APPENDIX M
CASE 10-T-0189
WATERBODY INVENTORY (114A) & WETLAND DELINEATION REPORT

Wetland & Waterbodies Delineation Report

Champlain Hudson Power Express Staging and Laydown Yards Packages 3, 5B & 6

Fort Edward, Bethlehem, and Coxsackie, New York

CHA Project Number: 066076

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TABLE OF CONTENTS

LIST OF ATTACHMENTS

1.0 INTRODUCTION

CHA Consulting, Inc. ("CHA") has prepared this wetland and waterbodies delineation report on behalf of Champlain Hudson Power Express, Inc. ("CHPE") and Kiewit Construction ("Kiewit") for the Champlain Hudson Power Express Project (Project). CHA was retained by Kiewit to identify and delineate jurisdictional wetlands and waterbodies regulated under Section 404 of the Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act of 1899, Article 24 Freshwater Wetlands Act (FWW), and Article 15 (Protection of Waters) of the Environmental Conservation Law along the overland transmission cable route that follows State and local roadways and the Canadian-Pacific (CP) and CSX Corporation (CSX) railroad rights-of-way ("ROW"). Delineations were conducted with the objective of verifying and updating previous wetland delineations performed for the Project Corridor as part of the Article VII and Section 10/404 permitting processes. This report describes the wetland delineation methodology and the existing wetland and waterbody resources that were identified in the Project Corridor (also defined as the Jurisdiction Determination limits) during field surveys for the overland portions of the Project.

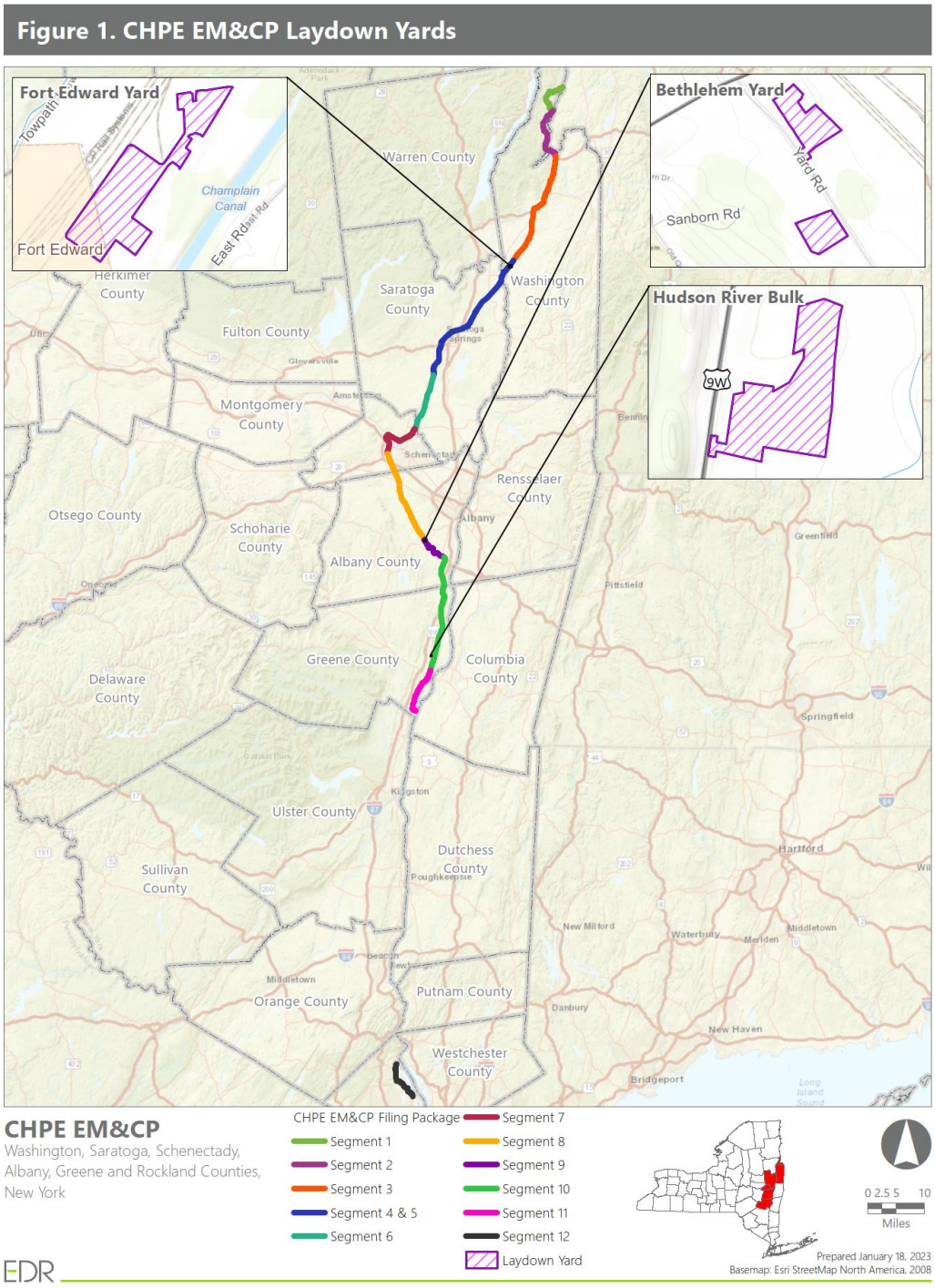
This report represents a supplemental wetland delineation review for equipment staging and laydown areas for the Fort Edward Yard (Segment 4 -Package 3), the Bethlehem Yard (Segment 9 - Package 5B) and the Hudson River Bulk-Coxsackie Yard (Segment 10 -Package 6).

2.0 PACKAGES 3, 5B & 6 STAGING AND LAYDOWN YARDS OVERVIEW

The entire Project Corridor is approximately 339 miles from Montreal, Quebec, Canada to New York City, New York, USA. Figure 1 below shows the equipment laydown yards within the counties of Washington, Schenectady, Albany and Greene within New York along/within the vicinity of the Project Corridor that were investigated for the presence of wetlands and waterbodies.

As identified in Figure 1, the Fort Edward Staging and Laydown Yards (A & B) occur within the Town of Fort Edwards in the southern part of Segment 4 - Package 3 on Lock 8 Way. The Bethlehem Staging and Laydown Yard is situated within the Town of Bethlehem in the southern part of Segment 9 - Package 5B northeast and southwest of West Yard Road. The Hudson River Bulk - Coxsackie Staging and Laydown Yard is proposed in the southern part of the of Town of Coxsackie within Segment 10 - Package 6 along US Route 9W.

Figure 1: Staging and Laydown Yard Wetland & Waterbody Investigation



3.0 WETLAND DELINEATION METHODOLOGY

To determine the potential for wetland impacts from construction of the Project, the CHA team assessed the Project areas in the field for the presence of federal (Section 404 CWA & Section 10 of the Rivers and Harbors Act of 1899) and state (Article 24 FWW & Article 15 Protection of Waters) jurisdictional wetlands and waterbodies. Wetland scientists conducted wetland delineations in the summer and fall of 2022 and winter 2023. The delineation criteria and methodology were performed in accordance with the *1987 Corps of Engineers Wetland Delineation Manual*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* Version 2.0 (January 2012) as well as the *New York State Freshwater Wetlands Delineation Manual* (Browne et. al., 1995).

The wetland delineation limits for the staging and laydown yards included the area approximately 100 feet from the edge of the property boundaries.

In accordance with the procedures provided in the *Corps of Engineers Wetland Delineation Manual (1987)*, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (January 2012), the "Routine Wetland Determination" method was used to delineate wetland boundaries.

The wetland boundaries were determined in the field based on the three-parameter approach, whereby an area is a wetland if it exhibits vegetation adapted to wet conditions (hydrophytes), hydric soils, and the presence or evidence of water at or near the soil surface during the growing season (hydrology).

Coded surveyor's ribbons (e.g. flag code A-1, A-2, etc.) were placed along the wetland boundaries based on observations of vegetation, soils and hydrologic conditions. Data points were recorded along the wetland boundaries at various locations across different vegetative community types correlating to each wetland. Wetland and upland data points were recorded to show the difference between the wetland and upland habitats. At a minimum, one data point set (wetland and upland) was collected for each wetland. Additional data points were collected for large wetlands and for

changes in vegetative communities. Wetland Determination Data Sheets corresponding to each point can be found in Attachment 1.

Wetlands within the various laydown yards fall under the jurisdiction of the New York State Department of Environmental Conservation (NYSDEC) and/or the U.S. Army Corps of Engineers (USACE). The New York State methodology similarly recognizes the three parameters of vegetation, soils, and hydrology; however, under the New York State method the hydric vegetation criterion is mandatory, while the other two parameters are not (Browne et. al. 1995). Wetlands regulated by the NYSDEC must be at least 12.4 acres (5 hectares) in size, unless they are deemed to have unusual local importance (Article 24 FWW). The NYSDEC publishes maps of wetland areas under state jurisdiction; however, it uses field delineation to determine the precise boundaries of these wetland areas.

Prior to actual field delineations for wetland resources, CHA reviewed USGS 7.5-minute topographic maps, aerial photographs, National Wetland Inventory (NWI) mapping, United States Department of Agriculture Natural Resources Conservation Service (NRCS) soil mapping, and NYSDEC freshwater wetlands mapping to identify potential wetland features present within the Project areas. Refer to Attachment 2 for NWI and NYSDEC Freshwater Wetland & Stream Mapping and Attachment 3 for NRCS Soil Mapping.

Ditches that met the three parameters for wetland delineation (i.e., presence of hydrology, hydric soils, and hydrophytic vegetation) were identified as a wetland community. Those that did not, but carried stream flow from off-site (redirecting flow through the ditch), were categorized as streams.

Waterbodies within the Project areas were identified by the presence of an ordinary high-water mark (OHWM) or stream channel and were flagged along this boundary.

This report documents the wetlands and waterbodies potentially under federal and State jurisdiction that were identified in the staging and laydown yards. Summaries of wetlands that were identified are provided in Table 4-1 in Attachment 4. Wetlands and Waterbodies Delineation Mapping is included in Attachment 5. Wetland determination data forms and photographic documentation of the wetlands are included in Attachment 1.

4.0 WETLAND & WATERBODIES DELINEATION RESULTS

Wetlands were delineated or visually located within or adjacent to the staging and laydown yards. Three wetland areas were identified near the Bethlehem staging and laydown yard. All are outside of the Limits of Work (LOW) that define the laydown yard but are shown to establish setbacks for refueling and the storage of fuel and chemicals. One wetland and one stream were delineated adjacent to the Fort Edward staging and laydown yard. Lastly, 4 wetlands were delineated at the Hudson River Bulk-Coxsackie site. Two of the wetlands adjacent to this site are State regulated (Wetland GP6-G and GP6-F/DEC# HN-108) and identified as a Class 1 wetland. Wetland GP6-F is approximately 300 feet from the entrance to the site and well outside of the limits of work and is not shown on the delineation mapping. Table 4-1 in Attachment 4 provides a summary of the wetlands identified, including their classification in accordance with Cowardin et al. (1979) and their state or federal jurisdiction.

Descriptions of wetland vegetation, hydrology, and soils observed within the Project areas are presented in the following sections. The delineated wetlands are summarized in Table 4-1 (Attachment 4) and the delineated boundaries are illustrated on the Wetlands and Waterbodies Delineation Mapping (Attachment 5). Table 4-2 (Attachment 4) summarizes the waterbodies identified within/adjacent to the staging and laydown yards, with photographs of these resources provided in Attachment 6. Table 4-3 (Attachment 4) provides the soil series information.

4.1 VEGETATION

Vegetative communities within wetlands are described according to *Ecological Communities of New York State, Second Edition* (Edinger 2014)[1] and *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin 1979)[2]. Using this hierarchical wetland classification

[1] Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero (editors). 2014. *Ecological* Communities *of New York State.* Second Edition. A revised and expanded edition of Carol Reshke's *Ecological Communities of New York State*. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

[2] Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe, 1979. *Classification of wetlands and deepwater habitats of the United States*. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

system three primary cover types were identified for vegetated wetlands in the Project Corridor. These include palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetlands. Some wetlands contained multiple community types. Open water areas (i.e. ponds) were identified as palustrine unconsolidated bottom (PUB).

4.1.1 Palustrine Emergent Wetland

The palustrine emergent wetland cover type is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens (Cowardin et. al., 1979), and with less than 50 percent aerial cover by shrubs and/or trees. The freshwater emergent wetlands along the Project Corridor primarily include shallow emergent marsh, common reed marsh and purple loosestrife marsh (Edinger et. al., 2014).

Shallow emergent marshes occur on mineral soils or deep muck soils that are permanently saturated and seasonally flooded. Water depths range from 6 inches to 3.3 feet during flood stages (Edinger et. al., 2014). Characteristic vegetation of shallow emergent marshes within the Project Corridor includes cattails (*Typha* spp.), sensitive fern (*Onoclea sensibilis*), Canada goldenrod (*Solidago canadensis)*, rough goldenrods (*Solidago rugosa* spp.), wool-grass (*Scirpus cyperinus*), reed canary grass (*Phalaris arundinacea)*, sedges (*Carex spp*.), asters (*Symphyotrichum spp.*), rushes (*Juncus s*pp.) and field horsetail (*Equisetum arvense*). Invasive species observed within the shallow emergent marshes include common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), honeysuckle (*Lonicera spp*.), and common buckthorn (*Rhamnus cathartica*).

Linear wetland ditches, which have been constructed for drainage or irrigation, are commonly found along staging and laydown yards. Vegetation within the ditches is typically dominated by invasive species such as common reed and purple loosestrife; however, some areas may be dominated by native, non-invasive wetland species.

4.1.2 Palustrine Scrub-Shrub Wetland

The scrub-shrub wetland cover type includes areas that are dominated by shrubs and saplings that are less than 6 meters (20 feet) tall (Cowardin et. al., 1979), and have less than 50 percent aerial cover by trees. Scrub-shrub wetlands along the staging and laydown yards, were dominated by silky dogwood (*Cornus amomum*), gray dogwood (*Cornus racemosa)*, common buckthorn and

honeysuckle. Other vegetation observed includes Eastern cottonwood (*Populus deltoides*), red maple (*Acer rubrum*), box elder (*Acer negundo*), swamp white oak (*Quercus bicolor*), speckled alder (*Alnus rugosa*), black willow (*Salix nigra*), sensitive fern (*Onoclea sensibilis*), and field horsetail. Invasive species observed include honeysuckle and common buckthorn.

4.1.3 Palustrine Forested Wetland

Forested wetland cover types are dominated by trees and shrubs that have a tolerance to a seasonal high-water table. For a community to be characterized as forested, a wetland must be dominated by trees and shrubs that are at least 6 meters tall (Cowardin et. al., 1979). Forested wetlands typically have a mature tree canopy, and depending upon the species and density, can have a broad range of understory and groundcover community components (Edinger et al., 2014).

Red maple hardwood swamp is the only forested wetland community within the staging and laydown yards. It occurs in poorly drained depressions, usually on inorganic soils. Red maple is either the only dominant tree species or is codominant with one or more hardwoods (Edinger et. al, 2014). Hardwood species observed within this community type within the staging and laydown yards include red maple, black willow, green ash (*Fraxinus pennsylvanica*) and Eastern cottonwood. Shrub species commonly observed include dogwoods and honeysuckle. The herbaceous layer typically includes sensitive fern, field horsetail, moneywort and young growth of the tree and shrub species. Invasive species primarily included honeysuckle and buckthorn.

4.2 HYDROLOGY

4.2.1 Streams

Table 4-2 lists 1 intermittent stream and 1 perennial stream, located within the Middle Hudson Basin. This watershed stretches across New York and Massachusetts, encompassing over 1,554,773 acres. The unnamed intermittent tributary occurs along the northeast corner of the Fort Edward Yard and crosses beneath Lock 8 Way to converge with the Champlain Canal. The perennial stream is located at the Bethlehem Laydown Yard and flows from the west side of W Yard Road, under the laydown yard, daylighting for a very short distance on the east side of the laydown yard before entering a culvert that extends beneath the CSX rail yard. This stream is a mapped, unnamed tributary of the Hudson River and is identified as a Class C, Standard C stream.

4.2.2 Wetlands

Site hydrology was examined within each wetland and adjacent upland areas. Indicators of wetland hydrology included inundation (A1) or high water table (A2) or evidence of inundation such as water-stained leaves (B9) saturation within the upper portion of the soil during the growing season (A3), and oxidized rhizospheres on living roots in the upper 12 inches of soil (C3) (Attachment 1). Hydrologic factors contributing to wetland hydrology varied by wetland and included flooding from adjacent streams, temporary inundation from runoff, precipitation and/or snowmelt, and seasonal to permanent shallow groundwater tables.

Hydrology along the Project Corridor has been historically altered by road and railroad drainage ditches and property development. The wetland delineators inspected these ditches for the presence or absence of wetland indicators and hydrologic connectivity to wetlands or streams.

4.3 SOILS

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil map units for the Project Corridor are provided in Attachment 3. Indicators of hydric soils documented during the delineations included depleted below dark surface (A11), depleted matrix (F3) and redox dark surface (F6) (Attachment 1). A total of 6 different soil types have been mapped by the NRCS within the staging and laydown areas. The mapped soil types range from excessively drained to very poorly drained soils. According to descriptions provided by the NRCS Web Soil Survey (2022) (Section 4.4 and Attachment 4, Table 4-3), 1 of the soils mapped within the staging and laydown areas is classified as a hydric soil (Fluvaquents). Hydric soils are defined as soils “that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil” (Federal Register, 1994). Table 4-3 summarizes the soil series in the staging and laydown areas and lists the soils that are classified as hydric (or associated with wetland hydrology).

Many soils within the staging and laydown areas are formed from glacial parent materials including outwash, dense till, loose till, and glaciomarine deposits. In active floodplains, soils are formed in recent alluvium. Anthropogenically disturbed soils, associated with road and railroad

construction and operation, are common within the Project Corridor. The disturbed soils consist of disturbed natural deposits or human transported materials.

4.4 NATURAL RESOURCE CONSERVATION SERVICE SOIL SERIES DESCRIPTIONS

The following are the abbreviated descriptions of each of the relevant soil types taken from the USDA Web Soil Survey (NRCS, USDA 2022). Soils survey mapping and additional information are provided in Attachment 3.

Claverack Series (ClA & ClB)

These are very deep, moderately well drained soils formed in sandy deposits that overlie clayey lacustrine sediments. They are nearly level to sloping soils in shallow deltas on lake plains. The sand, which overlies finer textured sediments, is dominated by quartz and has been derived primarily from non-calcareous sandstone or granite. Slope ranges from 0 to 15 percent. Typically, the A horizon consists of a fine sand and is usually a dark grayish brown color. The B horizon consists of structureless sand. In some places, the lower part of the B horizon has gray or grayish brown redoximorphic features below a depth of 18 inches. The C horizon is a silty clay loam or clay with some sub-horizons of silt or loam, up to 5 inches thick.

Fluvaquents (Fx)

These are deep, level or nearly level, moderately well drained, low lime, sandy soils formed in glacial outwash. The available water capacity is low to moderate. Permeability is rapid.

Kingsbury Series (KbA & KbB)

These are very deep, somewhat poorly drained soils formed in clayey glaciomarine or glacio-lacustrine sediments. They are nearly level or gently sloping, ranging from 0 to 8 percent slope. The A horizon is typically very dark grayish brown silt loam, and texture can range from very fine sandy loam to clay. This horizon has granular or blocky structure. The E horizon generally is mixed brown and yellowish brown silty clay but can be silt loam or very fine sandy loam, with blocky to platy structure. Redoximorphic features occur throughout. The B horizon typically

consists of dark grayish brown clay, mixed with yellowish brown clay in the shallower portions. Typically, it has greater than 50 percent redoximorphic depletions on ped faces with concentrations in ped interiors. This horizon generally has blocky structure, within coarse or very coarse prisms. The C horizon generally has similar color to the deeper portions of the B horizon, although redoximorphic features generally have lower contrast. This horizon ranges from silty clay loam to clay in texture, and has massive structure, which, when disturbed, can part into aggregates resembling very fine blocky structure.

Kingsbury & Rhinebeck Series (KrA & KrB)

Kingsbury soils are very deep, somewhat poorly drained soils formed in lacustrine or marine sediments. They are nearly level and gently sloping on lake plains. Slopes range from 0 to 8 percent slope. The A horizon is very dark grayish brown silty clay with strong medium granular structure. The E horizon is mixed brown and yellowish brown silty clay. The B horizon consists dark grayish brown clay angular or subangular blocky structure, within coarse or very coarse prisms in some pedons. The C horizon generally has similar color to the deeper portions of the B horizon, although redoximorphic features generally have lower contrast. This horizon ranges from silty clay loam to clay, and has massive structure, which, when disturbed, can part into aggregates resembling very fine blocky structure.

Rhinebeck soils are very deep, somewhat poorly drained soils formed in clayey lacustrine sediments. They are found on glacial lake plains and uplands mantled with lake sediments. Slopes range from 0 to 15 percent. The A horizon is very dark grayish brownish silt loam with moderate medium granular structure. The B horizon is light olive brown silty clay or silty clay loam with moderate medium subangular blocky structure. The C horizon varies in texture and is massive or varved, or have very coarse prismatic structure in the upper part.

Udorthents (Ug, Uh & Uk)

These are very deep, nearly level to gently sloping areas of well drained loamy soils that are a result of man-made cuts and fills in loamy upland soils. Slopes range from 0 to 8 percent. Typically, the surface layer is dark brown silt loam extending to 5 inches. Layers below the surface

are brown and yellowishbrown silt loam containing up to 80 percent rock fragments to a depth of 72 inches or more.

Valois Series (VdB & VdD)

These are very deep, well drained soils on nearly level to steep lateral moraines along lower valley sides. These soils formed in till dominated by siltstone, sandstone or shale. The slopes range from 0 to 60 percent. The A horizon is brown gravelly loam with weak medium granular structure extending from 0 to 7 inches. The B horizon is brown silt loam/ gravelly silt loam with weak fine granular structure and weak medium subangular blocky structure. The C horizon is dark grayish brown very gravelly fine sandy loam and gravelly clay loam. The C horizon has 40 percent rock fragments and extends from 47 to 72 inches.

5.0 SUMMARY

Wetlands identified along the three staging and laydown yards include shallow emergent marsh, common reed marsh, purple loosestrife marsh, shrub swamp and red maple-hardwood swamp. Stream communities include one intermittent and one perennial stream.

Land use in the staging and laydown yards are predominantly commercial parking and storage areas. Because the proposed yard locations are predominantly within/near railroad and roadway corridors, many wetlands/waterbodies are characterized by previous anthropogenic disturbance and/or the presence of invasive plant species.

Confirmation of the wetland boundaries are the responsibility of the involved regulatory agencies with jurisdiction over wetlands and waterbodies within the staging and laydown yards of the overall project. As previously noted, most wetlands within staging and laydown yards are regulated by USACE (Section 10/404) and NYSDEC (Article 24). Streams and other waterbodies are regulated by USACE (Section 10/404) and NYSDEC (Article 15). Based on review of the NYSDEC wetland mapping, two delineated wetlands regulated under Article 24 were identified adjacent to the Coxsackie- Hudson River Bulk staging and laydown yard. The 100-foot adjacent area overlaps a portion of the yard. No NYSDEC regulated streams were identified during the site

evaluations. It is anticipated that USACE will take jurisdiction over the majority of the delineated wetlands within the staging and laydown yards.

6.0 REFERENCES

Browne, S. et. al. 1995. New York State Freshwater Wetlands Delineation Manual. New York State Department of Environmental Conservation, Division of Fish and Wildlife, Bureau of Habitat, Albany, NY.

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ATTACHMENT 1
WETLAND DETERMINATION DATA SHEETS AND WETLAND PHOTOGRAPHS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - Package 3 - Fort Edward Laydown Area A City/County: Washington Sampling Date: 9/15/22

Applicant/Owner: CHPE State: NY Sampling Point: G-P3-D_WET

Investigator(s): KW, KS Section, Township, Range: Fort Edward

Landform (hillside, terrace, etc.): Side Slope Local relief (concave, convex, none): Convex Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43°,16',50.51"N Long: 73°,33',54.10"W Datum:

Soil Map Unit Name: Claverack Loamy Fine Sand NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Gravel pit with spoil material throughout from river dredging operations.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 4

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: G-P3-D_WET

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	20	Yes	FAC
2. *Salix nigra*	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Cornus racemosa*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Lythrum salicaria*	15	Yes	OBL
2. *Phragmites australis*	5	Yes	FACW
3. *Typha latifolia*	5	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1. *Celastrus orbiculatus*	10	Yes	UPL
2.			
3.			
4.			
	10	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: G-P3-D_WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	7.5YR 2.5/1	95	7.5YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ? Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ? Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- x Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Wetland G-P3-D- View facing Southwest

Wetland G-P3-D- Soils

Supplemental Laydown Areas

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - Package 3 - Fort Edward Laydown Area A City/County: Washington Sampling Date: 9/15/22

Applicant/Owner: CHPE State: NY Sampling Point: G-P3-D_UP

Investigator(s): KW, KS Section, Township, Range: Fort Edward

Landform (hillside, terrace, etc.): Side Slope Local relief (concave, convex, none): Convex Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43°,16',50.51"N Long: 73°,33',54.10"W Datum:

Soil Map Unit Name: Claverack Loamy Fine Sand NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Gravel pit with spoil material throughout from river dredging operations.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: G-P3-D_UP

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Populus deltoides*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Daucus carota*	20	Yes	UPL
2. *Centaurea stoebe*	20	Yes	UPL
3. *Asclepias syriaca*	15	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1. *Celastrus orbiculatus*	5	Yes	UPL
2.			
3.			
4.			
	5	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: G-P3-D_UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/3	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Upland G-P3-D- View facing Northwest

Upland G-P3-D- Soils

Supplemental Laydown Areas

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-F-1 Wet

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42-16-56.75N Long: 73-51-18.81W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)
shallow emergent marsh

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes x	No ____	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes ____	No x	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Adjacent to steram, culvert under road.

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-F-1 Wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	2	Yes	FACW
2. *Quercus bicolor*	2	Yes	FACW
3. *Rosa multiflora*	5	Yes	FACU
4.			
5.			
6.			
7.			
	9 =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Scirpus atrovirens*	20	No	OBL
2. *Phalaris arundinacea*	40	Yes	FACW
3. *Typha latifolia*	30	Yes	OBL
4. *Lythrum salicaria*	15	No	OBL
5. *Scirpus cyperinus*	2	No	OBL
6. *Onoclea sensibilis*	5	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	112 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *Parthenocissus quinquefolia*	5	Yes	FACU
2. *Vitis aestivalis*	2	Yes	FACU
3.			
4.			
	7 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	67	x 1 =	67
FACW species	49	x 2 =	98
FAC species	0	x 3 =	0
FACU species	12	x 4 =	48
UPL species	0	x 5 =	0
Column Totals:	128 (A)		213 (B)

Prevalence Index = B/A = 1.66

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-F-1 wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3								vegetation with organics
3-7	7.5YR 3/1	100					Loamy/Clayey	
7-14	10YR 2/2	70	7.5YR 3/4	30	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: none

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Wetland GP6-F-1 (PEM)- View facing south

Wetland GP6-F-1- Soils

Segment 10

SITE PHOTOGRAPHS

Champlain Hudson Power Express

Wetland GP6-F-1 (PSS)- View facing east

Wetland GP6-F-1 - Soils

Segment 10

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-F-1 upl

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42-16-56.96N Long: 73-51-19.08W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)
successional old field

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No x	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-F-1 upl

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Cornus amomum*	15	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Solidago canadensis*	80	Yes	FACU
2. *Cornus amomum*	5	No	FACW
3. *Oenothera biennis*	5	No	FACU
4. *Pastinaca sativa*	5	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Vitis aestivalis*	10	Yes	FACU
2. *Parthenocissus quinquefolia*	5	Yes	FACU
3.			
4.			
	15	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	10	x 3 =	30
FACU species	100	x 4 =	400
UPL species	5	x 5 =	25
Column Totals:	135 (A)		495 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-F-1 upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					Loamy/Clayey	fill with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: rocky fill/gravel

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Upland GP6-F-1- View facing west

Upland GP6-F-1- Soils

Segment 10

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-G6 wet

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope %: 0-1

Subregion (LRR or MLRA): LRR R Lat: 42-16-56.22N Long: 73-51-09.72W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)
Cattail marsh.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 8

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-G6 wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juniperus virginiana*	10	Yes	FACU
2. *Rhamnus cathartica*	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Elaeagnus umbellata*	10	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Typha angustifolia*	90	Yes	OBL
2. *Symphyotrichum novae-angliae*	10	No	FACW
3. *Artemisia vulgaris*	5	No	UPL
4. *Scirpus cyperinus*	2	No	OBL
5. *Pilea pumila*	2	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	109	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Parthenocissus*	5	Yes	
2. *Celastrus orbiculatus*	2	Yes	FACU
3.			
4.			
	7	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	92	x 1 =	92
FACW species	12	x 2 =	24
FAC species	5	x 3 =	15
FACU species	12	x 4 =	48
UPL species	15	x 5 =	75
Column Totals:	136 (A)		254 (B)

Prevalence Index = B/A = 1.87

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-G6 wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					Loamy/Clayey	
5-12	10YR 4/2	85	10YR 4/6	15	C	PL	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: none

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Wetland GP6-G-6- View facing east

Wetland GP6-G-6- Soils

Segment 10	**SITE PHOTOGRAPHS**
	Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-G-6 upl

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope %: 15

Subregion (LRR or MLRA): LRR R Lat: 42-16-56.31N Long: 73-51-10.29W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)
Disturbed slope of mulch.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No x	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-G-6 upl

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Robinia pseudoacacia*	5	Yes	FACU
2. *Lonicera tatarica*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	10 =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Artemisia vulgaris*	60	Yes	UPL
2. *Solidago canadensis*	10	No	FACU
3. *Lactuca serriola*	8	No	FACU
4. *Oenothera biennis*	10	No	FACU
5. *Erigeron canadensis*	5	No	FACU
6. *Fragaria virginiana*			FACU
7.			
8.			
9.			
10.			
11.			
12.			
	93 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *Celastrus orbiculatus*	5	Yes	FACU
2.			
3.			
4.			
	5 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	48	x 4 =	192
UPL species	60	x 5 =	300
Column Totals:	108 (A)		492 (B)

Prevalence Index = B/A = 4.56

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-G-6 upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: mulch

Depth (inches): 0

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

No soils- mulch slope.

Upland GP6-G-6- View facing west

Segment 10	SITE PHOTOGRAPHS
	Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-H-3 wet

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 72-17-05.03N Long: 73-57-12.88W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)
Cattail marsh.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes x	No ____	Depth (inches): 4
Water Table Present?	Yes ____	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ____	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Inundated drainage corridor.

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-H-3 wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Typha angustifolia*	40	Yes	OBL
2. *Lythrum salicaria*	15	Yes	OBL
3. *Euthamia graminifolia*	5	No	FAC
4. *Echinochloa crus-galli*	8	No	FAC
5. *Alisma subcordatum*	5	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	73 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	0	x 2 =	0
FAC species	13	x 3 =	39
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	73 (A)		99 (B)

Prevalence Index = B/A = 1.36

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-H-3 wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Area was inundated and is dominated by OBL species, soils not required.

Wetland GP6-H-3- View facing northeast

Segment 10	**SITE PHOTOGRAPHS**
	Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-I-4 upl

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42-17-07.27N Long: 73-51-11.50W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)
Data point for upland GP6-I-4 and GP6-H-3. Mowed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No x	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-I-4 upl

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Juniperus virginiana*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Daucus carota*	15	No	UPL
2. *Lotus corniculatus*	5	No	FACU
3. *Potentilla simplex*	20	Yes	FACU
4. *Solidago canadensis*	10	No	FACU
5. *Prunella vulgaris*	2	No	FAC
6. *Poa pratensis*	40	Yes	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	92	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	85	x 4 =	340
UPL species	15	x 5 =	75
Column Totals:	102 (A)		421 (B)

Prevalence Index = B/A = 4.13

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-I-4 upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 5/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: none

Depth (inches): ____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Upland GP6-G-6- View facing west

Segment 10	SITE PHOTOGRAPHS
	Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-I-4 wet

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42-17-07.07N Long: 73-51-11.01W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)
shallow emergent marsh

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 5

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-I-4 wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Scirpus cyperinus*	70	Yes	OBL
2. *Typha angustifolia*	20	No	OBL
3. *Lythrum salicaria*	25	Yes	OBL
4. *Juncus tenuis*	5	No	FAC
5. *Euthamia graminifolia*	2	No	FAC
6. *Ambrosia artemisiifolia*	1	No	FACU
7. *Lactuca serriola*	1	No	FACU
8. *Setaria pumila*	1	No	FAC
9.			
10.			
11.			
12.			
	125 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	115	x 1 =	115
FACW species	0	x 2 =	0
FAC species	8	x 3 =	24
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	125 (A)		147 (B)

Prevalence Index = B/A = 1.18

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-I-4 wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: none

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Community is dominated by OBL species, soils not required.

Wetland GP6-I-4- View facing north

Segment 10	**SITE PHOTOGRAPHS**
	Champlain Hudson Power Express

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CHPE City/County: Coxsackie/Greene Sampling Date: 9/21/22

Applicant/Owner: TDI State: NY Sampling Point: GP6-I-4 upl

Investigator(s): N. Frazer & K. Schumacher Section, Township, Range:

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42-17-07.27N Long: 73-51-11.50W Datum: WGS84

Soil Map Unit Name: Kingsbury and Rhinebeck soils (KrB) NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)
Data point for upland GP6-I-4 and GP6-H-3. Mowed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No x	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: GP6-I-4 upl

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Juniperus virginiana*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Daucus carota*	15	No	UPL
2. *Lotus corniculatus*	5	No	FACU
3. *Potentilla simplex*	20	Yes	FACU
4. *Solidago canadensis*	10	No	FACU
5. *Prunella vulgaris*	2	No	FAC
6. *Poa pratensis*	40	Yes	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	92	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	85	x 4 =	340
UPL species	15	x 5 =	75
Column Totals:	102 (A)		421 (B)

Prevalence Index = B/A = 4.13

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP6-I-4 upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 5/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: none

Depth (inches): ____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Upland GP6-I-4 & GP6-H-3- View facing north

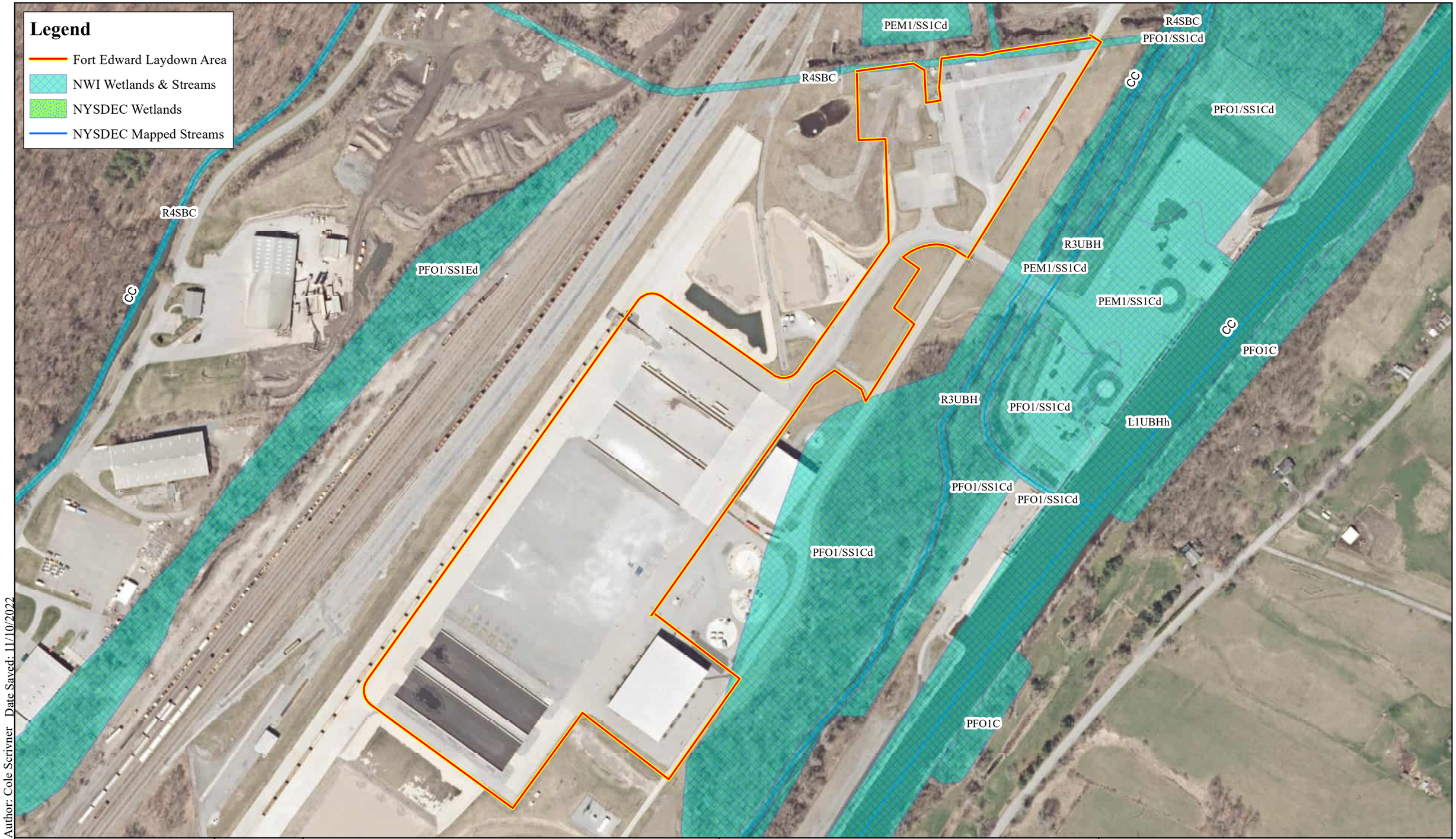
Upland GP6-I-4 & GP6-H-3- Soils

Segment 10

SITE PHOTOGRAPHS

Champlain Hudson Power Express

ATTACHMENT 2
NWI & NYSDEC WETLAND & STREAM MAPS



Author: Cole Scrivner Date Saved: 11/10/2022

CHA

N

0 250 500 Feet

Champlain Hudson Power Express
Segment 3 (Package 2) Fort Edward Laydown Area
Wetland & Stream Map
(NWI, NYSDEC)

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Wetland layers obtained from USFWS NWI and the NYS Clearing House (NYSDEC).

Author: Cole Scrivner Date Saved: 1/16/2023

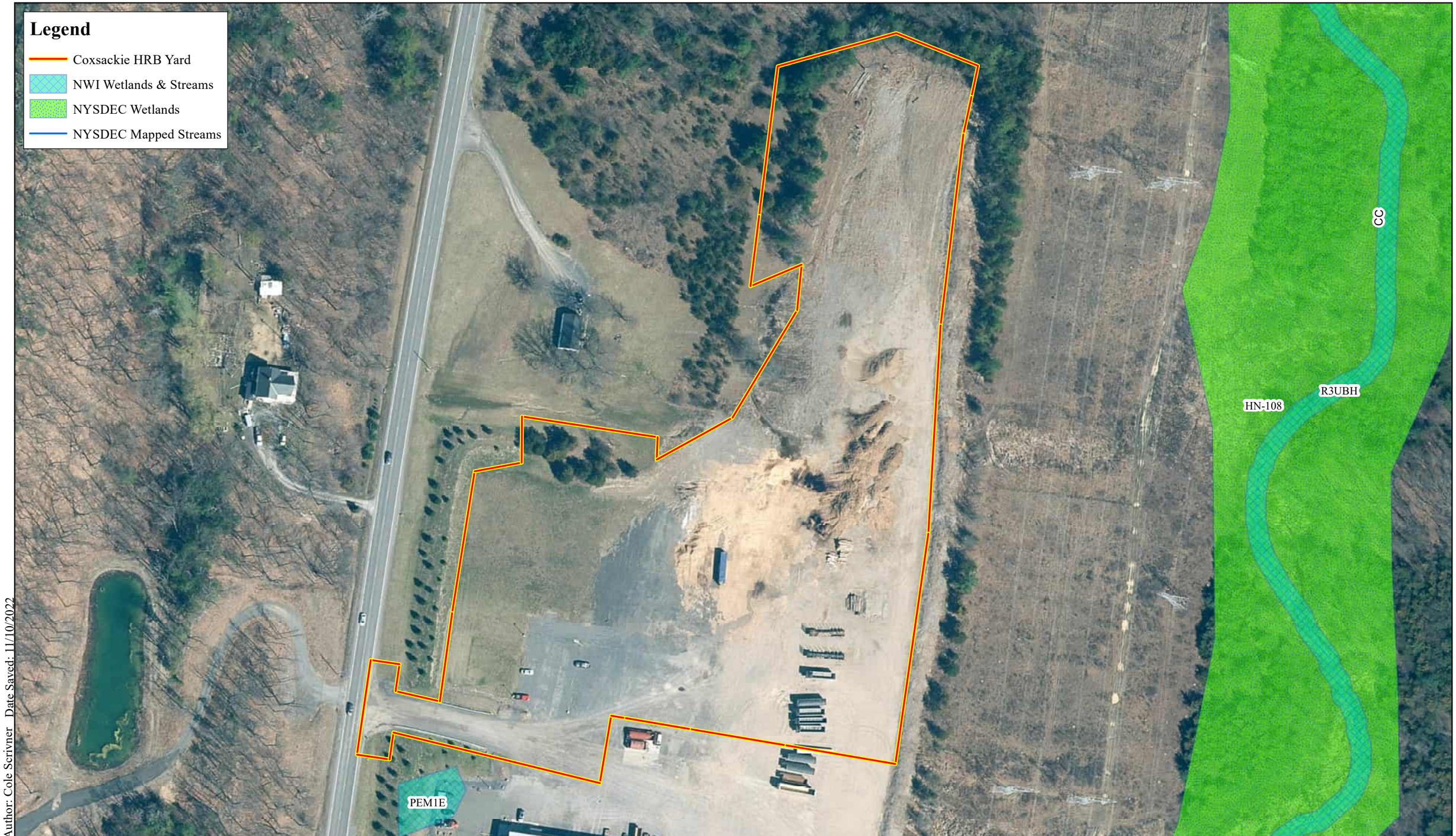
CHA

N

0 300 600 Feet

Champlain Hudson Power Express
Segment 9 (Package 5B) Bethlehem Laydown Area
Wetland & Stream Map
(NWI, NYSDEC)

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Wetland layers obtained from USFWS NWI and the NYS Clearing House (NYSDEC).



Author: Cole Scrivner Date Saved: 11/10/2022

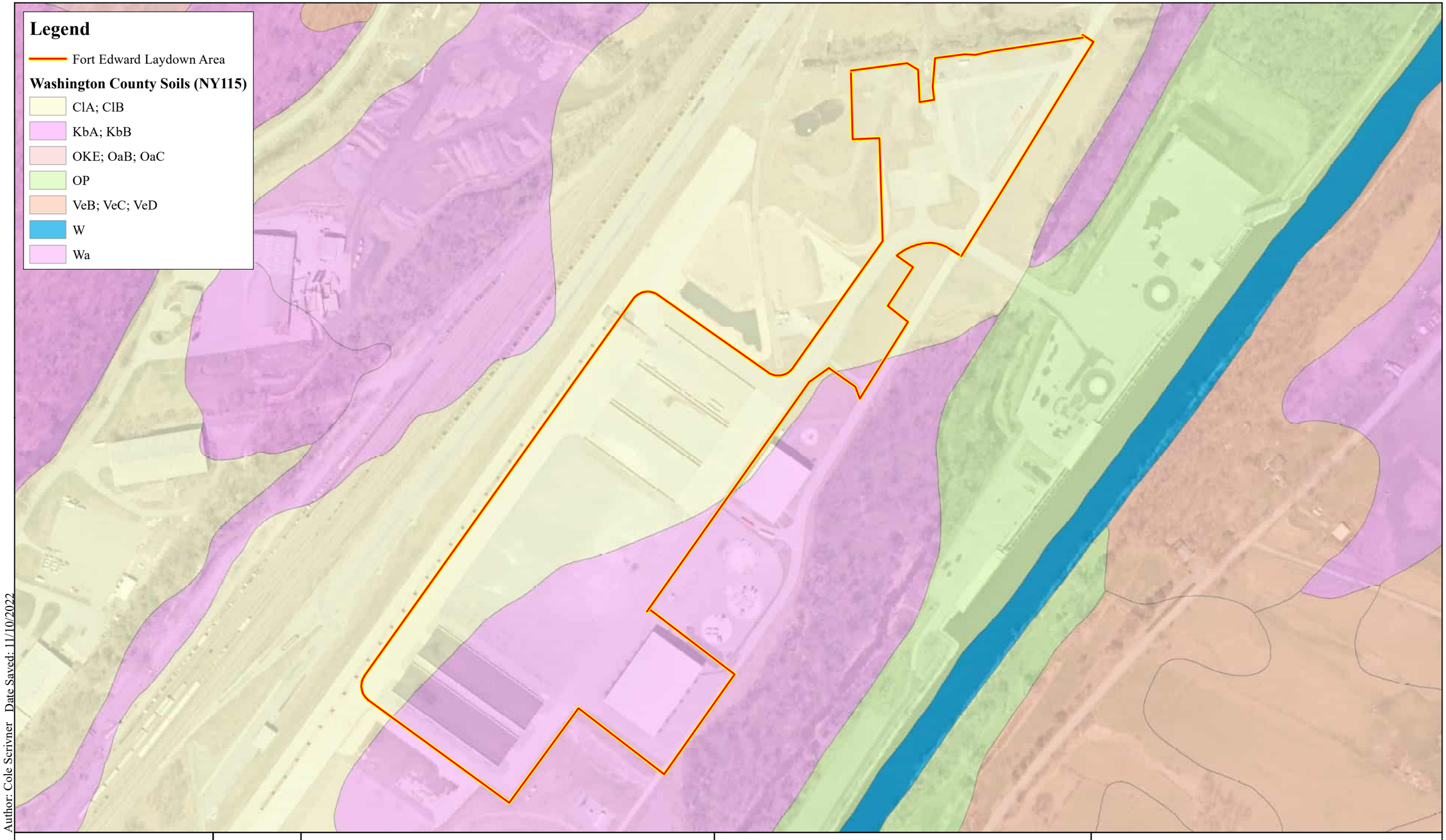
N

0 200 400 Feet

Champlain Hudson Power Express
Segment 10 (Package 6) Coxsackie Laydown Area
Wetland & Stream Map
(NWI, NYSDEC)

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Wetland layers obtained from USFWS NWI and the NYS Clearing House (NYSDEC).

ATTACHMENT 3
NRCS SOIL MAPS



Author: Cole Scrivner Date Saved: 11/10/2022

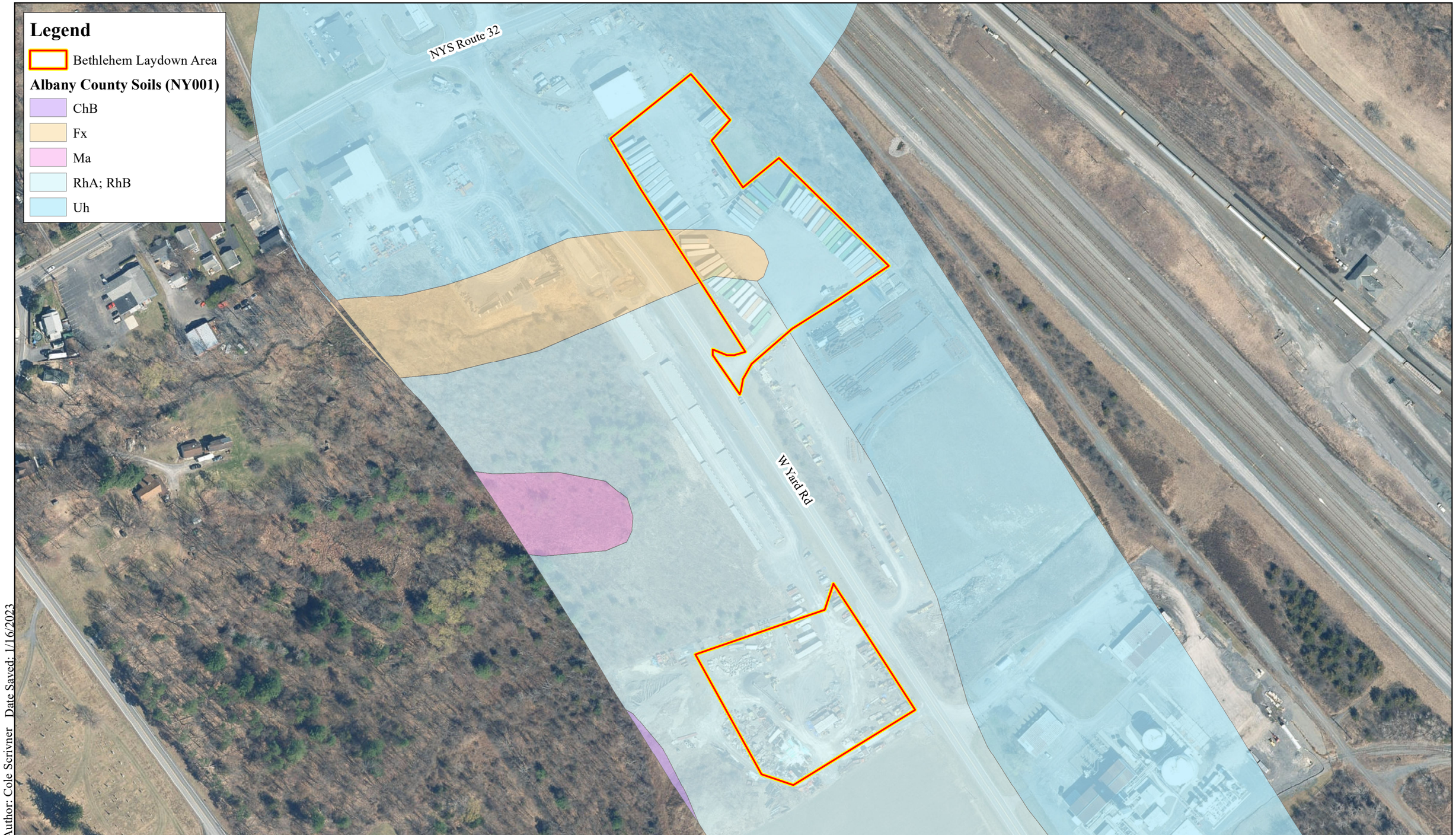
CHA

N

0 250 500 Feet

Champlain Hudson Power Express
Segment 3 (Package 2) Fort Edward Laydown Area
NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.



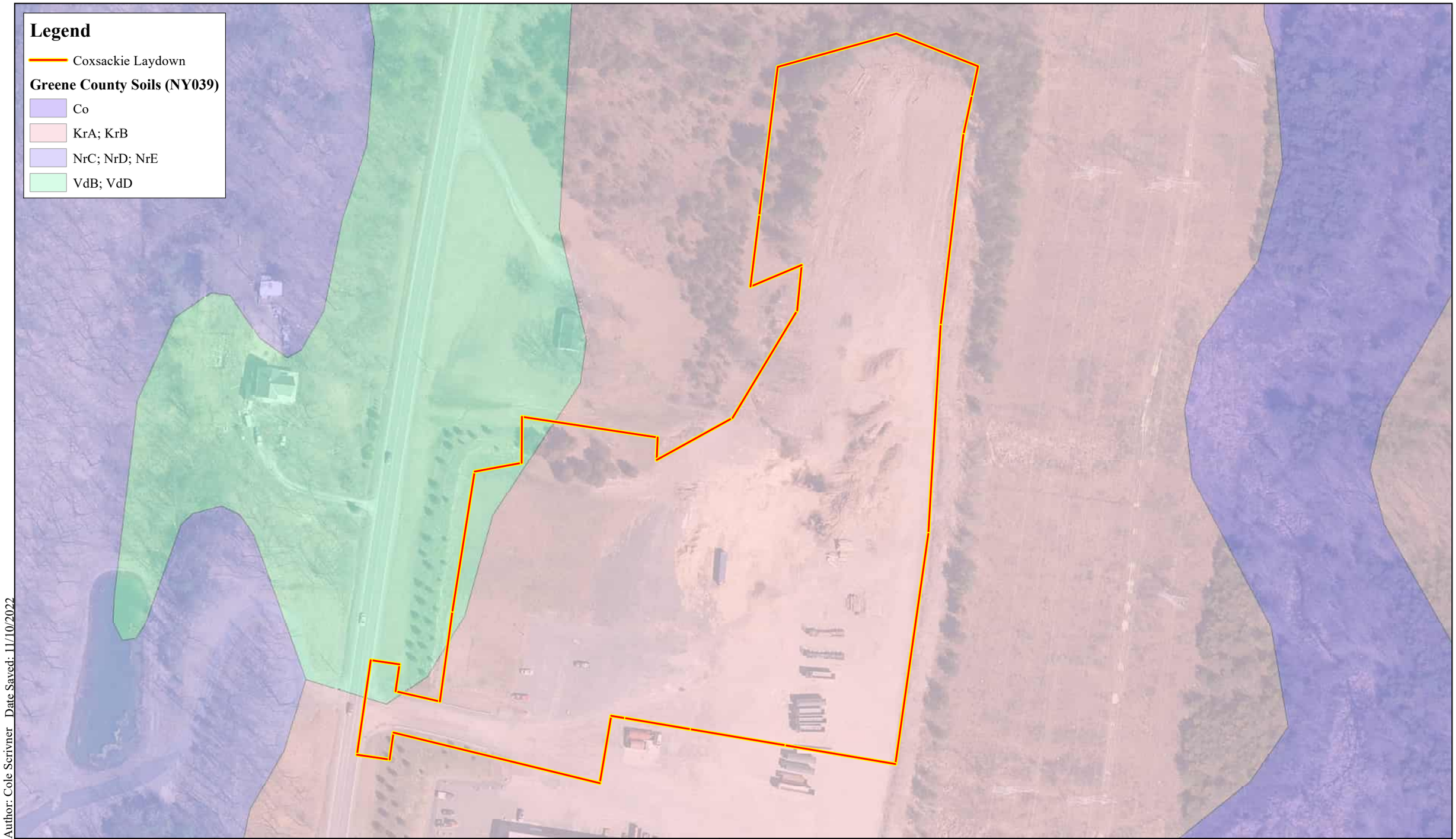
Author: Cole Scrivner Date Saved: 1/16/2023

N

0 300 600 Feet

Champlain Hudson Power Express
Segment 9 (Package 5B) Bethlehem Laydown Area
NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.



Author: Cole Scrivner Date Saved: 11/10/2022

N

0 200 400 Feet

Champlain Hudson Power Express
Segment 10 (Package 6) Coxsackie Laydown Area
NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

ATTACHMENT 4
TABLES

Table 4-1 Summary of Wetlands Within the Staging and Laydown Areas[1]					
Wetland ID	**Cowardin Classification[2]**	**Associated Water Course**	**Area w/in JD Limits Square Feet (sf)**	**USACE & NYSDEC Jurisdiction**	**Coordinates (lat., long)**
Fort Edward Staging and Laydown Areas (A &B)					
GP3-D	PFO/PSS	Unnamed Tributary to Champlain Canal	0	USACE	43.280750, -73.565067
Bethlehem Staging and Laydown Area					
BLD	PEM	Unnamed Tributary to Onesquethaw Creek	0	USACE	42.578090, -73.873745
Coxsackie-Hudson River Bulk Laydown Area					
GP6-F	PEM/PSS	-	0	USACE/NYSDEC (HN-108)	42.283370 -73.853433
GP6-G	PEM	-	0	USACE/ NYSDEC (HN-108)	42.284891 -73.853340
GP6-H	PEM	-	0	USACE	42.283907 -73.854028
GP6-I	PEM	-	0	USACE	42.284170 -73.853636

[1] Wetlands identified/delineated during field surveys include both wetlands that are directly within as well as wetlands adjacent to equipment staging and layout areas.

[2]Cowardin et al. 1979 categories include: Palustrine Emergent (PEM), Palustrine Forested (PFO), Palustrine and Scrub-Shrub (PSS)

Table 4-2 Summary of Waterbodies within the Project Corridor								
Waterbody Name	**NYSDEC Classification**	**Waterbody Field ID**	**Flow Status**	**Substrate**	**Width (ft.)[1]**	**Depth (ft.)[1]**	**Length w/in JD Boundary**	**Coordinates (lat., long)**
Fort Edward Staging and Laydown Area (A& B)								
Unnamed Tributary to Hudson River	Unmapped	GP3-S	Intermittent	Muck & Silt	20 - 25	2	0	43.280843, -73.564191
Unnamed Tributary to Hudson River	Mapped	BLD-S1	Perennial	Cobbles/ rip rap				

[1] **Bankfull width and bankfull depth measurements are approximate.**

Table 4-3 Soil Description Summary					
County	**Soil Name**	**Symbol**	**% Slopes**	**Hydric (y/n)**	**Drainage Class**
Hydric Soils					
Albany	Fluvaquents-Udifluvents complex, frequently flooded	Fx	0-3	Y	Poorly Drained
Non-hydric Soils					
Washington	Claverack loamy fine sand	ClA	0-3	N	Moderately Well Drained
Washington	Claverack loamy fine sand	ClB	3-8	N	Moderately Well Drained
Washington	Kingsbury silty clay	KbA	0-2	N	Somewhat Poorly Drained
Washington	Kingsbury silty clay	KbB	2-6	N	Somewhat Poorly Drained
Greene	Kingsbury and Rhinebeck soils	KrA	0-3	N	Somewhat Poorly Drained
Greene	Kingsbury and Rhinebeck soils	KrB	3-8	N	Somewhat Poorly Drained
Albany	Udorthents, clayey-Urban land complex	Uh	0-8	-	Moderately Well Drained
Greene	Valois-Nassau complex, undulating	VdB	3-8	N	Well Drained
Greene	Valois-Nassau complex, hilly	VdD	15-25	N	Well Drained

ATTACHMENT 5
WETLANDS AND WATERBODIES DELINEATION MAPPING

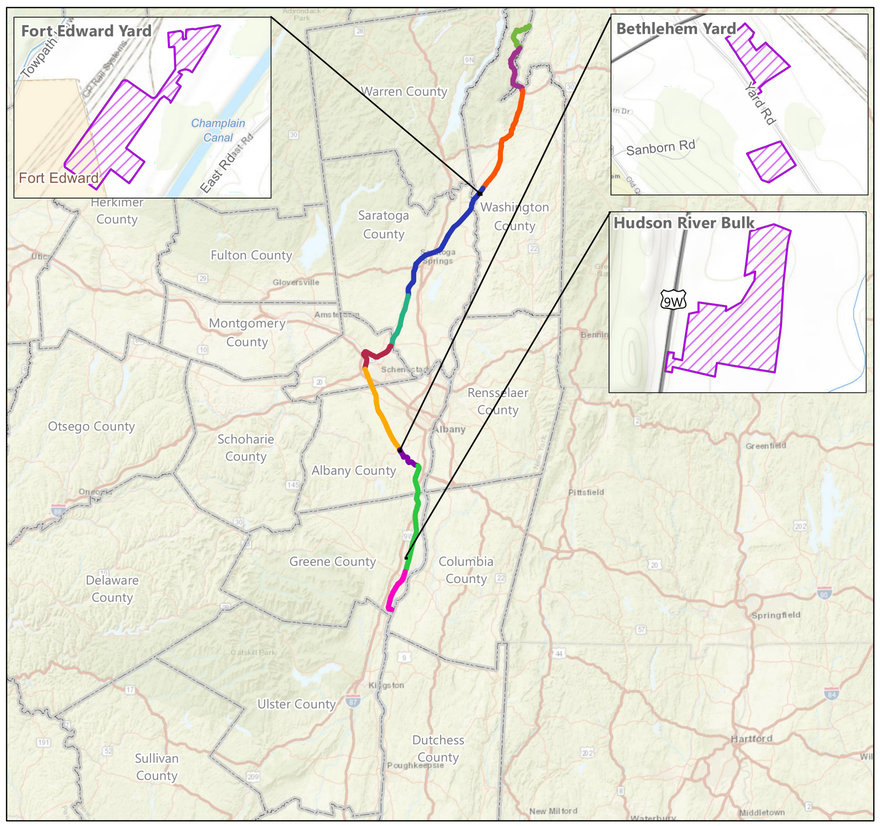
CHAMPLAIN HUDSON POWER EXPRESS

PROJECT WIDE LAYDOWN YARD PACKAGE

WASHINGTON, ALBANY AND GREENE COUNTIES, NEW YORK

FINAL EM&CP SUBMISSION

(JANUARY 20, 2023)



SITE LOCATION MAP
NOT TO SCALE

NOT FOR CONSTRUCTION
FOR EM&CP PERMIT ONLY

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/2023	REVISED PER DPS COMMENTS	JM	JR
0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
COVER SHEET

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	G-000

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | DATE 11/11/2022 | REV. NO. X | XXX

GENERAL NOTES:

1. THE PLANS SHOW SUBSURFACE STRUCTURES, ABOVE GROUND STRUCTURES AND/OR UTILITIES FROM FIELD LOCATION AND RECORD MAPPING, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE DIFFERENT FROM THAT SHOWN OR MAY NOT BE SHOWN, AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL, OR BLAST, CALL U.F.P.O. 1-(800)-962-7962 TOLL FREE.

2. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER. CHANGES TO THE PLAN SHALL BE DONE IN ACCORDANCE WITH THE EM&CP SECTION 3.2.6.

3. THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISTURBED AS DETERMINED BY THE ENGINEER.

4. THE CONTRACTOR AND/OR CERTIFICATE HOLDER SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL CONSTRUCTION PERMITS, INSPECTIONS, CERTIFICATES, ETC. AND SHALL COMPLY WITH ALL REQUIRED PERMITS.

5. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS.

6. ALL PROPOSED UTILITIES AND APPURTENANCES TO BE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL MUNICIPALITIES' CODES AND REGULATIONS GOVERNING THE INSTALLATION OF SUCH UTILITIES.

7. THE ENGINEER RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OF THIS PROJECT.

8. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW YORK STATE LICENSED LAND SURVEYOR.

9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS.

10. THE CONTRACTOR SHALL:

    A. VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
    B. EXAMINE THE SITE AND INCLUDE IN HIS WORK THE EFFECT OF ALL EXISTING CONDITIONS ON THE WORK.
    C. PROVIDE AND INSTALL ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH RECOGNIZED GOOD STANDARD PRACTICE.

11. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK IN CONFORMANCE WITH REFERENCE SECTION 4.5 DEWATERING METHODS IN THE EM&CP. CONTRACTOR SHALL MAINTAIN EXISTING SITE DRAINAGE PATTERNS THROUGHOUT CONSTRUCTION UNLESS OTHERWISE SHOWN ON THE PLANS.

12. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.

13. ALL FRAMES AND COVER TO BE SET AT ELEVATIONS CONSISTENT WITH THE PROJECT DETAILS.

14. ALL EXCAVATIONS SHALL BE PROTECTED AT THE END OF EACH WORK DAY PER OSHA AND NYSDOT REQUIREMENTS.

15. CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO EXISTING UTILITIES. UTILITIES DAMAGED BY CONTRACTOR SHALL BE IMMEDIATELY REPAIRED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE. IF DURING EXCAVATION PREVIOUSLY DAMAGED UTILITIES ARE UNCOVERED, CONTRACTOR SHALL DOCUMENT THE DAMAGE AND REPORT DAMAGE TO THE APPROPRIATE OWNER.

16. CONTRACTOR TO COORDINATE ALL DRIVEWAY CROSSINGS WITH THE PROPERTY OWNERS PRIOR TO EXCAVATING. ACCESS TO ALL DRIVEWAYS FOR THE RESIDENTS AND COMMERCIAL PROSPERITIES WILL NEED TO BE MAINTAINED DURING THE PROJECT. ALL EXCAVATIONS IN THE ENTRANCES/DRIVEWAYS WILL NEED TO BE BACKFILLED AT THE END OF EACH WORKDAY, OR STEEL PLATES SHALL BE INSTALLED TO ALLOW ACCESS DURING CONSTRUCTION. REFER TO THE EM&CP FOR EMERGENCY ACCESS MANAGEMENT PLAN.

17. SERVICE CONNECTIONS TO BE FIELD LOCATED PRIOR TO CONSTRUCTION.

18. REFER TO EM&CP DOCUMENT FOR ADDITIONAL ITEMS FOR ALL GENERAL NOTES.

19. FUELING OPERATIONS SHALL NOT TAKE PLACE WITHIN 100 FEET OF ANY KNOWN WETLAND OR STREAM OR WITHIN 200 FEET OF ANY POTABLE WATER SOURCE. WHERE THIS IS UNAVOIDABLE, REFUELING SHALL TAKE PLACE IN ACCORDANCE WITH THE EM&CP SECTION 5.5.

EROSION CONTROL NOTES

1. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.

2. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND FOLLOW THE EM&CP DOCUMENTS DURING CONSTRUCTION OPERATIONS.

3. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. (WETLAND PROTECTION FENCE, SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE)

4. SITE DISTURBANCE SHALL NOT EXCEED FIVE (5) ACRES OF SOIL AT ANY ONE TIME WITHOUT PRIOR WRITTEN AUTHORIZATION FROM NYSDEC DIVISION OF WATER.

5. ALL EXPOSED AREAS SHALL BE SEEDED AND MULCHED AS SPECIFIED WITHIN 14 DAYS OF FINAL GRADING (DURING WINTER STABILIZATION, THIS TIMEFRAME IS 3 DAYS AND MUST BEGIN WITHIN 24 HOUR OF DISTURBANCE). FOR DISTURBED WETLAND, STEEP SLOPES AND SENSITIVE AREAS, AREA TO BE RESTORED IN ACCORDANCE WITH THE EM&CP SECTIONS 9 AND 13.

6. INACTIVE PORTIONS OF THE SITE ARE TO BE SEEDED AND MULCHED AS SPECIFIED WITHIN 14 DAYS (DURING WINTER STABILIZATION, THIS TIMEFRAME IS 3 DAYS AND MUST BEGIN WITHIN 24 HOUR OF DISTURBANCE). FOR DISTURBED WETLAND, STEEP SLOPES AND SENSITIVE AREAS, AREA TO BE RESTORED IN ACCORDANCE WITH THE EM&CP SECTIONS 9 AND 13.

7. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) DAYS OR MORE FREQUENTLY IF REQUIRED. ALL MAINTENANCE REQUIRED BY INSPECTION SHALL COMMENCE WITHIN 24 HOURS AND BE COMPLETED WITHIN 48 HOURS OF REPORT.

8. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.

9. GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.

10. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY FOLLOWING SITE INSPECTION. THE SWPPP AND/OR ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF THE INSPECTOR DEEMS NECESSARY.

11. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE REASONABLE MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.

12. AT THE END OF EACH WORK DAY DISTURBED SOILS ARE TO BE REGRADED TO DRAIN INTO TEMPORARY DIVERSION SWALES OR SEDIMENT CONTROL PRACTICES.

13. CONCRETE WASHOUTS DEPICTED ON PLANS ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD LOCATE WASHOUTS AS NECESSARY. FIELD LOCATED WASHOUTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE EM&CP AND SHALL BE A MINIMUM OF 100' FROM ADJACENT WETLANDS AND 200' FROM ANY EXISTING WELLS.

GENERAL SEQUENCING NOTES

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (INSTALLED IN PROGRESSIVE PHASES).

2. ESTABLISH WORK AREA AND CONTRACTOR STAGING AREAS.

3. PERFORM INITIAL CLEARING TO REMOVE VEGETATION (WHERE REQUIRED).

4. PERFORM SITE GRADING AND INSTALL GRAVEL ACCESS ROADS AND GROUND STABILIZATION IF REQUIRED DUE TO SITE CONDITIONS. GROUND STABILIZATION SHALL GENERALLY CONSIST OF UNDERCUTTING EXISTING UNSUITABLE TOPSOIL (TO BE STOCKPILED ON-SITE), PROOF ROLLING THE SUBGRADE, INSTALLING LAYERS OF GEOTEXTILE FABRIC AND GEOGRID, AND INSTALLING AN AGGREGATE BASE. ADDITIONAL ESCS WILL BE INSTALLED AT THE DIRECTION OF DESIGN ENGINEERS AND ENVIRONMENTAL INSPECTORS.

5. INSTALL TEMPORARY ELECTRIC UTILITY TIE-INS FROM NEARBY LOCATIONS. DRILL WATER WELL AT COXSACKIE-HUDSON RIVER BULK YARD, AND TIE INTO PUBLIC WATER SYSTEM AT FORT EDWARD AND BETHLEHEM YARDS. WATER WELL AT COXSACKIE-HUDSON RIVER YARD WILL BE DRILLED BY A NYSDEC LICENSED WELL DRILLER AND WELL INSTALLATION WILL FOLLOW NYSDEC REGULATIONS FOR DRILLING NOTICE. REGISTRATION AND COMPLETION REPORTS WILL BE PROVIDED THROUGH THE WELL DRILLING CONTRACTOR. SANITARY HOLDING TANKS WILL BE UTILIZED AT EACH LAYDOWN YARD, SEE SECTION 5.3.2 FOR DETAILS PERTAINING TO PRECAUTIONARY MEASURES AND SERVICING.

6. INSTALL FENCING AND GATES, SITE LIGHTING, MODULAR TRAILER MOUNTED OFFICES, DUMPSTERS, AND CONNEX STORAGE CONTAINERS.

7. INSTALL CONCRETE PADS FOR TEMPORARY STRUCTURES SUCH AS MAINTENANCE SHOP, CABLE HEATING BUILDING, FUELING PAD, FUEL TRUCK PARKING PAD, AND EQUIPMENT WASH PAD.

8. INSTALL TEMPORARY STRUCTURES.

9. AT THE COMPLETION OF CONSTRUCTION, CONTRACTOR WILL RESTORE THE SITE TO EXISTING CONDITIONS IN ACCORDANCE WITH CHAPTER 13 OF THE EM&CP.

SHEET INDEX

Dig Safely. New York Call 811 before you dig

CHPE Champlain Hudson Power Express

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/2023	REVISED PER DPS COMMENTS	JM	JR
0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
GENERAL NOTES AND SHEET INDEX

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | REV. NO.: X

KIEWIT PROJECT NO.: 21162
CHA PROJECT NO.: 066076
DRAWING NO.: G-001
DATE: 11/11/2022

LEGEND & ABBREVIATIONS

- EXIST. FIBER OPTIC LINE HANDHOLE
- EXIST. FIBER OPTIC LINE PEDESTAL
- EXIST. FIBER OPTIC LINE DOGHOUSE
- EXIST. FIBER OPTIC LINE MANHOLE
- EXIST. FIBER OPTIC LINE VAULT
- EXIST. FIBER OPTIC LINE BORE PIT
- EXIST. FIBER OPTIC LOCK BOX
- EXIST. GROUND ROD
- EXIST. FIBER OPTIC MARKER POST
- EXIST. FIBER STORAGE
- EXIST. FIRE HYDRANT
- EXIST. WATER VALVE
- EXIST. WATER MANHOLE
- EXIST. WATER MARKER
- EXIST. SANITARY SEWER MANHOLE
- EXIST. SANITARY SEWER VENT
- EXIST. STORM SEWER MANHOLE
- EXIST. STORM SEWER CATCH BASIN
- EXIST. CULVERT INVERT
- EXIST. GAS MANHOLE
- EXIST. GAS VALVE
- EXIST. GAS MARKER
- EXIST. GAS PIPELINE VENT
- EXIST. LIGHT POLE
- EXIST. UTILITY POLE
- EXIST. ELEC. POLE
- EXIST. TRAFFIC LIGHT
- EXIST. ELEC. METER
- EXIST. ELEC. MANHOLE
- EXIST. ELEC. TRANSFORMER
- EXIST. ELEC. VAULT
- EXIST. ELEC. HANDHOLE
- EXIST. ELEC. PEDESTAL/BOX
- EXIST. ELEC. MARKER POST
- EXIST. ELEC. GUY ANCHOR/WIRE
- EXIST. TELE. RISER/BOX
- EXIST. TELE. MANHOLE
- EXIST. TELE. HANDHOLE
- EXIST. TELE. VAULT
- EXIST. TELE. PEDESTAL
- EXIST. TELE. DOGHOUSE
- EXIST. TELE. MARKER POST
- EXIST. TELE. JUNCTION BOX
- EXIST. TRAFFIC SIGNAL BOX
- EXIST. CELL TOWER
- EXIST. CABLE BOX
- EXISTING MANHOLE UNKNOWN
- EXISTING UTILITY BOX UNKNOWN
- EXISTING ANTENNA
- EXISTING CAPPED IRON ROD
- EXISTING IRON PIPE
- EXISTING CONCRETE MONUMENT
- EXISTING POST
- EXISTING REFLECTOR MARKER
- EXISTING SYMBOL (SYM.)

- EXISTING SIGN
- EXIST. STRUCTURE POST
- EXIST. STRUCTURE MAILBOX
- EXIST. WETLAND FLAG
- EXIST. GAS LINE
- EXIST. UNDERGROUND TELE.
- EXIST. FIBER OPTIC
- EXIST. OVERHEAD TELE.
- EXIST. UNDERGROUND ELEC.
- EXIST. OVERHEAD ELEC.
- EXIST. CULVERT
- EXIST. SANITARY SEWER
- EXIST. STORM SEWER
- EXIST. POTABLE WATER LINE
- EXIST. RAILROAD TRACK
- EXIST. WETLANDS
- CERTIFIED ROUTE PROVIDED BY CHPE KMZ
- EXIST. CONTOUR, INDEX
- EXIST. CONTOUR, DEPRESSION INDEX
- EXIST. CONTOUR, INTERMEDIATE
- EXIST. CONTOUR, DEPRESSION INTERMEDIATE
- EXIST. SPOT ELEVATION
- EXIST. CULTURAL DEBRIS
- EXIST. CULTURAL FIELD LINE
- EXIST. CULTURAL LANDSCAPE AREA
- EXIST. CULTURAL PILE
- EXIST. CULTURAL STORAGE AREA
- EXIST. HYDROGRAPHIC
- EXIST. CULVERT
- EXIST. INUNDATED AREA
- EXIST. RIP-RAP
- EXIST. STREAM
- EXIST. SWAMP
- WATER LEVEL
- EXIST. NATURAL BOULDER
- EXIST. NATURAL SHRUB LINE
- EXIST. NATURAL TREE LINE
- EXIST. NATURAL SINGLE TREE/BUSH
- EXIST. STRUCTURAL BUILDING
- EXIST. PAVED DRIVE
- EXIST. PAVED ROAD
- EXIST. PAVED SHOULDER
- EXIST. PAVED SIDEWALK
- EXIST. GUARDRAIL
- EXIST. RAILROAD
- EXIST. TRAIL
- EXIST. FENCE
- EXIST. WALL
- EXIST. RETAINING WALL
- EXIST. MILEPOST NUMBER
- EXIST. MAPPING BOUNDARY
- EXIST. GROUND CONTROL
- PROP. RIGHT-OF-WAY
- PROP. ABUTTER

- PEM – PALUSTRINE EMERGENT
- PSS – PALUSTRINE SCRUB-SHRUB
- PFO – PALUSTRINE FORESTED
- PUB – PALUSTRINE UNCONSOLIDATED BOTTOM
- L1 – LACUSTRINE LIMNETIC
- L2 – LACUSTRINE LITTORAL
- NYSDEC FWW 100-FOOT ADJACENT BUFFER AREA
- ESA 5 HABITAT (AVOID)
- ESA 5 HABITAT
- 200' ESA 5 BUFFER
- JD BOUNDARY
- PROP. WETLAND PROTECTION FENCE
- PROP. COMPOST FILTER SOCK (OR SILT SOCK)
- PROP. LIMITS OF WORK/DISTURBANCE
- PROP. LIMITS OF CLEARING/LIMITS OF WORK IN CLEARING AREAS (SEE NOTE 1)
- PROP. CONCRETE WASHOUT
- PROP. ACCESS ROAD ROUTE (EXISTING ROAD OR SURFACE)
- PROP. REFURBISHED ACCESS ROAD
- PROP. ACCESS ROAD OR OFF SITE ACCESS ROAD
- PROP. TIMBER MATTING ACCESS ROAD
- PROP. SPLICE LOCATION
- PROP. SPLICE VAULT
- PROP. LINK BOX HANDHOLE
- PROP. FIBER SPLICE HANDHOLE
- PROP. BORING LOCATION
- PROP. ALIGNMENT STATIONING
- PROP. RIGHT-OF-WAY
- PROP. ABUTTER
- PROP. ALIGNMENT CENTERLINE
- PROP. TEMPORARY EASEMENT
- PROP. PERMANENT EASEMENT
- PROP. TEMPORARY ACCESS EASEMENT
- APPROXIMATE SNOWMOBILE TRAIL LOCATION

NOTES:

1. LIMIT OF WORK (LOW) – THE BOUNDARY IN WHICH ALL CONSTRUCTION ACTIVITIES, STOCKPILES MATERIAL, EQUIPMENT STORAGE, ACCESS, PARKING, GRADING, LANDSCAPING, RESTORATION, AND ANY OTHER CONSTRUCTION RELATED ACTIVITIES SHALL OCCUR. ADDITIONALLY, THE LOW IS THE BOUNDARY FOR ALL POTENTIAL DISTURBANCE DURING CONSTRUCTION. UNLESS OTHERWISE SPECIFIED, WHEN THE LIMIT OF CLEARING AND GRUBBING IS SHOWN ON THE PLANS, IT SHALL ALSO BE THE LOW. THE LOW INCLUDES THE AREA THAT WOULD BE CONSIDERED THE LIMIT OF DISTURBANCE (LOD).

APP	APPROVED
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
DB	DESIGNED BY
DEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DEG	DEGREES
DR	DRIVE
DZ	DEVIATION ZONE
E	EASTING
ELECTRIC	ELECTRIC CABLE
ELEV	ELEVATION
FIBER	FIBER OPTIC CABLE
FT	FEET
GAS	GAS PIPE
H	HORIZONTAL
HDD	HORIZONTAL DIRECTIONAL DRILLING
HVDC	HIGH-VOLTAGE DIRECT CURRENT TRANSMISSION LINE
INV	INVERT ELEVATION
LOW	LIMITS OF WORK
MAX	MAXIMUM
MIN	MINIMUM
N	NORTHING
NO	NUMBER
NY	NEW YORK
P#	PACKAGE #
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REV	REVISION
ROW	RIGHT-OF-WAY
RTE	ROUTE
SEWER	SANITARY SEWER PIPE
SH	SHEET
ST	STREET
STA	STATION
STORM	STORM DRAIN PIPE
TELECOM	TELECOMMUNICATIONS CABLE
TEMP	TEMPORARY
TR	THERMAL RESISTIVITY
TYP	TYPICAL
V	VERTICAL
WATER	WATERLINE

CHPE Champlain Hudson Power Express

Kiewit

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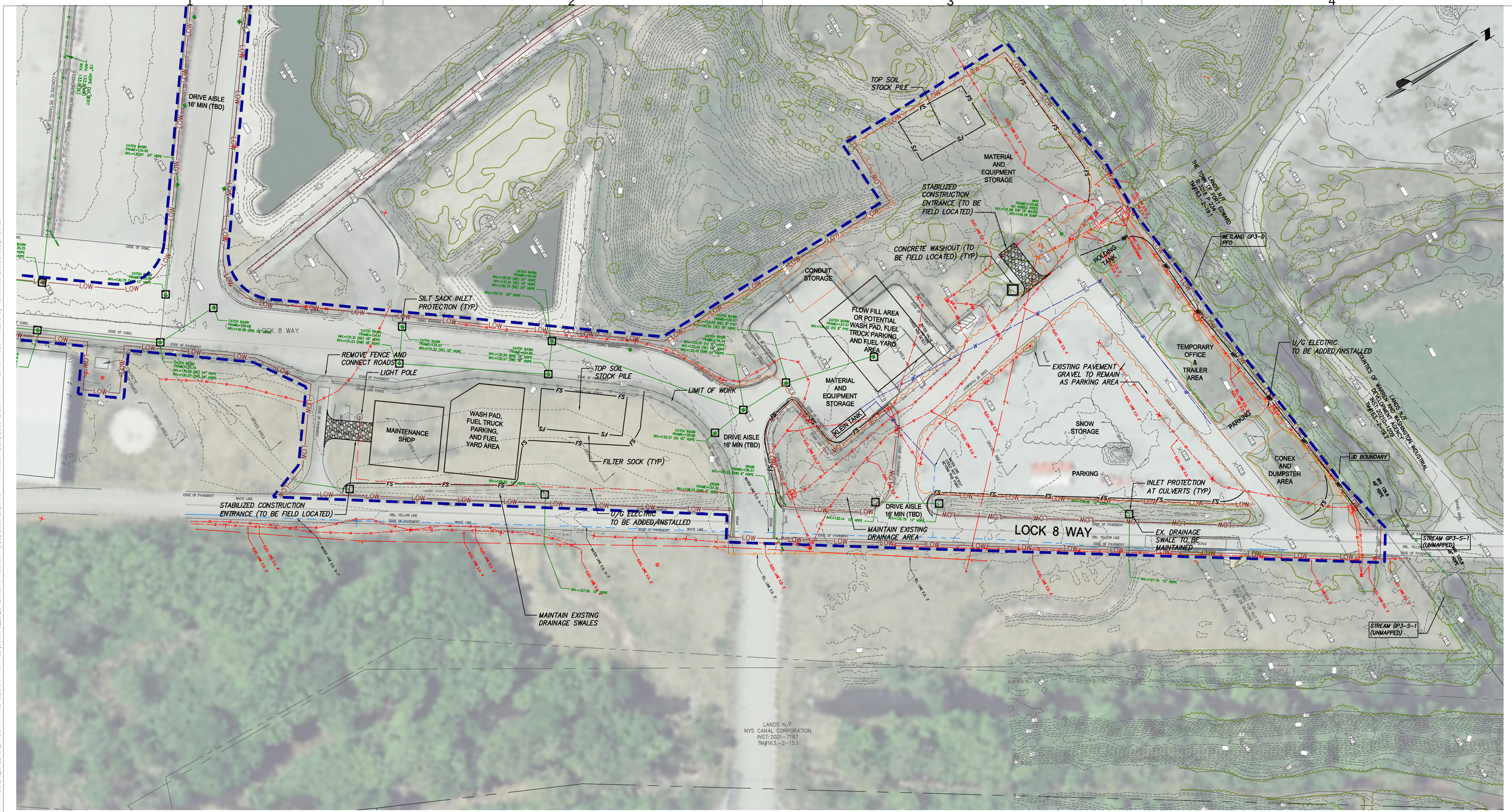
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/2023	REVISED PER DPS COMMENTS	JM	JR
0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
LEGENDS AND ABBREVIATIONS

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	G-003

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 11/11/2022



FORT EDWARD LAYDOWN AREA A
SCALE: 1" = 50'

0 50 100
Scale in feet

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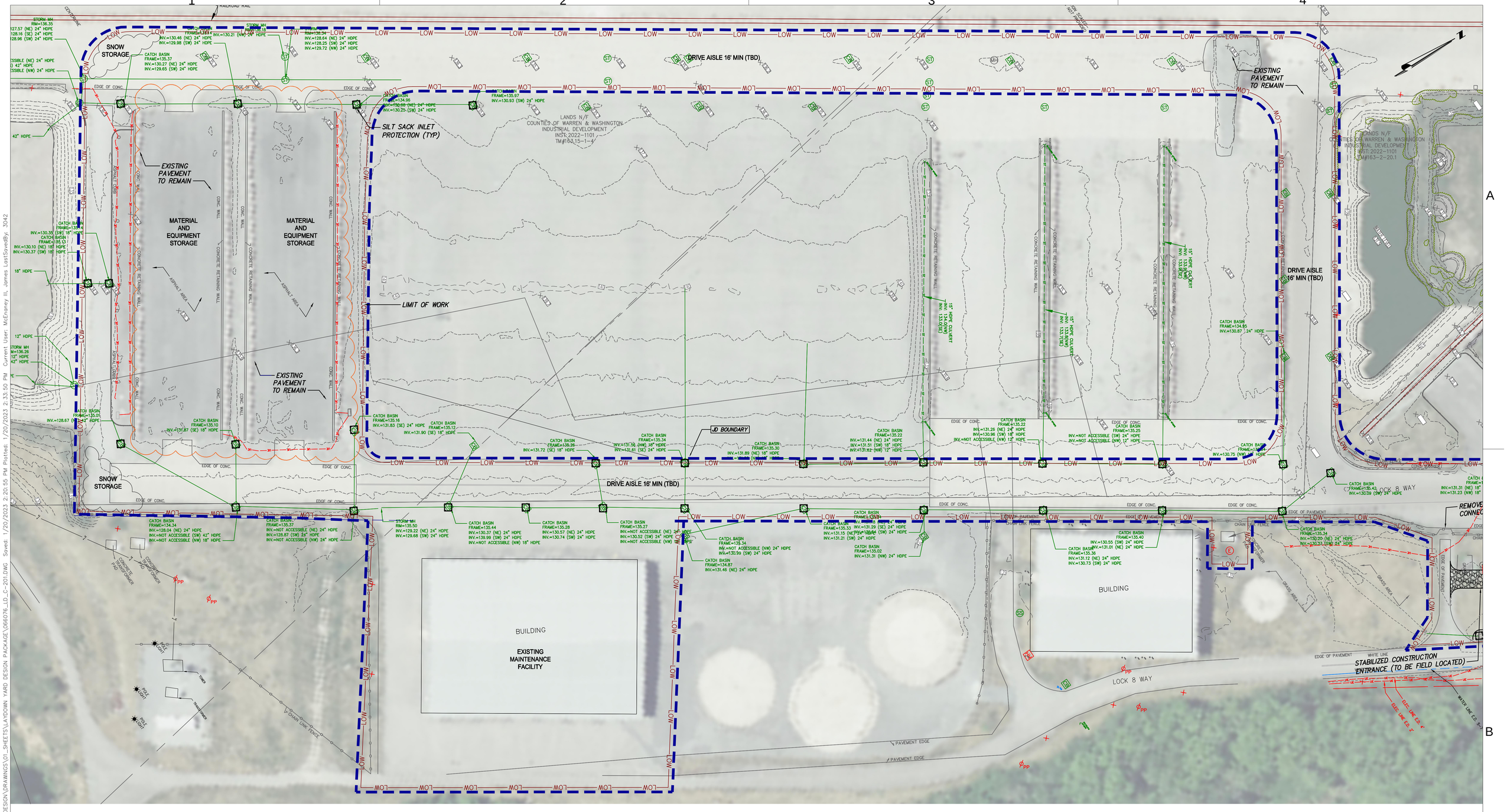
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/2023	REVISED PER DPS COMMENTS	JM	JR
0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
FORT EDWARD LAYDOWN AREA A
(SEGMENT 4, PACKAGE 3)

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-201A

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | REV. NO.: X | DATE: 11/11/2022



FORD EDWARD STAGING AND LAYDOWN AREA B
SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

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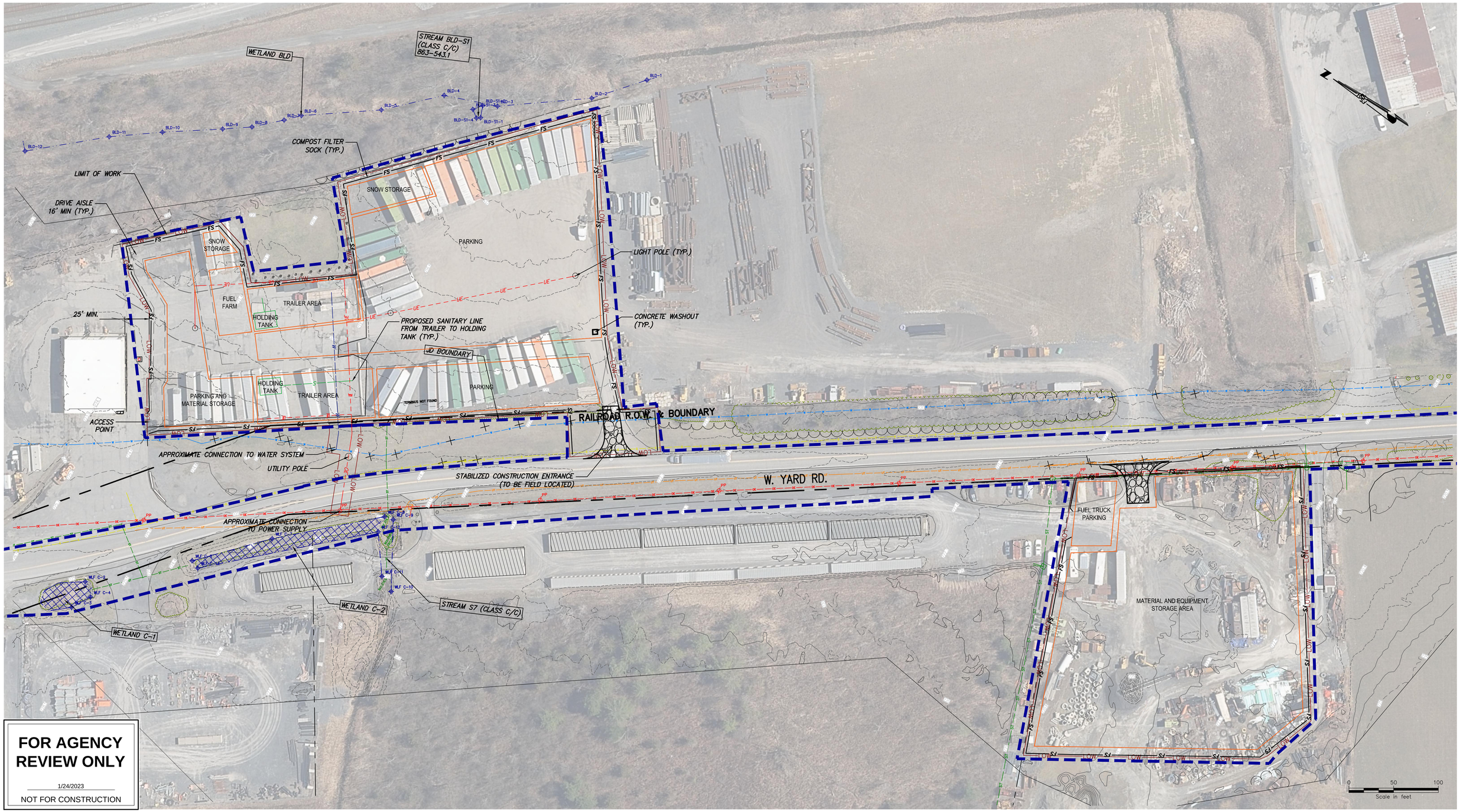
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/2023	REVISED PER DPS COMMENTS	JM	JR
0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
FORT EDWARD LAYDOWN AREA B
(SEGMENT 4, PACKAGE 3)

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-201B

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | DATE 11/11/2022 | REV. NO. X

File: V:\PROJECTS\ANYVK\066076.000\09_DESIGN DRAWINGS\01_SHEETS\LAYDOWN YARD DESIGN PACKAGE\066076_10_C-201.DWG Saved: 1/20/2023 2:20:55 PM Plotted: 1/20/2023 2:33:50 PM Current User: McEnaney III, James LastSavedBy: 3042



FOR AGENCY REVIEW ONLY

1/24/2023

NOT FOR CONSTRUCTION

BETHLEHEM LAYDOWN YARD PLAN VIEW

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

EDR a better environment

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/23	REVISED PER DPS COMMENTS	JLB	ZR
0	11/11/22	FINAL EM&CP SUBMISSION	JLB	ZR

CHAMPLAIN HUDSON POWER EXPRESS

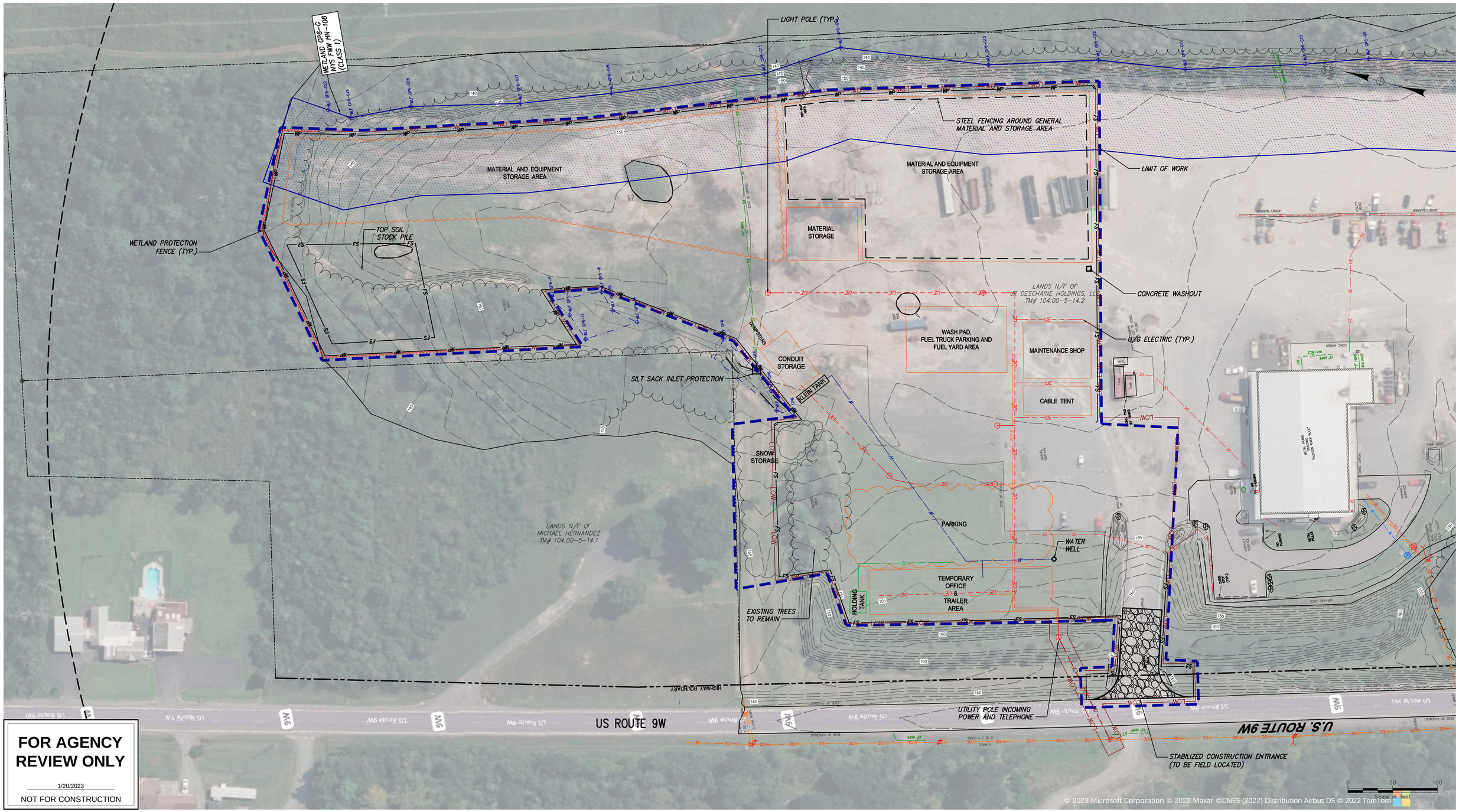
PROJECT WIDE LAYDOWN YARD EM&CP

BETHLEHEM LAYDOWN YARD (SEGMENT 9 - PACKAGE 5B)

EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
EDR PROJECT NO.	21075
DRAWING NO.	C-202

DRAWN BY: JLB | DESIGNED BY: JLB | APPROVED BY: ZR | SCALE AS SHOWN | REV. NO. | DATE 01/23/2023 | SH.NO. OF XXX



FOR AGENCY REVIEW ONLY

1/20/2023

NOT FOR CONSTRUCTION

COXSACKIE – HUDSON RIVER BULK LAYDOWN YARD PLAN VIEW

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

EDR a better environment

.\..\Partner's Stamps\TF_D_NY Stamp & Signature.jpg

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/23	REVISED PER DPS COMMENTS	JLB	ZR
0	11/11/22	FINAL EM&CP SUBMISSION	JLB	ZR

CHAMPLAIN HUDSON POWER EXPRESS

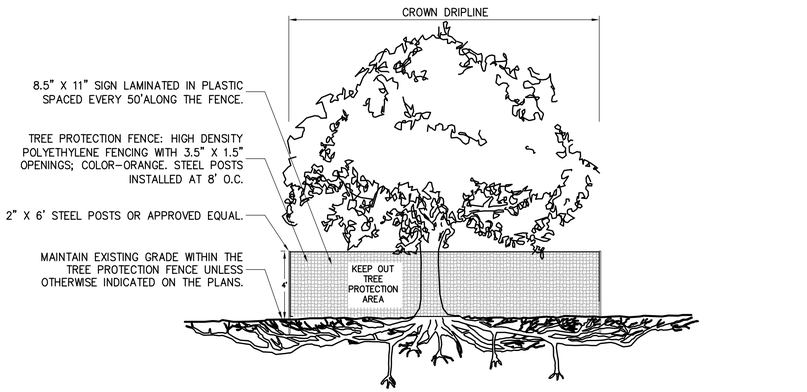
PROJECT WIDE LAYDOWN YARD EM&CP

COXSACKIE - HUDSON RIVER BULK LAYDOWN YARD (SEGMENT 10 - PACKAGE 6)

EROSION AND SEDIMENT CONTROL PLAN

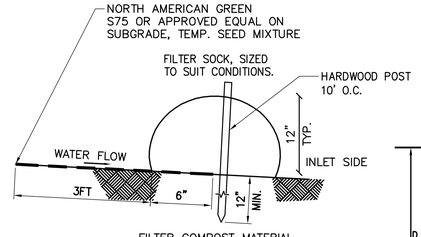
KIEWIT PROJECT NO.	21162
EDR PROJECT NO.	21075
DRAWING NO.	C-203

DRAWN BY: JLB | DESIGNED BY: XX | APPROVED BY: ZR | SCALE AS SHOWN | REV. NO. | DATE 01/06/2023 | SH.NO. XX OF XXX



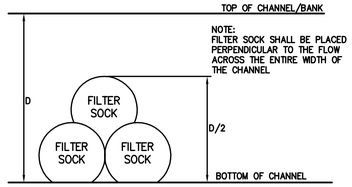
NOTES:
1. CONTRACTOR TO MAINTAIN INTEGRITY OF CONSTRUCTION FENCE FOR DURATION OF PROJECT.
2. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
3. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
4. SEE EROSION CONTROL PLANS FOR LOCATIONS OF TREE PROTECTION AREAS.

1 TREE PROTECTION
NOT TO SCALE



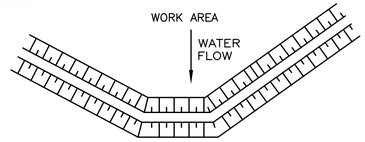
FILTER COMPOST MATERIAL AS PER SPECIFICATIONS.

NOTES:
1. ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS.
2. ALL FILTER SOCKS SHALL BE 12" DIAMETER OR LARGER.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
4. WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.
5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE OWNERS.
6. THE COMPOST FILTER BERM WILL BE REMOVED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE OWNERS.
7. INSTALL PERPENDICULAR TO FLOW.



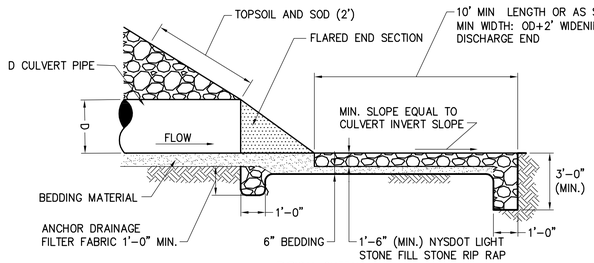
CHANNEL PLACEMENT

MAINTENANCE NOTES:
1. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
2. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ OF THE EXPOSED HEIGHT OF THE PRACTICE AND DISPOSED OF IN ACCORDANCE WITH THE SWPPP.
3. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED IN THE MANNER REQUIRED BY THE MANUFACTURER OR REPLACED WITHIN 24 HOURS OF INSPECTION NOTIFICATION.
4. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTO-DEGRADABLE FILTER SOCKS AFTER 1 YEAR. POLY-PROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
5. UPON STABILIZATION OF THE AREA CONTRIBUTORY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK SHALL BE REMOVED. FOR REMOVAL THE MESH CAN BE CUT AND COMPOST SPREAD AS AN ADDITIONAL MULCH TO ACT AS A SOIL SUPPLEMENT.

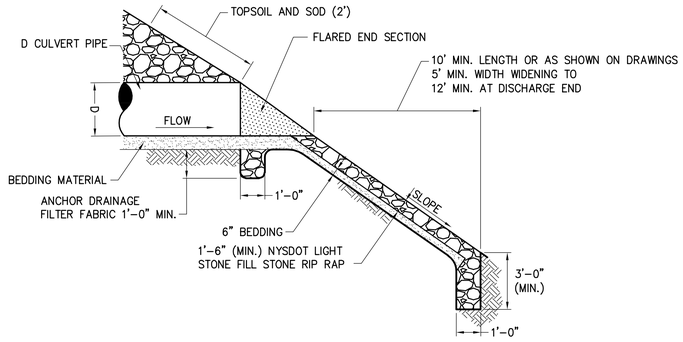


AT GRADE PLACEMENT

2 COMPOST FILTER SOCK DETAIL
SCALE: N.T.S.

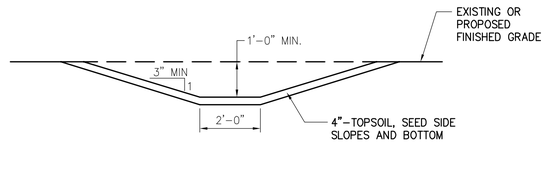


TYPICAL OUTFALL

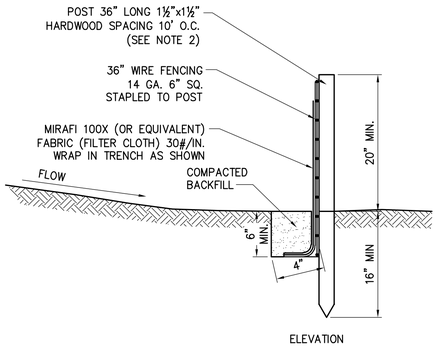


TYPICAL OUTFALL ON SLOPE

4 TYPICAL CULVERT OUTFALL RIP RAP
SCALE: N.T.S.



5 TYPICAL GRASS DRAINAGE SWALE
SCALE: N.T.S.

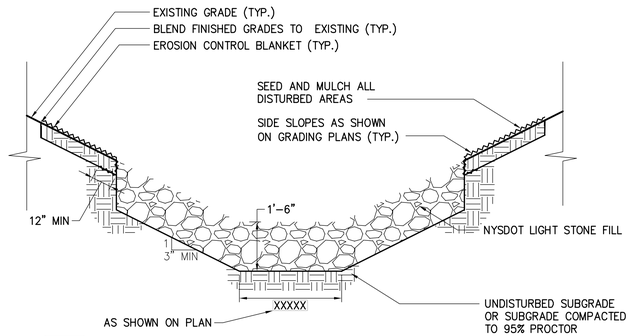


ELEVATION

NOTES:

1. TIE FABRIC TO WIRE FENCE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. IF EXTRA STRENGTH FABRIC (GREATER THAN 50#/INCH) IS USED, WIRE CAN BE DELETED IF POST SPACING IS REDUCED TO 6' O.C.
3. AT THE ENDS OF THE FENCING THE FIRST 20' SHALL BE TURNED UP THE SLOPE 2'.
4. POSTS SHOULD BE INCLINED TOWARD THE DIRECTION FLOW CAME FROM.
5. OVERLAP FABRIC A MINIMUM OF 6" AND FOLDED AT JOINTS. ATTACH FILTER FABRIC TO STAKES ALLOWING EXTENSION INTO TRENCH AS SHOWN; SECURE TO STAKES AS NOTED.
6. THE MAXIMUM AREA OF RUNOFF PER 100LF. OF FENCE SHALL NOT EXCEED 0.25 ACRES.
7. MAINTENANCE SHALL BE PERFORMED AS NECESSARY. THE FENCING SHALL BE CHECKED AFTER EVERY STORM TO ENSURE THEIR PROPER FUNCTIONING.
8. WHEN FENCE IS NO LONGER NEEDED, THE ACCUMULATED SILT, THE POSTS AND FABRIC SHALL BE REMOVED AND TRENCH BACK FILLED WITH TOPSOIL AND SEEDED.
9. FENCING SHOULD BE PLACED AS SHOWN ON THE DRAWING OR IF NOT SHOWN, 10' BEYOND THE TOE OF THE SLOPE AND AT A SPACING IN ACCORDANCE WITH THE TABLE.
10. EXCAVATE TRENCH AS PER DETAIL AND SET POSTS AT 10' O.C.
11. BACKFILL WITH COMPACTED, EXCAVATED SOIL FROM TRENCH.

3 SILT FENCE
SCALE: N.T.S.



6 LIGHT STONE-LINED DRAINAGE CHANNEL
SCALE: N.T.S.

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1	01/20/2023	REVISED PER DPS COMMENTS	JM	JR
0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

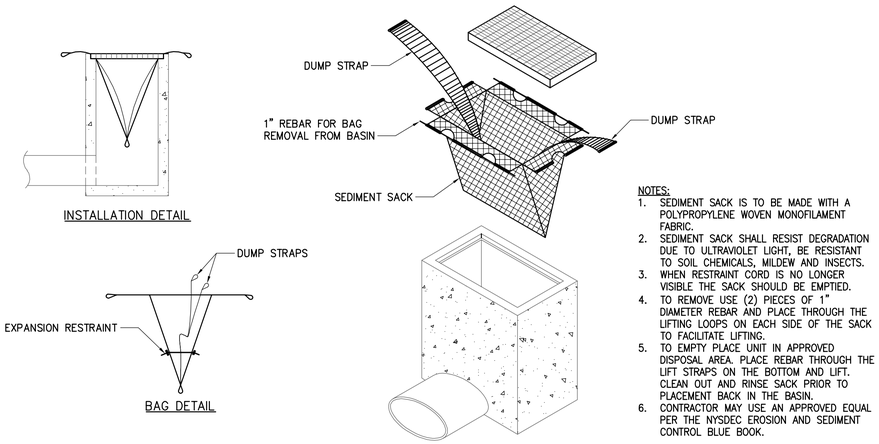
CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
EROSION AND SEDIMENT CONTROL DETAILS

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-601

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | DATE: 11/11/2022 | REV. NO.: X

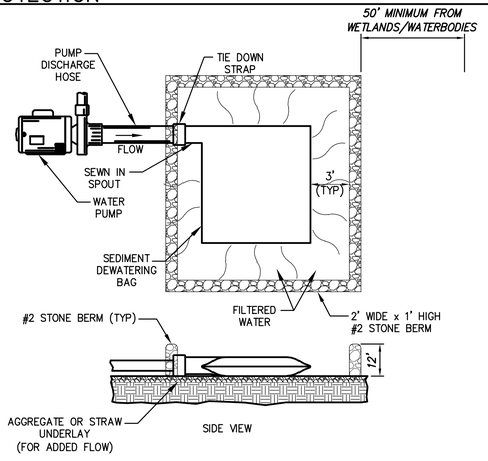
A

B



NOTES:
1. SEDIMENT SACK IS TO BE MADE WITH A POLYPROPYLENE WOVEN MONOFILAMENT FABRIC.
2. SEDIMENT SACK SHALL RESIST DEGRADATION DUE TO ULTRAVIOLET LIGHT, BE RESISTANT TO SOIL CHEMICALS, MILDEW AND INSECTS.
3. WHEN RESTRAINT CORD IS NO LONGER VISIBLE THE SACK SHOULD BE EMPTIED.
4. TO REMOVE USE (2) PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON EACH SIDE OF THE SACK TO FACILITATE LIFTING.
5. TO EMPTY PLACE UNIT IN APPROVED DISPOSAL AREA. PLACE REBAR THROUGH THE LIFT STRAPS ON THE BOTTOM AND LIFT. CLEAN OUT AND RINSE SACK PRIOR TO PLACEMENT BACK IN THE BASIN.
6. CONTRACTOR MAY USE AN APPROVED EQUAL PER THE NYSDEC EROSION AND SEDIMENT CONTROL BLUE BOOK.

1 INLET PROTECTION
SCALE: N.T.S.

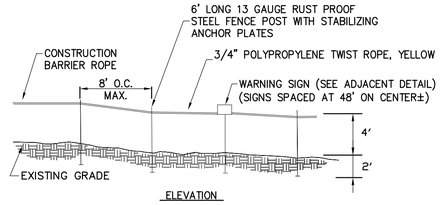


NOTE: THE SEDIMENT DEWATERING BAG WILL BE MANUFACTURED IN THE U.S.A. FROM A NONWOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

SEDIMENT DEWATERING BAG SPECIFICATIONS

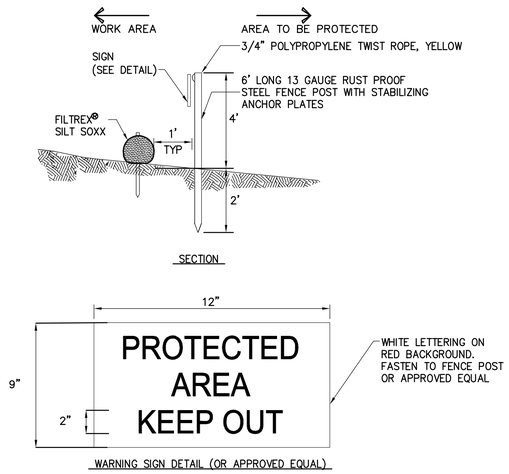
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205) x 0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50 x 50
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2618 (380)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80) X 0.36 (80)
UV Resistence	ASTM D 4355	%	70
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.180 (80)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	3866 (95)
Permittivity	ASTM D 4491	Sec⁻¹	1.2

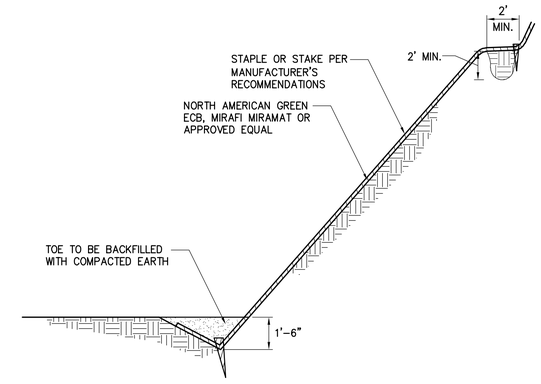
4 SEDIMENT DEWATERING BAG
SCALE: N.T.S.



1. CONSTRUCTION BARRIER FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS PRIOR TO BEGINNING ANY WORK ADJACENT TO THESE AREAS.
2. THE CONTRACTOR SHALL INSTALL AT THE BEGINNING OF THE CONTRACT, AND MAINTAIN THROUGHOUT ITS DURATION.

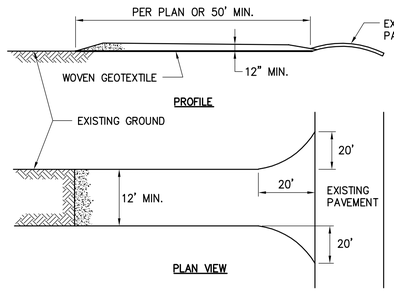
2 WETLAND PROTECTION FENCE
SCALE: N.T.S.





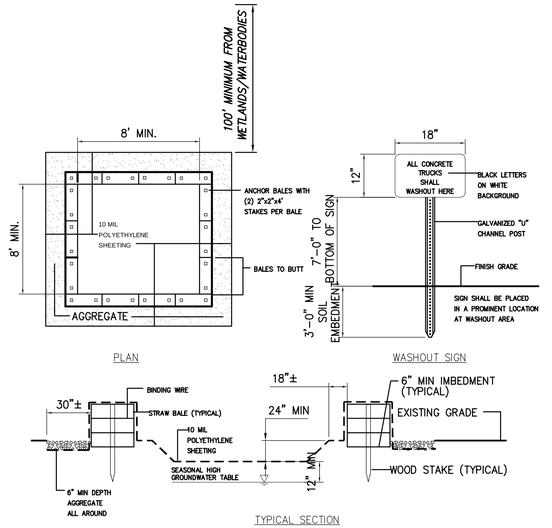
NOTE:
EROSION CONTROL BLANKETS TO BE INSTALLED ON SLOPES 3:1 OR GREATER (TYP.)

3 EROSION CONTROL BANK STABILIZATION DETAIL
SCALE: N.T.S.



1. STONE SIZE–USE AASHTO M43 SIZE 3 COARSE AGGREGATE, 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 12".
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 ACCESS TO SITE.
5. WOVEN GEOTEXTILE FABRIC WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. EXISTING ROAD SIDE DRAINAGE SHALL BE MAINTAINED.
7. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
8. MAINTENANCE–THE ACCESS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT OR STONE SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
9. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
10. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

5 STABILIZED CONSTRUCTION ACCESS
SCALE: N.T.S.



MAINTENANCE NOTES:
1. ALL CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING FACILITATES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. EXCESS RAINWATER THAT HAS ACCUMULATED OVER HARDENED CONCRETE SHALL BE PUMPED TO A STABILIZED AREA SUCH AS A GRASS FILTER STRIP.
2. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE STRUCTURE IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF SITE.
3. DISPOSAL OF THE HARDENED MATERIAL SHALL BE OFF–SITE IN A CONSTRUCTION/DEMOLITION LANDFILL.
4. THE PLASTIC LINER SHALL BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.
5. INSPECT THE PROJECT SITE FREQUENTLY TO ENSURE THAT NO CONCRETE DISCHARGES ARE TAKING PLACE IN NON–DESIGNATED AREAS.
6. LOCATION(S) TO BE DETERMINED IN THE FIELD BY THE OWNER'S REPRESENTATIVE
7. CONCRETE WASHOUTS SHALL NOT BE LOCATED WITHIN 200' OF ANY KNOWN WELL.

6 CONCRETE WASHOUT AREA
SCALE: N.T.S.

Champlain Hudson Power Express

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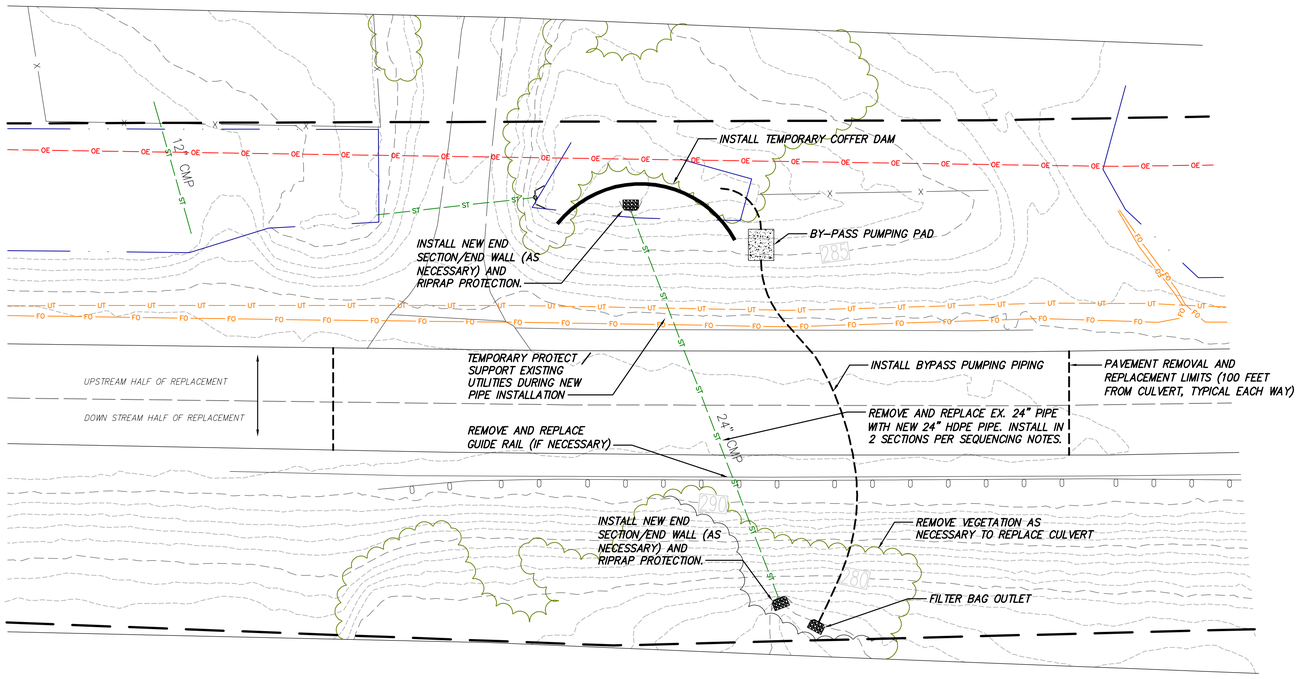
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
1	01/20/2023	REVISED PER DPS COMMENTS	JM	JR
0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
EROSION AND SEDIMENT CONTROL DETAILS

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | DATE: 11/11/2022 | REV. NO.: X

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. C-602



CULVERT REPLACEMENT CONSTRUCTION SEQUENCING

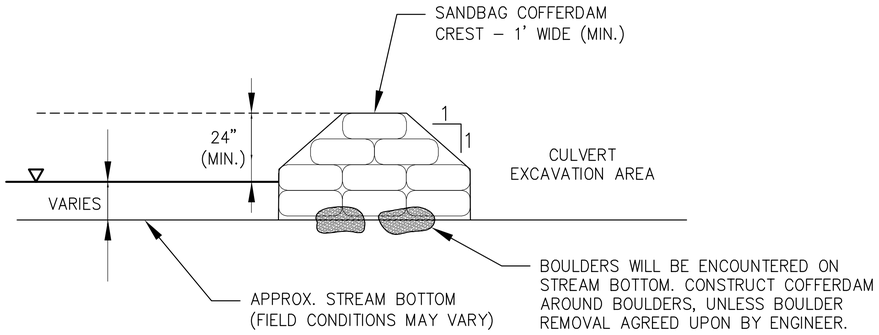
1. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES.
2. INSTALL MAINTENANCE AND PROTECTION OF TRAFFIC MEASURES.
3. INSTALL A SANDBAG COFFERDAM AT THE UPSTREAM END TO SUPPORT BY-PASS PUMPING.
4. INSTALL A RIPRAP APRON AT THE DOWNSTREAM END TO SUPPORT BY-PASS PUMPING.
5. INSTALL A TRENCH ACROSS THE ROAD TO RUN BY-PASS PUMPING PIPE AND BACKFILL OVERTOP OF THE PIPE WITH CRUSHED STONE TO MATCH THE GRADES OF THE EXISTING DRIVING SURFACE.
6. EXCAVATE THE DOWNSTREAM PORTION OF THE ROADWAY (FIRST HALF OF ROAD).
7. PREPARE SUBGRADE AND SUBBASE AND INSTALL HALF OF THE NEW CULVERT INLINE WITH THE EXISTING CULVERT. MATCH THE DOWNSTREAM INVERT TO THE TO THAT OF THE PREVIOUS DOWNSTREAM INVERT OF THE CULVERT REPLACED. (REMOVE A MINIMUM 100' OF PAVEMENT IN EACH DIRECTION FROM THE CULVERT)
8. INSTALL THE HEADWALL SECTION AND RIPRAP SECTION ALONG THE DOWNSTREAM SIDE (IF REQUIRED)
9. BACKFILL AND COMPACT IN LIFTS AROUND THE HALF SECTION OF NEWLY INSTALLED CULVERT AND INSTALL A COMPACTED CRUSHED STONE DRIVING SURFACE OVER TOP OF THE BACKFILLED AREA.
10. ADJUST MAINTENANCE AND PROTECTION OF TRAFFIC MEASURES AS NECESSARY TO INSTALL THE SECOND HALF OF THE CULVERT.
11. EXCAVATE THE UPSTREAM PORTION OF ROADWAY (SECOND HALF OF ROAD)
12. PREPARE SUBGRADE AND SUBBASE AND INSTALL HALF OF THE CULVERT INLINE WITH THE NEWLY INSTALLED DOWNSTREAM PORTION OF CULVERT. MATCH THE UPSTREAM INVERT TO THE TO THAT OF THE PREVIOUS UPSTREAM INVERT OF THE CULVERT REPLACED. (REMOVE A MINIMUM 100' OF PAVEMENT IN EACH DIRECTION FROM THE CULVERT)
13. INSTALL THE HEADWALL SECTION AND RIPRAP SECTION ALONG THE UPSTREAM SIDE (IF REQUIRED)
14. ALLOW FLOW THROUGH THE NEWLY INSTALLED CULVERT BY REMOVING THE SANDBAG COFFERDAM.
15. BACKFILL AND COMPACT IN LIFTS THE EXCAVATED AREAS AROUND THE NEW CULVERT SECTION AND INSTALL A CRUSHED STONE DRIVING SURFACE.
16. ROUGH GRADE THE EMBANKMENT BACKFILL AND COMPACT IN LIFTS.
17. FINE GRADE THE ROADWAY SUBBASE AND BASE COURSES TO MACH THE EXISTING GRADES.
18. INSTALL THE PORTION OF ROADWAY SECTION ABOVE THE INSTALLED CULVERT TO MATCH EX. GRADE.
19. TOPSOIL SEED AND MULCH THE GRADED EMBANKMENT AREA.
20. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AT THE SUBSTANTIAL COMPLETION OF THE CULVERT REPLACEMENT

BY-PASS PUMPING NOTE:

1. CONTRACTOR SHALL PROVIDE 24-HOUR BY-PASS PUMPING OF THE STREAM DURING THE REMOVAL OF EXISTING CULVERT THROUGH THE INSTALLATION OF THE NEW CULVERT.

1 TYPICAL CULVERT REPLACEMENT SEQUENCING

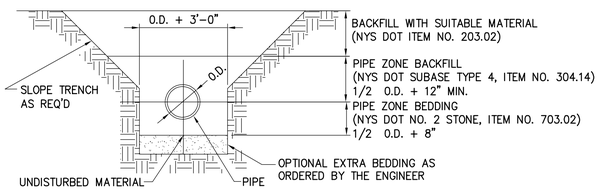
SCALE: N.T.S



NOTE:
1. SAND BAGS SHALL BE FILTER FABRIC TYPE AND BE DOUBLE BAGGED.
2. PORTADAM, BY PORTADAM, INC. SHALL BE CONSIDERED ACCEPTABLE SUBSTITUTE TO SAND BAGS.

2 SANDBAG COFFERDAM DETAIL

SCALE: N.T.S



NOTES:
1. WHERE IDENTIFIED ON PLANS, CULVERT REPLACEMENTS AND/OR REPAIR TO BE COMPLETED IN ACCORDANCE WITH NYSDOT STANDARD SHEETS (NYSDOT STANDARD SHEET GROUP 603 CULVERTS AND STORM DRAINS AND NYSDOT BRIDGE DETAIL SHEETS BD-CB1 THRU BD-CB13)

3 CULVERT REPLACEMENT

SCALE: N.T.S.

CHPE Champlain Hudson Power Express

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0	11/11/2022	FINAL EM&CP SUBMISSION	JM	JR

CHAMPLAIN HUDSON POWER EXPRESS
PROJECT WIDE LAYDOWN YARD PACKAGE
TYPICAL CULVERT INSTALLATION AND REPLACEMENT DETAILS

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-632

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | REV. NO.: X | DATE: 11/11/2022

ATTACHMENT 6
WATERBODY PHOTOGRAPHS

Stream G-P3-S1- upstream

Stream G-P3-S1- downstream

Supplemental Laydown Areas	**SITE PHOTOGRAPHS**
	Champlain Hudson Power Express