Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

STATE ENVIRONMENTAL QUALITY REVIEW ACT
DETERMINATION OF NON-SIGNIFICANCE (NEGATIVE DECLARATION)

BUSHKILL STREAM AND STREAMBANK REHABILITATION PROJECT

DATE: August 12, 2019

NAME OF ACTION: Bushkill Stream and Streambank Rehabilitation Project

LOCATION: Olive, Ulster County, NY

SEQRA CLASSIFICATION:	[X] Type I; [] Unlisted
REVIEW TYPE:	[X] Coordinated; [ ] Uncoordinated
DETERMINATION OF SIGNIFICANCE:	[X] Negative Declaration; [ ] Positive Declaration

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The Proposed Project:
The Town of Olive is requesting Community Development Block Grant – Disaster Recovery (CDBG-DR) funding to design and implement mitigation for potential flood hazard areas in the Bushkill channel and stream banks between Bushkill Bridge on County Route 42 and New York Route 28A Bridge to the east, in the Hamlet of West Shokan and Town of Olive, Ulster County, New York (See **Appendix A,** Figures).

The Proposed Project would involve stream channel and streambank rehabilitation along the Bushkill stream just west of the Ashokan Reservoir. The Bushkill stream runs generally parallel to Watson Hollow Road in the project area. The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments. The project area includes approximately 2,525 linear feet (LF) of channel beginning approximately 500 LF upstream of the Watson Hollow Road bridge and ending approximately 2,000 LF downstream of Watson Hollow bridge or 1,000 LF upstream of the Route 28A bridge (See **Appendix A**, Figures).

The project will be undertaken in three phases. In the first phase, construction will occur within the most upstream portion of the project reach. The modifications will include concentrating the stream channel and widening of the floodplain area, stabilizing the streambank with joint planted boulder revetments or planting of live willow stakes, and fortifying the base of the Watson Hollow bridge along the right bank with grouted rip rap (See **Appendix B**, Site Plans). In the second phase, which occupies the middle section of the project reach, the construction activities will include widening of the floodplain, and stabilizing the streambank with joint planted boulder revetments and/or planting of live willow stakes. The third phase which will encompass the most downstream portion of the project reach, will involve the same modification as phase two as well as the removal of a side cast berm along the left bank.

To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Grading of the stream

channel and floodplain will result in disturbance within the regulatory areas as follows:

- The stream channel will be disturbed for a length of 2,525 LF.
- In total, 10.45 acres will be disturbed, of which 4.04 acres will be below the ordinary high-water line (OHWL) and 4.23 acres will be within the NYSDEC regulated streambank area (50 feet beyond the OHWL).
- Tree clearing will occur on 1.15 acres of land. To avoid potential impacts to Northern long-eared and Indiana bats, winter tree clearing between November 1 and March 31 will be required.
- Materials that will be imported to the site and utilized to stabilize the streambank will primarily consist of the joint planted boulder revetment materials and will total 2,651 cubic yards (CY). Of that, 2,651 CY will be placed below the OHWL. 152 CY will be placed within the NYSDEC regulated streambank. (An additional 336 CY of fill material that will be placed below the OHWL, will be from on-site, reused material).

As a Class A(TS) stream, it is anticipated that no in-stream work will be permitted between September 30 and April 30th. As a result, the anticipated construction period is May 2020 (or slightly earlier to set up construction entrances, staging and traffic control measures) to September 30, 2020.

Purpose and Need:
During Hurricane Irene and Tropical Storm Lee, torrential rainfall caused flooding throughout the Esopus watershed, including the Bushkill in West Shokan. Government offices and hundreds of homes were completely isolated from surrounding areas during the floods. People seeking to receive and give assistance during the flooding were forced to make 1.5-hour detours around the flooding through Sullivan County. Flooding from recent storms has also resulted in significant erosion of the Bushkill's channel and banks that resulted in constrictions, reduced capacity, and a shift in the channel's course that, if not addressed, would present an immediate danger to County Route 42 and properties on the north and south banks of the channel.

The purpose of the Project is to enhance the existing streambank by creating a more confined stream channel with an expanded floodplain area. The project is intended to provide long-term protection from flooding to area residents, the town's emergency responders, and the area's current infrastructure. The Town of Olive envisions this project as a long-term solution for mitigating harmful effects of future storm events. All the proposed improvements will support and enhance the Town's ability to carry out essential governmental operations during future storm events, which includes increased emergency response capability and dispatching of public works employees to address emergencies throughout the Town.

Existing Conditions:
Two bridges are located within the project area: the State Route 28A bridge, located approximately 1,500 feet upstream of the Ashokan Reservoir, and the County Route 42 (Watson Hollow Road) bridge, located approximately 4,600 feet upstream of the Ashokan Reservoir. During Hurricane Irene, approximately 100 feet of the road by the State Route 28A Bridge washed out as well as the downstream embankment. The northern approach to the bridge and one of the piers subsequently required repairs. Additional repair work involved stream and slope stabilization, scour remediation along the embankment toe, and scour protection for the wingwall and abutment.

The County Route 42 (Watson Hollow Road) bridge was originally constructed as a three-span, two-pier bridge. It was replaced and realigned in 1992 with a single-pier bridge. Since the realignment of the bridge, the channel beneath it, as well as upstream and downstream, has adjusted significantly. A large sediment bar has formed along the upstream side of the left side of the channel, almost completely blocking the left opening. The right side of the channel has degraded and created a steep, eroding bank along the right side of the channel both upstream and downstream of the bridge. This situation worsened after Hurricane Irene, which resulted in the loss of much of the heavy stone riprap under the bridge and caused the downstream side of the right abutment to become undermined. While the upstream half of the right abutment retains its stone riprap cover, the downstream half of the pier cap is fully exposed, and a void is visible underneath it.

Upstream of the project area, the Bushkill is characterized by a steep, confined channel with very little floodplain. Raw, eroding banks can be observed at many locations, and large, active bank failures, some of which threaten roads, are present. This channel instability upstream of the project area represents a source of excessive sediment, which is transported downstream during large flood events and contributes to the large sediment load entering the project area.

Funding:
The total Project cost is estimated at $1,752,622.50. GOSR proposes to allocate funding pursuant to the HUD CDBG-DR program as authorized by the Disaster Relief Appropriations Act of 2013 (Public Law 113-2, approved January 29, 2013). The NYS Housing Trust Fund Corporation (HTFC), which administers the CDBG-DR program funds on behalf of GOSR, intends to approve funding for the proposed Project as described in this notice.

Environmental Considerations:
Land Use, Zoning, Public Policy and Urban Design – The project would require both temporary and permanent easements but would not result in any changes in land use or involve the acquisition of additional property. The easements would be required in areas of each property that are undeveloped and through which the Bushkill currently flows. Approximately 2.88 acres of temporary easements would be required during construction. Approximately 0.2 acres of permanent easements would be required, which would be approximately 5 feet on each side of the center of the new stream channel where it crosses private property. The Proposed Action is not expected to significantly modify property in floodplains, except that it would create a more confined stream channel and result in a beneficial increase in the area of the floodplain and reduce erosion, sedimentation, and stream channel migration. The project would not result in any changes in land use or zoning that would conflict with the Town of Olive Zoning Code.

Soil Suitability, Slope, Erosion, Drainage, and Stormwater Runoff – The project area is not covered by impervious surfaces, and the creation of a more confined stream channel with an expanded floodplain area would not increase impervious surfaces. The topographic map of the project site indicates that the elevation ranges from approximately 674 feet at the western edge of the project area to about 624 feet at the eastern end of the project area.

According to the soil survey, most existing soils on the project site are somewhat limited for surface water management. The ratings for Surface Water Management, System are based on the soil properties that affect the capacity of the soil to convey surface water across the landscape. The ratings are for soils in their natural condition and do not consider present land use. However, the project would stabilize the stream banks and re-grade the stream channel and floodplain. It is anticipated that improved stream conveyance and reduced flooding would beneficially affect slope erosion, drainage, and storm water runoff. (See **Appendix D**, Topography).

Prior to construction, the appropriate permits would be obtained in accordance with NYSDEC stormwater discharge from construction activities regulations; Section 401 of the Clean Water Act, and the NYC Department of Environmental Protection, as required. A SWPPP would be prepared for the Project, describing the use of BMPs to control runoff during construction that would mitigate Project-related temporary effects. Any temporary access roads will be restored to pre-existing conditions.

Hazards and Nuisances, including Site Safety and Noise – The Project Area was not identified in NYSDEC Remedial or Bulk Storage Site Databases. A search of the NYSDEC Remediation Site Database did not identify any remediation sites within a one-mile radius of the project site. (See **Appendix A**, Figures.) A search of the NYSDEC Bulk Storage Program Database identified one petroleum bulk storage facility (PBS) within one mile of the project area. This bulk storage site is not considered a hazard that could affect the health and safety pertaining to drainage improvements because bulk storage sites are permitted and

regulated by the NYSDEC petroleum bulk storage program ensuring the proper containment, handling and storage of petroleum, hazardous substances/chemicals, or liquefied natural gas (LNG).

Twenty-three EPA facilities are within one mile of the project area. (See **Appendix A**, Figures.) None of these 23 facilities are EPA Superfund sites. The listings include: one Resource Conservation and Recovery Act (RCRA)-regulated listing, 21 state master list records (FIS), and one National Pollutant Discharge Elimination System (NPDES) permit listing. The reported listings are unlikely to adversely affect the Project area, since they are regulated and permitted. The Project will not result in the exposure of people or sensitive environmental resources to the locations identified in these databases.

The project site is not within the bounds of a Sole Source Aquifer (SSA), coastal barrier resource area, or coastal zone as defined by the state's Coastal Zone Management Program. The project area is located within Zone AE- within the 100-year floodplain, as indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel Number 36111C0410F, dated November 18, 2016 (See **Appendix A**, Figures). The project is intended to create a more confined stream channel and result in a beneficial increase in the area of the floodplain and reduce erosion, sedimentation, and stream channel migration, thereby moderating future flooding.

A noise mitigation plan would be developed prior to construction to minimize construction noise effects. Project construction would follow the provisions of the local noise ordinances, including the Ulster County, NY, Noise Ordinance (Chapter 117 of the Ulster County Code). Mitigation measures could include but would not be limited to restricting the time and duration of construction activities during the day and week, phasing of construction, perimeter barriers, quieter models of equipment, and use of mufflers or other sound-dissipative devices on construction equipment.

Energy Consumption – The Project would not result in additional energy consumption or changes in energy infrastructure. No impacts would occur to existing nearby suppliers.

Socioeconomic Impacts and Community Facilities and Services – There would be a temporary, minor increase in employment during construction. No changes in long-term employment are anticipated as a result of the Project. These jobs would not significantly impact employment and income patterns or alter the demographic characteristics of the surrounding community. No direct or indirect population changes would result from the Project, and there would be no demographic, character, or displacement impacts. The project would require both temporary and permanent easements in areas of each property that are undeveloped and through which the Bushkill currently flows. These easements would not result in any changes in land use or involve displacement of residents or businesses.

The proposed project area is in an archaeologically sensitive area. On April 17, 2019, documentation of substantial ground disturbance was provided to SHPO. On April 23, 2019, SHPO determined that no historic properties or cultural resources will be affected by this undertaking. (See **Appendix E**, SHPO Correspondence).

Construction may result in a temporary increase in solid waste. Construction debris would be collected on-site and disposed of or recycled as appropriate. There would be no increase in solid waste disposal or recycling from operation of the Project because it would not result in any changes in population or land use. The proposed project will not generate wastewater and sewage. Because the project involves no changes in population, there will be no impact on wastewater and sewage generated in the project area. This Project would not change the area residents' use of water, and on-site no public drinking water supply is included in the Project. No changes to the water supply system are anticipated. There are no drinking water wells within one-half mile of the Project site.

Because the project involves no changes in population, there will be no impact on demand for health care

and social services. The proposed improvements would improve access to for police, fire, and medical responders that could be reduced due to flooding. Traffic controls along Watson Hollow Road that may be put in place during construction would be temporary and not restrict access of police, fire, and medical emergency services, which would be given priority. Potential traffic delays would be minimized through signage, phasing, and a protocol that would be coordinated with the Town of Olive. No long-term impact on transportation and accessibility is anticipated.

Natural Features – The project site is in Riverine and Freshwater Forested/Shrub Wetlands National Wetlands Inventory (NWI) wetland areas. Once the streambank has been rehabilitated, the wetland areas would be restored. No changes in land use or increase in impervious surface would adversely affect these wetlands in the long term.

The Bushkill is a Class A(TS) stream. It is anticipated that no in-stream work would be permitted between September 30 and April 30th. A USACE 404 wetland permit and BMPs would minimize impacts during construction. The stream is considered "Protected" waters. An Article 15, Protection of Waters Permit, pursuant to 6NYCRR Part 608 is required for any disturbance to the bed and banks of these streams. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. No other impact to unique natural features or water resources is anticipated. Temporary erosion and sediment controls would be installed over the length of the Project area. These measures would be installed prior to disturbance and would remain in place until all slopes are stabilized and revegetated as necessary.

All stockpiled soils would be protected with sediment and erosion control measures in compliance with Section 207-02 of the NYS Department of Transportation Standard Specifications. All necessary precautions would be undertaken to prevent contamination of any streams, channels or waterways by silt, sediment, fuel, solvents, lubricants, epoxy coatings, debris, concrete leachate, or any other pollutant associated with Project construction would be avoided through proper equipment maintenance and washout basins, platforms, nets, and screens for equipment cleaning. Debris or excess construction material would be immediately removed off-site.

The NYSNHP database had records of bald eagle nesting within 0.8 mile of the project site, timber rattlesnake within 1.5 miles of the project site, spreading rush (*Juncus subcaudatus*) within 0.5 mile of the project site, and nodding pogonia (*Triphora trianthophoros, ssp. Trianthophoros*) within 0.5 mile of the project site. A letter from NYSDEC Division of Environmental Permits, Region 3 stated that bald eagles would not likely be impacted by the project and no further review was needed. A rattlesnake management plan would be developed prior to construction and submitted to NYSDEC for approval. If project-related impacts cannot be fully avoided or minimized, an Incidental Take permit pursuant to Article 11, Title 5, Endangered and Threatened Species may be required.

An estimated 1.15 acres of trees will be removed by the project. The trees to be removed are mostly scattered or grouped along the stream and streambank, and do not constitute an intact forest. The USFWS identified one endangered and two threatened species that are potentially associated with the project site: the endangered Indiana bat (IB, *Myotis sodalis*) and the threatened northern long-eared bat (NLEB, *Myotis septentrionalis*) and bog turtle (*Clemmys muhlenbergii*). After completing a Phase 1 Habitat Assessment and a bat acoustic survey, GOSR committed to conducting winter tree clearing, and determined that the project may affect but is not likely to adversely affect the NLEB and IB. In addition, due to the lack of suitable wetland habitat at the project site, GOSR determined that the project would have no effect on the bog turtle. Migratory birds and foraging bald eagles may temporarily avoid the area during construction due to noise and disturbance.

Approximately 4.6 acres of the Project area are on farmland soils of statewide importance. However, the Project area is not in a New York State agricultural district. (See **Appendix A**, Figures). Project area soils

will be disturbed during construction but will return to the existing land use once the project is completed. The area is previously disturbed and is occupied by residential land, stormwater drainage, and road rights-of-way. It is not in active cultivation. No farmland would be permanently converted by the project.

The proposed Project is classified as a Type 1 action, and GOSR, as the lead agency, prepared a Long Environmental Assessment Form (LEAF) under the State Environmental Quality Review Act (SEQRA). The proposed Project is funding mitigation for potential flood hazard areas in the Bushkill channel and stream banks between Bushkill Bridge on County Route 42 and New York Route 28A Bridge to the east, and as such is not of sufficient scale to result in adverse effects to existing air quality, surface or groundwater quality or quantity, noise levels, existing traffic patterns, solid waste production or disposal, or to create erosion or drainage problems.

The proposed Project would include the following measures to avoid or reduce environmental effects:

- NYSDEC: State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) and a Stormwater Pollution Prevention Plan (SWPPP), Article 15 Protection of Waters Permit, CWA Section 401 Water Quality Certification
- USACE: Section 404 Wetland Permit OR Nationwide Permit 3
- Development of a rattlesnake management plan. Otherwise, an Incidental Take Permit for the timber rattlesnake per Article 11, Title 5, Endangered and Threatened Species if project-related construction activities cannot be mitigated to avoid or minimize incidental take for this species.
- Winter tree clearing (between November 1 and March 31)
- Noise mitigation plan under provisions of local noise ordinances.
- Implementation of standard BMPs would control dust and other emissions during construction.

Standard Requirements:
Any change to the proposed Project as described will require re-evaluation by GOSR's Certifying Officer for compliance with SEQRA and other law, regulations and policies.

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.

Additional Mitigation Measures:
To the extent practicable, the following mitigation measures recommended by the United States EPA would be implemented by the Responsible Entity to minimize environmental impacts and 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.
- Stormwater – utilize 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;
- Cost-efficient, environmentally friendly landscaping – EPA's GreenScapes program provides cost-efficient and environmentally friendly solutions for landscaping;

In addition to the factors considered above, the GOSR considered the following guidance from SEQRA and its implementing regulations and determined that the Proposed Action would:

i. Not result in "a substantial adverse change in existing air quality, ground or surface water quality or quantity, traffic or noise levels; a substantial increase in solid waste production; a substantial increase in potential for erosion, flooding, leaching or drainage problems;" (§617.7(c)(1)(i))
ii. Not result in "the removal or destruction of large quantities of vegetation or fauna; substantial interference with the movement of any resident or migratory fish or wildlife species; impacts on a significant habitat area; or other significant adverse impacts to natural resources;" (§617.7(c)(1)(ii))
iii. Not result in "the creation of a material conflict with a community's current plans or goals as officially approved or adopted;" (§617.7(c)(1)(iv))
iv. Not result in "the creation of a hazard to human health;" (§617.7(c)(1)(vii))
v. Not result in "a substantial change in the use, or intensity of use, of land including agricultural, open space or recreational resources, or in its capacity to support existing uses;" (§617.7(c)(1)(viii))
vi. Not result in "the encouraging or attracting of a large number of people to a place or places for more than a few days, compared to the number of people who would come to such place absent the action;" (§617.7(c)(1)(ix))
vii. Not result in "the creation of a material demand for other actions that would result in one of the above consequences;" (§617.7(c)(1)(x))
viii. Not result in "changes in two or more elements of the environment, no one of which has a significant impact on the environment, but when considered together result in a substantial adverse impact on the environment; or (§617.7(c)(1)(xi))

Therefore, GOSR, acting as Lead Agency (See **Appendix G**, Lead Agency Letter and Responses), and having prepared a LEAF, has determined that the proposed action will not have a significant effect on the environment and a Draft Environmental Impact Statement will not need to be prepared.

Lori A. Shirley
Date: August 12, 2019
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207
Office: (518) 474-0755

A copy of this Notice is available at the following web address:
http://www.stormrecovery.ny.gov/environmental-docs

Instructions for Completing Part 1

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

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

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

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Bush Kill Stream and Streambank Rehabilitation Project		
Project Location (describe, and attach a general location map): Along a reach of the Bush Kill, from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A		
Brief Description of Proposed Action (include purpose or need): This project involves rehabilitation of six Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from the CR 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHAs project elements are: #1: reduce the risk of channel migration through bank armoring or other acceptable measures; #2: repair Bush Kill Bridge scour and increase conveyance; Location #3: Create floodplain connectivity and prevent damage to a berm through accepted debris management strategies to reduce the potential flooding hazard at Loc #1 and alleviate erosion; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #7: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.		
Name of Applicant/Sponsor: Town of Olive	Telephone: (845) 657-8118 E-Mail: olivesupervisor@hvc.rr.com	
Address: 45 Waston Hollow Road		
City/PO: West Shokan	State: NY	Zip Code: 12494
Project Contact (if not same as sponsor; give name and title/role): Sylvia Rozzelle, Supervisor	Telephone: (845) 657-8118 E-Mail: olivesupervisor@hvc.rr.com	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

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

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Site Plan Review	TBD
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	Flood Advisory Committee Review	TBD
e. County agencies ☐Yes ☐No		
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC: Article 15; SPDES; 401 WQC; Rattlesnake Management Plan	TBD
h. Federal agencies ☑Yes ☐No	USACE: Section 404	TBD

i. Coastal Resources.

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

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

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

C. Planning and Zoning

C.1. Planning and zoning actions.

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

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

C.2. Adopted land use plans.

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

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

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

If Yes, identify the plan(s):

NYC Watershed Boundary

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

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
ER - ExUrban Residential

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

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

C.4. Existing community services.

a. In what school district is the project site located? Onteora

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

c. Which fire protection and emergency medical services serve the project site?
Olive Fire Department

d. What parks serve the project site?
Lewis S. Davis

D. Project Details

D.1. Proposed and Potential Development

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

b. a. Total acreage of the site of the proposed action? 8064.88 acres
b. Total acreage to be physically disturbed? 10.45 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 8,064.88 acres

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

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

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 3
- Anticipated commencement date of phase 1 (including demolition) 5 month 2020 year
- Anticipated completion date of final phase 11 month 2020 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

Phase I: upstream portion of project reach, stream channel concentration and widening of floodplain area, stabilize streambank w/planted revetments or live staking, fortify base of Watson Hollow bridge;
Phase II: middle section of project reach, widening of floodplain, and stabilizing streambank w/joint planted boulder revetments and/or planting of live willow stakes;
Phase III: downstream portion of project reach, same as phase two as well as the removal of a side cast berm along the left bank.

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

If Yes, show numbers of units proposed.

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

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

If Yes,

i. Total number of structures _____

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

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

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

If Yes,

i. Purpose of the impoundment: _____

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

_____

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

_____

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

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

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

_____

D.2. Project Operations

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

If Yes:

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

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

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

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

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No

If yes, describe. _____

_____

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

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

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

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

ix. Summarize site reclamation goals and plan: _____

_____

_____

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

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Bush Kill (862-536)

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
bank armoring or other acceptable measures; scour repair, floodplain connectivity, debris management and bank stabilization with joint planted boulder revetments and/or planting of live willow stakes.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: _____

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

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

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

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

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

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

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

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

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

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

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

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

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

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

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

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

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

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

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

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

_____

_____

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

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

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

_____

_____

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

_____

_____

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

If Yes:

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

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

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

_____

_____

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

_____

_____

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

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

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

If Yes, identify:

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

_____

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

_____

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

_____

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

If Yes:

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

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

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

If Yes:

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

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

_____

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

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

_____

_____

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

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

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

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

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

_____

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

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

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

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

If Yes:

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

_____

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

_____

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

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

i. During Construction:

- Monday - Friday: 7AM to 4PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

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

If yes:

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

_____

_____

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

Describe: _____

_____

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

If yes:

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

_____

_____

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

Describe: _____

_____

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

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

_____

_____

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

If Yes:

i. Product(s) to be stored _____

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

iii. Generally, describe the proposed storage facilities:_____

_____

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

If Yes:

i. Describe proposed treatment(s):

_____

_____

_____

_____

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

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

If Yes:

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

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

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

- Construction: _____

  _____
- Operation: _____

  _____

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

- Construction: _____

  _____
- Operation: _____

  _____

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

If Yes:

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

ii. Anticipated rate of disposal/processing:

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

iii. If landfill, anticipated site life: _____ years

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

If Yes:

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

_____

_____

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

_____

_____

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

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

_____

_____

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

If Yes: provide name and location of facility: _____

_____

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

_____

_____

E. Site and Setting of Proposed Action

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

a. Existing land uses.

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

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

☑ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): stream channel and floodplain

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.01	0.01	0
• Forested	1.15	0	-1.15
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	6.09	6.09
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	3.61	3.0	-0.61
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	5.68	1.35	-4.33
• Other Describe: _____ _____			

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

i. If Yes: explain: hiking, fishing

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

If Yes,

i. Identify Facilities:

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

If Yes:

i. Dimensions of the dam and impoundment:

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

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

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

If Yes:

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

- If yes, cite sources/documentation: _____

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

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

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

If Yes:

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

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

If Yes:

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

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

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

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

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

If yes, provide DEC ID number(s): _____

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

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

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

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? > 6.5 feet

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

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

Alluvial Land	57 %
Hoosic gravelly loam, 0-3% slopes	23 %
Hoosic gravelly loam, 3-8% slopes	20 %

d. What is the average depth to the water table on the project site? Average: 0 feet

e. Drainage status of project site soils:

☑	Well Drained:	43 % of site
☐	Moderately Well Drained:	_____% of site
☑	Poorly Drained	57 % of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	100 % of site
☐	10-15%:	_____% of site
☐	15% or greater:	_____% of site

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

h. Surface water features.

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

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

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

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

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

- Streams: Name 862-536 Classification A(TS)
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size _____
- Wetland No. (if regulated by DEC) _____

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

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

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

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

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

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

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

_____ _____ _____

_____ _____ _____

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

_____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

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

If Yes:

i. Species and listing (endangered or threatened): _____

Timber Rattlesnake, Bald Eagle

_____

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

If Yes:

i. Species and listing: _____

_____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☑ Yes ☐ No

If yes, give a brief description of how the proposed action may affect that use: _____

no fishing will be allowed during construction

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

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

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

_____

_____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

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

ii. Name: West Shokan Rock Shelter, also referred to as the Bush Kill Rock Shelter (substantially contiguous to project site)

iii. Brief description of attributes on which listing is based:
rock shelter with potential for prehistoric occupation

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

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

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

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

If Yes:

i. Identify resource: _____

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

iii. Distance between project and resource: _____ miles.

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

If Yes:

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

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

F. Additional Information

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

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

G. Verification

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

Applicant/Sponsor Name Sylvia Rozzelle Date Jan. 27, 2019

Signature Sylvia Rozzelle Title Supervisor, Town of Olive

PRINT FORM

EAF Mapper Summary Report

Thursday, January 10, 2019 6:35 PM

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

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYC Watershed Boundary
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	862-536
E.2.h.iv [Surface Water Features - Stream Classification]	A(TS)
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Yes
E.2.j. [100 Year Floodplain]	Yes

E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Timber Rattlesnake, Bald Eagle
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National Register of Historic Places]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

ATTACHMENT A

NEW YORK STATE ENVIRONMENTAL QUALITY REVIEW
FULL ENVIRONMENTAL ASSESSMENT FORM
PART 1 – PROJECT AND SETTING

BUSHKILL STREAM AND STREAMBANK REHABILITATION PROJECT

DESCRIPTION AND CLASSIFICATION OF ACTION

This supplemental information has been prepared for the Project listed above as a companion to the Full Environmental Assessment Form (6 NYCRR Part 617.20 - **Appendix B**) completed by GOSR as part of an independent review as an Involved Agency, with consideration of Criteria for Determining Significance listed in 6 NYCRR 617.7.

Project Description: During Hurricane Irene and Tropical Storm Lee, torrential rainfall caused flooding throughout the Esopus watershed, including the Bushkill in West Shokan. Government offices and hundreds of homes were completely isolated from surrounding areas during the floods. People seeking to receive and give assistance during the flooding were forced to make 1.5-hour detours around the flooding through Sullivan County. Flooding from recent storms has also resulted in significant erosion of the Bushkill's channel and banks that resulted in constrictions, reduced capacity, and a shift in the channel's course that, if not addressed, would present an immediate danger to County Route 42 and properties on the north and south banks of the channel.

The purpose of the Project is to enhance the existing streambank by creating a more confined stream channel with an expanded floodplain area. The project is intended to provide long-term protection from flooding to area residents, the town's emergency responders, and the area's current infrastructure. The Town of Olive envisions this project as a long-term solution for mitigating harmful effects of future storm events. All the proposed improvements will support and enhance the Town's ability to carry out essential governmental operations during future storm events, which includes increased emergency response capability and dispatching of public works employees to address emergencies throughout the Town.

The Town of Olive is requesting Community Development Block Grant – Disaster Recovery (CDBG-DR) funding to design and implement mitigations for potential flood hazard areas in the Bushkill channel and stream banks between Bushkill Bridge on County Route 42 and New York Route 28A Bridge to the east, in the Hamlet of West Shokan and Town of Olive, Ulster County, New York (See **Appendix A,** Figures).

The Proposed Project would involve stream channel and streambank rehabilitation along the Bushkill stream just west of the Ashokan Reservoir. The Bushkill stream runs generally parallel to Watson Hollow Road in the project area. The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments. The project area includes approximately 2,525 linear feet (LF) of channel beginning approximately 500 LF upstream of the Watson Hollow Road bridge and ending approximately 2,000 LF downstream of Watson Hollow bridge or 1,000 LF upstream of the Route 28A bridge (See **Appendix A**, Figures).

The project will be undertaken in three phases. In the first phase, construction will occur within the most upstream portion of the project reach. The modifications will include concentrating the stream channel and widening of the floodplain area, stabilizing the streambank with joint planted boulder revetments or planting of live willow stakes, and fortifying the base of the Watson Hollow bridge along the right bank with grouted rip rap (See **Appendix B**, Site Plans). In the second phase, which occupies the middle section of the project reach, the construction activities will include widening of the floodplain, and stabilizing the streambank with joint planted boulder revetments and/or planting of live willow stakes. The third phase which will encompass the most downstream portion of the project reach, will involve the same modification as phase two as well as the removal of a side cast berm along the left bank.

To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Grading of the stream channel and floodplain will result in disturbance within the regulatory areas as follows:

- The stream channel will be disturbed for a length of 2,525 LF.
- In total, 10.45 acres will be disturbed, of which 4.04 acres will be below the ordinary high-water line (OHWL) and 4.23 acres will be within the NYSDEC regulated streambank area (50 feet beyond the OHWL).
- Tree clearing will occur on 1.15 acres of land.
- Materials that will be imported to the site and utilized to stabilize the streambank will primarily consist of the joint planted boulder revetment materials and will total 2,651 cubic yards (CY). Of that, 2,651 CY will be placed below the OHWL. 152 CY will be placed within the NYSDEC regulated streambank. (An additional 336 CY of fill material that will be placed below the OHWL, will be from on-site, reused material).

Environmental Issues: The proposed Project is located within the 100-year floodplain and floodway. In addition, the Project overlaps approximately 6.5 acres of wetlands and an archaeologically sensitive area. Bald eagle (*Haliaeetus leucocephalus,* NYS-listed as Threatened) have been documented nesting within 0.8 miles of the project site and timber rattlesnake (*Crotalus horridus*, NYS-listed as Threatened) within 1.5 miles. Three federally-listed species were identified as being potentially associated with the site: Indiana bat (*Myotis sodalis*, endangered), northern long-eared bat (*Myotis septentrionalis*, endangered), and bog turtle (*Clemmys muhlenbergii*, threatened). The Project will require conversion of cover types on the project site.

SEQR Classification: Operating under the auspices of New York State Homes and Community Renewal (HCR), the Governor's Office of Storm Recovery (GOSR) disburses funding made available by the U.S. Department of Housing & Urban Development's (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program. For this proposed Project, GOSR serves as the Lead Agency and must make a discretionary decision to fund the proposed action. It is independently responsible for ensuring that its own decision is consistent with the requirements of the State Environmental Quality Review (SEQR).

The Bushkill Stream and Streambank Rehabilitation Project involves stream channel and streambank rehabilitation along the Bushkill stream that will mitigate potential flood hazards. The proposed Project has

been classified as a Type I Action pursuant to SEQR and reviewed and completed as such. GOSR conducted a Coordinated review to make its determination of significance and decision to fund the action. GOSR used the Full Environmental Assessment Form (FEAF) as the basis for its determination of significance for the proposed action. GOSR will also publish the notice of declaration in the New York State Environmental Bulletin (ENB); maintain the Administrative Record; provide notice to, and file a copy of the declaration with, the chief executive officer of the political subdivision in which the action will be principally located, the applicant, and all involved agencies and interested parties; and make its files available for public reference.

ATTACHMENT B

NEW YORK STATE ENVIRONMENTAL QUALITY REVIEW
FULL ENVIRONMENTAL ASSESSMENT FORM
PART 1 – PROJECT AND SETTING

BUSHKILL STREAM AND STREAMBANK REHABILITATION PROJECT

This supplemental information has been prepared for the Project listed above as a companion to the Full Environmental Assessment Form (6 NYCRR Part 617.20 – **Appendix B**) completed by GOSR as part of an independent review as an Involved Agency, with consideration of Criteria for Determining Significance listed in 6 NYCRR 617.7.

B. Government Approvals

Permits:

- USACE Section 404 Wetland Permit OR Nationwide Permit 3
- NYSDEC Article 15 Protection of Waters Permit
- NYSDEC CWA Section 401 Water Quality Certification
- NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from a Construction Activity (GP-0-15-002) and a Stormwater Pollution Prevention Plan (SWPPP)
- Incidental Take Permit for the timber rattlesnake per Article 11, Title 5, Endangered and Threatened Species if project-related construction activities cannot be mitigated to avoid or minimize incidental take for this species.

Conditions:

- Endangered Species- Winter tree clearing (November 1 to March 31) required to reduce potential impacts to Northern long-eared and Indiana bats.

Approvals (required and/or received) (See **Appendix C** – USFWS, NYSDEC, and NYNHP Correspondence):

- Town of Olive: Site Plan Review/Approval
- Town of Olive: Temporary and permanent easements in areas of each property that are undeveloped and through which the Bushkill currently flows
- New York State Natural Heritage Program: Consultation
- New York State Historic Preservation Office: Consultation
- US Fish and Wildlife Service: Consultation

Funding:

- New York State Homes and Community Renewal (NYSHCR), Governor's Office of Storm Recovery (GOSR) – Community Development Block Grant - Disaster Recover (CDBG-DR) Funds

C. Planning and Zoning

C.2. Adopted land use plans

C.2.b. The project site is located within the NYC Watershed Boundary, which consists of 3 separate political watersheds overlapping parts of geographical watersheds in southeastern New York State. Specifically, the project is within the Catskill and Delaware Watersheds, which provide about 90% of daily drinking water consumption, west of the Ashokan Reservoir.

C.3. Zoning

C.3.b. Approximately 2.88 acres of temporary easements would be required during construction. Approximately 0.2 acres of permanent easements would be required, which would be approximately 5 feet on each side of the center of the new stream channel where it crosses private property.

D. Project Details

D.2. Project Operations

D.2.b. Approximately 5.3 acres of Riverine and 1.2 acres of Freshwater Forested/Shrub National Wetlands Inventory (NWI) wetlands are within the project area. The Bushkill (862-536) is a Class A(TS) stream, used as a source of drinking water and may support trout spawning. The project would result in temporary disturbance of wetlands and surface waters during construction when a portion of the stream channel is concentrated, and the surrounding floodplain is modified.

E. Site and Setting of Proposed Action

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

E.1.a. The 10.5-acre site consists of the Bush Kill stream channel and adjacent floodplain area. The surrounding area is the residential community of West Shokan, which is between the Ashokan Reservoir to the east and Slide Mountain Wilderness and Sundown Wild Forest to the west.

E.1.f – h. A search of the NYSDEC Remediation Site Database did not identify any remediation sites within a one-mile radius of the project site. A search of the NYSDEC Bulk Storage Program Database identified one petroleum bulk storage facility (PBS) within one mile of the project area (See **Appendix A**, Figures.)

E.2. Natural Resources On or Near Project Site

E.2. i – k. The project area is located within Zone AE of the 100-year floodplain, as indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel Number 36111C0410F, dated November 18, 2016. A portion of the project area within the 100-year floodplain is also within a floodway, which includes the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachments so that a 100-

year flood can be accommodated without substantial increases in flood height. Part of the project area also is within the 500-year floodplain. (See **Appendix A**, Figures)

E.2.m. As discussed in Ecological Communities of New York State (Edinger 2014), characteristic fish species of the project site include creek chub, pumpkinseed, tessellated darter, longnose dace, bluntnose minnow and northern hogsucker.

E.2.o. Consultation with the New York Natural Heritage Program (NYNHP) revealed that the following state-listed animals have been documented in the vicinity of the project site: bald eagle (*Haliaeetus leucocephalus*) nesting within 0.8 mile of the project site; timber rattlesnake (*Crotalus horridus*) within 1.5 miles of the project site. The US Fish and Wildlife Service (USFWS) online review process identified one endangered and two threatened species that are potentially associated with the project site: the endangered Indiana bat (IB, *Myotis sodalis*) and the threatened northern long-eared bat (NLEB, *Myotis septentrionalis*) and the bog turtle (*Clemmys muhlenbergii*).

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

E.3.f. Consultation with the New York State Historic Preservation Office (SHPO) revealed that the proposed project area is in an archaeologically sensitive area. The Delaware Nation, Delaware Tribe, Mohawk Nation Council of Chiefs of Haudenosaunee Six Nations Confederacy, Saint Regis Mohawk Tribe, and the Band of the Mohicans were identified as possible consulting parties. Each was sent a letter describing the Project. The Delaware Nation indicated the location of the proposed project does not endanger cultural, or religious sites of interest to them. A representative of the Stockbridge Munsee Community responded that although they are not aware of cultural sites within the area of potential effect, they request to be notified if any artifacts or resources are discovered during project construction.

List of Sources, Agencies and Persons Consulted

Federal Emergency Management Agency (FEMA)
https://msc.fema.gov/portal/search?AddressQuery

New York Rising Community and Reconstruction Plan (NYRCR)
https://stormrecovery.ny.gov/sites/default/files/crp/community/documents/broad_channel_nyrcr_plan_25mb_0.pdf

New York State Department of Agriculture & Markets
http://www.agriculture.ny.gov/AP/agservices/agricultural-districts.html
http://www.agriculture.ny.gov/AP/agservices/SOILCOUNTY.htm

New York State Department of Environmental Conservation (NYSDEC)
https://www.dec.ny.gov/lands/58524.html
http://www.dec.ny.gov/gis/erm/
https://www.dec.ny.gov/permits/6042.html
https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=1
https://www.dec.ny.gov/animals/29384.html

http://www.dec.ny.gov/animals/7494.html
http://gis.ny.gov/gisdata/inventories/member.cfm?organizationid=529&nysgis=
http://www.dec.ny.gov/chemical/32501.html
http://www.dec.ny.gov/docs/wildlife_pdf/wetart24a.pdf
http://www.dec.ny.gov/imsmaps/facilities/viewer.htm
http://www.dec.ny.gov/natureexplorer/app/
http://www.dec.ny.gov/permits/6184.html
http://www.dec.ny.gov/permits/53826.html

New York State Department of Transportation (NYSDOT)
https://www.dot.ny.gov/tdv

New York State Division of Historic Preservation
https://cris.parks.ny.gov/

New York State Natural Heritage Program
http://www.dec.ny.gov/animals/29338.html

U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)
http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

U.S. Environmental Protection Agency
http://nepassisttool.epa.gov/nepassist/entry.aspx
https://www.epa.gov/dwssa/map-sole-source-aquifer-locations
https://www.epa.gov/green-book

U.S. Department of Fish and Wildlife
https://www.fws.gov/wetlands/data/Mapper.html
http://ecos.fws.gov/ipac/
http://refuges.fws.gov
http://www.fws.gov/CBRA/Maps/Mapper.html

U.S. Department of Interior – National Park Service
http://www.nature.nps.gov/nnl/docs/NNLRegistry.pdf

U.S. Department of Interior – National Wild and Scenic Rivers System
http://www.rivers.gov/new-york.php

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	□	□
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	□	□
c. Other impacts: _____ _____		□	□

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☑	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☑	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☑
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☑	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☑	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2)

☐ NO ☑ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☑	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☑	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☑	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☑
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☑
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☑	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D.2.h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑ NO ☐ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	□	□
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	□	□
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	□	□
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	□	□
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	□	□
j. Other impacts: _____ _____		□	□

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	□	□
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	□	□
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	□	□
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	□	□
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	□	□
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	□	□
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	□	□
h. Other impacts: _____		□	□

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		□	□
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	□	□
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	□	□
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	□	□

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	□	□
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	□	□
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	□	□
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	□	□
e. Other impacts: _____ _____		□	□

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
c. Other impacts: _____ _____		□	□

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

1. Impact on Land
3. Impact on Surface Water
5. Impact on Flooding
7. Impact on Plants and Animals
10. Impact on Historic and Archeological Resources

Full discussion on impacts to the above is provided in Attachment C.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the _____ as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

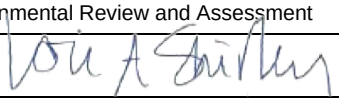
☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Bushkill Stream and Streambank Restoration Project

Name of Lead Agency: New York State Governer's Office of Storm Recovery (GOSR)

Name of Responsible Officer in Lead Agency: Lori A. Shirley

Title of Responsible Officer: Director, Bureau of Environmental Review and Assessment

Signature of Responsible Officer in Lead Agency:  Date: August 12, 2019

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Lori A. Shirley

Address: 38-40 State Street, Albany, NY 12207

Telephone Number: (518) 474-0755

E-mail: Lori.Shirley@nyshcr.org

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

ATTACHMENT C

NEW YORK STATE ENVIRONMENTAL QUALITY REVIEW
FULL ENVIRONMENTAL ASSESSMENT FORM
PART 3 – DETERMINATION OF SIGNIFICANCE

BUSHKILL STREAM AND STREAMBANK REHABILITATION PROJECT

This supplemental information has been prepared for the Project listed above as a companion to the Full Environmental Assessment Form (6 NYCRR Part 617.20 - **Appendix B**) completed by GOSR as part of an independent review as an Involved Agency, with consideration of Criteria for Determining Significance listed in 6 NYCRR 617.7.

Impacts on Land, Surface Water, and Flooding

The purpose of the Project is to enhance the existing streambank by creating a more confined stream channel with an expanded floodplain area. The project is intended to provide long-term protection from flooding to area residents, the town's emergency responders, and the area's current infrastructure.

The proposed Project involves stream channel and streambank rehabilitation along approximately 2,525 linear feet of the Bushkill, west of the Ashokan Reservoir. Construction involves both in-stream and adjacent floodplain work that will disturb 10.45 acres, of which 4.04 acres will be below the ordinary high-water line (OHWL) and 4.23 acres will be within the NYSDEC regulated streambank area (50 feet beyond the OHWL). Materials that will be imported to the site and utilized to stabilize the streambank will primarily consist of the joint planted boulder revetment materials and will total 2,651 cubic yards (CY). Of that, 2,651 CY will be placed below the OHWL. 152 CY will be placed within the NYSDEC regulated streambank. An additional 336 CY of fill material that will be placed below the OHWL will be from on-site, reused material.

As the Bushkill is a Class A(TS) stream, it is anticipated that no in-stream work will be permitted between September 30 and April 30th. As a result, the anticipated construction period is May 2020 to September 30, 2020. An 8-Step Floodplain and Wetland Analysis has been performed in compliance with Executive Order 11988 in accordance with HUD regulations at 24 CFR 55.20. The analysis examined the direct and indirect impacts associated with the construction within the floodplain and associated wetlands. The analysis concluded that the project impacts would be minimal because once the streambank has been rehabilitated, the wetland areas would be restored. The project would create a more confined stream channel and result in a beneficial increase in the area of the floodplain and reduce erosion, sedimentation, and stream channel migration. No changes in land use or increase in impervious surface would adversely affect the floodplain or these wetlands in the long term.

According to the soil survey, most existing soils on the project site are somewhat limited for surface water management. The ratings for Surface Water Management, System are based on the soil properties that affect the capacity of the soil to convey surface water across the landscape. The project would stabilize the stream banks and re-grade the stream channel and floodplain. It is anticipated that improved stream conveyance and reduced flooding would beneficially affect slope erosion, drainage, and storm water runoff.

Implementation of the project will comply with all best management practices and permit requirements and conditions set forth in the applicable Federal, State, and local permits, which will minimize the temporary effects of construction within wetlands. The project will require a NYSDEC Article 15 Protection of Waters Permit, CWA Section 401 Water Quality Certification, a USACE Section 404 permit, and a Local Floodplain Development Permit. The project will obtain coverage under the current SPDES General Permit for Stormwater Discharge from Construction Activity (GP-0-15-002), and a Stormwater Pollution Prevention Plan (SWPPP) will be developed that conforms to requirements of the General Permit.

Temporary erosion and sediment controls would be installed over the length of the Project. These measures would be installed prior to disturbance and would remain in place until all slopes are stabilized and revegetated as necessary. All stockpiled soils would be protected with sediment and erosion control measures in compliance with Section 207-02 of the NYS Department of Transportation Standard Specifications. All necessary precautions would be undertaken to prevent contamination of any streams, channels or waterways by silt, sediment, fuel, solvents, lubricants, epoxy coatings, debris, concrete leachate, or any other pollutant associated with Project construction would be avoided through proper equipment maintenance and washout basins, platforms, nets, and screens for equipment cleaning. Debris or excess construction material would be immediately removed off-site.

Impact on Plants and Animals

Consultation with the New York Natural Heritage Program (NYNHP) revealed that the following state-listed animals have been documented in the vicinity of the project site: bald eagle (*Haliaeetus leucocephalus*) nesting within 0.8 mile of the project site; timber rattlesnake (*Crotalus horridus*) within 1.5 miles of the project site; spreading rush (*Juncus subcaudatus*) was identified on Little Mountain, West Shokan, within 0.5 mile of the project site in 1999 (this plant is found in seeps in hemlock-northern hardwood forests); and nodding pogonia (*Triphora trianthophoros*, ssp. *Trianthophoros*), which was identified within 0.5 mile of the project site in 2009 (this plant is found in mixed woods tending toward beech-maple).

A letter from NYSDEC Division of Environmental Permits, Region 3 stated that bald eagles would not likely be impacted by the project and no further review was needed. It indicated that conservation measures and take avoidance measures may be needed during construction. If project-related impacts cannot be fully avoided or minimized, an Incidental Take permit pursuant to Article 11, Title 5, Endangered and Threatened Species may be required.

A Notice of Incomplete Permit Application from the same Department, dated May 1, 2019, noted that it is reasonable that timber rattlesnakes may be present in the work areas and advised that to prevent adverse impacts to the species, basic education and encounter plans should be implemented. This requires the following:

- A “Timber Rattlesnake Encounter Plan” should be added to the project plans and followed in the event of an encounter during construction;

- Separately, an education and encounter plan should be developed and must be submitted to the Department for approval. The plan would be distributed to all contractors/on-site personnel to inform them of the possibility of encountering a timber rattlesnake, and what to do if one is found.

A rattlesnake management plan would be developed prior to construction and submitted to NYSDEC for approval.

An estimated 1.15 acres of trees will be removed by the project. The trees to be removed are mostly scattered or grouped along the stream and streambank, and do not constitute an intact forest. Consultation with the USFWS identified one endangered and two threatened species that are potentially associated with the project site: the endangered Indiana bat (MYSO, *Myotis sodalis*) and the threatened northern long-eared bat (MYSE, *Myotis septentrionalis*) and bog turtle (*Clemmys muhlenbergii*). Several migratory birds of concern that could potentially be affected by the proposed Project were also identified.

A Phase 1 Habitat Assessment and Bat Acoustic Survey was conducted by Amanda Bailey, NYSDEC Wildlife Biologist. The results indicated suitable bat habitat potential presence of the Indiana bat and the northern long-eared bat at the project location during the summer maternity season. MLE values associated with acoustic monitoring suggests that Indiana bats were present for one night at the stream sampling site, and one night at the trail site. This project is located just over 9 miles from the nearest Indiana bat maternity colony in eastern Ulster County, and is located approximately 13 miles from Rosendale, NY, which has several mines that both MYSO and MYSE hibernate in. Further coordination with the US Fish and Wildlife Service will be necessary prior to the clearing of the 118 trees proposed for this project.

As a result of the Acoustic Survey findings, GOSR committed to winter tree clearing between November 1 and March 31, and concluded that with this restriction, the project may affect but is not likely to adversely affect Indiana and/or Northern long-eared bats. The revised consultation also provided additional information explaining that the wetlands at the project site do not provide suitable habitat for the bog turtle; therefore, GOSR determined that the project would have no effect on bog turtles. Migratory birds and foraging bald eagles may temporarily avoid the area during construction due to noise and disturbance.

Impact on Historic and Archaeological Resources

Consultation with the New York State Historic Preservation Office (SHPO) and the Division for Historic Preservation (DHP) in the Office of Parks, Recreation and Historic Preservation (OPRHP), in accordance with Section 106 of the National Historic Preservation Act of 1966, was initiated on January 28, 2019.

In a February 14, 2019 response, SHPO stated that the proposed project area is in an archaeologically sensitive area and recommended that a Phase I archaeological survey be conducted within location where ground-disturbing activities are proposed, unless substantial prior ground disturbance can be documented. On April 17, 2019, documentation of substantial ground disturbance was provided to SHPO. On April 23, 2019, SHPO determined that no historic properties or cultural resources will be affected by the project.

The Delaware Nation, Delaware Tribe, Mohawk Nation Council of Chiefs of Haudenosaunee Six Nations Confederacy, Saint Regis Mohawk Tribe, and the Band of the Mohicans were identified as possible consulting parties. Each was sent a letter on January 28, 2019, with the site description, photographs, site plan, and map. In a March 12, 2019, letter the Delaware Nation indicated the location of the proposed project does not endanger cultural, or religious sites of interest to the Delaware Nation.

On February 13, 2019, the Stockbridge Munsee Community representative responded that although they are not aware of cultural sites within the area of potential effect, they wished to consult on the project and receive the survey reports for review when complete. On April 23, 2019, GOSR responded by explaining that as a result of SHPO's no effect determination, GOSR did not plan to undertake an archaeological Phase 1 survey unless the tribe requested it. GOSR committed that should an archaeological site or artifacts inadvertently be uncovered during project construction, all construction and ground disturbing activities would be immediately be halted until all appropriate agencies are notified (within 24 hours), and a proper archaeological assessment could be made. On May 3, 2019, the Stockbridge Munsee Community representative confirmed approval this plan of action.

List of Sources, Agencies and Persons Consulted

Federal Emergency Management Agency (FEMA)
https://www.fema.gov/media-library-data/20130726-1642-20490-7647/8_step.pdf

New York State Department of Environmental Conservation (NYSDEC)
https://www.dec.ny.gov/lands/58524.html
http://www.dec.ny.gov/gis/erm/
https://www.dec.ny.gov/permits/6042.html
https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=1
https://www.dec.ny.gov/animals/29384.html
http://www.dec.ny.gov/animals/7494.html
http://gis.ny.gov/gisdata/inventories/member.cfm?organizationid=529&nysgis=
http://www.dec.ny.gov/chemical/32501.html
http://www.dec.ny.gov/docs/wildlife_pdf/wetart24a.pdf
http://www.dec.ny.gov/imsmaps/facilities/viewer.htm
http://www.dec.ny.gov/natureexplorer/app/
http://www.dec.ny.gov/permits/6184.html
http://www.dec.ny.gov/permits/53826.html

New York State Natural Heritage Program
http://www.acris.nynhp.org/

U.S. Department of Fish and Wildlife
http://ecos.fws.gov/ipac/

Appendix A
Figures

Project Location

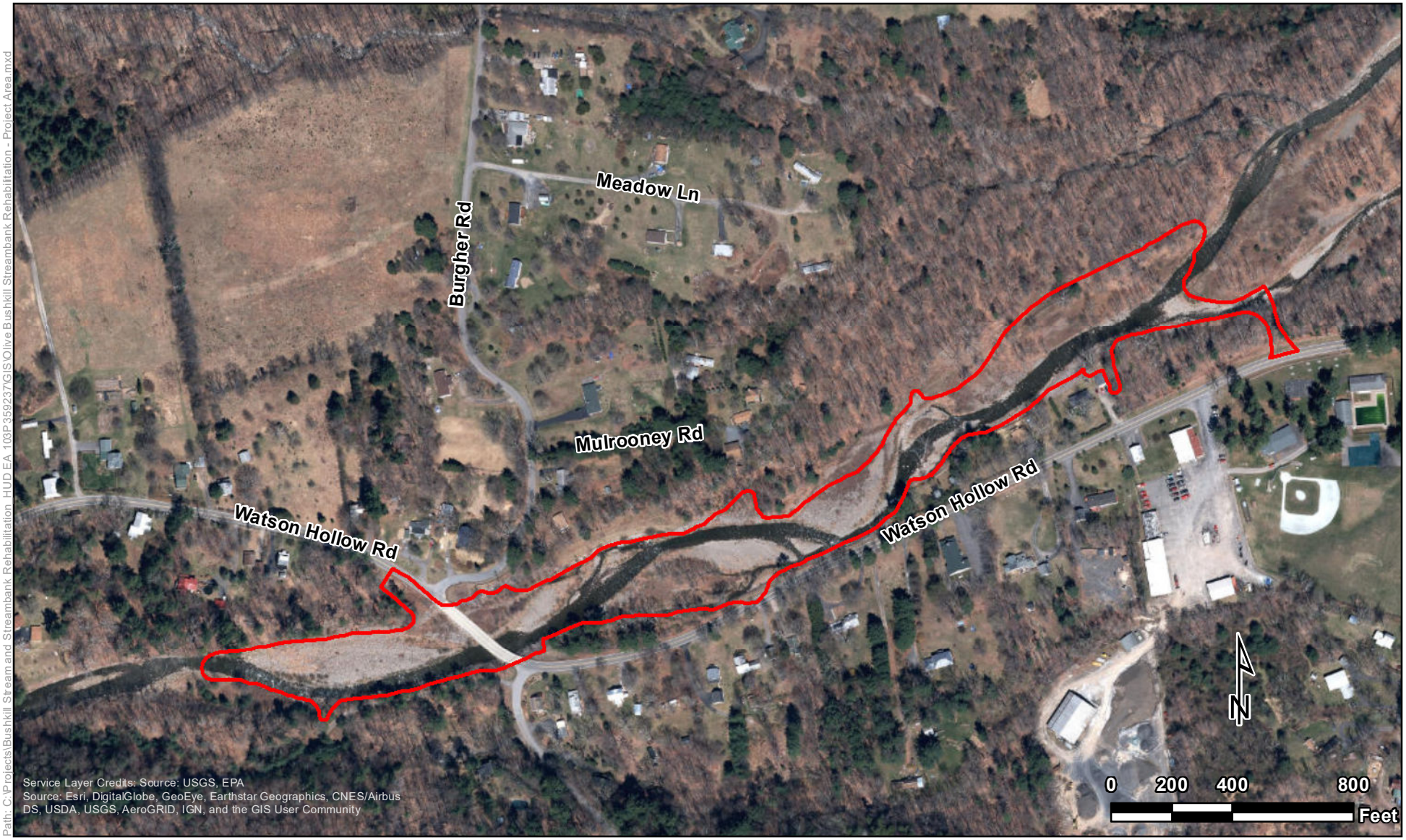
Legend

Project Location

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 1



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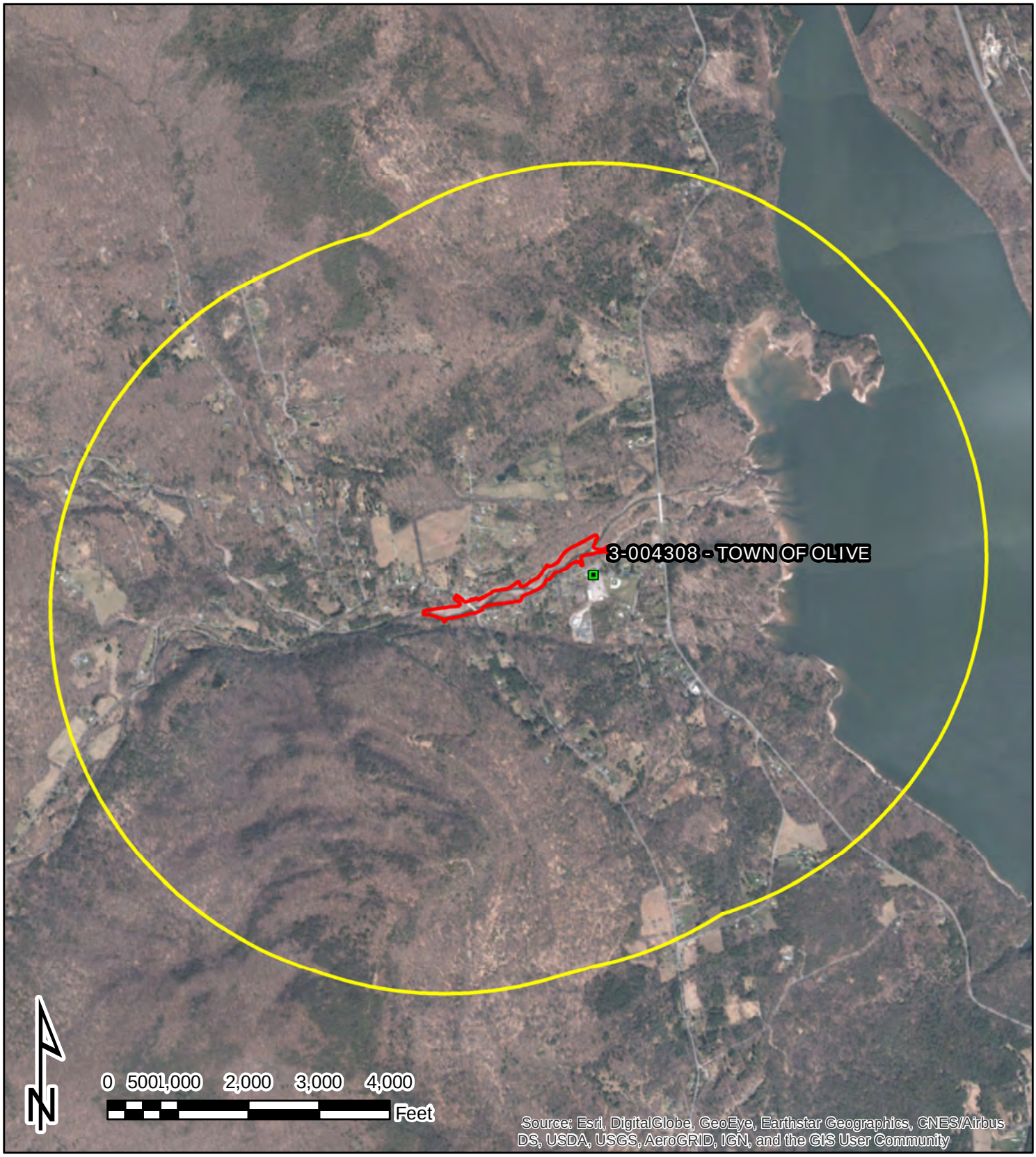
Project Area

Legend

Project Area

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc



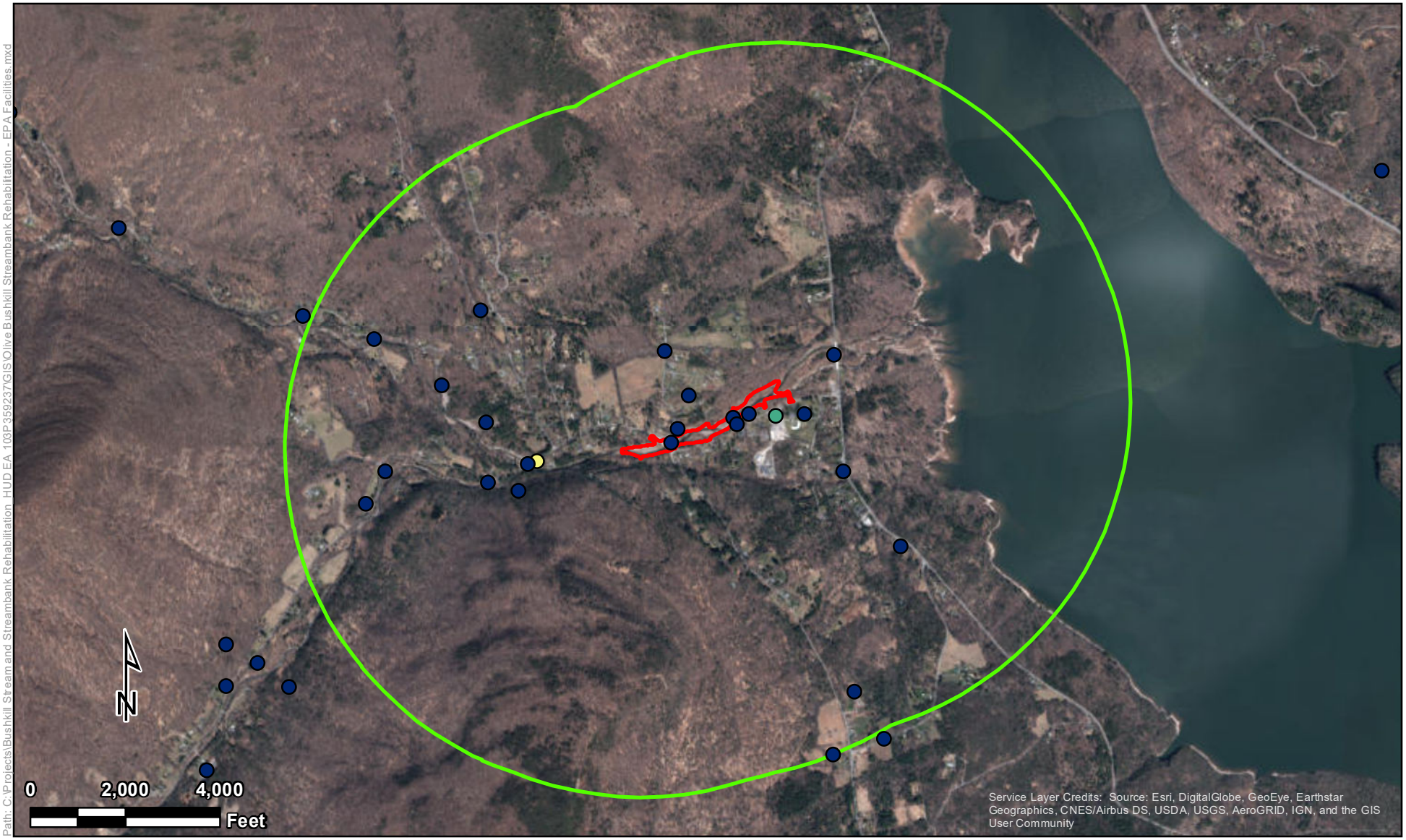
Legend

- Project Area
- One Mile Project Area Buffer
- Petroleum Bulk Storage

Bulk Storage Facilites

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

PARS ENVIRONMENTAL
a Montrose Environmental Group company



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EPA Facilities

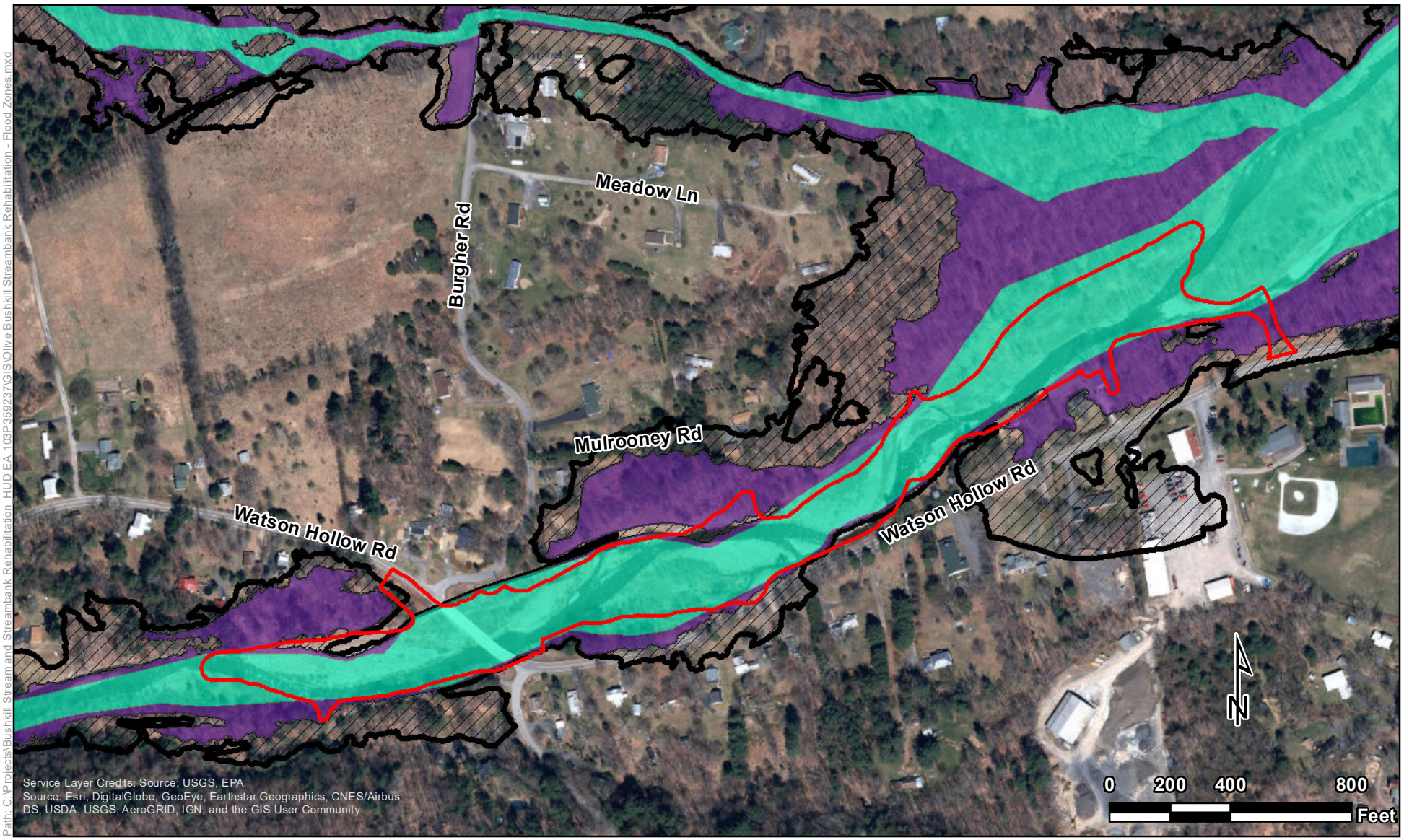
Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Legend

EPA Facilities

- FIS
- NPDES
- RCRAINFO
- Project Area

Tetra Tech, Inc



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Legend

- Project Area

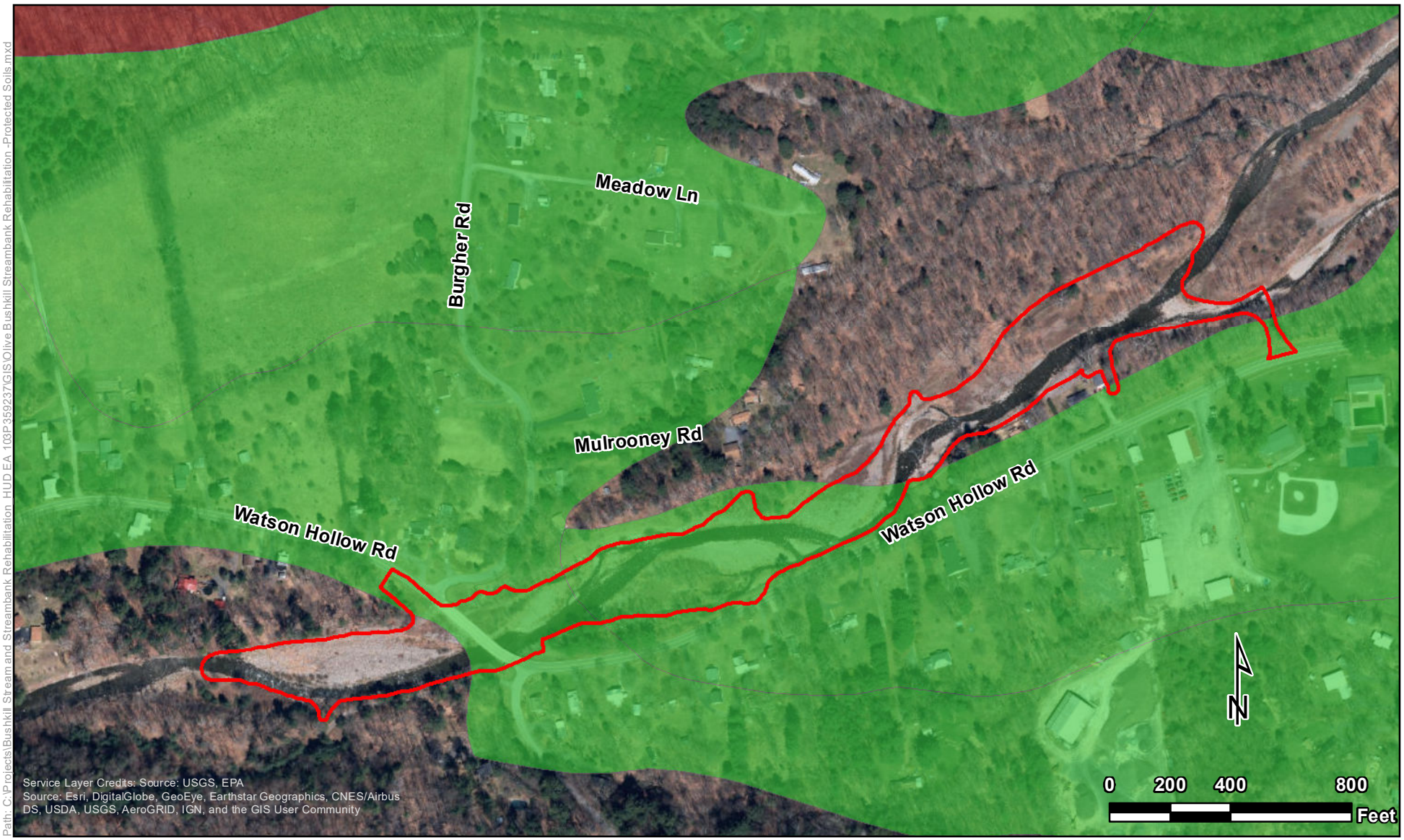
Flood Zones

- Zone AE- within the 1% annual chance flood
- Zone AE- Floodway within the 1% annual chance flood
- Zone X-within the 0.2% annual chance of flood
- Zone X- area of minimal flood hazard

Flood Zones

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc



Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103P359237\GIS\Olive Bushkill Streambank Rehabilitation_Protected Soils.mxd

Legend

- Project Area
- All areas are prime farmland
- Farmland of statewide importance
- Prime farmland if drained

Protected Soils

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Appendix B
Site Plans

Plotted By: DRM on 10/30/2018 8:54 AM File: G:\PROJECTS\5909-01\Drawings\Construction\Plan\CP-1.dwg
Plotted At: 1/2/2019 Xrefs: Bound: Images: Layout: CP-1

CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF WORK A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES OF THE TOWN OF OLIVE, PROJECT ENGINEER, AND CONTRACTOR. AT THIS MEETING, ONE PERSON WILL BE PLACED IN CHARGE OF SEDIMENT AND EROSION CONTROL FOR THE ENTIRE SITE.
2. THE PROPOSED CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
3. SIGNIFICANT CHANGES TO THE CONSTRUCTION SEQUENCE OR PROJECT LAYOUT OR DESIGN WILL REQUIRE NOTIFICATION AND APPROVAL BY NYSDEC PRIOR TO IMPLEMENTATION.

WATER CONTROL NOTES

1. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
2. THE WATER CONTROL MEASURES AS REPRESENTED ON THIS PLAN ARE PRESENTED AS INFORMATIONAL ONLY, AND SUBJECT TO CHANGE BASED ON SEASONAL, WEATHER, AND FIELD CONDITIONS.
3. CONTRACTOR SHALL PREPARE AND SUBMIT A WATER CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
4. REFER TO WORK AREA DEWATERING NOTES ON SHEET SE-1.
5. TEMPORARY TURBID WATER DEWATERING SUMP, PUMP AND BASIN LOCATION MAY VARY AS WELL AS THE QUANTITY NEEDED.
6. CLEAR WATER DEWATERING PUMPS/PIPING CAN BE DISCHARGED DIRECTLY INTO CLEAN WATER BYPASS PIPING WITH THE APPROPRIATE ADAPTERS/SPLICES. LEAKY OR FAULTY CONNECTIONS OF PIPING WILL NOT BE APPROVED FOR USE ON-SITE. CLEAN WATER DEWATERING MAY ALSO BE DISCHARGED DOWNSTREAM OF WORK SITE INTO CHANNEL.

CONSTRUCTION ACCESS NOTES

1. CONSTRUCTION ACCESS ROUTES SHOWN ARE SCHEMATIC IN NATURE - FINAL ROUTES TO BE NEGOTIATED WITH PROPERTY OWNERS PRIOR TO START OF CONSTRUCTION.
2. TEMPORARY CONSTRUCTION ENTRANCE PAD AND TEMPORARY CONSTRUCTION HAUL ROADS TO BE RESTORED UPON PROJECT COMPLETION.
3. ALL PRIVATELY OWNED LAWN, GARDEN, SHRUBS, TREES, FENCING, AND OTHER YARD FEATURES SHALL BE RESTORED OR REPAIRED AT PROJECT COMPLETION AT THE APPROVAL OF THE PROPERTY OWNER. THERE SHALL BE NO CLEARING OF TREES WITH GREATER THAN 3" DBH ALLOWED.
4. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE

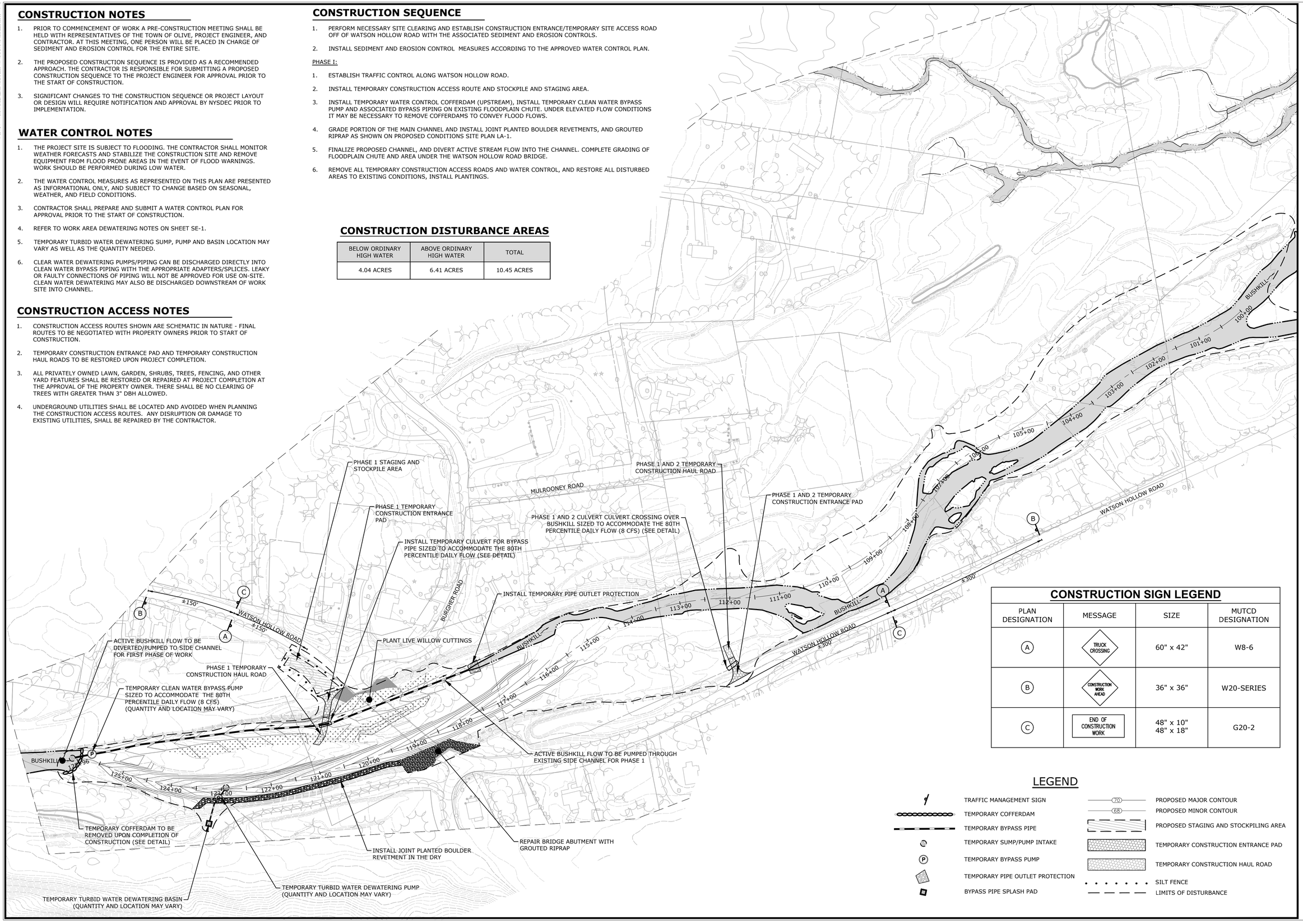
1. PERFORM NECESSARY SITE CLEARING AND ESTABLISH CONSTRUCTION ENTRANCE/TEMPORARY SITE ACCESS ROAD OFF OF WATSON HOLLOW ROAD WITH THE ASSOCIATED SEDIMENT AND EROSION CONTROLS.
2. INSTALL SEDIMENT AND EROSION CONTROL MEASURES ACCORDING TO THE APPROVED WATER CONTROL PLAN.

PHASE I:

1. ESTABLISH TRAFFIC CONTROL ALONG WATSON HOLLOW ROAD.
2. INSTALL TEMPORARY CONSTRUCTION ACCESS ROUTE AND STOCKPILE AND STAGING AREA.
3. INSTALL TEMPORARY WATER CONTROL COFFERDAM (UPSTREAM), INSTALL TEMPORARY CLEAN WATER BYPASS PUMP AND ASSOCIATED BYPASS PIPING ON EXISTING FLOODPLAIN CHUTE. UNDER ELEVATED FLOW CONDITIONS IT MAY BE NECESSARY TO REMOVE COFFERDAMS TO CONVEY FLOOD FLOWS.
4. GRADE PORTION OF THE MAIN CHANNEL AND INSTALL JOINT PLANTED BOULDER REVETMENTS, AND GROUTED RIPRAP AS SHOWN ON PROPOSED CONDITIONS SITE PLAN LA-1.
5. FINALIZE PROPOSED CHANNEL, AND DIVERT ACTIVE STREAM FLOW INTO THE CHANNEL. COMPLETE GRADING OF FLOODPLAIN CHUTE AND AREA UNDER THE WATSON HOLLOW ROAD BRIDGE.
6. REMOVE ALL TEMPORARY CONSTRUCTION ACCESS ROADS AND WATER CONTROL, AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITIONS, INSTALL PLANTINGS.

CONSTRUCTION DISTURBANCE AREAS

BELOW ORDINARY HIGH WATER	ABOVE ORDINARY HIGH WATER	TOTAL
4.04 ACRES	6.41 ACRES	10.45 ACRES



CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
A	TRUCK CROSSING	60" x 42"	W8-6
B	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
C	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2

LEGEND

- TRAFFIC MANAGEMENT SIGN
- TEMPORARY COFFERDAM
- TEMPORARY BYPASS PIPE
- TEMPORARY SUMP/PUMP INTAKE
- TEMPORARY BYPASS PUMP
- TEMPORARY PIPE OUTLET PROTECTION
- BYPASS PIPE SPLASH PAD
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STAGING AND STOCKPILING AREA
- TEMPORARY CONSTRUCTION ENTRANCE PAD
- TEMPORARY CONSTRUCTION HAUL ROAD
- SILT FENCE
- LIMITS OF DISTURBANCE

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845.633.8153
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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

CONSTRUCTION PLAN - PHASE 1

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

DESIGNED	DRAWN	CHECKED
MC	MC	DRM

SCALE: 1"=80'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 13 OF 17
SHEET NAME: CP-1

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CONSTRUCTION NOTES

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WATER CONTROL NOTES

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3. CONTRACTOR SHALL PREPARE AND SUBMIT A WATER CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
4. REFER TO WORK AREA DEWATERING NOTES ON SHEET SE-1.
5. TEMPORARY TURBID WATER DEWATERING SUMP, PUMP AND BASIN LOCATION MAY VARY AS WELL AS THE QUANTITY NEEDED.
6. CLEAR WATER DEWATERING PUMPS/PIPING CAN BE DISCHARGED DIRECTLY INTO CLEAN WATER BYPASS PIPING WITH THE APPROPRIATE ADAPTERS/SPLICES. LEAKY OR FAULTY CONNECTIONS OF PIPING WILL NOT BE APPROVED FOR USE ON-SITE. CLEAN WATER DEWATERING MAY ALSO BE DISCHARGED DOWNSTREAM OF WORK SITE INTO CHANNEL.

CONSTRUCTION ACCESS NOTES

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4. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE

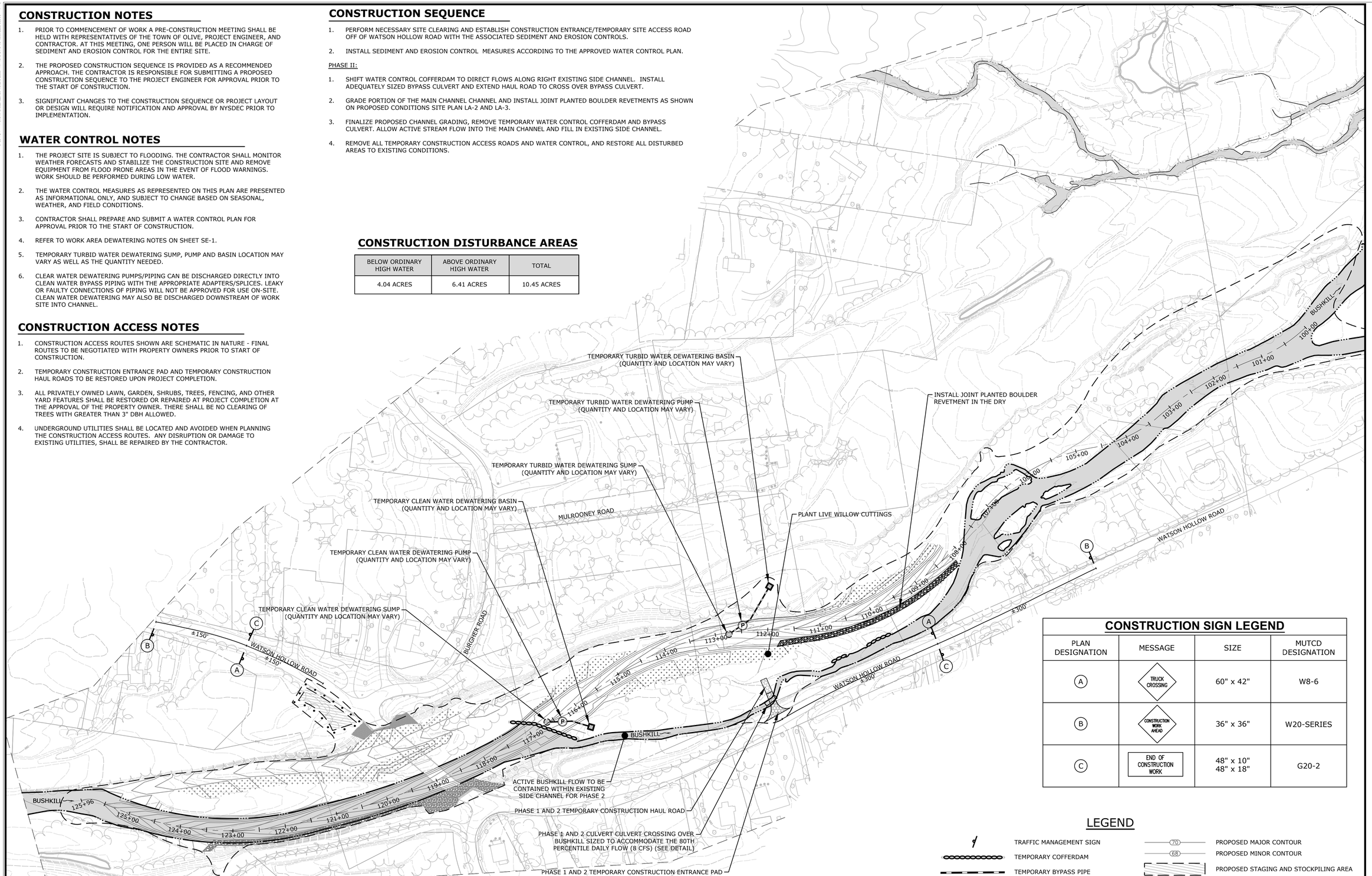
1. PERFORM NECESSARY SITE CLEARING AND ESTABLISH CONSTRUCTION ENTRANCE/TEMPORARY SITE ACCESS ROAD OFF OF WATSON HOLLOW ROAD WITH THE ASSOCIATED SEDIMENT AND EROSION CONTROLS.
2. INSTALL SEDIMENT AND EROSION CONTROL MEASURES ACCORDING TO THE APPROVED WATER CONTROL PLAN.

PHASE II:

1. SHIFT WATER CONTROL COFFERDAM TO DIRECT FLOWS ALONG RIGHT EXISTING SIDE CHANNEL. INSTALL ADEQUATELY SIZED BYPASS CULVERT AND EXTEND HAUL ROAD TO CROSS OVER BYPASS CULVERT.
2. GRADE PORTION OF THE MAIN CHANNEL CHANNEL AND INSTALL JOINT PLANTED BOULDER REVETMENTS AS SHOWN ON PROPOSED CONDITIONS SITE PLAN LA-2 AND LA-3.
3. FINALIZE PROPOSED CHANNEL GRADING, REMOVE TEMPORARY WATER CONTROL COFFERDAM AND BYPASS CULVERT. ALLOW ACTIVE STREAM FLOW INTO THE MAIN CHANNEL AND FILL IN EXISTING SIDE CHANNEL.
4. REMOVE ALL TEMPORARY CONSTRUCTION ACCESS ROADS AND WATER CONTROL, AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITIONS.

CONSTRUCTION DISTURBANCE AREAS

BELOW ORDINARY HIGH WATER	ABOVE ORDINARY HIGH WATER	TOTAL
4.04 ACRES	6.41 ACRES	10.45 ACRES



CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
A	TRUCK CROSSING	60" x 42"	W8-6
B	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
C	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2

LEGEND

- TRAFFIC MANAGEMENT SIGN
- TEMPORARY COFFERDAM
- TEMPORARY BYPASS PIPE
- TEMPORARY SUMP/PUMP INTAKE
- TEMPORARY BYPASS PUMP
- TEMPORARY PIPE OUTLET PROTECTION
- BYPASS PIPE SPLASH PAD
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STAGING AND STOCKPILING AREA
- TEMPORARY CONSTRUCTION ENTRANCE PAD
- TEMPORARY CONSTRUCTION HAUL ROAD
- SILT FENCE
- LIMITS OF DISTURBANCE

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

CONSTRUCTION PLAN - PHASE 2

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=80'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 14 OF 17

SHEET NAME: CP-2

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CONSTRUCTION NOTES

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WATER CONTROL NOTES

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CONSTRUCTION SEQUENCE

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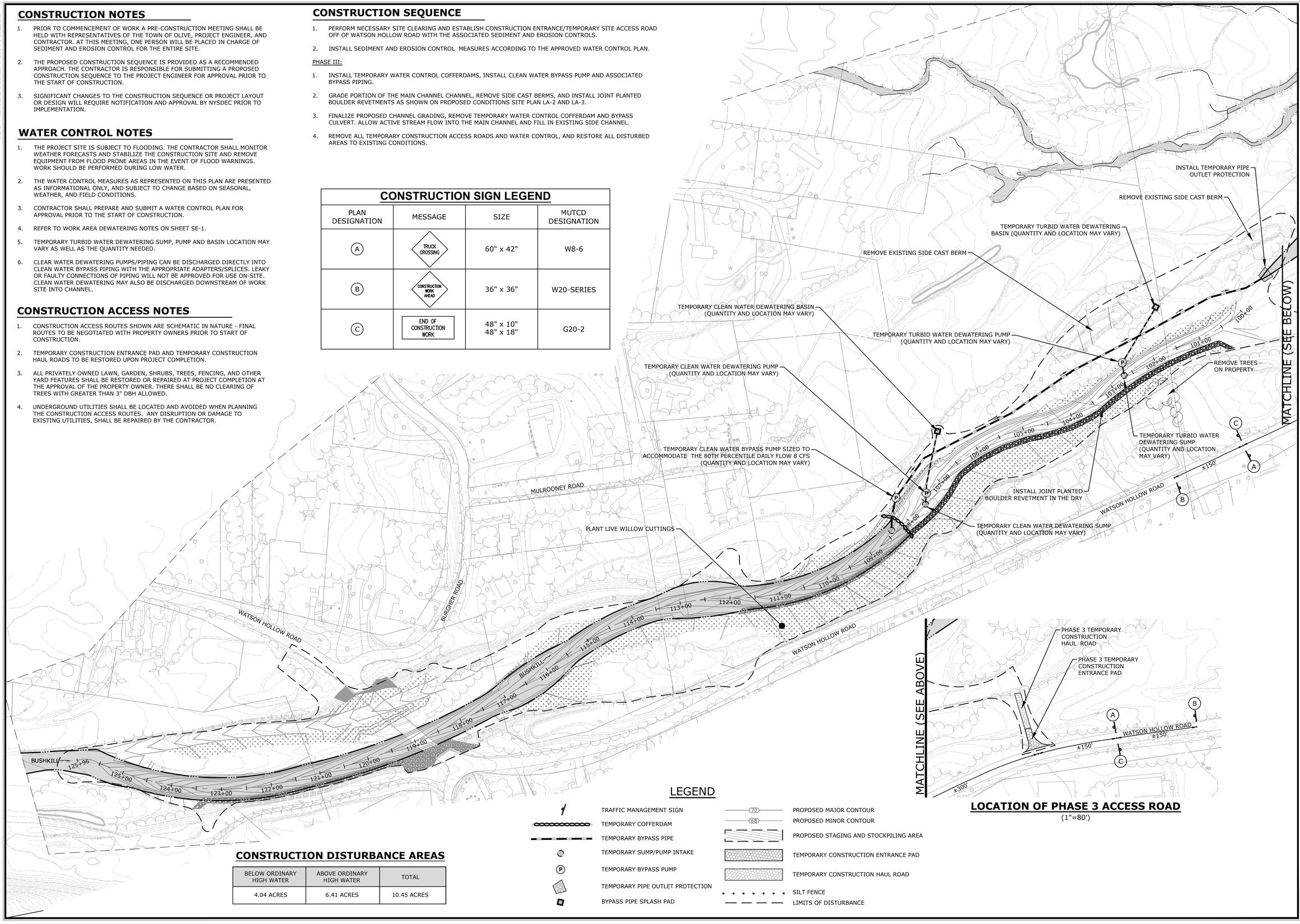
2. INSTALL SEDIMENT AND EROSION CONTROL MEASURES ACCORDING TO THE APPROVED WATER CONTROL PLAN.

PHASE III:

1. INSTALL TEMPORARY WATER CONTROL COFFERDAMS, INSTALL CLEAN WATER BYPASS PUMP AND ASSOCIATED BYPASS PIPING.
2. GRADE PORTION OF THE MAIN CHANNEL CHANNEL, REMOVE SIDE CAST BERMS, AND INSTALL JOINT PLANTED BOULDER REVETMENTS AS SHOWN ON PROPOSED CONDITIONS SITE PLAN LA-2 AND LA-3.
3. FINALIZE PROPOSED CHANNEL GRADING, REMOVE TEMPORARY WATER CONTROL COFFERDAM AND BYPASS CULVERT. ALLOW ACTIVE STREAM FLOW INTO THE MAIN CHANNEL AND FILL IN EXISTING SIDE CHANNEL.
4. REMOVE ALL TEMPORARY CONSTRUCTION ACCESS ROADS AND WATER CONTROL, AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITIONS.

CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
A	TRUCK CROSSING	60" x 42"	W8-6
B	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
C	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2



LOCATION OF PHASE 3 ACCESS ROAD
(1"=80')

LEGEND

- TRAFFIC MANAGEMENT SIGN
- TEMPORARY COFFERDAM
- TEMPORARY BYPASS PIPE
- TEMPORARY SUMP/PUMP INTAKE
- TEMPORARY BYPASS PUMP
- TEMPORARY PIPE OUTLET PROTECTION
- BYPASS PIPE SPLASH PAD
- PROPOSED MAJOR CONTOUR (70)
- PROPOSED MINOR CONTOUR (68)
- PROPOSED STAGING AND STOCKPILING AREA
- TEMPORARY CONSTRUCTION ENTRANCE PAD
- TEMPORARY CONSTRUCTION HAUL ROAD
- SILT FENCE
- LIMITS OF DISTURBANCE

CONSTRUCTION DISTURBANCE AREAS

BELOW ORDINARY HIGH WATER	ABOVE ORDINARY HIGH WATER	TOTAL
4.04 ACRES	6.41 ACRES	10.45 ACRES

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

CONSTRUCTION PLAN - PHASE 3
BUSHKILL STREAM & STREAM BANK REHABILITATION
WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

DESIGNED	DRAWN	CHECKED
MC	MC	DRM

SCALE: 1"=80'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 15 OF 17
SHEET NAME: CP-3

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Appendix C
USFWS, NYNHP, and NYSDEC Correspondence

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

Via Electronic Mail

December 21, 2018

Robyn A. Niver
Endangered Species Biologist USFWS
New York Field Office
Cortland, NY 13045

Re: Section 7 Project Review - ESA/MBTA/BGEPA Consultation for the Bushkill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster 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 & Urban Development (HUD), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for the Bushkill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York (see **Figures 1 and 2**).

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 compliance with Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), as well as the 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, torrential rainfall caused flooding throughout the Esopus watershed, including the Bushkill, which runs parallel to County Route 42 (Watson Hollow Road) in West Shokan. The Town of Olive government offices, including the Department of Public Works and Highway Department and the West Shokan Fire Department are located in West Shokan. These government offices and hundreds of homes were completely isolated from surrounding areas during the floods. People seeking to receive and give assistance during the flooding were forced to make 1.5-hour detours around the flooding through Sullivan County. Flooding also resulted in significant erosion of the Bushkill's channel and banks that resulted in constrictions, reduced capacity, and a shift in the channel's course, that, if not addressed, would present an immediate danger to County Route 42 and properties on the north and south banks of the channel. a Local Flood Analysis (LFA) identified the conditions in seven locations along the Bushkill, contributing to inundation of public and private infrastructure associated with high water flows during future

events and develop mitigation strategies to address flood hazards. The town selected six of the seven potential flood hazard areas to be addressed through the New York Rising Community Recovery Program.

Area of Potential Effect: The proposed stream and streambank rehabilitation area is located along the Bushkill from the County Route 42 Bridge, east to the intersection of the Bushkill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York (see **Figures 1 and 2**).

Proposed Project Description: The Town of Olive has requesting $1,000,000 in CDBG-DR funding for design and construction of stream channel and streambank rehabilitation along the Bushkill stream just west of the Ashokan Reservoir. The Bushkill stream runs generally parallel to Watson Hollow Road in the project area. The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments.

The project area includes approximately 2,525 linear feet (LF) of channel beginning approximately 500 LF upstream of the Watson Hollow Road bridge and ending approximately 2,000 LF downstream of Watson Hollow bridge or 1,000 LF upstream of the Route 28A bridge (**Figure 2**).

The project will be undertaken in three phases. In the first phase, construction will occur within the most upstream portion of the project reach. The modifications will include concentrating the stream channel and widening of the floodplain area, stabilizing the streambank with joint planted boulder revetments or planting of live willow stakes, and fortifying the base of the Watson Hollow bridge along the right bank with grouted rip rap (See Figures LD01 through LD08). In the second phase, which occupies the middle section of the project reach, the construction activities will include widening of the floodplain, and stabilizing the streambank with joint planted boulder revetments and/or planting of live willow stakes. The third phase which will encompass the most downstream portion of the project reach, will involve the same modification as phase two as well as the removal of a side cast berm along the left bank.

To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees (see the attached **Tree Clearing Tally**).

As a Class A(TS) stream, it is anticipated that no in-stream work will be permitted between September 30 and April 30th. As a result, the anticipated construction period is May 2019 (or slightly earlier to set up construction entrances, staging and traffic control measures) to September 30, 2019.

Wetlands: See the attached wetland map, **Figure 3**.

- The project site is within Riverine and Freshwater Forested/Shrub Wetlands National Wetlands Inventory (NWI) wetland areas associated with Bushkill. Both of these wetland areas already have been disturbed by the existing bridge, Watson Hollow Road, and residential development along Bushkill. The project site covers approximately 4.9 acres of the riverine wetlands and approximately 1.1 acres of the freshwater forested/shrub wetlands. The project would not damage the function and beneficial values of these wetlands. Once the streambank has been rehabilitated, the wetland areas will be restored.

- The project site is not within New York State Department of Environmental Conservation (NYSDEC) wetlands or the 300-foot buffer of NYSDEC wetlands.

ESA, Migratory Bird Treaty Act, And Bald and Golden Eagle Protection Act Species: The New York State Natural Heritage Program (NYSNHP) database search completed on October 12, 2018, had records of bald eagle (*Haliaeetus leucocephalus*) nesting within 0.8 mile of the project site, timber rattlesnake (*Crotalus horridus*) within 1.5 miles of the project site, spreading rush (*Juncus subcaudatus*) within 0.5 mile of the project site, and nodding pogonia (*Triphora trianthophoros*, ssp. *Trianthophoros*) within 0.5 mile of the project site. (See attached New **York Natural Heritage Program Review**.)

The USFWS, New York Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of species under the jurisdiction of the USFWS within the project area. The attached Official Species List identifies one endangered and two threatened species that are potentially associated with the project site: the endangered Indiana bat (IB, *Myotis sodalis*) and the threatened northern long-eared bat (NLEB, *Myotis septentrionalis*) and bog turtle (*Clemmys muhlenbergii*) (see attached list). **No critical habit for these species was identified in IPaC**. The IPaC review also indicated that there are several migratory birds of concern that could potentially be affected by the proposed project. Below is a determination of potential effects of the project on each of threatened and endangered species.

Northern Long-eared Bat (NLEB)

Ulster County is within the White-Nose Syndrome Zone. The NLEB, listed as federally threatened, 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. The NLEB is sensitive to fragmentation and urbanization and requires interior forest for both foraging and breeding. Roost trees are usually in intact forest, close to the core and away from large clearings, roads, or other sharp edges. Neither of the two sites that comprise the project area are within five miles of NLEB hibernacula or known maternity colonies (see the attached **Figure 4**). The **project involves the removal of 118 trees** (see the attached **Tree Clearing Tally**), along with vegetated areas and cobble bars dominated by willow shrubs (*Salix* ssp.) and young American sycamore (*Platinus occidentalis*) under 4 inches in diameter at breast height. The trees to be removed are mostly scattered or grouped along the stream and streambank, and do not constitute an intact forest; however, because the proposed project involves the removal of trees during the active season of the NLEB, a habitat assessment for the potential presence of the NLEB will be conducted by a qualified biologist prior to project-related activities. If warranted by the results of habitat assessment, an acoustic survey may also be conducted prior to tree removal. The vegetation cover type will remain the same after the project has been completed, and there is ample forested habitat within 0.5 miles of the project location. All activities associated with the proposed project will not:

- disturb hibernating NLEBs or in a known hibernaculum;
- alter the entrance or interior environment of a known hibernaculum;
- remove any trees within 0.25 miles of a known hibernaculum at any time of year; or

- cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from a maternity roost tree, during the pup season (June 1 through July 31).

Based on these conditions, GOSR has determined that the proposed project **may affect but is not likely to adversely affect** the NLEB.

Indiana Bat (IB)

The IB, listed as federally endangered, is a temperate, insectivorous bat. IB hibernate in caves or mines during winter and emerge during the spring, with males dispersing and remaining solitary or forming small bachelor groups until the end of the summer, and pregnant females forming maternity colonies. Summer habitat of the IB generally includes wooded areas, where they roost under loose tree bark on dead or dying trees. The IB consumes a variety of flying insects found along rivers and other inland water bodies, and the IB is sensitive to forested habitat fragmentation and urbanization of habitat that was previously used for roosting.

GOSR received a review for the Bushkill Stream and Streambank Rehabilitation Project from the NYSDEC on March 12, 2018, of the available information in the New York State Natural Heritage Program (NYSNHP) database on known occurrences of rare or state-listed species. No occupied habitat for the IB was identified. The major concern for this species in relation to this project would be the destruction of potential roosts through tree clearing. The trees to be removed are mostly scattered or grouped along the stream and streambank, and do not constitute an intact forest; however, because the proposed project involves the removal of trees during the active season of the IB, a habitat assessment for the potential presence of the IB will be conducted by a qualified biologist prior to project-related activities. If warranted by the results of habitat assessment, an acoustic survey may also be conducted prior to tree removal. The vegetation cover type will remain the same after the project has been completed, and there is ample forested habitat within 0.5 miles of the project location. All activities associated with the proposed project will not:

- disturb hibernating IBs or in a known hibernaculum;
- alter the entrance or interior environment of a known hibernaculum;
- remove any trees within 0.25 miles of a known hibernaculum at any time of year; or
- cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from a maternity roost tree, during the pup season (June 1 through July 31).

Based on these conditions, GOSR has determined that the proposed project **may affect but is not likely to adversely affect** the IB.

Bog Turtle

Bog turtles rarely leave wetland habitats, and their home ranges are small. Long-distance movements between wetlands were infrequently observed. Bog turtles usually occur in small, discrete populations, generally occupying open-canopy, unpolluted, herbaceous sedge meadows and fens bordered by wood areas. Fens are freshwater, bog-like wetland that are a mosaic of open and shrub habitats with grasses, sedges, and small spring-fed streams (source: https://www.fws.gov/northeast/ecologicalservices/turtle/pdf/Bogturtle.pdf).

Bog Turtles inhabit open, **unpolluted emergent and scrub/shrub wetlands** such as shallow spring-fed fens, sphagnum bogs, swamps, marshy meadows, and wet pastures. These habitats are characterized by soft muddy bottoms, interspersed wet and dry pockets, vegetation dominated by low grasses and sedges, and a low volume of standing or slow-moving water which often forms a network of shallow pools and rivulets. Bog Turtles prefer areas with ample sunlight, high evaporation rates, high humidity in the near-ground microclimate, and perennial saturation of portions of the ground. Eggs are often laid in elevated areas, such as the tops of tussocks. Bog Turtles generally retreat into more densely vegetated areas to hibernate from mid-September through mid-April (source: https://www.fws.gov/northeast/nyfo/es/bogturtle.htm).

Mating occurs from late April to early June. Lays clutch of 1-6 (usually 3-5) eggs in May, June, or July (occasionally August). Eggs hatch in about 6-9 weeks, late July to early September. In the north, hatchlings may not emerge from the nest until October or they may overwinter in the nest.

Eggs are susceptible to trampling by humans walking through the habitat. Frequent human visits to single sites conceivably could interfere with the turtles' basking behavior and may disturb females attempting to nest (source: http://explorer.natureserve.org/servlet/NatureServe?searchName=Clemmys+muhlenbergii+).

The project site is within Riverine and Freshwater Forested/Shrub National Wetlands Inventory (NWI) wetland areas associated with Bushkill. These wetland areas already have been disturbed by the existing bridge, Watson Hollow Road and residential development along Bushkill. These wetland areas do not represent the open, unpolluted emergent and scrub/shrub wetlands that provide habitat for the bog turtle. Therefore, **the wetlands associated with the project do not provide suitable habitat for the bog turtle**. The vegetation will remain the same and the function of the wetlands will not be altered once the project is completed. Therefore, GOSR has determined that the proposed project **may affect but is not likely to adversely affect** bog turtles.

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The IPaC review indicated that seven migratory bird species of concern for the project area, including the bald eagle. The NYNHP database search identified the bald eagle (*Haliaeetus leucocephalus*) as a species near the project area, with a documented nest site within 0.8 mile of the project site. The bald eagle and golden eagle (*Aquila chrysaetos*) warrant attention because of the Bald and Golden Eagle Protection Act. As with other migratory birds, foraging bald eagles may temporarily avoid the area during construction due to noise and disturbance. GOSR will conduct a survey prior to project-related activities to ensure that no bald eagle nests would be disturbed by the project.

Summary and Compliance

The proposed project would not jeopardize the continued existence of ESA species or destroy or adversely modify their critical habitat. On this basis, GOSR has determined that the proposed action **may affect but is not likely to adversely affect** the NLEB, IB, bog turtle, or migratory birds. We request your concurrence with this determination. Additionally, we request to be alerted if USFWS becomes aware of a Bald or Golden Eagle nest within 660 feet of the project site.

Project implementation is conditioned upon issuance of applicable federal and state permits and would be constructed in accordance with federal and state permit conditions. The proposed project would not have a

significant impact on ESA species or adversely modify any critical habitat. Conservation measures would be employed to avoid impacts to bats, including a tree survey prior to any project-related disturbance and clearly demarcating trees to be protected compared with those to be cut if any are identified in the survey.

Your assistance with this matter is greatly appreciated. We respectfully request your concurrence with our determinations and are seeking a response within 30 days of receipt of this letter. If you have questions or require additional information regarding this request, please contact Lori A. Shirley at (518) 474-0755 or Lori.Shirley@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Lori A. Shirley
Certifying Officer
NYS Governor's Office of Storm Recovery

Attachments:
Figure 1 -Olive Bushkill Streambank Rehabilitation - Project Location
Figure 2 - Olive Bushkill Streambank Rehabilitation - Project Area
Figure 3 - Olive Bushkill Streambank Rehabilitation - NYS Freshwater and NWI Wetlands
Figure 4 - Olive Bushkill Streambank Rehabilitation - Northern Long-eared Bat Hibernacula
Site Plans
New York Natural Heritage Program Review
USFWS Species List - New York Ecological Services Field Office
Tree Clearing Tally

Project Location

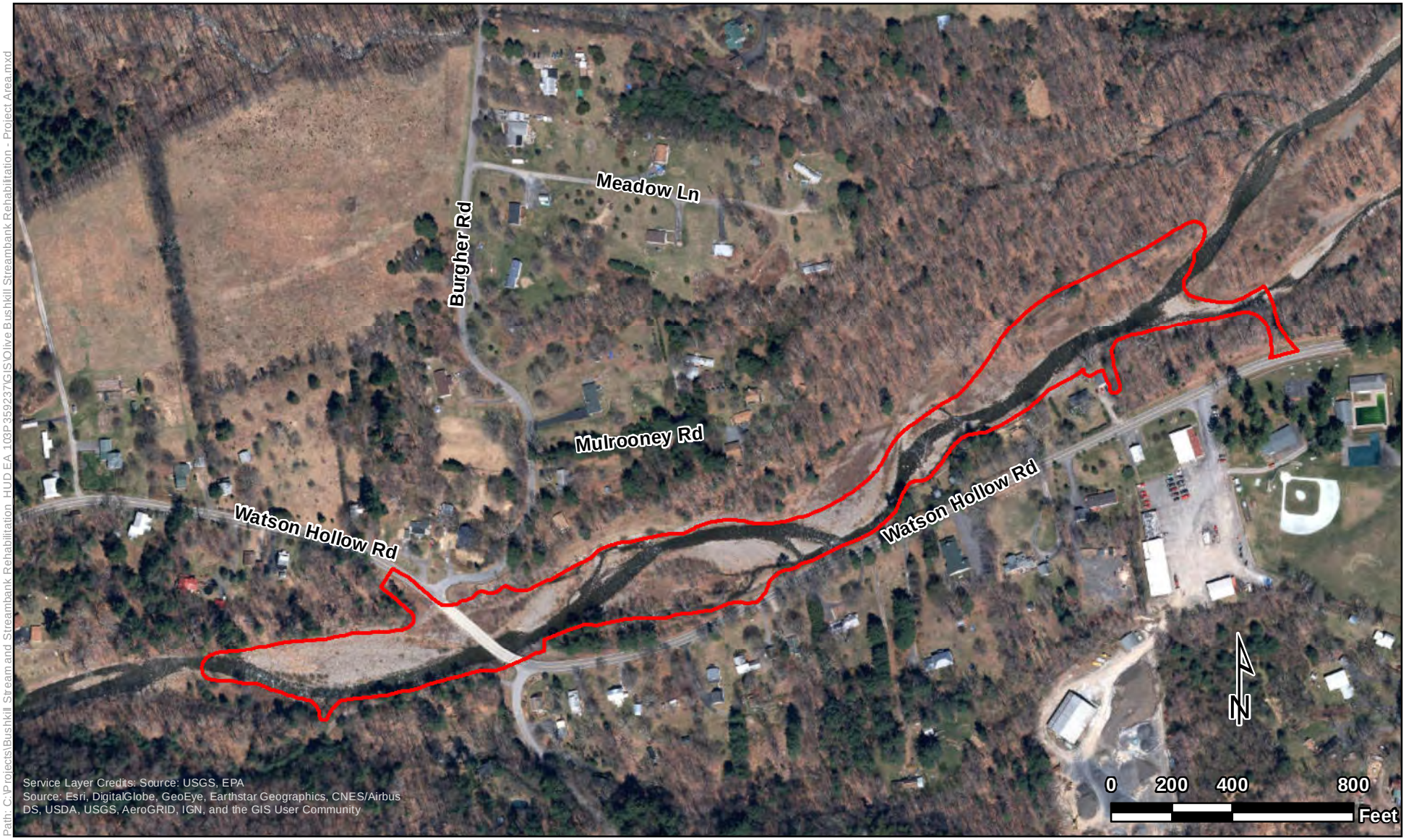
Legend

Project Location

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 1



Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103935923\GIS\Olive Bushkill Streambank Rehabilitation - Project Area.mxd

Project Area

Legend

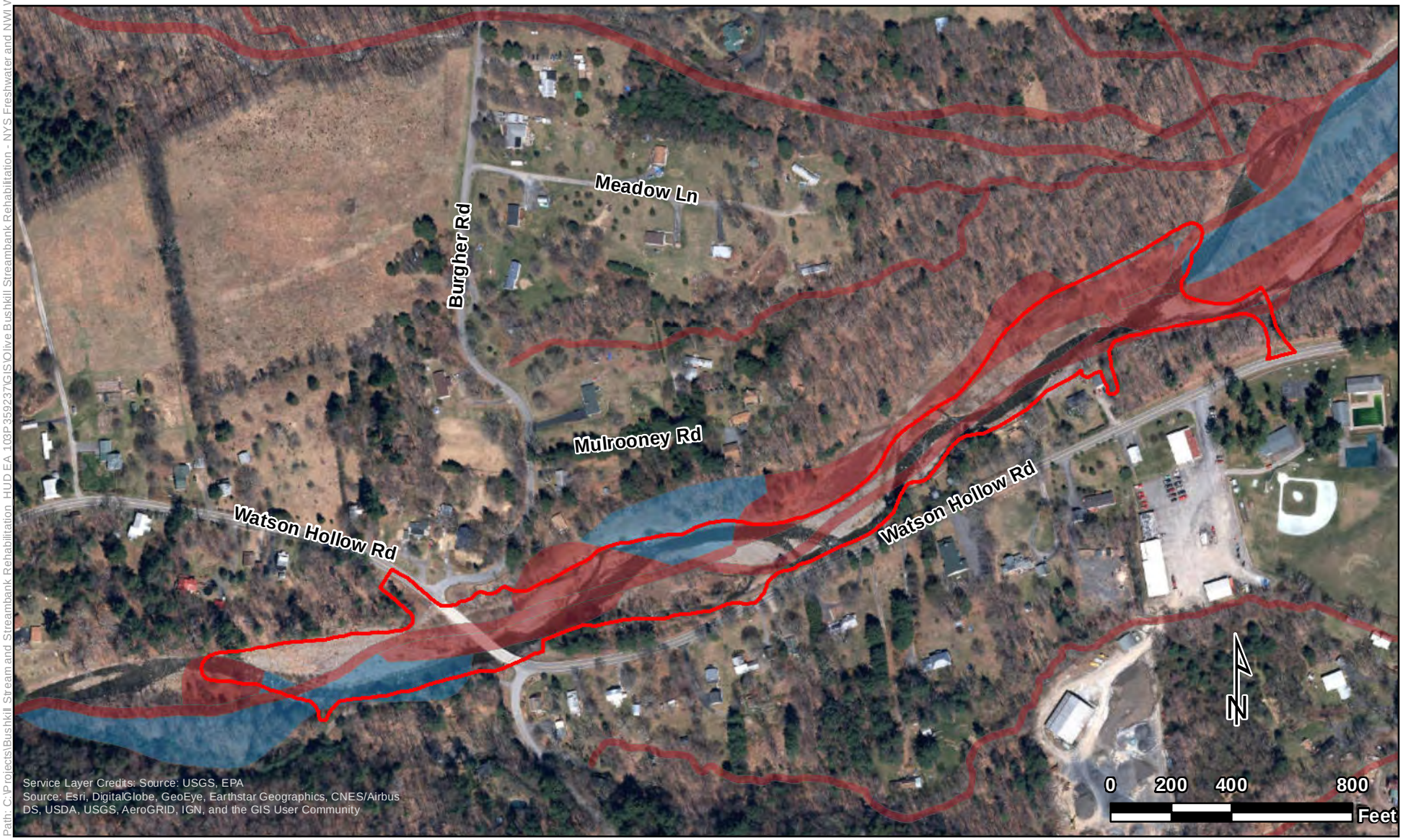
Project Area

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 2

Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103935923\GIS\Olive Bushkill Streambank Rehabilitation - NYS Freshwater and NWI Wetlands.mxd



Legend

- Project Area
- NYS Freshwater Wetlands
- NYS Freshwater Wetlands Buffer

NWI Wetlands

- Freshwater Forested/Shrub Wetland
- Riverine

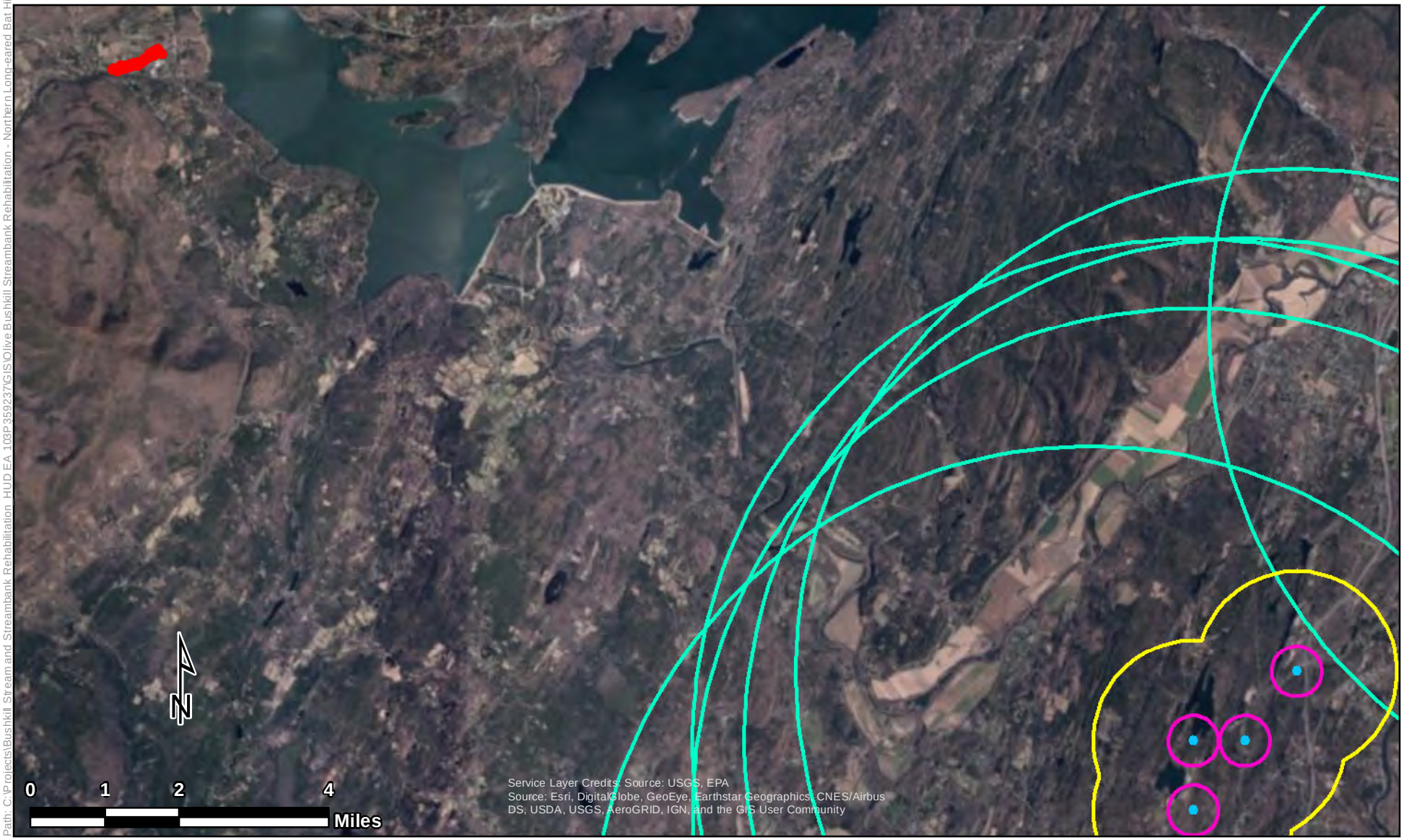
NYS Freshwater and NWI Wetlands

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Figure 3

Tetra Tech, Inc

Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103P359237\GIS\Olive Bushkill Streambank Rehabilitation - Northern Long-eared Bat Hibernacula.mxd



Legend

- NLEB Hibernacula
- Project Area
- NLEB Hibernacula 0.25 Mile Buffer
- NLEB Hibernacula 1 Mile Buffer
- NLEB Hibernacula 5 Mile Buffer

Northern Long-eared Bat Hibernacula

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

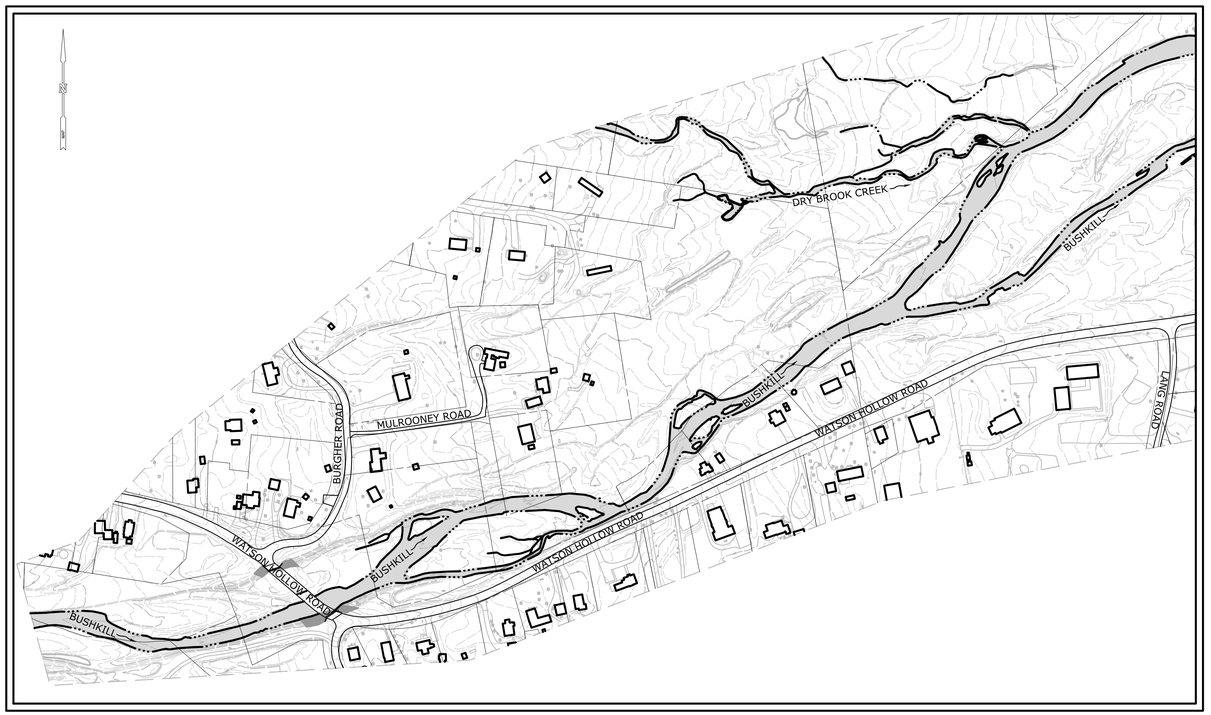
Tetra Tech, Inc

Figure 4

BUSHKILL CREEK STREAM AND STREAM BANK STABILIZATION DESIGN

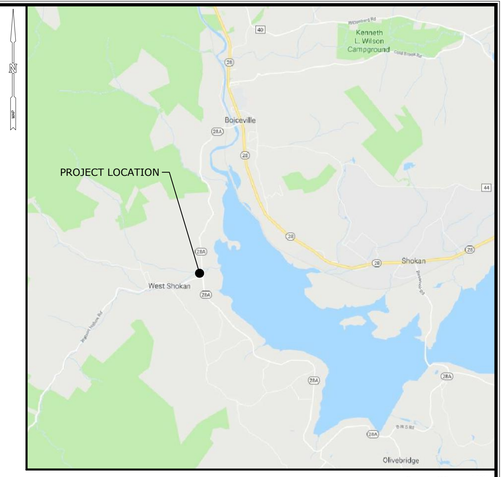
WATSON HOLLOW ROAD
TOWN OF OLIVE, NEW YORK

PRELIMINARY DESIGN (60%)
NOVEMBER 2, 2018
MMI#: 5909-01



PROJECT SITE VICINITY MAP

0' 100' 200'
0 1/2" 1"
SCALE 1" = 300'



LOCATION MAP

0' 3000' 6,000'
0 1/2" 1"
SCALE 1" = 1000'

PREPARED FOR:

TOWN OF OLIVE
45 WATSON HOLLOW ROAD
WEST SHOKAN, NY 12494

FUNDING PROVIDED THROUGH THE GOVERNOR'S OFFICE OF STORM RECOVERY'S
NEW YORK RISING COMMUNITY RECONSTRUCTION PROGRAM

LIST OF DRAWINGS

NO.	NAME	TITLE
01	--	TITLE PLAN
02	IN-1	INDEX PLAN
03-05	EX 1-3	SITE PLAN - EXISTING CONDITIONS
06-08	GR 1-3	SITE PLAN - GRADING
09-11	LA 1-3	SITE PLAN - LAYOUT
12	PR-1	STREAM CHANNEL PROFILE
13-15	CP 1-3	CONSTRUCTION PLAN
16	SE-1	DETAILS - SEDIMENT AND EROSION CONTROL
17	DE-1	DETAILS - CHANNEL AND SITE RESTORATION

PREPARED BY:

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New Paltz, New York 12561
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MMI NO.: 5909-01
SUBMITTED: OCTOBER 2018

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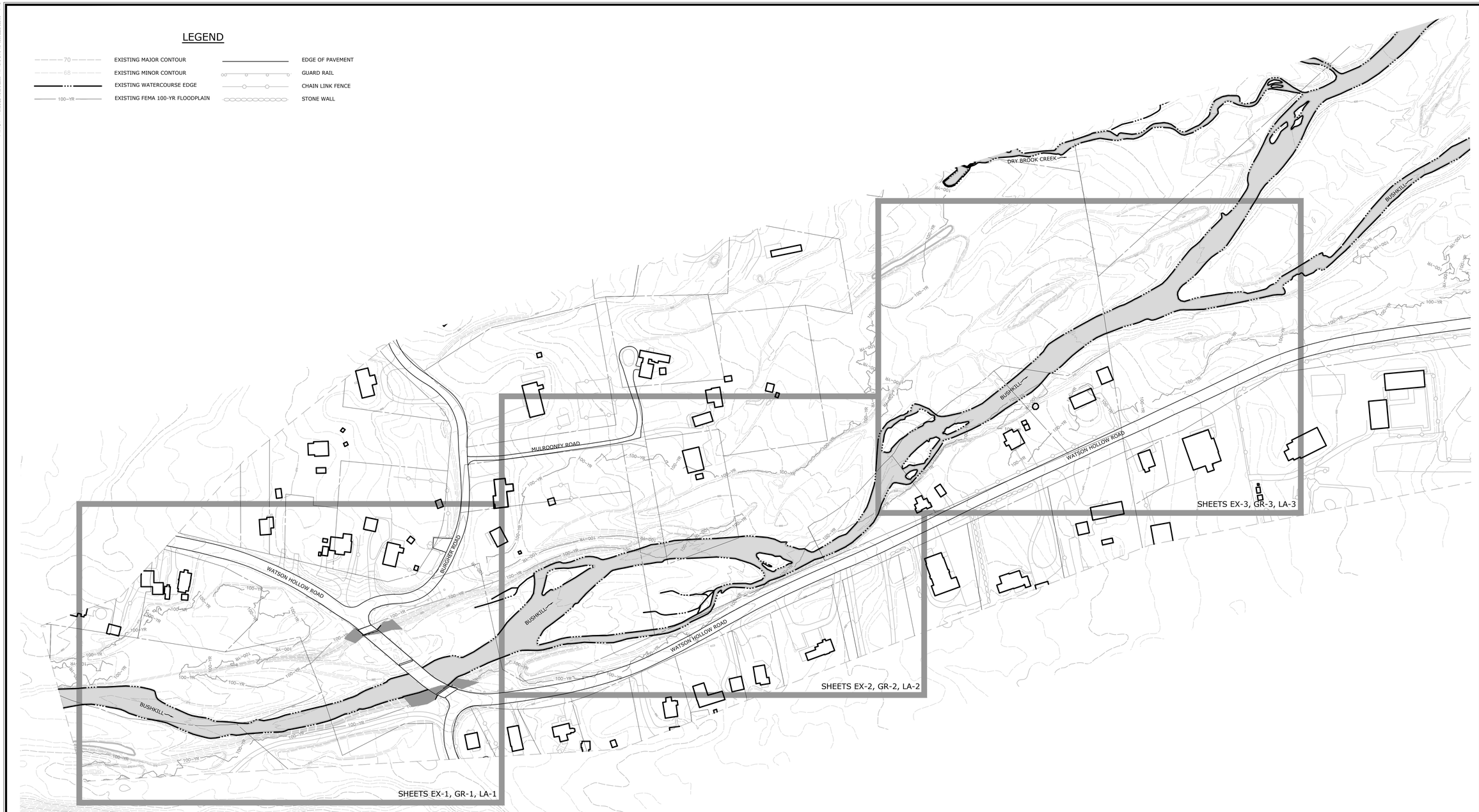
Plotted: 01/02/2019 08:57 AM By: JOHN@MACBROOM.COM
Filename: W:\5900\5909-01\Drawings\Site Plan\5909-01 IN-1.dwg
Xrefs: Base_Sheet-1

LEGEND

70 EXISTING MAJOR CONTOUR	EDGE OF PAVEMENT
68 EXISTING MINOR CONTOUR	GUARD RAIL
EXISTING WATERCOURSE EDGE	CHAIN LINK FENCE
100-YR EXISTING FEMA 100-YR FLOODPLAIN	STONE WALL



GENERAL NOTES

1. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. DIAL 811 OR GO TO WWW.DIGSAFELYNEWYORK.COM. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

2. MILONE & MACBROOM INC. ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.

3. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

4. SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL," AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.

5. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.

6. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE TOWN OF OLIVE, COUNTY OF ULSTER, AND/OR STATE OF NEW YORK REQUIREMENTS, AS NECESSARY AND APPLICABLE. CONSTRUCTION PRACTICES, MATERIALS, AND PAYMENT SHALL BE IN ACCORDANCE WITH THE CURRENTLY PUBLISHED VERSION OF THE STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AS APPLICABLE.

7. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.

8. ALL FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS USED DURING CONSTRUCTION SHOULD BE STORED IN A SECONDARY CONTAINER AND REMOVED TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.

9. MODIFICATIONS TO ANY ABOVE-GROUND OR UNDERGROUND UTILITY, INCLUDING BUT NOT LIMITED TO STORM SEWER, SANITARY SEWER, WATER DISTRIBUTION, ELECTRIC, TELECOMMUNICATIONS, AND/OR GAS SYSTEMS SHALL BE COORDINATED WITH THE APPLICABLE UTILITY PROVIDER.

10. COMPLIANCE WITH ALL REGULATORY PERMIT APPROVALS AND SPECIAL CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITTEE.

11. THE CONTRACTOR MUST MAINTAIN (REPAIR/REPLACE WHEN NECESSARY) THE SILTATION CONTROL MEASURES UNTIL ALL DEVELOPMENT ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

0' 50' 100'
0 1/2" 1"

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

INDEX PLAN

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

1"=100'

NOVEMBER 2, 2018

5909-01

02 OF 17

IN-1

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Plotted: 11/2/2018 9:06:07 AM By: mjohnson
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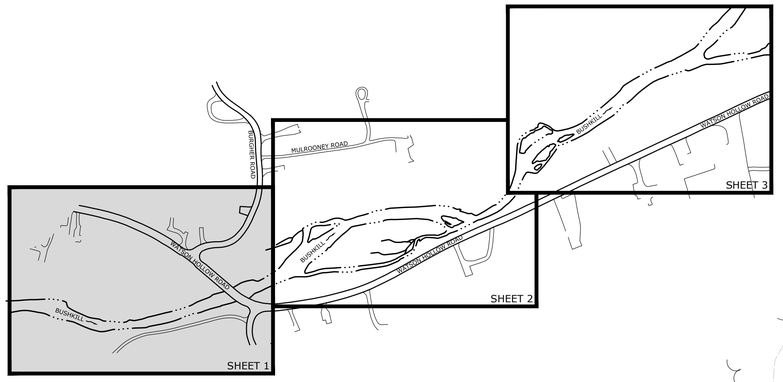
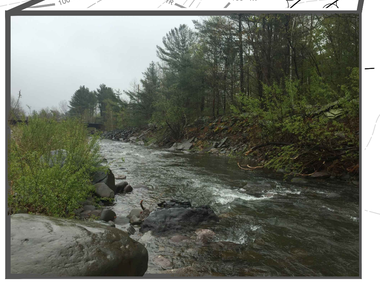


SHEET INDEX
(N.T.S.)

LOOKING UPSTREAM

BRIDGE ABUTMENT



LOOKING DOWNSTREAM

WATSON HOLLOW ROAD

BURGHER ROAD

BUSHKILL

EXISTING RIPRAP ARMORING AT TOE OF BRIDGE ABUTMENT

EXISTING SIDE CHANNEL

EXISTING ROCK ARMORING ALONG RIGHT BANK

N/F
RACKELLE RODEN
#13 BURGHER RD

N/F
JESSICA APPLEBY
#147 WATSON HOLLOW RD

N/F
PHILLIP TAGER
#2 HIGH POINT MOUNTAIN ROAD

N/F
CHRISTOPHER N MARZULI
#HIGH POINT MOUNTAIN RD

LIMITS OF AERIAL TOPOGRAPHY

MATCHLINE (SEE SHEET EX-2)

54+00
55+00
53+00
52+00
51+00
50+00
49+00
48+00
47+00
46+00

LEGEND

- EXISTING WATERCOURSE EDGE
- PROPERTY LINE
- EDGE OF PAVEMENT
- TREE LINE
- 70 EXISTING MAJOR CONTOUR
- 68 EXISTING MINOR CONTOUR
- STONE WALL
- FENCE
- UTILITY POLE
- GUARD RAIL
- 100-YR EXISTING FEMA 100-YEAR FLOODPLAIN
- OHW ORDINARY HIGH WATER LINE
- LIMITS OF AERIAL TOPOGRAPHY

MAPPING AND SURVEY NOTES:

1. TOPOGRAPHIC INFORMATION IS BASED UPON AERIAL PHOTOGRAMMATETRY PERFORMED BY GOLDEN AERIAL, INC. NEWTOWN, CT, FLOWN APRIL 23, 2017, AND SUPPLEMENTED WITH GROUND SURVEY PERFORMED BY PRUDENT ENGINEERING, IN OCTOBER 2017. CHANNEL SURVEY PERFORMED BY MJ ENGINEERING IN AUGUST 2016.
2. HORIZONTAL MAPPING IS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), IN THE NEW YORK EAST ZONE. ELEVATION DATA IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). ALL CONTOURS ARE PRESENTED IN FEET.
3. PROPERTY BOUNDARY INFORMATION WAS OBTAINED FROM ULSTER COUNTY, AND IS FOR INFORMATIONAL PURPOSES ONLY. ASSESSORS INFORMATION IS APPROXIMATE, AND SHOULD NOT BE CONSIDERED COMPLETE OR CURRENT FOR PURPOSES OF CONSTRUCTION AND/OR EASEMENT NEGOTIATION.
4. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CONTACT "DIG SAFELY NEW YORK" BY CALLING 811. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
5. MILONE & MACBROOM INC. ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
6. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR DETERMINATION.
7. FLOOD HAZARD INFORMATION AS DEPICTED FOR THE 100-YEAR FLOOD BOUNDARY WAS DERIVED FROM CURRENTLY EFFECTIVE FLOOD INSURANCE RATE MAPPING (FIRM) NO. 36111C0410F (EFF. 11/18/16).
8. THE PROJECT SITE INCLUDES BUSHKILL CREEK AND IS SUBJECT TO FLOODING. INFORMATION DEPICTED HEREIN IS SHOWN AS A REPRESENTATION OF THE PROJECT SITE AT THE TIME IT WAS SURVEYED, AND IS SUBJECT TO CHANGE BASED UPON HIGH FLOWS, FLOOD, EROSION, AND/OR CHANGING SITE CONDITIONS.
9. ALL CONTRACTORS ARE ADVISED TO VISIT THE SITE TO CONFIRM CURRENT CONDITIONS PRIOR TO SUBMITTING BIDS.

0' 15' 30'
0 1/2" 1"

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DESCRIPTION	DATE	BY

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SITE PLAN - EXISTING CONDITIONS

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

1"=30'
SCALE

NOVEMBER 2, 2018
DATE

5909-01
PROJECT NO.

03 OF 17
SHEET NO.

EX-1
SHEET NAME

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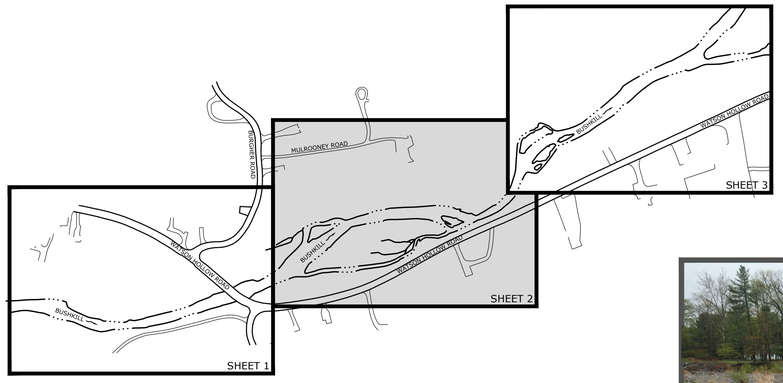

SHEET INDEX
(N.T.S.)

SEDIMENT BAR

MATCHLINE (SEE SHEET EX-1)

MATCHLINE (SEE SHEET EX-3)

N/F
COUNTY OF ULSTER
MEADOW LN / BURGHER RD

N/F
THOMAS FREDERICK OLIVERI
BURGHER RD

EXISTING STONE ARMORING
ALONG RIGHT BANK

N/F
VICTOR AVILES
#70 WATSON HOLLOW RD

BUSHKILL

40+00
41+00
42+00
43+00
44+00
45+00
39+00
38+00
37+00

N/F
HECTOR & SIMONE SANZ
#10 BURGHER RD

N/F
SARAH HEMINGWAY LYNCH
#75 WATSON HOLLOW RD

WATSON HOLLOW ROAD

N/F
URSULA PERRY
#89 WATSON HOLLOW RD

N/F
FRED & MARIE JAECK
#91 WATSON HOLLOW RD

LIMITS OF AERIAL TOPOGRAPHY

LOOKING DOWNSTREAM

LEGEND

- EXISTING WATERCOURSE EDGE
- PROPERTY LINE
- EDGE OF PAVEMENT
- TREE LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- STONE WALL
- FENCE
- UTILITY POLE
- GUARD RAIL
- EXISTING FEMA 100-YEAR FLOODPLAIN
- ORDINARY HIGH WATER LINE
- LIMITS OF AERIAL TOPOGRAPHY

N

0' 15' 30'
0 15" 1"

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PRELIMINARY DESIGN 60%

SITE PLAN - EXISTING CONDITIONS

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 04 OF 17

SHEET NAME: **EX-2**

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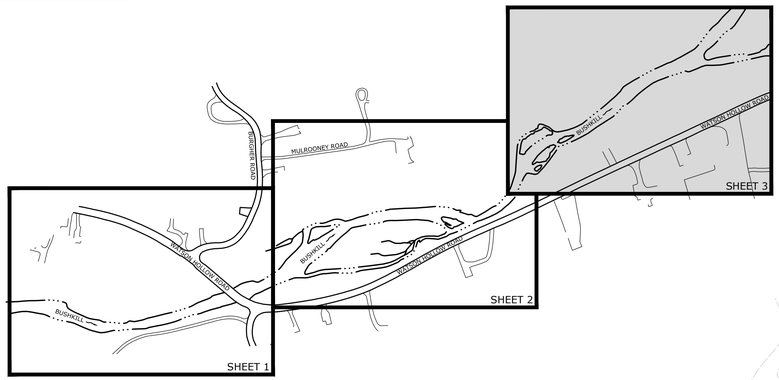

SHEET INDEX
(N.T.S.)

EXISTING SIDE CAST BERM

EXISTING SIDE CAST BERM

BUSHKILL

EROSION ALONG RIGHT BANK

LOOKING DOWNSTREAM

EROSION ALONG RIGHT BANK

LOOKING DOWNSTREAM

N/F
WERNER WAGNER
#62 WATSON HOLLOW RD

N/F
FRED & MARIE JAECK
#91 WATSON HOLLOW RD

N/F
ADAM & JODI SCOTT
#59 WATSON HOLLOW RD

N/F
OLIVE FIRE DEPT NO 1 INC
#53 WATSON HOLLOW RD

WATSON HOLLOW ROAD

MATCHLINE (SEE SHEET EX-2)

LEGEND

- EXISTING WATERCOURSE EDGE
- PROPERTY LINE
- EDGE OF PAVEMENT
- TREE LINE
- 70 EXISTING MAJOR CONTOUR
- 68 EXISTING MINOR CONTOUR
- STONE WALL
- FENCE
- UTILITY POLE
- GUARD RAIL
- 100-YR EXISTING FEMA 100-YEAR FLOODPLAIN
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231 Main Street, Suite 102
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www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - EXISTING CONDITIONS

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

1"=30'
SCALE

NOVEMBER 2, 2018
DATE

5909-01
PROJECT NO.

05 OF 17
SHEET NO.

EX-3
SHEET NAME

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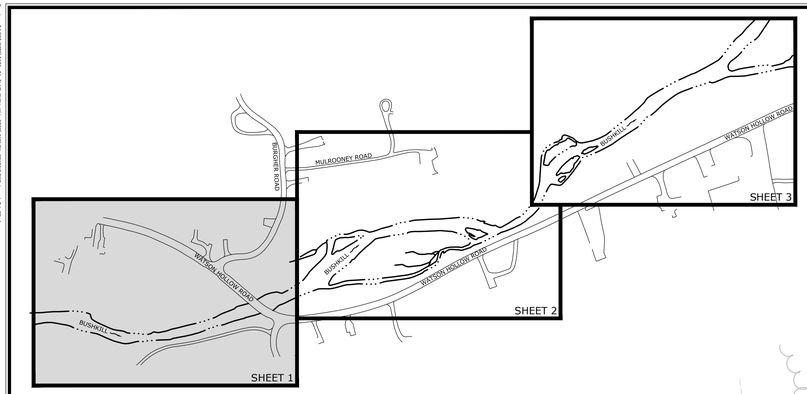

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-2)

WATSON HOLLOW ROAD

BURGHER ROAD

RESHAPE 25' WIDE
SIDE CHANNEL

BEGIN STREAM CHANNEL RECONSTRUCTION
STA: 126+09

BUSHKILL

CONSTRUCT A 46' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 10H:1V

SLOPE 3H:1V

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

N
W E
S
0' 15' 30'
0 15" 1"

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New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION
WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 08 OF 17
SHEET NAME: GR-1

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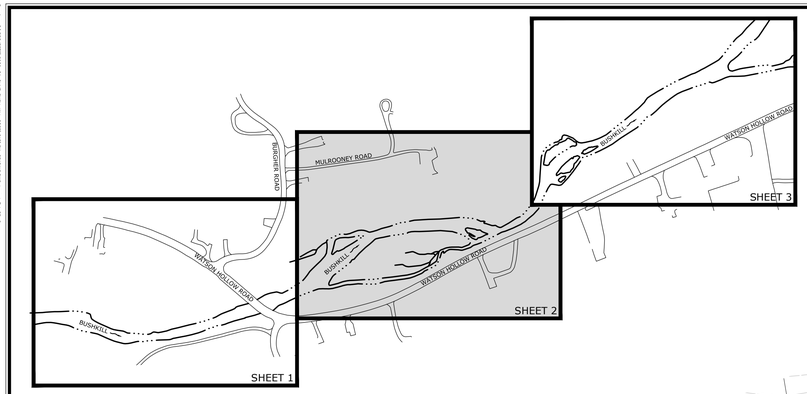

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-1)

MATCHLINE (SEE SHEET GR-3)

SLOPE 3H:1V

CONSTRUCT A 69' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 100H:1V

SLOPE 50H:1V

FILL EXISTING
FLOODPLAIN SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 07 OF 17

SHEET NAME: GR-2

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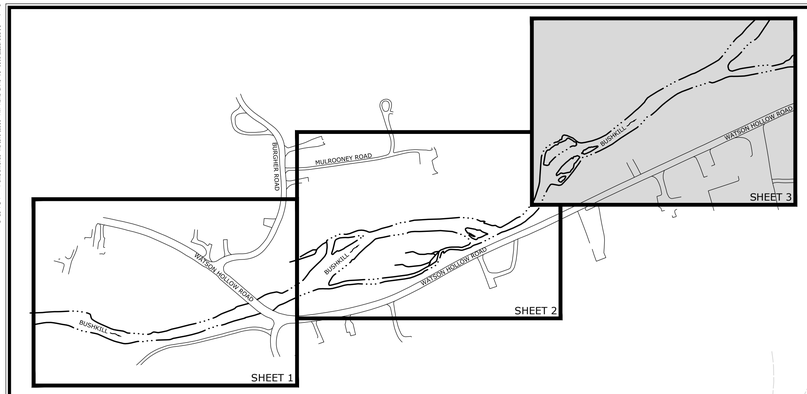

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

CONSTRUCT A 46' WIDE BANKFULL CHANNEL (SEE DETAIL CROSS SECTION)

SLOPE 3H:1V

SLOPE 100H:1V

END OF STREAM CHANNEL RECONSTRUCTION STA: 100+00

BUSHKILL

WATSON HOLLOW ROAD

MATCHLINE (SEE SHEET GR-2)

100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

LEGEND

- 70 — EXISTING MAJOR CONTOUR
- 68 — EXISTING MINOR CONTOUR
- (70) — PROPOSED MAJOR CONTOUR
- (68) — PROPOSED MINOR CONTOUR

N W E S
0' 15' 30'
0 1/2" 1"

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 06 OF 17

SHEET NAME: GR-3

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Plotted: 9/28/2018 11:07:39 AM By: MC
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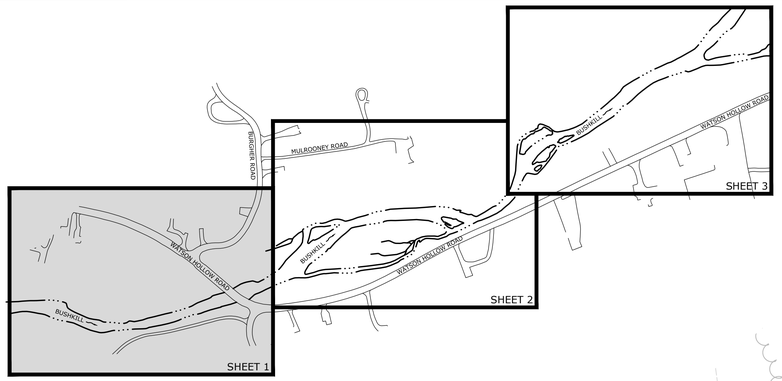

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-2)

WATSON HOLLOW ROAD

BURGHER ROAD

REMOVE EXCESS MATERIAL FROM BRIDGE OPENING

RESHAPE EXISTING SIDE CHANNEL

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

BUSHKILL

126+17

126+00

125+00

124+00

123+00

122+00

121+00

120+00

119+00

118+00

REPLACE RIPRAP AND GROUT (SEE DETAIL)

INSTALL JOINT PLANTED BOULDER REVETMENT STA 119+50 TO 123+50 - SEE DETAIL

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

N
W E
S

0' 15' 30'
0 1/2" 1"

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

1"=30'
SCALE

NOVEMBER 2, 2018
DATE

5909-01
PROJECT NO.

09 OF 17
SHEET NO.

LA-1
SHEET NAME

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Plotted: 31 JAN 2019 08:38 By: JOSHUA MACBROOM
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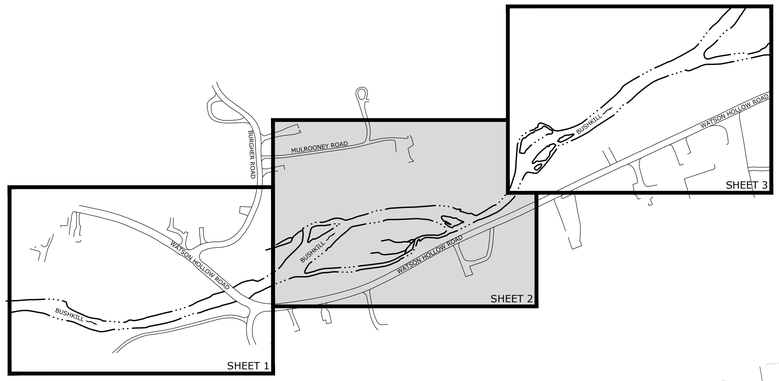

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-1)

MATCHLINE (SEE SHEET EX-3)

FILL EXISTING CHANNEL AND RELOCATE AWAY FROM ROAD

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

INSTALL JOINT PLANTED BOULDER REVETMENT STA 100+60 TO 111+75 - SEE DETAIL

FILL EXISTING SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00

LEGEND

- EXISTING MAJOR CONTOUR (70)
- EXISTING MINOR CONTOUR (68)
- PROPOSED MAJOR CONTOUR (70)
- PROPOSED MINOR CONTOUR (68)
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

0' 15' 30'
0 1/2" 1"

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SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 10 OF 17

SHEET NAME: **LA-2**

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Plotted: 02/05/2019 - 8:58 AM By: ANTHONY MACBROOM (Layer: Model)
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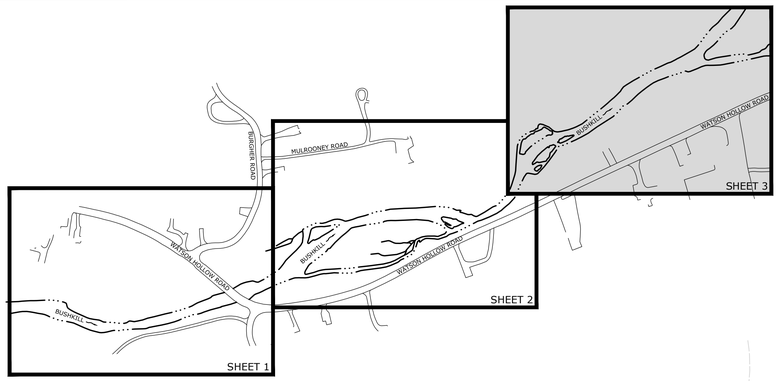

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

LIVE WILLOW CUTTINGS
(REUSE FROM SITE WHERE POSSIBLE)

INSTALL JOINT PLANTED BOULDER
REVETMENT STA 100+60 TO
111+75 - SEE DETAIL

REMOVE TREES ON PROPERTY

RE-USE EXISTING WILLOW PLANTS
FOR PLANTING WHERE POSSIBLE

FILL EXISTING SIDE CHANNEL
AWAY FROM PROPERTIES

WATSON HOLLOW ROAD

BUSHKILL

MATCHLINE (SEE SHEET EX-2)

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

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SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 11 OF 17

SHEET NAME: LA-3

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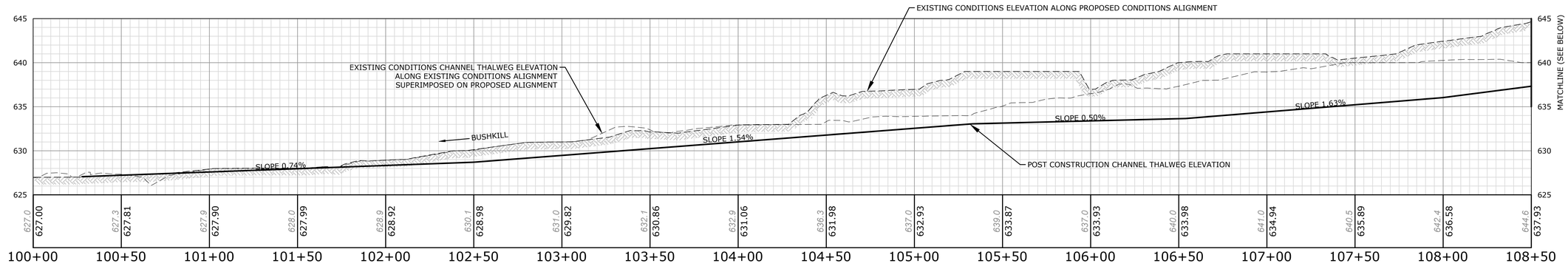

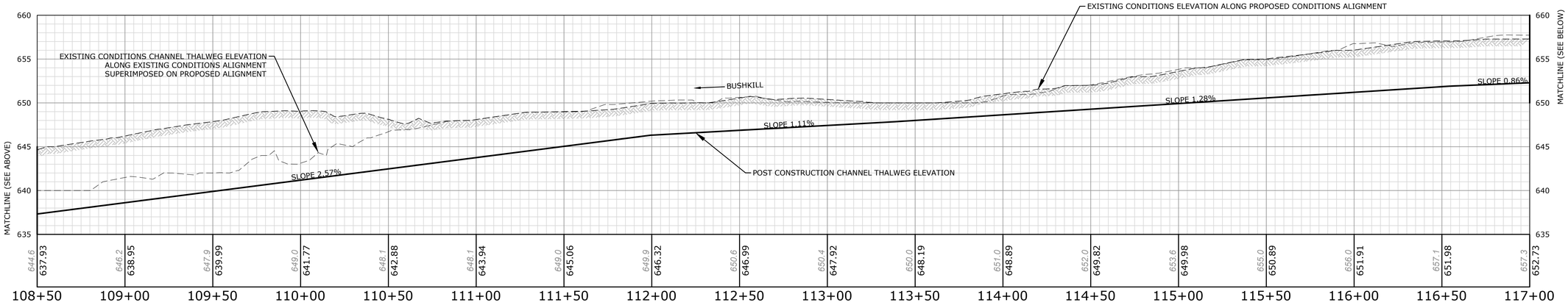

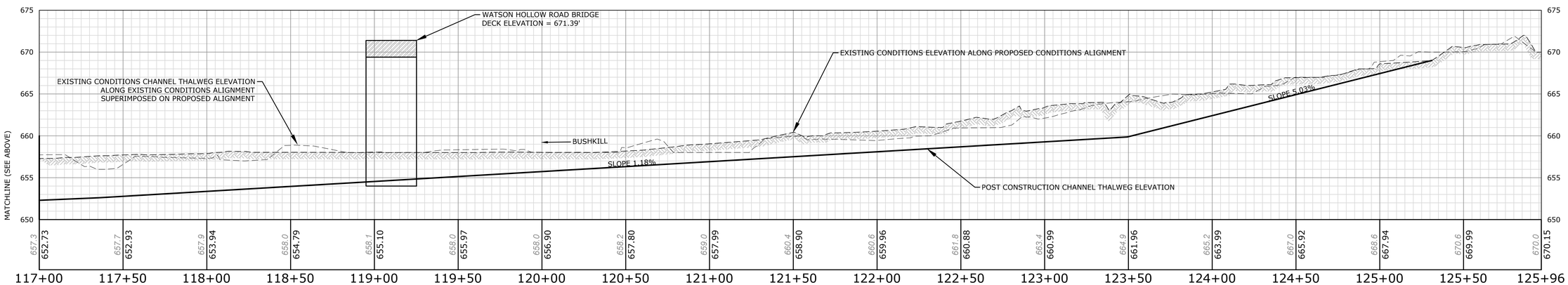

BUSHKILL - PROFILE VIEW

SCALE: 1"=30' (H); 1"=6' (V)

LEGEND

- EXISTING GRADE ALONG EXISTING ALIGNMENT
- EXISTING GRADE ALONG PROPOSED ALIGNMENT
- PROPOSED GRADE ALONG PROPOSED ALIGNMENT

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

STREAM PROFILE

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

DESIGNED	DRAWN	CHECKED
MC	MC	DRM

SCALE: AS NOTED

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 12 OF 17

SHEET NAME: PR-1

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Plotted By: DRM on 10/30/2018 8:54 AM File: G:\PROJECTS\5909-01\Drawings\Construction\Plan\CP-1.dwg
Plotted At: 1/2/2019 Xrefs: Bound: Images: Layout: CP-1

CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF WORK A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES OF THE TOWN OF OLIVE, PROJECT ENGINEER, AND CONTRACTOR. AT THIS MEETING, ONE PERSON WILL BE PLACED IN CHARGE OF SEDIMENT AND EROSION CONTROL FOR THE ENTIRE SITE.
2. THE PROPOSED CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
3. SIGNIFICANT CHANGES TO THE CONSTRUCTION SEQUENCE OR PROJECT LAYOUT OR DESIGN WILL REQUIRE NOTIFICATION AND APPROVAL BY NYSDEC PRIOR TO IMPLEMENTATION.

WATER CONTROL NOTES

1. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
2. THE WATER CONTROL MEASURES AS REPRESENTED ON THIS PLAN ARE PRESENTED AS INFORMATIONAL ONLY, AND SUBJECT TO CHANGE BASED ON SEASONAL, WEATHER, AND FIELD CONDITIONS.
3. CONTRACTOR SHALL PREPARE AND SUBMIT A WATER CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
4. REFER TO WORK AREA DEWATERING NOTES ON SHEET SE-1.
5. TEMPORARY TURBID WATER DEWATERING SUMP, PUMP AND BASIN LOCATION MAY VARY AS WELL AS THE QUANTITY NEEDED.
6. CLEAR WATER DEWATERING PUMPS/PIPING CAN BE DISCHARGED DIRECTLY INTO CLEAN WATER BYPASS PIPING WITH THE APPROPRIATE ADAPTERS/SPLICES. LEAKY OR FAULTY CONNECTIONS OF PIPING WILL NOT BE APPROVED FOR USE ON-SITE. CLEAN WATER DEWATERING MAY ALSO BE DISCHARGED DOWNSTREAM OF WORK SITE INTO CHANNEL.

CONSTRUCTION ACCESS NOTES

1. CONSTRUCTION ACCESS ROUTES SHOWN ARE SCHEMATIC IN NATURE - FINAL ROUTES TO BE NEGOTIATED WITH PROPERTY OWNERS PRIOR TO START OF CONSTRUCTION.
2. TEMPORARY CONSTRUCTION ENTRANCE PAD AND TEMPORARY CONSTRUCTION HAUL ROADS TO BE RESTORED UPON PROJECT COMPLETION.
3. ALL PRIVATELY OWNED LAWN, GARDEN, SHRUBS, TREES, FENCING, AND OTHER YARD FEATURES SHALL BE RESTORED OR REPAIRED AT PROJECT COMPLETION AT THE APPROVAL OF THE PROPERTY OWNER. THERE SHALL BE NO CLEARING OF TREES WITH GREATER THAN 3" DBH ALLOWED.
4. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE

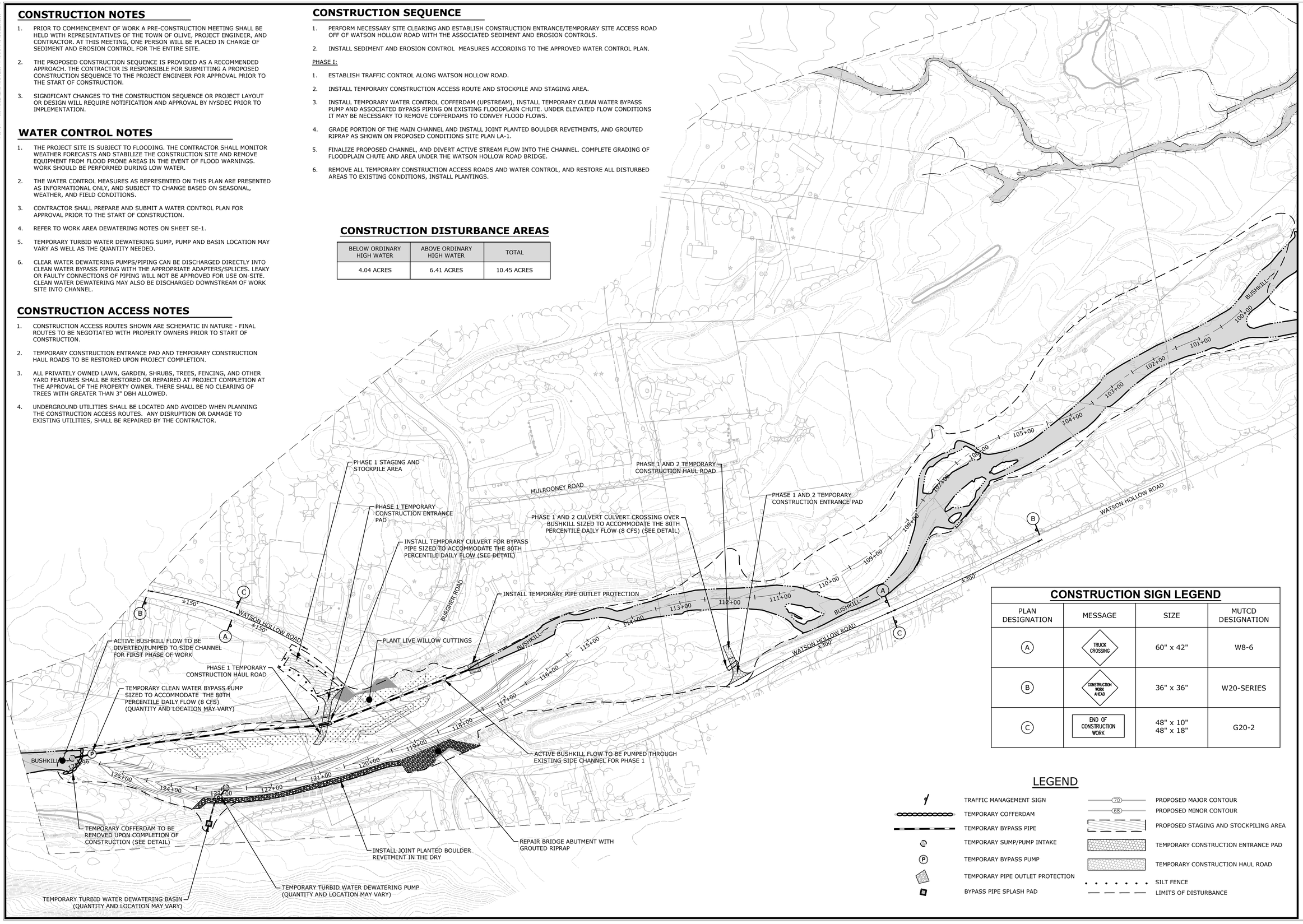
1. PERFORM NECESSARY SITE CLEARING AND ESTABLISH CONSTRUCTION ENTRANCE/TEMPORARY SITE ACCESS ROAD OFF OF WATSON HOLLOW ROAD WITH THE ASSOCIATED SEDIMENT AND EROSION CONTROLS.
2. INSTALL SEDIMENT AND EROSION CONTROL MEASURES ACCORDING TO THE APPROVED WATER CONTROL PLAN.

PHASE I:

1. ESTABLISH TRAFFIC CONTROL ALONG WATSON HOLLOW ROAD.
2. INSTALL TEMPORARY CONSTRUCTION ACCESS ROUTE AND STOCKPILE AND STAGING AREA.
3. INSTALL TEMPORARY WATER CONTROL COFFERDAM (UPSTREAM), INSTALL TEMPORARY CLEAN WATER BYPASS PUMP AND ASSOCIATED BYPASS PIPING ON EXISTING FLOODPLAIN CHUTE. UNDER ELEVATED FLOW CONDITIONS IT MAY BE NECESSARY TO REMOVE COFFERDAMS TO CONVEY FLOOD FLOWS.
4. GRADE PORTION OF THE MAIN CHANNEL AND INSTALL JOINT PLANTED BOULDER REVETMENTS, AND GROUTED RIPRAP AS SHOWN ON PROPOSED CONDITIONS SITE PLAN LA-1.
5. FINALIZE PROPOSED CHANNEL, AND DIVERT ACTIVE STREAM FLOW INTO THE CHANNEL. COMPLETE GRADING OF FLOODPLAIN CHUTE AND AREA UNDER THE WATSON HOLLOW ROAD BRIDGE.
6. REMOVE ALL TEMPORARY CONSTRUCTION ACCESS ROADS AND WATER CONTROL, AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITIONS, INSTALL PLANTINGS.

CONSTRUCTION DISTURBANCE AREAS

BELOW ORDINARY HIGH WATER	ABOVE ORDINARY HIGH WATER	TOTAL
4.04 ACRES	6.41 ACRES	10.45 ACRES



CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
A	TRUCK CROSSING	60" x 42"	W8-6
B	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
C	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2

LEGEND

- TRAFFIC MANAGEMENT SIGN
- TEMPORARY COFFERDAM
- TEMPORARY BYPASS PIPE
- TEMPORARY SUMP/PUMP INTAKE
- TEMPORARY BYPASS PUMP
- TEMPORARY PIPE OUTLET PROTECTION
- BYPASS PIPE SPLASH PAD
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STAGING AND STOCKPILING AREA
- TEMPORARY CONSTRUCTION ENTRANCE PAD
- TEMPORARY CONSTRUCTION HAUL ROAD
- SILT FENCE
- LIMITS OF DISTURBANCE

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

CONSTRUCTION PLAN - PHASE 1

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

DESIGNED	DRAWN	CHECKED
MC	MC	DRM

SCALE: 1"=80'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 13 OF 17
SHEET NAME: CP-1

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CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF WORK A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES OF THE TOWN OF OLIVE, PROJECT ENGINEER, AND CONTRACTOR. AT THIS MEETING, ONE PERSON WILL BE PLACED IN CHARGE OF SEDIMENT AND EROSION CONTROL FOR THE ENTIRE SITE.
2. THE PROPOSED CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
3. SIGNIFICANT CHANGES TO THE CONSTRUCTION SEQUENCE OR PROJECT LAYOUT OR DESIGN WILL REQUIRE NOTIFICATION AND APPROVAL BY NYSDEC PRIOR TO IMPLEMENTATION.

WATER CONTROL NOTES

1. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
2. THE WATER CONTROL MEASURES AS REPRESENTED ON THIS PLAN ARE PRESENTED AS INFORMATIONAL ONLY, AND SUBJECT TO CHANGE BASED ON SEASONAL, WEATHER, AND FIELD CONDITIONS.
3. CONTRACTOR SHALL PREPARE AND SUBMIT A WATER CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
4. REFER TO WORK AREA DEWATERING NOTES ON SHEET SE-1.
5. TEMPORARY TURBID WATER DEWATERING SUMP, PUMP AND BASIN LOCATION MAY VARY AS WELL AS THE QUANTITY NEEDED.
6. CLEAR WATER DEWATERING PUMPS/PIPING CAN BE DISCHARGED DIRECTLY INTO CLEAN WATER BYPASS PIPING WITH THE APPROPRIATE ADAPTERS/SPLICES. LEAKY OR FAULTY CONNECTIONS OF PIPING WILL NOT BE APPROVED FOR USE ON-SITE. CLEAN WATER DEWATERING MAY ALSO BE DISCHARGED DOWNSTREAM OF WORK SITE INTO CHANNEL.

CONSTRUCTION ACCESS NOTES

1. CONSTRUCTION ACCESS ROUTES SHOWN ARE SCHEMATIC IN NATURE - FINAL ROUTES TO BE NEGOTIATED WITH PROPERTY OWNERS PRIOR TO START OF CONSTRUCTION.
2. TEMPORARY CONSTRUCTION ENTRANCE PAD AND TEMPORARY CONSTRUCTION HAUL ROADS TO BE RESTORED UPON PROJECT COMPLETION.
3. ALL PRIVATELY OWNED LAWN, GARDEN, SHRUBS, TREES, FENCING, AND OTHER YARD FEATURES SHALL BE RESTORED OR REPAIRED AT PROJECT COMPLETION AT THE APPROVAL OF THE PROPERTY OWNER. THERE SHALL BE NO CLEARING OF TREES WITH GREATER THAN 3" DBH ALLOWED.
4. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE

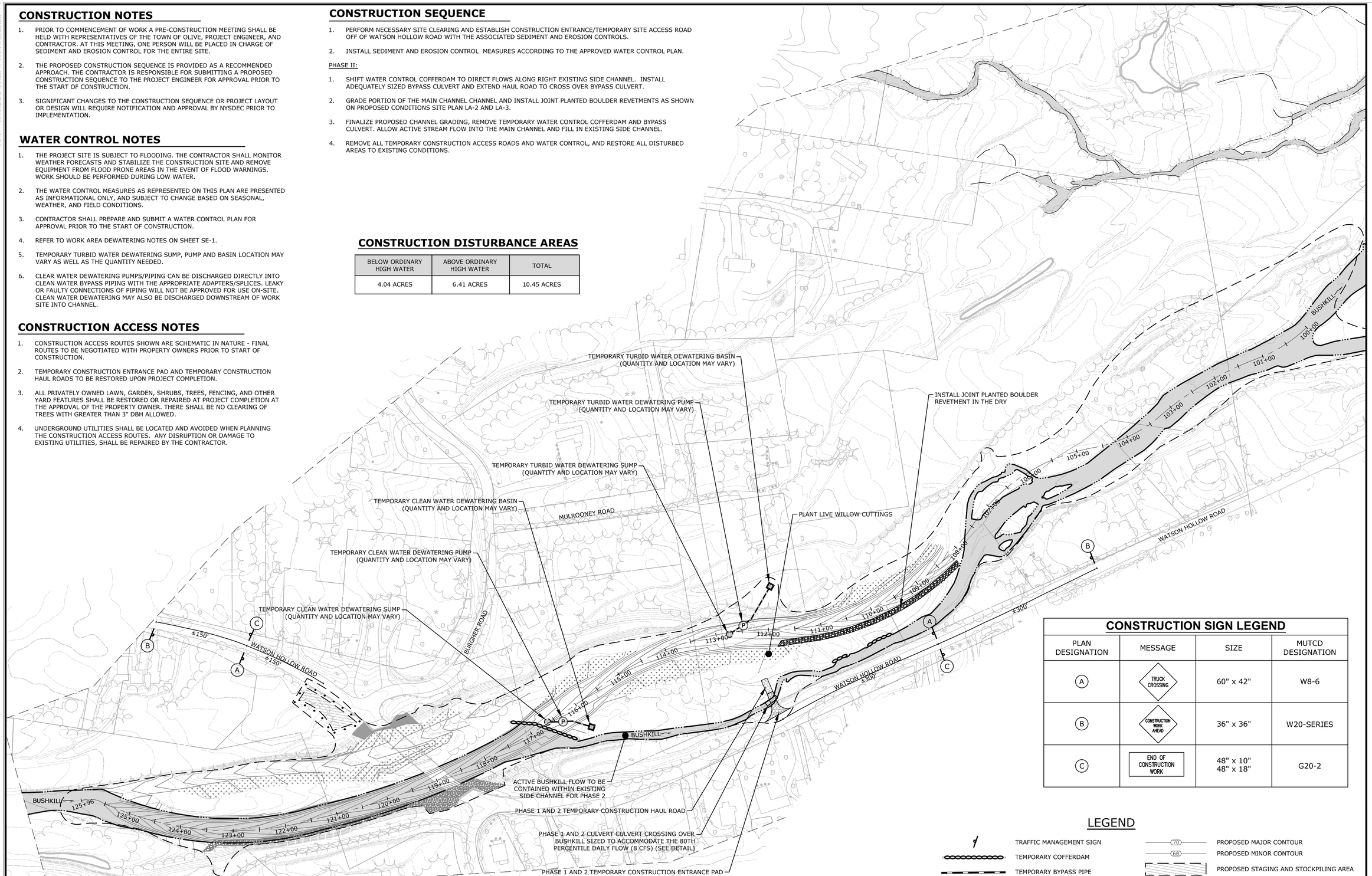
1. PERFORM NECESSARY SITE CLEARING AND ESTABLISH CONSTRUCTION ENTRANCE/TEMPORARY SITE ACCESS ROAD OFF OF WATSON HOLLOW ROAD WITH THE ASSOCIATED SEDIMENT AND EROSION CONTROLS.
2. INSTALL SEDIMENT AND EROSION CONTROL MEASURES ACCORDING TO THE APPROVED WATER CONTROL PLAN.

PHASE II:

1. SHIFT WATER CONTROL COFFERDAM TO DIRECT FLOWS ALONG RIGHT EXISTING SIDE CHANNEL. INSTALL ADEQUATELY SIZED BYPASS CULVERT AND EXTEND HAUL ROAD TO CROSS OVER BYPASS CULVERT.
2. GRADE PORTION OF THE MAIN CHANNEL CHANNEL AND INSTALL JOINT PLANTED BOULDER REVETMENTS AS SHOWN ON PROPOSED CONDITIONS SITE PLAN LA-2 AND LA-3.
3. FINALIZE PROPOSED CHANNEL GRADING, REMOVE TEMPORARY WATER CONTROL COFFERDAM AND BYPASS CULVERT. ALLOW ACTIVE STREAM FLOW INTO THE MAIN CHANNEL AND FILL IN EXISTING SIDE CHANNEL.
4. REMOVE ALL TEMPORARY CONSTRUCTION ACCESS ROADS AND WATER CONTROL, AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITIONS.

CONSTRUCTION DISTURBANCE AREAS

BELOW ORDINARY HIGH WATER	ABOVE ORDINARY HIGH WATER	TOTAL
4.04 ACRES	6.41 ACRES	10.45 ACRES



CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
A	TRUCK CROSSING	60" x 42"	W8-6
B	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
C	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2

LEGEND

- TRAFFIC MANAGEMENT SIGN
- TEMPORARY COFFERDAM
- TEMPORARY BYPASS PIPE
- TEMPORARY SUMP/PUMP INTAKE
- TEMPORARY BYPASS PUMP
- TEMPORARY PIPE OUTLET PROTECTION
- BYPASS PIPE SPLASH PAD
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STAGING AND STOCKPILING AREA
- TEMPORARY CONSTRUCTION ENTRANCE PAD
- TEMPORARY CONSTRUCTION HAUL ROAD
- SILT FENCE
- LIMITS OF DISTURBANCE

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

CONSTRUCTION PLAN - PHASE 2

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=80'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 14 OF 17

SHEET NAME: CP-2

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CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF WORK A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES OF THE TOWN OF OLIVE, PROJECT ENGINEER, AND CONTRACTOR. AT THIS MEETING, ONE PERSON WILL BE PLACED IN CHARGE OF SEDIMENT AND EROSION CONTROL FOR THE ENTIRE SITE.
2. THE PROPOSED CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
3. SIGNIFICANT CHANGES TO THE CONSTRUCTION SEQUENCE OR PROJECT LAYOUT OR DESIGN WILL REQUIRE NOTIFICATION AND APPROVAL BY NYSDEC PRIOR TO IMPLEMENTATION.

WATER CONTROL NOTES

1. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
2. THE WATER CONTROL MEASURES AS REPRESENTED ON THIS PLAN ARE PRESENTED AS INFORMATIONAL ONLY, AND SUBJECT TO CHANGE BASED ON SEASONAL, WEATHER, AND FIELD CONDITIONS.
3. CONTRACTOR SHALL PREPARE AND SUBMIT A WATER CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
4. REFER TO WORK AREA DEWATERING NOTES ON SHEET SE-1.
5. TEMPORARY TURBID WATER DEWATERING SUMP, PUMP AND BASIN LOCATION MAY VARY AS WELL AS THE QUANTITY NEEDED.
6. CLEAR WATER DEWATERING PUMPS/PIPING CAN BE DISCHARGED DIRECTLY INTO CLEAN WATER BYPASS PIPING WITH THE APPROPRIATE ADAPTERS/SPLICES. LEAKY OR FAULTY CONNECTIONS OF PIPING WILL NOT BE APPROVED FOR USE ON-SITE. CLEAN WATER DEWATERING MAY ALSO BE DISCHARGED DOWNSTREAM OF WORK SITE INTO CHANNEL.

CONSTRUCTION ACCESS NOTES

1. CONSTRUCTION ACCESS ROUTES SHOWN ARE SCHEMATIC IN NATURE - FINAL ROUTES TO BE NEGOTIATED WITH PROPERTY OWNERS PRIOR TO START OF CONSTRUCTION.
2. TEMPORARY CONSTRUCTION ENTRANCE PAD AND TEMPORARY CONSTRUCTION HAUL ROADS TO BE RESTORED UPON PROJECT COMPLETION.
3. ALL PRIVATELY OWNED LAWN, GARDEN, SHRUBS, TREES, FENCING, AND OTHER YARD FEATURES SHALL BE RESTORED OR REPAIRED AT PROJECT COMPLETION AT THE APPROVAL OF THE PROPERTY OWNER. THERE SHALL BE NO CLEARING OF TREES WITH GREATER THAN 3" DBH ALLOWED.
4. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE

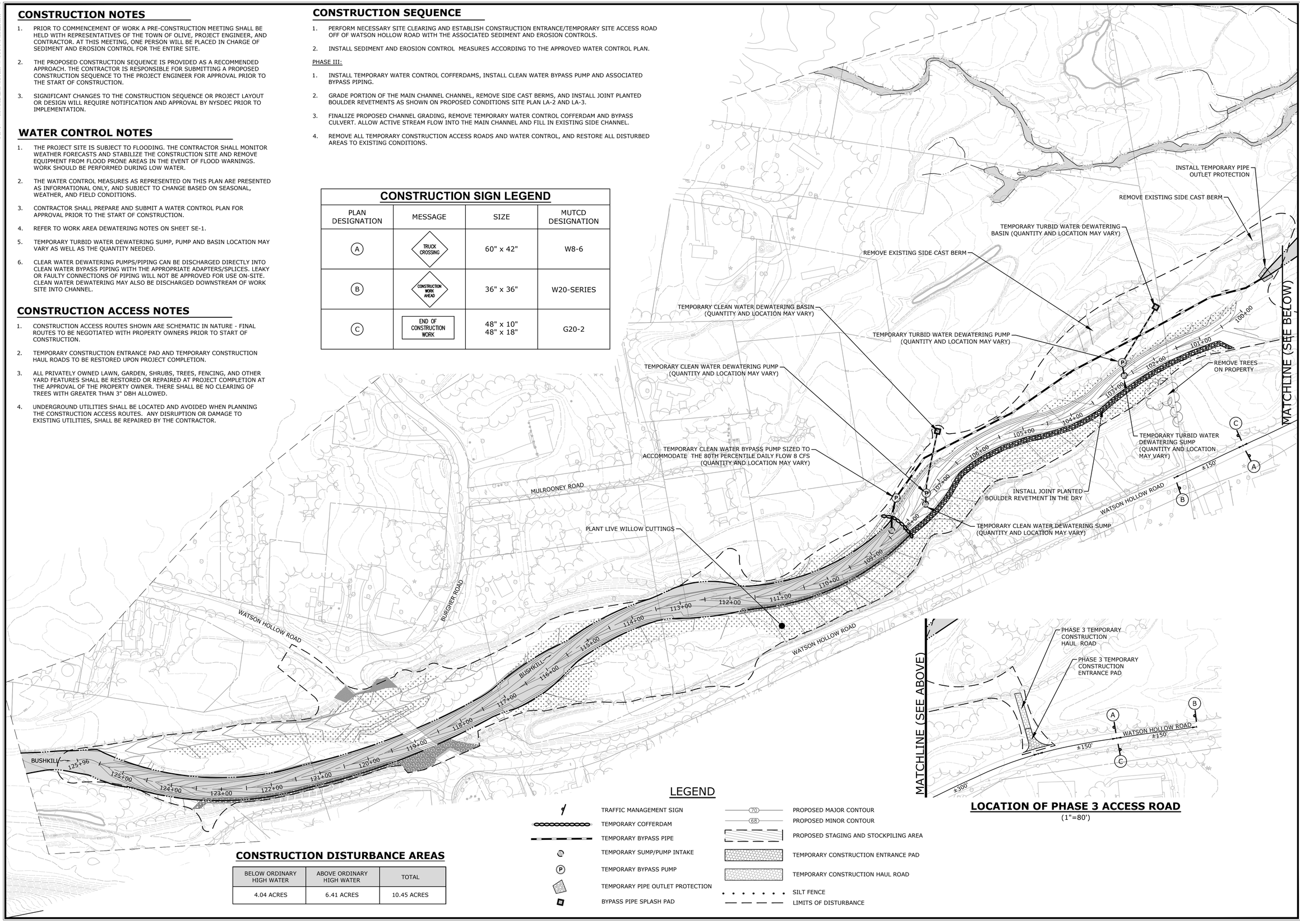
1. PERFORM NECESSARY SITE CLEARING AND ESTABLISH CONSTRUCTION ENTRANCE/TEMPORARY SITE ACCESS ROAD OFF OF WATSON HOLLOW ROAD WITH THE ASSOCIATED SEDIMENT AND EROSION CONTROLS.
2. INSTALL SEDIMENT AND EROSION CONTROL MEASURES ACCORDING TO THE APPROVED WATER CONTROL PLAN.

PHASE III:

1. INSTALL TEMPORARY WATER CONTROL COFFERDAMS, INSTALL CLEAN WATER BYPASS PUMP AND ASSOCIATED BYPASS PIPING.
2. GRADE PORTION OF THE MAIN CHANNEL CHANNEL, REMOVE SIDE CAST BERMS, AND INSTALL JOINT PLANTED BOULDER REVETMENTS AS SHOWN ON PROPOSED CONDITIONS SITE PLAN LA-2 AND LA-3.
3. FINALIZE PROPOSED CHANNEL GRADING, REMOVE TEMPORARY WATER CONTROL COFFERDAM AND BYPASS CULVERT. ALLOW ACTIVE STREAM FLOW INTO THE MAIN CHANNEL AND FILL IN EXISTING SIDE CHANNEL.
4. REMOVE ALL TEMPORARY CONSTRUCTION ACCESS ROADS AND WATER CONTROL, AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITIONS.

CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
A	TRUCK CROSSING	60" x 42"	W8-6
B	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
C	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2



LOCATION OF PHASE 3 ACCESS ROAD
(1"=80')

LEGEND

- TRAFFIC MANAGEMENT SIGN
- TEMPORARY COFFERDAM
- TEMPORARY BYPASS PIPE
- TEMPORARY SUMP/PUMP INTAKE
- TEMPORARY BYPASS PUMP
- TEMPORARY PIPE OUTLET PROTECTION
- BYPASS PIPE SPLASH PAD
- PROPOSED MAJOR CONTOUR (70)
- PROPOSED MINOR CONTOUR (68)
- PROPOSED STAGING AND STOCKPILING AREA
- TEMPORARY CONSTRUCTION ENTRANCE PAD
- TEMPORARY CONSTRUCTION HAUL ROAD
- SILT FENCE
- LIMITS OF DISTURBANCE

CONSTRUCTION DISTURBANCE AREAS

BELOW ORDINARY HIGH WATER	ABOVE ORDINARY HIGH WATER	TOTAL
4.04 ACRES	6.41 ACRES	10.45 ACRES

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

CONSTRUCTION PLAN - PHASE 3
BUSHKILL STREAM & STREAM BANK REHABILITATION
WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

DESIGNED	DRAWN	CHECKED
MC	MC	DRM

SCALE: 1"=80'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 15 OF 17
SHEET NAME: CP-3

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PROJECT DESCRIPTION

THE TOWN OF OLIVE RECEIVED COMMUNITY DEVELOPMENT BLOCK GRANT- DISASTER RECOVERY (CDBG-DR) FUNDING FROM THE GOVERNOR'S OFFICE OF STORM RECOVERY (GOSR) TO IMPLEMENT IMPROVEMENTS ALONG THE BUSHKILL TO REPAIR CHANNEL DAMAGE, SEDIMENT AGGRADATION AND ACCUMULATION OF WOODY DEBRIS THAT OCCURRED DURING TROPICAL STORM IRENE. THE PROJECT HAS BEEN DIVIDED INTO TWO PHASES. PHASE I OF THE PROJECT BEGAN WITH AN ASSESSMENT OF THE PROJECT AREA REACH FOR THE PURPOSE OF IDENTIFYING AND CHARACTERING WHERE CHANNEL AND INFRASTRUCTURE IMPROVEMENTS ARE NEEDED. PHASE II OF THE PROJECT IS THE ENGINEERING DESIGN AND CONSTRUCTION PHASE OF THE FINAL RECOMMENDATIONS MADE DURING PHASE I.

SITE DESCRIPTION

THE BUSHKILL DRAINS A 19.7-SQUARE-MILE WATERSHED IN ULSTER COUNTY WITHIN THE TOWNS OF OLIVE, SHANDAKEN, AND DENNING. THE BASIN IS WHOLLY CONTAINED WITHIN NEW YORK STATE'S CATSKILL PARK AND IS COMPRISED MAINLY OF UNDEVELOPED FORESTED LAND WITH 12.7 SQUARE MILES LOCATED IN THE SLIDE MOUNTAIN WILDERNESS AND SUNDOWN WILD FOREST AREAS. THE ELEVATION WITHIN THE BUSHKILL WATERSHED RANGES FROM 600 FEET AT THE ENTRANCE TO THE ASHOKAN RESERVOIR TO 3,855 FEET AT THE TOP OF CORNELL MOUNTAIN. THE UPPER PORTION OF THE WATERSHED CONSISTS OF STEEPLY SLOPING CONFINED VALLEY WALLS AND TRANSITIONS TO A MUCH WIDER, RELATIVELY FLAT VALLEY IN THE LOWER PORTION.

PROPOSED IMPROVEMENTS

THE FOCUS OF THIS PROJECT LOCATED AT THE REACH OF THE BUSHKILL FROM UPSTREAM OF THE WATSON HOLLOW BRIDGE AT STA 54+50, TO DOWNSTREAM NEAR THE LOCATION OF A MAJOR SEDIMENT BAR AT STA 27+00. THE RESTORATION ELEMENTS INCLUDED THE FOLLOWING:

- CHANNEL RESHAPING TO APPROXIMATE BANKFULL WIDTH TO INCREASE SEDIMENT TRANSPORT AND CONVEYANCE
- CHANNEL REALIGNMENT AWAY FROM ROADWAYS AND PROPERTIES
- REPAIR SCOUR PROTECTION ALONG THE RIGHT ABUTMENT AT THE WATSON HOLLOW ROAD BRIDGE AND REMOVE EXCESS SEDIMENT IN THE LEFT WATERWAY
- REMOVAL OF SIDE CAST BERMS LOCATED AT THE LOWER END OF THE PROJECT AREA

THE PROPOSED CONCEPT INVOLVES THE RESHAPING OF 2,500 LINEAR FEET OF THE CREEK CHANNEL TO MAXIMIZE SEDIMENT TRANSPORT AND RELOCATE THE STROM AWAY FROM THE ROADWAY AND WATSON HOLLOW BRIDGE ABUTMENT . THE ESTIMATED BANKFULL DIMENSIONS WOULD BE 46-69 FEET WIDE BY 3 FEET DEEP; CHANNEL FLOODPLAIN AT A 1% GRADE TYING BACK TO EXISTING GROUND WITH MINIMAL AMOUNT OF DISTURBANCE TO THE EXISTING OVERBANK AREAS.

SOILS

THE PROJECT AREA IS PREDOMINATELY IDENTIFIED AS SOIL MAPPING UNIT ALLUVIAL LAND WHICH INCLUDES THOSE SOILS THAT HAVE FORMED FROM THE ACCUMULATION OF SAND, SILT, CLAY, GRAVEL AND BOULDERS DEPOSITED FROM FAST-FLOWING MOUNTAIN RIVERS. DRAINAGE CLASSES CAN RANGE FROM SOMEWHAT POORLY DRAINED TO EXCESSIVELY DRAINED.

UPLAND AREAS AREA MADE UP PREDOMINATELY OF HOOSIC GRAVELLY LOAM, WHICH INCLUDES THOSE SOILS THAT HAVE FORMED FROM GLACIAL OUTWASH OF SANDY GRAVELLY GLACIOFLUVIAL DEPOSITS. DRAINAGE CLASSES TYPICALLY SOMEWHAT EXCESSIVELY DRAINED WITH A SOIL PERMEABILITY OF MODERATELY RAPID TO RAPID.

PLANNED EROSION AND SEDIMENT CONTROL PRACTICES

1. STABILIZED CONSTRUCTION ENTRANCES WILL BE CONSTRUCTED AT ALL SITE ACCESS POINTS.
2. CONSTRUCTION ROAD STABILIZATION: THE CONSTRUCTION ACCESS ROAD WILL BE CONSTRUCTED AFTER THE REMOVAL OF TOPSOIL.
3. SILT FENCE WILL BE INSTALLED ALONG THE CONSTRUCTION ACCESS ROADS AND AROUND ANY STOCKPILE AREAS.
4. TURBID WATER MANAGEMENT: AREAS FOR DISCHARGE, DETAINING, AND INFILTRATING OF TURBID CONSTRUCTION WATER ARE SHOWN ON SITE PLANS.
5. SURFACE STABILIZATION: STABILIZATION OF THE SURFACE WILL BE ACCOMPLISHED WITH VEGETATION AS SPECIFIED ON THE SITE PLAN.

WATER CONTROL NOTES

1. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
2. THE WATER CONTROL MEASURES INCLUDING TURBID CONSTRUCTION WATER MANAGEMENT AREAS AS PRESENTED ON THIS PLAN ARE PRESENTED AS A GUIDE ONLY, AND SUBJECT TO CHANGE BASED ON SEASONAL, WEATHER, AND FIELD CONDITIONS.
3. CONTRACTOR SHALL PREPARE AND SUBMIT A WATER CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

EROSION CONTROL NOTES

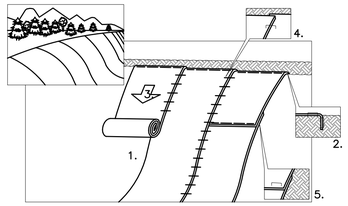
1. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL."
2. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
3. ALL WETLANDS SHALL BE AVOIDED AND PROTECTED FROM CONSTRUCTION ACTIVITIES WITH SEDIMENT CONTROL MEASURES WHERE NECESSARY AS DETERMINED BY THE PROJECT ENGINEER.
4. CLEARING OF NATIVE VEGETATION FOR CONSTRUCTION ACCESS SHOULD BE MINIMIZED.
5. TEMPORARY ACCESS AREAS SHALL BE BORDERED WITH SEDIMENT AND EROSION CONTROL FENCES AND HAYBALES. SEE PLANS AND DETAILS.
6. STOCKPILE AREAS TO BE ENCLOSED BY FILTER FABRIC AND HAYBALES. SEE PLANS AND DETAILS.
7. AN EROSION CONTROL BLANKET SHALL BE PLACED OVER ANY DISTURBED AREAS WITH A SLOPE GREATER THAN OR EQUAL TO 3:1 TO PREVENT EROSION. SEE PLANS AND DETAILS.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES. THE CONSTRUCTION INSPECTOR WILL VERIFY THE MAINTENANCE WEEKLY AND AFTER RAIN EVENTS.

STOCKPILING NOTES

1. TEMPORARY STOCKPILE AND STAGING AREAS TO BE FLAGGED BY CONTRACTOR PRIOR TO CONSTRUCTION AND APPROVED BY TOWN, LANDOWNERS AND PROJECT ENGINEER.
2. NO CONSTRUCTION VEHICLES SHALL BE STORED, SERVICED, WASHED OR FLUSHED IN A LOCATION WHERE LEAKS, SPILLAGE, WASTE MATERIALS, CLEANERS, OR WATERS WILL BE INTRODUCED OR FLOW INTO WETLANDS OR WATERCOURSES. AN EMERGENCY MANAGEMENT PLAN AND SPILL KIT WILL BE MAINTAINED ON SITE AT ALL TIMES. IN THE EVENT OF AN ACCIDENTAL RELEASE, IMMEDIATELY STOP CONSTRUCTION WORK, CONTAIN THE SPILL, AND NOTIFY THE TOWN, APPROPRIATE AUTHORITIES AND PROJECT ENGINEER.
3. THE CONTRACTOR SHALL MAINTAIN ALL STREETS, SIDEWALKS, AND WALKWAYS IN THE AREA FREE OF SOIL, MUD AND CONSTRUCTION DEBRIS. CONSTRUCTION ENTRANCES MUST BE MAINTAINED AT EACH RIVER ACCESS POINT. SEE PLANS AND DETAILS.
4. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
5. ALL STORAGE AND ACCESS ROUTES, PEDESTRIAN FENCES/BARRIERS, WORKING HOURS, AND LIMITS OF CLEARING SHALL BE APPROVED BY THE TOWN OF OLIVE, LANDOWNERS AND THE PROJECT ENGINEER.
6. FINAL LOCATION OF ALL TEMPORARY HAUL ROADS SUBJECT TO LAND-OWNER APPROVAL, AND MAY CHANGE PRIOR TO CONSTRUCTION. THE HAUL ROAD SHALL BE CONSTRUCTED WITH PROPER EROSION CONTROLS, INCLUDING SILT FENCE WHERE NECESSARY, AND A CONSTRUCTION ENTRANCE PAD AT THE ENTRANCE. RESTORATION OF THE DISTURBED AREA SHALL BE COORDINATED WITH THE PROPERTY OWNER.

EROSION CONTROL MAINTENANCE INTERVALS

EROSION CONTROL MEASURE	CONTROL OBJECTIVE	INSPECTION/MAINTENANCE	
SILT FENCE	- INTERCEPT, AND REDIRECT/DETAIN SMALL AMOUNTS OF SEDIMENT FROM SMALL DISTURBED AREAS. - DECREASE VELOCITY OF SHEET FLOW. - PROTECT SENSITIVE SLOPES OR SOILS FROM EXCESSIVE WATER FLOW.	INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL OF 0.5 INCHES OR MORE. ACCUMULATED SEDIMENT MUST BE REMOVED ONCE ITS DEPTH IS EQUAL TO ½ THE TRENCH HEIGHT. INSPECT FREQUENTLY DURING PUMPING OPERATIONS IF USED FOR DEWATERING OPERATIONS.	- PHYSICAL DAMAGE OR DECOMPOSITION - EVIDENCE OF OVERTOPPED OR UNDERCUT FENCE - EVIDENCE OF SIGNIFICANT FLOWS EVADING CAPTURE - REPETITIVE FAILURE
PUMP WATER SETTLING BASIN	- DETAIN SEDIMENT-LADEN RUNOFF FROM SMALL DEWATERING PUMPS LONG ENOUGH TO ALLOW THE SEDIMENT TO SETTLE OUT.	INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL OF 0.5 INCHES OR MORE. STONE OUTLET SHOULD BE AT LEAST SIX (6) INCHES BELOW CREST OF EMBANKMENT. SEDIMENT MUST BE REMOVED WHEN ACCUMULATION REACHES ½ OF THE REQUIRED WET STORAGE.	- TURBID DISCHARGE WATER - EXCESSIVE SEDIMENT ACCUMULATION - OVERTOPPING EVIDENCE
STABILIZED CONSTRUCTION ENTRANCE	- REDUCE THE TRACKING OF SEDIMENT OFF-SITE ONTO PAVED SURFACES.	INSPECT AT THE END OF EACH WORK DAY AND IMMEDIATELY REPAIR DAMAGES. PERIODIC ADDITION OF STONE, OR LENGTHENING OF ENTRANCE MAY BE REQUIRED AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES AS A RESULT OF INEFFICIENCY OF CONSTRUCTION ENTRANCE SHALL BE IMMEDIATELY REMOVED.	- SEDIMENT IN ROADWAY ADJACENT TO SITE

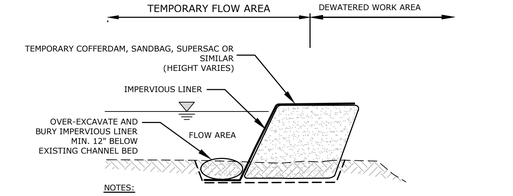


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING S150, DO NOT SEED PREPARED AREA. S150 MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAP AREA, APPROXIMATELY 12" APART.

REFER TO GENERAL STAPLE PATTERN GUIDE IN NORTH AMERICAN GREEN CATALOG FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

APPLICATION OF EROSION CONTROL BLANKET ON SLOPES

NOT TO SCALE



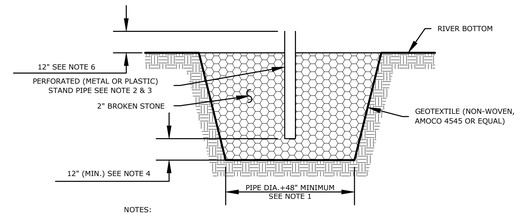
NOTES:

1. COFFERDAM AND TO BE SIZED FOR NORMAL FLOW CONDITIONS. TOP ELEVATION OF COFFERDAM TO ISOLATE LAGOON FROM TIDAL INFLUENCE AND STREAM FLOWS.
2. COFFERDAM TO BE CONSTRUCTED OF SANDBAGS, SUPERSAC OR SIMILAR PRODUCT.
3. EARTHEN (NATIVE) MATERIAL MAY BE USED IN PLACE OF SANDBAGS OR SUPERSAC.

TEMPORARY SANDBAG BARRIER WITH PLASTIC SHEETING (OR APPROVED EQUAL)

ALT. A. TEMPORARY COFFERDAM

NOT TO SCALE

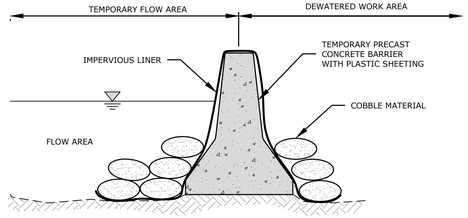


NOTES:

1. OVERALL SUMP PIT DIMENSIONS TO BE COMPATIBLE WITH ANTICIPATED SEEPAGE RATES AND PUMP TO BE USED.
2. THE STAND PIPE DIAMETER AND NUMBER OF PERFORATIONS TO BE COMPATIBLE WITH THE PUMP SIZE BEING USED.
3. PERFORATIONS IN THE STANDPIPE TO BE EITHER CIRCULAR OR SLOTS, PERFORATION SIZE SHALL NOT EXCEED 1/2" DIAMETER.
4. 2" BROKEN STONE SHALL EXTEND A MINIMUM OF 12" BELOW THE BOTTOM OF THE STANDPIPE.
5. A PROPERLY DESIGNED GEOTEXTILE TO BE PLACED BETWEEN THE EXISTING SOILS AND THE CRUSHED STONE BACKFILL.
6. THE STANDPIPE SHALL EXTEND A MINIMUM OF 12" ABOVE THE SURROUNDING GROUND.

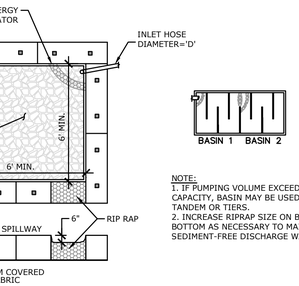
STONE PROTECTION AT DEWATERING PUMP INLET

NOT TO SCALE



ALT B. TEMPORARY CONCRETE BARRIER COFFERDAM DETAIL

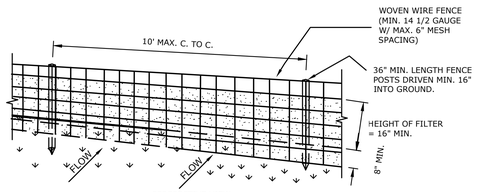
NOT TO SCALE



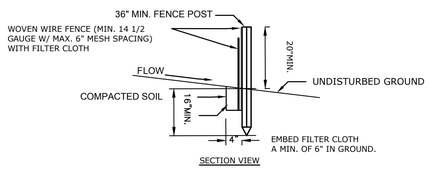
NOTE:
1. IF PUMPING VOLUME EXCEEDS BASIN CAPACITY, BASIN MAY BE USED IN TANDEM OR TIERS.
2. INCREASE RIPRAP SIZE ON BASIN BOTTOM AS NECESSARY TO MAINTAIN SEDIMENT-FREE DISCHARGE WATERS

PUMP WATER SETTLING BASIN

NOT TO SCALE



PERSPECTIVE VIEW



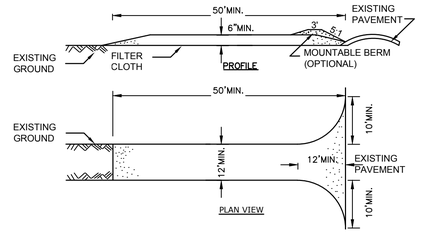
SECTION VIEW

SILT FENCE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



TEMPORARY CONSTRUCTION ENTRANCE PAD

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

DETAILS - SEDIMENT AND EROSION CONTROL

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

AS NOTED
SCALE

NOVEMBER 2, 2018
DATE

5909-01
PROJECT NO.

16 OF 17
SHEET NO.

SE-1
SHEET NAME

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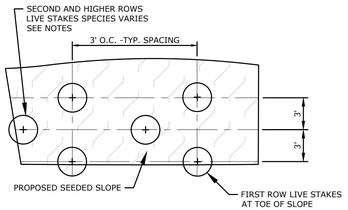
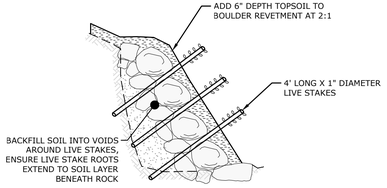


TYPICAL PLAN VIEW



JOINT PLANTING SECTION VIEW

JOINT PLANTING

(NOT TO SCALE)

PLANTING NOTES:

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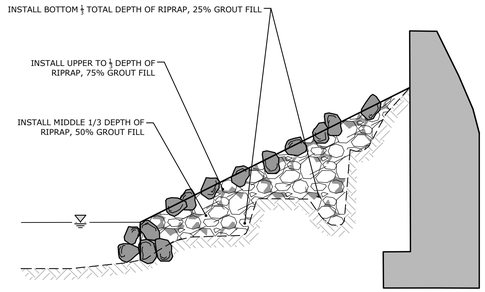
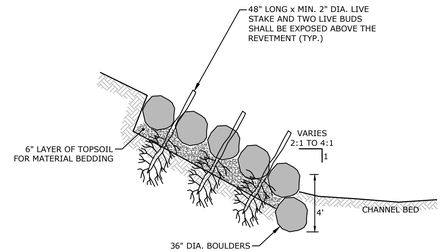


TYPICAL RIPRAP GROUT DETAIL - SECTION VIEW

(LOOKING DOWNSTREAM, NOT TO SCALE)



JOINT PLANTED BOULDER REVETMENT

(NOT TO SCALE)

NOTES:
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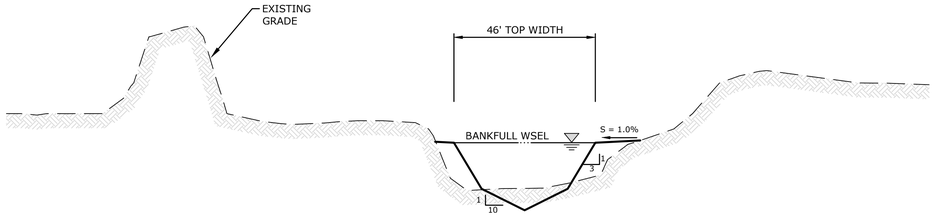
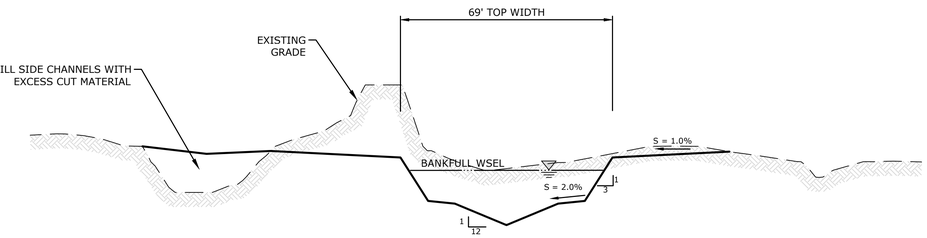


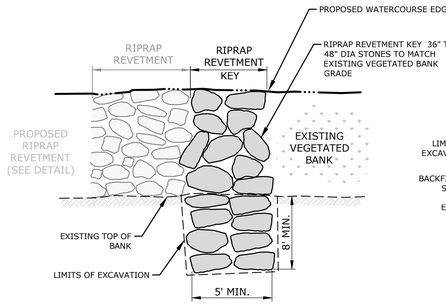
CHANNEL RESHAPING - TYPICAL CROSS SECTION

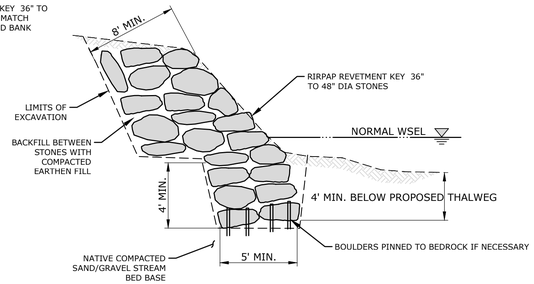
(LOOKING UPSTREAM, NOT TO SCALE)



CHANNEL RESHAPING AT RIFFLES - TYPICAL CROSS SECTION

(LOOKING UPSTREAM, NOT TO SCALE)





BOULDER REVETMENT KEY

(NOT TO SCALE)

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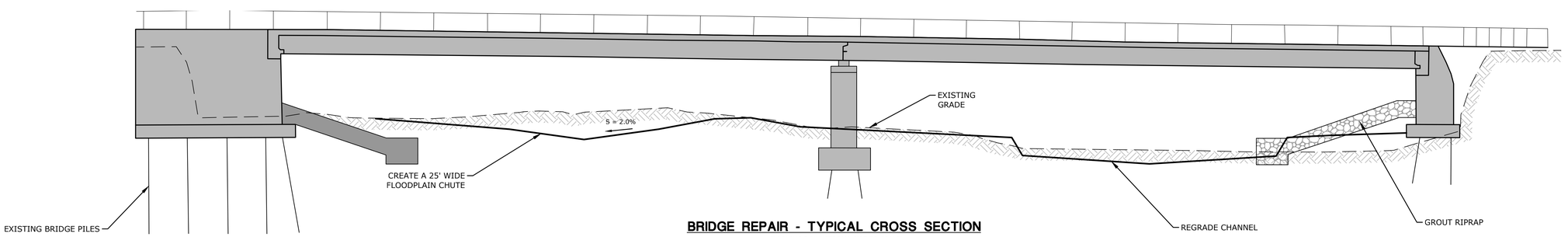

BRIDGE REPAIR - TYPICAL CROSS SECTION

(LOOKING DOWNSTREAM, NOT TO SCALE)

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

DETAILS - CHANNEL AND SITE RESTORATION

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: AS NOTED

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 17 OF 17

SHEET NAME: DE-2

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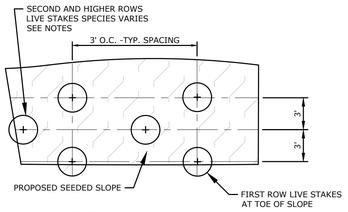

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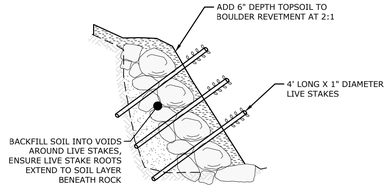

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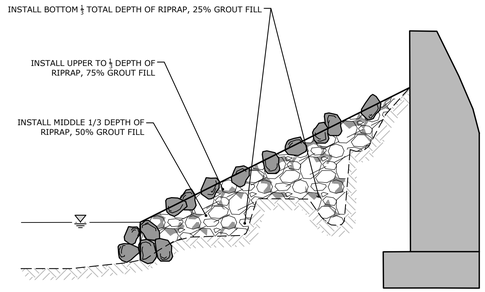

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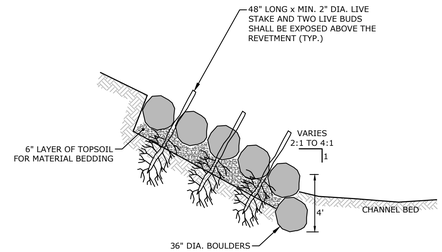

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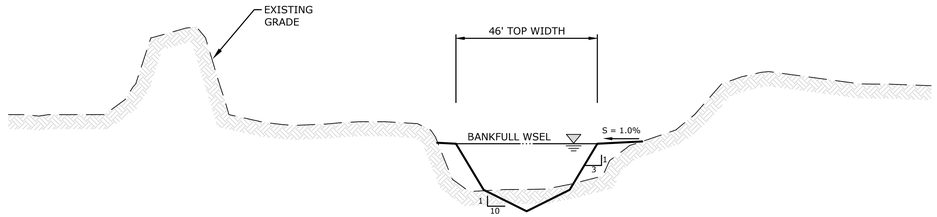

CHANNEL RESHAPING - TYPICAL CROSS SECTION

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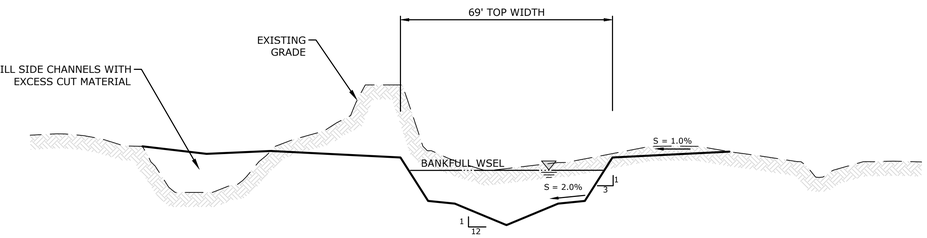

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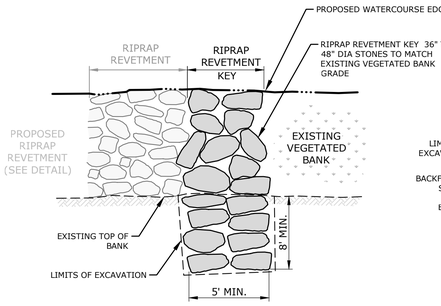

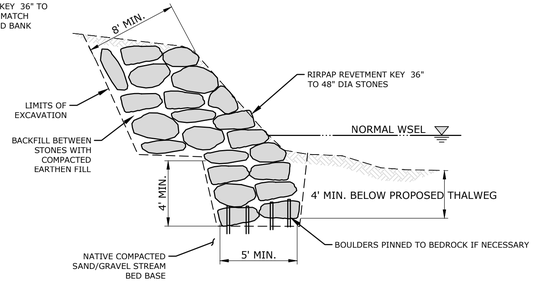

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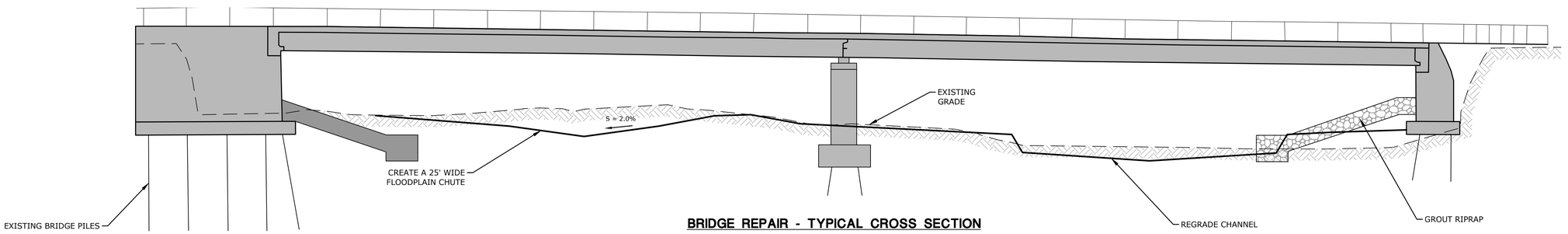

BRIDGE REPAIR - TYPICAL CROSS SECTION

(LOOKING DOWNSTREAM, NOT TO SCALE)

MILONE & MACBROOM
231 Main Street, Suite 102
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845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

DETAILS - CHANNEL AND SITE RESTORATION

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

PRELIMINARY DESIGN 60%

DESIGNED	DRAWN	CHECKED
MC	MC	DRM

SCALE: AS NOTED

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 17 OF 17

SHEET NAME: DE-2

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

October 12, 2018

Lori Shirley
Governor's Office of Storm Recovery
30-40 State St., Hampton Plaza
Albany, NY 12207

Re: Bushkill Stream and Streambank Rehabilitation Project, West Shokan
County: Ulster Town/City: Olive

Dear Ms. Shirley:

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

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to 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 sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 3 Office, Division of Environmental Permits, at dep.r3@dec.ny.gov, (845) 256-3054.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1152

The following state-listed animals have been documented in the vicinity of the project site.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for the project, please contact the NYSDEC Region 3 Office, Department of Environmental Permits, at dep.r3@dec.ny.gov, (845) 256-3054.

The following species has been documented nesting within .8 mile of the project site.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Bald Eagle *Breeding*	*Haliaeetus leucocephalus*	Threatened		1715

The following species has been documented within 1.5 miles of the project site. Individual animals may travel 1.5 miles from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Timber Rattlesnake	*Crotalus horridus*	Threatened		13551

The following state-listed plants have been documented in the vicinity of the project site.

If suitable habitat for these species is present at the project site, these species may also occur there.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*	
Spreading Rush	*Juncus subcaudatus*	Endangered	Critically Imperiled in NYS	
Little Mountain, West Shokan, within .5 mile of the project site, 1999-08-17: Seeps in a recovering hemlock-northern hardwood forest.				1205
Nodding Pogonia	*Triphora trianthophoros* ssp. *trianthophoros*	Threatened	Imperiled in NYS	
Within .5 mile of the project site, 2009-08-31: Mixed woods tending toward beech-maple.				14467

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: December 20, 2018
Consultation Code: 05E1NY00-2019-SLI-0669
Event Code: 05E1NY00-2019-E-02032
Project Name: Bushkill Stream and Streambank Rehabilitation Project, Town of Olive, Ulster County, NY

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2019-SLI-0669

Event Code: 05E1NY00-2019-E-02032

Project Name: Bushkill Stream and Streambank Rehabilitation Project, Town of Olive, Ulster County, NY

Project Type: LAND - FLOODING

Project Description: The Town of Olive has requesting $1,000,000 in CDBG-DR funding for design and construction of stream channel and streambank rehabilitation along the Bushkill stream just west of the Ashokan Reservoir. The Bushkill stream runs generally parallel to Watson Hollow Road in the project area. The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/41.96815169932177N74.28308928432122W

Counties: Ulster, NY

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/182/office/52410.pdf Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/182/office/52410.pdf	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Tree Tally (conducted August 8, 2018)
Bushkill Stream & Streambank Rehabilitation
Olive, New York

Area A
49,170 square feet (1.1 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
northern red oak	*Quercus rubra*	18	1
sugar maple	*Acer saccharum*	6	15
		8	17
		12	4
		36	2
American sycamore	*Platinus occidentalis*	6	10
		8	7
		10	11
		12	11
		14	9
		20	6
		36	1
white ash	*Fraxinus americana*	8	3
		18	2
		20	2
eastern cottonwood	*Populus deltoides*	20	1
white pine	*Pinus strobus*	6	1
		10	2
		Total:	105

Area B
2,342 square feet (0.05 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
American sycamore	*Platinus occidentalis*	6	7
northern catalpa	*Catalpa speciosa*	6	3
		8	3
		Total:	13

Note: Vegetated areas to be disturbed outside of Area A and Area B are prediminantly cobble bars dominated by willow shrubs (*Salix ssp* .) and young American sycamore (*Platinus occidentalis*) under 4" dbh

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

February 13, 2019

Ms. Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
New York State Homes and Community Renewal
Governor's Office of Storm Recovery
38-40 State St., Hampton Plaza
Albany, NY 12207

Dear Ms. Shirley:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter dated December 21, 2018, regarding the proposed Bushkill Stream and Streambank Rehabilitation project located along Bushkill Creek from the County Route 42 bridge, east to the intersection of the Bushkill with New York State Route 28A bridge in the Hamlet of West Shokan, Town of Olive, Ulster County, New York. The proposed project includes bank stabilization, increasing floodplain width, stabilizing stream channel bed by realigning the channel profile, adding hard armor along select areas of the Bushkill, and reinforcing the Watson Hollow bridge abutments.

As you are aware, federal agencies, such as the U.S. Department of Housing and Urban Development (HUD), have responsibilities under section 7 of the Endangered Species Act (ESA) (87 Stat. 844, as amended; 16 U.S.C. 1531 *et seq.*) to consult with the Service regarding projects that may affect federally listed species or designated critical habitat, and confer with the Service regarding projects that are likely to jeopardize federally proposed species or adversely modify proposed critical habitat. We understand that the Governor's Office of Storm Recovery (GOSR) has been designated a HUD non-federal representative for the purposes of completing informal consultation pursuant to section 7(a)(2) of the ESA.

On behalf of HUD, the GOSR determined the proposed action may affect, but is not likely to adversely affect, the federally listed Indiana bat (*Myotis sodalis;* Endangered) and the northern long-eared bat (*Myotis septentrionalis;* Threatened). However, we understand that 118 trees that may be potential bat roosting trees are proposed for removal during the active bat roosting and foraging season (i.e., between April 1 and October 31). We understand that the GOSR plans to conduct an assessment to determine if potential roost trees are within the project area and further plans to conduct an acoustic survey should suitable roost trees be found. Due to these information needs, we have concluded that we cannot concur with your determination at this time. Please submit a tree assessment and/or acoustic survey plans as soon as they are available.

Similarly, the GOSR determined the project may affect, but is not likely to adversely affect, the federally listed bog turtle (*Clemmys* [=*Glyptemys*] *muhlenbergii*; Threatened) based on the lack of suitable habitat for this species. It is unclear if a Phase 1 Bog Turtle Habitat Survey[1] was conducted by a biologist/consultant familiar with this species to determine if suitable habitat exists along the project area. Please provide additional information regarding the wetlands at the site and their potential suitability for bog turtles.

We look forward to receiving this information.

As a reminder, the most recent compilation of federally listed and proposed endangered and threatened species in New York is available for your information. Until the proposed project is complete, we recommend that you check our website regularly to ensure that listed species presence/probable absence information for the proposed project is current.*

Any additional information regarding the proposed project and its potential to impact listed species should be coordinated with both this office and with the New York State Department of Environmental Conservation.

Thank you for your time. If you require additional information or assistance, please contact Noelle Rayman-Metcalf at 607-753-9334. Future correspondence with us on this project should reference project file 19I0669.

Sincerely,

David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at:
http://www.fws.gov/northeast/nyfo/es/section 7.htm

cc: NYSDEC, New Paltz, NY (Env. Permits)

[1] The Service's Phase 1 Bog Turtle Habitat Survey guidelines, along with data forms and supplemental information can be found here: https://www.fws.gov/northeast/nyfo/es/bogturtle.htm.

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

Via Electronic Mail

July 8, 2019

Robyn A. Niver
Endangered Species Biologist USFWS
New York Field Office
Cortland, NY 13045

Re: Section 7 Project Review – Follow up to December 21, 2018 Effect Determination for the Bushkill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster 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 & Urban Development (HUD), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for the Bushkill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York (see **Figures 1 and 2**).

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – New York Field Office (USFWS) a follow up to GOSR's December 21, 2018 consultation of the proposed project, to present the results of an Indiana Bat and NLEB Habitat Assessment and Acoustic Survey and a review of the potential for bog turtle habitat. We are requesting concurrence from the U.S. Fish and Wildlife Service that the Bushkill Stream and Streambank Rehabilitation Project **may affect, but is not likely to adversely affect**, the northern long-eared bat and Indiana bat and would have **no effect** on the bog turtle.

Program Overview: During Hurricane Irene and Tropical Storm Lee, torrential rainfall caused flooding throughout the Esopus watershed, including the Bushkill, which runs parallel to County Route 42 (Watson Hollow Road) in West Shokan. The Town of Olive government offices, including the Department of Public Works and Highway Department and the West Shokan Fire Department are located in West Shokan. These government offices and hundreds of homes were completely isolated from surrounding areas during the floods. People seeking to receive and give assistance during the flooding were forced to make 1.5-hour detours around the flooding through Sullivan County. Flooding also resulted in significant erosion of the Bushkill's channel and banks that resulted in constrictions, reduced capacity, and a shift in the channel's course, that, if not addressed, would present an immediate danger to County Route 42 and properties on the north and south banks

of the channel. a Local Flood Analysis (LFA) identified the conditions in seven locations along the Bushkill, contributing to inundation of public and private infrastructure associated with high water flows during future events and develop mitigation strategies to address flood hazards. The town selected six of the seven potential flood hazard areas to be addressed through the New York Rising Community Recovery Program.

Area of Potential Effect: The proposed stream and streambank rehabilitation area is located along the Bushkill from the County Route 42 Bridge, east to the intersection of the Bushkill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York (see **Figures 1 and 2**).

Proposed Project Description: The Town of Olive has requesting $1,000,000 in CDBG-DR funding for design and construction of stream channel and streambank rehabilitation along the Bushkill stream just west of the Ashokan Reservoir. The Bushkill stream runs generally parallel to Watson Hollow Road in the project area. The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments.

The project area includes approximately 2,525 linear feet (LF) of channel beginning approximately 500 LF upstream of the Watson Hollow Road bridge and ending approximately 2,000 LF downstream of Watson Hollow bridge or 1,000 LF upstream of the Route 28A bridge (**Figure 2**).

The project will be undertaken in three phases. In the first phase, construction will occur within the most upstream portion of the project reach. The modifications will include concentrating the stream channel and widening of the floodplain area, stabilizing the streambank with joint planted boulder revetments or planting of live willow stakes, and fortifying the base of the Watson Hollow bridge along the right bank with grouted rip rap (See Figures LD01 through LD08). In the second phase, which occupies the middle section of the project reach, the construction activities will include widening of the floodplain, and stabilizing the streambank with joint planted boulder revetments and/or planting of live willow stakes. The third phase which will encompass the most downstream portion of the project reach, will involve the same modification as phase two as well as the removal of a side cast berm along the left bank.

To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing approximately 120 trees (see **Attachment 1, Tree Clearing Tally**).

As a Class A(TS) stream, it is anticipated that no in-stream work will be permitted between September 30 and April 30th. As a result, the anticipated construction period is May 2019 (or slightly earlier to set up construction entrances, staging and traffic control measures) to September 30, 2019, unless NYSDEC extends the time restriction by amended permit.

Wetlands: See the attached wetland map, **Figure 3**.

- The project site is within Riverine and Freshwater Forested/Shrub Wetlands National Wetlands Inventory (NWI) wetland areas associated with Bushkill. Both of these wetland areas already have been disturbed by the existing bridge, Watson Hollow Road, and residential development along Bushkill. The project site covers approximately 4.9 acres of the riverine wetlands and approximately 1.1 acres of the

freshwater forested/shrub wetlands. The project would not damage the function and beneficial values of these wetlands. Once the streambank has been rehabilitated, the wetland areas will be restored.

- The project site is not within New York State Department of Environmental Conservation (NYSDEC) wetlands or the 100-foot buffer of NYSDEC wetlands.

ESA, Migratory Bird Treaty Act, And Bald and Golden Eagle Protection Act Species: The New York State Natural Heritage Program (NYSNHP) database search completed on October 12, 2018, had records of bald eagle (*Haliaeetus leucocephalus*) nesting within 0.8 mile of the project site, timber rattlesnake (*Crotalus horridus*) within 1.5 miles of the project site, spreading rush (*Juncus subcaudatus*) within 0.5 mile of the project site, and nodding pogonia (*Triphora trianthophoros*, ssp. *Trianthophoros*) within 0.5 mile of the project site. (See **Attachment 2, New York Natural Heritage Program Review**.)

The USFWS, New York Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of species under the jurisdiction of the USFWS within the project area. The attached Official Species List identifies one endangered and two threatened species that are potentially associated with the project site: the endangered Indiana bat (IB, *Myotis sodalis*) and the threatened northern long-eared bat (NLEB, *Myotis septentrionalis*) and bog turtle (*Clemmys muhlenbergii*) (see **Attachment 3, Species List**). **No critical habit for these species was identified in IPaC**. The IPaC review also indicated that there are several migratory birds of concern that could potentially be affected by the proposed project. Below is a determination of potential effects of the project on each of threatened and endangered species.

DETERMINATIONS - NO CHANGE

Migratory Birds and Bald Eagles:

GOSR determined that there will be **no adverse impact to migratory birds** as a result of the Project. There are no known breeding bald eagles within the vicinity of the Project area; therefore, GOSR determined that there will be **no adverse impacts to breeding bald eagles** as a result of the Project. If eagles are found in the area, GOSR will follow the USFWS Bald Eagle Management Guidelines.

DETERMINATIONS - FOLLOW UP ON THE NORTHERN LONG EARED BAT AND INDIANA BAT

Northern Long-eared Bat (NLEB) and Indiana Bat (IB)

Neither of the two sites that comprise the project area are within five miles of northern long-eared bat (NLEB) hibernacula or known maternity colonies (see the attached **Figure 4**). the March 12, 2018, New York State Natural Heritage Program (NYSNHP) database review of known occurrences of rare or state-listed species identified no occupied habitat for the IB. The major concern for these species in relation to this project would be the destruction of potential roosts through tree clearing. The **project involves the removal of 118 trees** (see **Attachment 1, Tree Clearing Tally**), along with vegetated areas on cobble bars, dominated by willow shrubs (*Salix* ssp.) and young American sycamore (*Platinus occidentalis*) under 4 inches in diameter at breast height.

Since the proposed project involves the removal of trees, a Phase 1 Habitat Assessment (See **Attachment 4, Phase 1 Habitat Assessment**) was conducted for the IB on February 11, 2019. The assessment concluded that there is potential suitable habitat available for the IB and recommended an acoustic survey.

Based on the recommendations of the habitat survey, an acoustic survey was conducted on the project site between May 16 and May 25, 2019 (attached), in accordance with the 2017 Rangewide Indiana Bat Summer Survey Guidelines, May 9, 2017. Sampling began at sunset and end at sunrise each night of sampling. Recorded echolocation calls were then analyzed. A report on the results of the acoustic survey indicated that big brown bats (*Eptesicus fuscus*), red bats (*Lasiurus borealis*), hoary bats (*Lasiurus cinereus*), silver-haired bats (*Lasionycteris noctivagans*), little brown bats (*M. lucifugus*), Indiana bats (*M. sodalis*), and tri-colored bats (*Perimyotis subflavus*) were present in the project area (See **Attachment 5, Acoustic Survey**). Maximum likelihood estimates suggested that the Indiana bat was present at the stream site on 5/24/2019 and at the trail site on 5/16/2019.

Based on the acoustic survey results that indicate potential presence of the NLEB and IB at this project location during the summer maternity season, tree removal will be conducted only in the winter months between November 1 and March 31.

Because the Project will not impact a large area of suitable habitat relative to the surrounding landscape and tree removal will be conducted between November 1 and March 31, GOSR has determined that the Proposed Project **may affect, but is not likely to adversely affect** the NLEB and IB.

DETERMINATIONS - FOLLOW UP ON THE BOG TURTLE

Bog Turtle

Bog Turtles inhabit open, **unpolluted emergent and scrub/shrub wetlands** such as shallow spring-fed fens, sphagnum bogs, swamps, marshy meadows, and wet pastures. These habitats are characterized by soft muddy bottoms, interspersed wet and dry pockets, vegetation dominated by low grasses and sedges, and a low volume of standing or slow-moving water which often forms a network of shallow pools and rivulets. Bog Turtles prefer areas with ample sunlight, high evaporation rates, high humidity in the near-ground microclimate, and perennial saturation of portions of the ground. (source: https://www.fws.gov/northeast/nyfo/es/bogturtle.htm).

According to the October 26, 2018, USFWS Guidelines for Bog Turtle Surveys for the Northern Population Range, Phase 1 and 2 Surveys, potential bog turtle habitat is recognized by three criteria:

1. Suitable hydrology. Bog turtle wetlands are groundwater/spring-fed, interspersed with dry and wet pockets;
2. Suitable soils. Usually a bottom substrate of permanently saturated organic or mineral soils, which are often soft, mucky-like soils, such as Wayland silt loam, Sun silt loam, Palms muck, Catden (Carlisle) muck, Canandaigua silt loam, and Alden silt loam (MacDougall 2016); and
3. Suitable vegetation. Wetlands with a history of disturbance often contain a dominance of tall, aggressively competitive species, many of which are nonnative and have been attributed to local declines and extirpation of bog turtles from many sites.

The project site is within Riverine and Freshwater Forested/Shrub National Wetlands Inventory (NWI) wetland areas associated with Bushkill. These wetland areas have been previously disturbed by construction of the Watson Hollow Road bridge over Bush Kill in 1993 and residential development along the Bush Kill. As shown on the attached soil map, no silt loam soils are present on the project site (See **Attachment 6- Soil Map**). These

wetland areas do not represent the open, unpolluted emergent and scrub/shrub wetlands that provide habitat for the bog turtle.

Therefore, **the wetlands associated with the project do not provide suitable habitat for the bog turtle**. The vegetation will remain the same and the function of the wetlands will not be altered once the project is completed.

Upon further review of the characteristics of the wetland area that would be disturbed by the project and the criteria for a Phase 1 Habitat Assessment for bog turtle habitat, GOSR has determined that the proposed project would have **no effect** on bog turtles.

Summary and Compliance

The proposed project would not jeopardize the continued existence of ESA species or destroy or adversely modify their critical habitat. On this basis, GOSR has determined that the proposed action **may affect but is not likely to adversely affect** the NLEB and IB and would have **no effect** on bog turtles or migratory birds. We request your concurrence with this determination. Additionally, we request to be alerted if USFWS becomes aware of a Bald or Golden Eagle nest within 660 feet of the project site.

Project implementation is conditioned upon issuance of applicable federal and state permits and would be constructed in accordance with federal and state permit conditions. The proposed project would not have a significant impact on ESA species or adversely modify any critical habitat. Conservation measures would be employed to avoid impacts to bats, including a tree survey prior to any project-related disturbance and clearly demarcating trees to be protected compared with those to be cut if any are identified in the survey.

If you have questions or require additional information regarding this request, please contact Lori A. Shirley at (518) 474-0755 or Lori.Shirley@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Lori A. Shirley
Certifying Officer
NYS Governor's Office of Storm Recovery

Figures
Figure 1 -Olive Bushkill Streambank Rehabilitation - Project Location
Figure 2 - Olive Bushkill Streambank Rehabilitation - Project Area
Figure 3 - Olive Bushkill Streambank Rehabilitation - NYS Freshwater and NWI Wetlands
Figure 4 - Olive Bushkill Streambank Rehabilitation - Northern Long-eared Bat Hibernacula

Attachments
Attachment 1 Tree Clearing Tally
Attachment 2 New York Natural Heritage Program Review
Attachment 3 USFWS Updated Species List - New York Ecological Services Field Office
Attachment 4 Bat Habitat Assessment

Attachment 5 Bat Acoustic Survey Report for the Bushkill Stream and Streambank Rehabilitation Project
Attachment 6 Soil Map
Attachment 7 Site Plans

Project Location

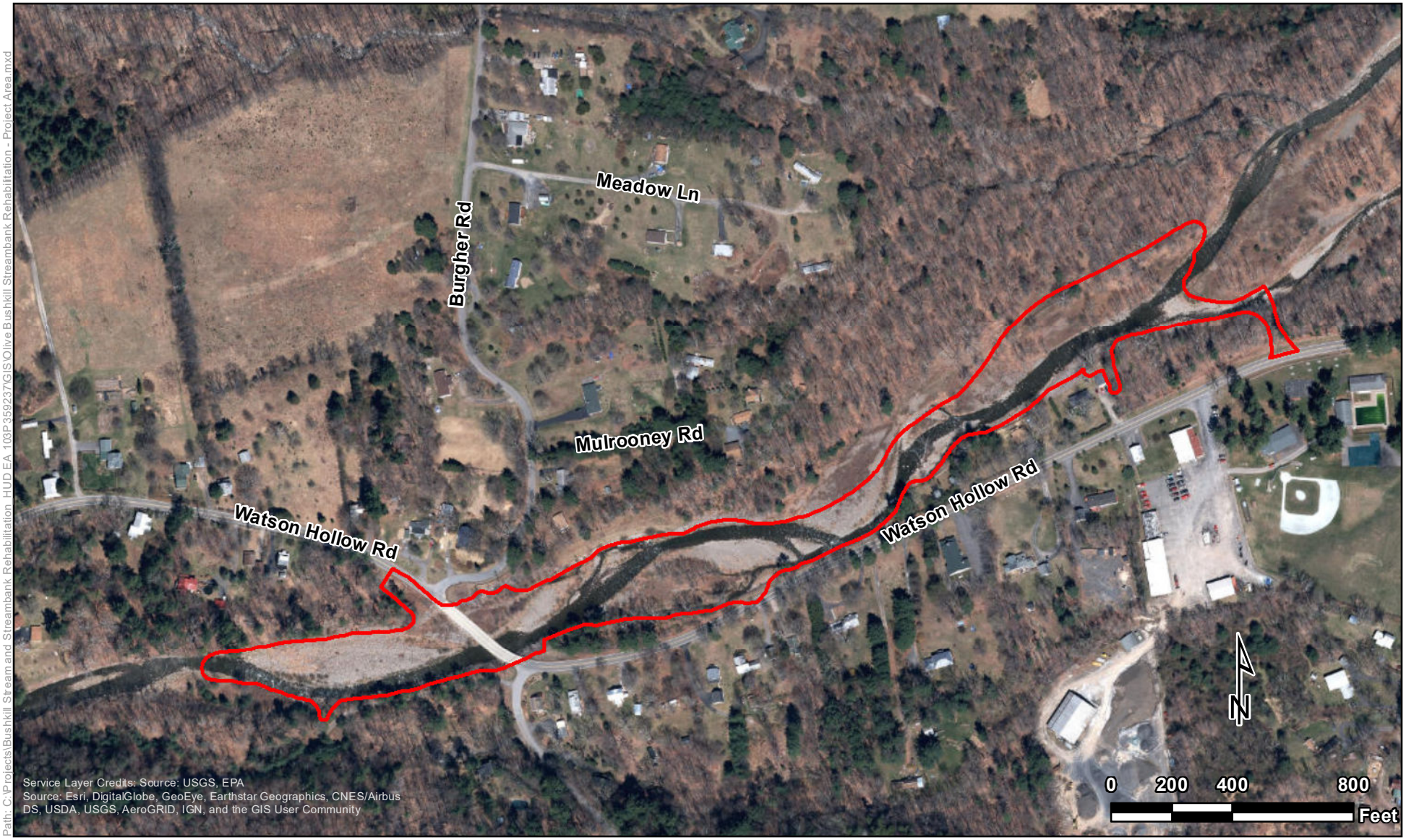
Legend

Project Location

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 1



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Project Area

Legend

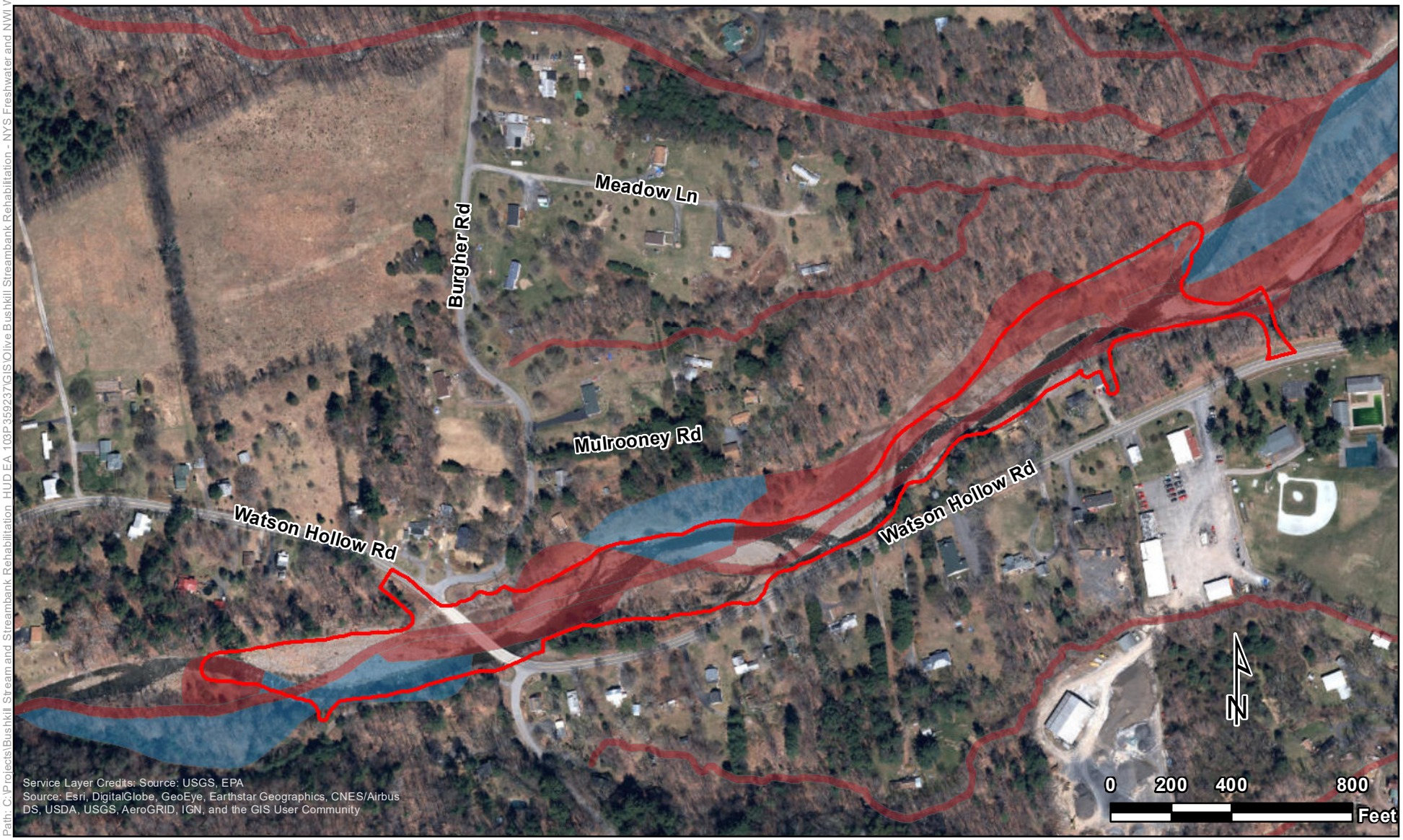
Project Area

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 2

Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103P359237\GIS\Olive Bushkill Streambank Rehabilitation - NYS Freshwater and NWI Wetlands.mxd



Legend

- Project Area
- NYS Freshwater Wetlands
- NYS Freshwater Wetlands Buffer

NWI Wetlands

- Freshwater Forested/Shrub Wetland
- Riverine

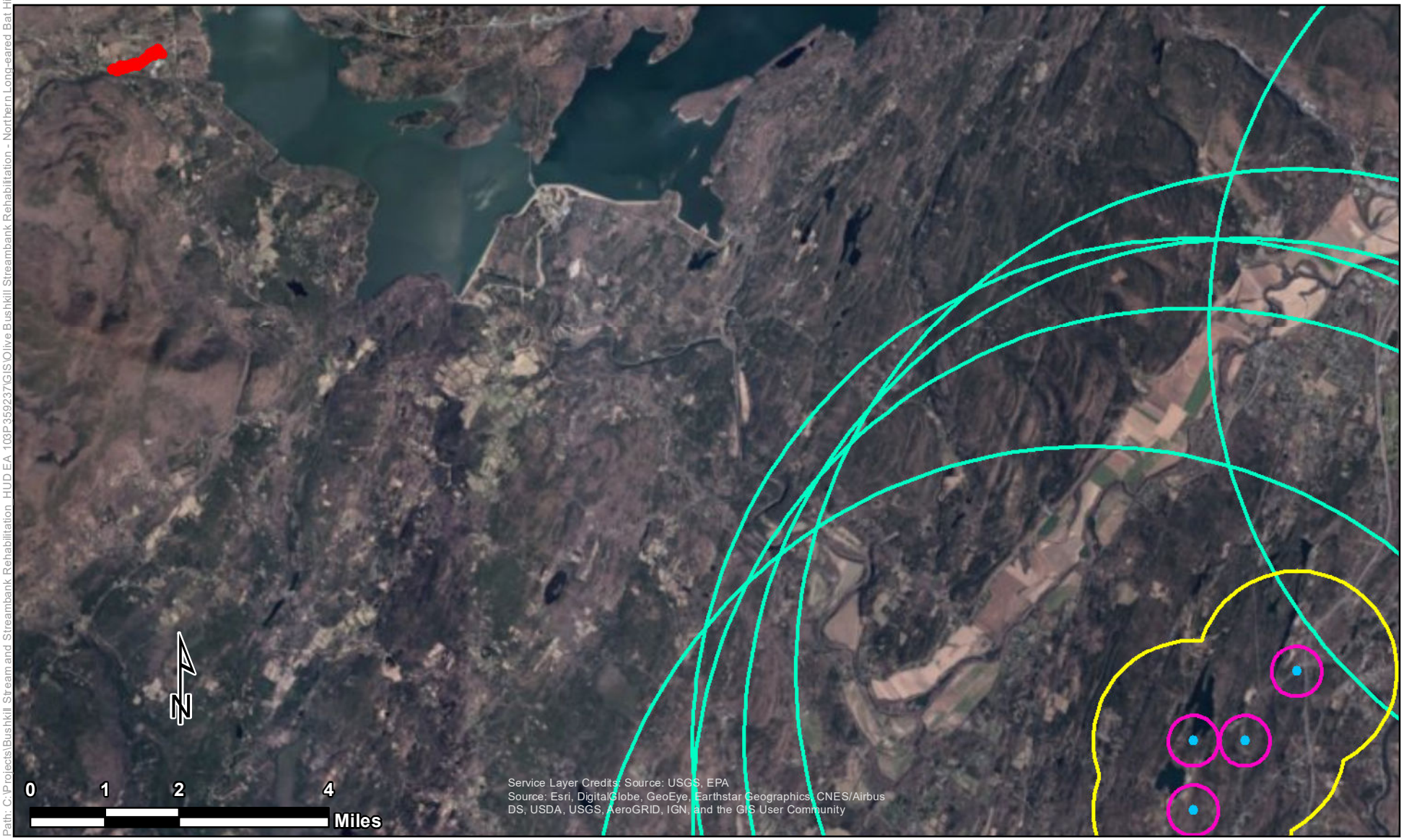
NYS Freshwater and NWI Wetlands

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Figure 3

Tetra Tech, Inc

Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103P359237\GIS\Olive Bushkill Streambank Rehabilitation - Northern Long-eared Bat Hibernacula.mxd



Legend

- NLEB Hibernacula
- Project Area
- NLEB Hibernacula 0.25 Mile Buffer
- NLEB Hibernacula 1 Mile Buffer
- NLEB Hibernacula 5 Mile Buffer

Northern Long-eared Bat Hibernacula

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 4

Attachment 1

Tree Tally

Tree Tally (conducted August 8, 2018)
Bushkill Stream & Streambank Rehabilitation
Olive, New York

Area A
49,170 square feet (1.1 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
northern red oak	*Quercus rubra*	18	1
sugar maple	*Acer saccharum*	6	15
		8	17
		12	4
		36	2
American sycamore	*Platinus occidentalis*	6	10
		8	7
		10	11
		12	11
		14	9
		20	6
		36	1
white ash	*Fraxinus americana*	8	3
		18	2
		20	2
eastern cottonwood	*Populus deltoides*	20	1
white pine	*Pinus strobus*	6	1
		10	2
		Total:	105

Area B
2,342 square feet (0.05 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
American sycamore	*Platinus occidentalis*	6	7
northern catalpa	*Catalpa speciosa*	6	3
		8	3
		Total:	13

Note: Vegetated areas to be disturbed outside of Area A and Area B are prediminantly cobble bars dominated by willow shrubs (*Salix ssp* .) and young American sycamore (*Platinus occidentalis*) under 4" dbh

Attachment 2

NHP Response 10-12-2018

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

October 12, 2018

Lori Shirley
Governor's Office of Storm Recovery
30-40 State St., Hampton Plaza
Albany, NY 12207

Re: Bushkill Stream and Streambank Rehabilitation Project, West Shokan
County: Ulster Town/City: Olive

Dear Ms. Shirley:

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

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to 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 sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 3 Office, Division of Environmental Permits, at dep.r3@dec.ny.gov, (845) 256-3054.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1152

The following state-listed animals have been documented in the vicinity of the project site.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for the project, please contact the NYSDEC Region 3 Office, Department of Environmental Permits, at dep.r3@dec.ny.gov, (845) 256-3054.

The following species has been documented nesting within .8 mile of the project site.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Bald Eagle *Breeding*	*Haliaeetus leucocephalus*	Threatened		1715

The following species has been documented within 1.5 miles of the project site. Individual animals may travel 1.5 miles from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Timber Rattlesnake	*Crotalus horridus*	Threatened		13551

The following state-listed plants have been documented in the vicinity of the project site.

If suitable habitat for these species is present at the project site, these species may also occur there.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*	
Spreading Rush	*Juncus subcaudatus*	Endangered	Critically Imperiled in NYS	
Little Mountain, West Shokan, within .5 mile of the project site, 1999-08-17: Seeps in a recovering hemlock-northern hardwood forest.				1205
Nodding Pogonia	*Triphora trianthophoros* ssp. *trianthophoros*	Threatened	Imperiled in NYS	
Within .5 mile of the project site, 2009-08-31: Mixed woods tending toward beech-maple.				14467

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

Attachment 3

Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: July 01, 2019
Consultation Code: 05E1NY00-2019-SLI-0669
Event Code: 05E1NY00-2019-E-07790
Project Name: Bushkill Stream and Streambank Rehabilitation Project, Town of Olive, Ulster County, NY

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2019-SLI-0669

Event Code: 05E1NY00-2019-E-07790

Project Name: Bushkill Stream and Streambank Rehabilitation Project, Town of Olive, Ulster County, NY

Project Type: LAND - FLOODING

Project Description: The Town of Olive has requesting $1,000,000 in CDBG-DR funding for design and construction of stream channel and streambank rehabilitation along the Bushkill stream just west of the Ashokan Reservoir. The Bushkill stream runs generally parallel to Watson Hollow Road in the project area. The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/41.96815169932177N74.28308928432122W

Counties: Ulster, NY

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/182/office/52410.pdf Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/182/office/52410.pdf	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Attachment 4

Phase 1 Habitat Assessment

INDIANA BAT HABITAT ASSESSMENT DATASHEET

Project Name: Bushkill Stream and Streambank Rehabilitation Date: 2/11/2019

Township/Range/Section: Town of Olive, Ulster County, NY

Lat Long/UTM/ Zone: Zone 18N - E: 559455.74 N: 4646588.79 Surveyor: A. Bailey

Brief Project Description

Approximately 2,525 linear feet of the Bushkill stream channel will be stabilized and realigned to mimic a more healthy, functioning stream with a confined channel and wider floodplain. 1.15 acres of trees (118 total trees) will be removed.

Project Area

	Total Acres	Forest Acres	Open Acres
Project	8.35	2.65	5.7 (open + stream)

	Completely cleared	Partially cleared (will leave trees)	Preserve acres- no clearing
Proposed Tree Removal (ac)	1.15		7.2

Vegetation Cover Types

Pre-Project	Post-Project
The project area is a mixture of forested and open streambank.	The project area will remain a mixture of forested and open streambank.

Landscape within 5 mile radius

Flight corridors to other forested areas?

There are flight corridors to other forested areas in the vicinity of the project area.

Describe Adjacent Properties (e.g. forested, grassland, commercial or residencial development, water sources)

The area immediately around the project area is mainly residential, with forested areas surrounding.

Proximity to Public Land

What is the distance (mi.) from the project area to forested public lands (e.g., national or state forests, national or state parks, conservation areas, wildlife management areas)?

The project area lies within the Catskill Park, and is approximately 14 miles from Minnewaska State Park.

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): 1

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
			2,525 ft	
Pools/Ponds (# and size)		Open and accessible to bats?		The project area is along a quick-moving stream.
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50 ')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
		3		
Dominant Species of Mature Trees	American sycamore			
% Trees w/ Exfoliating Bark		~30-40%		
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	See attached.			
No. of Suitable Snags				

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:

Please see the attached photographs and tree tally for more information on trees to be removed. While the project area does not occur within a known Indiana bat occurrence buffer, there is potential suitable habitat available. An acoustic survey is recommended.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Tree Tally (conducted August 8, 2018)
Bushkill Stream & Streambank Rehabilitation
Olive, New York

Area A
49,170 square feet (1.1 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
northern red oak	*Quercus rubra*	18	1
sugar maple	*Acer saccharum*	6	15
		8	17
		12	4
		36	2
American sycamore	*Platinus occidentalis*	6	10
		8	7
		10	11
		12	11
		14	9
		20	6
		36	1
white ash	*Fraxinus americana*	8	3
		18	2
		20	2
eastern cottonwood	*Populus deltoides*	20	1
white pine	*Pinus strobus*	6	1
		10	2
		Total:	105

Area B
2,342 square feet (0.05 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
American sycamore	*Platinus occidentalis*	6	7
northern catalpa	*Catalpa speciosa*	6	3
		8	3
		Total:	13

Note: Vegetated areas to be disturbed outside of Area A and Area B are prediminantly cobble bars dominated by willow shrubs (*Salix ssp* .) and young American sycamore (*Platinus occidentalis*) under 4" dbh

NEW YORK
STATE OF
OPPORTUNITY

Department of Environmental Conservation

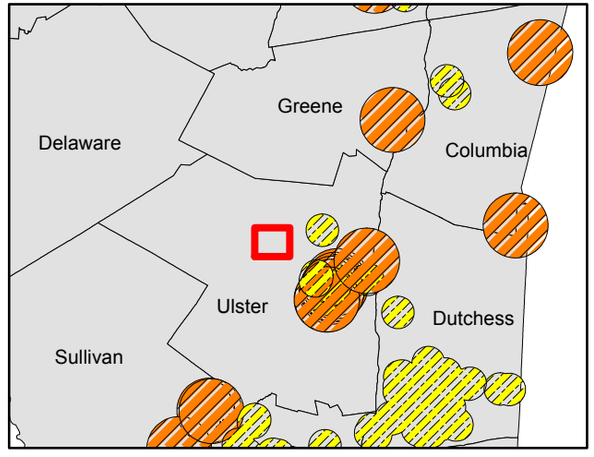
0 0.03 0.06 0.12 0.18 0.24
Miles

1 inch = 500 feet

NYS Resources Map

Bushkill Stream and Streambank Rehabilitation Town of Olive, Ulster County

Prepared by AMB on 2/4/2019



Project Area

Indiana Bat

Northern Long-eared Bat

Disclaimer: this map was prepared by the NYSDEC using the most current data available. It is deemed accurate but is not guaranteed. NYSDEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data. This map may contain information that is considered sensitive and therefore the distribution of this map is strictly prohibited.

Attachment 5

Bat Acoustic Survey

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife
625 Broadway, 5th Floor, Albany, NY 12233-4750
P: (518) 402-8924 | F: (518) 402-8925
www.dec.ny.gov

Bat Acoustic Survey Report
For the
Bushkill Stream & Streambank Rehabilitation Project
Ulster County, NY

May 2019

Prepared for:
U.S. Fish & Wildlife Service
Cortland, NY

Prepared by:
Amanda Bailey
NEIWPCC/NYSDEC
625 Broadway
Albany, NY 12233

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Executive Summary

The Governor's Office of Storm Recovery (GOSR) is administering a U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant for Disaster Recovery, including the New York Rising Community Reconstruction Program. One proposed project under this grant is the Bushkill stream and streambank rehabilitation project, which will stabilize the bank and channel bed of the Bushkill Stream, increase the floodplain width, and reinforce the existing Watson Hollow bridge abutments. To ensure compliance with Section 7 of the Endangered Species Act of 1973, an environmental review was initiated to assess the possibility of listed species presence on the project site.

The USFWS Information, Planning, and Conservation System (IPaC) Trust Resource Report and Official Species Lists listed that the federally endangered Indiana bat (*Myotis sodalis*) and federally threatened northern long-eared bat (*Myotis septentrionalis*) may occur in the proposed project area. A Phase 1 summer habitat assessment completed by Amanda Bailey (NYSDEC/NEIWPCC) found that potential roosting habitat for both species occurs on the project area (see Section 7 Project Review for Bushkill Stream and Streambank Rehabilitation). The purpose of this survey was to determine presence/absence of the Indiana bat and northern long-eared bat at the project site during the maternity season.

An acoustic survey was performed at two sites within the project area, including one streamside location and one trail location, both within the clearing area. Sites were monitored between May 16th and May 25th. Inclement weather led to 4 of these nights being discarded, and the batteries at the trail location died prematurely. In total, 9 successful detector nights were completed, 5 for the stream site and 4 for the trail site. Recorded files were run through Kaleidoscope Pro Bats of North America 4.2.0 automatic identification program to determine maximum likelihood estimates (MLE) for species presence on each detector night. According to these results, big brown bats (*Eptesicus fuscus*), red bats (*Lasiurus borealis*), hoary bats (*Lasiurus cinereus*), silver-haired bats (*Lasionycteris noctivagans*), little brown bats (*M. lucifugus*), Indiana bats (*M. sodalis*), and tri-colored bats (*Perimyotis subflavus*) were present in the project area. **Maximum likelihood estimates suggested that the Indiana bat was present at the stream site on 5/24/2019 and at the trail site on 5/16/2019.** All individual files from this night were reviewed by Amanda Bailey. Several call files from each detector night were identified as potential Indiana bat or northern long-eared bat calls, suggesting probable presence of these listed species on the project site.

1. Introduction 1.1 Project background

The Town of Olive is proposing a stream and streambank rehabilitation project along the Bushkill Stream from the County Route 42 Bridge, east to the intersection of the Bushkill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York (Figure 1-1). The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments. These improvements will occur along 2,525 feet of channel, and will require the removal of approximately 1.15 acres of trees in two different areas (Figure 1-2).

Hurricane Irene and Tropical Storm Lee, the Bushkill Stream flooded County Route 42, isolating the Town of Olive government offices and hundreds of homes. This flooding also resulted in significant erosion of the Bushkill's channel and banks that resulted in constrictions, reduced capacity, and a shift in the channel's course that, if not addressed, would present an immediate danger to County Route 42 and properties on the north and south banks of the channel. This project aims to address these concerns and help ameliorate the risk of future flood events.

1.2 Bats of New York

The Bushkill stream and streambank rehabilitation project includes portions of the ranges of nine bat species, including the federally and state endangered Indiana bat, and the federally and state threatened northern long-eared bat.

Table 1-1. List of potential bat species at the Rochester Creek and Ponds Mitigation project area.

Common Name	Scientific Name (Code)	Status	Roosting Habitat
Big brown bat	*Eptesicus fuscus* (EPFU)	--	Trees, structures, caves, mines
Eastern red bat	*Lasiurus borealis* (LABO)	--	Trees
Eastern small-footed bat	*Myotis leibii* (MYLE)	SC	Rock crevices, structures
Hoary bat	*L. cinerus* (LACI)	--	Trees
Indiana bat	*M. sodalis* (MYSO)	SE, FE	Trees, structures, caves, mines
Little brown bat	*M. lucifugus* (MYLU)	--	Trees, structures, caves, mines
Northern long-eared bat	*M. septentrionalis* (MYSE)	ST, FT	Trees, structures, caves, mines
Silver-haired bat	*Lasionycteris noctivagans* (LANO)	--	Trees, structures, caves, mines
Tri-colored	*Perimyotis subflavus* (PESU)	--	Trees, structures, caves, mines

FE = Federally endangered, FT = Federally threatened, SE = State endangered, ST = State threatened, SC = State Species of Special Concern

2. Methods 2.1 Acoustic Monitoring

A habitat survey conducted by Amanda Bailey on 2/11/2019 concluded that potential Indiana bat and northern long-eared bat roosting habitat existed at the project locations. To reduce the possibility for adverse impacts for either species to occur, we conducted a phase 2 acoustic survey at the project site. The total tree clearing area is approximately 1.15 acres. We followed the protocol outlined in the 2019 Range-wide Indiana Bat Summer Survey Guidelines (Guidelines), which called for at least 8 detector nights at this location (USFWS 2019).

Bat acoustic surveys were performed using Wildlife Acoustics SM4Bat detectors equipped with omnidirectional SM-U1 microphones. We used the recommended manufacturer detector settings and set the detectors to begin recording 30 minutes before sunset and stop recording 30 minutes after sunrise.

We focused our efforts on Area A (Figure 1-2), as Area B was mainly small willow shrubs, with only trees to be removed, none of which were ideal roost trees. Area A had a number of larger potential roost trees, and the proximity to the stream and presence of forested corridors made it an ideal location to sample acoustically. Detector locations were selected to represent different habitats that will be cleared for this project (Figure 2-1). To remain within the clearing area (which was 1.1 acres) and select adequate detector locations different habitats, we were forced to have our two sample points less than 200 meters apart. One of these locations was along an open stream corridor, and the other was a forested trail corridor.

Detectors were placed in areas with minimum vegetation within at least 10 meters of the microphone. Microphones were mounted on a plastic painter's pole 2.5 meters from the ground and connected to the detector using a cable. Microphones were oriented at a 45° angle from the ground. Photo-documentation of detector locations can be found in Appendix A. Prior to each survey, we tested each microphone with an ultrasonic calibrator, and conducted a finger rub test and forced recording before and after each survey to ensure that the detector was functioning properly upon deployment.

We monitored the weather on each survey night with data from the weather station at Stewart International Airport. We counted each night where the temperature remained above 50°F, the wind remained light, and there was no significant precipitation within the first 5 hours after

sunset. Table 2-1 summarizes weather data from the Stewart International Airport weather station for the survey period. Overall, the stream site and the trail site were monitored for 5 and 4 nights, respectively (4 additional nights did not meet weather requirements). The memory card at the trail site filled up partway through the night on 5/24/2019, and so that night was not counted.

Table 2-1. Weather data from Stewart International Airport for the Bushkill Stream survey period. Data are from the first 5 hours of each survey night. Yellow highlights indicate that the night was not counted towards total detector nights because of weather conditions.

Date	Sunset Time	Sunset Temp (°F)	Min Temp (°F)	Avg Temp (°F)	Avg Wind Speed (mph)	Precipitation	Conditions
5/16/2019	20:11	55	54	54.83	4.67	None	Partly Cloudy
5/17/2019	20:12	59	45	51.17	0.83	None	Clear
5/18/2019	20:13	59	55	59.86	1.43	None	Overcast
5/19/2019	20:14	70	64	66.33	4.50	Thunderstorm at 21:45*	Overcast
5/20/2019	20:15	61	54	57.50	12.00	None	Overcast
5/21/2019	20:15	50	45	47.17	7.00	None	Clear
5/22/2019	20:16	61	55	59.00	1.17	Light rain between 23:4501:45	Overcast, showers
5/23/2019	20:17	66	59	62.17	7.80	None	Clear
5/24/2019	20:18	57	50	54.00	2.67	None	Partly Cloudy

*Storm was short in duration, and the rest of the night had clear weather.

2.2 Data Analysis

All recorded bat passes were analyzed using automated species identification software approved for use by the USFWS. We used Kaleidoscope Pro (Wildlife Acoustics) with the Bats of North America (Version 4.2.0) extension as a classifier, with a sensitivity setting of 0, as required by USFWS (USFWS 2019). Data was analyzed by night and by site. We considered species likely present at a site if the maximum likelihood estimator (MLE) for that night was significant ($p \leq 0.05$).

For the two nights where the MLE calculated by Kaleidoscope indicated likely presence of Indiana bats, we manually reviewed all call sequences recorded. Calls were analyzed in Kaleidoscope Pro and using SCAN'R software to get accurate slope and frequency measurements of pulses. The key used as a reference during the manual vetting was created by Carl Herzog of NYSDEC (see Appendix B).

3. Results 3.1 Acoustic Monitoring

We surveyed 2 different locations for a total of 9 successful detector nights (Table 3-1). The stream site was successfully surveyed on 5/16, 5/18, 5/19, 5/23, and 5/24. The trail site was successfully surveyed on 5/16, 5/18, 5/19, and 5/23. Other nights were not counted due to low temperatures, rain events, and/or high winds.

3.1.1 Species Composition

The MLEs calculated by Kaleidoscope Pro indicated that 7 different species were present at the study location (Table 3-2). After manual review, we determined that the eastern smallfooted bat (MYLE) call sequences recorded at the stream location were all likely northern long-eared bat (MYSE) call sequences. See Section 3.1.2 for more information on MYSE and MYSO detections. The most commonly detected species was little brown bat (MYLU), followed by big brown bat (EPFU; detected every successful detector night) and tri-colored bat (PESU, detected on 5 of 9 successful detector nights). MLE values indicated that red bats (LABO) were present at the stream site every night except for one; MLE values did not indicate presence of LABO at the trail site.

3.1.2 Indiana bat and northern long-eared bat presence and distribution

MLE values indicated that MYSO were present on two detector nights: 5/16/2019 at the stream site and 5/24/2019 at the trail site. Manual review of all calls over 35 kHz on those two nights confirmed potential presence of MYSO at both sample sites.

4. Conclusions

The results of this acoustic survey indicate potential presence of the Indiana bat and the northern long-eared bat at this project location during the summer maternity season. MLE values associated with acoustic monitoring suggests that Indiana bats were present for one night at our stream sampling site, and one night at the trail site. This project is located just over 9 miles from the nearest Indiana bat maternity colony in eastern Ulster County, and is located approximately 13 miles from Rosendale, NY, which has several mines that both MYSO and MYSE hibernate in. Further coordination with the US Fish and Wildlife Service will be necessary prior to the clearing of the 118 trees proposed for this project.

Table 3-1. Detector information for acoustic monitoring on Bushkill Stream & Streambank Rehabilitation project location.

Detector Name	Detector Model	Location Description	Detector Orientation	Detector Coordinates (UTM)	Recording Dates	Survey Hours	Successful Detector Night?	Number of Files Recorded
BSSB_stream	SM4Bat	Stream corridor	SSE	559643 E 4646702 N	5/16/2019	11 hrs 25 min	Yes	66
					5/17/2019	11 hrs 23 min	No	142
					5/18/2019	11 hrs 21 min	Yes	85
					5/19/2019	11 hrs 19 min	Yes	236
					5/20/2019	11 hrs 17 min	No	719
					5/21/2019	11 hrs 15 min	No	620
					5/22/2019	11 hrs 13 min	No	255
					5/23/2019	11 hrs 12 min	Yes	772
					5/24/2019	11 hrs 10 min	Yes	824
BSSB_trail	SM4Bat	Forest opening along trail	SSW	559559 E 4646655 N	5/16/2019	11 hrs 25 min	Yes	394
					5/17/2019	11 hrs 23 min	No	1367
					5/18/2019	11 hrs 21 min	Yes	200
					5/19/2019	11 hrs 19 min	Yes	1204
					5/20/2019	11 hrs 17 min	No	2146
					5/21/2019	11 hrs 15 min	No	1230
					5/22/2019	11 hrs 13 min	No	735
					5/23/2019	11 hrs 12 min	Yes	1731

Table 3-2. Kaleidoscope Pro results by detector site, by night. Nights with significant MLE values (≤ 0.05) for species are in green.

Detector Location	Survey Date	Species Presence: # files (MLE value)										Total
		EPFU	LABO	LACI	LANO	MYLE	MYLU	MYSE	MYSO	PESU	Unknown	
Stream	5/16/2019	6 (0.00)	6 (0.01)	0 (1.00)	5 (0.08)	0 (1.00)	35 (0.00)	1 (0.99)	0 (1.00)	4 (0.00)	9	66
	5/17/2019	4 (0.24)	6 (0.15)	0 (1.00)	10 (0.00)	0 (1.00)	63 (0.00)	0 (1.00)	4 (0.84)	18 (0.00)	37	142
	5/18/2019	8 (0.00)	7 (0.01)	1 (0.88)	4 (0.39)	0 (1.00)	44 (0.00)	0 (1.00)	3 (0.79)	1 (0.77)	17	85
	5/19/2019	9 (0.00)	97 (0.00)	0 (1.00)	3 (0.71)	0 (1.00)	73 (0.00)	1 (1.00)	3 (1.00)	15 (0.00)	35	236
	5/20/2019	3 (0.49)	65 (0.00)	1 (0.96)	8 (0.00)	0 (1.00)	396 (0.00)	1 (1.00)	20 (0.96)	144 (0.00)	81	719
	5/21/2019	2 (0.05)	40 (0.00)	0 (1.00)	0 (1.00)	4 (0.00)	410 (0.00)	4 (1.00)	8 (1.00)	6 (0.40)	146	620
	5/22/2019	3 (0.03)	28 (0.00)	0 (1.00)	1 (0.90)	2 (0.00)	111 (0.00)	5 (0.57)	8 (0.48)	5 (0.08)	92	255
	5/23/2019	10 (0.00)	41 (0.00)	0 (1.00)	2 (0.99)	1 (0.00)	559 (0.00)	0 (1.00)	7 (1.00)	17 (0.00)	135	772
	5/24/2019	10 (0.00)	18 (1.00)	0 (1.00)	8 (0.02)	0 (1.00)	618 (0.00)	4 (1.00)	43 (0.03)	33 (0.00)	90	824
Trail	5/16/2019	204 (0.00)	1 (1.00)	0 (1.00)	20 (1.00)	0 (1.00)	98 (0.00)	0 (1.00)	14 (0.00)	0 (1.00)	57	394
	5/17/2019	81 (0.00)	4 (1.00)	0 (1.00)	2 (1.00)	0 (1.00)	1191 (0.00)	0 (1.00)	7 (1.00)	4 (1.00)	78	1367
	5/18/2019	37 (0.00)	9 (0.16)	0 (1.00)	8 (0.98)	0 (1.00)	110 (0.00)	0 (1.00)	5 (0.99)	0 (1.00)	31	200
	5/19/2019	19 (0.00)	29 (1.00)	0 (1.00)	2 (1.00)	0 (1.00)	1013 (0.00)	0 (1.00)	37 (1.00)	1 (1.00)	103	1204
	5/20/2019	15 (0.00)	27 (1.00)	0 (1.00)	1 (1.00)	0 (1.00)	1963 (0.00)	1 (1.00)	11 (1.00)	10 (1.00)	118	2146
	5/21/2019	0 (1.00)	0 (1.00)	0 (1.00)	0 (1.00)	1 (0.00)	1056 (0.00)	3 (1.00)	33 (1.00)	25 (0.00)	112	1230
	5/22/2019	18 (0.00)	25 (0.28)	0 (1.00)	4 (0.98)	0 (1.00)	473 (0.00)	3 (1.00)	32 (0.12)	77 (0.00)	103	735
	5/23/2019	6 (0.00)	11 (1.00)	2 (0.25)	0 (1.00)	0 (1.00)	1405 (0.00)	0 (1.00)	24 (1.00)	138 (0.00)	145	1731

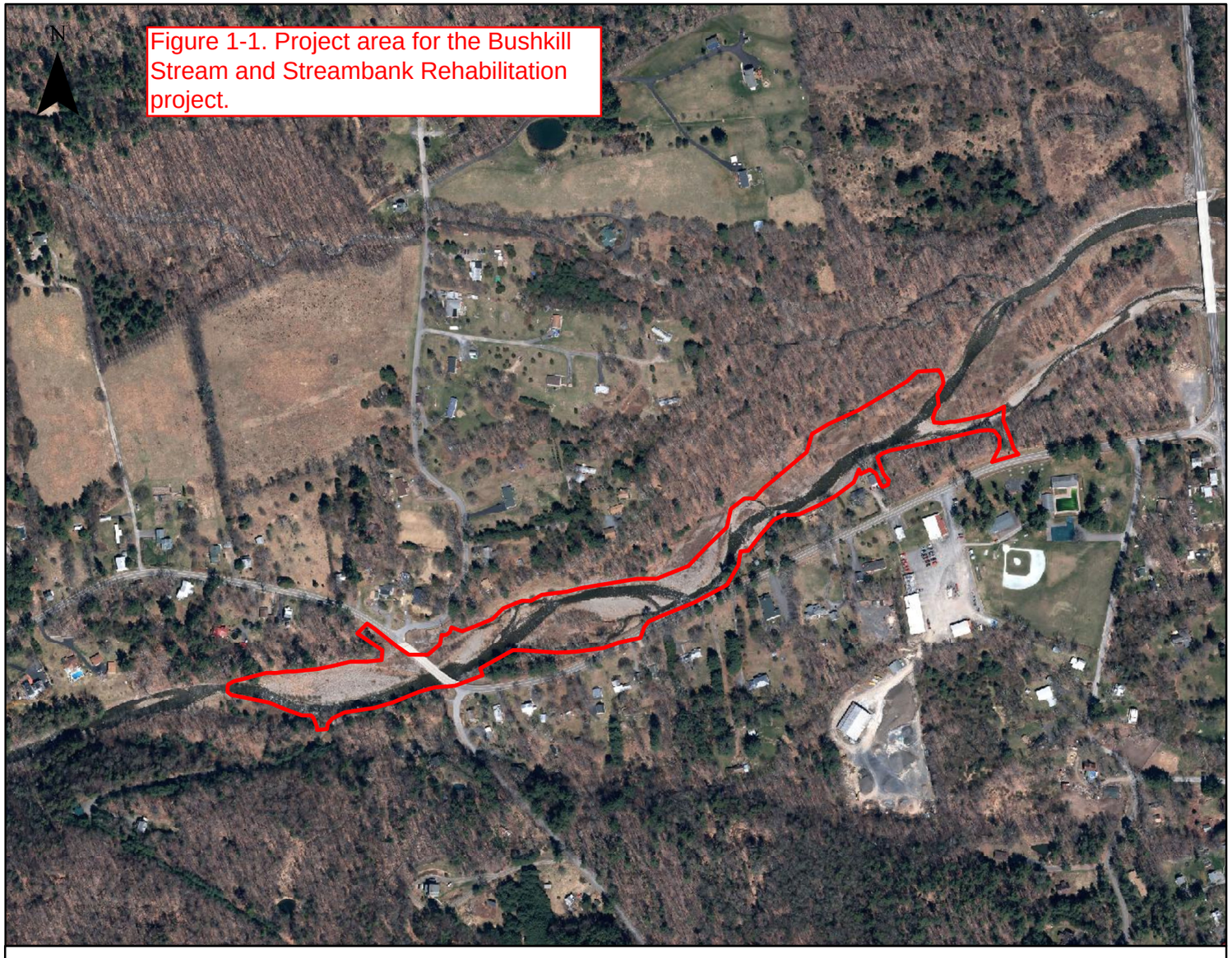


Figure 1-1. Project area for the Bushkill Stream and Streambank Rehabilitation project.

NEW YORK
STATE OF
OPPORTUNITY

Department of Environmental Conservation

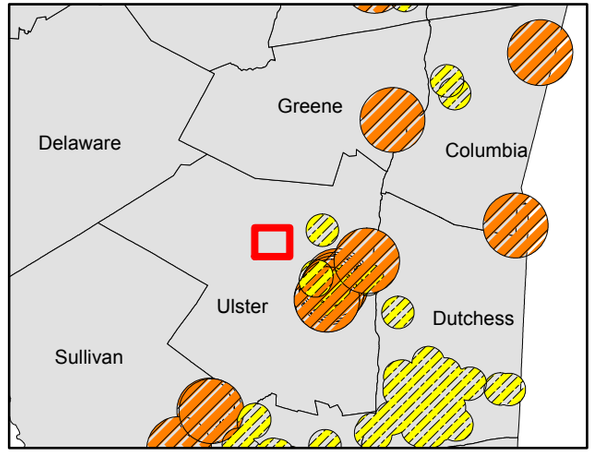
0 0.03 0.06 0.12 0.18 0.24
Miles

1 inch = 500 feet

NYS Resources Map

Bushkill Stream and Streambank Rehabilitation Town of Olive, Ulster County

Prepared by AMB on 2/4/2019



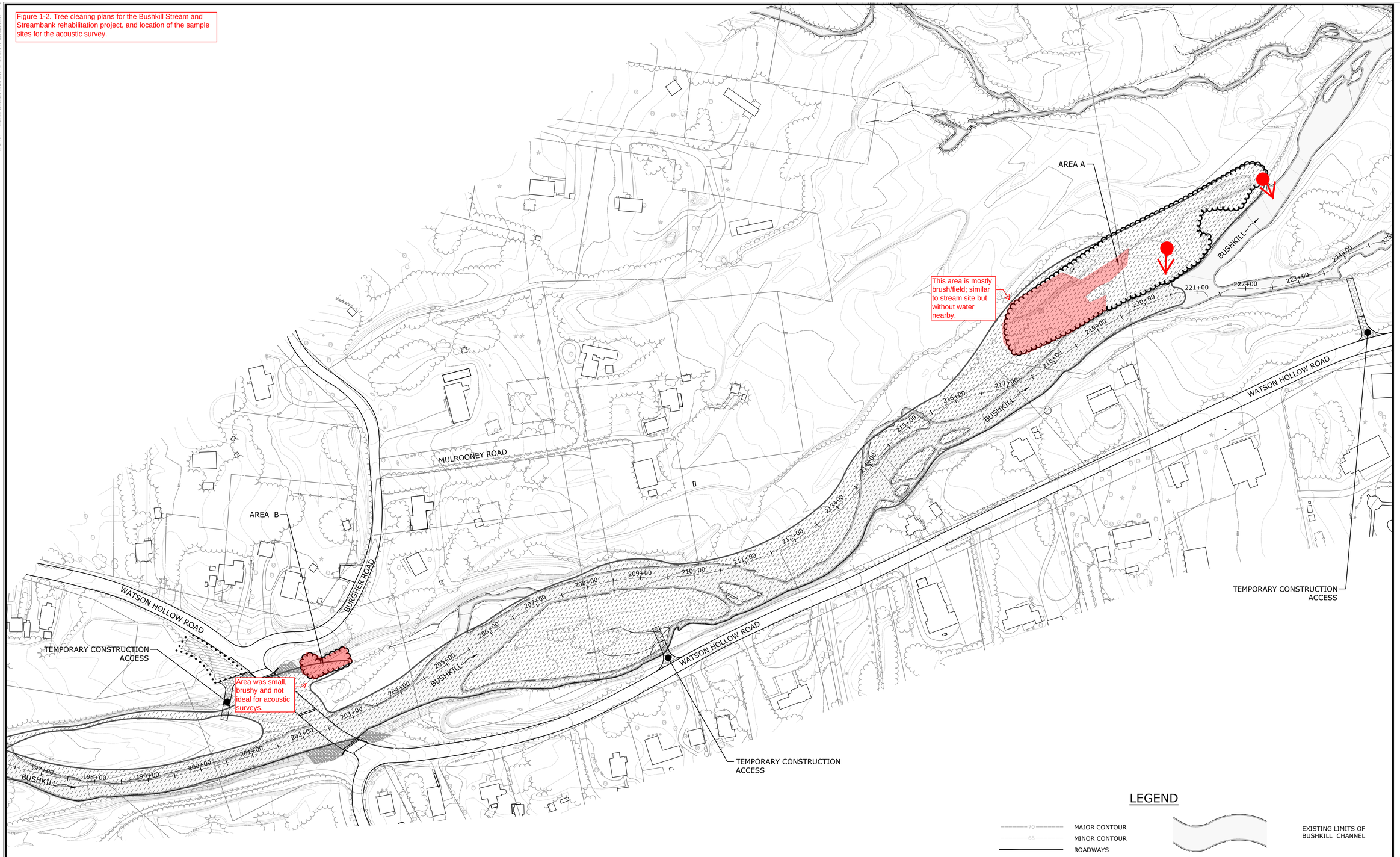
Project Area

Indiana Bat

Northern Long-eared Bat

Disclaimer: this map was prepared by the NYSDEC using the most current data available. It is deemed accurate but is not guaranteed. NYSDEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data. This map may contain information that is considered sensitive and therefore the distribution of this map is strictly prohibited.

Figure 1-2. Tree clearing plans for the Bushkill Stream and Streambank rehabilitation project, and location of the sample sites for the acoustic survey.



LEGEND

- MAJOR CONTOUR
- MINOR CONTOUR
- ROADWAYS
- PROPERTY LINE
- TREE DISTURBANCE AREAS
- EXISTING LIMITS OF BUSHKILL CHANNEL
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED STAGING AND STOCKPILING AREA

0' 40' 80'
0 1/2" 1"

MILONE & MACBROOM
201 MAIN STREET, SUITE 102
NEW PALTZ, NY 12561
845.633.8183
WWW.MMINC.COM

DESCRIPTION | DATE | BY

LIMITS OF DISTURBANCE PLAN

BUSHKILL STREAM AND STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	MC
DESIGNED	DRAWN	CHECKED

SCALE: 1" = 80'

DATE: AUGUST 08, 2018

PROJECT NO.: 5909-01

SHEET NO.: 01 OF 01

SHEET NAME: **LD-01**

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Tree Tally (conducted August 8, 2018)
Bushkill Stream & Streambank Rehabilitation
Olive, New York

Area A
49,170 square feet (1.1 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
northern red oak	*Quercus rubra*	18	1
sugar maple	*Acer saccharum*	6	15
		8	17
		12	4
		36	2
American sycamore	*Platinus occidentalis*	6	10
		8	7
		10	11
		12	11
		14	9
		20	6
		36	1
white ash	*Fraxinus americana*	8	3
		18	2
		20	2
eastern cottonwood	*Populus deltoides*	20	1
white pine	*Pinus strobus*	6	1
		10	2
		Total:	105

Area B
2,342 square feet (0.05 acres)

Common Name	Scientific Name	DBH (inches)	Stem Count
American sycamore	*Platinus occidentalis*	6	7
northern catalpa	*Catalpa speciosa*	6	3
		8	3
		Total:	13

Note: Vegetated areas to be disturbed outside of Area A and Area B are prediminantly cobble bars dominated by willow shrubs (*Salix ssp* .) and young American sycamore (*Platinus occidentalis*) under 4" dbh

Appendix A. Detector photographs

Detection area of trail site detector

Overview of trail site detector

Canopy above trail site detector

Detection area of trail site detector

Stream site detector location

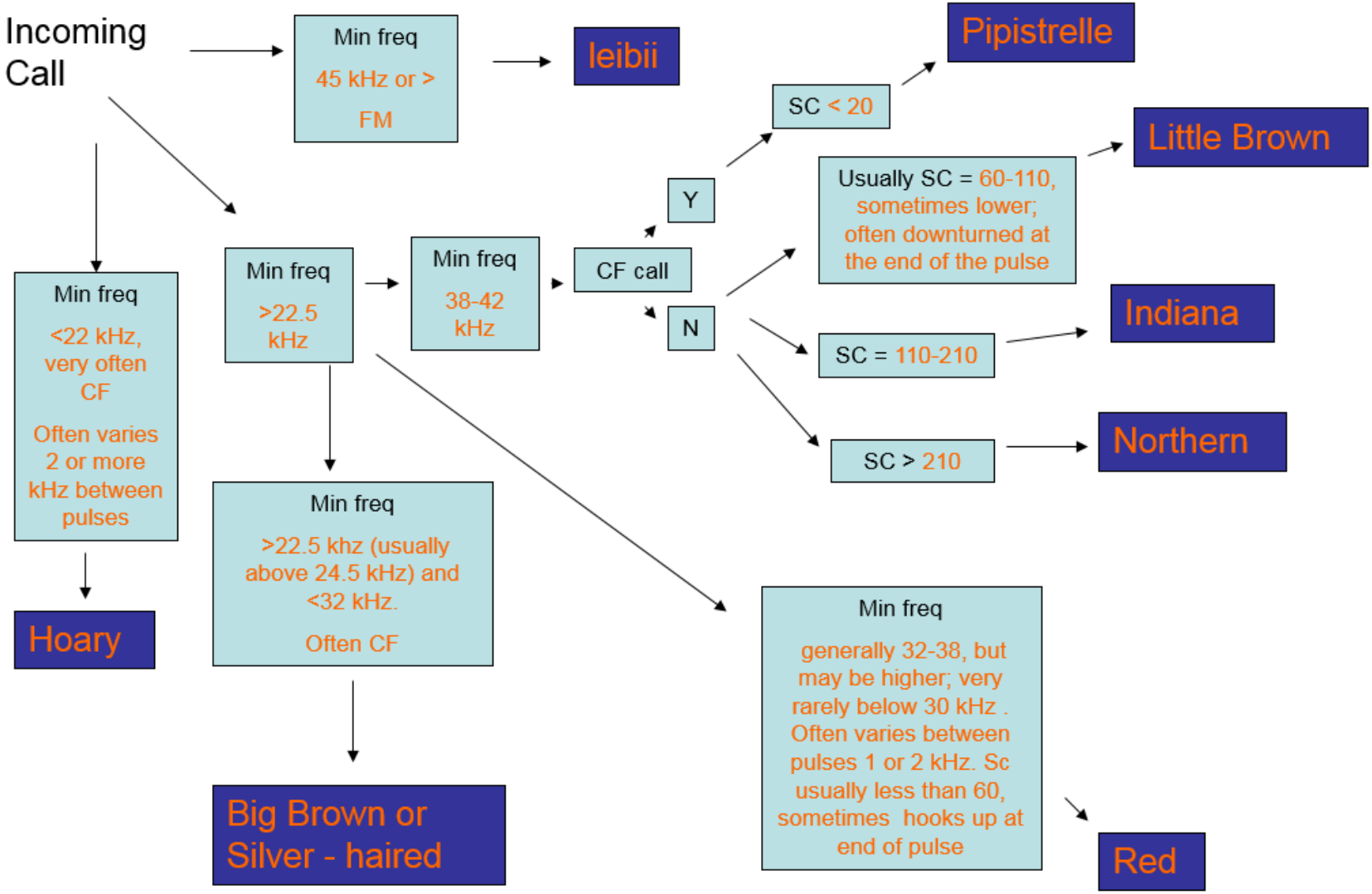
Canopy above stream site detector location

Overview of stream site detector location

Detection area of stream site detector

Detection area of stream site detector

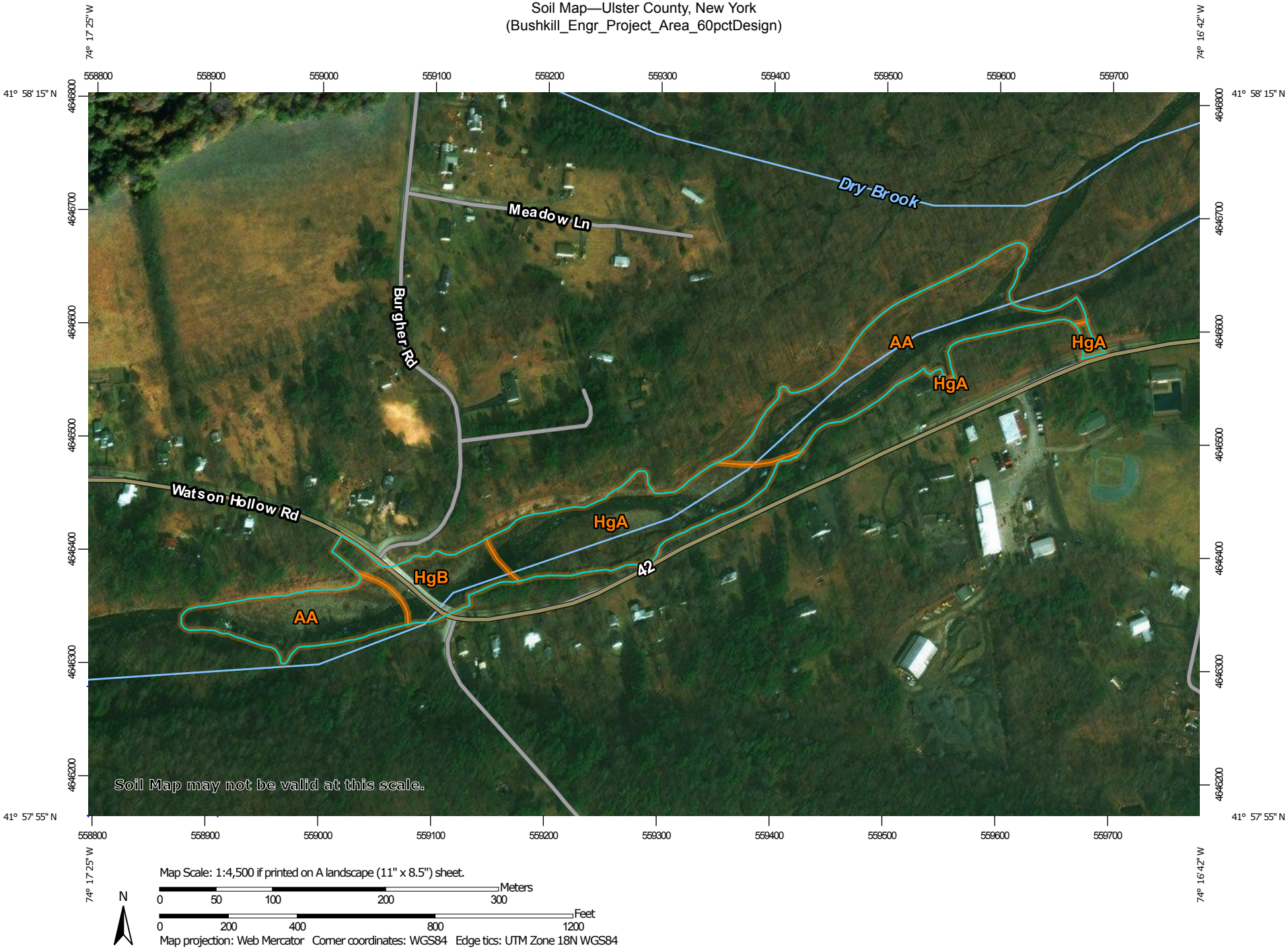
Appendix B. Acoustical key to species. Created by Carl Herzog, NYSDEC.



Attachment 6

Soil Map

Soil Map—Ulster County, New York
(Bushkill_Engr_Project_Area_60pctDesign)



Map Scale: 1:4,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Ulster County, New York
Survey Area Data: Version 17, Sep 3, 2018

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

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AA	Alluvial land	5.9	55.8%
HgA	Hoosic gravelly loam, 0 to 3 percent slopes	3.3	31.0%
HgB	Hoosic gravelly loam, 3 to 8 percent slopes	1.4	13.2%
Totals for Area of Interest		**10.5**	**100.0%**

Attachment 7

Site Plans

CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF WORK A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES OF THE TOWN OF OLIVE, PROJECT ENGINEER, AND CONTRACTOR. AT THIS MEETING, ONE PERSON WILL BE PLACED IN CHARGE OF SEDIMENT AND EROSION CONTROL FOR THE ENTIRE SITE.
2. THE PROPOSED CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
3. SIGNIFICANT CHANGES TO THE CONSTRUCTION SEQUENCE OR PROJECT LAYOUT OR DESIGN WILL REQUIRE NOTIFICATION AND APPROVAL BY NYSDEC PRIOR TO IMPLEMENTATION.

WATER CONTROL NOTES

1. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
2. THE WATER CONTROL MEASURES AS REPRESENTED ON THIS PLAN ARE PRESENTED AS INFORMATIONAL ONLY, AND SUBJECT TO CHANGE BASED ON SEASONAL, WEATHER, AND FIELD CONDITIONS.
3. CONTRACTOR SHALL PREPARE AND SUBMIT A WATER CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
4. REFER TO WORK AREA DEWATERING NOTES ON SHEET SE-1.
5. TEMPORARY TURBID WATER DEWATERING SUMP, PUMP AND BASIN LOCATION MAY VARY AS WELL AS THE QUANTITY NEEDED.
6. CLEAR WATER DEWATERING PUMPS/PIPING CAN BE DISCHARGED DIRECTLY INTO CLEAN WATER BYPASS PIPING WITH THE APPROPRIATE ADAPTERS/SPLICES. LEAKY OR FAULTY CONNECTIONS OF PIPING WILL NOT BE APPROVED FOR USE ON-SITE. CLEAN WATER DEWATERING MAY ALSO BE DISCHARGED DOWNSTREAM OF WORK SITE INTO CHANNEL.

CONSTRUCTION ACCESS NOTES

1. CONSTRUCTION ACCESS ROUTES SHOWN ARE SCHEMATIC IN NATURE - FINAL ROUTES TO BE NEGOTIATED WITH PROPERTY OWNERS PRIOR TO START OF CONSTRUCTION.
2. TEMPORARY CONSTRUCTION ENTRANCE PAD AND TEMPORARY CONSTRUCTION HAUL ROADS TO BE RESTORED UPON PROJECT COMPLETION.
3. ALL PRIVATELY OWNED LAWN, GARDEN, SHRUBS, TREES, FENCING, AND OTHER YARD FEATURES SHALL BE RESTORED OR REPAIRED AT PROJECT COMPLETION AT THE APPROVAL OF THE PROPERTY OWNER. THERE SHALL BE NO CLEARING OF TREES WITH GREATER THAN 3" DBH ALLOWED.
4. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE

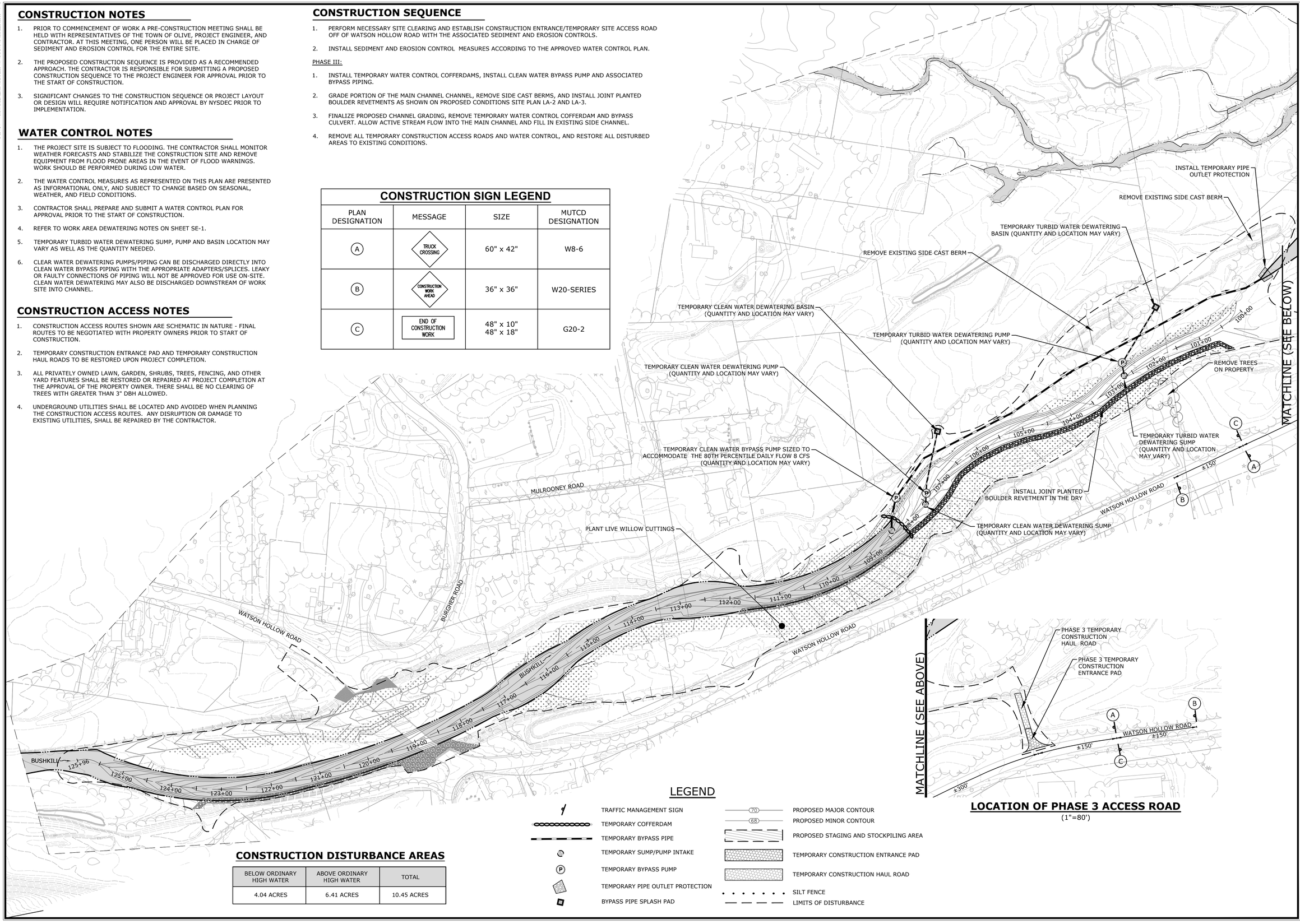
1. PERFORM NECESSARY SITE CLEARING AND ESTABLISH CONSTRUCTION ENTRANCE/TEMPORARY SITE ACCESS ROAD OFF OF WATSON HOLLOW ROAD WITH THE ASSOCIATED SEDIMENT AND EROSION CONTROLS.
2. INSTALL SEDIMENT AND EROSION CONTROL MEASURES ACCORDING TO THE APPROVED WATER CONTROL PLAN.

PHASE III:

1. INSTALL TEMPORARY WATER CONTROL COFFERDAMS, INSTALL CLEAN WATER BYPASS PUMP AND ASSOCIATED BYPASS PIPING.
2. GRADE PORTION OF THE MAIN CHANNEL CHANNEL, REMOVE SIDE CAST BERMS, AND INSTALL JOINT PLANTED BOULDER REVETMENTS AS SHOWN ON PROPOSED CONDITIONS SITE PLAN LA-2 AND LA-3.
3. FINALIZE PROPOSED CHANNEL GRADING, REMOVE TEMPORARY WATER CONTROL COFFERDAM AND BYPASS CULVERT. ALLOW ACTIVE STREAM FLOW INTO THE MAIN CHANNEL AND FILL IN EXISTING SIDE CHANNEL.
4. REMOVE ALL TEMPORARY CONSTRUCTION ACCESS ROADS AND WATER CONTROL, AND RESTORE ALL DISTURBED AREAS TO EXISTING CONDITIONS.

CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
A	TRUCK CROSSING	60" x 42"	W8-6
B	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
C	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2



LEGEND

- TRAFFIC MANAGEMENT SIGN
- TEMPORARY COFFERDAM
- TEMPORARY BYPASS PIPE
- TEMPORARY SUMP/PUMP INTAKE
- TEMPORARY BYPASS PUMP
- TEMPORARY PIPE OUTLET PROTECTION
- BYPASS PIPE SPLASH PAD
- PROPOSED MAJOR CONTOUR (70)
- PROPOSED MINOR CONTOUR (68)
- PROPOSED STAGING AND STOCKPILING AREA
- TEMPORARY CONSTRUCTION ENTRANCE PAD
- TEMPORARY CONSTRUCTION HAUL ROAD
- SILT FENCE
- LIMITS OF DISTURBANCE

LOCATION OF PHASE 3 ACCESS ROAD

(1"=80')

CONSTRUCTION DISTURBANCE AREAS

BELOW ORDINARY HIGH WATER	ABOVE ORDINARY HIGH WATER	TOTAL
4.04 ACRES	6.41 ACRES	10.45 ACRES

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

CONSTRUCTION PLAN - PHASE 3

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=80'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 15 OF 17

SHEET NAME: CP-3

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Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

Via Electronic Mail

September 26, 2018

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 for the Bushkill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

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), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for the Bushkill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York (see **Figures 1 and 2**).

The purpose of this letter is to request a search of the files of the New York Natural Heritage Program for records of the occurrence of any rare animals, plants, and natural communities and/or significant wildlife habitats in the vicinity of this project. The information we receive will be used in NEPA and SEQRA documentation and/or any permit applications. We will retain the confidentiality, as needed, of any information received.

Program Overview: During Hurricane Irene and Tropical Storm Lee, torrential rainfall caused flooding throughout the Esopus watershed, including the Bushkill, which runs parallel to County Route 42 (Watson Hollow Road) in West Shokan. The Town of Olive government offices, including the Department of Public Works and Highway Department and the West Shokan Fire Department are located in West Shokan. These government offices and hundreds of homes were completely isolated from surrounding areas during the floods. People seeking to receive and give assistance during the flooding were forced to make 1.5-hour detours around the flooding through Sullivan County. Flooding also resulted in significant erosion of the Bushkill's channel and banks that resulted in constrictions, reduced capacity, and a shift in the channel's course, that, if not addressed, would present an immediate danger to County Route 42 and properties on the north and south banks of the channel. a Local Flood Analysis (LFA) identified the conditions in seven locations along the Bushkill

contributing to inundation of public and private infrastructure associated with high water flows during future events and develop mitigation strategies to address flood hazards. The town selected six of the seven potential flood hazard areas to be addressed through the New York Rising Community Recovery Program

Area of Potential Effect: The proposed stream and streambank rehabilitation area is located along the Bushkill from the County Route 42 Bridge, east to the intersection of the Bushkill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York (see **Figures 1 and 2**).

Proposed Project Description: The Town of Olive has requesting $1,000,000 in CDBG-DR funding for design and construction of improvements to approximately 3,060 linear feet of the Bushkill stream channel and stream banks, as well as repairs to abutments of a bridge span that conveys County Route 42 across Bushkill (see attached **Limits of Disturbance Plan**). This project will involve rehabilitation of six Potential Flood Hazard Areas (PFHA's) along a reach of the Bushkill, from the County Route 42 Bridge, east to the intersection of the Bushkill with NY Route 28A bridge (Location # 1-5 and 7 within the project area shown in **Figure 2**). These PFHA's have been identified as significant areas of concern by the Town of Olive through a LFA conducted by New York City Department of Environmental Protection. The six PFHAs and associated project elements are:

Location #1: 350 feet downstream of the Bushkill Bridge along the right bank. Deposition near the mouth of this historic flow path could reduce flood conveyance volume and cause water to flow down the historic flow path leading to inundation of homes. The design goal of this location to reduce the risk of channel migration through bank armoring or other acceptable measures.

Location #2: The Bushkill Bridge. The left side of the Bushkill Bridge (looking downstream) is filled with sediments from a large depositional gravel/cobble bar. This blockage has reduced flood conveyance and increased scour of the Bushkill's channel bottom. The design goal of this location is to repair bridge scour and increase conveyance.

Location #3: 450 feet downstream of the Bushkill Bridge along the left bank. A manmade berm at this site has cut off floodplain access resulting in increased velocities and water surface elevations proximal to the berm. Creating floodplain connectivity and preventing damage to this berm through accepted debris management strategies could reduce the likelihood of the potential flooding hazard at Location #1 and reduce water velocities near the berm, alleviating erosion along the berm.

Location #4: 920 feet upstream of the 28A bridge crossing. Channel obstructions have been accumulating along a berm that separates a historic flow channel from active floodwaters. To keep the Bushkill from flooding Route 28A, ensuring that unwanted debris does not accumulate and channel migration does not occur at this location will keep the Bushkill from flooding the Route 28A parking lot and the 28A bridge approach.

Location 5: near the Olive Town Hall on the Bushkill's right bank. Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating a head cut, created by channel migration causing a steep change in the stream's elevation, will protect the rip rap that is shielding three homes along the bank.

Location #7: an obstruction in the Bushkill downstream of the Bushkill Bridge. The obstruction is pushing flow into the Bushkill's right river bank, which has eroded Watson Hollow road's embankment and jeopardizes the eastbound lane of the road and nearby utilities. The project will stabilize the bank to withstand the shear stress associated with flooding.

Compliance: According to information reviewed from the New York State Environmental Resource Mapper (ERM), the Project area is in the vicinity of natural communities and rare plants (see attached **Figure 3**). The Project is near the beech-maple mesic forest natural community in Catskill Park.

The proposed project would involve ground disturbance and tree removal. As such, GOSR respectfully requests that the New York Natural Heritage Program 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 (518) 474-0755) or Lori.Shirley@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Lori A. Shirley
Certifying Officer
Governor's Office of Storm Recovery
NYS Homes and Community Renewal

Attachments:
Figure 1 - Olive Bushkill Streambank Rehabilitation - Project Location
Figure 2 - Olive Bushkill Streambank Rehabilitation - Project Area
Figure 3 - Olive Bushkill Streambank Rehabilitation - Environmental Resource Mapper Results
Limits of Disturbance Plan

Project Location

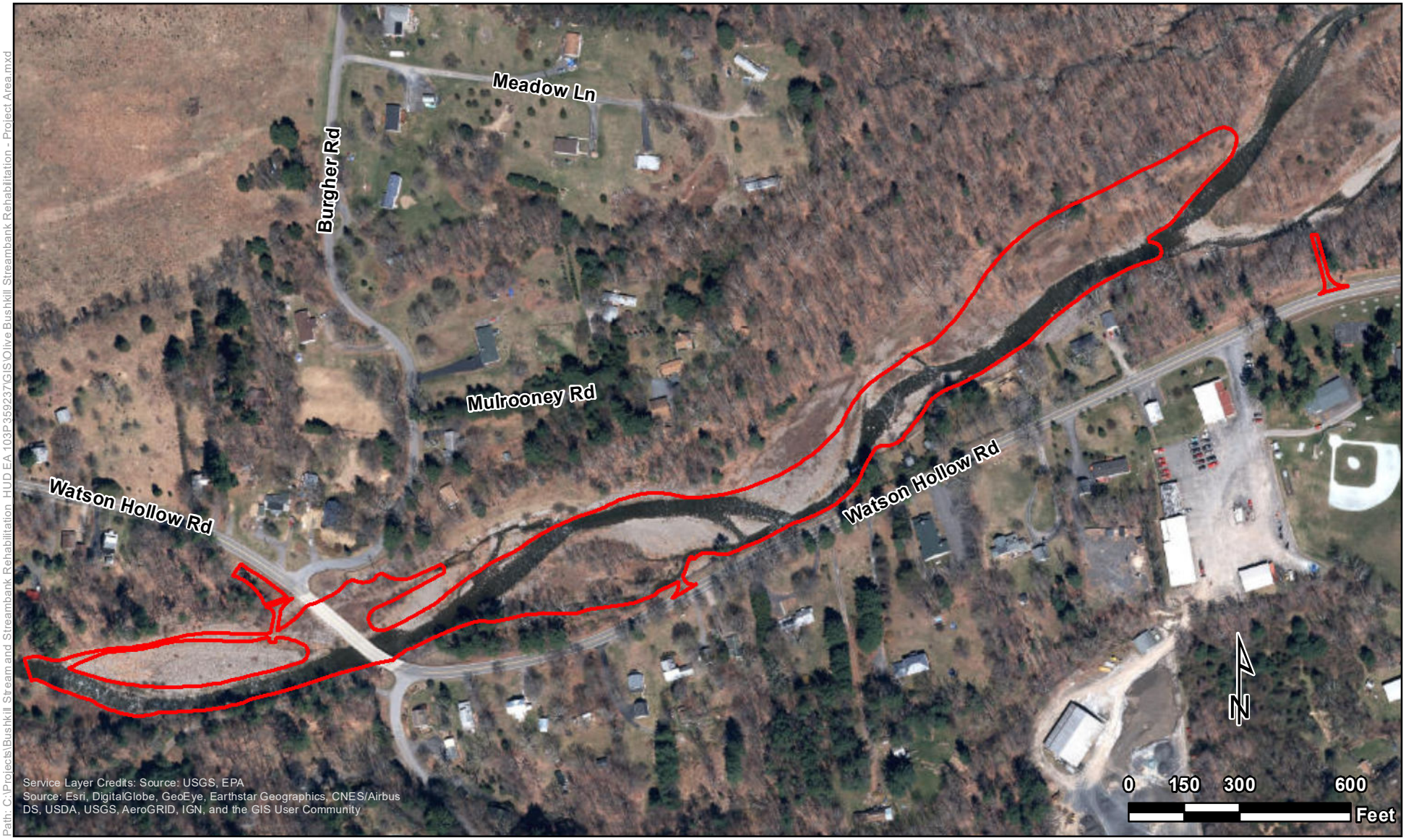
Legend

Project Location

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 1



Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103P359237\GIS\Olive Bushkill Streambank Rehabilitation - Project Area.mxd

Project Area

Legend

Project Area

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 2

dec.ny.gov/gis/erm

NEW YORK STATE

Services News Government Local Location Translate

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Resource Mapper

Base Map: Topographical Using this map

Search

Tools

Layers and Legend

- Waterbody Classifications for Lakes
- State Regulated Freshwater Wetlands
- State Regulated Wetland Checkzone
- Significant Natural Communities
- Natural Communities Near This Location
- Rare Plants or Animals

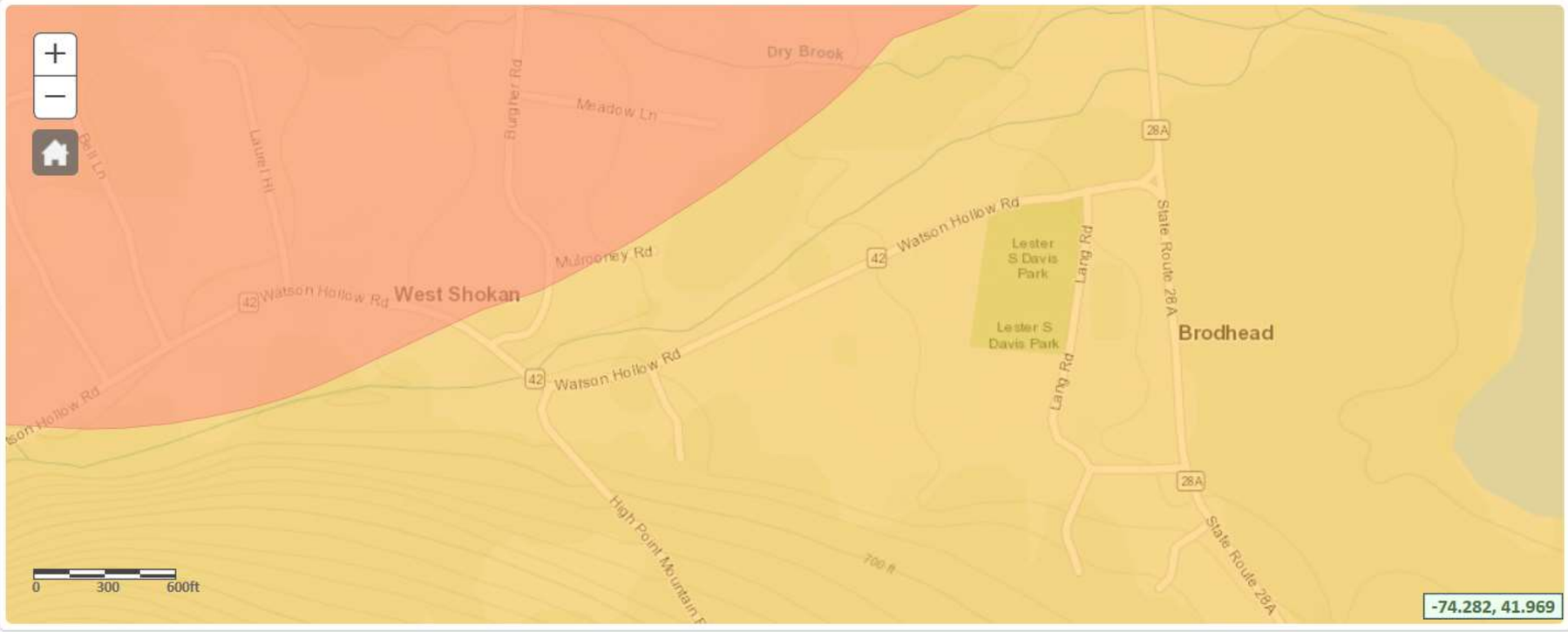
Other Wetland Layers

Reference Layers

Tell Me More...

Need A Permit?

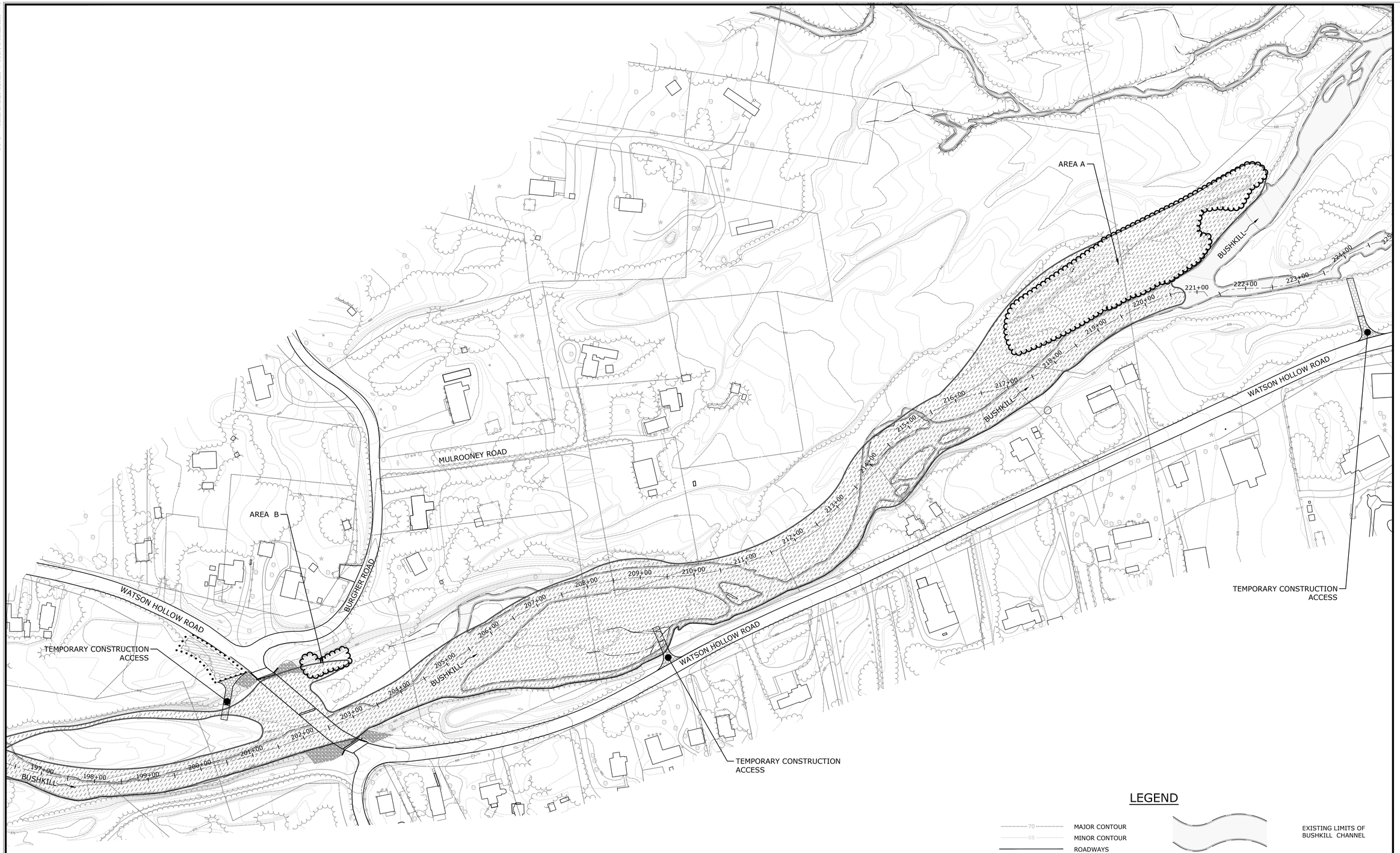
Contacts



NEW YORK STATE

Agencies Services App Directory Counties Events Programs

Figure 3



LEGEND

- MAJOR CONTOUR (70)
- MINOR CONTOUR (68)
- ROADWAYS
- PROPERTY LINE
- TREE DISTURBANCE AREAS
- EXISTING LIMITS OF BUSHKILL CHANNEL
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED STAGING AND STOCKPILING AREA

N W E S

0' 40' 80'
0 1/2" 1"

MILONE & MACBROOM
331 MAIN STREET, SUITE 102
NEW PALTZ, NY 12561
845.633.8183
WWW.MMINC.COM

DESCRIPTION	DATE	BY

LIMITS OF DISTURBANCE PLAN

BUSHKILL STREAM AND STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	MC
DESIGNED	DRAWN	CHECKED

SCALE: 1" = 80'

DATE: AUGUST 08, 2018

PROJECT NO.: 5909-01

SHEET NO.: 01 OF 01

SHEET NAME: LD-01

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

October 12, 2018

Lori Shirley
Governor's Office of Storm Recovery
30-40 State St., Hampton Plaza
Albany, NY 12207

Re: Bushkill Stream and Streambank Rehabilitation Project, West Shokan
County: Ulster Town/City: Olive

Dear Ms. Shirley:

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

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to 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 sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 3 Office, Division of Environmental Permits, at dep.r3@dec.ny.gov, (845) 256-3054.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1152

The following state-listed animals have been documented in the vicinity of the project site.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for the project, please contact the NYSDEC Region 3 Office, Department of Environmental Permits, at dep.r3@dec.ny.gov, (845) 256-3054.

The following species has been documented nesting within .8 mile of the project site.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Bald Eagle *Breeding*	*Haliaeetus leucocephalus*	Threatened		1715

The following species has been documented within 1.5 miles of the project site. Individual animals may travel 1.5 miles from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Timber Rattlesnake	*Crotalus horridus*	Threatened		13551

The following state-listed plants have been documented in the vicinity of the project site.

If suitable habitat for these species is present at the project site, these species may also occur there.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*	
Spreading Rush	*Juncus subcaudatus*	Endangered	Critically Imperiled in NYS	
Little Mountain, West Shokan, within .5 mile of the project site, 1999-08-17: Seeps in a recovering hemlock-northern hardwood forest.				1205
Nodding Pogonia	*Triphora trianthophoros* ssp. *trianthophoros*	Threatened	Imperiled in NYS	
Within .5 mile of the project site, 2009-08-31: Mixed woods tending toward beech-maple.				14467

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561-1620
P: (845) 256-3054 I F: (845) 255-4659
www.dec.ny.gov

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

January 28, 2019

Lori Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: Bushkill Stream and Streambank Rehabilitation Project
Town of Olive, Ulster County
CH# 8034
Comments on Jurisdiction

Dear Ms. Shirley,

The Department of Environmental Conservation (DEC or Department) received your inquiry regarding stream and bank improvements to 3,060 linear feet of the Bushkill on January 24, 2019. Based upon our review of your inquiry we offer the following comments:

PROTECTION OF WATERS

The following stream is located within the site you indicated:

Name	Class	DEC Water Index Number	Status
Bushkill	A(TS)	H-171-P 845-5	Protected

A Protection of Waters permit is required to physically disturb the bed or banks (up to 50 feet from stream) of any streams identified above as "protected."

If a permit is not required, please note, however, you are still responsible for ensuring that work shall not pollute any stream or waterbody. Care shall be taken to stabilize any disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

FRESHWATER WETLANDS

Your project is not within a New York State-protected Freshwater Wetland. However, please contact town officials and the United States Army Corps of Engineers in New York City, telephone (917) 790-8411, for any permitting they might require.

WATER QUALITY CERTIFICATION

If the US Army Corps of Engineers requires a permit pursuant to Section 404 of the Clean Water Act, then a Section 401 Water Quality Certification will be required. Issuance of these certifications is delegated in New York State to DEC. If the project qualifies for a

Nationwide Permit, it may be eligible for coverage under DEC's Blanket Water Quality Certification. Coverage under the blanket requires compliance with all conditions in the blanket for the corresponding Nationwide Permit. A copy of the current blanket for the 2017 Nationwide Permits is available on the DEC website at: http://www.dec.ny.gov/docs/permits_ej_operations_pdf/wqcnwp2017.pdf.

STATE-LISTED SPECIES

DEC has reviewed the State's Natural Heritage records. We have determined that the site is located within or near records of the following state-listed species:

Name	Status
Bald eagle (*Haliaeetus leucocephalus*)	Threatened
Timber rattlesnake (*Crotalus horridus*)	Threatened

A permit is required for the incidental taking of any species listed as "endangered" or "threatened", which can include removal of habitat.

Based on the project area's distance to the nearest known bald eagle nest, this project is not likely to impact bald eagles. No further review is necessary but please note that new eagle nests may be established each breeding season. The breeding season runs from January 1st to September 30th, so records should be checked for new nests each year.

The project area is within the screening distance of a known timber rattlesnake record. Impacts to the species and potential suitable habitat should be assessed following the attached Timber Rattlesnake Guidelines Document. At a minimum, conservation measures and take avoidance measures may be needed during construction of this project. Additional information may be needed to determine if suitable habitat for this species will be impacted. If project-related impacts cannot be fully avoided or minimized, an Incidental Take permit pursuant to Article 11, Title 5, Endangered and Threatened Species may be required.

The absence of data does not necessarily mean that other rare or state-listed species, natural communities or significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which 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 sources may be required to fully assess impacts on biological resources.

FEMA FLOODPLAIN

The project site is located within a Federal Emergency Management Agency (FEMA) floodplain and floodway.

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NYCDEP)

The project site is located within the NYCDEP watershed. Please contact NYCDEP directly about any jurisdiction they may have.

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES)

If the overall project will disturb over one acre of land the project sponsor must obtain coverage under the current SPDES General Permit for Stormwater Discharge from Construction Activity (GP-0-15-002), and a Stormwater Pollution Prevention Plan (SWPPP) must be developed which conforms to requirements of the General Permit. Authorization for coverage under this SPDES General Permit is not granted until the Department issues all other necessary DEC permits.

CULTURAL RESOURCES

We have reviewed the statewide inventory of archaeological resources maintained by the New York State Museum and the New York State Office of Parks, Recreation, and Historic Preservation. These records indicate that the project is located within an area considered to be sensitive with regard to archaeological resources.

For more information, please visit the New York State Office of Historic Preservation website at http://www.nysparks.com/shpo/.

OTHER

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. More information about DEC permits may be found at our website, www.dec.ny.gov, under "Regulatory" then "Permits and Licenses." Application forms may be downloaded at http://www.dec.ny.gov/permits/6081.html.

Please contact this office if you have questions regarding the above information. Thank you.

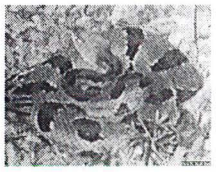
Sincerely,

Chris Lang
Division of Environmental Permits
Region 3, Telephone No. (845) 256-3096

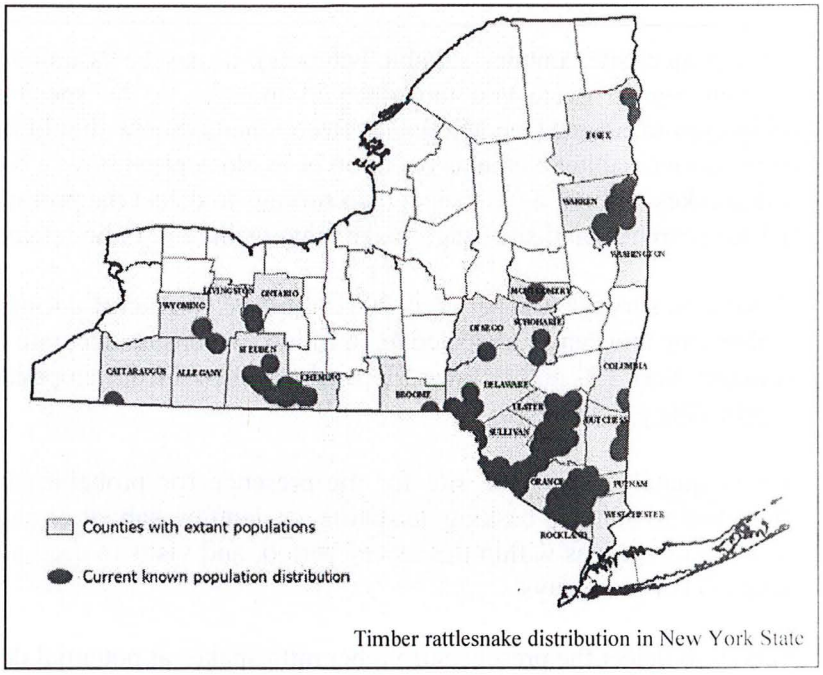
Enc: Timber Rattlesnake Guidelines Document

ecc: Brian Drumm, DEC Bureau of Ecosystem Health
Amanda Bailey, DEC CO Bureau of Wildlife
DEC R3 Bureau of Wildlife
May O'Malley, DEC Division of Environmental Permits
Town of Olive
Brian Orzel, US Army Corps of Engineers
Joseph Damrath, NYCDEP

Guidelines for Reviewing Projects for Potential Impacts to the Timber Rattlesnake



The timber rattlesnake (*Crotalus horridus*) is listed as a *threatened* species in New York and is protected by Environmental Conservation Law (ECL) section 11-0535 and the New York Code of Rules and Regulations (6 NYCRR Part 182). A permit is required for any proposed project that may result in a "take", which includes, but is not limited to, adverse modification, degradation or destruction of occupied habitat of any species listed as endangered or threatened pursuant to the above laws and regulations. In New York, timber rattlesnakes are typically associated with steep-slopes and rocky terrain of deciduous or mixed deciduous/coniferous forest. They are, however, known to use and/or move through a wide variety of land types (e.g. wetlands and early successional habitats) during a typical seasonal activity cycle. In areas where movement is not impeded by artificial barriers (e.g. major roads and urban areas) timber rattlesnakes may migrate three miles or more from their den each summer in search of essential summer habitats (e.g. basking and gestating areas), food, and mating partners. Human-rattlesnake interactions are most likely to occur during the summer and early autumn when movement rates peak and snakes are typically at their maximum distance from the den; in some locations, migration routes may require snakes to pass through residential developments or other areas of intensive land use. Where multiple den sites are clustered in relatively close proximity, areas of potential range overlap between snakes from different dens may be particularly important locations for continued gene flow. Thus, avoiding fragmentation of these areas of genetic exchange is critical for the long-term viability of a local population.



Timber rattlesnake distribution in New York State

Impact Assessment Requirements

For projects that have been determined to be in close proximity to a known timber rattlesnake den, the project design will need to avoid alteration of suitable habitats and incorporate mitigation measures to prevent impacts to the snakes that would constitute a take under ECL Section 11-0535. Where the landscape will be significantly altered, mitigation is difficult and avoiding impacts may require detailed information about timber rattlesnakes on and around the project site. Therefore, if it has been determined that a potential taking could result from the project, the following information may be required to assess the potential project-related impacts on timber rattlesnakes: 1) habitat assessment [identify all suitable hibernacula, transient habitat, and summer range, 2) site usage, and 3) movement between summer and winter habitats.

Habitat Assessment

Due to the species' large home range and multiple habitat requirements a habitat assessment (PFBC-NDS, 2004) should be conducted to determine the presence of suitable basking, foraging, gestating and denning habitat or potential travel corridors within the project boundaries. Information collected for each area identified as potentially suitable habitat should include, at minimum, a habitat description and geographic location (i.e. GPS coordinates). Results of the habitat assessment will determine what additional information and/or mitigation may be required. Locations identified as potential habitat will also be used as the primary focus areas of presence-absence surveys, if necessary. Habitat assessments must be conducted by individuals that have knowledge of timber rattlesnake ecology.

Population Surveys

If the project site contains suitable habitat(s), it may be assumed rattlesnakes utilize the site during some stage of their annual cycle and the potential impacts to the species and their habitats should be assessed and mitigation measures (see Mitigation Recommendations) should be incorporated into the project design. If any of the above habitat elements occur on or in close proximity to the project site ***AND*** usage of the site by timber rattlesnakes will not be assumed, then surveys to detect the presence (e.g. den emergence, basking and gestating habitat searches) and site usage/snake movement (e.g. radio telemetry) should be conducted.

Population surveys (Casper *et al.* 2001) must be conducted during the time when timber rattlesnakes are not hibernating and can be expected to be active. To ensure accurate results, surveys should only be conducted between April 15th and October 31st on days when the air temperatures is 66^{o} F or greater ***AND*** there is no appreciable precipitation.

To adequately assess the site for the presence (or probable absence) of timber rattlesnakes, each location identified as suitable basking, gestating, or denning habitat or as a potential travel corridor should be visited at least four (4) times within the survey period, and visits to each suitable habitat location should be separated by seven (7) or more days.

Survey to detect the presence of timber rattlesnakes at potential den habitats are confined to the beginning and end of the active season when snakes are most likely to be detected at or near den sites. Thus, two (2) visits per potential den should occur post den emergence between April 15th and May 15th, and an additional two (2) visits per potential den should occur between September 15th and October 25th when the snakes are congregating around dens prior to den ingress for winter hibernation.

The collection of site usage and snake movement data may require telemetric monitoring (via external and/or internal radio transmitters) to record the location and behavior of a representative sample of snakes throughout their annual cycle. In order to assess movement patterns, or to be reasonably certain that rattlesnakes do not use specific areas of a proposed project site, up to three field seasons of data collection may be required (a minimum of two full activity cycles of data are recommended). Contingent upon the data collection requirements of the project, a detailed scope of work should be developed by the project sponsor (in consultation with Department staff) and approved by the Department prior to the initiation of any field work.

All timber rattlesnake population surveys should be conducted by individuals that have knowledge of the species' ecology, and surveys that may involve handling snakes (e.g. marking, radio telemetry) must be conducted by individuals that have experience with such techniques and are licensed by New York State to handle timber rattlesnakes.

Threats

- Loss and/or degradation of habitat - residential and commercial development and mining operations eliminate available habitat and may degrade that which is not destroyed (e.g. stormwater runoff, use of residential chemicals).

- Persecution and illegal collection - increased human activity in timber rattlesnake habitats increases the potential for snake mortality from intentional killing of snakes by humans. A higher rate of illegal collection (effective mortality) for the pet trade is also often a result of increased human presence near timber rattlesnake populations.

- Fragmentation and road mortality - the species' large home range and a high degree of site fidelity result in timber rattlesnakes typically following the same route each year during long-distance migrations between habitats. Thus, any newly-constructed road that intersects a snake's traditional travel route will become either an impassable barrier to migration or an annual road-mortality hazard.

Mitigation Recommendations

The following is a list of potential mitigation methods that may be used to avoid or minimize certain project-related impacts; however, not all methods are appropriate for all projects.

- Seasonal restrictions

  All allowable disturbance activities, including movement of construction vehicles, excavation, and alteration of vegetation, should be conducted during the period when the snakes would be expected to be hibernating and are less likely to be directly impacted by above-ground disturbances. The acceptable work period is November 1st through March 31st.

  Habitat management (including timber harvesting) and trail maintenance activities should also be timed to minimize the potential for injury/death of snakes. Habitats that are actively managed (e.g. mowing and prescribed burning) and trailsides that are cleared using a brush hog may increase mortality as snakes are killed by machinery or incinerated by fire (Means and Campbell, 1982b)

  In addition to the seasonal restrictions applied to vegetation management practices, disturbance to non-transient habitats should be avoided at ***ALL*** times. Roads, skid trails and landings should be kept at least 330 feet from all known or potentially suitable basking and gestating habitats, and to minimize the potential for collapse or disturbance of dens, heavy equipment and site preparation work (e.g. disk-harrowing, shearing, root-raking) should be prohibited within 660 feet of any known hibernacula.

- Timber rattlesnake monitor

  If any project-related work is to occur (in whole or in part) during April 1st through October 31st, the project sponsor should retain the services of a snake monitor. The snake monitor must be a qualified biologist that has knowledge of timber rattlesnake ecology and relocation procedures. The monitor must also have experience handling rattlesnakes and be licensed by New York State to do so.

  The snake monitor should be on site during all construction activities and would be responsible for: 1) conducting reconnaissance surveys for timber rattlesnakes within the work area prior to the initiation of any disturbance activities, and 2) relocating snakes as required.

- Temporary barrier

When disturbance is likely to occur from actions occurring outside of the acceptable work periods, a temporary restrictive (Stechert, 2001) barrier may help to avoid impacts if installed around the perimeter of the disturbance footprint of small projects (< 1 acre). The barrier should be: 1) installed before the end of the acceptable work period and maintained until the end of the construction phase of the project or until the beginning of the next acceptable work period, whichever occurs first, 2) inspected daily and, if necessary, repaired immediately to a fully functional condition*, and 3) constructed in accordance with the following design specifications:

- made of ¼ inch square hardware cloth or wire mesh
- a minimum of 48" high
- anchored into the ground with reinforcement bars placed on the "disturbance side" of the barrier and spaced between 6 – 8 feet apart.
- secured at the base (barrier/ground interface) with at least 6" of fence material covered with soil backfill

* The effectiveness of the barrier will be diminished and snakes may be able to gain access to the disturbance area if debris (e.g. tree limbs, soil) is allowed to overtop or pile up along side of the barrier.

- Education

Persecution by humans is a significant source of timber rattlesnake mortality and is thought to be a major contributing factor to the population declines experienced by the species over the past 100 years. Misconceptions about the actual versus perceived threat posed by timber rattlesnakes often leads to the snakes being injured or killed by humans who, when encountering a timber rattlesnake, are fearful of being attacked. Prospective residents in subdivisions located near known den sites should be provided with educational materials that help identify timber rattlesnakes and accurately describe the snakes' non-aggressive behavior. Educational materials should also include information about the Department's nuisance rattlesnake relocation program. The subdivision's prospectus could also be required to disclose the potential for the presence of timber rattlesnakes on the property. Homeowners and local law enforcement agencies should be provided with phone numbers of nuisance rattlesnake responders in the area.

- Habitat creation/enhancement

In some locations, natural succession may cause shading-over of hibernacula or essential summer habitats. Such habitat suitability changes, particularly that of gestating and birthing areas, can decrease the long-term viability of the location's timber rattlesnake population. Vegetation thinning to reclaim the site or the establishment of open stone piles to create escape cover and basking areas may mitigate some of habitat lost to successional changes. In such cases, the development of a site management plan, along with a long-term commitment by the landowner, may more than offset the loss of non-essential habitat resulting from project-related actions.

- Herp tunnel

Where roads and highways separate summer and winter habitats, it may be possible to maintain migration corridors via herp tunnels.

References

Brown, W. S. 1993. Biology, status, and management of the timber rattlesnake (*Crotalus horridus*): a guide for conservation. SSAR Herp. Circ. No. 22. vi + 78 pp.

Casper et al. 2001. *Recommended Standard Survey Protocol For the Eastern Massasauga, Sistrurus catenatus catenatus*. Unpublished.

Means, D. Bruce and Howard W. Campbell. 1982b. Effects of prescribed burning on amphibians and reptiles. Pages 89-97 *in* G. W. Wood, editor. Prescribed fire and wildlife in Southern forests. Proceedings of a symposium. Belle W. Baruch Forest Science Institute, Clemson University, Clemson, South Carolina. USA.

PFBC-NDS. 2004. Pennsylvania Fish and Boat Commission Natural Diversity Section Timber Rattlesnake Presence-Absence Survey Guidelines (Form-06, revised 3/9/04).

Stechert, R. 2001. Effectiveness of an experimental timber rattlesnake (*Crotalus horridus*) exclusion fence at Schunemunk Mountain, Town of Woodbury, Orange County, New York. Report to the Eastern Chapter of the New York Natural Conservancy and the New York State Department of Environmental Conservation. 23p.

Related Resources and Links

New York Natural Heritage Program

New York Natural Heritage Program. 2008. Online Conservation Guide for *Crotalus horridus*. Available from: http://www.acris.nynhp.org/guide.php?id=7536

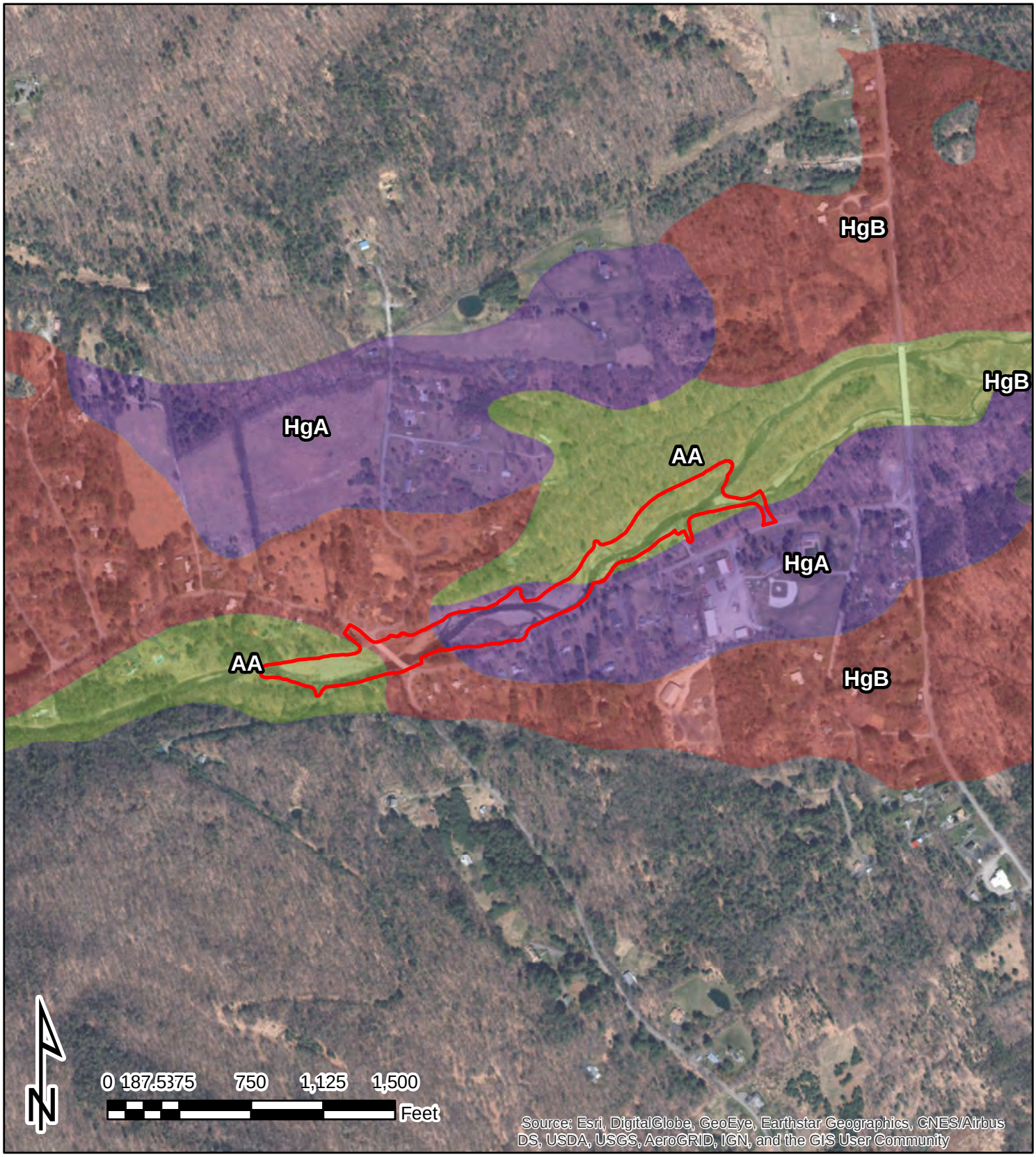
NatureServe Explorer

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer

NYSDEC

New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources. 2006. Timber Rattlesnake Fact Sheet. http://www.dec.ny.gov/animals/7147.html

Appendix D
Topography



Legend

- Project Area
- AA = Alluvial Land
- HgA = Hoosic gravelly loam, 0 to 3 percent slopes
- HgB = Hoosic gravelly loam, 3 to 8 percent slopes

Soils

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

PARS ENVIRONMENTAL
a Montrose Environmental Group company

Appendix E
SHPO Correspondence

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

Via Electronic Mail

January 28, 2019

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 the Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

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 Tribal Historic Preservation Offices for the Delaware Nation, the Delaware Tribe of Indians, the Stockbridge-Munsee Community Band of Mohicans and the St. Regis Mohawk Tribe. In accordance with Section 106 of the National Historic Preservation Act ("NHPA") of 1966, as amended (54 U.S.C. §306108), and its implementing regulations, 36 Code of Federal Regulations ("CFR") Part 800, this letter serves as notification of the proposed action.

Proposed Project Description: GOSR proposes to fund the design and construction of improvements to approximately 3,060 linear feet of the Bush Kill stream channel and stream banks, as well as repairs to abutments of a bridge span that conveys County Route 42 across Bush Kill in the Hamlet of West Shokan, Town of Olive, Ulster County, New York (Project). This project involves rehabilitation of six Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from approximately 500 linear feet (LF) upstream of the Watson Hollow CR 42 Bridge, east to approximately 1,000 LF upstream of the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHAs project elements are: #1: reduce the risk of channel migration through bank armoring or other acceptable measures; #2: repair Watson Hollow Bridge scour and increase conveyance; #3: Create floodplain connectivity by removing a sidecast berm and reconnecting the

channel to its floodplain and alleviate erosion; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #6: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.

Existing Conditions: Two bridges are located within the project area. The State Route 28A bridge is located approximately 1,500 feet upstream of the Ashokan Reservoir and originally consisted of two bridge openings spanning separate segments of the channel. The bridge segments were originally built in 1911 and were repaired several times. The County Route 42 (Watson Hollow Road) bridge is located approximately 4,600 feet upstream of the Ashokan Reservoir. The bridge was originally constructed as a three-span, two-pier bridge. It was replaced and realigned in 1992 with a single-pier bridge.

Upstream of the project area, the Bush Kill can be characterized as a steep, confined channel with very little floodplain. Raw, eroding banks can be observed at many locations along the channel upstream of the project area. Large, active bank failures, some of which threaten roads, are present along the channel. This channel instability upstream of the project area represents a source of excessive sediment, which is transported downstream during large flood events.

Just upstream of the County Road 42 bridge, the Bush Kill transitions from a confined valley with high, steep banks to a wide and gently sloping valley. As this portion of the valley became more populated and developed, large floodplains that once bordered the Bush Kill became obstructed by berms to protect homes and roadways built on the floodplain. In addition, the channel was excavated and significantly widened in the 1980s to create more capacity within the channel, further disconnecting the Bush Kill from its floodplain. This, in combination with a high supply of sediment from upstream, has resulted in a laterally dynamic, multithread channel with significant sediment aggradation throughout the reach. Continual aggradation has created bank erosion along significant portions of this reach, potentially threatening bridges and homes.

Potential Project Effects: The Project requires bank armoring, bridge scour repair, debris management, bank stabilization and tree removal at various locations within the channel and along portions of the bank as described above.

Area of Potential Effects: In addition to the locations immediately effected by the drainage improvements in the Town of Olive, Ulster County, NY, described above, the Area of Potential Effects (APE) also includes a 50-foot buffer zone around the work area. Consideration of the impact on cultural resources of this project includes all potential resources within the APE.

The proposed stream and streambank rehabilitation area covers approximately 3,060 linear feet along the Bush Kill from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York.

Assessment of Effects: The assessment of effects on cultural resources resulting from the streambank rehabilitation in the town of Olive, Ulster County, NY is based primarily on any cultural resources in or near the APE recorded in the New York State Cultural Resource Information System (NYS-CRIS).

According to NYS-CRIS, the entire project area is located within an archaeologically sensitive area. A prehistoric archaeological site, the West Shokan Rock Shelter (also referred to as the Bush Kill Rock Shelter [USN# 11111.000015; NYSM 8112]), has been identified approximately 260 feet south of the APE.

Civil and residential construction in the project area throughout the 20th century, combined with extensive channel widening and alignment along the Bush Kill, may have had a negative impact on the integrity of any archaeological

deposits in the vicinity. However, due to the project area's proximity to a water source, its location within an archaeologically sensitive area, and the identification of a nearby rock shelter, there remains the possibility that subsurface cultural resources may be impacted by the proposed work.

Request for Comment: 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 (518) 474-0755 or via email at Lori.Shirley@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207

Enclosures:
Project Location Map
Site Plan
Photos

Project Location

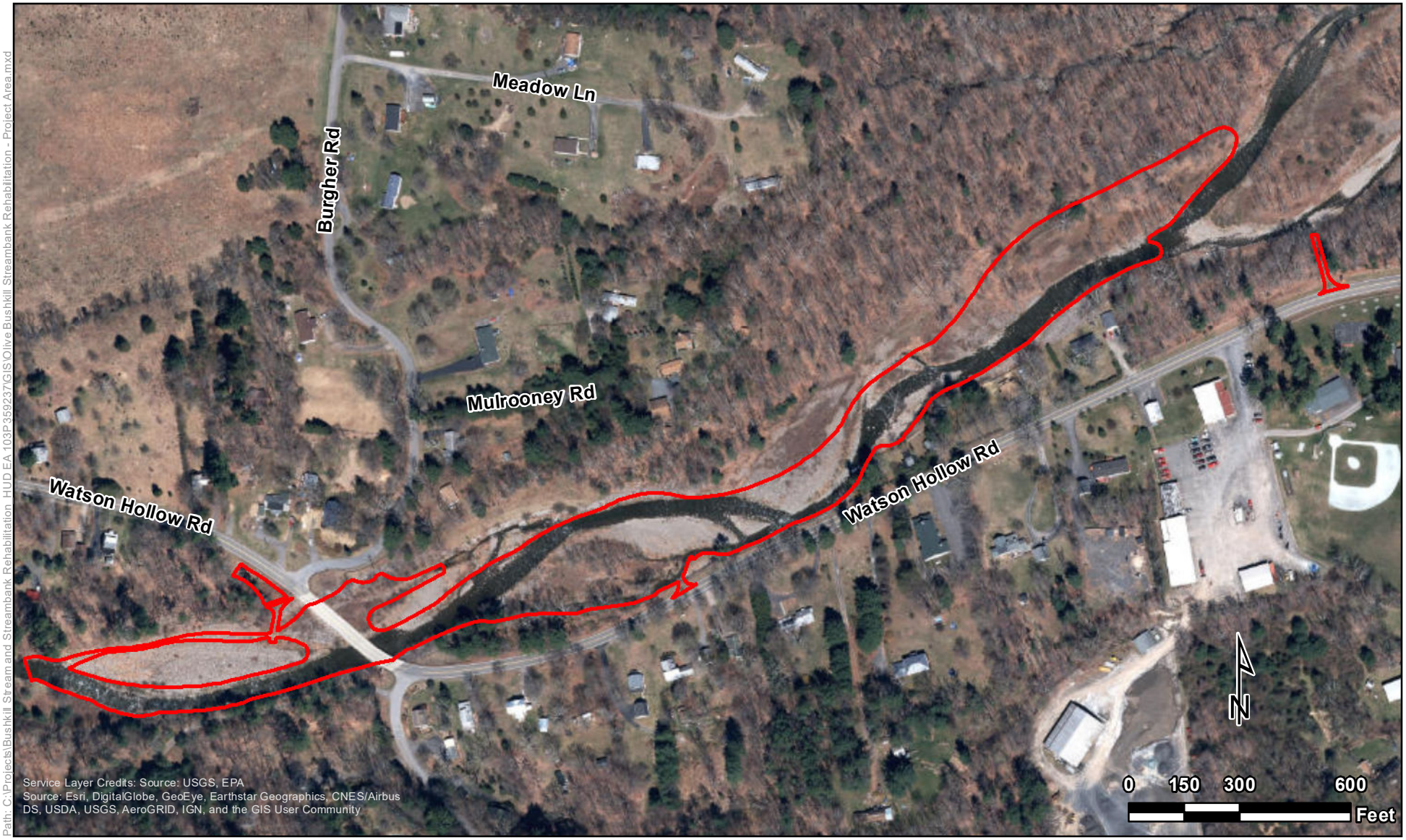
Legend

Project Location

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 1



Path: C:\Projects\Bushkill Stream and Streambank Rehabilitation_HUD EA 103P359237\GIS\Olive Bushkill Streambank Rehabilitation - Project Area.mxd

Project Area

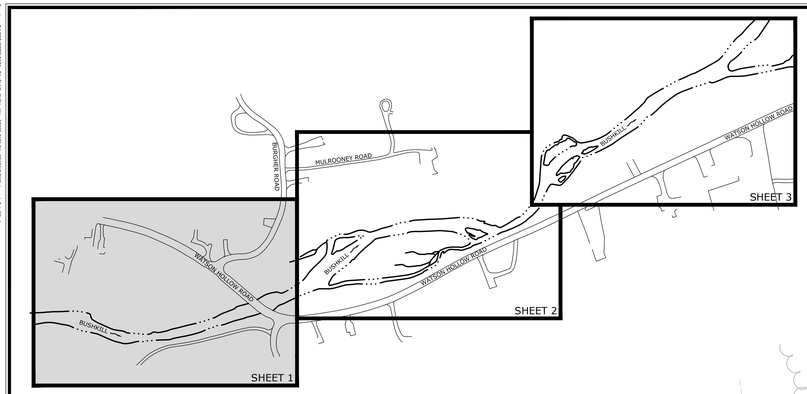
Legend

Project Area

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 2



SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-2)

WATSON HOLLOW ROAD

BURGHER ROAD

RESHAPE 25' WIDE
SIDE CHANNEL

BEGIN STREAM CHANNEL RECONSTRUCTION
STA: 126+09

BUSHKILL

CONSTRUCT A 46' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 10H:1V

SLOPE 3H:1V

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

N
W E
S
0' 15' 30'
0 15" 1"

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION
WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 08 OF 17
SHEET NAME: GR-1

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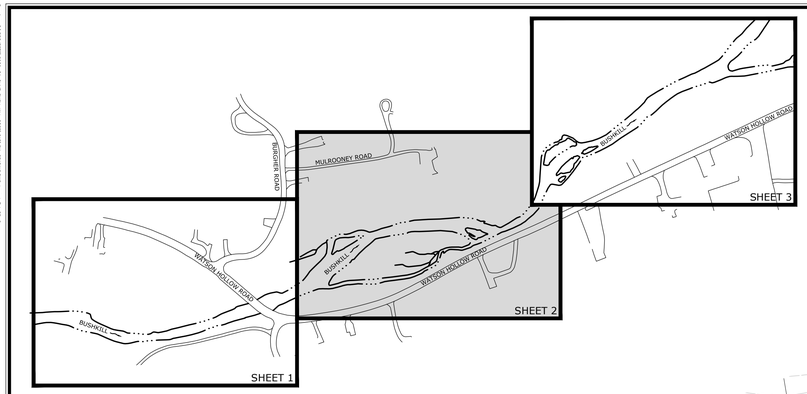

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-1)

MATCHLINE (SEE SHEET GR-3)

SLOPE 3H:1V

CONSTRUCT A 69' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 100H:1V

SLOPE 50H:1V

FILL EXISTING
FLOODPLAIN SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 07 OF 17

SHEET NAME: GR-2

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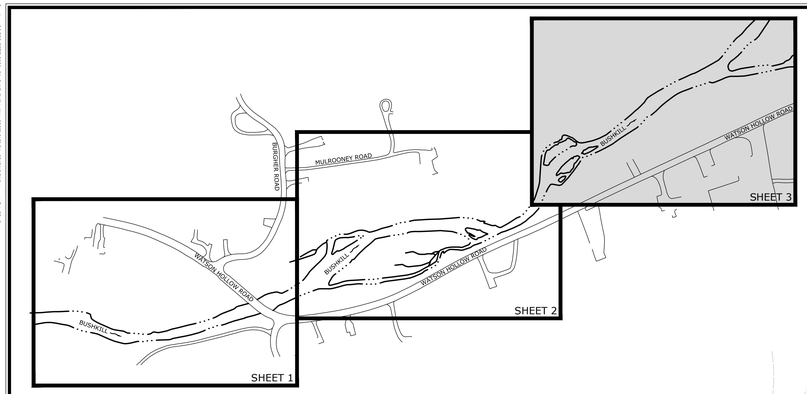

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

CONSTRUCT A 46' WIDE BANKFULL CHANNEL (SEE DETAIL CROSS SECTION)

SLOPE 3H:1V

SLOPE 100H:1V

END OF STREAM CHANNEL RECONSTRUCTION STA: 100+00

BUSHKILL

WATSON HOLLOW ROAD

MATCHLINE (SEE SHEET GR-2)

100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

LEGEND

- 70 — EXISTING MAJOR CONTOUR
- 68 — EXISTING MINOR CONTOUR
- (70) — PROPOSED MAJOR CONTOUR
- (68) — PROPOSED MINOR CONTOUR

N W E S
0' 15' 30'
0 1/2" 1"

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 06 OF 17

SHEET NAME: GR-3

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Plotted: 9/28/2018 11:07:39 AM By: MC
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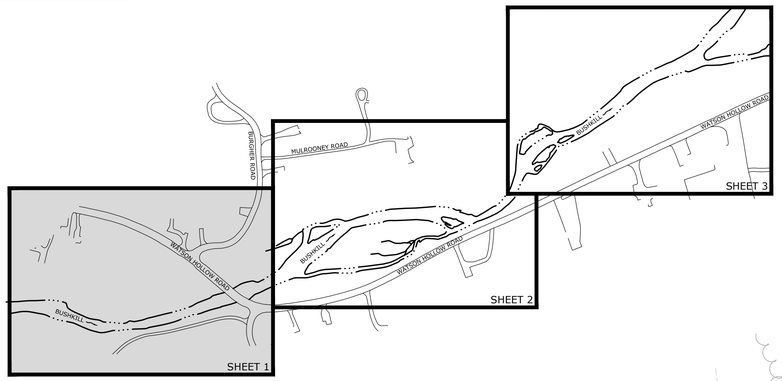

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-2)

WATSON HOLLOW ROAD

BURGHER ROAD

REMOVE EXCESS MATERIAL FROM BRIDGE OPENING

RESHAPE EXISTING SIDE CHANNEL

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

BUSHKILL

126+17

126+00

125+00

124+00

123+00

122+00

121+00

120+00

119+00

118+00

REPLACE RIPRAP AND GROUT (SEE DETAIL)

INSTALL JOINT PLANTED BOULDER REVETMENT STA 119+50 TO 123+50 - SEE DETAIL

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

N
W E
S

0' 15' 30'
0 1/2" 1"

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

1"=30'
SCALE

NOVEMBER 2, 2018
DATE

5909-01
PROJECT NO.

09 OF 17
SHEET NO.

LA-1
SHEET NAME

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Plotted: 31 JAN 2019 08:38 By: JOSHUA MACBROOM
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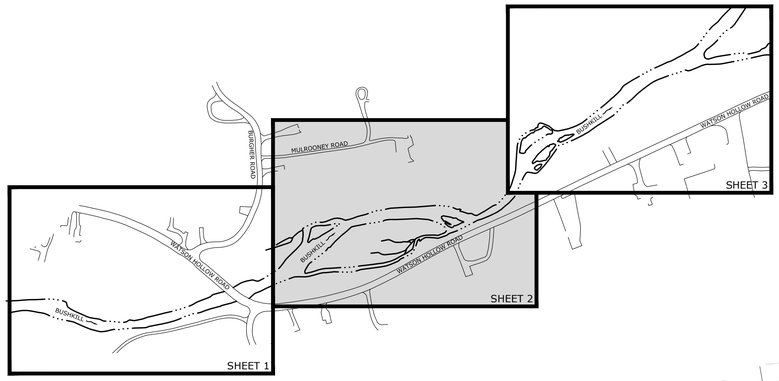

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-1)

MATCHLINE (SEE SHEET EX-3)

FILL EXISTING CHANNEL AND RELOCATE AWAY FROM ROAD

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

INSTALL JOINT PLANTED BOULDER REVETMENT STA 100+60 TO 111+75 - SEE DETAIL

FILL EXISTING SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00

LEGEND

- EXISTING MAJOR CONTOUR (70)
- EXISTING MINOR CONTOUR (68)
- PROPOSED MAJOR CONTOUR (70)
- PROPOSED MINOR CONTOUR (68)
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

0' 15' 30'
0 1/2" 1"

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 10 OF 17

SHEET NAME: **LA-2**

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Plotted: 02/05/2019 - 8:58 AM By: ANTHONY MACBROOM (Layer: Model)
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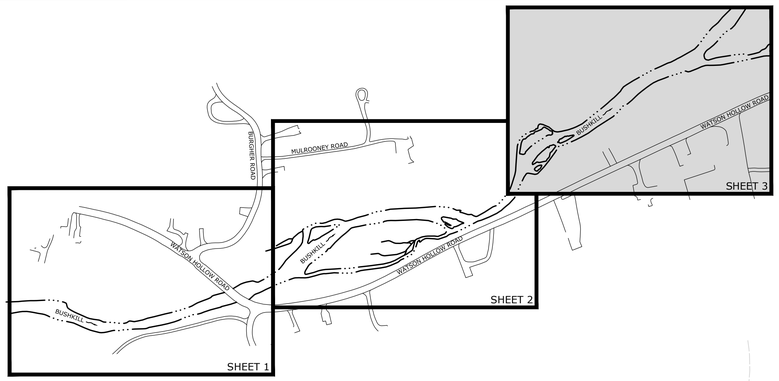

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

LIVE WILLOW CUTTINGS
(REUSE FROM SITE WHERE POSSIBLE)

INSTALL JOINT PLANTED BOULDER
REVETMENT STA 100+60 TO
111+75 - SEE DETAIL

REMOVE TREES ON PROPERTY

RE-USE EXISTING WILLOW PLANTS
FOR PLANTING WHERE POSSIBLE

FILL EXISTING SIDE CHANNEL
AWAY FROM PROPERTIES

WATSON HOLLOW ROAD

BUSHKILL

MATCHLINE (SEE SHEET EX-2)

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 11 OF 17

SHEET NAME: LA-3

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APPENDIX A

PHOTO LOG

Bushkill Upstream of Project Area

MILONE & MACBROOM

Watson Hollow Road Bridge

Sediment clogs left opening

Severe scour at right abutment

MILONE & MACBROOM

Bank Erosion along Watson Hollow Road

MILONE & MACBROOM

Berms from Sidecast Dredge Spoils

Route 28A Bridge

MILONE & MACBROOM

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ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

February 14, 2019

Lori Shirley
Governor's Office of Storm Recovery
38 State St
Albany, NY 12207

Re: GOSR/ HTF/ HUD CDBG-DR
Bush Kill Stream and Streambank Repairs
from County Route 42 to NY 28A bridge, West Shokan, Town of Olive/ Ulster County.
19PR00664

Dear Ms. Shirley:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with Section 106 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).

The project APE is in an archaeologically sensitive area. Some portions are actively scoured by the stream. We have no further concerns regarding these areas. For the remainder, we recommend that a Phase I archaeological survey be conducted of locations where ground-disturbing activities are proposed, unless substantial prior ground disturbance can be documented. If we can be of further assistance, please contact Philip Perazio (518) 268-2187 Philip.perazio@parks.ny.gov.

If I can be of further assistance, please contact me at (518) 268-2175 Larry.moss@parks.ny.gov

Sincerely,

LMoss

Larry K Moss, Historic Preservation Technical Specialist

CC: Joseph Fischl, Tetratech

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

Via CRIS

April 17, 2019

Philip Perazio, 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 the Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York- Response to February 14, 2019 SHPO comments (PR00664)

Dear Mr. Perazio:

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.

In accordance with Section 106 of the National Historic Preservation Act ("NHPA") of 1966, as amended (54 U.S.C. §306108), and its implementing regulations, 36 Code of Federal Regulations ("CFR") Part 800, this letter describes prior disturbance of the project site in response to SHPO's Comment Letter on the project (February 14, 2019).

- Areas of disturbance during Hurricane Irene and Tropical Storm Lee, aside from severe channel scouring, were noted along the north and south banks of the Bushkill. Most notably, the events of 2011 caused significant erosion of residential properties along the south bank of the stream. The loss of soils and other aggregates ranged from a few-to-several feet of these residential properties. Due to velocity coupled with depth of the floodwaters, these lost soils were washed into Lake Ashokan, along with portions of Watson Hollow Road (Ulster County Highway 42).

- South Bank Disturbance: The residences constructed to the north of Watson Hollow Road were constructed in the mid-1970s. The area on which these buildings are erected was formerly utilized as an agricultural area (as was the entire Watson Hollow Valley) following removal of the first growth trees used as a resource for area tanneries. Local reports also indicate that the residential area between NY S.R. 28A and the Watson Hollow Bridge was excavated extensively to provide for necessary infrastructure improvements allowing for development, to include the digging of water wells on each property, septic tank burials, and leach field installations. In fact, leach field degradation resulting from erosion caused by flooding is utilized as one rationale

for this project, to mitigate against untreated residential sewage entering the Bushkill and polluting the stream, not to mention Lake Ashokan, which provides drinking water for residents of NYC.

- North Bank Disturbance: Areas north of Bushkill were also utilized as agricultural areas for at least 150 years prior to the introduction of residential housing in the area during the mid-1970s. Until fairly recently, the method for dealing with debris and detritus left in the wake of high-water events in the stream channel has been to remove rock and large wood material by excavator and bulldozing. This material was then "sidecast" onto the north bank to create a berm presently ranging from 20-25 feet in width and 8-12 feet in height. Water hydraulics during present storm events are thus altered in these areas, causing an undercutting of soils from these areas, and resulting collapse of these sidecast berms. Soils are carried into Lake Ashokan.

- North Bank Staging Area, Phase I: This area, noted on page 13 of the engineer's drawings, is a previously disturbed area, created in 1992, when Ulster County Department of Public Works replaced its Watson Hollow Road Bridge. This area was built-up at that time with large sidecast materials and covered with gravel. The County DPW then constructed a construction equipment path from the staging area to the water's edge (now under approximately 12 feet under deposition left after Hurricane Irene). This project will utilize this former staging area for the same purpose utilized by Ulster County in 1992.

If you have any questions or require additional information regarding this request, please feel free to contact me (518) 474-0755 or via email at Lori.Shirley@nyshcr.org, and please advise us on how to proceed. Thank you for your time and consideration.

Sincerely,

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207

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ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

April 23, 2019

Ms. Lori Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: GOSR
GOSR-Bush Kill Stream and Streambank Repairs
Town of Olive, Ulster County, NY
19PR00664

Dear Ms. Shirley:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 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 potential 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 upon this review, the New York SHPO has determined that no historic properties will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Michael F. Lynch, P.E., AIA
Director, Division for Historic Preservation

Appendix F
Tribal Correspondence

The Delaware Nation
Cultural Resources /106 Department
31064 State Highway 281
Anadarko, OK 73005
Phone (405)247-2448 Fax (405) 247-8905

12 March 2019

To Whom It May Concern:

The Delaware Nation Cultural Preservation Department received correspondence regarding the following referenced project(s).

Project: Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Our office is committed to protecting tribal heritage, culture and religion with particular concern for archaeological sites potentially containing burials and associated funerary objects.

The Lenape people occupied the area indicated in your letter during prior to European contact until their eventual removal to our present locations. According to our files, the location of the proposed project does not endanger cultural, or religious sites of interest to the Delaware Nation. **Please continue with the project as planned** keeping in mind during construction should an archaeological site or artifacts inadvertently be uncovered, all construction and ground disturbing activities should immediately be halted until the appropriate state agencies, as well as this office, are notified (within 24 hours), and a proper archaeological assessment can be made.

Please note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation Cultural Preservation Office to conduct proper Section 106 consultation. Should you have any questions, feel free to contact our offices at 405/247-2448.

Dana Kelly
Historic Preservation/106 Asst.
Delaware Nation
31064 State Highway 281
Anadarko, OK 73005
Ph. 405-247-2448
dkelly@delawarenation.com

(Genevieve.Kaiser2@tetratech.com) <Genevieve.Kaiser2@tetratech.com>
Subject: RE: Streambank rehab- West Shokan NY

Thank you, Bonney,
We will keep you in the loop.
Lori

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207
Office: (518) 474-0755 I Cell: (917) 446-2281 I Lori.Shirley@nyshcr.org
www.stormrecovery.ny.gov

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From: Bonney Hartley <Bonney.Hartley@mohican-nsn.gov>
Sent: Wednesday, February 13, 2019 11:55 AM
To: Shirley, Lori (NYSHCR) <Lori.Shirley@nyshcr.org>
Subject: Streambank rehab- West Shokan NY

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Hello Lori,
I reviewed the correspondence for Stockbridge Munsee Community regarding the Streambank Rehabilitation Project in West Shokan, Ulster County, NY. I am not aware of cultural sites within the APE but we wish to consult on the project and receive the survey reports for review when complete.
Thank you,
Bonney

Bonney Hartley
Tribal Historic Preservation Officer
Stockbridge-Munsee Mohican Tribal Historic Preservation
Extension office
65 1st Street
Troy, NY 12180
(518) 244-3164
Bonney.Hartley@mohican-nsn.gov
https://protect2.fireeye.com/url?k=bdd5b18f-e1f3862c-bdd748ba-000babda0106-f9b042ab38ff086c&u=https://protect2.fireeye.com/url?k=027ab9ec-5e5c8e4f-027840d9-000babda0106-0349937e6b5265da&u=http://www.mohican-nsn.gov/

Shirley, Lori (NYSHCR)

From: Bonney Hartley <Bonney.Hartley@mohican-nsn.gov>
Sent: Friday, May 3, 2019 12:37 PM
To: Shirley, Lori (NYSHCR)
Subject: RE: Bush Kill Stream bank restoration- Olive, West Shokan, NY

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

Hi Lori:
I am ok with that.
Thanks,
Bonney

Bonney Hartley
Tribal Historic Preservation Officer
Stockbridge-Munsee Mohican Tribal Historic Preservation
Extension office
65 1st Street
Troy, NY 12180
(518) 244-3164
Bonney.Hartley@mohican-nsn.gov
https://protect2.fireeye.com/url?k=cdc7d310-91e1e4b3-cdc52a25-000babda0106-9ddb46508e26b087&u=http://www.mohican-nsn.gov/

From: Shirley, Lori (NYSHCR) <Lori.Shirley@nyshcr.org>
Sent: Tuesday, April 23, 2019 3:46 PM
To: Bonney Hartley <Bonney.Hartley@mohican-nsn.gov>
Subject: Bush Kill Stream bank restoration- Olive, West Shokan, NY

Hi Bonney,
To follow up on this, attached is SHPO's request for additional information, GOSR's response and description of prior disturbance in the project area, and SHPO's determination of No Effect. Based on SHPO's no effect determination, GOSR does not plan to conduct an archaeological Phase 1, unless you request that we do so. Rather, we propose that should an archaeological site or artifacts inadvertently be uncovered, all construction and ground disturbing activities immediately be halted until the you and all appropriate agencies are notified (within 24 hours), and a proper archaeological assessment can be made. Would that be acceptable to you? Please let me know.
Thank you,
Lori

From: Shirley, Lori (NYSHCR)
Sent: Thursday, February 14, 2019 8:47 AM
To: Bonney Hartley <Bonney.Hartley@mohican-nsn.gov>
Cc: Jarman, Clifford (Clifford.Jarman@tetratech.com) <Clifford.Jarman@tetratech.com>; Kaiser, Genevieve

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

January 28, 2019

Kim Penrod, Director, Cultural Resources/Section 106
The Delaware Nation
P.O. Box 825
Anadarko, Oklahoma 73005

Re: Section 106 Compliance for the Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Dear Kim Penrod,

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 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 to design and implement a streambank rehabilitation project in the Hamlet of West Shokan, Town of Olive, Ulster County, 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. GOSR will also send this letter to the Delaware Tribe of Indians, the Stockbridge-Munsee Community Band of Mohican Indians, the Mohawk Nation and the St. Regis Mohawk Tribe.

Proposed Project Description

GOSR proposes to fund the design and construction of improvements to approximately 3,060 linear feet of the Bush Kill stream channel and stream banks, as well as repairs to abutments of a bridge span that conveys County Route 42 across Bush Kill in the Hamlet of West Shokan, Town of Olive, Ulster County, New York (Project). This project involves rehabilitation of six Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from approximately 500 linear feet (LF) upstream of the Watson Hollow CR 42 Bridge, east to approximately 1,000 LF upstream of the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHAs project elements are: #1: reduce the risk of channel migration through bank armoring or other acceptable measures; #2: repair Watson Hollow Bridge scour and

increase conveyance; #3: Create floodplain connectivity by removing a sidecast berm and reconnecting the channel to its floodplain and alleviate erosion; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #6: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.

Existing Conditions

Two bridges are located within the project area. The State Route 28A bridge is located approximately 1,500 feet upstream of the Ashokan Reservoir and originally consisted of two bridge openings spanning separate segments of the channel. The bridge segments were originally built in 1911 and were repaired several times. The County Route 42 (Watson Hollow Road) bridge is located approximately 4,600 feet upstream of the Ashokan Reservoir. The bridge was originally constructed as a three-span, two-pier bridge. It was replaced and realigned in 1992 with a single-pier bridge.

Upstream of the project area, the Bush Kill can be characterized as a steep, confined channel with very little floodplain. Raw, eroding banks can be observed at many locations along the channel upstream of the project area. Large, active bank failures, some of which threaten roads, are present along the channel. This channel instability upstream of the project area represents a source of excessive sediment, which is transported downstream during large flood events.

Just upstream of the County Road 42 bridge, the Bush Kill transitions from a confined valley with high, steep banks to a wide and gently sloping valley. As this portion of the valley became more populated and developed, large floodplains that once bordered the Bush Kill became obstructed by berms to protect homes and roadways built on the floodplain. In addition, the channel was excavated and significantly widened in the 1980s to create more capacity within the channel, further disconnecting the Bush Kill from its floodplain. This, in combination with a high supply of sediment from upstream, has resulted in a laterally dynamic, multithread channel with significant sediment aggradation throughout the reach. Continual aggradation has created bank erosion along significant portions of this reach, potentially threatening bridges and homes

Potential Project Effects

The Project requires bank armoring, bridge scour repair, debris management, bank stabilization and tree removal at various locations within the channel and along portions of the bank as described above.

Area of Potential Effects

In addition to the locations immediately effected by the drainage improvements in the Town of Olive, Ulster County, NY, described above, the Area of Potential Effects (APE) also includes a 50-foot buffer zone around the work area. Consideration of the impact on cultural resources of this project includes all potential resources within the APE.

The proposed stream and streambank rehabilitation area covers approximately 3,060 linear feet along the Bush Kill from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York.

Assessment of Effects

The assessment of effects on cultural resources resulting from the streambank rehabilitation in the town of Olive, Ulster County, NY is based primarily on cultural resources in or near the APE recorded in the New York State Cultural Resource Information System (NYS-CRIS).

According to NYS-CRIS, the entire project area is located within an archaeologically sensitive area. A prehistoric archaeological site, the West Shokan Rock Shelter (also referred to as the Bush Kill Rock Shelter [USN# 11111.000015; NYSM 8112]), has been identified approximately 260 feet south of the APE.

Civil and residential construction in the project area throughout the 20th century, combined with extensive channel widening and alignment along the Bush Kill, may have had a negative impact on the integrity of any archaeological deposits in the vicinity. However, due to the project area's proximity to a water source, its location within an archaeologically sensitive area, and the identification of a nearby rock shelter, there remains the possibility that subsurface cultural resources may be impacted by the proposed work.

GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. If the Area of Potential Effects encompasses historic properties of religious or cultural significance to your Tribe, please respond within 30 days or sooner. In addition, 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.

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207

I am available to answer any questions that you may have regarding this action. If you have any questions, please feel free to contact me at (518) 474-0755 or via email at Lori.Shirley@nyshcr.org.

Sincerely,

Lori A. Shirley
Director
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

Enclosures:
Figure 1: Site Locations
Figure 2: Project Area
Figure 3: Figure 3: Bush Kill Stream and Stream Bank Rehabilitation Proposed Site Plan

Project Location

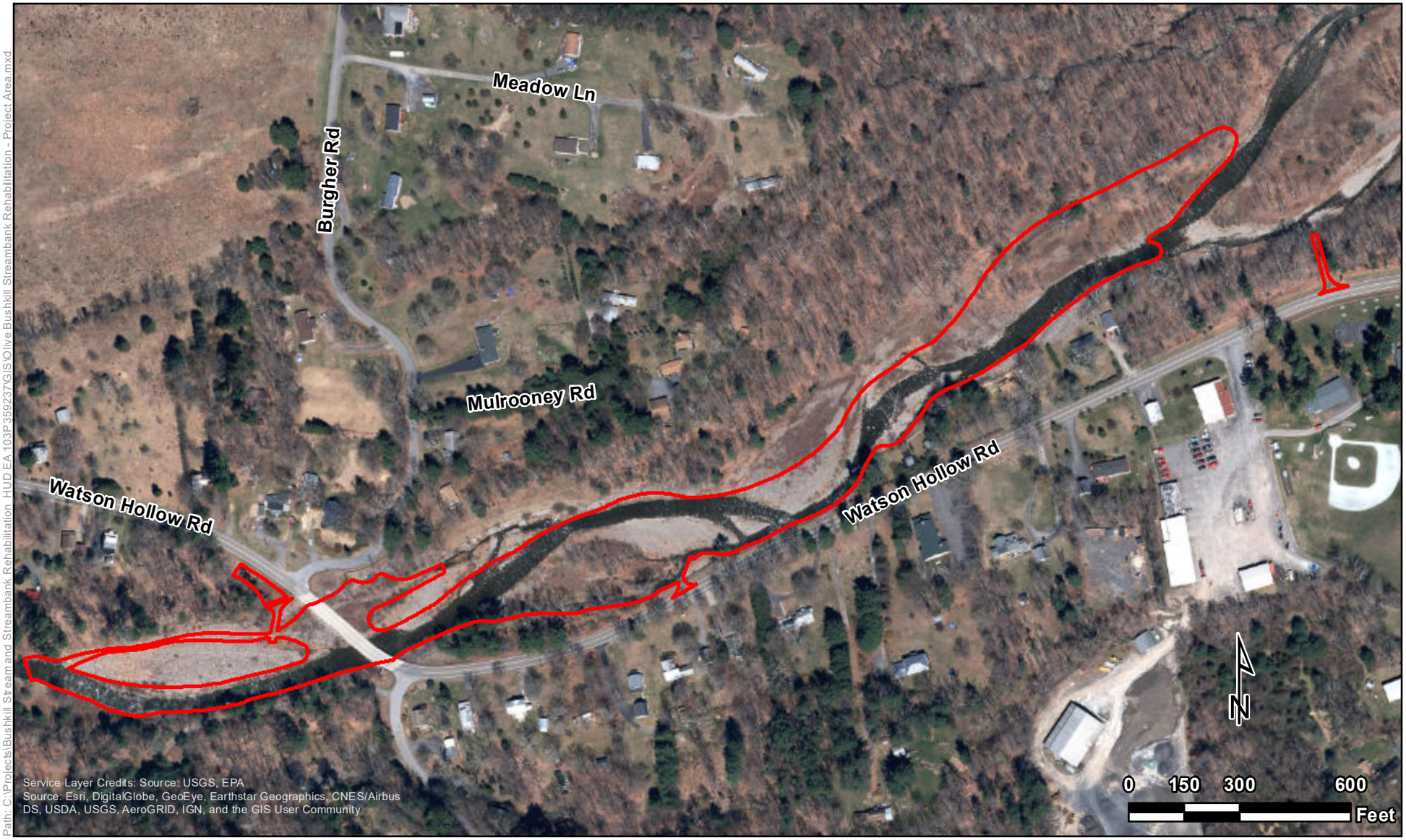
Legend

Project Location

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 1



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Project Area

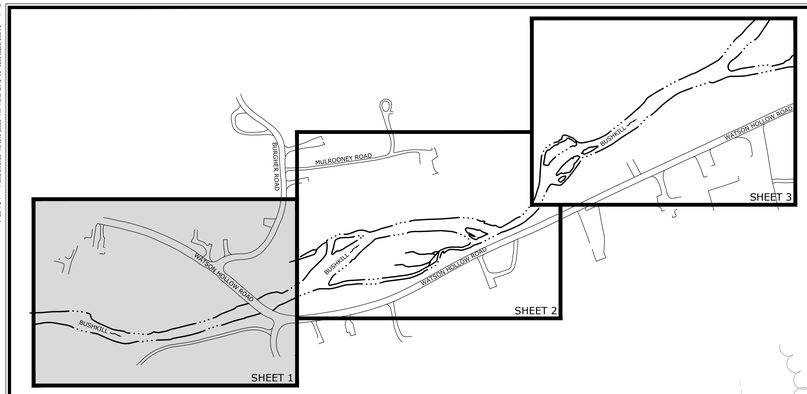
Legend

Project Area

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 2



SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-2)

WATSON HOLLOW ROAD

BURGHER ROAD

RESHAPE 25' WIDE
SIDE CHANNEL

BEGIN STREAM CHANNEL RECONSTRUCTION
STA: 126+09

BUSHKILL

CONSTRUCT A 46' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 10H:1V

SLOPE 3H:1V

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

N
W E
S
0' 15' 30'
0 15" 1"

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION
WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 08 OF 17
SHEET NAME: GR-1

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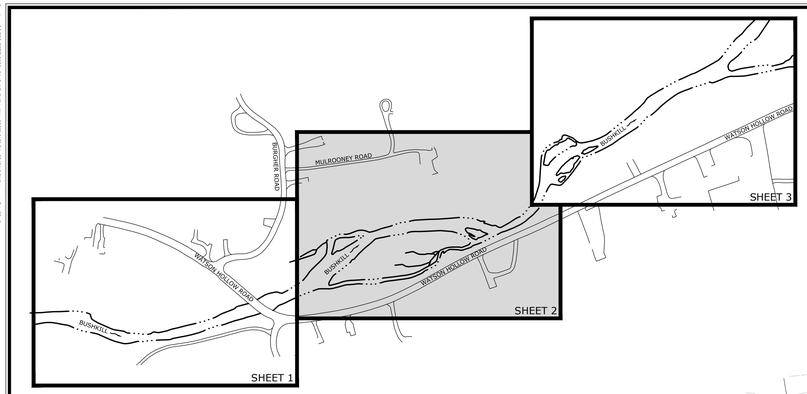

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-1)

MATCHLINE (SEE SHEET GR-3)

SLOPE 3H:1V

CONSTRUCT A 69' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 100H:1V

SLOPE 50H:1V

FILL EXISTING
FLOODPLAIN SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 07 OF 17

SHEET NAME: GR-2

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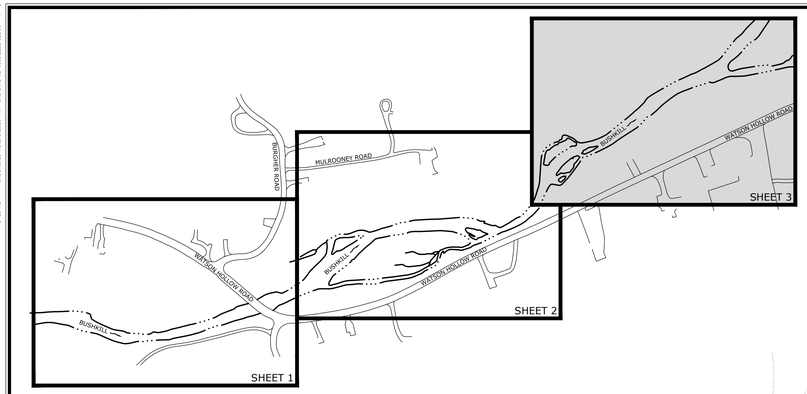

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

CONSTRUCT A 46' WIDE BANKFULL CHANNEL (SEE DETAIL CROSS SECTION)

SLOPE 3H:1V

SLOPE 100H:1V

END OF STREAM CHANNEL RECONSTRUCTION STA: 100+00

BUSHKILL

WATSON HOLLOW ROAD

MATCHLINE (SEE SHEET GR-2)

100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

LEGEND

- 70 — EXISTING MAJOR CONTOUR
- 68 — EXISTING MINOR CONTOUR
- (70) — PROPOSED MAJOR CONTOUR
- (68) — PROPOSED MINOR CONTOUR

N W E S
0' 15' 30'
0 1/2" 1"

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New Paltz, NY 12561
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www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 06 OF 17

SHEET NAME: GR-3

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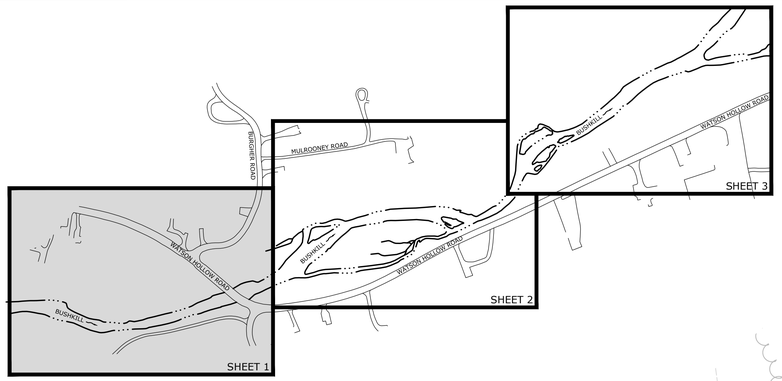

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-2)

WATSON HOLLOW ROAD

BURGHER ROAD

REMOVE EXCESS MATERIAL FROM BRIDGE OPENING

RESHAPE EXISTING SIDE CHANNEL

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

BUSHKILL

126+17

126+00

125+00

124+00

123+00

122+00

121+00

120+00

119+00

118+00

REPLACE RIPRAP AND GROUT (SEE DETAIL)

INSTALL JOINT PLANTED BOULDER REVETMENT STA 119+50 TO 123+50 - SEE DETAIL

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

N
W E
S

0' 15' 30'
0 1/2" 1"

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

1"=30'
SCALE

NOVEMBER 2, 2018
DATE

5909-01
PROJECT NO.

09 OF 17
SHEET NO.

LA-1
SHEET NAME

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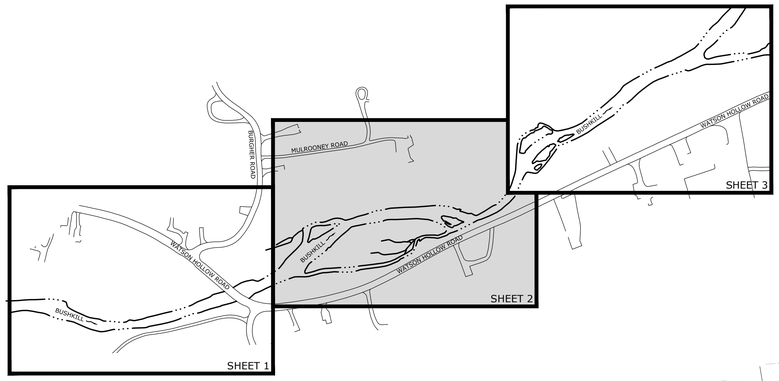

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-1)

MATCHLINE (SEE SHEET EX-3)

FILL EXISTING CHANNEL AND RELOCATE AWAY FROM ROAD

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

INSTALL JOINT PLANTED BOULDER REVETMENT STA 100+60 TO 111+75 - SEE DETAIL

FILL EXISTING SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00

LEGEND

- EXISTING MAJOR CONTOUR (70)
- EXISTING MINOR CONTOUR (68)
- PROPOSED MAJOR CONTOUR (70)
- PROPOSED MINOR CONTOUR (68)
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

0' 15' 30'
0 1/2" 1"

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New Paltz, NY 12561
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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 10 OF 17

SHEET NAME: **LA-2**

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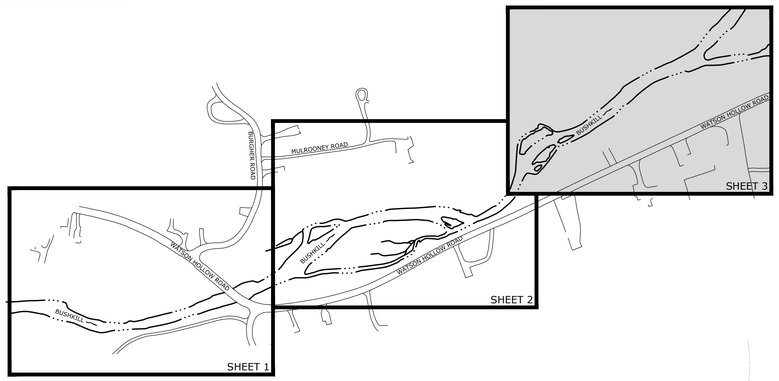

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

LIVE WILLOW CUTTINGS
(REUSE FROM SITE WHERE POSSIBLE)

INSTALL JOINT PLANTED BOULDER
REVETMENT STA 100+60 TO
111+75 - SEE DETAIL

REMOVE TREES ON PROPERTY

RE-USE EXISTING WILLOW PLANTS
FOR PLANTING WHERE POSSIBLE

FILL EXISTING SIDE CHANNEL
AWAY FROM PROPERTIES

WATSON HOLLOW ROAD

BUSHKILL

MATCHLINE (SEE SHEET EX-2)

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

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www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 11 OF 17

SHEET NAME: LA-3

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Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

January 28, 2019

Dr. Brice Obermeyer, THPO
Delaware Tribe of Indians
Delaware Tribe Historic Preservation Office
Roosevelt Hall, Room 12
1200 Commercial Street
Emporia, Kansas 66801

Re: Section 106 Compliance for the Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Dear Dr. Obermeyer,

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 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 to design and implement a streambank rehabilitation project in the Hamlet of West Shokan, Town of Olive, Ulster County, 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. GOSR will also send this letter to the Delaware Nation, Stockbridge-Munsee Community Band of Mohican Indians, and Mohawk Nation.

Proposed Project Description

GOSR proposes to fund the design and construction of improvements to approximately 3,060 linear feet of the Bush Kill stream channel and stream banks, as well as repairs to abutments of a bridge span that conveys County Route 42 across Bush Kill in the Hamlet of West Shokan, Town of Olive, Ulster County, New York (Project). This project involves rehabilitation of six Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from approximately 500 linear feet (LF) upstream of the Watson Hollow CR 42 Bridge, east to approximately 1,000 LF upstream of the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHAs project elements are: #1: reduce the risk of

channel migration through bank armoring or other acceptable measures; #2: repair Watson Hollow Bridge scour and increase conveyance; #3: Create floodplain connectivity by removing a sidecast berm and reconnecting the channel to its floodplain and alleviate erosion; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #6: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.

Existing Conditions

Two bridges are located within the project area. The State Route 28A bridge is located approximately 1,500 feet upstream of the Ashokan Reservoir and originally consisted of two bridge openings spanning separate segments of the channel. The bridge segments were originally built in 1911 and were repaired several times. The County Route 42 (Watson Hollow Road) bridge is located approximately 4,600 feet upstream of the Ashokan Reservoir. The bridge was originally constructed as a three-span, two-pier bridge. It was replaced and realigned in 1992 with a single-pier bridge.

Upstream of the project area, the Bush Kill can be characterized as a steep, confined channel with very little floodplain. Raw, eroding banks can be observed at many locations along the channel upstream of the project area. Large, active bank failures, some of which threaten roads, are present along the channel. This channel instability upstream of the project area represents a source of excessive sediment, which is transported downstream during large flood events.

Just upstream of the County Road 42 bridge, the Bush Kill transitions from a confined valley with high, steep banks to a wide and gently sloping valley. As this portion of the valley became more populated and developed, large floodplains that once bordered the Bush Kill became obstructed by berms to protect homes and roadways built on the floodplain. In addition, the channel was excavated and significantly widened in the 1980s to create more capacity within the channel, further disconnecting the Bush Kill from its floodplain. This, in combination with a high supply of sediment from upstream, has resulted in a laterally dynamic, multithread channel with significant sediment aggradation throughout the reach. Continual aggradation has created bank erosion along significant portions of this reach, potentially threatening bridges and homes

Potential Project Effects

The Project requires bank armoring, bridge scour repair, debris management, bank stabilization and tree removal at various locations within the channel and along portions of the bank as described above.

Area of Potential Effects

In addition to the locations immediately effected by the drainage improvements in the Town of Olive, Ulster County, NY, described above, the Area of Potential Effects (APE) also includes a 50-foot buffer zone around the work area. Consideration of the impact on cultural resources of this project includes all potential resources within the APE.

The proposed stream and streambank rehabilitation area covers approximately 3,060 linear feet along the Bush Kill from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York.

Assessment of Effects

The assessment of effects on cultural resources resulting from the streambank rehabilitation in the town of Olive, Ulster County, NY is based primarily on cultural resources in or near the APE recorded in the New York State Cultural Resource Information System (NYS-CRIS).

According to NYS-CRIS, the entire project area is located within an archaeologically sensitive area. A prehistoric archaeological site, the West Shokan Rock Shelter (also referred to as the Bush Kill Rock Shelter [USN# 11111.000015; NYSM 8112]), has been identified approximately 260 feet south of the APE.

Civil and residential construction in the project area throughout the 20th century, combined with extensive channel widening and alignment along the Bush Kill, may have had a negative impact on the integrity of any archaeological deposits in the vicinity. However, due to the project area's proximity to a water source, its location within an archaeologically sensitive area, and the identification of a nearby rock shelter, there remains the possibility that subsurface cultural resources may be impacted by the proposed work.

GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. If the Area of Potential Effects encompasses historic properties of religious or cultural significance to your Tribe, please respond within 30 days or sooner. In addition, 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.

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207

I am available to answer any questions that you may have regarding this action. If you have any questions, please feel free to contact me at (518) 474-0755 or via email at Lori.Shirley@nyshcr.org.

Sincerely,

Lori A. Shirley
Director
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

Enclosures:
Figure 1: Site Locations
Figure 2: Project Area
Figure 3: Figure 3: Bush Kill Stream and Stream Bank Rehabilitation Proposed Site Plan

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

January 28, 2019

Mohawk Nation Council of Chiefs of Haudenosaunee Six Nations Confederacy
Akwesasane Territory
Box 336
Rooseveltown, New York 13683-0336

Re: Section 106 Compliance for the Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Dear Council of Chiefs,

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 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.

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Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
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New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207

I am available to answer any questions that you may have regarding this action. If you have any questions, please feel free to contact me at (518) 474-0755 or via email at Lori.Shirley@nyshcr.org.

Sincerely,

Lori A. Shirley
Director
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

Enclosures:
Figure 1: Site Locations
Figure 2: Project Area
Figure 3: Bush Kill Stream and Stream Bank Rehabilitation Proposed Site Plan

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

January 28, 2019

Ron LaFrance Jr.
Saint Regis Mohawk Tribe
412 Route 37
Akwesasne, New York 13655

Re: Section 106 Compliance for the Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Dear Mr. LaFrance,

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 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 to design and implement a streambank rehabilitation project in the Hamlet of West Shokan, Town of Olive, Ulster County, 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. GOSR will also send this letter to the Delaware Nation, the Delaware Tribe, the Stockbridge-Munsee Community Band of Mohican Indians, and the Mohawk Nation.

Proposed Project Description

GOSR proposes to fund the design and construction of improvements to approximately 3,060 linear feet of the Bush Kill stream channel and stream banks, as well as repairs to abutments of a bridge span that conveys County Route 42 across Bush Kill in the Hamlet of West Shokan, Town of Olive, Ulster County, New York (Project). This project involves rehabilitation of six Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from approximately 500 linear feet (LF) upstream of the Watson Hollow CR 42 Bridge, east to approximately 1,000 LF upstream of the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHAs project elements are: #1: reduce the risk of channel migration through bank armoring or other acceptable measures; #2: repair Watson Hollow Bridge scour and

increase conveyance; #3: Create floodplain connectivity by removing a sidecast berm and reconnecting the channel to its floodplain and alleviate erosion; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #6: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.

Existing Conditions

Two bridges are located within the project area. The State Route 28A bridge is located approximately 1,500 feet upstream of the Ashokan Reservoir and originally consisted of two bridge openings spanning separate segments of the channel. The bridge segments were originally built in 1911 and were repaired several times. The County Route 42 (Watson Hollow Road) bridge is located approximately 4,600 feet upstream of the Ashokan Reservoir. The bridge was originally constructed as a three-span, two-pier bridge. It was replaced and realigned in 1992 with a single-pier bridge.

Upstream of the project area, the Bush Kill can be characterized as a steep, confined channel with very little floodplain. Raw, eroding banks can be observed at many locations along the channel upstream of the project area. Large, active bank failures, some of which threaten roads, are present along the channel. This channel instability upstream of the project area represents a source of excessive sediment, which is transported downstream during large flood events.

Just upstream of the County Road 42 bridge, the Bush Kill transitions from a confined valley with high, steep banks to a wide and gently sloping valley. As this portion of the valley became more populated and developed, large floodplains that once bordered the Bush Kill became obstructed by berms to protect homes and roadways built on the floodplain. In addition, the channel was excavated and significantly widened in the 1980s to create more capacity within the channel, further disconnecting the Bush Kill from its floodplain. This, in combination with a high supply of sediment from upstream, has resulted in a laterally dynamic, multithread channel with significant sediment aggradation throughout the reach. Continual aggradation has created bank erosion along significant portions of this reach, potentially threatening bridges and homes

Potential Project Effects

The Project requires bank armoring, bridge scour repair, debris management, bank stabilization and tree removal at various locations within the channel and along portions of the bank as described above.

Area of Potential Effects

In addition to the locations immediately effected by the drainage improvements in the Town of Olive, Ulster County, NY, described above, the Area of Potential Effects (APE) also includes a 50-foot buffer zone around the work area. Consideration of the impact on cultural resources of this project includes all potential resources within the APE.

The proposed stream and streambank rehabilitation area covers approximately 3,060 linear feet along the Bush Kill from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York.

Assessment of Effects

The assessment of effects on cultural resources resulting from the streambank rehabilitation in the town of Olive, Ulster County, NY is based primarily on cultural resources in or near the APE recorded in the New York State Cultural Resource Information System (NYS-CRIS).

According to NYS-CRIS, the entire project area is located within an archaeologically sensitive area. A prehistoric archaeological site, the West Shokan Rock Shelter (also referred to as the Bush Kill Rock Shelter [USN# 11111.000015; NYSM 8112]), has been identified approximately 260 feet south of the APE.

Civil and residential construction in the project area throughout the 20th century, combined with extensive channel widening and alignment along the Bush Kill, may have had a negative impact on the integrity of any archaeological deposits in the vicinity. However, due to the project area's proximity to a water source, its location within an archaeologically sensitive area, and the identification of a nearby rock shelter, there remains the possibility that subsurface cultural resources may be impacted by the proposed work.

GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. If the Area of Potential Effects encompasses historic properties of religious or cultural significance to your Tribe, please respond within 30 days or sooner. In addition, 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.

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207

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Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

January 28, 2019

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

Re: Section 106 Compliance for the Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Dear Ms. Hartley,

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 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.

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GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. If the Area of Potential Effects encompasses historic properties of religious or cultural significance to your Tribe, please respond within 30 days or sooner. In addition, 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.

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Albany, NY 12207

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Sincerely,

Lori A. Shirley
Director
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

Enclosures:
Figure 1: Site Locations
Figure 2: Project Area
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Appendix G
Lead Agency Letter and Responses

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

January 30, 2019

Re: Lead Agency Designation for Environmental Review of the Bush Kill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Dear Involved/Interested Party:

The Governor's Office of Storm Recovery ("GOSR") proposes to serve as lead agency under the State Environmental Quality Review Act ("SEQRA") and related laws for the environmental review of the proposed Bush Kill Stream and Streambank Rehabilitation Project, (the "Proposed Action"). GOSR is conducting an environmental review of the Proposed Action on behalf of the State of New York as the recipient of Community Development Block Grant - Disaster Recovery ("CDBG-DR") funds from the U.S. Department of Housing and Urban Development under 42 U.S.C. § 5304(g).[1]

GOSR proposes to fund the design and construction of improvements to approximately 3,060 linear feet of the Bush Kill stream channel and stream banks, as well as repairs to abutments of a bridge span that conveys County Route 42 across Bush Kill in the Hamlet of West Shokan, Town of Olive, Ulster County, New York (Project). The proposed stream and streambank rehabilitation area is located along the Bush Kill from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York.

This project involves rehabilitation of Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from approximately 500 linear feet (LF) upstream of the Watson Hollow CR 42 Bridge, east to approximately 1,000 LF upstream of the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHA project elements are: #1: reduce the risk of channel migration through bank armoring or other acceptable measures; #2: repair Watson Hollow Bridge scour and increase conveyance; #3: Create floodplain connectivity by removing a sidecast berm and reconnecting the channel to its floodplain and alleviate erosion; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #6: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.

[1] The Governor's Office of Storm Recovery, operating under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation, is the responsible entity for the administration of the CDBG-DR grants to the State of New York.

This action has been preliminarily classified as a TYPE 1 action pursuant to SEQRA. Additional information regarding the Proposed Action and its location are provided in the enclosed Long Environmental Assessment Form. The review of the Proposed Action under SEQRA would satisfy the requirements 6 NYCRR Part 617.

Your agency or organization has been identified as a potential cooperating, involved, or interested agency for the review and approval of the Proposed Action. If your agency consents to GOSR's serving as the lead agency for review under SEQRA, please so indicate by signing this letter and returning it at your earliest convenience to Lori Shirley at the Bureau of Environmental Review and Assessment, Governor's Office of Storm Recovery, New York State Homes & Community Renewal, 38-40 State Street, Albany, NY 12207 or simply email a signed copy to Lori.Shirely@stormrecovery.ny.gov.

If we have not heard from you by March 1, 2019, your consent will be assumed.

If you have any questions, please feel free to contact me at (518) 474-0755. Thank you for your consideration and cooperation.

Sincerely,

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

The undersigned hereby consents to The Governor's Office of Storm Recovery serving as lead agency for the Bush Kill Stream and Streambank Rehabilitation Project.

Agency/Organization: _____

By: _____

Name: _____

Title: _____

Date: _____

Permits/Approvals/Comments:_____
_____
_____
_____
_____

Enclosure: Long Environmental Assessment Form
List of Involved and Interested Agencies
Figures:
Bush Kill Stream and Streambank Rehabilitation Project – Project Location
Bush Kill Stream and Streambank Rehabilitation Project – Project Site
Bush Kill Stream and Streambank Rehabilitation Project – Proposed Site Plan

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

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

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

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

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Bush Kill Stream and Streambank Rehabilitation Project		
Project Location (describe, and attach a general location map): Along a reach of the Bush Kill, from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A		
Brief Description of Proposed Action (include purpose or need): This project involves rehabilitation of Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from approximately 500 linear feet (LF) upstream of the Watson Hollow CR 42 Bridge, east to approximately 1,000 LF upstream of the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHAs project elements are: #1: reduce the risk of channel migration through bank armoring or other acceptable measures; #2: repair Watson Hollow Bridge scour and increase conveyance; #3: Create floodplain connectivity by removing a sidecast berm and reconnecting the channel to its floodplain; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #6: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.		
Name of Applicant/Sponsor: Town of Olive	Telephone: (845) 657-8118 E-Mail: olivesupervisor@hvc.rr.com	
Address: 45 Waston Hollow Road		
City/PO: West Shokan	State: NY	Zip Code: 12494
Project Contact (if not same as sponsor; give name and title/role): Sylvia Rozzelle, Supervisor	Telephone: (845) 657-8118 E-Mail: olivesupervisor@hvc.rr.com	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

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

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes☑No		
b. City, Town or Village Planning Board or Commission ☑Yes☐No	Site Plan Review	TBD
c. City, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☑Yes☐No	Flood Advisory Committee Review	TBD
e. County agencies ☐Yes☐No		
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	NYSDEC Article 15 permit; SPDES permit; Section 401 WQC; NYSDOT Access permit	TBD
h. Federal agencies ☑Yes☐No	USACE Section 404 permit	TBD

i. Coastal Resources.

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

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

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

C. Planning and Zoning

C.1. Planning and zoning actions.

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

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

C.2. Adopted land use plans.

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

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

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

If Yes, identify the plan(s):

NYC Watershed Boundary

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

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
ER - ExUrban Residential

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

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

C.4. Existing community services.

a. In what school district is the project site located? Onteora

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

c. Which fire protection and emergency medical services serve the project site?
Olive Fire Department

d. What parks serve the project site?
Lewis S. Davis

D. Project Details

D.1. Proposed and Potential Development

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

b. a. Total acreage of the site of the proposed action? 8064.88 acres
b. Total acreage to be physically disturbed? 10.4 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 8,064.88 acres

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

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 3
- Anticipated commencement date of phase 1 (including demolition) 3 month 2019 year
- Anticipated completion date of final phase 11 month 2019 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

Phase I: upstream portion of project reach, stream channel concentration and widening of floodplain area, stabilize streambank w/planted revetments or live staking, fortify base of Watson Hollow bridge;
Phase II: middle section of project reach, widening of floodplain, and stabilizing streambank w/joint planted boulder revetments and/or planting of live willow stakes,
Phase III: downstream portion of project reach, same as phase two as well as the removal of a side cast berm along the left bank.

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

If Yes, show numbers of units proposed.

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

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

If Yes,

i. Total number of structures _____

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

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

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

If Yes,

i. Purpose of the impoundment: _____

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

_____

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

_____

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

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

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

_____

D.2. Project Operations

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

If Yes:

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

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

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

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

_____

_____

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

_____

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

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

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

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

ix. Summarize site reclamation goals and plan: _____

_____

_____

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

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Bush Kill (862-536)

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
bank armoring or other acceptable measures; scour repair, floodplain connectivity, debris management and bank stabilization with joint planted boulder revetments and/or planting of live willow stakes.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☑Yes ☐No
If Yes, describe: _____

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

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

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

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

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

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

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

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

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

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

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

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

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

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

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

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

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

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

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

If Yes:

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

_____

_____

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

If Yes:

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

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

_____

_____

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

_____

_____

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

If Yes:

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

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

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

_____

_____

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

_____

_____

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

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

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

If Yes, identify:

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

_____

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

_____

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

_____

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

If Yes:

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

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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

If Yes:

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

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

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

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

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

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

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

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

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

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

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

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

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

If Yes:

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

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

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

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

i. During Construction:
- Monday - Friday: 7AM to 4PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:
- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

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

If yes:

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

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

Describe:

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

If yes:

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

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

Describe:

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

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

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

If Yes:

i. Product(s) to be stored

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

iii. Generally, describe the proposed storage facilities:

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

If Yes:

i. Describe proposed treatment(s):

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

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

If Yes:

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

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

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

- Construction:
- Operation:

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

- Construction:
- Operation:

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

If Yes:

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

ii. Anticipated rate of disposal/processing:

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

iii. If landfill, anticipated site life: _____ years

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

If Yes:

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

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

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

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

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

If Yes: provide name and location of facility: _____

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

E. Site and Setting of Proposed Action

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

a. Existing land uses.

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

☐ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): stream channel and floodplain

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.01	0.01	0
• Forested	1.15	0	-1.15
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	6.09	6.09
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	3.61	3.0	-0.61
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	5.41	1.08	-4.33
• Other Describe: _____			

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

i. If Yes: explain: hiking, fishing

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

If Yes,

i. Identify Facilities:

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

If Yes:

i. Dimensions of the dam and impoundment:

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

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

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

If Yes:

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

- If yes, cite sources/documentation: _____

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

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

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

If Yes:

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

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

If Yes:

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

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

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

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

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

If yes, provide DEC ID number(s): _____

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

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

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

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? > 6.5 feet

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

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

Alluvial Land	57 %
Hoosic gravelly loam, 0-3% slopes	23 %
Hoosic gravelly loam, 3-8% slopes	20 %

d. What is the average depth to the water table on the project site? Average: 0 feet

e. Drainage status of project site soils:

☑ Well Drained:	43 % of site
☐ Moderately Well Drained:	% of site
☑ Poorly Drained	57 % of site

f. Approximate proportion of proposed action site with slopes:

☑ 0-10%:	100 % of site
☐ 10-15%:	% of site
☐ 15% or greater:	% of site

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

h. Surface water features.

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

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

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

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

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

- Streams: Name 862-536 Classification A(TS)
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size _____
- Wetland No. (if regulated by DEC) _____

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

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

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

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

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

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

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

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

If Yes:

i. Species and listing (endangered or threatened): _____

Timber Rattlesnake, Bald Eagle

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

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☑Yes ☐No

If yes, give a brief description of how the proposed action may affect that use: _____

no fishing will be allowed during construction

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

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

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

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

ii. Name: West Shokan Rock Shelter, also referred to as the Bush Kill Rock Shelter (substantially contiguous to project site)

iii. Brief description of attributes on which listing is based:
rock shelter with potential for prehistoric occupation

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

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

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

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

If Yes:

i. Identify resource: _____

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

iii. Distance between project and resource: _____ miles.

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

If Yes:

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

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

F. Additional Information

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

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

G. Verification

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

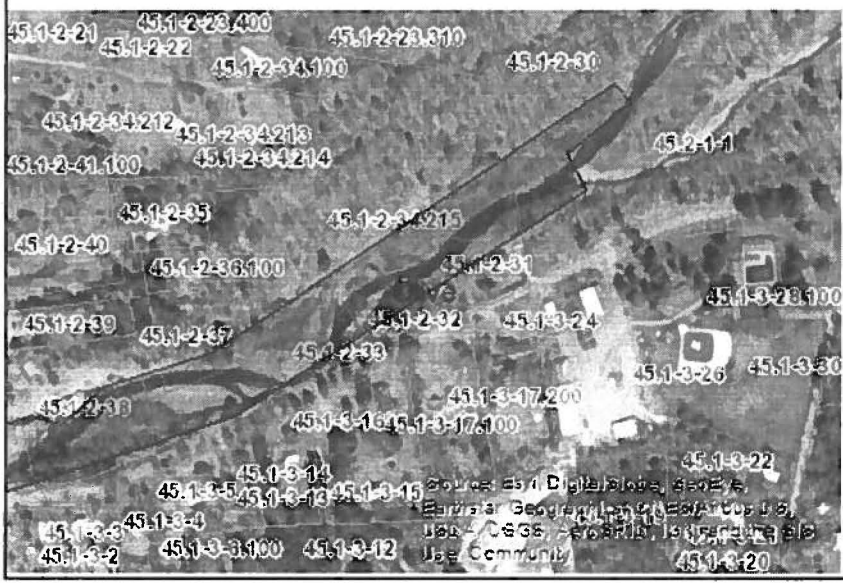
Applicant/Sponsor Name Sylvia Rozzelle Date Jan. 27, 2019

Signature Sylvia Rozzelle Title Supervisor, Town of Olive

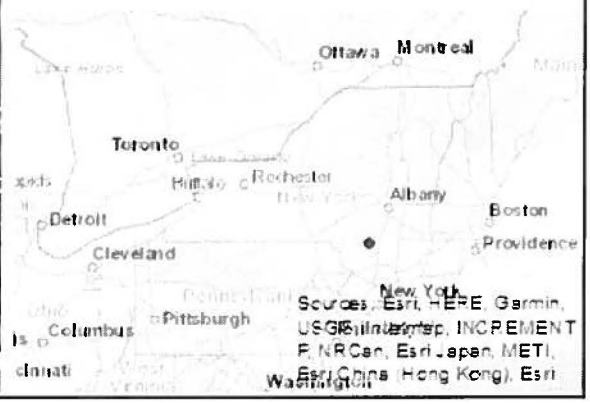
PRINT FORM

EAF Mapper Summary Report

Thursday, January 10, 2019 6:35 PM



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



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYC Watershed Boundary
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	862-536
E.2.h.iv [Surface Water Features - Stream Classification]	A(TS)
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Yes
E.2.j. [100 Year Floodplain]	Yes

E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Timber Rattlesnake, Bald Eagle
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National Register of Historic Places]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Involved/Interested Agencies – Bushkill Stream and Streambank Rehabilitation, Olive, NY

Involved

John Petronella, Regional Permit Administrator, Region 3
New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561
845-256-3054

Todd Westhuis, PE, Regional Director
New York State Department of Transportation Region 8
Eleanor Roosevelt State Office Building
4 Burnett Boulevard
Poughkeepsie, NY 12603

Sylvia Rozzelle, Town Supervisor/Flood Advisory Committee
45 Watson Hollow Road
PO Box 180
West Shokan, NY 12494
845-657-8118 menu option 4

Town of Olive Planning Board
PO Box 513
Shokan, NY 12481

Interested

Ron Rausch, Director
Environmental Management Bureau
Office of Parks, Recreation and Historic Preservation
625 Broadway, 2nd Floor
Albany, NY 12238

Steven J. Peterson, Director
Ulster County Emergency Services
238 Golden Hill Lane
Kingston, NY 12401
845-331-7000

Amanda LaValle, Coordinator
Ulster County Department of the Environment
PO Box 1800
Kingston, NY 12402-1800
845-338-7455

Adam Doan, Ashokan Basin Project Manager
Ulster County Soil and Water Conservation District
3130 State Route 28
P O Box 667
Shokan, NY 12481
845-688-3047

Jared Buono, Executive Director
Ashokan Watershed Stream Management Program
PO Box 667
3130 State Route 28
Shokan, NY 12481
845-688-3047

Phil Eskeli, Project Manager
NYC Department of Environmental Protection, Stream Management
PO Box 667
3130 Route 28
Shokan, NY 12481
845-688-3047

Hon. James L. Seward., 51st Senate District
41 South Main Street
Oneonta, NY 13820
607-432-5524

Hon. Kevin A. Cahill, 103rd Assembly District
Governor Clinton Bldg. Suite G-4
1 Albany Ave
Kingston, NY 12401
845-338-9610

New York District Office
US Army Corps of Engineers
New York District
ATTN: Regulatory Branch, Room 1937
26 Federal Plaza
New York, NY 10278-0090
917-790-8511 (Eastern Permit Section)

Dawn Giuditta, Town Clerk
45 Watson Hollow Road
PO Box 96
West Shokan, NY 12494
845-657-8118 menu option 5

Project Location

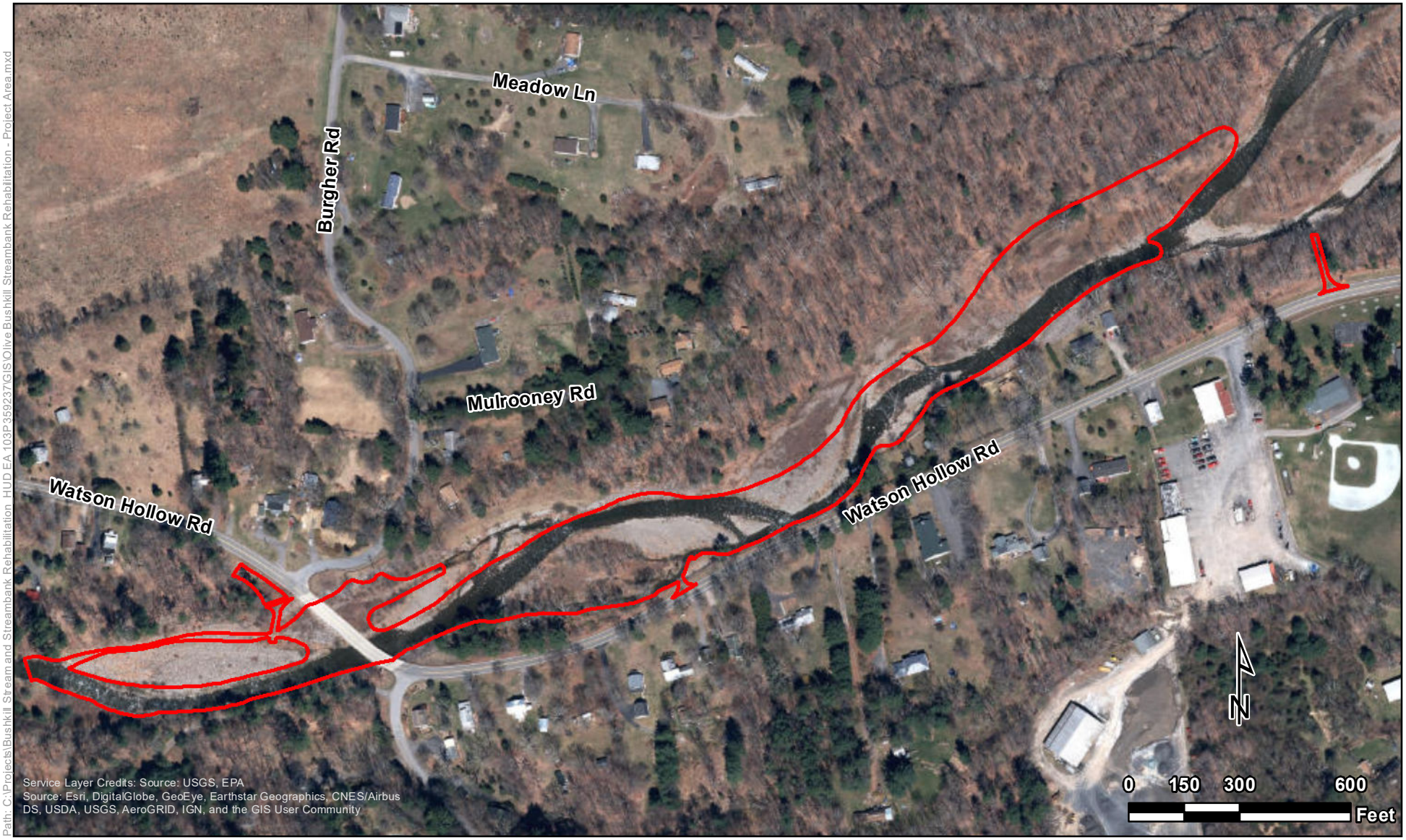
Legend

Project Location

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 1



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Project Area

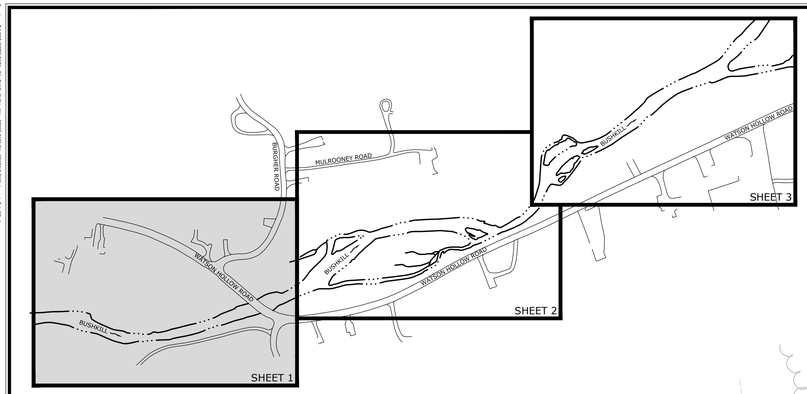
Legend

Project Area

Bushkill Stream and Streambank Rehabilitation
Town of Olive
Ulster County, New York

Tetra Tech, Inc

Figure 2



SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-2)

WATSON HOLLOW ROAD

BURGHER ROAD

RESHAPE 25' WIDE
SIDE CHANNEL

BEGIN STREAM CHANNEL RECONSTRUCTION
STA: 126+09

BUSHKILL

CONSTRUCT A 46' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 10H:1V

SLOPE 3H:1V

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

N
W E
S
0' 15' 30'
0 15" 1"

MILONE & MACBROOM
231 Main Street, Suite 102
New Paltz, NY 12561
845.633.8153
www.mminc.com

DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION
WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'
DATE: NOVEMBER 2, 2018
PROJECT NO.: 5909-01
SHEET NO.: 08 OF 17
SHEET NAME: GR-1

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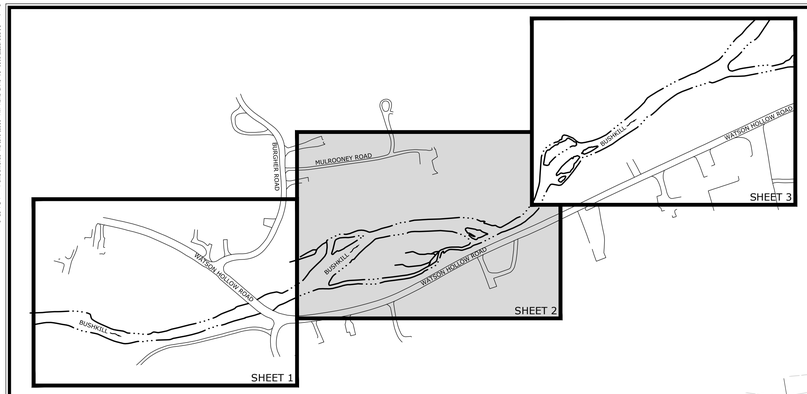

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET GR-1)

MATCHLINE (SEE SHEET GR-3)

SLOPE 3H:1V

CONSTRUCT A 69' WIDE
BANKFULL CHANNEL
(SEE DETAIL CROSS SECTION)

SLOPE 100H:1V

SLOPE 50H:1V

FILL EXISTING
FLOODPLAIN SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

LIMITS OF AERIAL TOPOGRAPHY

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 07 OF 17

SHEET NAME: GR-2

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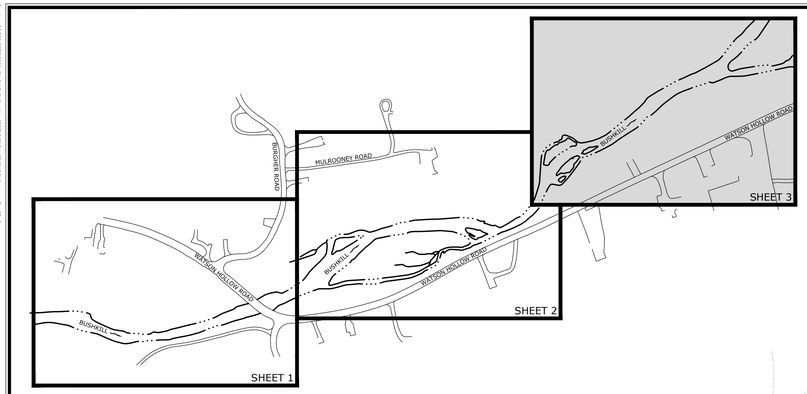

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

CONSTRUCT A 46' WIDE BANKFULL CHANNEL (SEE DETAIL CROSS SECTION)

SLOPE 3H:1V

SLOPE 100H:1V

END OF STREAM CHANNEL RECONSTRUCTION STA: 100+00

BUSHKILL

WATSON HOLLOW ROAD

MATCHLINE (SEE SHEET GR-2)

100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

GRADING NOTES:

1. PROPOSED CONTOURS AS PRESENTED ON THIS PLAN INDICATE FINAL GRADE AFTER TOPSOIL, ROCKS, AND OTHER PROPOSED STRUCTURES AND FINISH TREATMENTS ARE COMPLETE.
2. MATERIAL GENERATED DURING CONSTRUCTION THAT IS TO BE REMOVED FROM THE SITE MUST BE HAULED TO AN APPROVED LOCATION.

LEGEND

- 70 — EXISTING MAJOR CONTOUR
- 68 — EXISTING MINOR CONTOUR
- (70) — PROPOSED MAJOR CONTOUR
- (68) — PROPOSED MINOR CONTOUR

N W E S
0' 15' 30'
0 1/2" 1"

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - GRADING

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 06 OF 17

SHEET NAME: GR-3

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Plotted: 9/28/2018 11:07:39 AM By: MC
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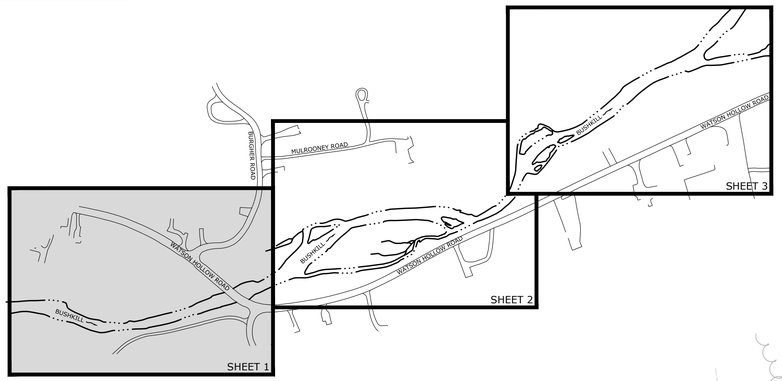

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-2)

WATSON HOLLOW ROAD

BURGHER ROAD

REMOVE EXCESS MATERIAL FROM BRIDGE OPENING

RESHAPE EXISTING SIDE CHANNEL

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

BUSHKILL

126+17

126+00

125+00

124+00

123+00

122+00

121+00

120+00

119+00

118+00

REPLACE RIPRAP AND GROUT (SEE DETAIL)

INSTALL JOINT PLANTED BOULDER REVETMENT STA 119+50 TO 123+50 - SEE DETAIL

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

N
W E
S

0' 15' 30'
0 1/2" 1"

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

1"=30'
SCALE

NOVEMBER 2, 2018
DATE

5909-01
PROJECT NO.

09 OF 17
SHEET NO.

LA-1
SHEET NAME

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Plotted: 31 JAN 2019 08:38 By: JOSHUA MACBROOM
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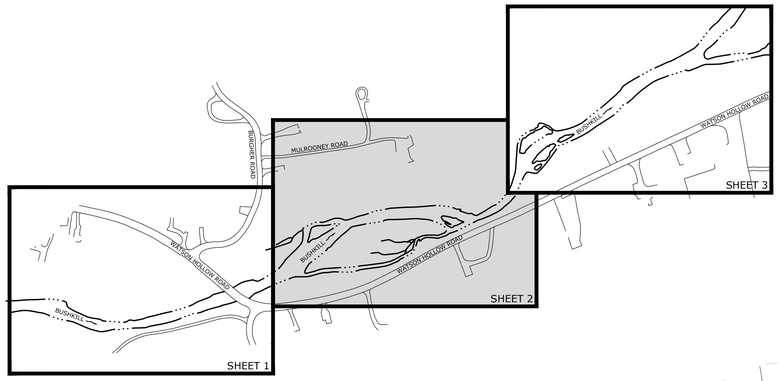

SHEET INDEX
(N.T.S.)

MATCHLINE (SEE SHEET EX-1)

MATCHLINE (SEE SHEET EX-3)

FILL EXISTING CHANNEL AND RELOCATE AWAY FROM ROAD

LIVE WILLOW CUTTINGS (REUSE FROM SITE WHERE POSSIBLE)

RE-USE EXISTING WILLOW PLANTS FOR PLANTING WHERE POSSIBLE

INSTALL JOINT PLANTED BOULDER REVETMENT STA 100+60 TO 111+75 - SEE DETAIL

FILL EXISTING SIDE CHANNEL

BUSHKILL

WATSON HOLLOW ROAD

109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00

LEGEND

- EXISTING MAJOR CONTOUR (70)
- EXISTING MINOR CONTOUR (68)
- PROPOSED MAJOR CONTOUR (70)
- PROPOSED MINOR CONTOUR (68)
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

0' 15' 30'
0 1/2" 1"

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 10 OF 17

SHEET NAME: **LA-2**

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Plotted: 02/05/2019 - 8:58 AM By: ANTHONY MACBROOM (Layer: Model)
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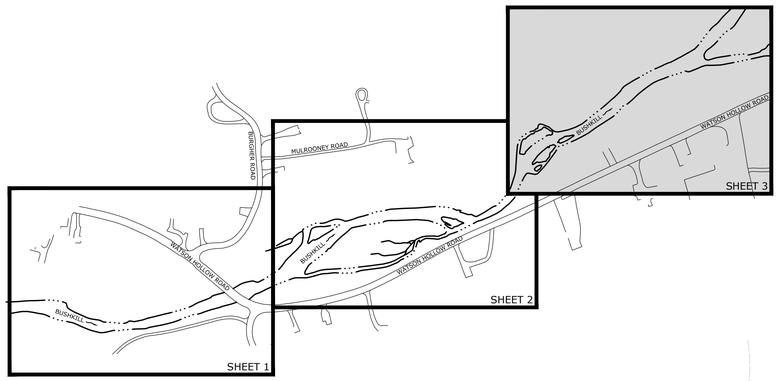

SHEET INDEX
(N.T.S.)

REMOVE SIDE CAST BERM

REMOVE SIDE CAST BERM

LIVE WILLOW CUTTINGS
(REUSE FROM SITE WHERE POSSIBLE)

INSTALL JOINT PLANTED BOULDER
REVETMENT STA 100+60 TO
111+75 - SEE DETAIL

REMOVE TREES ON PROPERTY

RE-USE EXISTING WILLOW PLANTS
FOR PLANTING WHERE POSSIBLE

FILL EXISTING SIDE CHANNEL
AWAY FROM PROPERTIES

WATSON HOLLOW ROAD

BUSHKILL

MATCHLINE (SEE SHEET EX-2)

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED GROUTED RIPRAP
- PROPOSED LIVE WILLOW STAKE CUTTINGS
- PROPOSED JOINT PLANTED BOULDER REVETMENT
- PROPOSED CHANNEL
- PROPOSED LOW FLOW CHANNEL (±28' WIDE)
- PROPOSED BANKFULL CHANNEL (±46'-69' WIDE)

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DESCRIPTION	DATE	BY

PRELIMINARY DESIGN 60%

SITE PLAN - LAYOUT

BUSHKILL STREAM & STREAM BANK REHABILITATION

WATSON HOLLOW ROAD
TOWN OF OLIVE, ULSTER COUNTY, NY

MC	MC	DRM
DESIGNED	DRAWN	CHECKED

SCALE: 1"=30'

DATE: NOVEMBER 2, 2018

PROJECT NO.: 5909-01

SHEET NO.: 11 OF 17

SHEET NAME: LA-3

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Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

RECEIVED
FEB 01 2019
Regional Director's Office
NYSDOT - Region 8

RECEIVED
FEB 05 2019
REGION 8
TRAFFIC SAFETY & MOBILITY GROUP

January 30, 2019

Re: Lead Agency Designation for Environmental Review of the Bush Kill Stream and Streambank Rehabilitation Project, Hamlet of West Shokan, Town of Olive, Ulster County, New York

Dear Involved/Interested Party:

The Governor's Office of Storm Recovery ("GOSR") proposes to serve as lead agency under the State Environmental Quality Review Act ("SEQRA") and related laws for the environmental review of the proposed Bush Kill Stream and Streambank Rehabilitation Project, (the "Proposed Action"). GOSR is conducting an environmental review of the Proposed Action on behalf of the State of New York as the recipient of Community Development Block Grant - Disaster Recovery ("CDBG-DR") funds from the U.S. Department of Housing and Urban Development under 42 U.S.C. § 5304(g).[1]

GOSR proposes to fund the design and construction of improvements to approximately 3,060 linear feet of the Bush Kill stream channel and stream banks, as well as repairs to abutments of a bridge span that conveys County Route 42 across Bush Kill in the Hamlet of West Shokan, Town of Olive, Ulster County, New York (Project). The proposed stream and streambank rehabilitation area is located along the Bush Kill from the County Route 42 Bridge, east to the intersection of the Bush Kill with NY Route 28A bridge in the Hamlet of West Shokan and Town of Olive, New York.

This project involves rehabilitation of Potential Flood Hazard Areas (PFHA's) along a reach of the Bush Kill, from approximately 500 linear feet (LF) upstream of the Watson Hollow CR 42 Bridge, east to approximately 1,000 LF upstream of the intersection of the Bush Kill with NY Route 28A. These PFHA's are identified as significant areas of concern by the Town of Olive through a LFA conducted by NYCDEP. The six PFHA project elements are: #1: reduce the risk of channel migration through bank armoring or other acceptable measures; #2: repair Watson Hollow Bridge scour and increase conveyance; #3: Create floodplain connectivity by removing a sidecast berm and reconnecting the channel to its floodplain and alleviate erosion; #4: Debris management. #5: Stabilizing the bank to withstand the shear stress associated with the flood waters and mitigating head cut; #6: stabilize the bank to withstand the shear stress associated with flooding. To mimic a healthy, functioning stream, the proposed project will create a more confined stream channel with an expanded floodplain area. Stabilization of eroding streambanks will be accomplished by fortifying the banks with a combination of joint planted revetments and live willow stakes. Tree clearing will occur on 1.15 acres of land and removing a total of 118 trees.

[1] The Governor's Office of Storm Recovery, operating under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation, is the responsible entity for the administration of the CDBG-DR grants to the State of New York.

This action has been preliminarily classified as a TYPE 1 action pursuant to SEQRA. Additional information regarding the Proposed Action and its location are provided in the enclosed Long Environmental Assessment Form. The review of the Proposed Action under SEQRA would satisfy the requirements 6 NYCRR Part 617.

Your agency or organization has been identified as a potential cooperating, involved, or interested agency for the review and approval of the Proposed Action. If your agency consents to GOSR's serving as the lead agency for review under SEQRA, please so indicate by signing this letter and returning it at your earliest convenience to Lori Shirley at the Bureau of Environmental Review and Assessment, Governor's Office of Storm Recovery, New York State Homes & Community Renewal, 38-40 State Street, Albany, NY 12207 or simply email a signed copy to Lori.Shirely@stormrecovery.ny.gov.

If we have not heard from you by March 1, 2019, your consent will be assumed.

If you have any questions, please feel free to contact me at (518) 474-0755. Thank you for your consideration and cooperation.

Sincerely,

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

The undersigned hereby consents to The Governor's Office of Storm Recovery serving as lead agency for the Bush Kill Stream and Streambank Rehabilitation Project.

Agency/Organization: NYS DoT

By: _____

Name: JOHN REILLY

Title: R13 8-7 PERMIT ENGINEER

Date: 2/6/19

Permits/Approvals/Comments: _____

Enclosure: Long Environmental Assessment Form
List of Involved and Interested Agencies
Figures:
Bush Kill Stream and Streambank Rehabilitation Project – Project Location
Bush Kill Stream and Streambank Rehabilitation Project – Project Site
Bush Kill Stream and Streambank Rehabilitation Project – Proposed Site Plan

The undersigned hereby consents to The Governor's Office of Storm Recovery serving as lead agency for the Bush Kill Stream and Streambank Rehabilitation Project.

Agency/Organization: Town of Olive

By: Sylvia B. Rozzelle

Name: Sylvia B. Rozzelle

Title: Supervisor

Date: 7/15/19

Permits/Approvals/Comments: _____

Enclosure: Long Environmental Assessment Form
List of Involved and Interested Agencies
Figures:
- Bush Kill Stream and Streambank Rehabilitation Project – Project Location
- Bush Kill Stream and Streambank Rehabilitation Project – Project Site
- Bush Kill Stream and Streambank Rehabilitation Project – Proposed Site Plan

The ENB SEQRA Notice Publication Form - *Please check all that apply*

Reset Form

Deadline: Notices must be received by **6 p.m. Wednesday** to appear in the following Wednesday's ENB

- [x] Negative Declaration - Type I
- [ ] Conditioned Negative Declaration
- [ ] Positive Declaration
- [ ] Draft Scope
- [ ] with Public Scoping Session (optional)
- [ ] Final Scope
- [ ] Draft EIS
- [ ] with Public Hearing
- [ ] Generic
- [ ] Supplemental
- [ ] Final EIS
- [ ] Generic
- [ ] Supplemental

DEC Region # 3 County: Ulster Lead Agency: Governor's Office of Storm Recovery

Project Title: Bushkill Stream and Streambank Rehabilitaiton

Brief Project Description: The action involves . . .

The Town of Olive proposes to design and implement mitigation for potential flood hazard areas in the Bushkill channel and stream banks between Bushkill Bridge on County Route 42 and New York Route 28A Bridge to the east, in the Hamlet of West Shokan and Town of Olive. The proposed restoration includes bank stabilization, increasing the floodplain width, stabilizing the channel bed by realigning the channel profile and adding armoring at specified locations along the project reach, and reinforcing the Watson Hollow bridge abutments. The purpose of the Project is to enhance the existing streambank by creating a more confined stream channel with an expanded floodplain area. The project is intended to provide long-term protection from flooding to area residents, the town's emergency responders, and the area's current infrastructure. The Town of Olive envisions this project as a long-term solution for mitigating harmful effects of future storm events.

Project Location (include street address/municipality): Bushkill Bridge area, Olive, Ulster County

Contact Person: Lori A. Shirley, GOSR

Address: 38-40 State Street City: Albany State: NY Zip: 12207

Phone: 518-474-0755 Fax: _____ E-mail: Lori.Shirley@nyshcr.org

For Conditioned Negative Declaration / Draft Scope / Draft EIS: Public Comment Period ends: ___ / ___ /____

For Public Hearing or Scoping Session: Date: ____ / ____ / _____ Time: _____:_____ am/pm

Location:

A hard copy of the Draft Scope/Final Scope/DEIS/FEIS is available at the following locations:

The online version of the Draft Scope/Final Scope/DEIS/FEIS is available at the following publically accessible web site:

For Conditioned Negative Declaration: In summary, conditions include: