE COURSE AND FIRST COURSE OF STONE IS PLACED IN FINAL POSITION. SEE TYPICAL WALL SECTION AND BACKFILL DETAIL FOR ADDITIONAL INFORMATION.
  4. IF THE CONSTRUCTION ENTRANCE CROSSES PATTERSON CREEK, PIPES SHALL BE USED IN CONJUNCTION TO AVOID MACHINERY IN FLOWING WATER. THE COST OF PIPES IS INCIDENTAL TO ITEMS SHOWN IN THE PLANS.

TOWN OF UNION PATTERSON CREEK STREAM BANK IMPROVEMENTS/RESTORATION		
MISCELLANEOUS DETAILS		
<b>DELTA</b> ENGINEERS, ARCHITECTS, & LAND SURVEYORS	SCALE NONE	DRAWING NO. DETAIL-01
	DATE APRIL, 2016	SHEET 18 OF

