PUBLIC NOTICE

US Army Corps
of Engineers
New York District
Jacob K. Javits Federal Building
New York, N.Y. 10278-0090
ATTN: Regulatory Branch

In replying refer to:
Public Notice Number: NAN-2019-01262-EME
Issue Date: **11 OCT 2019**
Expiration Date: **11 NOV 2019**

To Whom It May Concern:

The New York District, Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).

APPLICANT: New York State Department of Parks, Recreation and Historic Preservation.

ACTIVITY: Proposed discharge of fill material into Waters of the United States as part of the overall Hempstead Lake State Park Hurricane Recovery Project

WATERWAY: Hempstead Lake and Northern Ponds, Tributary to Hempstead Bay

LOCATION: Hempstead Lake State Park, Town of Hempstead, Nassau County, New York.

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING AND MAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. Comments provided will become part of the public record for this permit application. All written comments, including contact information, will be made a part of the administrative record, available to the public under the Freedom of Information Act. The Administrative Record, or portions thereof, may also be posted on a Corps of Engineers internet

web site. Due to resource limitations, this office will normally not acknowledge the receipt of comments or respond to individual letters of comment.

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by mail is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

The activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat, including Northern Long Eared Bat. Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the Governor's Office of Storm Recovery, as the lead federal agency, completed consultation with the United States Fish and Wildlife Service on October 20, 2017.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act (Public Law 104-267), requires all Federal agencies to consult with the National Oceanic and Atmospheric Administration Fisheries Service (NOAA/FS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The project area is not EFH; therefore, no consultation is necessary.

There are three properties listed, or eligible for listing in the National Register of Historic Places (NHRP) within the permit area, including Hempstead Lake State Park, Hempstead Lake Dam Gatehouse and South Pond Inlet Gatehouse. Pursuant to Section 106 of the Historic Preservation Act, the Governor's Office of Storm Recovery, as the lead federal agency, consulted with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) for the project's potential effects on the historic properties. In a letter dated June 21, 2017, the OPRHP concurred the proposed work would have "No Adverse Effect" on the above properties. Several other known sites eligible for inclusion in the NRHP are located in or near Hempstead Lake State Park; however, there are no other known sites within the permit area. Presently unknown archeological, scientific, pre-historical, or historical data may be lost by work accomplished under the required permit.

The permit area is located landward/outside of the coastal area boundary as defined by the New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, Coastal Zone Management Program; therefore, a coastal zone management program concurrence is not required pursuant to Section 307 (c) of the Coastal Zone Management Act of 1972 as amended [16 U.S.C. 1456 (c)].

Reviews of activities pursuant to Section 404 of the Clean Water Act will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b) of the Clean Water Act and the applicant will obtain a water quality certificate or waiver from the appropriate state agency in accordance with Section 401 of the Clean Water Act prior to a permit decision.

In addition to any required water quality certificate, the applicant has obtained or requested the following governmental authorization for the activity under consideration:

- New York State Department of Environmental Conservation for Freshwater Wetlands;
- New York State Department of Environmental Conservation for Dams and Impoundment Structures.

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. If you have

any questions concerning this application, you may contact this office at (917) 790-8428 and ask for Lisa Grudzinski.

In order for us to better serve you, please complete our Customer Service Survey located at http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx

For more information on New York District Corps of Engineers programs, visit our website at http://www.nan.usace.army.mil.

Stephan A. Ryba
Chief, Regulatory Branch

Enclosures

WORK DESCRIPTION

The permit applicant, New York State Office of Parks, Recreation & Historic Preservation, has requested Department of the Army authorization to discharge regulated fill materials pursuant to Section 404 of the Clean Water Act for flood risk management and habitat enhancement at Hempstead Lake State Park, in Hempstead Lake, South Pond and the Northern Ponds, in the Town of Hempstead, Nassau County, New York.

The following are components of the permit applicant's overall "Rebuild by Design-Living with the Bay/ Hempstead Lake State Park Project." The components would include lake and stream bank stabilization, the construction of two new stormwater detention basins, replacement of existing stormwater culverts, installation of new stormwater culverts, wetland channel excavation portions of vegetated wetlands to improve water circulation, and the replacement of an existing low level dam/weir which was significantly damaged during Hurricane Sandy.

The regulated work would result in the proposed permanent loss of a total of approximately 2.36-acres of waters of the United States, including approximately 1.289-acres of vegetated wetlands, conversion of approximately 0.56-acre of existing scrub-shrub wetlands to emergent wetland types, and approximately 0.62-acre of temporary impacts as a result of construction work, soil excavation and equipment access. The permit applicant's mitigation proposal is summarized at the end of this work description.

has proposed on-site compensatory mitigation to off-set these impacts to waters of the United States.

The proposed work is described as follows:

MILL CREEK

Mill Creek Channel Bank Stabilization and Erosion Control (see sheets C201 – Proposed Site Plan Key Map; C203 - Detail Area 2; C305 – Alignment Location Map; C306 – Channel Section; C502 – Grading Detail Area 1 & 2, C901 - Details; L105 – Landscape Plan Detail Area Channel Structure)

Install an open cell, pre-cast concrete grid mattress, 25-feet wide by 32-feet long, filled with approximately 5. 1 cubic yards (CY) of gravel, below the Ordinary High Water Mark (OHWM) of Mill Creek. The proposed work would result in permanent impacts to approximately 0.018-acre of open water.

Northeast (NE) Floatables Catcher w/ Concrete Open Channel Structure (see sheets C201 – Proposed Site Plan Key Map; C202 & C203 - Detail Area 1 & 2; C305 – Alignment Location Map; C306 – Channel Section; C502 – Grading Detail Areas 1 & 2, C904 & C905 – Open Channel Structure Details; L105 – Landscape Plan Detail Area Channel Structure)

Install a floatables catcher, 25-feet wide and three-feet high, and pre-cast concrete structure to secure the floatables catcher system, 25-feet wide by 67-feet long, into Mill Creek, approximately 250-feet upstream of the Northeast Pond. Install riprap, approximately 25 to 50 feet wide by 50-feet long at the channel outlet.

The proposed work for the pre-cast concrete structure and riprap would result in permanent impacts to approximately 0.031-acre of open water and approximately 0.04-acre of open water, respectively. Removal of the existing brick and timber structures and grading/excavation would result in proposed

temporary impacts to the Mill Creek channel.

NORTHEAST (NE) POND

"New Wetland B" (In-Pond Filtering Emergent Wetland/Detention Basin) (see sheets C201 – Proposed Site Plan Key Map; C204 – Proposed Detail Area 3; C301 - Alignment Location Map, C302 – Alignment BB1; C303 & C304 Section B1 thru B8; C503 – Grading Detail Area 3; C902 – Culvert Details; C911 Observation Deck; L103 – Landscape Plan Detail Area Wetland "B")

Construct "New Wetland B", an approximately 4.2-acre emergent wetland detention basin, in the southeast portion of the NE Pond adjacent to the Southern State Parkway, by discharging a total of approximately 44,000 cubic yards of clean, imported fill material (soil, clay and sand) into open water (5.54-acres) and emergent wetland (0.05-acres) to form an earthen berm, approximately 80-feet wide (at the base) by 1,300-feet long, and to raise the existing bottom elevation of the pond within the newly enclosed area by six-feet to encourage development of emergent vegetation. Approximately 3.0-acres of open water would be converted to emergent wetland as a result of placing fill to raise the bottom elevation of the pond.

Construct a new pre-cast concrete twin pipe arch culvert (Culvert C), consisting of two pipes, each four-feet wide by three-feet tall by 60-feet long and filled with six-inches of gravel, with an inlet riprap apron 32-feet wide by 19-feet long and outlet apron with trapezoidal shape maximum 42-feet wide by 43-feet long (0.02-acre).

The proposed work would result in the proposed permanent loss of approximately 1.03-acres of open water and 0.05-acre of emergent wetland. Other permanent impacts would include 0.02-acre of open water from the Culvert C riprap outlet apron, 0.29-acre of open water resulting from the construction of the berm, and 0.22-acre of existing emergent wetland that would be located inside the new detention basin. Inside the proposed berm area, fill would be placed in approximately 4.03-acre of open water and 0.17-acre of emergent wetland in order to raise the elevation of the pond bottom.

Northern Linear Wetland Culvert Replacement (Culvert A) (see sheets C201 – Proposed Site Plan Key Map; C206 - Proposed Detail Area 6 & 7; C505 – Grading Detail Area 6 & 7, C902 – Details Culvert A & Culvert B; L102 – Landscape Plan Detail Area Culverts A and B)

Replace a historic culvert with two new concrete elliptical culverts (Culvert A), each approximately eight and one-half feet wide, five-feet high, and 125-linear feet long. Install riprap aprons at the culvert inlet, approximately 40-feet wide, 8-feet long, and three-feet deep, and at the culvert outlet, approximately 54-feet wide, 30-feet long, and three-feet deep.

The proposed work would result in the permanent loss of approximately 0.04-acres of scrub shrub wetland and temporary impacts to approximately 0.03-acres of open water.

New Culvert Between NE Pond and NW Pond (Culvert B) (see sheets C201 – Proposed Site Plan Key Map; C206 - Proposed Detail Area 6 & 7; C505 – Grading Detail Area 6 & 7, C902 – Details Culvert A & Culvert B; L102 – Landscape Plan Detail Area Culverts A and B)

Install a new elliptical pipe culvert (Culvert B), 10-feet wide by six and one-half feet tall, and 150-feet long through upland from the western side of NE Pond to the northeast corner of NW Pond to

connect NE Pond and NW Pond. Install riprap aprons and backfill at the culvert inlet, approximately 36-feet wide, 38-feet long, and 2-3-feet deep, and at the culvert outlet, approximately 50-feet wide, 23-feet long, and 2-3-feet deep.

The proposed work would result in the permanent loss of approximately 0.02-acre of emergent wetland, permanent impacts to 0.02-acre of open water, and temporary impacts to approximately 0.02-acre of emergent wetland.

NORTHWEST (NW) POND

NW Wetland Detention Basin with Floatables Catcher and Maintenance Access Ramp (see sheets C201 – Proposed Site Plan Key Map; C205 - Proposed Detail Area 4; C307 – Alignment Location Map, C308 (Sections DD) & C309 (Sections D1-D8), C504 – Grading Detail Area 4, C910 – NW Pond Floatables Catcher Details; L104 – Landscape Plan Detail Area NW SW Wetland Detention Basin)

Construct a 0.93-acre wetland detention basin and maintenance access ramp on the northwest side of the NW Pond at capture flow from an existing 96-inch pipe outfall. The NW Wetland Detention Basin would be segmented from the NW Pond by constructing an earthen berm, a total of approximately 54-feet wide at the base and 12-feet wide at the crest by 450-feet long, by placing approximately 3,900 CY of imported fill below the OHWM and within wetlands.

A section of the berm would consist of a spillway, approximately 64-feet wide by 86-feet long, which includes a gabion and Reno mattress approximately 64-feet wide by 86-feet long, and riprap apron, approximately 70-feet wide by 20-feet long, placed at the spillway outlet for stabilization.

Install a floatables catcher within the NW Wetland Detention Basin, at the existing 96-inch pipe outfall. The floatables catcher would consist of a steel mesh floatation boom, approximately 75-feet long, angled across the basin.

Construct an access ramp for maintenance equipment, a total of approximately 15-feet wide by 300-linear feet long, from the western shore of the NW Pond to the earthen berm on the southwest side of the NW Wetland Detention Basin. The end of the ramp would include a wider turn-around area, approximately 75-feet wide by 75-feet long. The last 100-linear feet of the access ramp, also including the turn-around, would be located on fill placed in waters of the United States.

Construction of the NW Wetland Detention Basin, also including the earthen berm/spillway, would result in the proposed permanent loss of a total of approximately 1.17-acres of waters of the United States waters of the United States, including 0.02-acre of open water, 0.32-acre of emergent wetland, and 0.13-acre of scrub shrub wetland as the result of the discharge of dredged and fill material to construct the earthen berm; 0.33-acre of scrub shrub wetland and 0.06 acres of emergent wetland located within the detention basin due to conversion to open water; and approximately 0.31-acre of scrub shrub wetlands to construct the maintenance access ramp. Other proposed permanent impacts to waters of the United States S include the conversion of approximately 0.19-acre of existing scrub shrub wetland to emergent wetland within the basin, and 0.15-acre of existing emergent wetland as the result of being located within the detention basin,

which would be periodically dredged.

NW Pond New Wetland Channel (see sheets C201 – Proposed Site Plan Key Map; C205 - Proposed Detail Area 4; C504 – Grading Detail Area 4; L104 – Landscape Plan Detail Plan Wetland Channel and Typical Cross Section)

Create a new channel through the existing emergent wetland by dredging approximately 640 cubic yards of soil from an area approximately 20-feet wide by 1,000-feet long, and 18-inches-deep (0.46-acre), in order to connect the NW Pond Wetland Detention Basin spillway to the existing, open water channel in the southern area of the NW Pond. The work would be conducted using small, low-ground pressure equipment working atop wetland construction mats.

The proposed work would result in proposed temporary impacts to approximately 0.46-acre of emergent wetland from excavation and equipment operation. The disturbed area would be replanted with native emergent vegetation upon completion of the new channel.

NW Pond Dam (weir) Replacement (See sheets C201 – Proposed Site Plan Key Map; NWP-3 thru NWP 6, NWP-8 thru NWP-9).

Replace the existing, failed NW Pond Dam with a new dam in the same location. The existing dam would be removed and replaced with a new steel sheet pile dam, approximately nine-inches wide by 230-feet long with a concrete cap, 19-inches wide, and step weir, 40-feet wide. The new dam would be located within the footprint of the existing dam, with the spillway set at elevation 21-feet with a top elevation of 25 feet to remain consistent with the existing surface water elevation. Place rip-rap along the back side of the new dam, approximately 30-feet wide by 190-feet long.

The proposed work would result in the permanent loss of approximately 0.004-acre of open water and 0.029-acre of emergent wetland; permanent impacts to 0.037-acre of emergent wetland; and temporary impacts to approximately 0.14-acre of emergent wetland.

Hempstead Lake Pedestrian Bridge (see sheets TC-3, TC-4, TC-7 and TC-8)

Remove existing twin culverts, approximately seven-feet wide by five-feet high by 20-feet long, and replace with a full-span pedestrian bridge, 12-feet wide by 30-feet long, to restore the area to a stone lined open channel, approximately 24-feet wide by 32-feet long below OHWM.

SOUTH POND DAM

South Pond Dam Tree Removal and Dam Repair (see sheets TR-3, GR-1 and E&S-2)

Re-grade the dam surface to remove ruts and eroded areas in order to create a consistent dam crest and to restore the dam slopes. The dam re-grading would result in the proposed permanent loss of approximately 0.017-acre of open water. Trees proposed to be removed on the dam are located above the OHWM of South Pond and would not result in the placement of dredged or fill material below the OHWM, as regulated under Section 404 of the Clean Water Act; therefore, a Department of the Army authorization is not required for the tree removal work.

PERMIT APPLICANT'S STATEMENT OF AVOIDANCE, MINIMIZATION AND MITGATION

The permit applicant has stated that they have avoided, minimized and mitigated for proposed impacts to waters of the United States to the maximum extent practicable by reducing the scope and size of the proposed work to avoid all impacts to forested wetlands, by minimizing the footprint of proposed in-water elements also including sizing earthen berms for the new detention areas to the smallest footprint necessary for maintenance access and safety, and for compensating for unavoidable impacts to wetlands.

The permit applicant's compensatory mitigation proposal includes re-establishment and creation of wetlands from dry land, and enhancement of existing wetlands. Compensatory mitigation would occur on-site, within the Northeast and Northwest Ponds. Emergent, scrub-shrub, and forested wetlands would be re-established through excavation of sediments and accumulated floatables. Emergent wetlands would be created as a result of proposed project work at the Northwest Pond dam/weir and the Northwest Pond detention basin. Existing emergent, scrub-shrub, and forested wetlands would be enhanced through active removal of invasive vegetation and establishment of native species. All temporary impacts would be restored to pre-project conditions upon completion of the subject activity, including re-graded and/or replanted with native wetland vegetation, as necessary.

The stated purpose of this project is to improve flood resiliency and lake water quality.

USACE FILE: NAN-2019-01262-EME

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation and Historic Preservation

NEW YORK STATE

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION

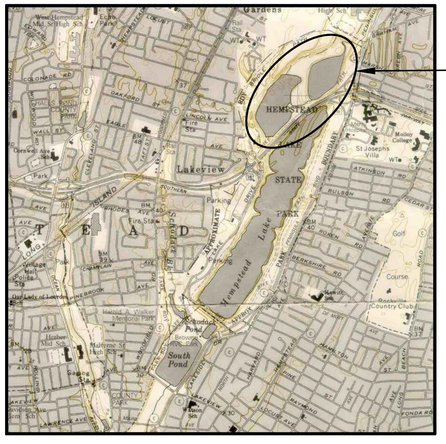
HEMPSTEAD LAKE STATE PARK

NASSAU COUNTY NEW YORK

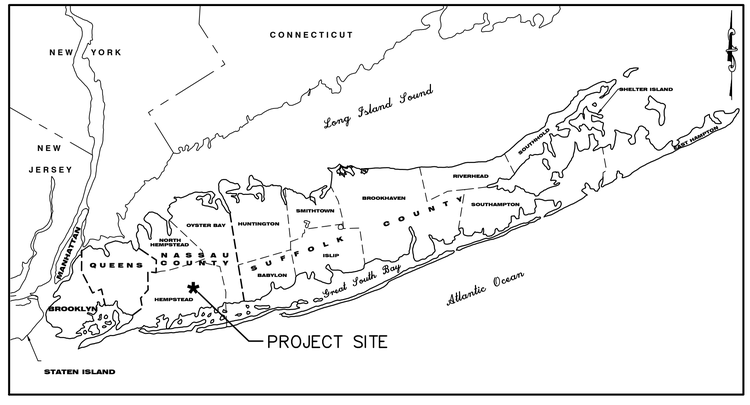
RESTORATION OF NORTHEAST AND NORTHWEST PONDS STORMWATER REMEDIATION PROJECT

CONTRACT NUMBER _____

SEPTEMBER 2019



LOCATION MAP



REGIONAL MAP
NOT TO SCALE

_____ _____
JAMES GLADYSZ, P.E. DATE
SENIOR VICE PRESIDENT
CASHIN ASSOCIATES, P.C.

APPROVED BY: _____ _____
SCOTT FISH, P.E. DATE
CAPITAL FACILITIES REGIONAL MANAGER II

APPROVED BY: _____ _____
GEORGE GORMAN DATE
REGIONAL DIRECTOR

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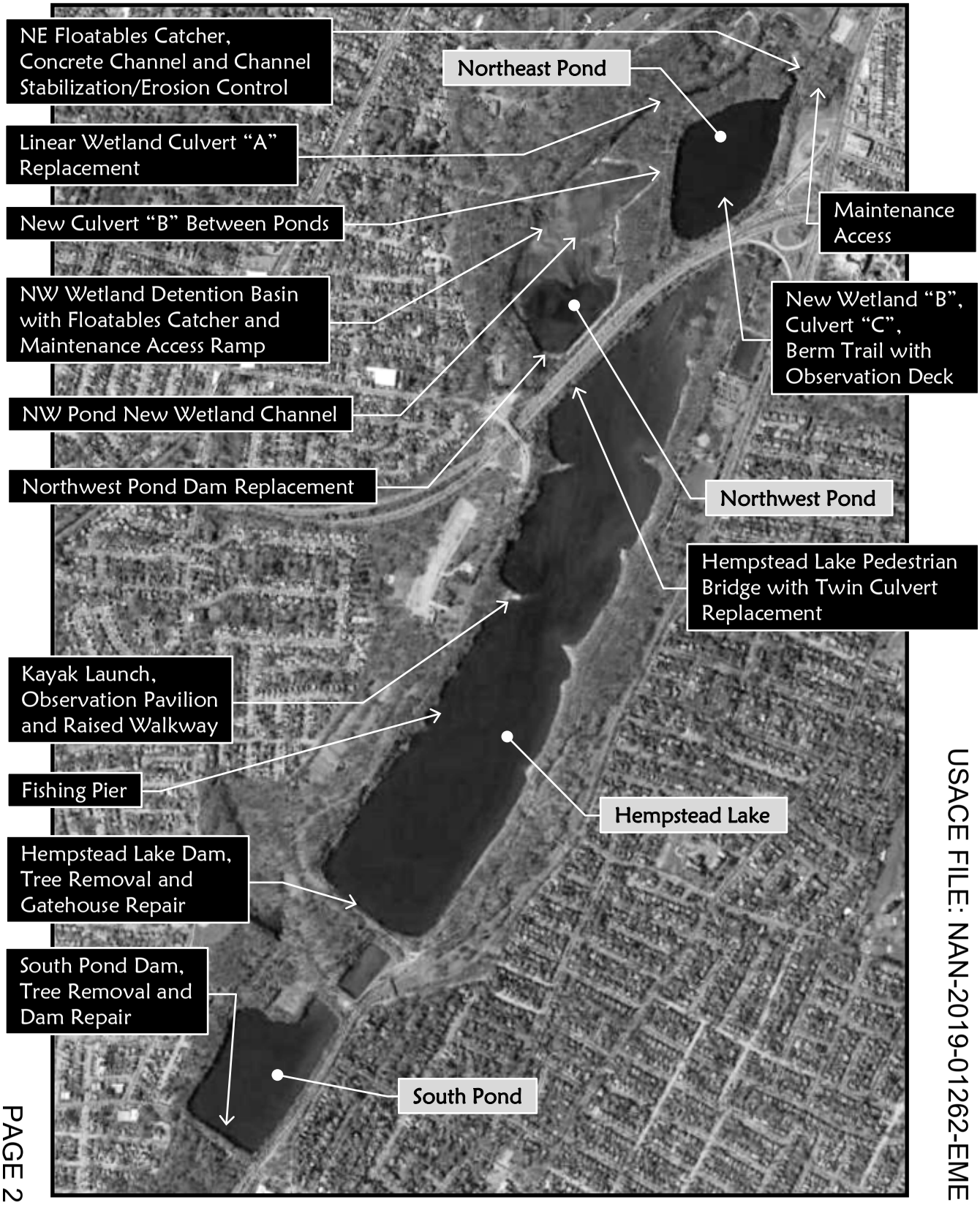


USACE FILE: NAN-2019-01262-EME

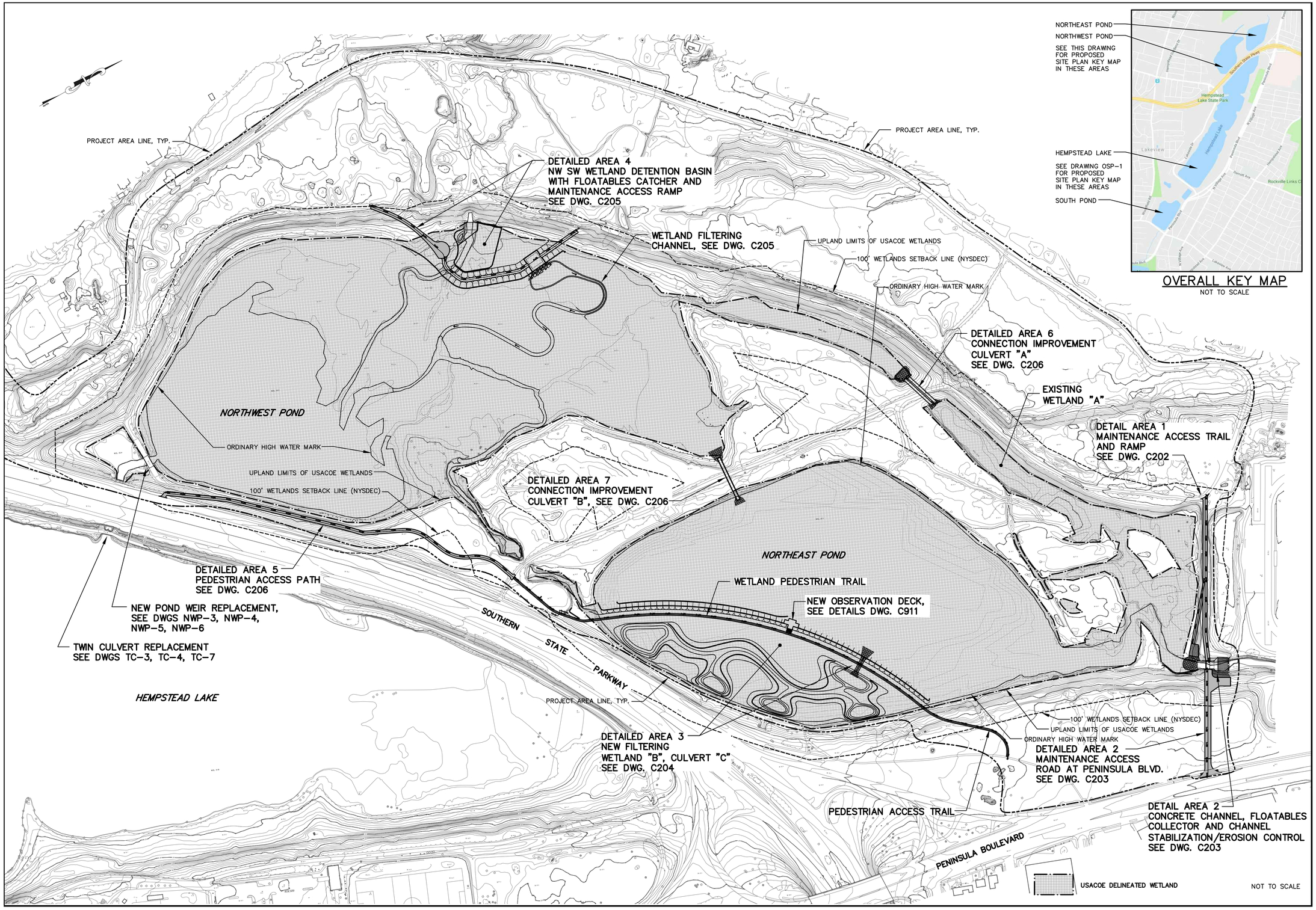
PAGE 2 OF 44

North

OVERALL KEY MAP

Hempstead Lake State Park

Not to Scale



Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

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LKB CONSULTING ENGINEERS

Cashin Associates, P.C.

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE
PROPOSED SITE PLAN KEY MAP

DRAWING # C201
SHEET # 20 OF XX

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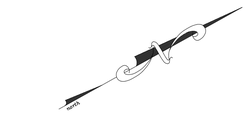

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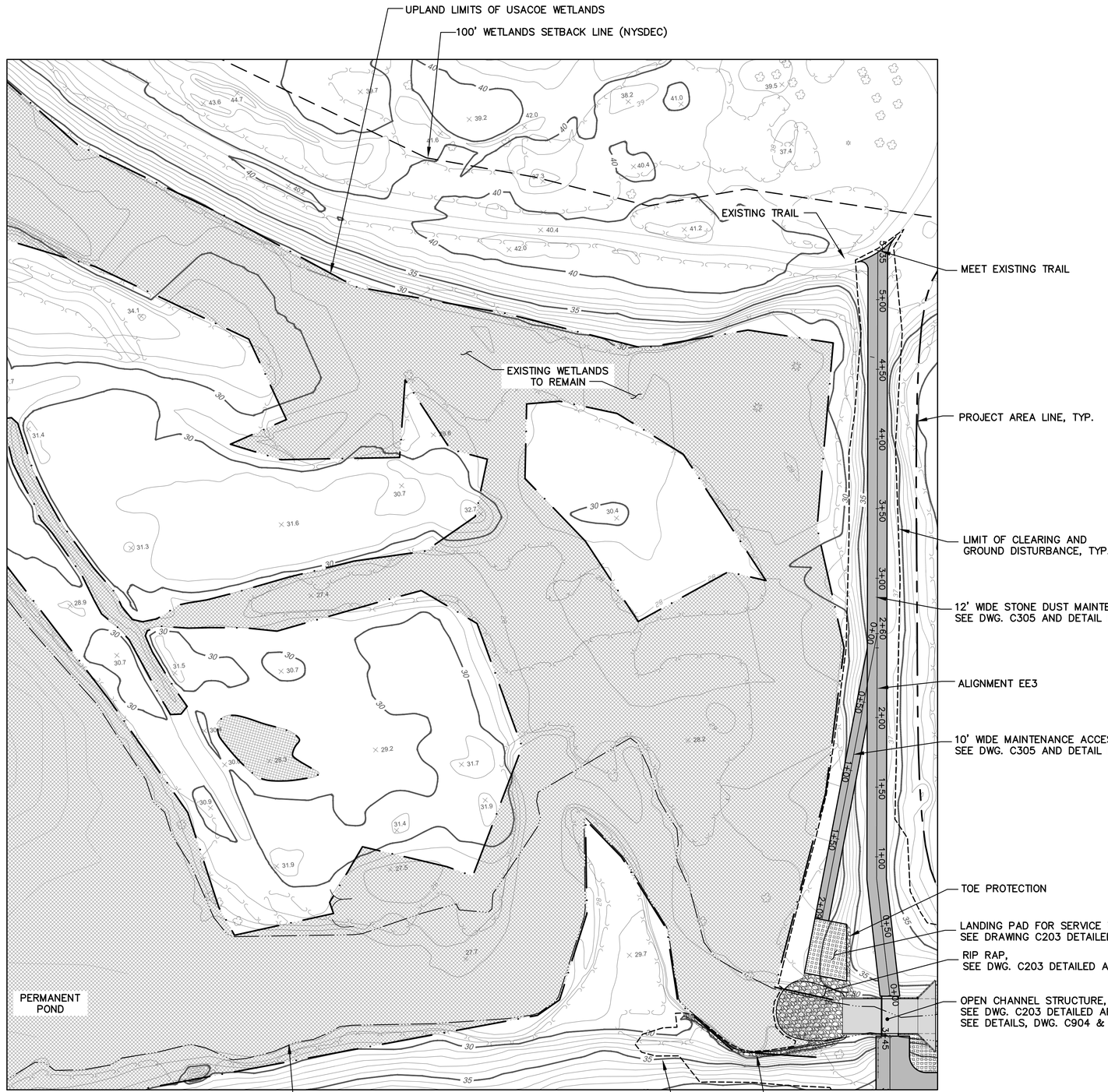
USACOE DELINEATED WETLAND



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DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE

PROPOSED DETAILED AREA 1

DRAWING # C202

SHEET # 21 OF XX

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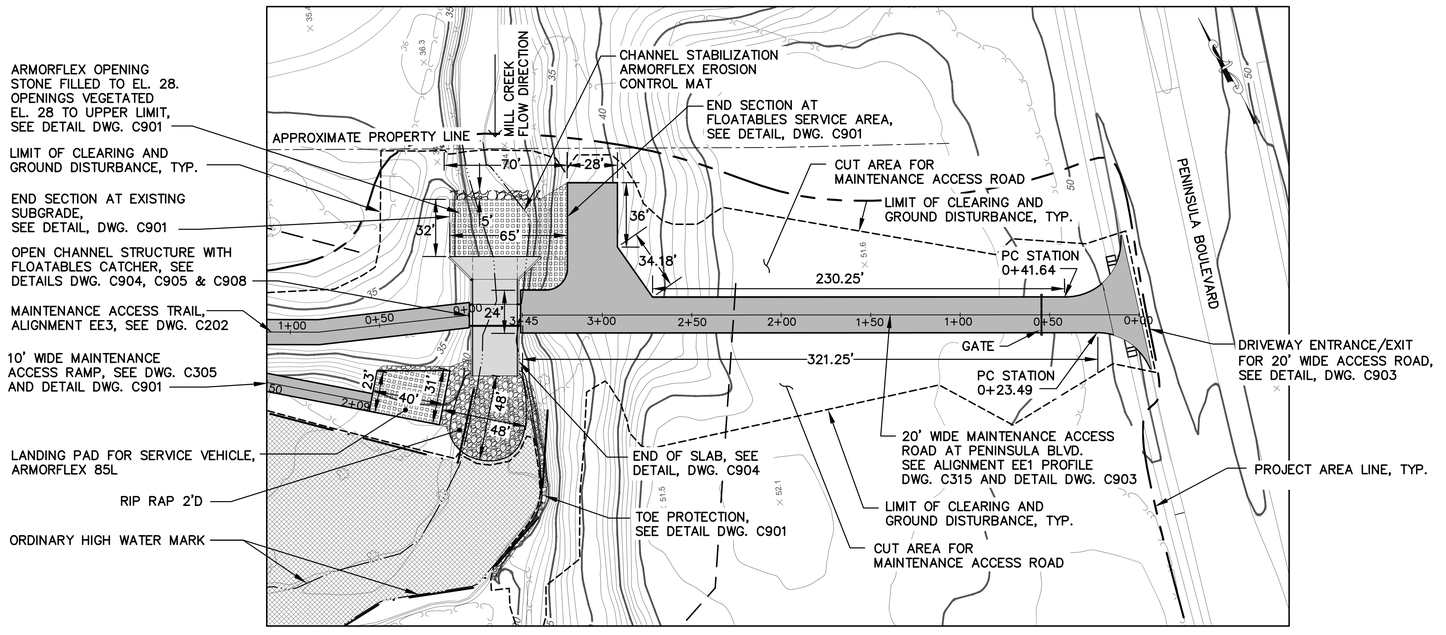

DETAILED AREA 2

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

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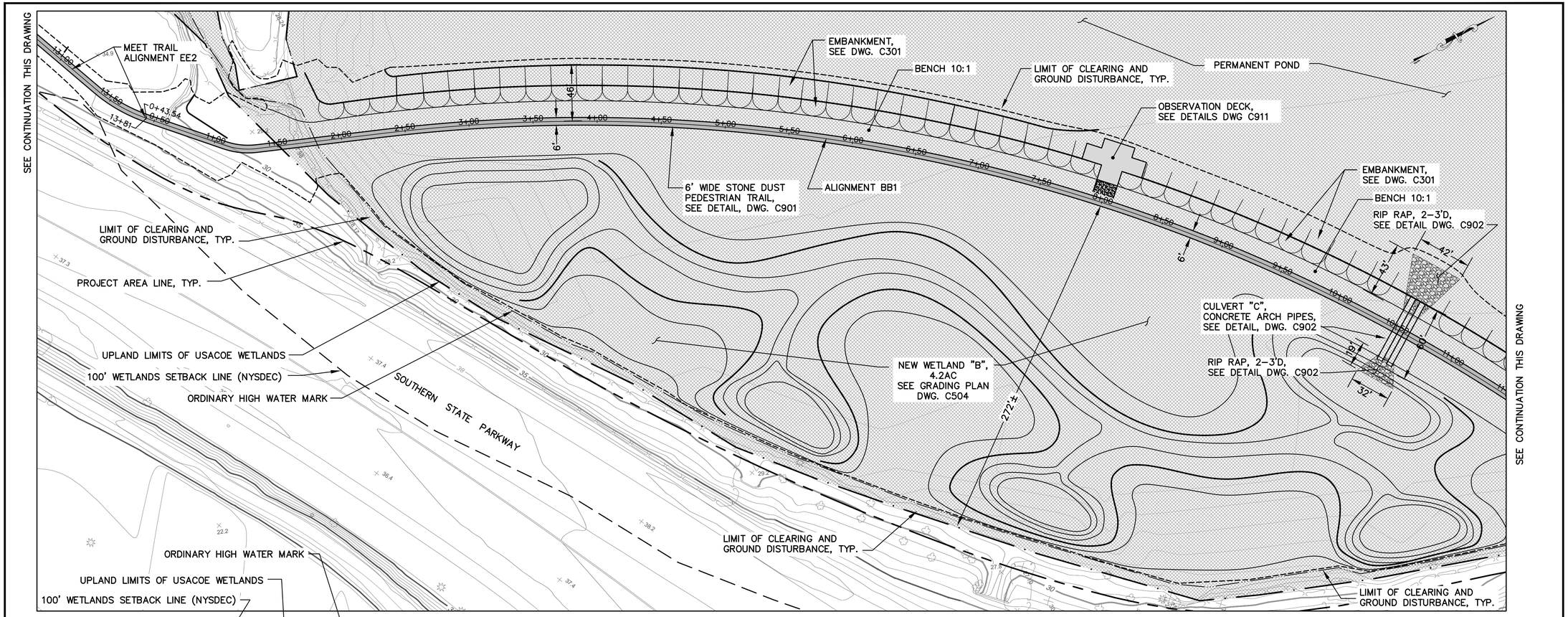
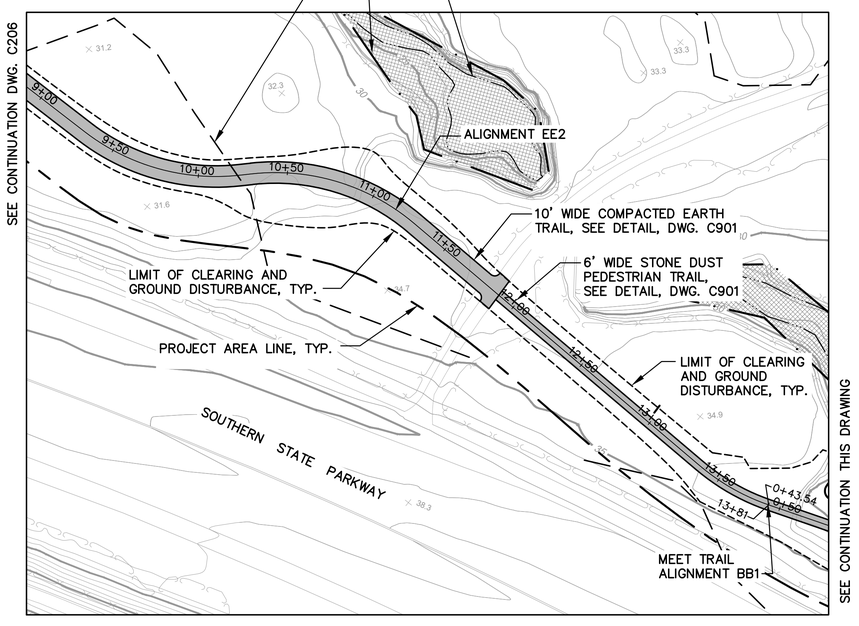
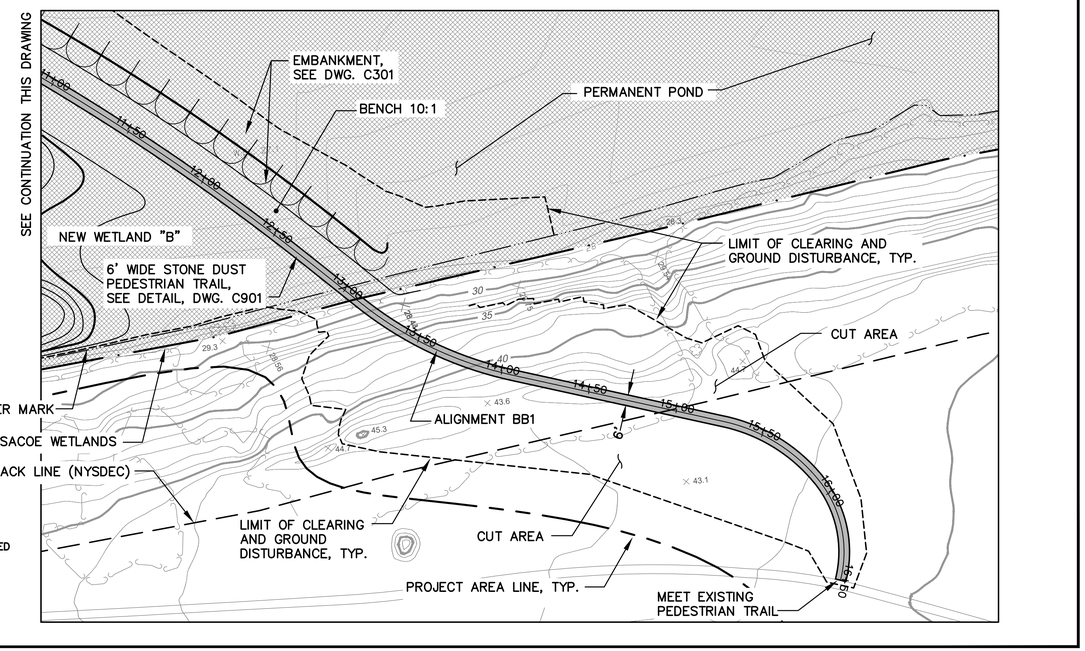
PROPOSED DETAILED AREA 2

DRAWING # C203
SHEET # 22 OF XX

A:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\90% Sub Rossegrim_00_Proposed_Site-4.dwg Last Modified: Oct 01, 2019 - 5:07pm Plotted on: Oct 02, 2019 - 4:40pm By: soulsard







USACOE DELINEATED WETLAND

40 0 40
SCALE: 1" = 40'

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

Stantec

H2M architects + engineers
538 Broad Hollow Road
4th Floor East
Melville, NY 11747
P:(631)756-8000
F:(631)694-4122

SIDNEY DESIGN & ENGINEERING, P.C.

LKB CONSULTING ENGINEERS

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

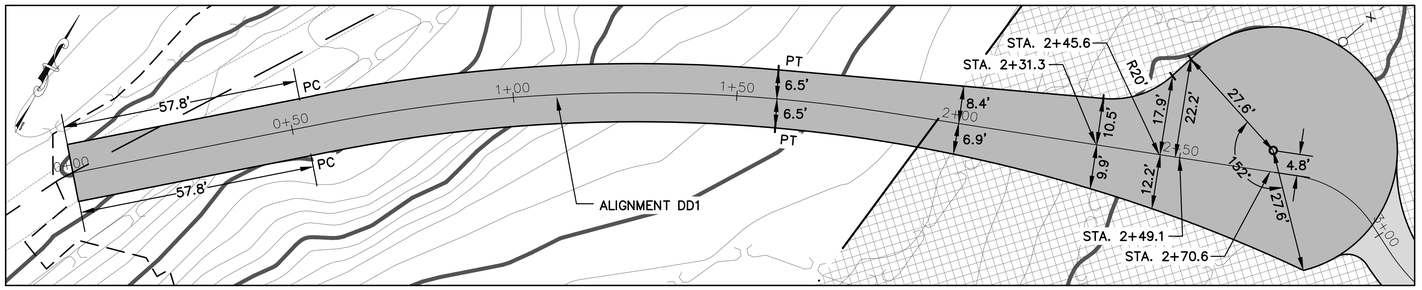
CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/
PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: V.L.
CHECKED BY: N.L. REVIEWED BY:

SHEET TITLE
PROPOSED DETAILED AREA 3

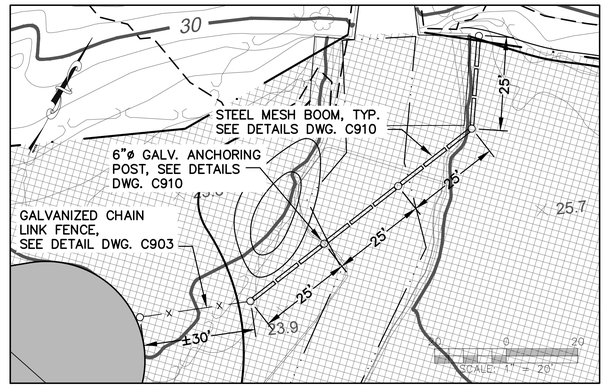
DRAWING # C204
SHEET # 23 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\90% Sub Redesign\P_Dp_Proposed_Sub-4.dwg Last Modified: Oct 01, 2019 - 3:07pm Plotted on: Oct 02, 2019 - 4:40pm By: lcuddihy



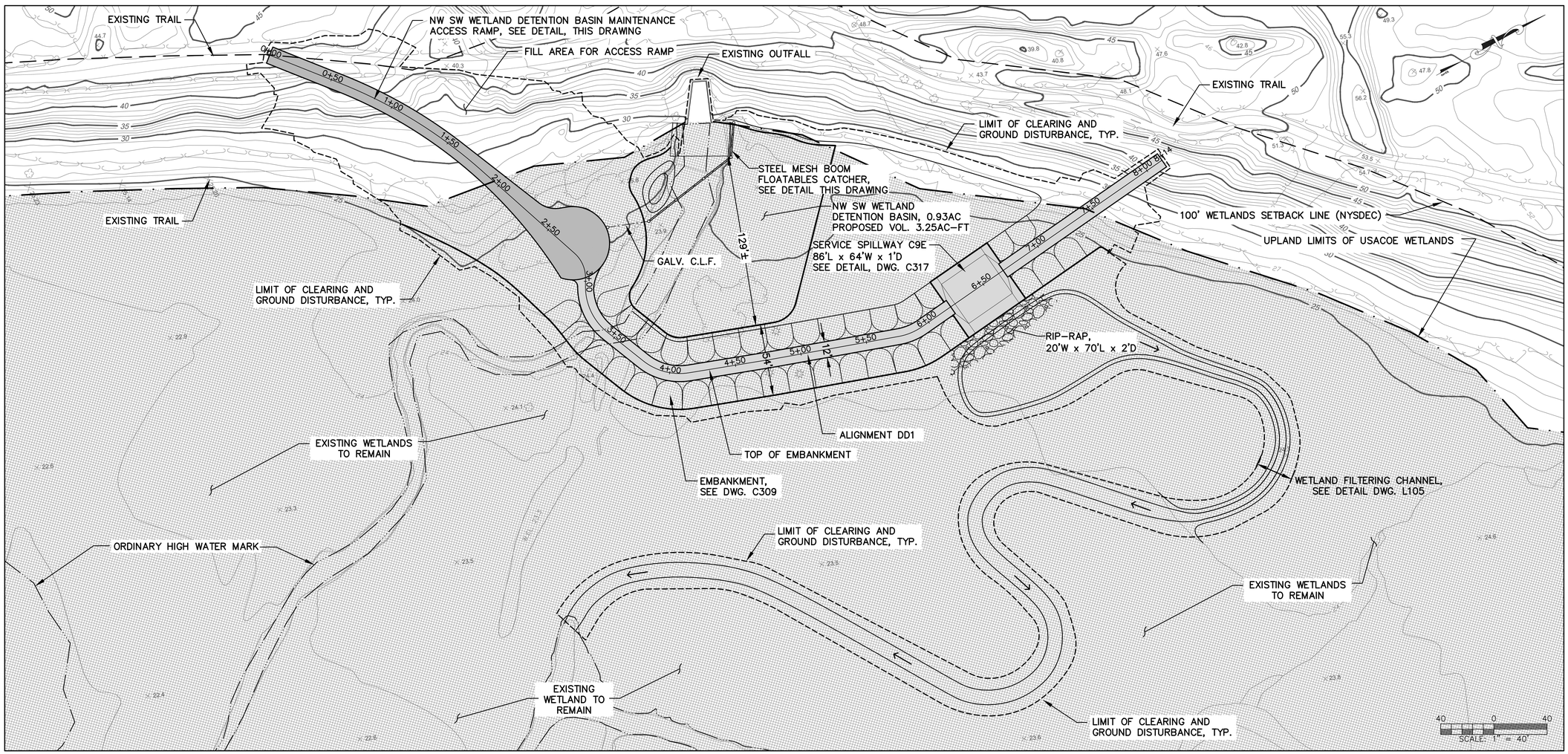
DETAIL MAINTENANCE ACCESS RAMP

16 0 16
SCALE: 1" = 16'



STEEL MESH BOOM
FLOATABLES CATCHER DETAIL

USACOE DELINEATED WETLAND



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Stantec

H2M architects + engineers
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4th Floor East
Melville, NY 11747
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F:(631)694-4122

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

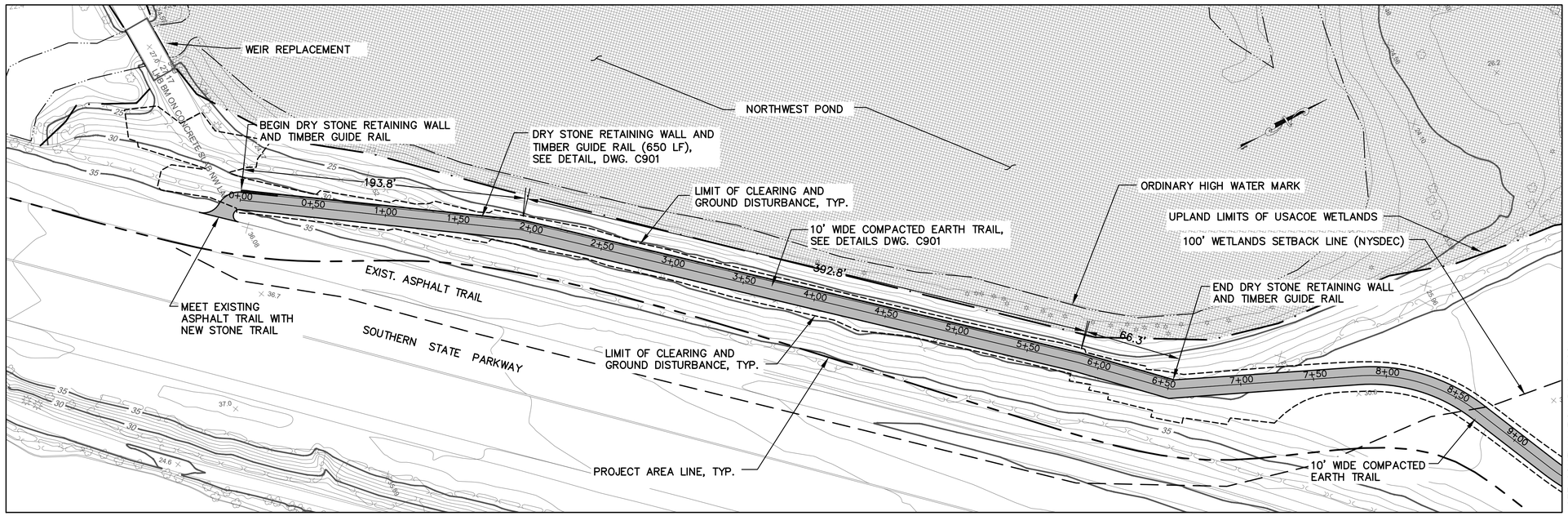
CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE
PROPOSED DETAILED AREA 4

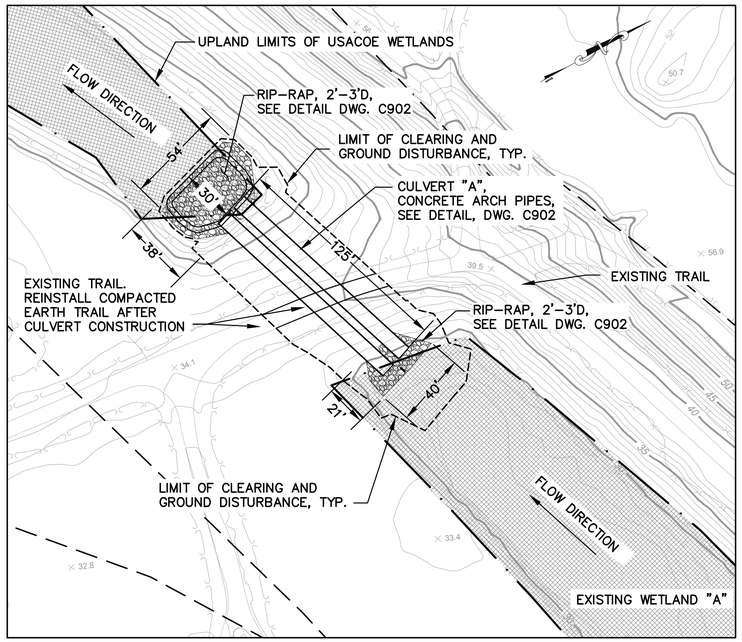
DRAWING # C205
SHEET # 24 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Proposed_Site-4.dwg Last Modified: Oct 01, 2019 - 5:07pm Plotted on: Oct 02, 2019 - 4:41pm By: lsouthard

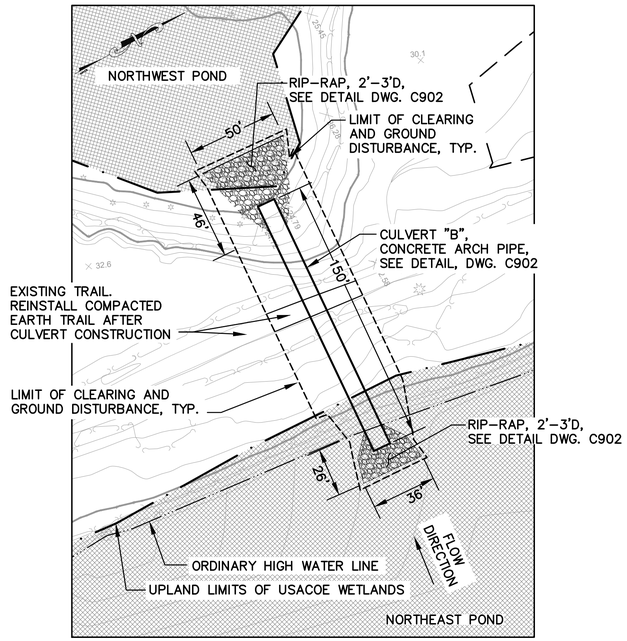


SEE CONTINUATION DWG. C204

DETAILED AREA 5



DETAILED AREA 6



DETAILED AREA 7

USACOE DELINEATED WETLAND

40 0 40
SCALE: 1" = 40'

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Revisions

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2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE
PROPOSED DETAILED AREAS 5,6 & 7

DRAWING # C206

SHEET # 25 OF XX

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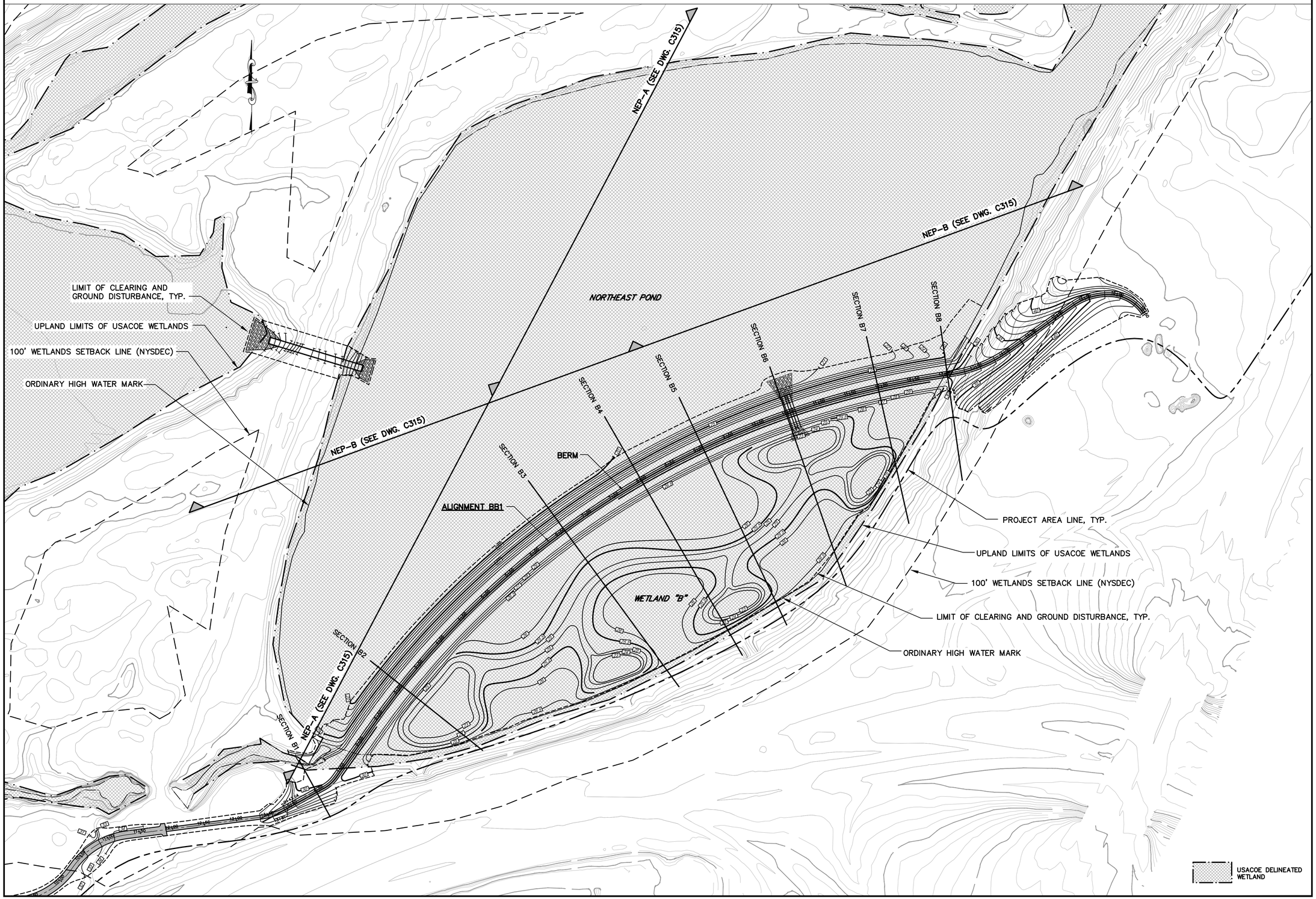

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Revisions

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1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

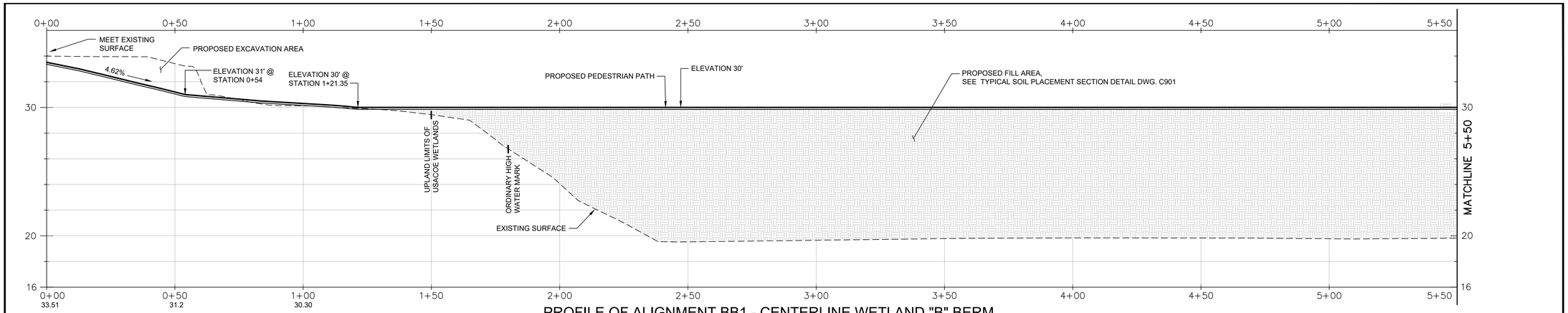
PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	
	N.T.S.

SHEET TITLE
ALIGNMENT BB1 AND NE POND PROFILES/SECT LOCATION MAP

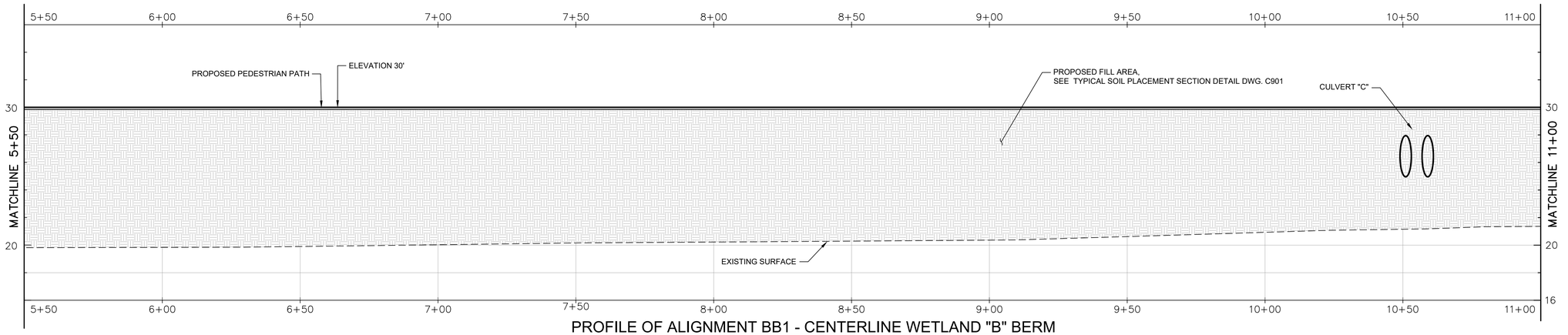
DRAWING # C301

SHEET # 26 OF XX

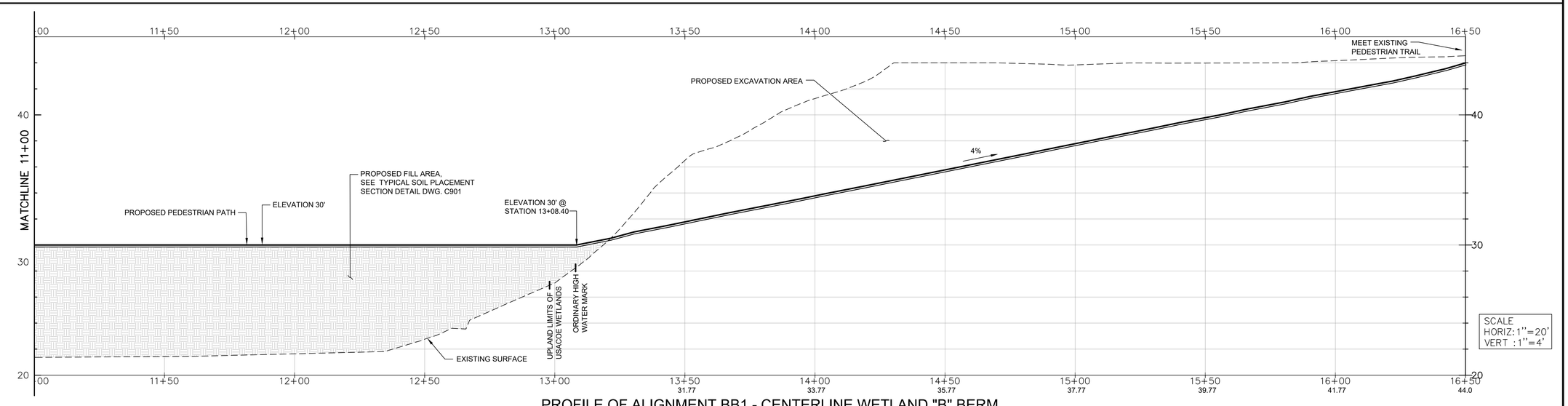
A:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\90% Sub Rotterprint\F_00_Plottles Xsec.dwg Last Modified: Oct 01, 2019 - 4:42pm Plotted on: Oct 02, 2019 - 4:42pm By: southard



PROFILE OF ALIGNMENT BB1 - CENTERLINE WETLAND "B" BERM



PROFILE OF ALIGNMENT BB1 - CENTERLINE WETLAND "B" BERM



PROFILE OF ALIGNMENT BB1 - CENTERLINE WETLAND "B" BERM

SEE DRAWING C301 FOR LOCATIONS

Governor's Office of Storm Recovery

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

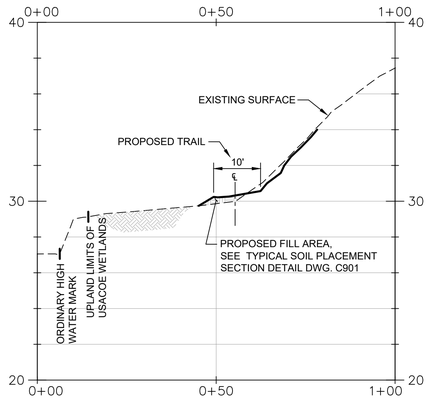
CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

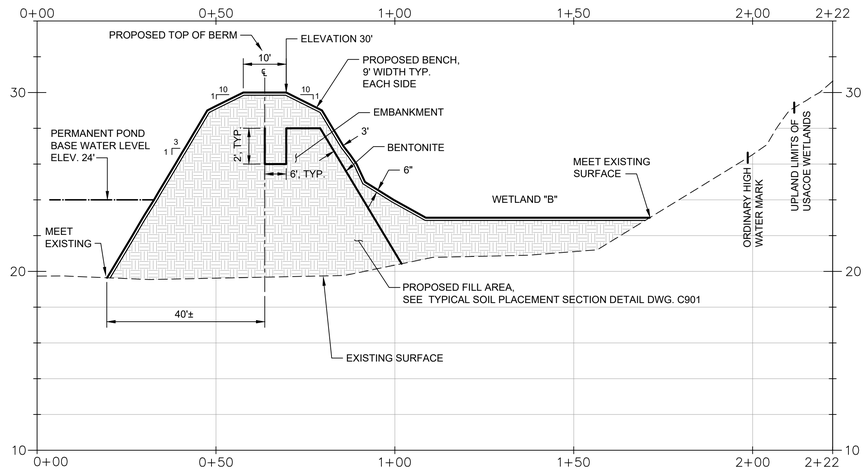
SHEET TITLE
ALIGNMENT BB1 PROFILE

DRAWING # C302
SHEET # 27 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Profiles Xsect.dwg Last Modified: Oct 01, 2019 - 4:43pm Plotted on: Oct 02, 2019 - 4:42pm By lsouthard

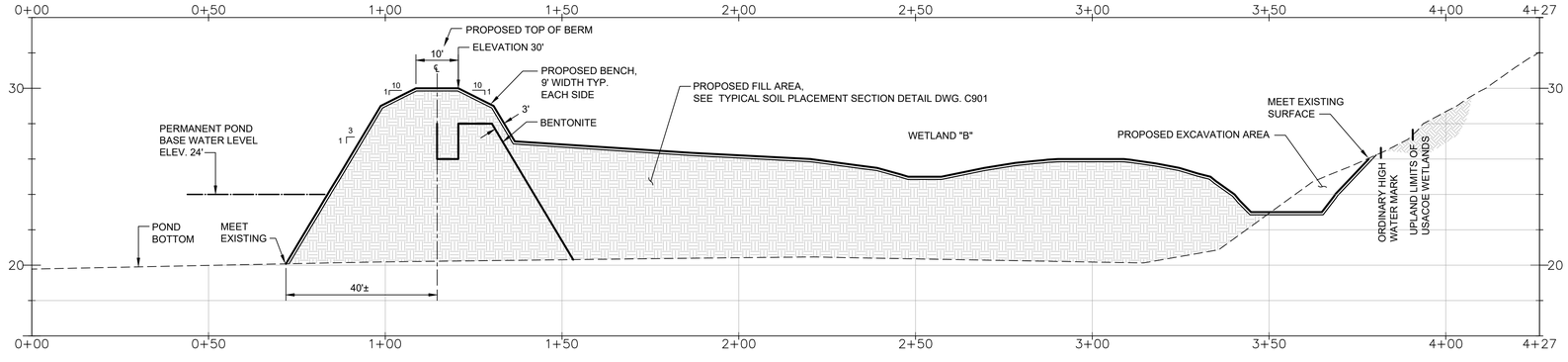


STATION 0+95 - SECTION B1
SECTION AT ALIGNMENT BB1 - WETLAND "B"



STATION 3+08 - SECTION B2
SECTION AT ALIGNMENT BB1 - WETLAND "B"

STATION 6+57 - SECTION B3
SECTION AT ALIGNMENT BB1 - WETLAND "B"



STATION 7+99 - SECTION B4
SECTION AT ALIGNMENT BB1 - WETLAND "B"

SCALE
HORIZ: 1"=20'
VERT : 1"=4'

SEE DRAWING C301 FOR LOCATIONS

Governor's Office of Storm Recovery

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Melville, NY 11747
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SIDNEY DESIGN LAB PC

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Revisions

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1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LT-022
CONTRACT: D004472
COA: 1290350/30377/33001/
PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE

ALIGNMENT BB1 SECTIONS

DRAWING # C303
SHEET # 28 OF XX

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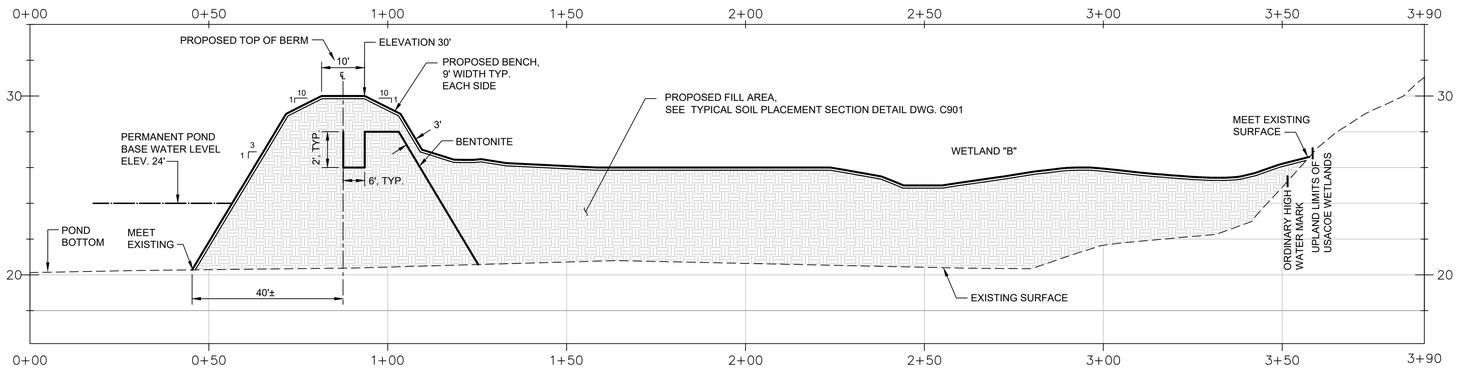
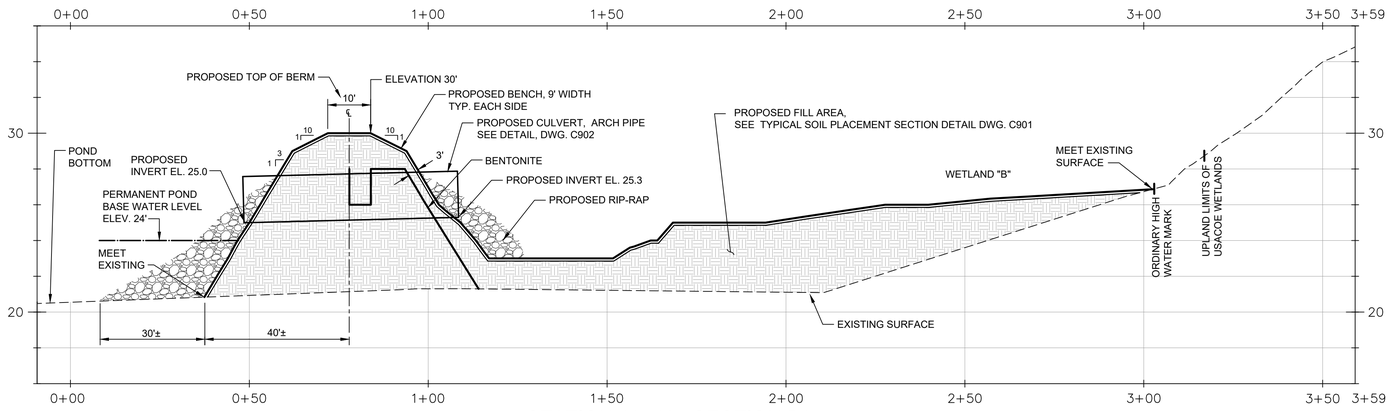
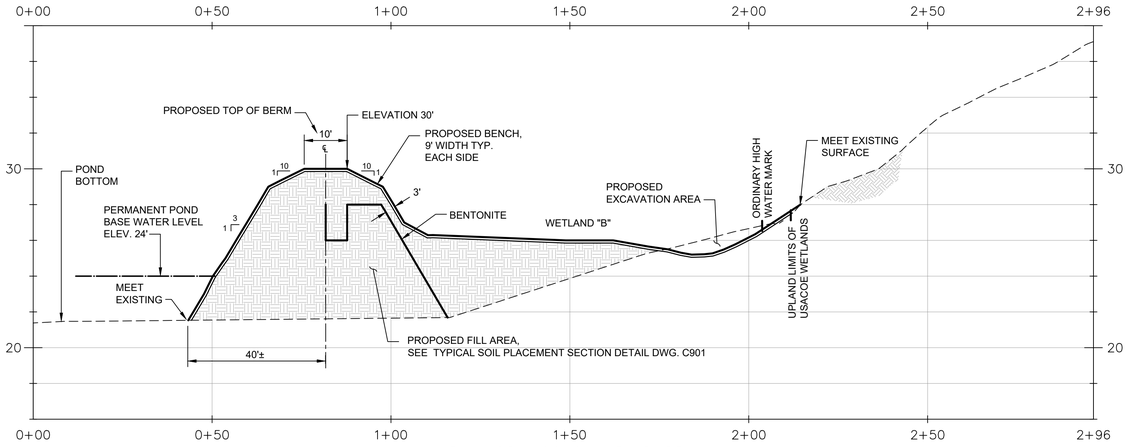


STATION 9+07 - SECTION B5
SECTION AT ALIGNMENT BB1 - WETLAND "B"

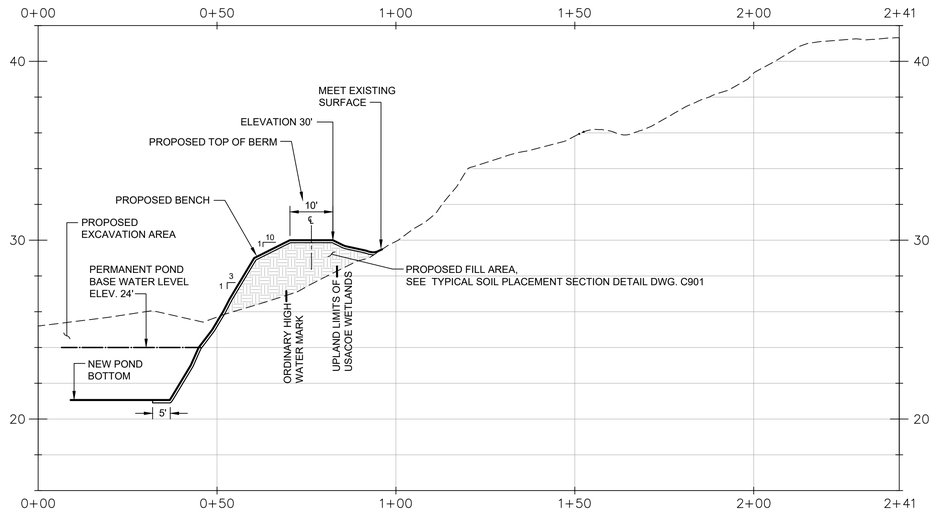
SCALE
HORIZ: 1"=20'
VERT : 1"=4'



STATION 10+46 - SECTION B6
SECTION AT ALIGNMENT BB1 - WETLAND "B"



STATION 11+94 - SECTION B7
SECTION AT ALIGNMENT BB1 - WETLAND "B"



STATION 13+03 - SECTION B8
SECTION AT ALIGNMENT BB1 - WETLAND "B"

SEE DRAWING C301 FOR LOCATIONS

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

Stantec

H2M architects + engineers
538 Broad Hollow Road
4th Floor East
Melville, NY 11747
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F:(631)694-4122

CHINNEY DESIGN, M.A.P.C. LANDSCAPE ARCHITECTS

LKB CONSULTING ENGINEERS

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE

ALIGNMENT BB1 SECTIONS

DRAWING # C304

SHEET # 29 OF XX

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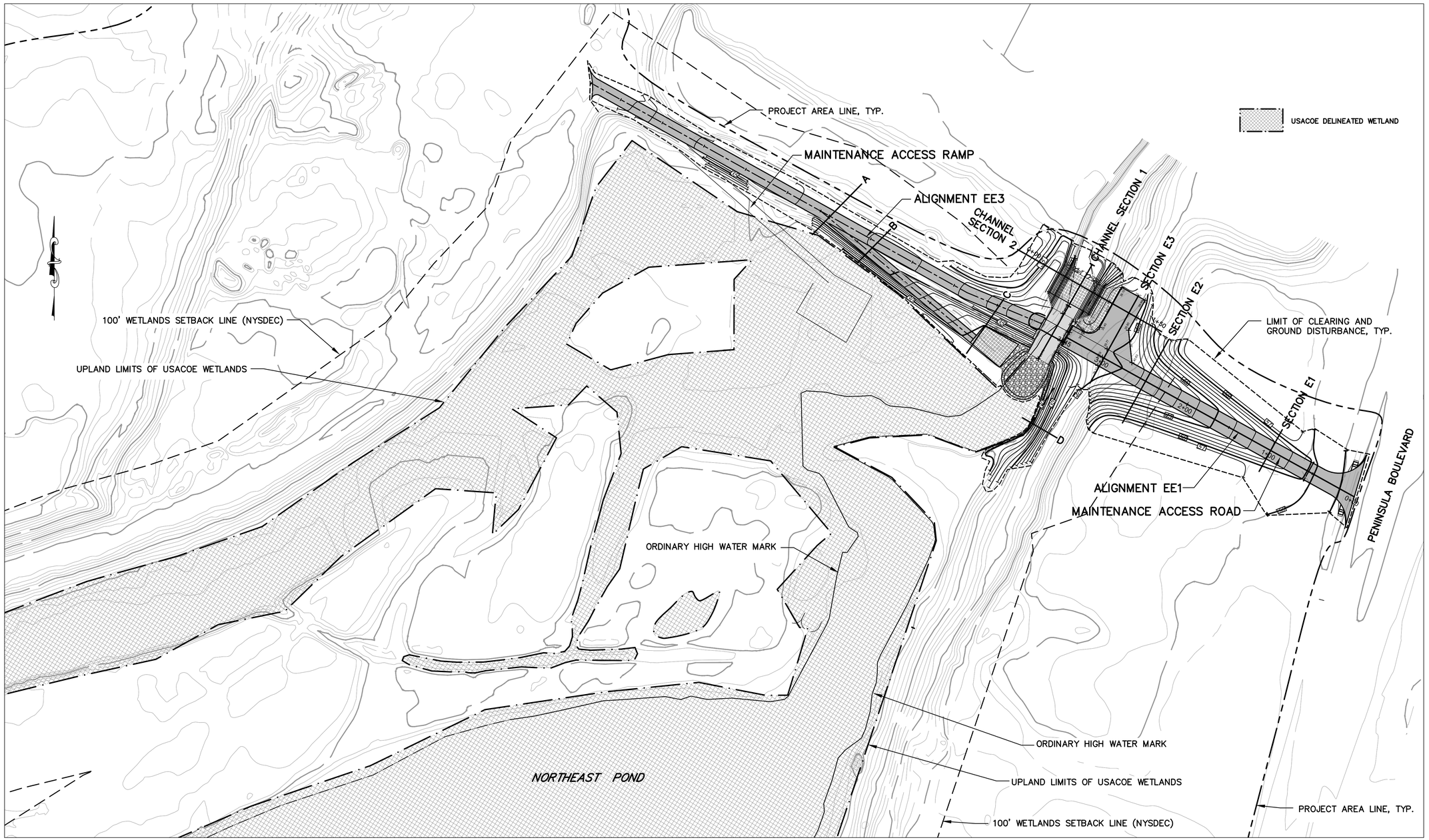

SEE DRAWINGS C306, C312, C313, C314 FOR SECTIONS AND PROFILES

Governor's Office of Storm Recovery

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CONSULTANTS:

Stantec

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10–2018
2	ADDRESS USACOE COMMENTS	5–2019
3	DESIGN REVISIONS	9–2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

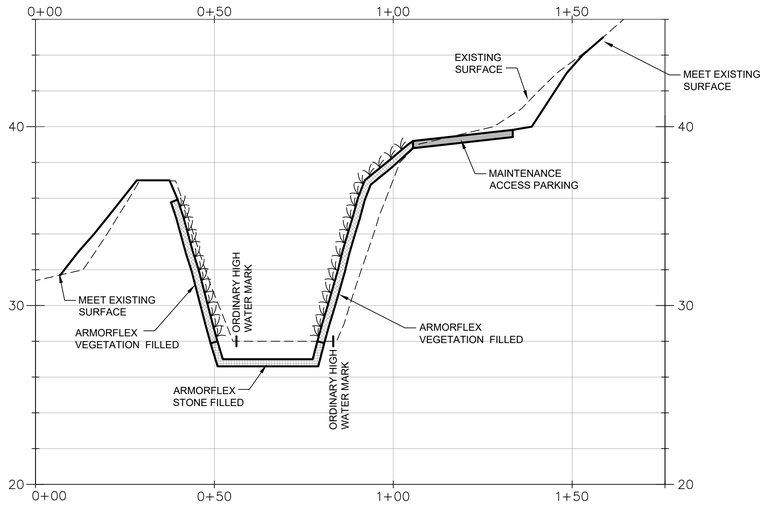
PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L. REVIEWED BY:
N.T.S.

SHEET TITLE
ALIGNMENT EE1 AND EE3 PROFILES/SECT LOCATION MAP

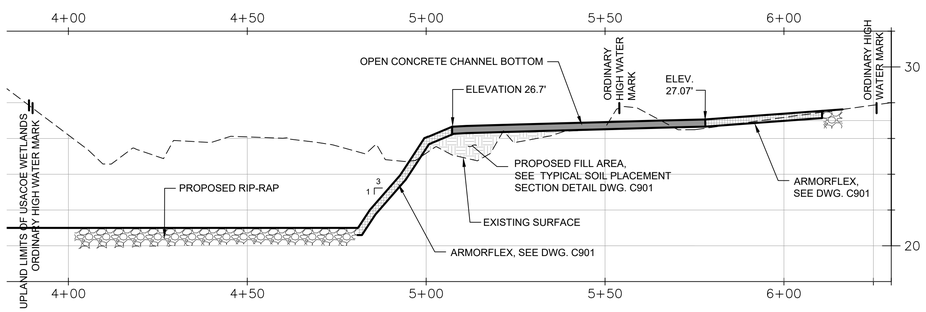
DRAWING # C305

SHEET # 30 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Profiles Xsect.dwg Last Modified: Oct 01, 2019 - 4:43pm Plotted on: Oct 02, 2019 - 4:42pm By: lsouthard



CHANNEL SECTION 2



CHANNEL SECTION 1

SCALE
HORIZ: 1"=20'
VERT : 1"=4'

SEE DRAWING C305 FOR LOCATIONS

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

Stantec

H2M architects + engineers
538 Broad Hollow Road
4th Floor East
Melville, NY 11747
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WORK ORDER: LI-022
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COA: 1290350/30377/33001/
PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE

CHANNEL SECTIONS

DRAWING # C306
SHEET # 31 OF XX

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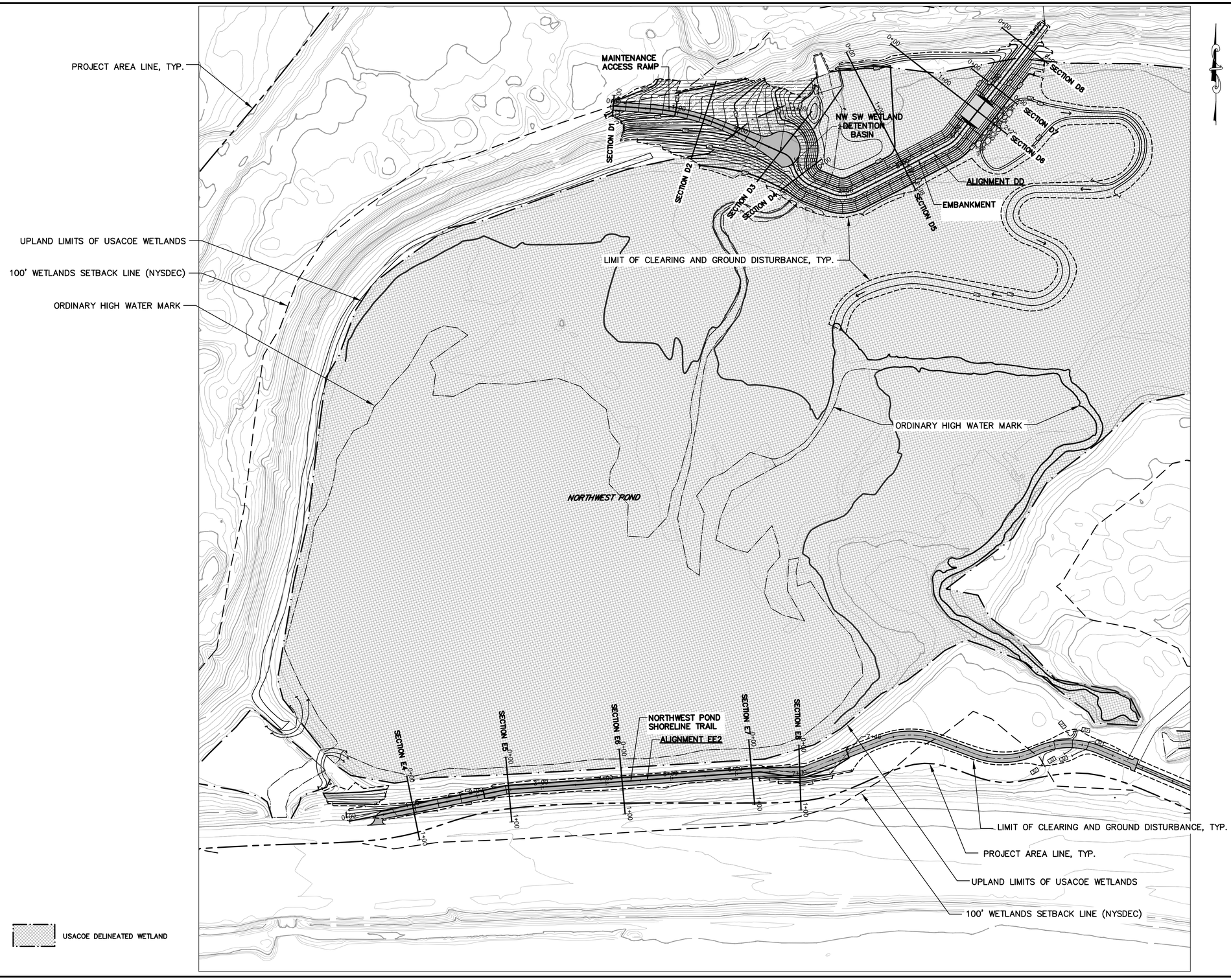

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WORK ORDER: LI-022
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COA: 1290350/30377/33001/ PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L. REVIEWED BY:
N.T.S.

SHEET TITLE
ALIGN. DD, EE2 AND NW POND PROFILES/SECT LOCATION MAP

DRAWING # C307

SHEET # 32 OF XX

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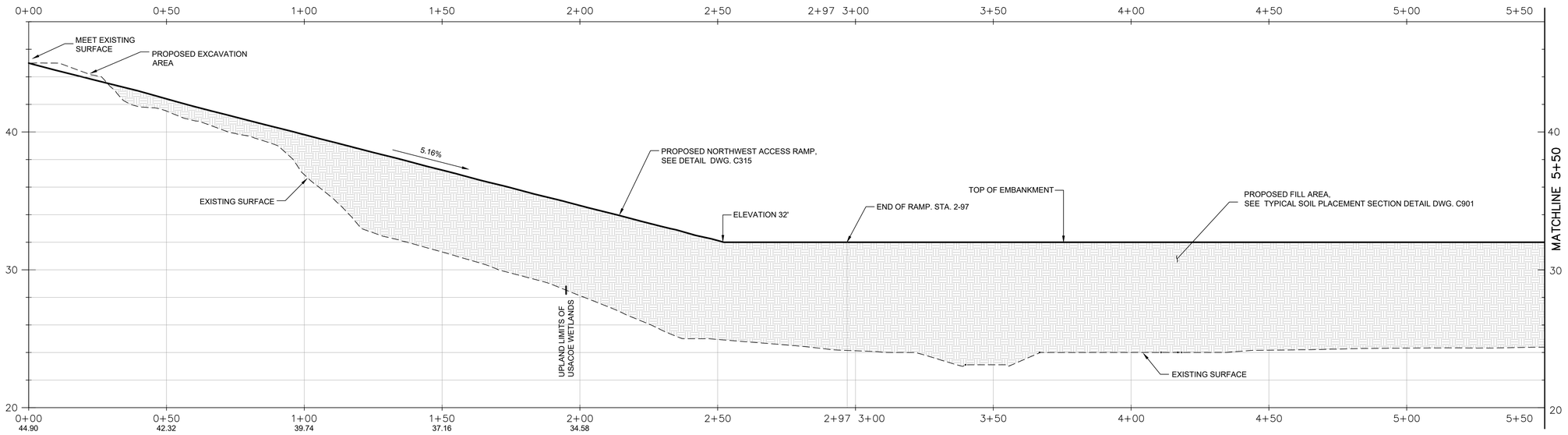
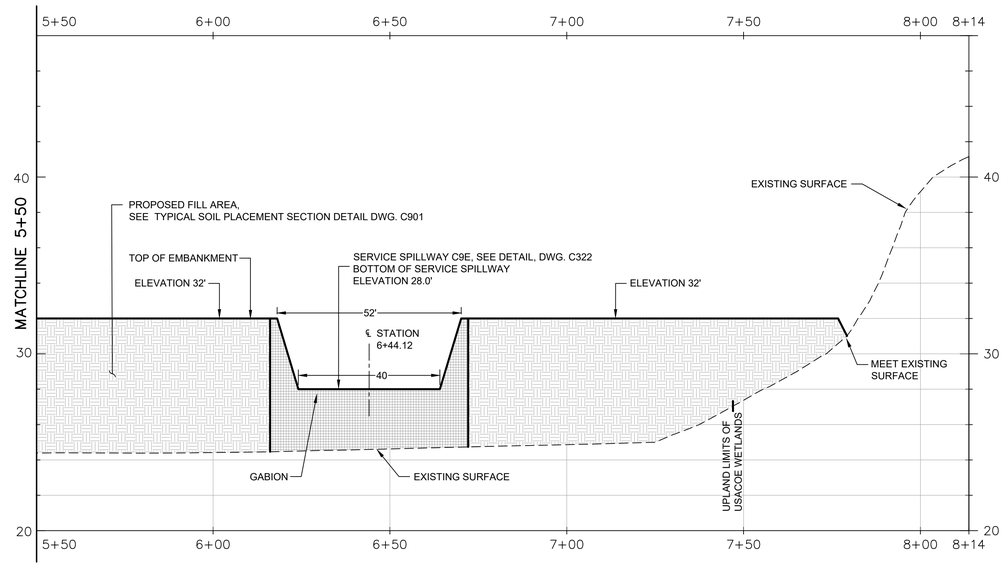


PROFILE OF ALIGNMENT DD - CENTERLINE OF NW SW WETLAND DETENTION BASIN ACCESS RAMP AND EMBANKMENT



SCALE
HORIZ: 1"=20'
VERT : 1"=4'

PROFILE OF ALIGNMENT DD
CENTERLINE OF NW SW WETLAND DETENTION BASIN ACCESS RAMP AND EMBANKMENT

SEE DRAWING C307 FOR LOCATIONS

Governor's Office of Storm Recovery

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WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
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DRAWN BY: L.A.S.
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REVIEWED BY:

SHEET TITLE

ALIGNMENT DD PROFILE

DRAWING # C308

SHEET # 33 OF XX

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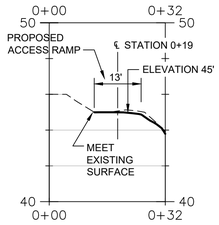
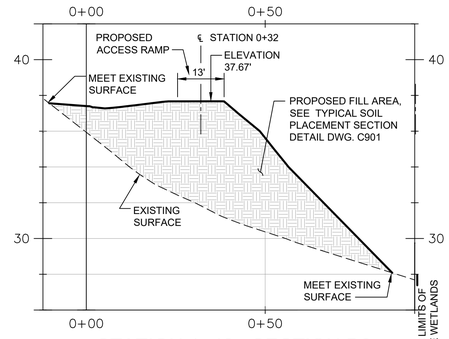


STATION 0+00 - SECTION D1
SECTION AT ALIGNMENT DD
NW SW WETLAND DETENTION BASIN ACCESS RAMP



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SECTION AT ALIGNMENT DD
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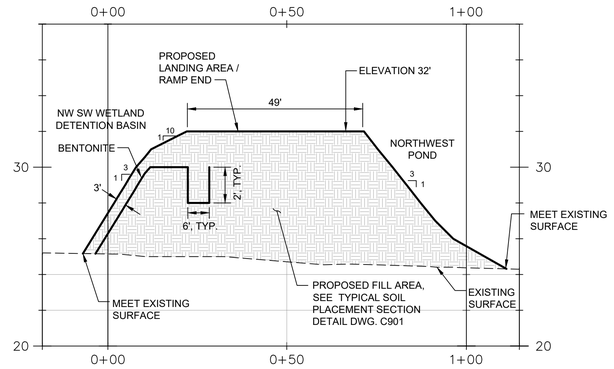
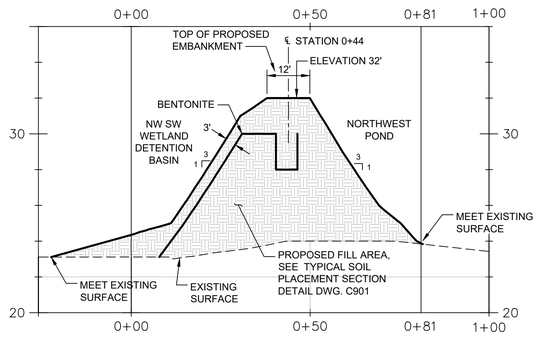
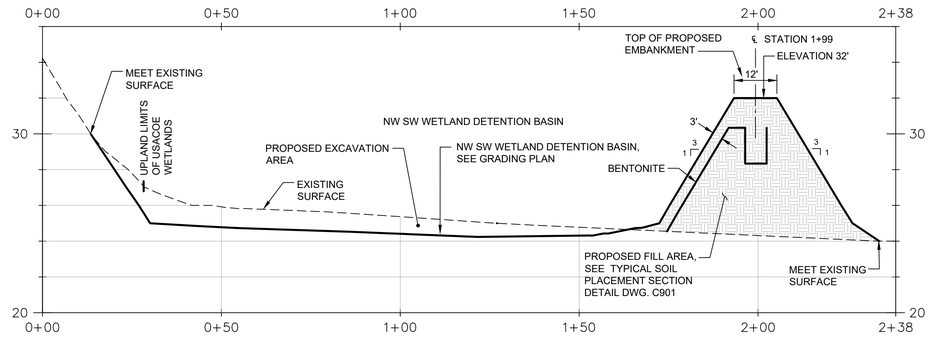


STATION 2+69 - SECTION D3
SECTION AT ALIGNMENT DD
NW SW WETLAND DETENTION BASIN ACCESS RAMP



STATION 3+19 - SECTION D4
SECTION AT ALIGNMENT DD
NW SW WETLAND DETENTION BASIN EMBANKMENT



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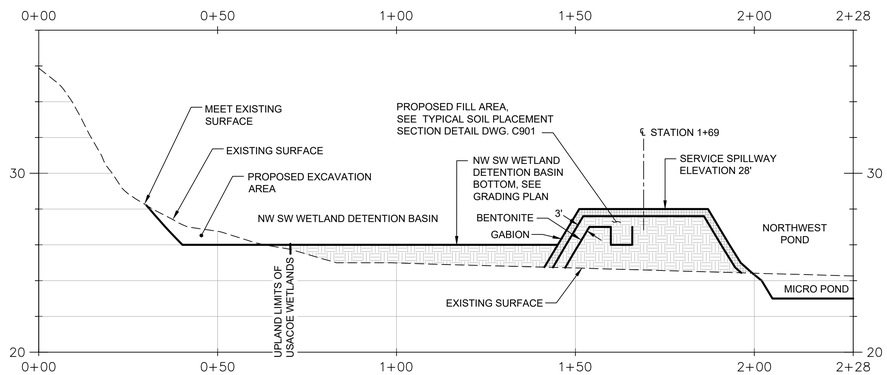
SECTION AT ALIGNMENT DD
NW SW WETLAND DETENTION BASIN EMBANKMENT



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SECTION AT ALIGNMENT DD
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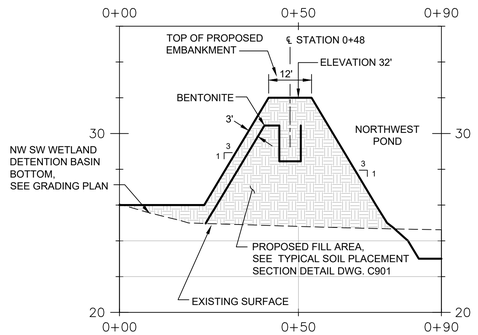
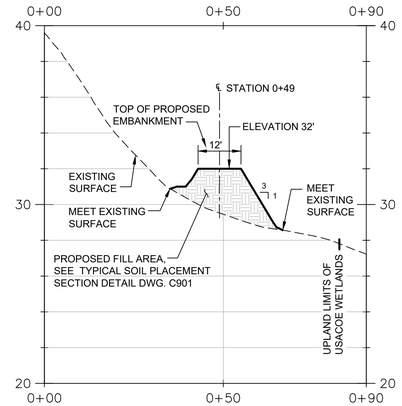


STATION 6+90 - SECTION D7
SECTION AT ALIGNMENT DD
NW SW WETLAND DETENTION BASIN EMBANKMENT



STATION 7+69 - SECTION D8
SECTION AT ALIGNMENT DD
NW SW WETLAND DETENTION BASIN EMBANKMENT

SCALE
HORIZ: 1"=20'
VERT : 1"=4'

SEE DRAWING C307 FOR LOCATIONS

Governor's Office of Storm Recovery

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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/
PRK 4559

PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE

ALIGNMENT DD SECTIONS

DRAWING # C309

SHEET # 34 OF XX

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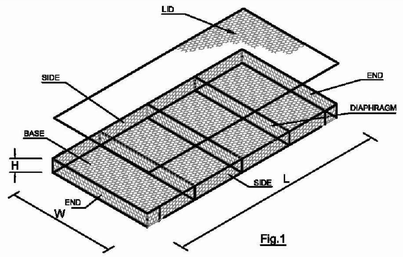


Fig.1

RENO MATTRESS
Maccaferri, Inc.

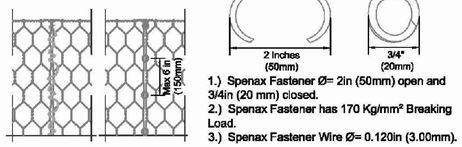


Fig. 2

The tolerance of the mesh opening "D", (the distance between the axis's of two parallel twists) is according to ASTM A975

CLOSING PROCESS

Edges Are Joined Together, Using The Appropriate Lacing Techniques.
Manual: Continuous Wire Looped Tightly Around Every Other Mesh Opening, Alternating Single And Double Loops (Fig. 5a).
Mechanical: Using A Pneumatic Or Hand Power Tool, Employing "c" Shaped Ring Fasteners. For Continuity And Strength, The Recommended Spacing Is 6 Inches, Max 150mm (Fig 5b).



1.) Spenax Fastener Ø= 2in (50mm) open and 3/4in (20 mm) closed.
2.) Spenax Fastener has 170 Kg/mm² Breaking Load.
3.) Spenax Fastener Wire Ø= 0.120in (3.00mm).

Fig. 3

INSTALLATION NOTES:

1. After Assembly, the mattresses are placed in their proper location and securely attached to adjacent units.
2. For structural integrity, all adjoining empty units should be connected by means of lacing wire or ring fasteners along all the edges of their contact surfaces.
3. Where mattresses are to placed on steep slopes, the mattress should be laid with the width perpendicular to the slope, except for very small ditches.
4. Mattress should be placed and securely attached while empty.
5. Mattresses can conform to bends up to a radius of 60-70 ft. without alteration, and placed to the required curvature for filling.
6. Mattresses may be cut to form curves or bevels.
7. Level off the fill 1" above the top of mesh to allow for settlement.
8. Install bracing wires vertically between the top and bottom mesh in areas where water will fall directly on to the Reno mattresses.
9. Make sure the top edges of the diaphragms are exposed
10. Lay the lid down, pull the edges of the panels to be connected together where necessary using an appropriate tool as a lid closer.
11. The lids shall be tightly laced along all edges, ends and diaphragms in the same manner as assembling .
12. Adjacent lids may be securely attached simultaneously
13. Securely attached the lids to the ends of the mattresses and then securely attach them to the sides, and diaphragms, using alternate double and single loops, or ring fasteners.
14. In cases where number of adjacent bases are to be covered at one time, rolls of mesh can be used in place of individual unit size lids.
15. The actual number and placement of stakes shall be determined by the Engineer.
16. Ring fasteners can be used instead of, or to complement, lacing wire.
17. Spacing of the rings shall not exceed 6 inches.
18. Geotextile shall be placed under entire length of Reno mattress and Gabions.

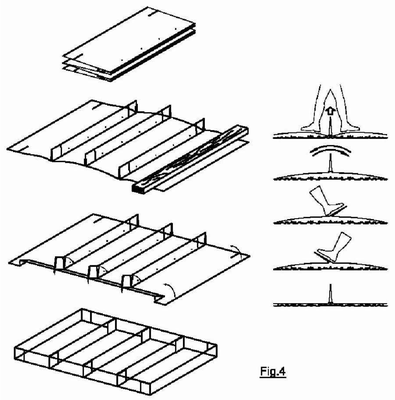
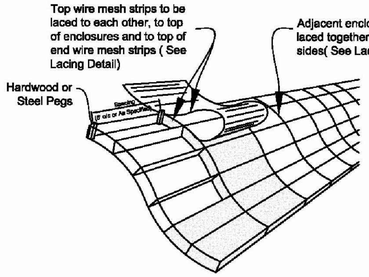


Fig.4

Reno Mattess Assembly
Maccaferri Reno Mattress



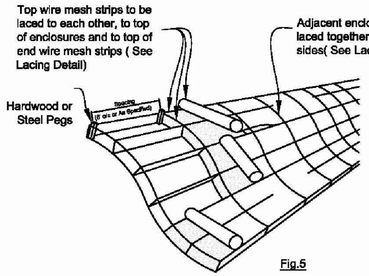


Fig.5

Installation and Filling
Maccaferri Reno Mattress

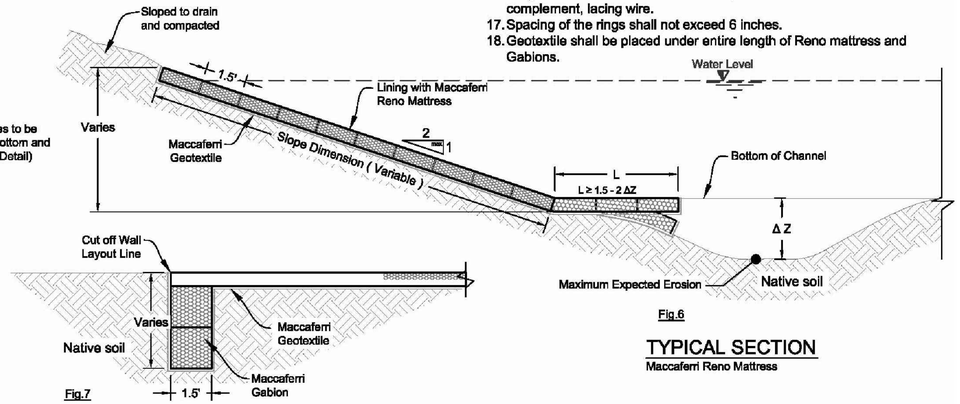
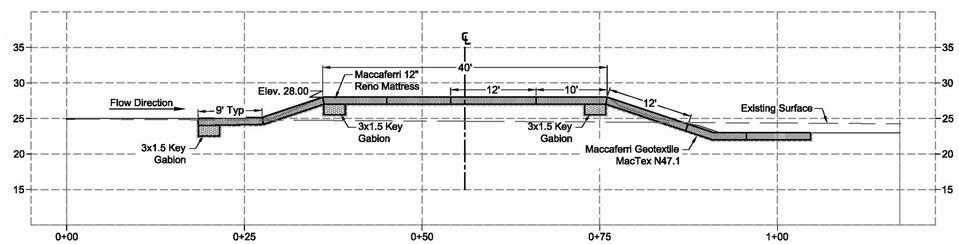


Fig.6

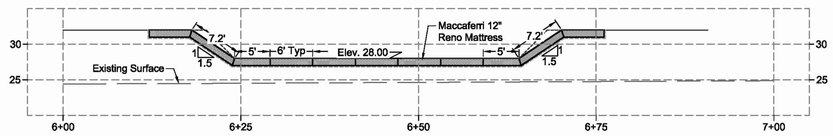
TYPICAL SECTION
Maccaferri Reno Mattress

Fig.7

TYPICAL CUTOFF WALL
Maccaferri, Inc.



SERVICE SPILLWAY PROFILE - C9E
Maccaferri Reno Mattress



SERVICE SPILLWAY SECTION - C9E
Maccaferri Reno Mattress

NORTHWEST POND DETENTION BASIN SERVICE SPILLWAY TO POND

SPILLWAY DESIGN BY:

MACCAFERRI
Maccaferri, Inc.
10303 Governor Lane Blvd.
Williamsport, MD 21795-3116 USA
Ph. (301) 223-6910 Fax (301) 223-6134

SEE DRAWINGS C205, C305 AND C310 FOR LOCATIONS AND RIP-RAP DIMENSIONS

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DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L. | REVIEWED BY:
N.T.S.

SHEET TITLE
SPILLWAY NOTES, DETAILS SECTION AND PROFILE

DRAWING # C317

SHEET # 42 OF XX

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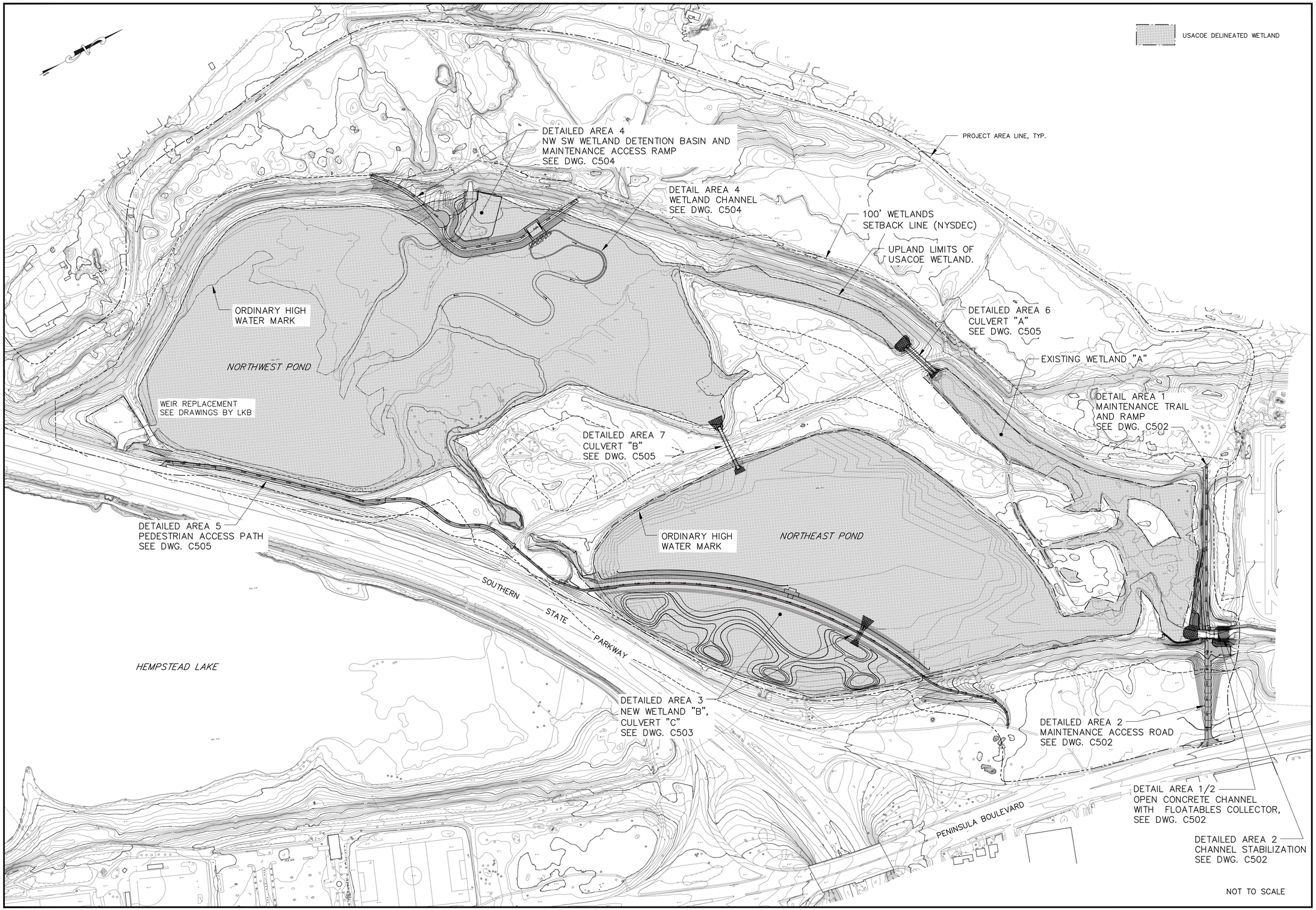

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2	ADDRESS USACOE COMMENTS	5-2019
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4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

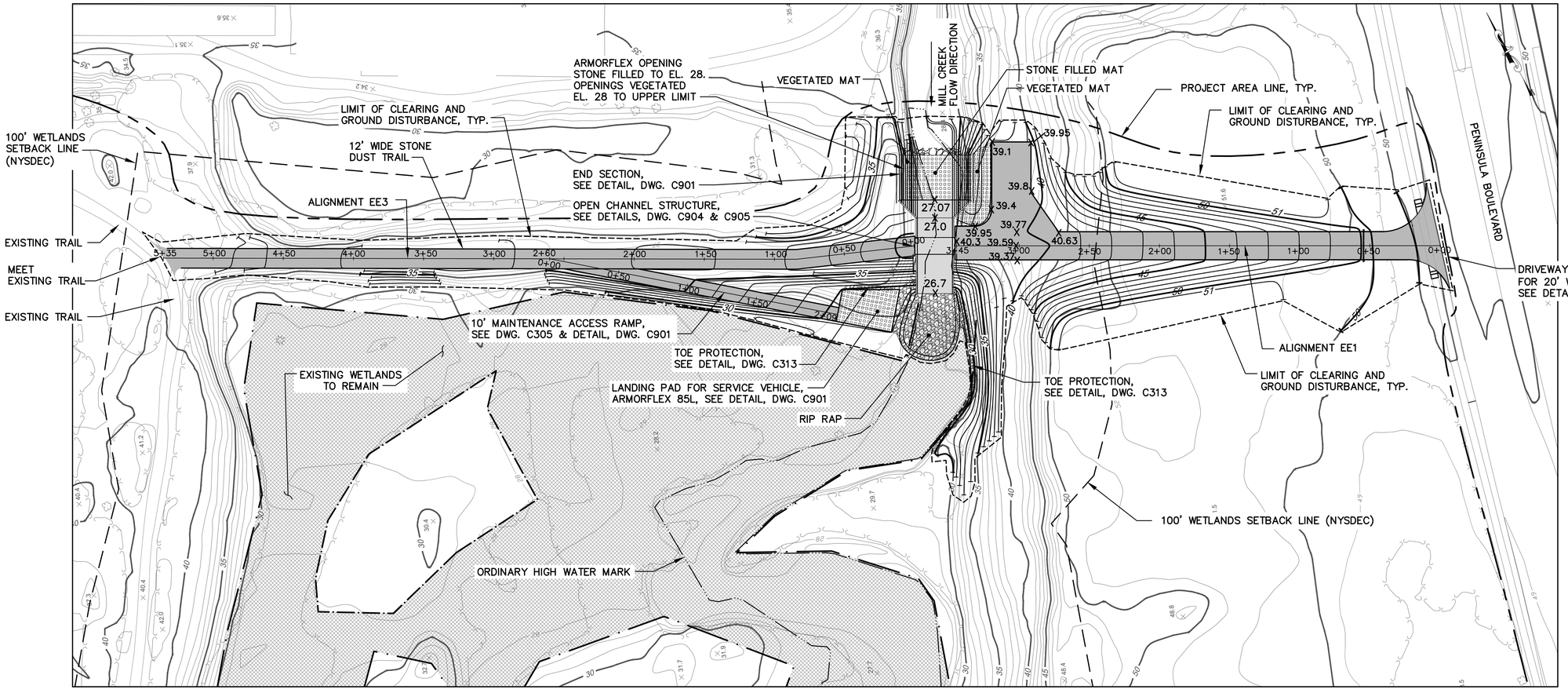
CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L. REVIEWED BY:
N.T.S.

SHEET TITLE
PROPOSED GRADING KEY MAP

DRAWING # C501
SHEET # 43 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Proposed_Grading_4.dwg Last Modified: Oct 01, 2019 - 4:52pm Plotted on: Oct 02, 2019 - 4:45pm By lsouthard



DETAILED AREAS 1 & 2

USACOE DELINEATED WETLAND

40 0 40
SCALE: 1" = 40'

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

Stantec

H2M architects + engineers
538 Broad Hollow Road
4th Floor East
Melville, NY 11747
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F:(631)694-4122

GREY DESIGN LA & PC

LKB CONSULTING ENGINEERS

Cashin Associates, P.C.
ENGINEERING · PLANNING · CONSTRUCTION MANAGEMENT

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10–2018
2	ADDRESS USACOE COMMENTS	5–2019
3	DESIGN REVISIONS	9–2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE
GRADING DETAILED AREAS 1 & 2

DRAWING # C502

SHEET # 44 OF XX

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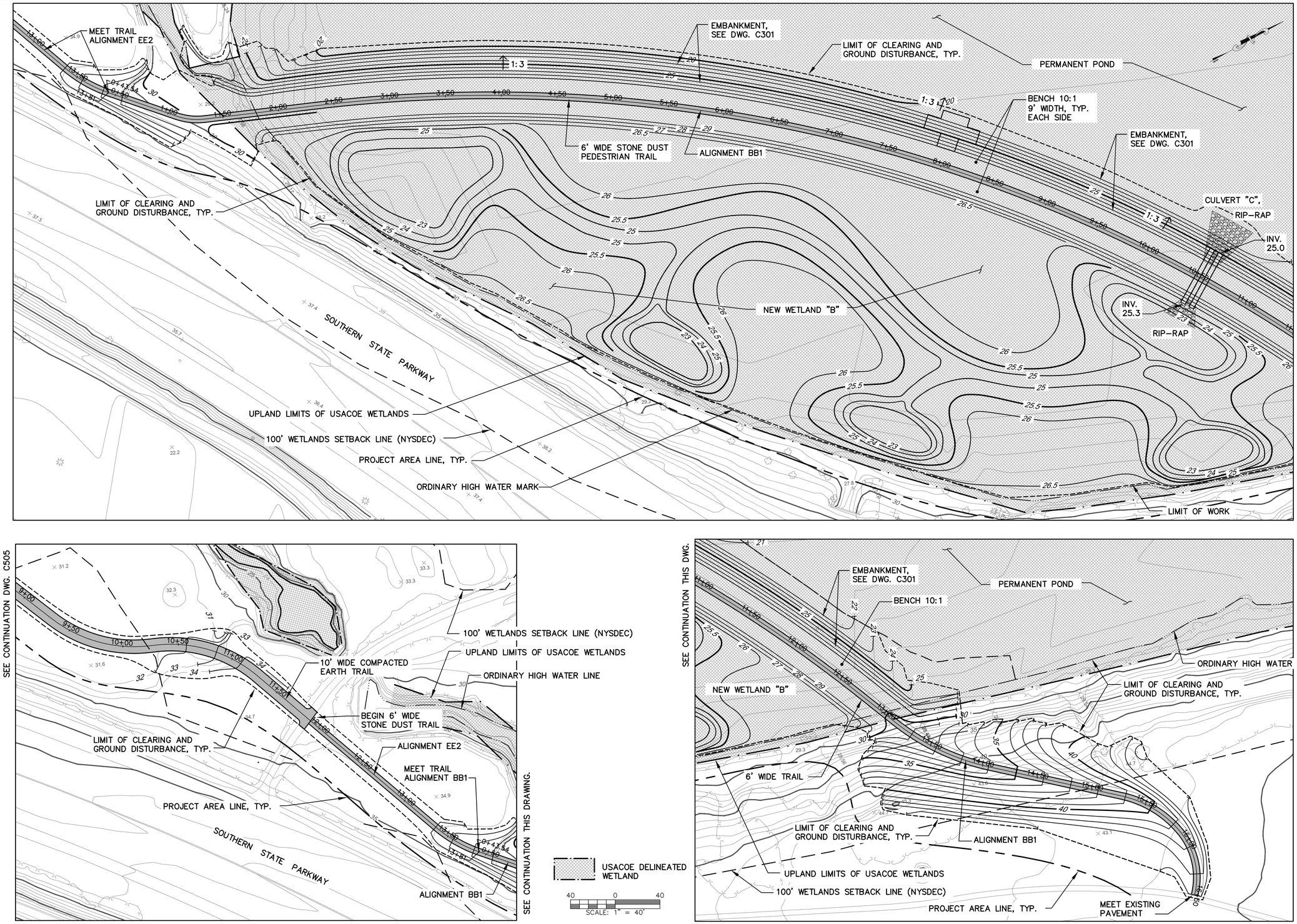

Governor's Office of Storm Recovery

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LKB CONSULTING ENGINEERS

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5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE
GRADING DETAILED AREA 3

DRAWING # C503

SHEET # 45 OF XX

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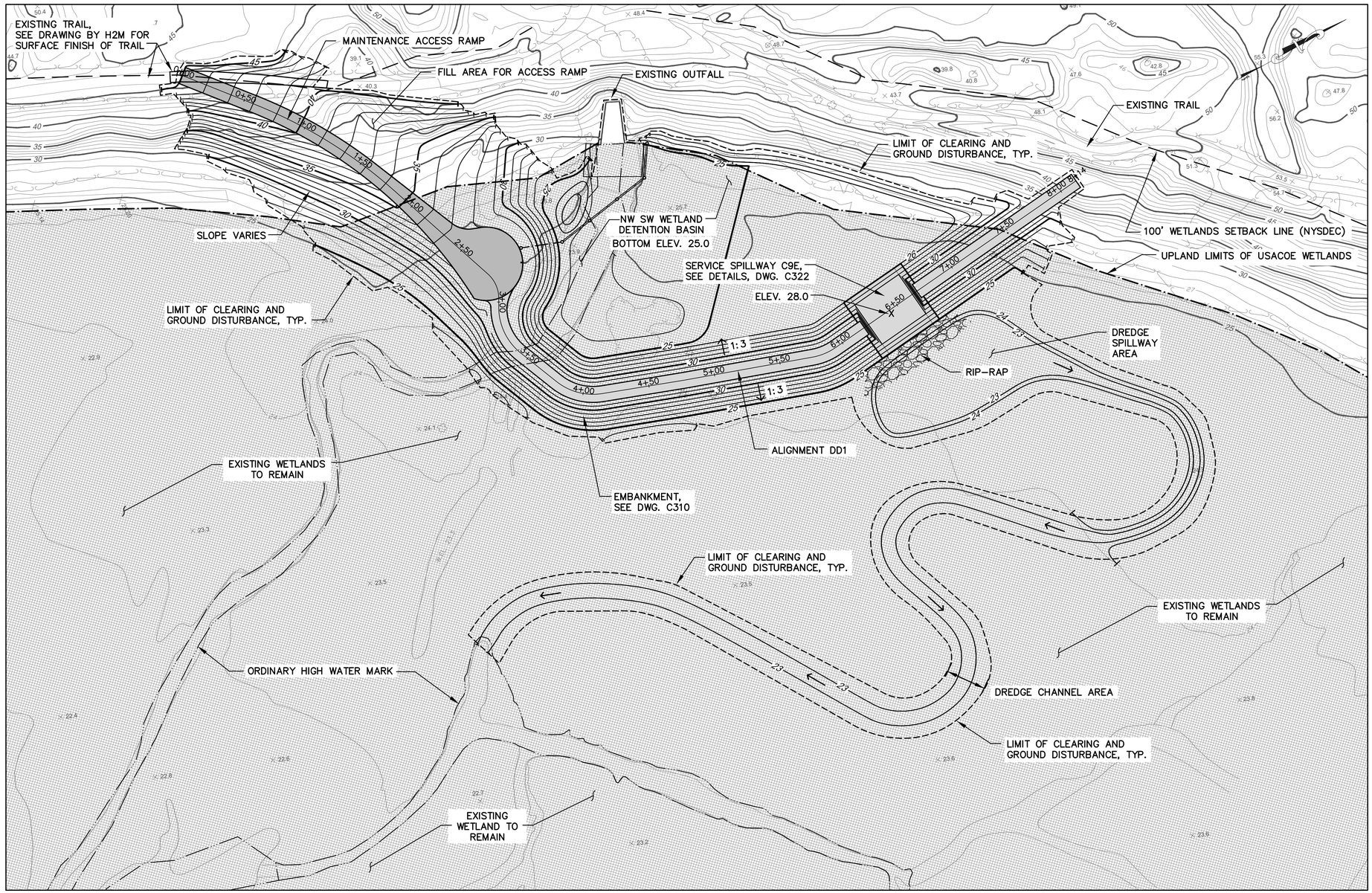

Governor's Office of Storm Recovery

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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

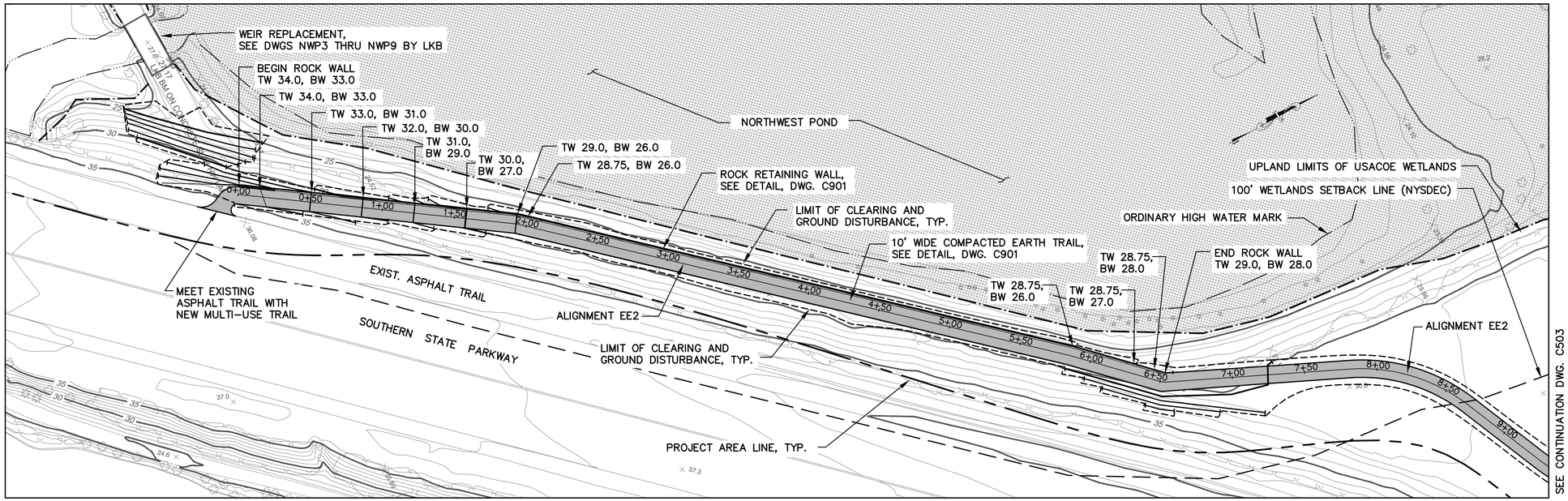
PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE
GRADING DETAILED AREA 4

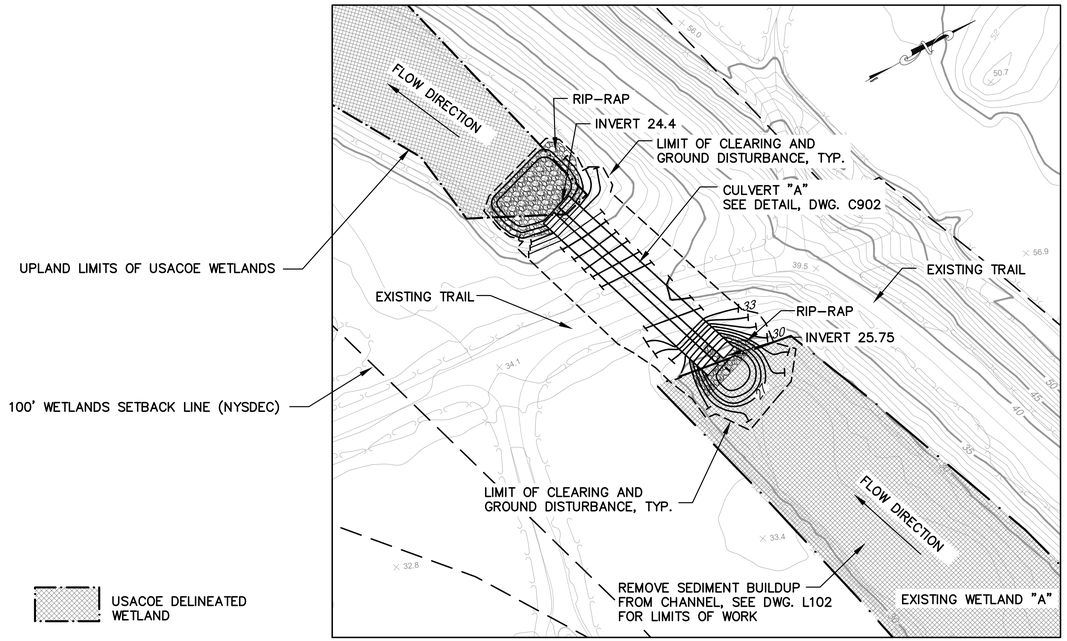
DRAWING # C504

SHEET # 46 OF XX

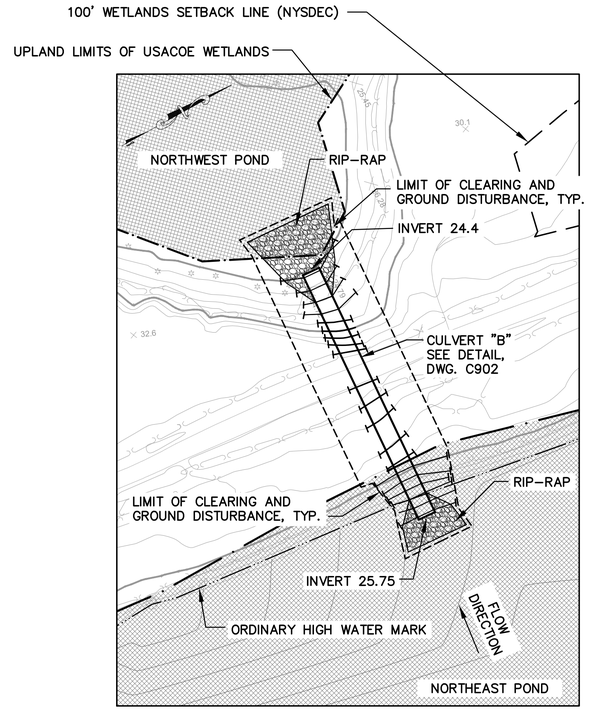
X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\90% Sub Redesign\P_00_Proposed_Grading_4.dwg Last Modified: Oct 01, 2019 - 4:52pm Plotted on: Oct 02, 2019 - 4:46pm By: tscothard



DETAILED AREA 5



DETAILED AREA 6



DETAILED AREA 7

Governor's Office of Storm Recovery

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CONSULTANTS:

Stantec

H2M architects + engineers
538 Broad Hollow Road
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Melville, NY 11747
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F:(631)694-4122

BARNEY DESIGN

LKB CONSULTING ENGINEERS

Cashin Associates, P.C.

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Project Title

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CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

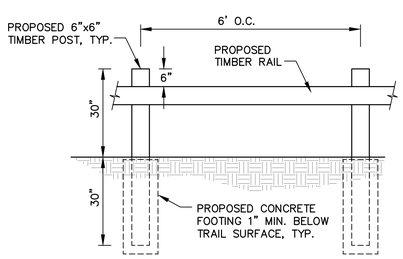
PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE
GRADING DETAILED AREAS 5,6 & 7

DRAWING # C505

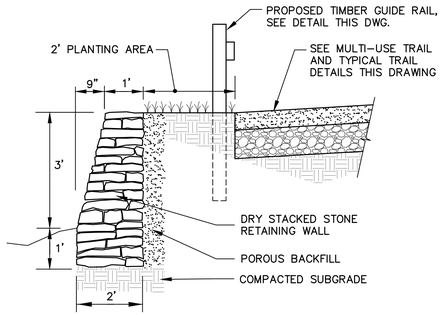
SHEET # 47 OF XX

X:\STATE OF NEW YORK\14014\21 Hempstead Lake Regrading\SET\90% Sub Redesign\F_00_Proposed_Grading_4.dwg Last Modified: Oct 01, 2019 - 4:52pm Plotted on: Oct 02, 2019 - 4:47pm By: ssouthard



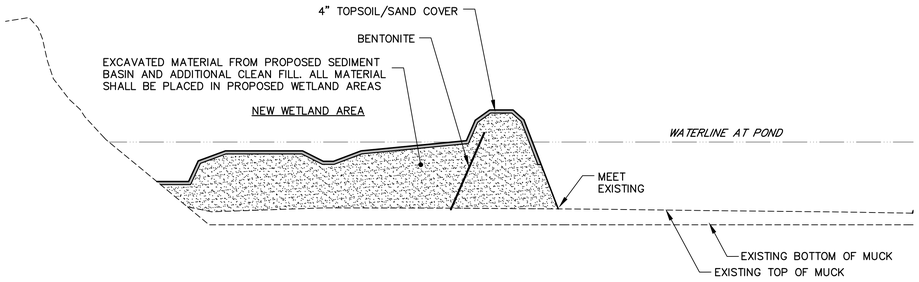
TIMBER GUIDE RAIL DETAIL

NOT TO SCALE



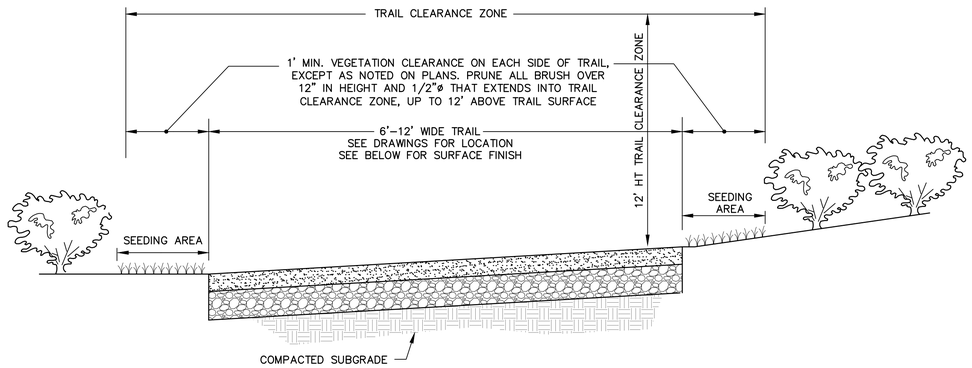
DRY STONE RETAINING WALL AT NORTHWEST POND

NOT TO SCALE



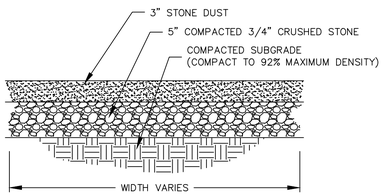
TYPICAL SOIL PLACEMENT SECTION FOR NORTHEAST POND WETLAND AND BERM CREATION

NOT TO SCALE



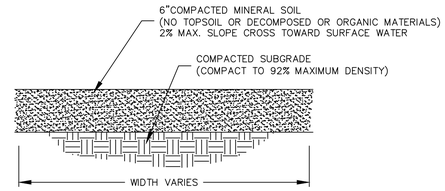
MULTI-USE TRAIL DETAIL

NOT TO SCALE



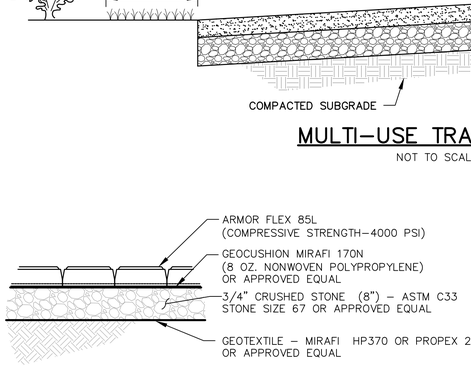
STONE DUST TRAIL SURFACE

NOT TO SCALE



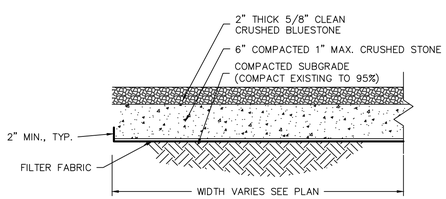
COMPACTED EARTH TRAIL SURFACE

NOT TO SCALE



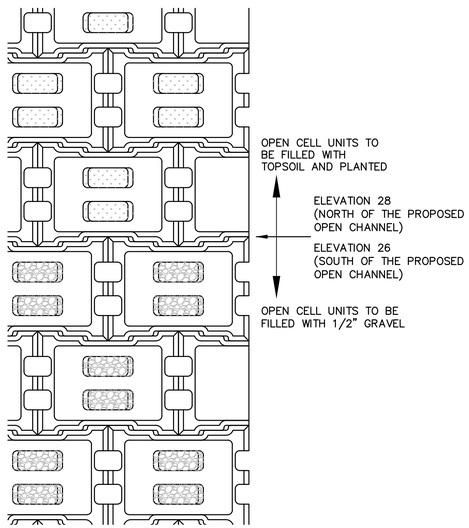
ARMORFLEX CONCRETE MATTRESS TYPICAL DETAIL

NOT TO SCALE



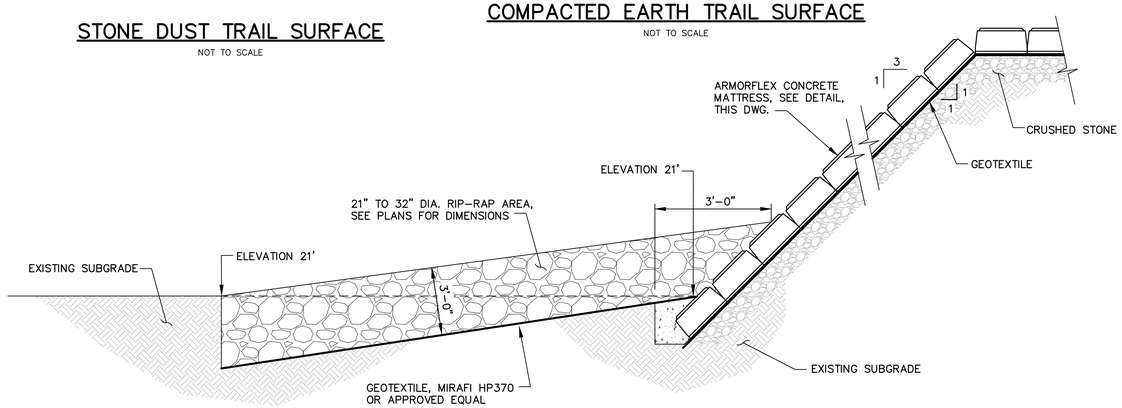
GRAVEL VEHICLE ACCESS ROAD AND SEDIMENT BASIN PARKING AREA

NOT TO SCALE



ARMORFLEX MATTRESS OPEN CELL UNITS FILL MATERIALS TYPICAL DETAIL

NOT TO SCALE



SECTION AT RIP-RAP TYPICAL DETAIL

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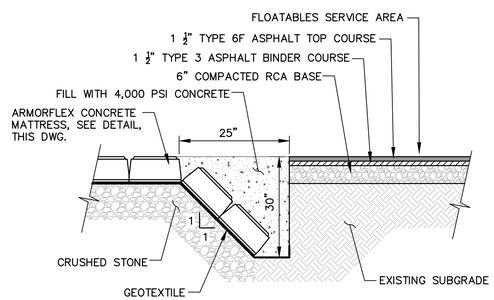
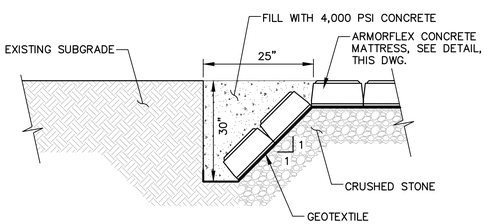


END SECTION AT FLOATABLES SERVICE AREA TYPICAL DETAIL

NOT TO SCALE



END SECTION AT EXISTING SUBGRADE TYPICAL DETAIL

NOT TO SCALE

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE | Parks, Recreation and Historic Preservation

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Melville, NY 11747
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CHENEY DESIGN LA+PC

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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3		
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	V.L.
DRAWN BY:	V.L.
CHECKED BY:	N.L.
REVIEWED BY:	

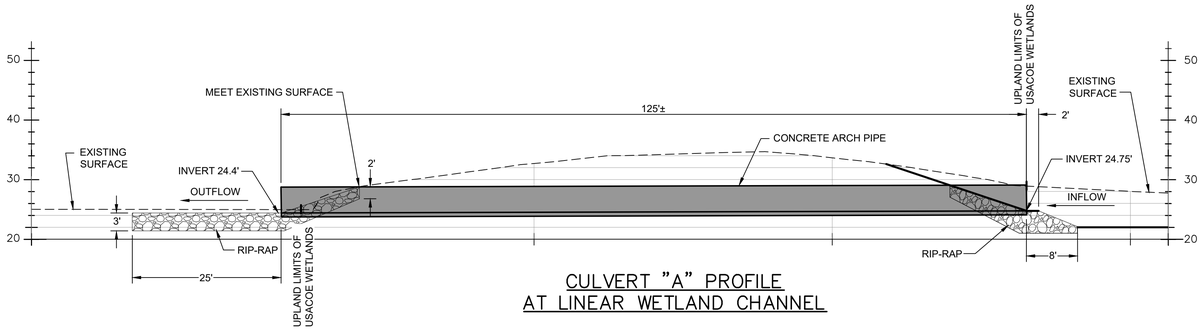
SHEET TITLE

MISCELLANEOUS DETAILS

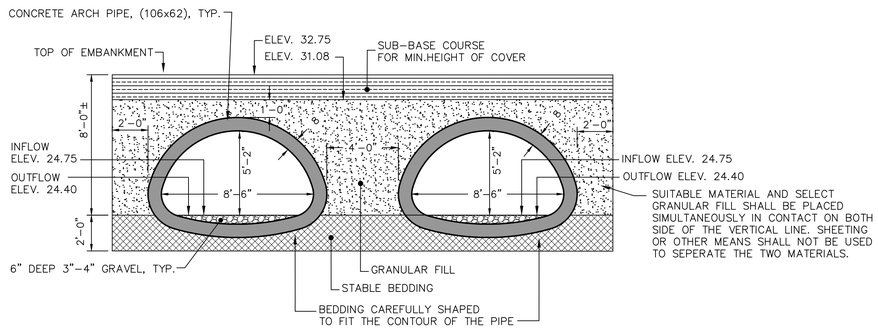
DRAWING # C901

SHEET # 48 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Detail_05.dwg Last Modified: Sep 13, 2019 - 1:01pm Plotted on: Oct 02, 2019 - 4:47pm By: lsouthard



CULVERT "A" PROFILE
AT LINEAR WETLAND CHANNEL



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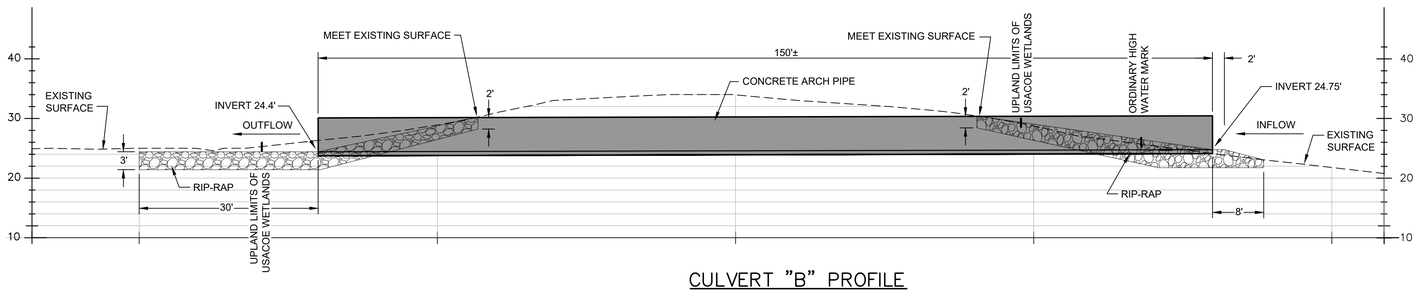
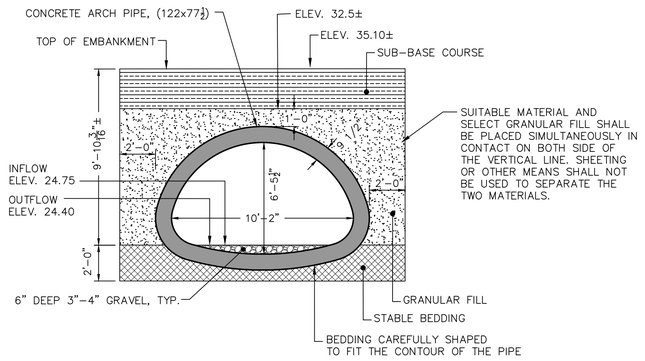


CULVERT "B" PROFILE
TO CONNECT NORTHEAST POND AND NORTHWEST POND



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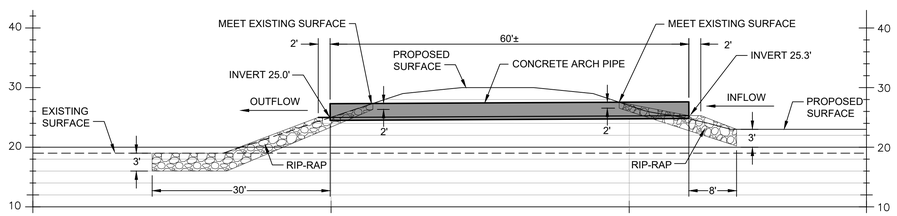
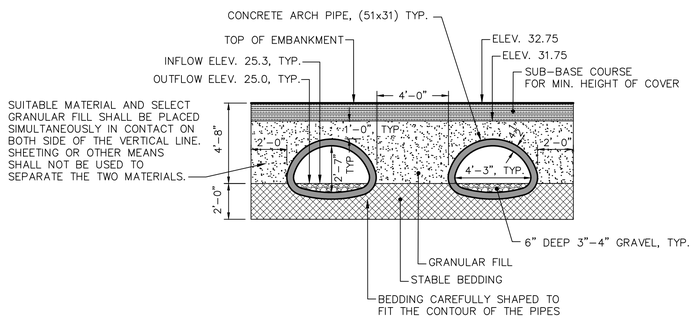


CULVERT "C" PROFILE
OUTFALL FROM WETLAND "B"



CULVERT "C" DETAIL

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NEW YORK STATE Parks, Recreation and Historic Preservation

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Stantec

H2M architects + engineers
538 Broad Hollow Road
4th Floor East
Melville, NY 11747
P:(631)756-8000
F:(631)694-4122

SIDNEY OLSON & P.C. LANDSCAPE ARCHITECTURE

LKB CONSULTING ENGINEERS

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Project Title

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CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

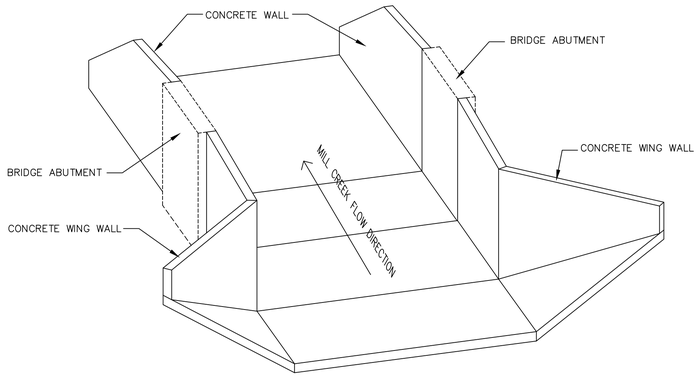
PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: V.L.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE
CULVERTS PROFILES AND DETAILS

DRAWING # C902

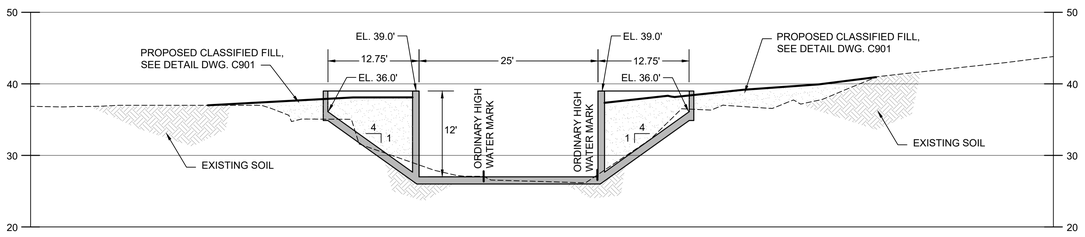
SHEET # 49 OF XX

X:\STATE OF NEW YORK\1401-4021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Detail_06.dwg Last Modified: Sep 11, 2019 - 5:31pm Plotted on: Oct 02, 2019 - 4:48pm By: tsouthard



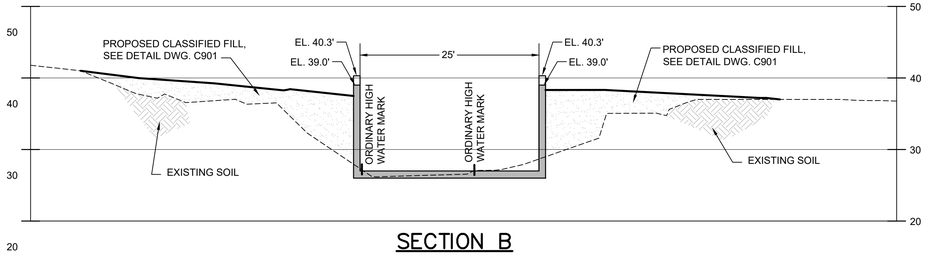
OPEN CHANNEL STRUCTURE DETAIL FOR REFERENCE ONLY

NOT TO SCALE



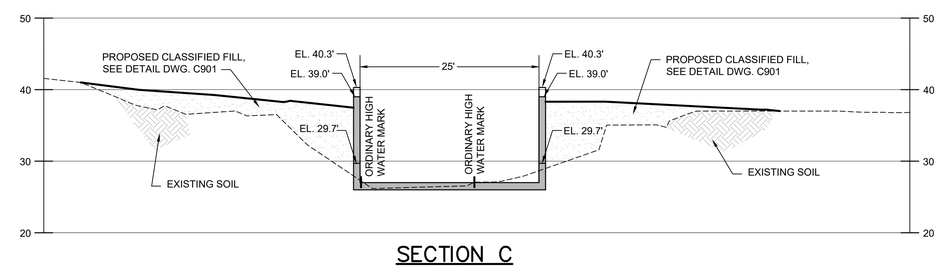
SECTION A

NOT TO SCALE



SECTION B

NOT TO SCALE

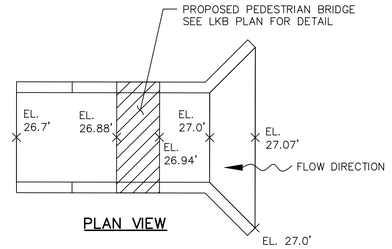


SECTION C

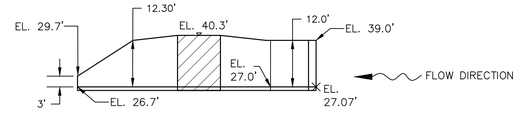
NOT TO SCALE

PROPOSED OPEN CHANNEL STRUCTURE WITH FLOATABLES CATCHER

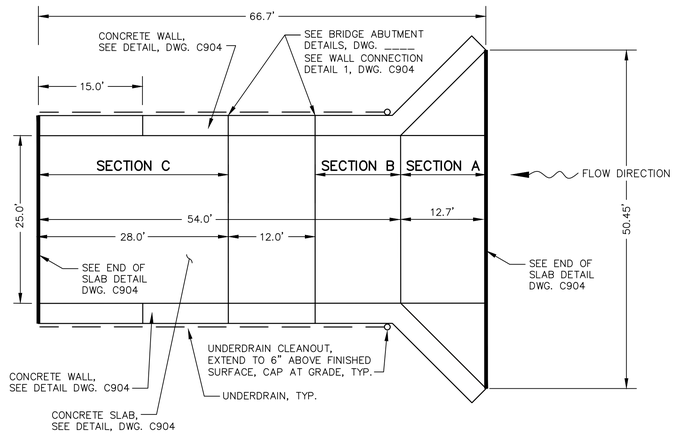
- STORM EVENT: 100 STORM YEAR – 9"
- FLOW DISCHARGE Q: 5234 CFS
- INFLOW ELEVATION: 27.00'
- OUTFLOW ELEVATION: 26.70'
- TOP ELEVATION: 39.00', 40.30' (PED. BRIDGE ABUTMENT)
- FLOW DEPTH/HYDRAULIC DEPTH: 10.50'
- FLOW VELOCITY: 20 FT/S (MAX.)
- TOP WIDTH: 25'
- BOTTOM WIDTH: 25'
- GRAVITATIONAL ACCELERATION g = 32.17 FTS^{-2}



PLAN VIEW



PROFILE VIEW



OPEN CHANNEL STRUCTURE PLAN VIEW

NOT TO SCALE

NOTE:
SEE DRAWING C908 FOR FLOATABLES CATCHER DETAILS

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

Stantec

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Melville, NY 11747
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Revisions

Number	Description	Date:
1	ADDRESS DEC COMMENTS	10–2018
2	ADDRESS USACOE COMMENTS	5–2019
3	DESIGN REVISIONS	9–2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

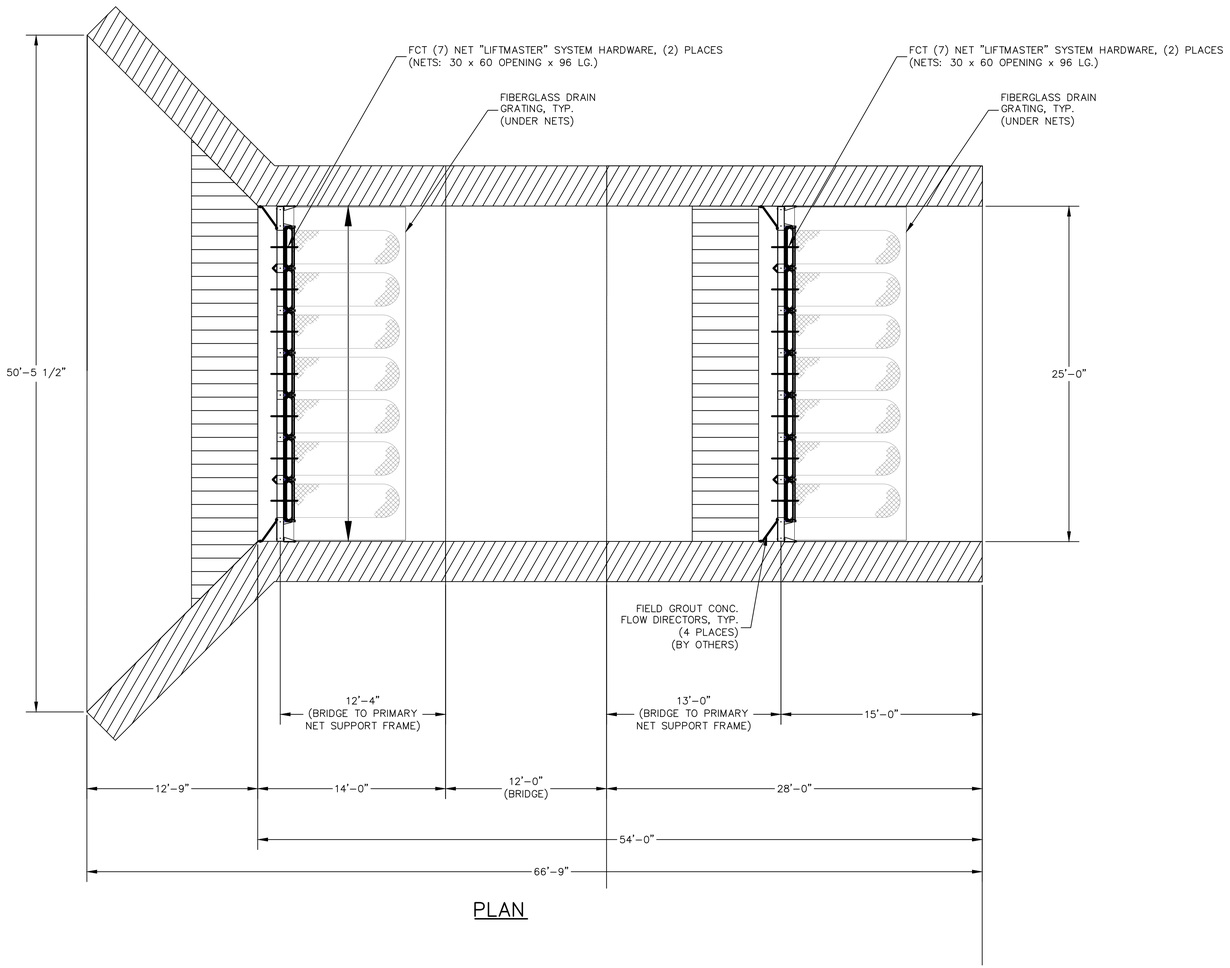
PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: V.L.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE

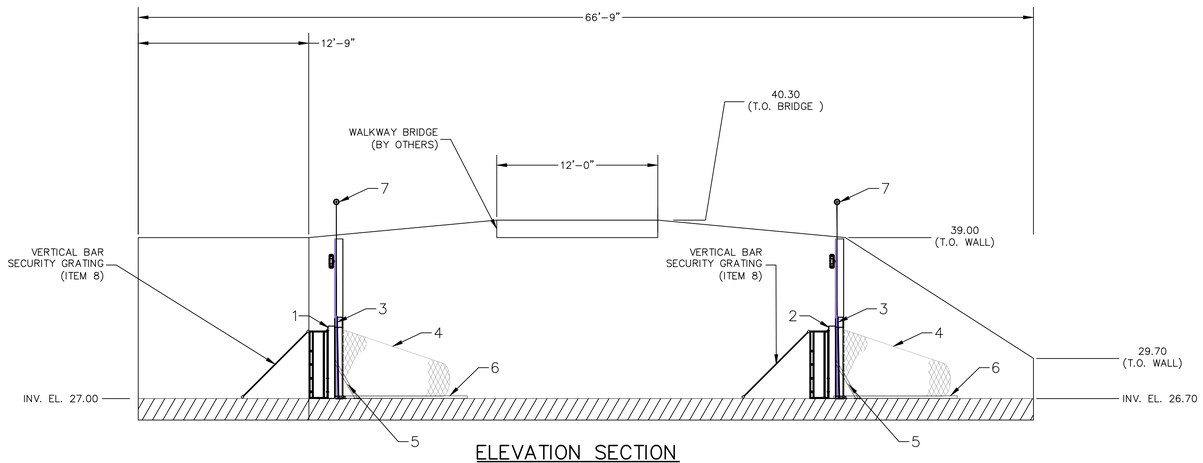
OPEN CHANNEL STRUCTURE DETAILS 2

DRAWING # C905
SHEET # 52 OF XX

X:\STATE OF NEW YORK\14414421 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Detail_05.dwg Last Modified: Sep 11, 2019 - 5:31pm Plotted on: Oct 02, 2019 - 4:49pm by rsouthard



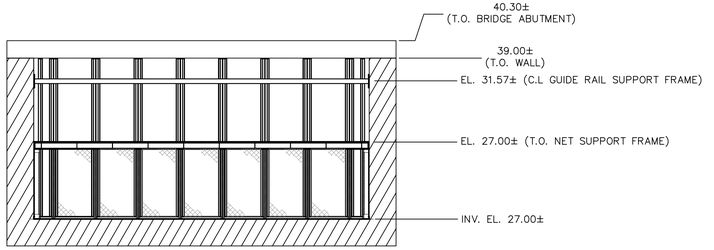
PLAN



ELEVATION SECTION

NOTES & SPECIFICATIONS:

1. NET BAGS: 96" LG. WITH 30" x 60" INLET OPENING (NOMINAL DIMENSIONS).
2. DESIGN FLOW RATE = 437.5 CFS. ADDITIONAL FLOW OVER THE NET DESIGNED FLOW RATE SHALL PASS OVER THE MAIN SUPPORT FRAME.
3. UNLESS OTHERWISE SPECIFIED: NET GUIDE ASSEMBLY, LIFT FRAME AND ALL ASSOCIATED FCT SYSTEM COMPONENTS SHALL BE TYPE 316 STAINLESS STEEL. ALL FASTENING HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.
4. UNLESS OTHERWISE SPECIFIED: THE NETTING FACILITY SHALL BE CONSTRUCTED SUCH THAT ALL PROCESS BAR SPACINGS, GRATING, HINGED JOINTS AND CONNECTION POINTS OF FRAME WORK SHALL NOT EXCEED 1/2 INCHES. NO OPENINGS SHALL BE ALLOWED WHICH PROVIDE A MEANS OF BYPASSING OR SHORT CIRCUITING MATERIAL 1/2 INCH OR GREATER.
5. FIXED DRAIN GRATING (BELOW NETS): STRONGWELL "SAFDECK" OR EQUAL
6. GENERAL CONTRACTOR TO VERIFY DIMENSIONS AND ELEVATIONS SHOWN.
7. SEE JXXX-D1 FOR HARDWARE CONNECTIONS & RELATED DETAILS.
8. SEE CHAMBER MANUFACTURER'S DOCUMENTATION FOR CONCRETE CHAMBER DETAILS & SPECIFICATIONS.
9. SEE CONTRACT DRAWINGS FOR ADDITIONAL SYSTEM RELATED DETAILS & SPECIFICATIONS.



END SECTION

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	PART NO.	NOTE
10	1	INSTALLATION HARDWARE KIT	–	3
9	1	"TrashGuard"	–	–
8	2	VERTICAL BAR SECURITY GRATING	–	–
7	14	LIFTING SLING (CABLE W/RING)	–	–
6	AS REQ'D	FIBERGLASS DRAIN GRATING	–	5
5	4	VELOCITY BRACE	–	3
4	14	NET BAG	306096-0.5	1
3	14	LIFT FRAME	LM-3060	3
2	1	7 NET GUIDE ASSY, SECONDARY	–	3
1	1	7 NET GUIDE ASSY, PRIMARY	–	3

NOTE:
CONCRETE CONCRETE CHAMBER INLET & OUTLET OPENINGS SHALL BE MEASURED PRIOR TO FABRICATION OF THE MAIN NET SUPPORT FRAMES

Governor's Office of Storm Recovery

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NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

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LKB CONSULTING ENGINEERS

Cashin Associates, P.C.
ENGINEERING - PLANNING - CONSTRUCTION MANAGEMENT

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HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/
PRK 4559

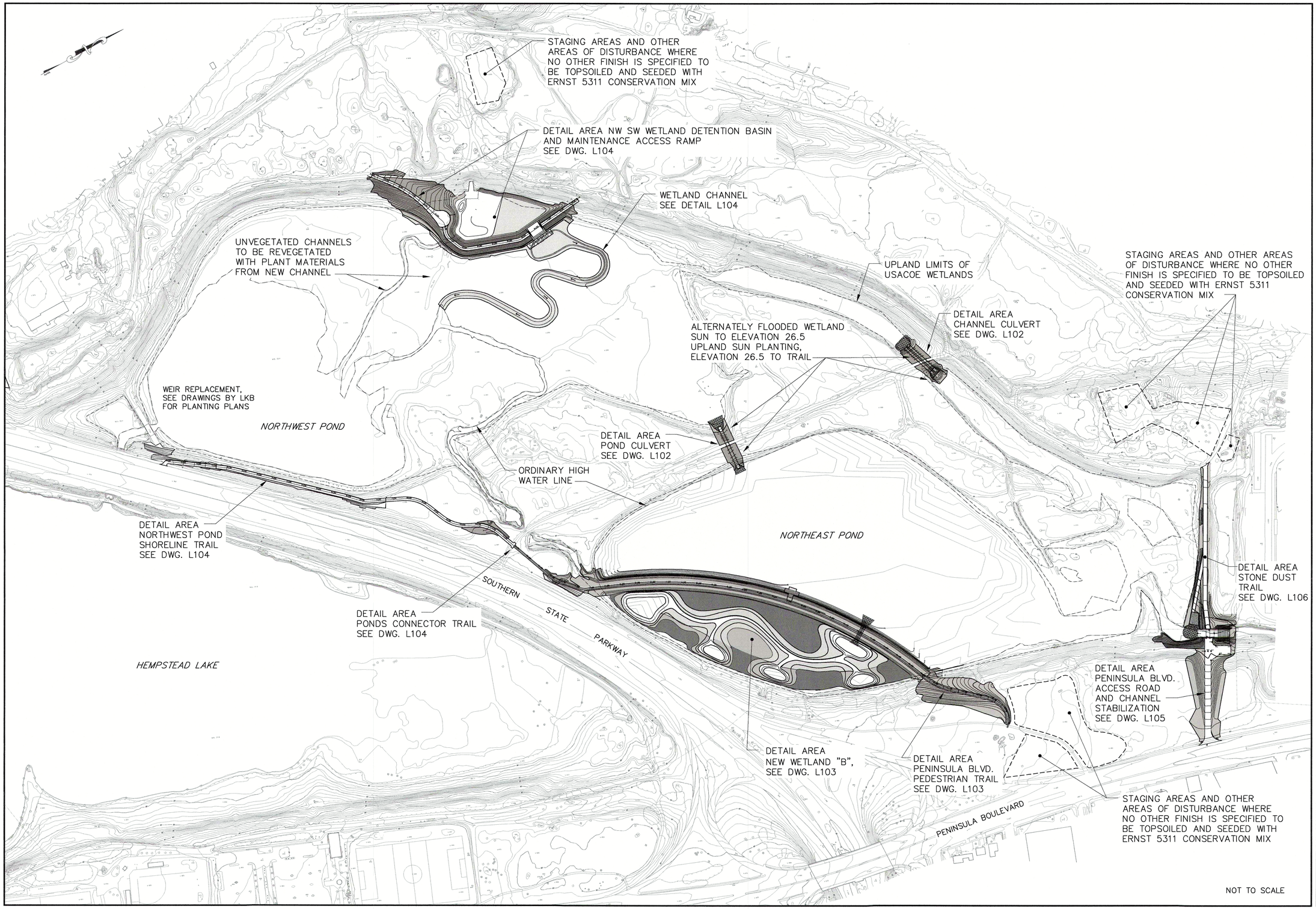
PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: V.L.
DRAWN BY: V.L.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE
FLOATABLES CATCHER SYSTEM DETAILS 1

DRAWING # C908

SHEET # 55 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Detail_06.dwg Last Modified: Sep 11, 2019 - 5:31pm Plotted on: Oct 02, 2019 - 4:30pm By: lsouthard



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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

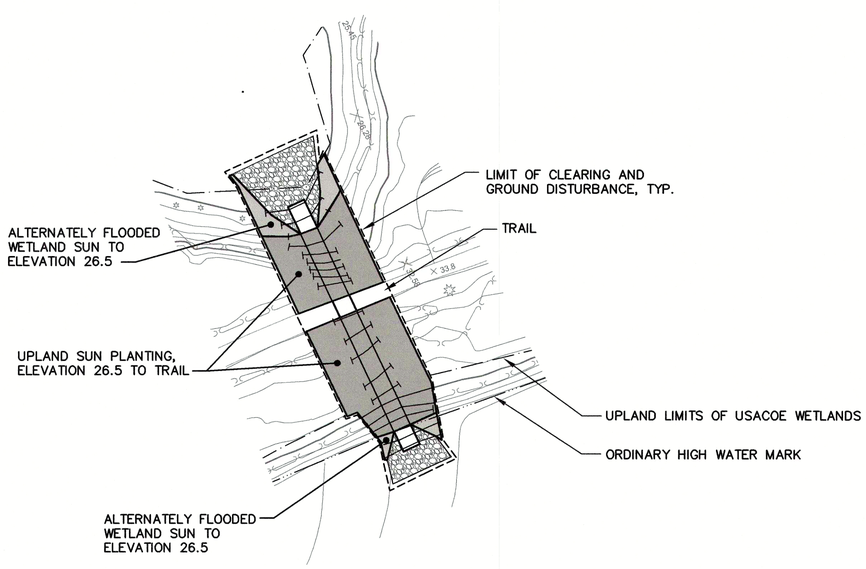
PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	EM, VL
DRAWN BY:	EM, L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE
LANDSCAPE PLAN DETAIL AREAS KEY MAP

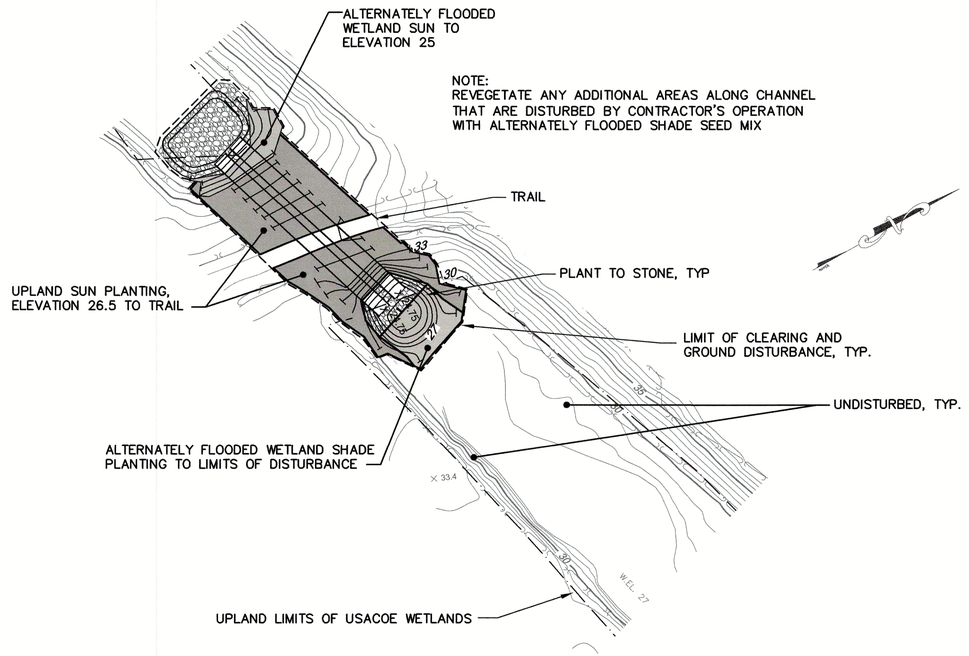
DRAWING #
L101

SHEET # 61 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Proposed_Landscaping_44.dwg Last Modified: Oct 03, 2019 - 12:01pm Plotted on: Oct 03, 2019 - 12:17pm By: scuttard



POND CULVERT



CHANNEL CULVERT

SEE PLANTING DETAILS AND PLANT LIST, DRAWINGS L901 THRU L903

40 0 40
SCALE: 1" = 40'

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CONSULTANTS:

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H2M architects + engineers
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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: EM, VL
DRAWN BY: EM, L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE
LANDSCAPE PLAN DETAIL AREA CULVERTS

DRAWING # L102

SHEET # 62 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\95% Sub Redesign\P_00_Proposed_Landscaping_44.dwg Last Modified: Oct 03, 2019 - 12:01pm Plotted on: Oct 03, 2019 - 12:16pm By:lsouthard

SEE DRAWING L104 FOR CONTINUATION

UPLAND SHADE PLANTING ELEVATION 26.5 TO TRAIL

COIR FABRIC BLANKET ON ALL SLOPES 1:3 OR GREATER, SEE DETAIL, DWG L902

UPLAND SUN PLANTING ELEVATION 26.5 TO TRAIL

PEDESTRIAN TRAIL, SEE DETAIL, DWG. C90X

UPLAND SHADE PLANTING ELEVATION 26.5 TO TRAIL

ALTERNATELY FLOODED SHADE PLANTING ELEVATION 25.5 TO 26.5

LIVE STAKES PLANTING ELEVATION 24.0 TO 25.5

NO PLANTING BELOW ELEVATION 24.0

12" DIA. COIR LOGS AT ELEVATION 25. SEE DETAILS AND PLANTING WITH LIVE STAKES, DWGS L901 AND L902

ALTERNATELY FLOODED WETLAND SUN PLANTING ELEVATION RANGE 26 TO 26.5

WETLAND SUN PLANTING ELEVATION 25 TO 26

PEDESTRIAN TRAIL, SEE DETAIL, DWG. C90X

UPLAND SHADE PLANTING ELEVATION 26.5 TO TRAIL

ALTERNATELY FLOODED SHADE PLANTING ELEVATION 25.5 TO 26.5

LIVE STAKES PLANTING ELEVATION 24.0 TO 25.5

NO PLANTING BELOW ELEVATION 24.0

FOREBAY

MICRO POOL

LIMIT OF CLEARING AND GROUND DISTURBANCE, TYP.

NO PLANTING BELOW ELEVATION 24.0

UPLAND LIMITS OF USACOE WETLANDS

ORDINARY HIGH WATER MARK

WETLAND SUN PLANTING ELEVATION 25 TO 26

CHANNEL ELEVATION RANGE 24.5 TO 25

WETLAND SHADE PLANTING ELEVATION 25 TO 26

ALTERNATELY FLOODED WETLAND SHADE PLANTING ELEVATION RANGE 26 TO 26.5

NO PLANTING BELOW ELEVATION 24.0

WETLAND SHADE PLANTING ELEVATION 25 TO 26

ALTERNATELY FLOODED WETLAND SHADE PLANTING ELEVATION RANGE 26 TO 26.5

NO PLANTING BELOW ELEVATION 24.0

CHANNEL ELEVATION RANGE 24.5 TO 25

NO PLANTING BELOW ELEVATION 24.0

WETLAND SHADE PLANTING ELEVATION 25 TO 26

ALTERNATELY FLOODED WETLAND SHADE PLANTING ELEVATION RANGE 26 TO 26.5

SEE CONTINUATION THIS DWG.

SEE CONTINUATION THIS DWG.

NO PLANTING BELOW ELEVATION 24.0

LIVE STAKES PLANTING ELEVATION 24.0 TO 25.5

ALTERNATELY FLOODED SHADE PLANTING ELEVATION 25.5 TO 26.5

UPLAND LIMITS OF USACOE WETLANDS

ORDINARY HIGH WATER MARK

UPLAND SHADE PLANTING TO LIMITS OF DISTURBANCE

6' WIDE PEDESTRIAN TRAIL, SEE DETAIL, DWG. C901

3' WIDE GRASS SHOULDER EACH SIDE TRAIL, SEEDED ONLY WITH PARTIALLY SHADED AREA MIX

COIR FABRIC BLANKET ON ALL SLOPES 1:3 OR GREATER, SEE DETAIL, DWG. L902

LIMIT OF CLEARING AND GROUND DISTURBANCE, TYP.

COIR FABRIC BLANKET ON ALL SLOPES 1:3 OR GREATER, SEE DETAIL, DWG. L902

PENINSULA BOULEVARD PEDESTRIAN TRAIL

WETLAND "B"
SOUTHERN STATE PARKWAY OUTFALLS AND WETLANDS TRAIL

WETLAND "B" ELEVATION RANGE	
ALTERNATELY FLOODED	26.0 TO 26.5
WETLAND	25.0 TO 26.0
LOW FLOW CHANNEL	< 25.0

NOTES:

1. SEE PLANTING DETAILS AND PLANT LIST DRAWINGS L901 THRU L903
2. ALIGN FOREBAYS WITH PIPE OUTFALLS. FINAL LOCATION TO BE DETERMINED IN FIELD.
3. WETLAND AND ALTERNATELY FLOODED AREAS HAVE 0.5' CONTOUR INTERVALS

SCALE: 1" = 40'

Governor's Office of Storm Recovery

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NEW YORK STATE Parks, Recreation and Historic Preservation

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Revisions

Number	Description	Date
1	ADDRESS DEC COMMENTS	10-2018
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3	DESIGN REVISIONS	9-2019
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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

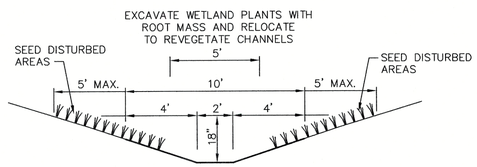
PROJECT #:	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	EM, VL
DRAWN BY:	EM, L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

SHEET TITLE
LANDSCAPE PLAN DETAIL AREA WETLAND B

DRAWING # L103

SHEET # 63 OF XX

X:\STATE OF NEW YORK\14014-021 Hempstead Lake Mapping\SET\90% Sub Redesign\P_00_Proposed_Landscaping_44.dwg Last Modified: Oct 03, 2019 - 12:16pm Plotted on: Oct 03, 2019 - 12:16pm By: soumard



NW POND WETLAND FILTERING CHANNEL TYPICAL CROSS SECTION

NOT TO SCALE

UPLAND SUN PLANTING
EXISTING TRAIL, SEE DRAWING BY H2M FOR SURFACE FINISH OF TRAIL
MAINTENANCE ACCESS RAMP, SEE DETAIL DWG. C90X
EXISTING OUTFALL STRUCTURE
NO PLANTING
UPLAND SUN PLANTING
ALTERNATIVELY FLOODED WETLAND SUN PLANTING ELEVATION RANGE TO 25.0
SEED WITH ERNST OBL WETLAND MIX (ERNMX-131) TO ELEVATION 25.0 AS PER SPECIFICATIONS
COIR FABRIC BLANKET ON ALL SLOPES 1:3 OR GREATER, SEE DETAIL, DWG. L902
LIMIT OF CLEARING AND GROUND DISTURBANCE, TYP.
UPLAND LIMITS OF USACOE WETLANDS
FOREBAY/SEDIMENT BASIN
TOP OF EMBANKMENT, GRASS MIX, AS PER SPECIFICATION
COIR FABRIC BLANKET ON ALL SLOPES 1:3 OR GREATER, SEE DETAIL, DWG. L902
GABION SPILLWAY
UPLAND SUN PLANTING
WETLAND SUN PLANTING TO LIMIT OF DISTURBANCE
ORDINARY HIGH WATER MARK
ALTERNATELY FLOODED WETLAND SUN PLANTING ELEVATION RANGE 25.0 TO 26.5
UPLAND SUN PLANTING
TOP OF EMBANKMENT GRASS MIX, AS PER SPECIFICATION
LIMIT OF CLEARING AND GROUND DISTURBANCE, TYP.
COIR FABRIC BLANKET ON ALL SLOPES 1:3 OR GREATER, SEE DETAIL, DWG. L902
NW SW WETLAND DETENTION BASIN
WETLAND SUN PLANTING TO LIMIT OF DISTURBANCE
WETLAND FILTERING CHANNEL, SEE TYPICAL CROSS SECTION THIS DRAWING
LIMIT OF CLEARING AND GROUND DISTURBANCE, TYP.
SEE DRAWINGS BY LKB FOR PLANTINGS IN THIS LOCATION
UPLAND SUN PLANTING TO LIMIT OF DISTURBANCE
NORTHWEST POND
SHRUB AND UPLAND SUN PLANTING BETWEEN TRAIL AND WALL
10' WIDE TRAIL, SEE DETAIL, DWG. C901
UPLAND LIMITS OF USACOE WETLANDS
ORDINARY HIGH WATER MARK
LIMIT OF CLEARING AND GROUND DISTURBANCE, TYP.
EXIST. ASPHALT TRAIL
SOUTHERN STATE PARKWAY
UPLAND SUN PLANTING TO LIMIT OF DISTURBANCE
UPLAND SUN PLANTING TO LIMIT OF DISTURBANCE
NW POND SHORELINE TRAIL AND POND CONNECTOR TRAIL
SEE PLANTING DETAILS AND PLANT LIST, DRAWINGS L901 THRU L903
SCALE: 1" = 40'
SEE DRAWING L103 FOR CONTINUATION

Governor's Office of Storm Recovery
Living with the BAY
NEW YORK STATE Parks, Recreation and Historic Preservation

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CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

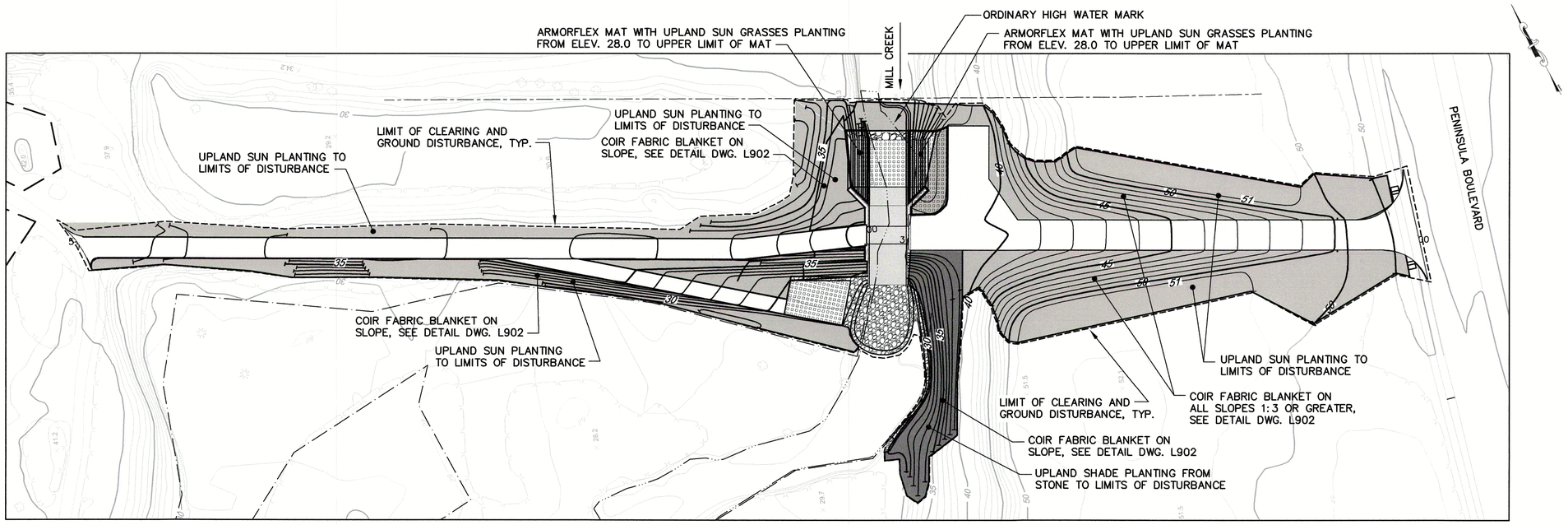
PROJECT #: NYSP-1503
DATE: MAY 2019
DESIGNED BY: EM, VL
DRAWN BY: EM, L.A.S.
CHECKED BY: N.L.
REVIEWED BY:

SHEET TITLE
LANDSCAPE PLAN DETAIL AREA NW SED. BASIN & NW POND TRAIL

DRAWING # L104

SHEET # 64 OF XX

X:\STATE OF NEW YORK\14014021 Hempstead Lake Mapping\SE\1905\ Sub Redesign\P_00_Proposed_Landscaping_44.dwg Last Modified: Oct 03, 2019 - 12:01pm Plotted on: Oct 03, 2019 - 12:15pm By: bsuthard



MAINTENANCE ACCESS TRAIL AND RAMP

PENINSULA BOULEVARD ACCESS ROAD

SEE PLANTING DETAILS AND PLANT LIST, DRAWINGS L901 THRU L903

40 0 40
SCALE: 1" = 40'

Governor's Office of Storm Recovery

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H2M architects + engineers
538 Broad Hollow Road
4th Floor East
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LKB CONSULTING ENGINEERS

Cashin Associates, P.C.

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Revisions

Number	Description	Date
1	ADDRESS DEC COMMENTS	10-2018
2	ADDRESS USACOE COMMENTS	5-2019
3	DESIGN REVISIONS	9-2019
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
NYSP
WORK ORDER: LI-022
CONTRACT: D004472
COA: 1290350/30377/33001/ PRK 4559

PROJECT #	NYSP-1503
DATE:	MAY 2019
DESIGNED BY:	EM, VL
DRAWN BY:	EM, L.A.S.
CHECKED BY:	N.L.
REVIEWED BY:	

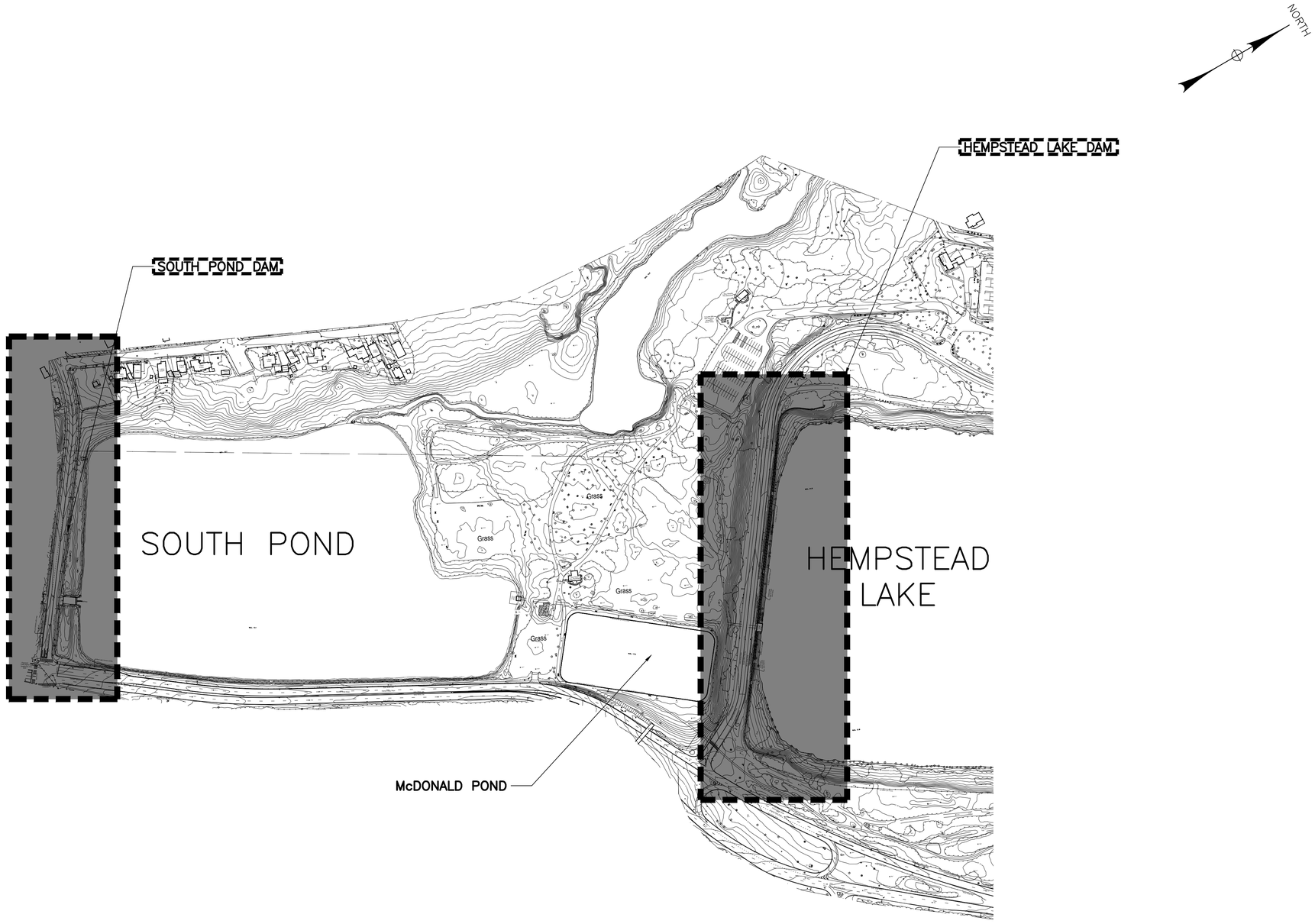
SHEET TITLE
LANDSCAPE PLAN DETAIL AREA CHANNEL STRUCTURE & MAINT. ACCESS

DRAWING #
L105

SHEET # 65 OF XX

A:\STATE OF NEW YORK\14074\021 Hempstead Lake Keeping\SET\90% Sub Redesign\P_00_Proposed_Landscaping_44.dwg Last Modified: Oct 03, 2019 - 11:12am Plotted on: Oct 03, 2019 - 11:13am by bouchard

USACE FILE: NAN-2019-01262-EME



NOTE:

EXISTING BASE MAPPING PROVIDED BY SURVEY INFORMATION FROM H2M ARCHITECTS AND ENGINEERS.

LEGEND:

WORK INCLUDED IN THIS CONTRACT

0 200' 400'

Governor's Office of Storm Recovery

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NEW YORK STATE Parks, Recreation and Historic Preservation

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Revisions

Number	Description	Date:
1		
2		
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Project Title

HEMPSTEAD LAKE STATE PARK

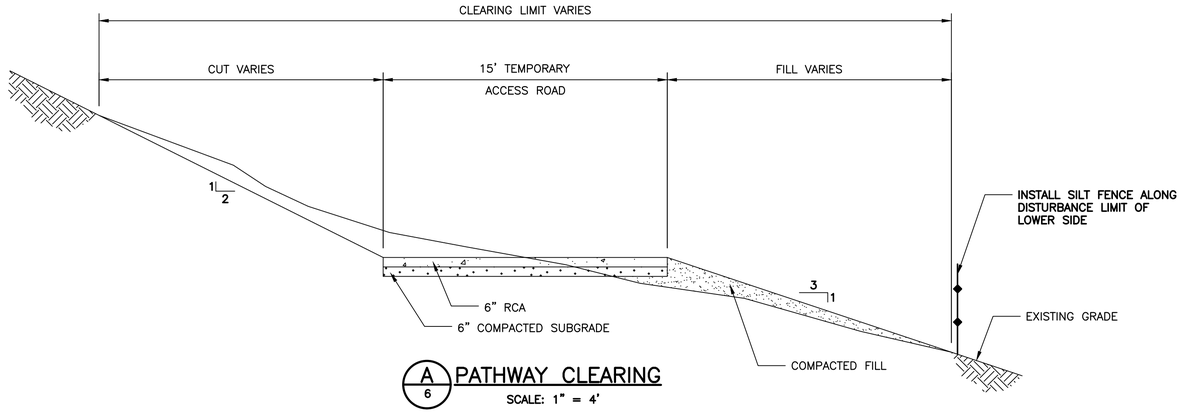
CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #: HL 2017-003
DATE: MARCH 2018
DESIGNED BY: C.P.
DRAWN BY: E.J.Z.
CHECKED BY: M.W. REVIEWED BY: B.E.
4419-06

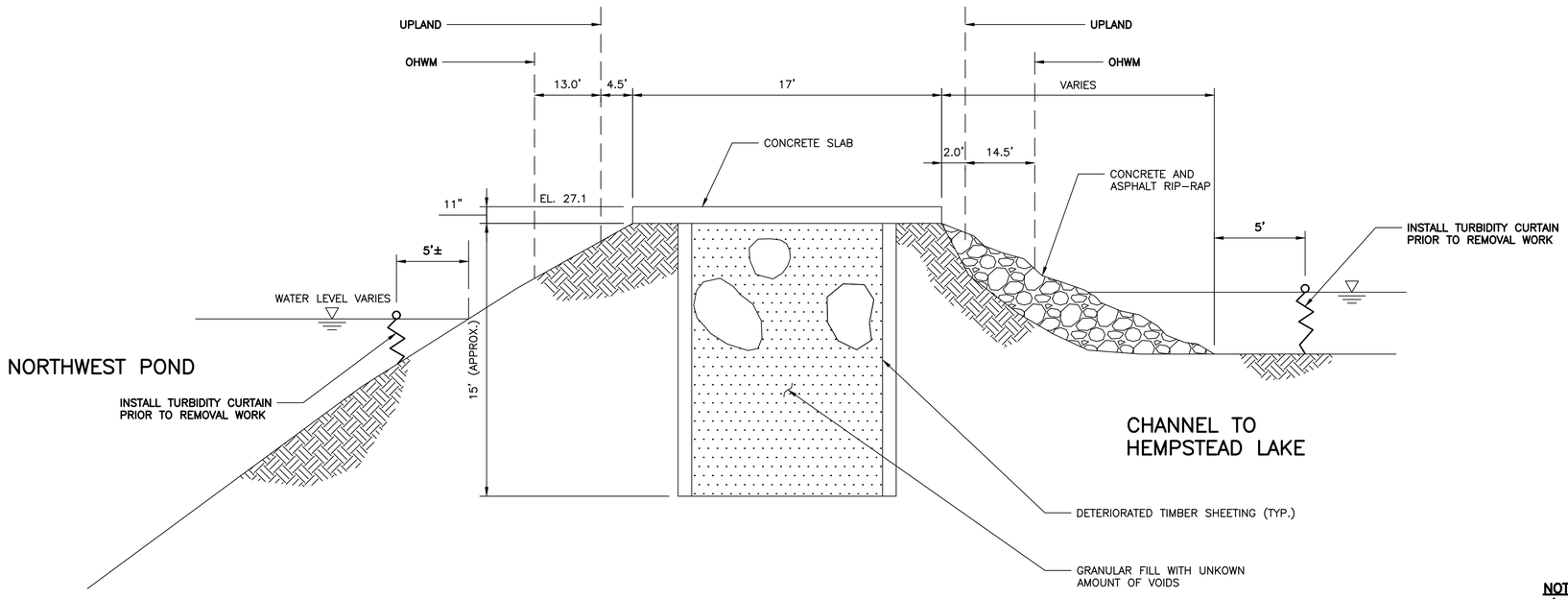
SHEET TITLE
KEY NOTE SHEET 2

SHEET # 69
OSP-1

I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\4419-06 OVERALL SITE PLAN.dwg Last Modified: Oct 01, 2019 - 10:43am Plotted on: Oct 01, 2019 - 10:54am By: mmcdonnell



A/6 PATHWAY CLEARING
SCALE: 1" = 4'



B/8 NORTHWEST POND DAM EXISTING SECTION
N.T.S.

NOTES:
1. SEE DWG NO. NWP-10 FOR RESTORATION PLANTING PLAN ALONG TEMPORARY ACCESS ROAD.
2. SEE CASHIN PLANS FOR TREE REMOVALS ASSOCIATED WITH TEMPORARY ACCESS ROAD.

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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

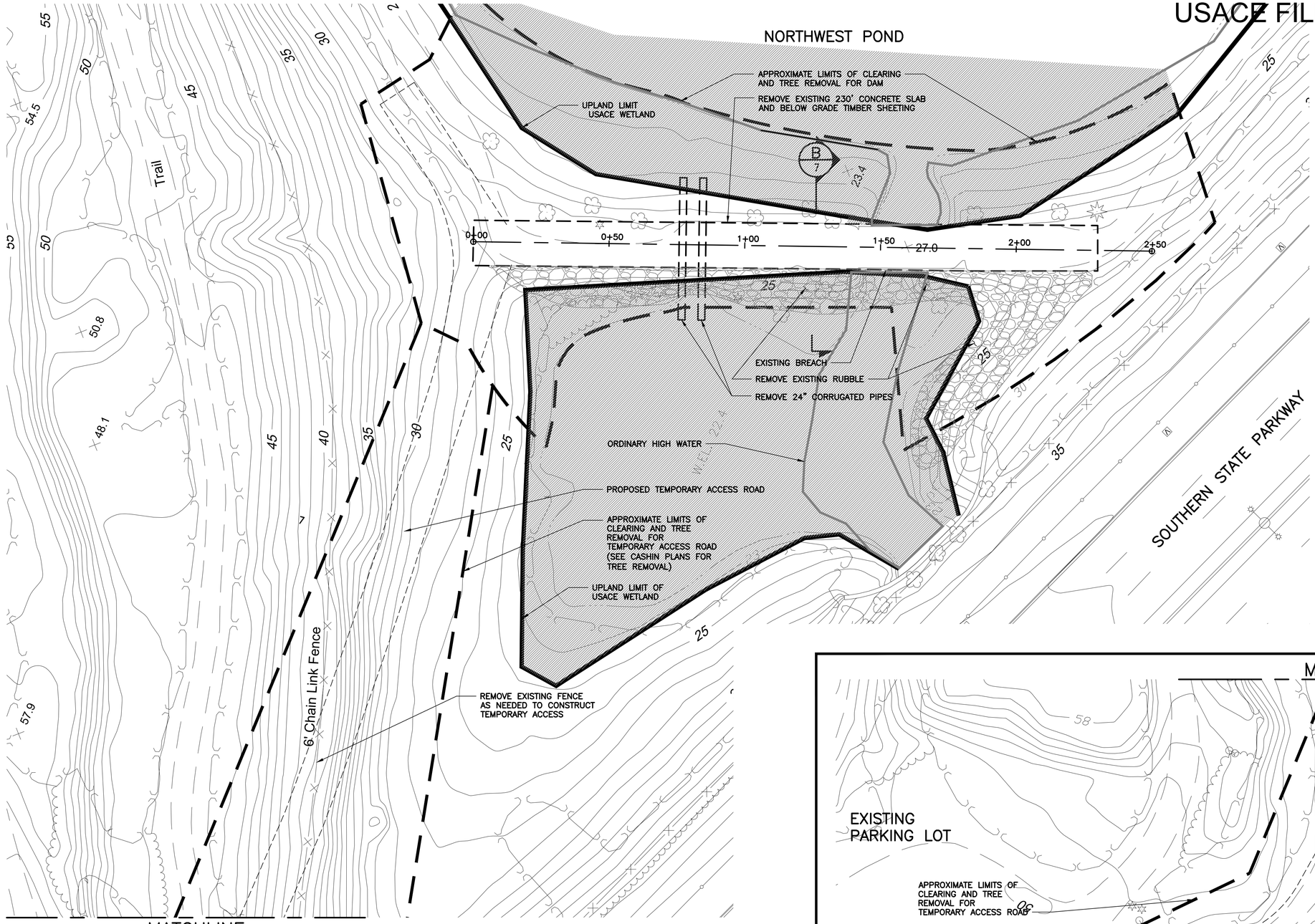
PROJECT #: HL 2017-003
DATE: MARCH 2018
DESIGNED BY: C.P.
DRAWN BY: E.J.Z.
CHECKED BY: M.W. | REVIEWED BY: B.E.
4419-06

SHEET TITLE
NORTHWEST POND EXISTING SECTION

SHEET # 70
NWP-3

I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\NW POND DAM NORTH SIDE SECTIONS.dwg Last Modified: Oct 01, 2019 - 10:43am Plotted on: Oct 01, 2019 - 10:54am By mmcdonnell

USACE FILE: NAN-2019-01262-EME



NOTES:

1. CONTRACTOR MUST MAINTAIN FLOW THROUGH DAM WORK AREA AND SSP CULVERT AT ALL TIMES.

LEGEND:

USACE DELINEATED WETLAND

NORTHWEST POND DAM TREE REMOVAL				
STATION	UPSTREAM EMBANKMENT		DOWNSTREAM EMBANKMENT	
	TREE COUNT	AVG. DIA.	TREE COUNT	AVG. DIA.
WEST OF DAM	8	12" - 18"	-	-
STA 0+00 to 0+50	5	12" - 24"	3	18" - 30"
STA 0+50 to 1+00	1	24"	2	6" - 12"
STA 1+00 to 1+50	3	6" - 12"	4	6" - 18"
STA 1+50 to 2+00	2	6" - 12"	13	12" - 24"
STA 2+00 to 2+30	5	6" OR LESS	10	12" - 18"
EAST OF DAM	11	6" OR LESS	-	-
TOTAL	27		32	

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1		
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3		
4		
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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

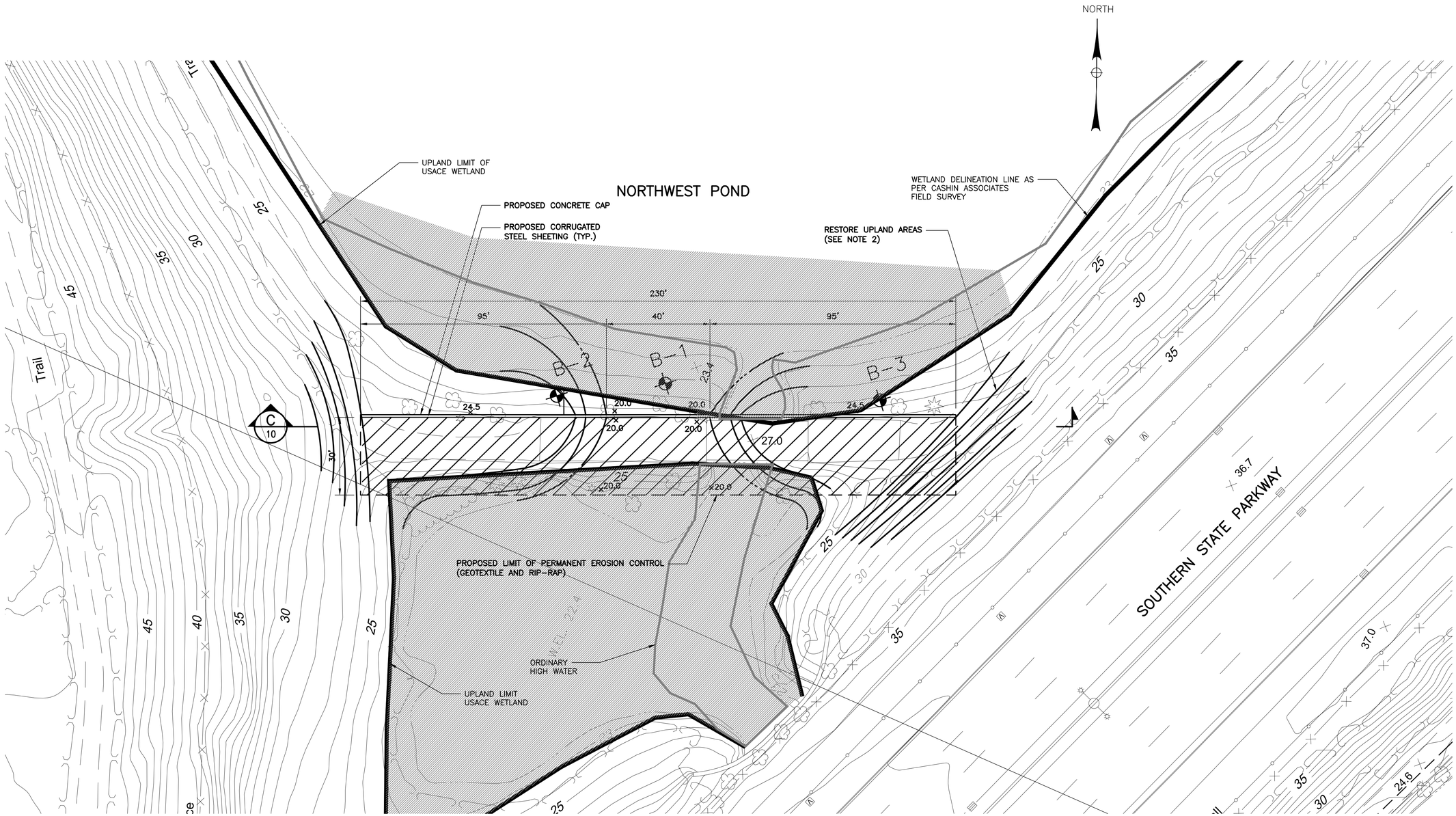
PROJECT #: HL 2017-003
DATE: MARCH 2018
DESIGNED BY: ___
DRAWN BY: E.J.Z.
CHECKED BY: ___ REVIEWED BY: ___
4419-06

SHEET TITLE
NORTHWEST POND DAM REMOVALS PLAN

SHEET # 71
NWP-4

I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\NW POND DAM NORTH SIDE REMOVALS PLAN.dwg Last Modified: Oct 01, 2019 - 10:44am Plotted on: Oct 01, 2019 - 10:56am By mmcdonnell

USACE FILE: NAN-2019-01262-EME



LEGEND:

RIP RAP

USACE DELINEATED WETLAND

NOTES:

1. PROPOSED DAM IS LOCATED APPROXIMATELY 10 FT FARTHER EAST THAN EXISTING CONCRETE SLAB.
2. SEE DWGS. NWP-8 AND NWP-9 FOR DAM AREA RESTORATION PLANTING PLAN.
3. FOR BORING LOGS SEE DWGS. BL-1 TO BL-2.

0 20' 40'

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Project Title

HEMPSTEAD LAKE STATE PARK

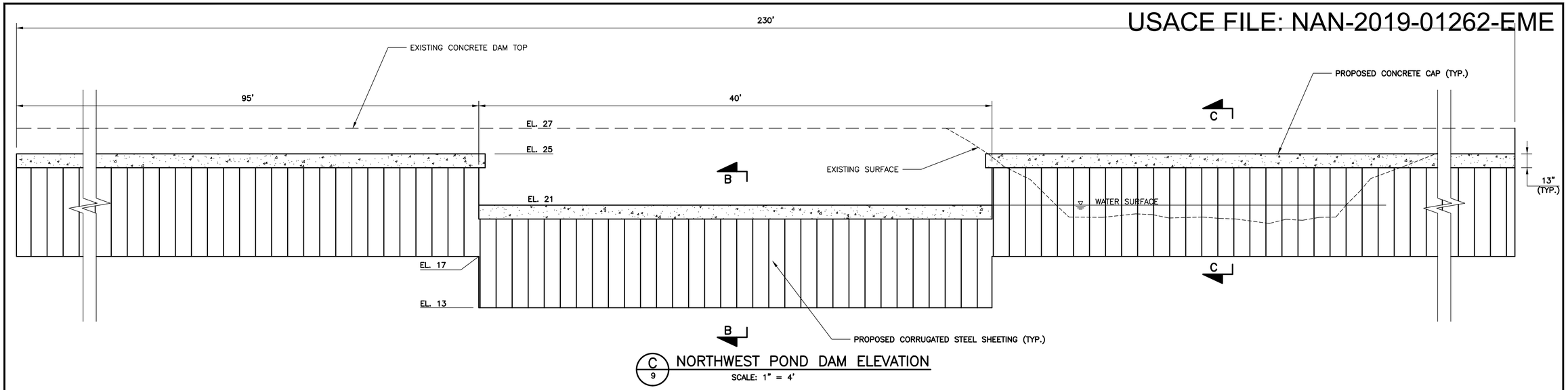
CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #:	HL 2017-003
DATE:	MARCH 2018
DESIGNED BY:	C.P.
DRAWN BY:	E.J.Z.
CHECKED BY:	M.W.
REVIEWED BY:	B.E.
4419-06	

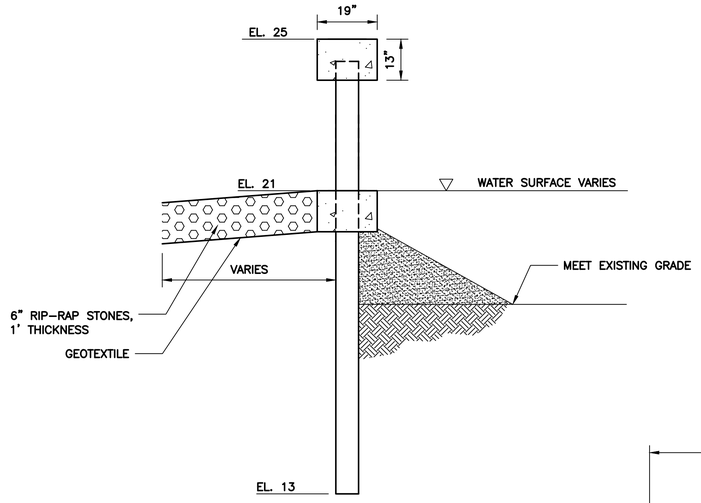
SHEET TITLE
NORTHWEST POND PROPOSED DAM PLAN

SHEET #72
NWP-5

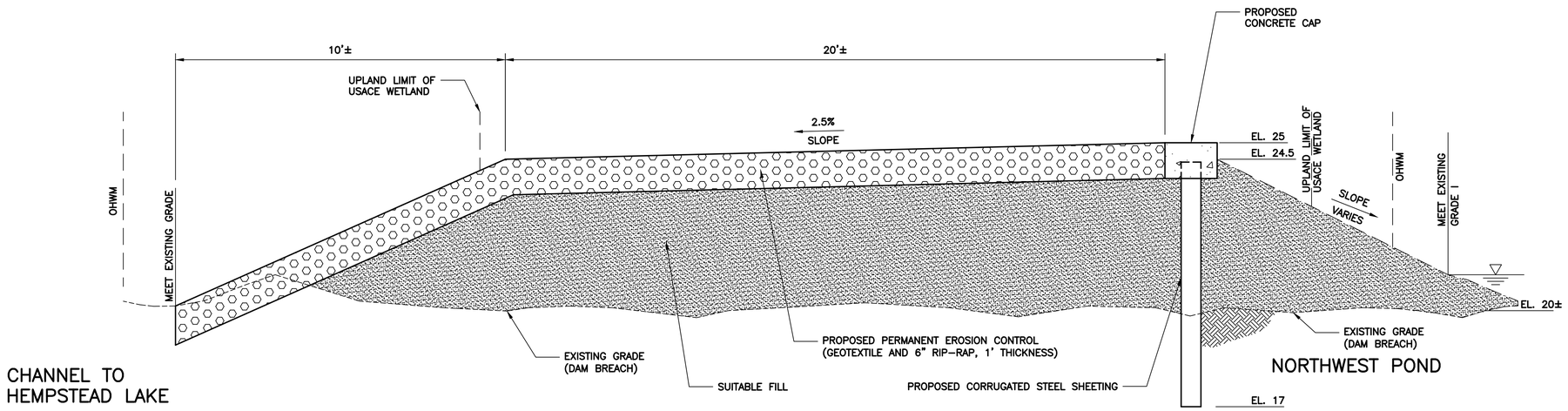
I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\NW POND DAM NORTH SIDE.dwg Last Modified: Oct 01, 2019 - 10:45am Plotted on: Oct 01, 2019 - 10:57am By mmcdonnell



C/9 NORTHWEST POND DAM ELEVATION
SCALE: 1" = 4'



SECTION B–B
SCALE: 1" = 2'



SECTION C–C
SCALE: 1" = 2'

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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #: HL 2017-003
DATE: MARCH 2018
DESIGNED BY: ---
DRAWN BY: E.J.Z.
CHECKED BY: | REVIEWED BY:
4419-06

SHEET TITLE
NORTHWEST POND DAM SECTIONS AND ELEVATION

SHEET #73
NWP-6

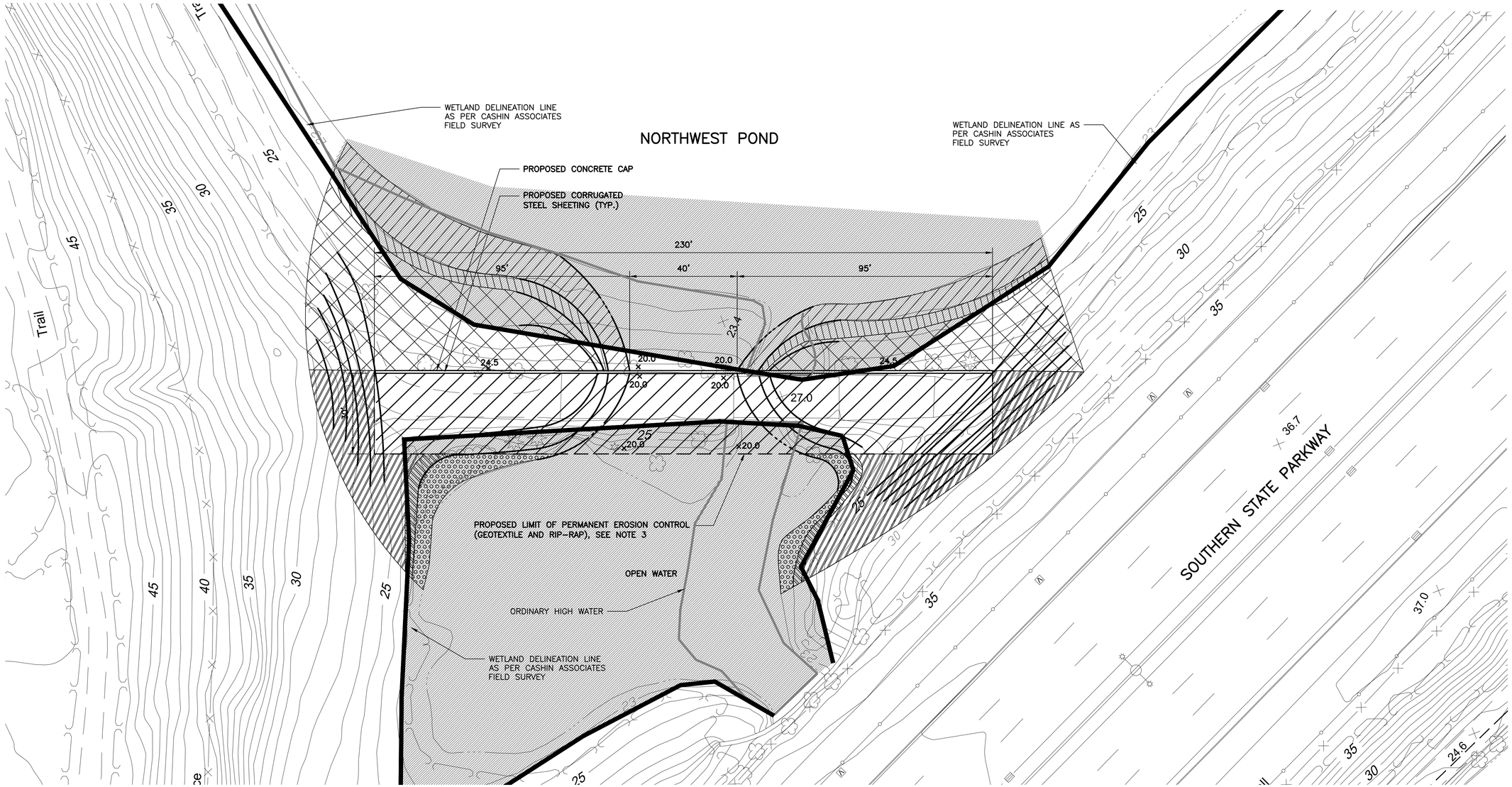
I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\NW POND DAM NORTH SIDE SECTIONS.dwg Last Modified: Oct 01, 2019 - 10:43am Plotted on: Oct 01, 2019 - 10:58am By mmcdonnell

USACE FILE: NAN-2019-01262-EME

LEGEND:

- EL. 22 TO EL. 23 (1FT.) WETLAND SUN PLANTS
- EL. 22 TO EL. 23 (1FT.) WETLAND SHADE PLANTS
- RIP RAP
- EL. 23 TO EL. 23.50 (½FT.) ALTERNATELY/ FLOODED SUN PLANTS
- EL. 23 TO EL. 23.50 (½FT.) ALTERNATELY/ FLOODED SHADE PLANTS
- USACE DELINEATED WETLAND
- EL. 23.50 AND UP – UPLAND SUN PLANTS
- EL. 23.50 AND UP – UPLAND SHADE PLANTS

NORTH



NOTES:

1. PROPOSED DAM IS LOCATED APPROXIMATELY 10 FT FARTHER EAST THAN EXISTING CONCRETE SLAB.
2. SEE DWG. NWP-9 FOR RESTORATION PLANTING SCHEDULE.
3. SEE DWG. NWP-6 FOR GEOTEXTILE AND RIP-RAP SECTION.

0 20' 40'

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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #:	HL 2017-003
DATE:	MARCH 2018
DESIGNED BY:	C.P.
DRAWN BY:	E.J.Z.
CHECKED BY: M.W.	REVIEWED BY: B.E.
4419-06	

SHEET TITLE

NORTHWEST POND PROPOSED DAM PLANTING PLAN

SHEET #74
NWP-8

I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\NW POND DAM NORTH SIDE PLANT LIST.dwg Last Modified: Oct 01, 2019 - 10:46am Plotted on: Oct 01, 2019 - 10:46am By mmcdonnell

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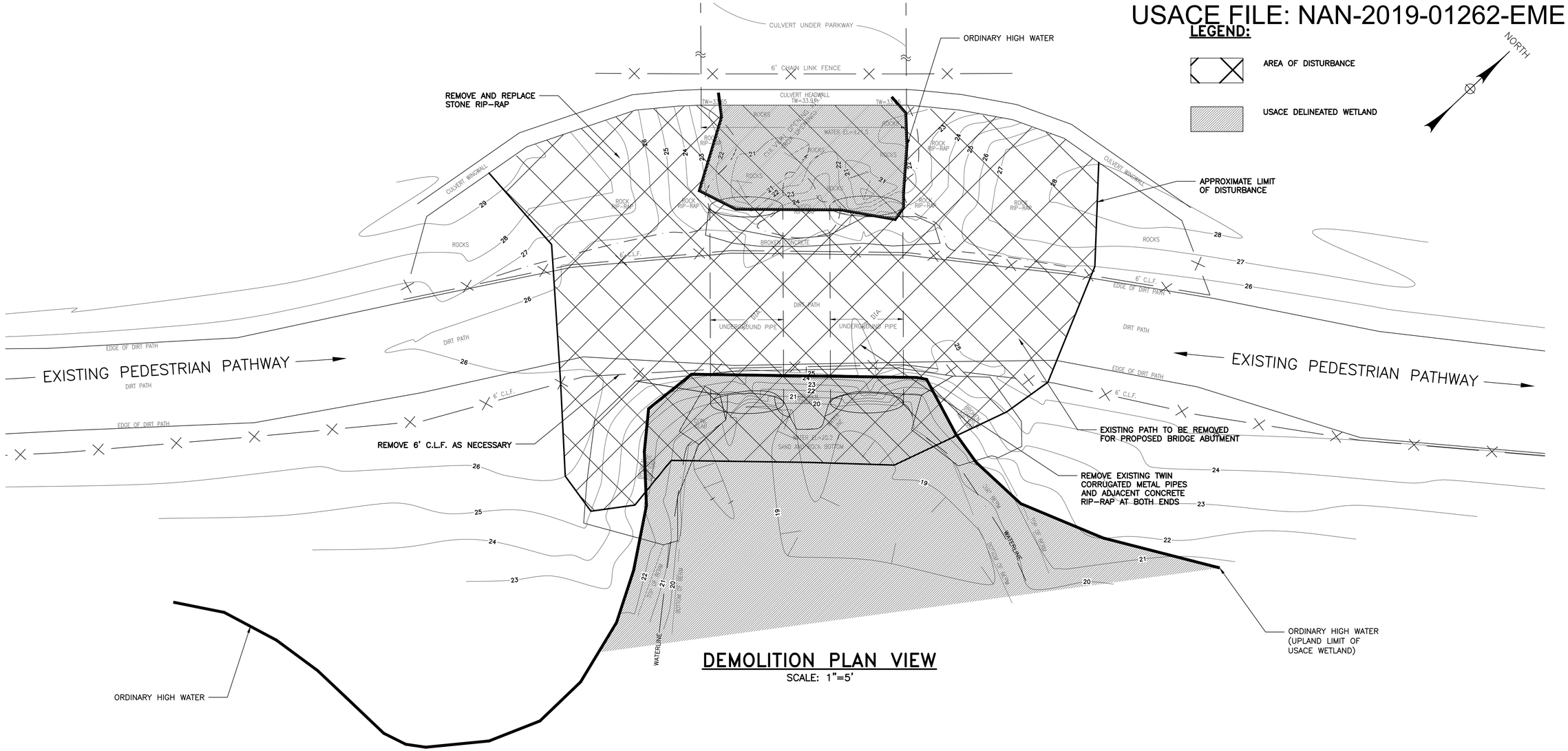
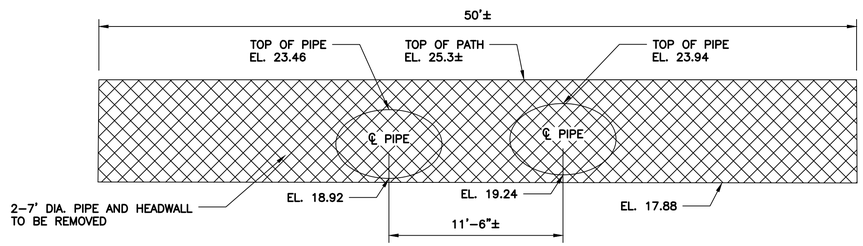


DEMOLITION PLAN VIEW

SCALE: 1"=5'



DEMOLITION ELEVATION VIEW

SCALE: 1"=5'

0 5' 10'

LEGEND:

AREA OF DISTURBANCE

USACE DELINEATED WETLAND

NORTH

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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT

HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #:	HL 2017-003
DATE:	MARCH 2018
DESIGNED BY:	G.L.
DRAWN BY:	D.M.M.
CHECKED BY: W.T.C.	REVIEWED BY: B.E.
4419-06	

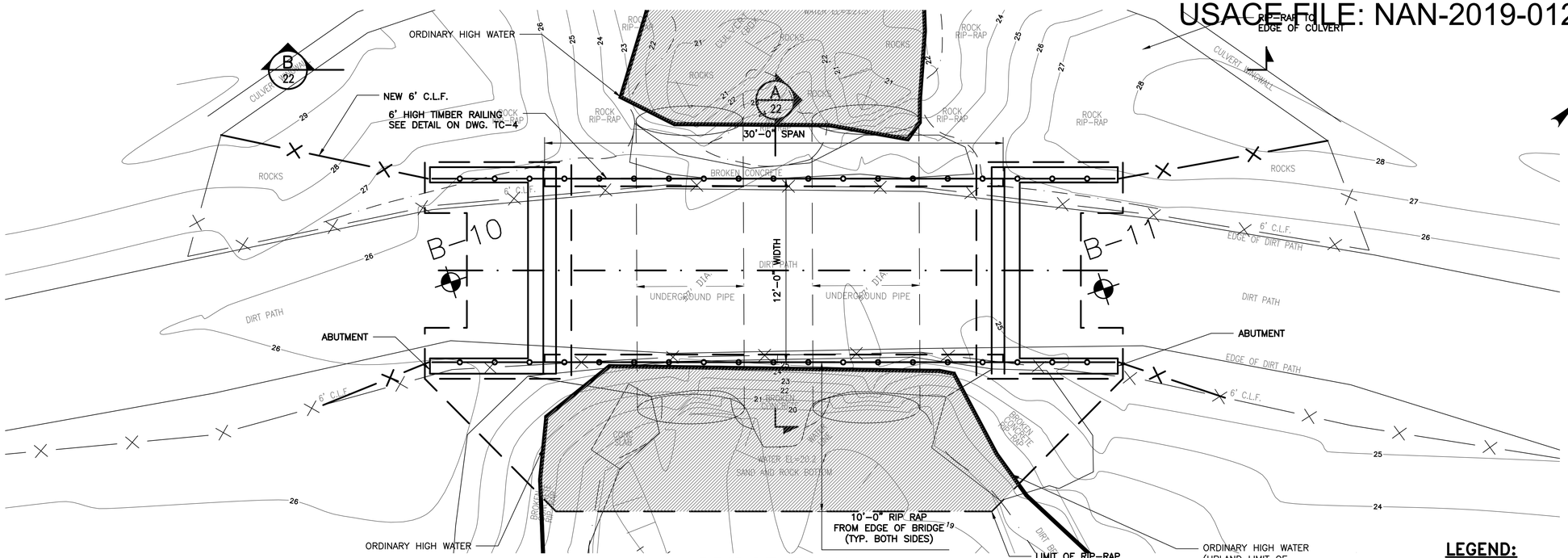
SHEET TITLE

TWIN CULVERT BRIDGE REMOVALS PLAN

SHEET #76
TC-3

I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\Pedestrian Bridge - Center.dwg Last Modified: Oct 01, 2019 - 10:48am Plotted on: Oct 01, 2019 - 11:00am By mmcdonnell

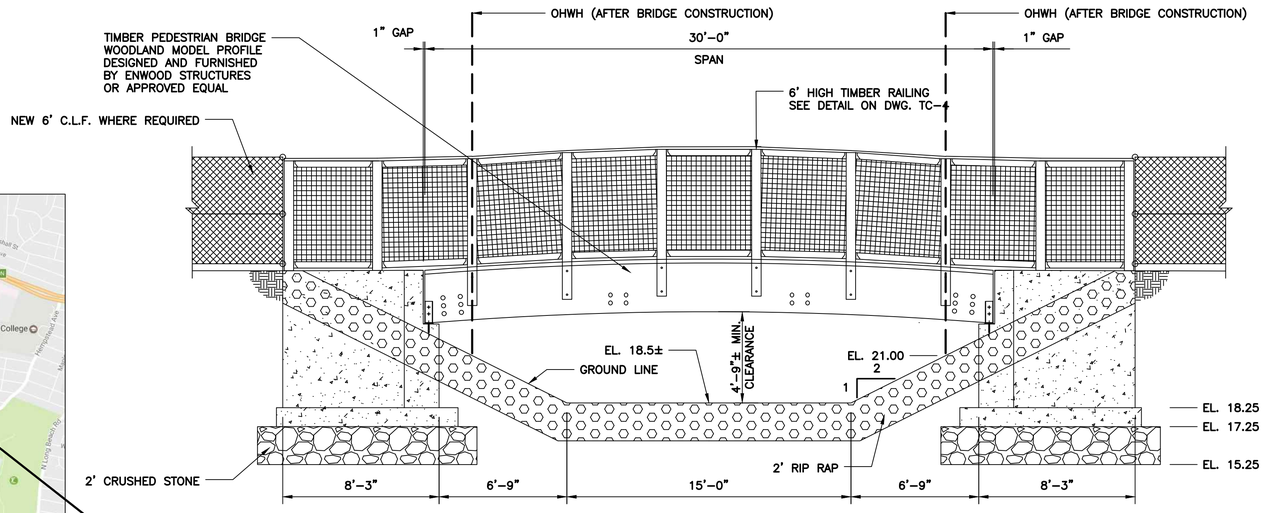
USACE FILE: NAN-2019-01262-EME



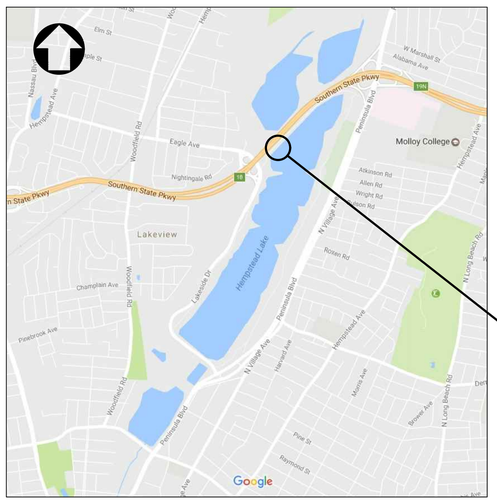
BRIDGE PLAN
SCALE: 1"=4'

LEGEND:

USACE DELINEATED WETLAND



BRIDGE ELEVATION
SCALE: 1"=4'



LOCATION PLAN
SCALE: N.T.S.

TWIN CULVERT BRIDGE

NOTES:
1. FOR BORING LOGS SEE DWG. NOS. BL-1 TO BL-2.

0 4' 8'

Governor's Office of Storm Recovery

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Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #: HL 2017-003
DATE: MARCH 2018
DESIGNED BY: G.L.
DRAWN BY: D.M.M.
CHECKED BY: W.T.C. | REVIEWED BY: B.E.
4419-06

SHEET TITLE
TWIN CULVERT BRIDGE PLAN AND ELEVATION

SHEET # 77
TC-4

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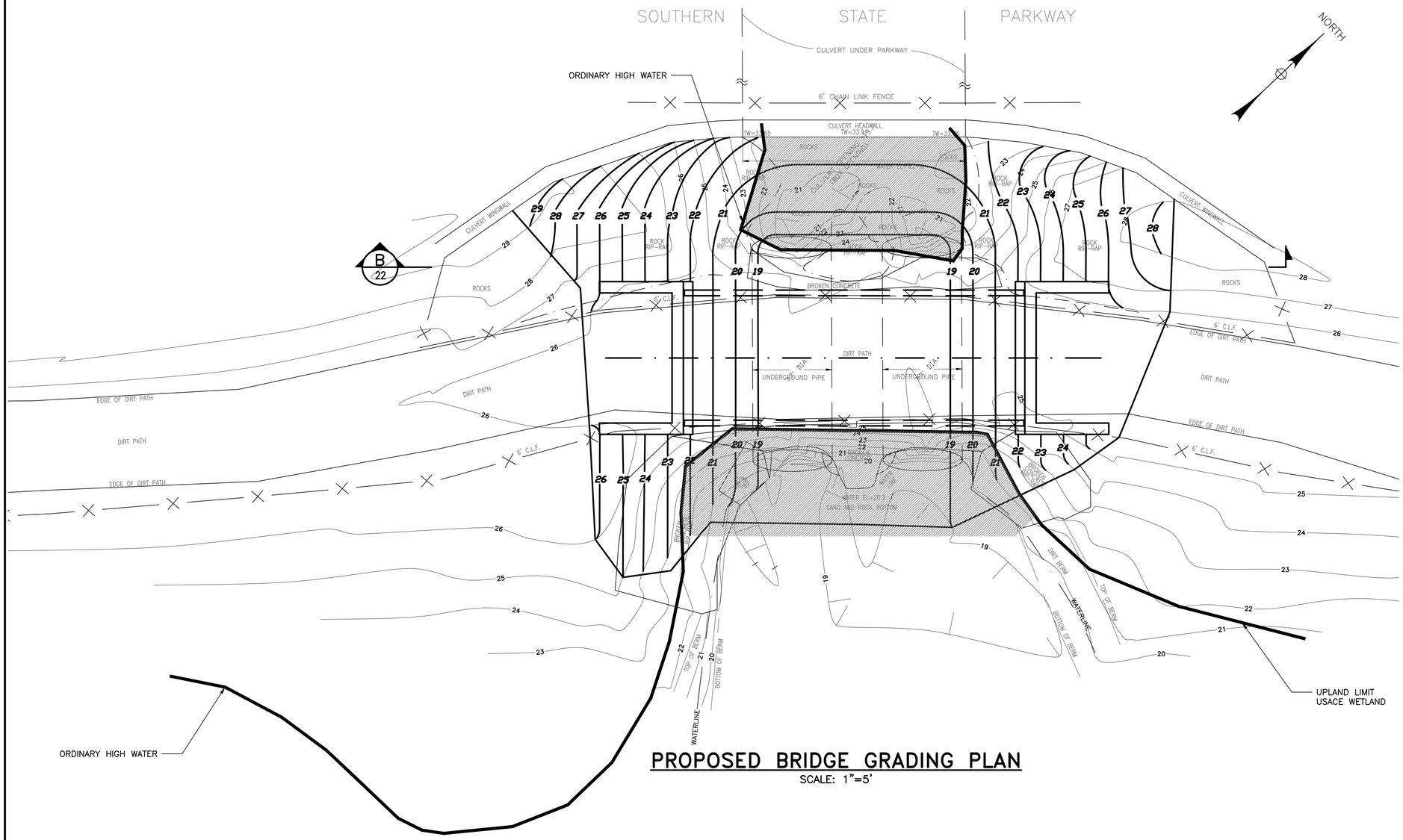
USACE FILE: NAN-2019-01262-EME



PROPOSED BRIDGE GRADING PLAN

SCALE: 1"=5'

LEGEND:

USACE DELINEATED WETLAND

NOTES:

1. UPSTREAM OF BRIDGE TO BE RESTORED WITH RIP–RAP AS PREVIOUSLY IN PLACE.
2. SEE DWG. TC–8 FOR TWIN CULVERT BRIDGE PLANTING PLAN.

SUGGESTED SEQUENCE OF CONSTRUCTION:

1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
2. INSTALL SHEETING AND EXCAVATE PROPOSED BRIDGE ABUTMENT EAST SIDE.
3. MAINTAIN FLOW THROUGH EXISTING TWIN CULVERTS.
4. CONSTRUCT EAST SIDE FOOTING AND ABUTMENT.
5. INSTALL SHEETING AND EXCAVATE PROPOSED BRIDGE ABUTMENT WEST SIDE.
6. CONSTRUCT WEST SIDE FOOTING AND ABUTMENT.
7. REMOVE EXISTING CULVERTS AND EMBANKMENT BETWEEN THE ABUTMENTS.
8. REMOVE EXISTING STONE RIP–RAP FROM CHANNEL AREA.
8. RE–GRADE OPEN CHANNEL FROM SOUTHERN STATE PARKWAY CULVERT TO 35' +/– SOUTHWARD.
9. REPLACE RIP–RAP AND EXTEND NEW RIP–RAP FROM SSP CULVERT TO 10' SOUTH OF NEW PEDESTRIAN BRIDGE.
10. PLACE NEW PEDESTRIAN BRIDGE ON THE ABUTMENTS.

0 5' 10'

Governor's Office of Storm Recovery

Living with the BAY

NEW YORK STATE Parks, Recreation and Historic Preservation

CONSULTANTS:

LKB CONSULTING ENGINEERS

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PHASE
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Revisions

Number	Description	Date:
1		
2		
3		
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #:	HL 2017-003
DATE:	MARCH 2018
DESIGNED BY:	G.L.
DRAWN BY:	D.M.M.
CHECKED BY:	W.T.C.
REVIEWED BY:	B.E.
4419-06	

SHEET TITLE
TWIN CULVERT BRIDGE GRADING PLAN

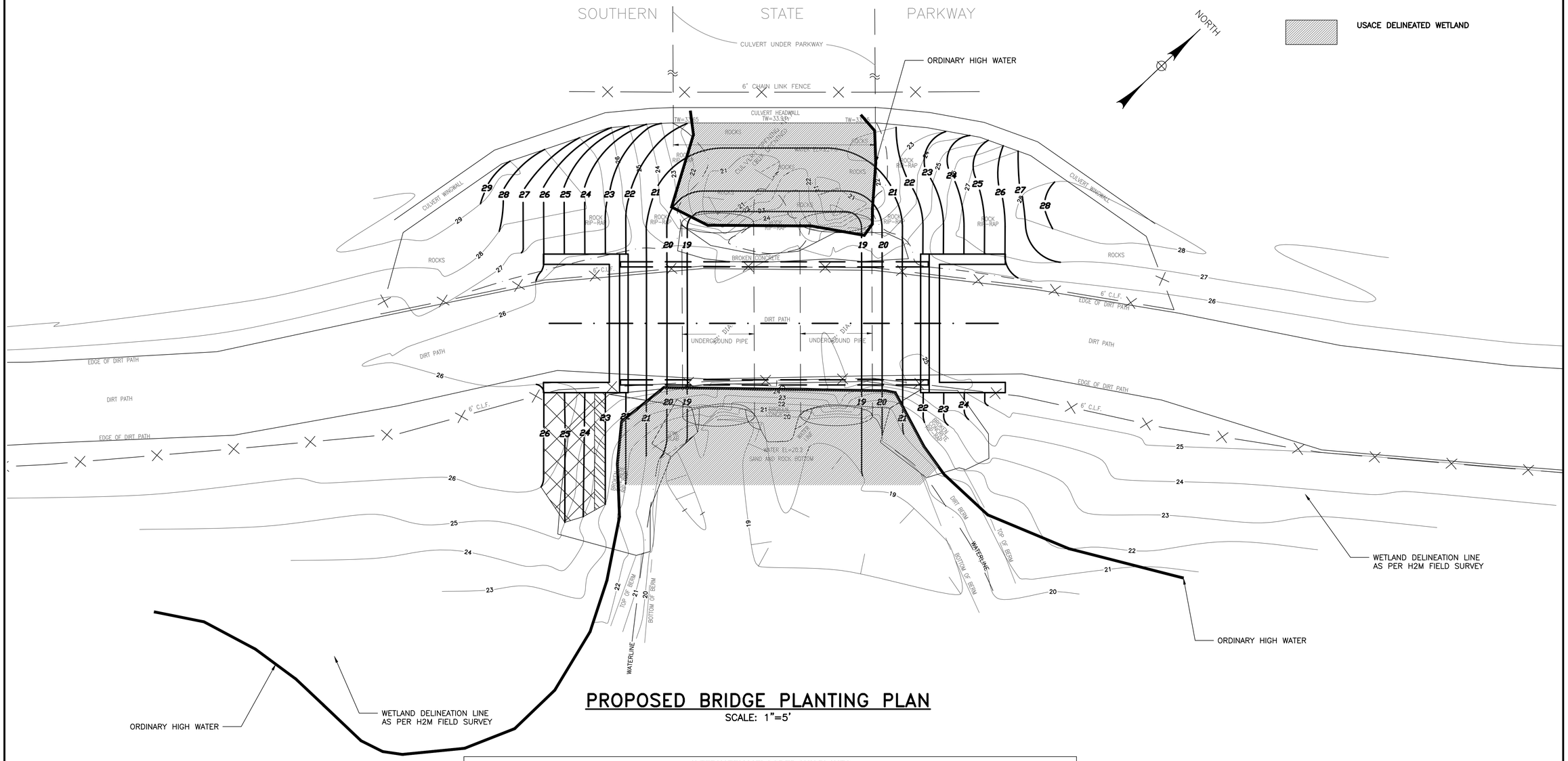
SHEET # 78
TC-7

I:\PROJECTS\4419 nys parks term agreement\4419-06 hempstead lake state park\CADD\Sheets\usacoe permit\Pedestrian Bridge - Center.dwg Last Modified: Oct 01, 2019 - 10:48am Plotted on: Oct 01, 2019 - 11:00am By mmcdonnell

USACE FILE: NAN-2019-01262-EME

LEGEND:

- EL. 23 TO EL. 23.50 (½FT.) ALTERNATELY/ FLOODED SUN PLANTS
- 23.50 AND UP – UPLAND SUN PLANTS
- USACE DELINEATED WETLAND



PROPOSED BRIDGE PLANTING PLAN

SCALE: 1"=5'

ALTERNATELY / FLOODED SUN PLANTS						
QUANTITY	**SYMBOL**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE/CONTAINER**	**SPACING**	**PLANTING GROUP**
GRASSES AND HERBACEOUS PLANTS						
275		*Iris versicolor*	Blue Flag Iris	2" plug	18" O.C.	Group of 25
Seed shaded upland planting area with Ernst Conservation Seed Partially Shaded Area Mix (ERNMX-140) at a rate of 0.5 lbs. per 1000 SF with a companion crop of annual ryegrass from Sept 1 to Dec 31, or grain oats from Jan 1 to July 31 at 0.7 lbs. per 1000 SF.						
UPLAND SUN PLANTS						
GRASSES AND HERBACEOUS PLANTS						
1,300		*Leersia oryzoides*	Rice Cutgrass	2" plug	18" O.C.	Group of 50
Seed shaded upland planting area with Ernst Conservation Seed Partially Shaded Area Mix (ERNMX-140) at a rate of 0.5 lbs. per 1000 SF with a companion crop of annual ryegrass from Sept 1 to Dec 31, or grain oats from Jan 1 to July 31 at 0.7 lbs. per 1000 SF.						

0 5' 10'

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HEMPSTEAD LAKE STATE PARK

CONTRACT

HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #:	HL 2017-003
DATE:	MARCH 2018
DESIGNED BY:	G.L.
DRAWN BY:	D.M.M.
CHECKED BY:	W.T.C.
REVIEWED BY:	B.E.
	4419-06

SHEET TITLE

TWIN CULVERT BRIDGE PLANTING PLAN

SHEET #79
TC-8

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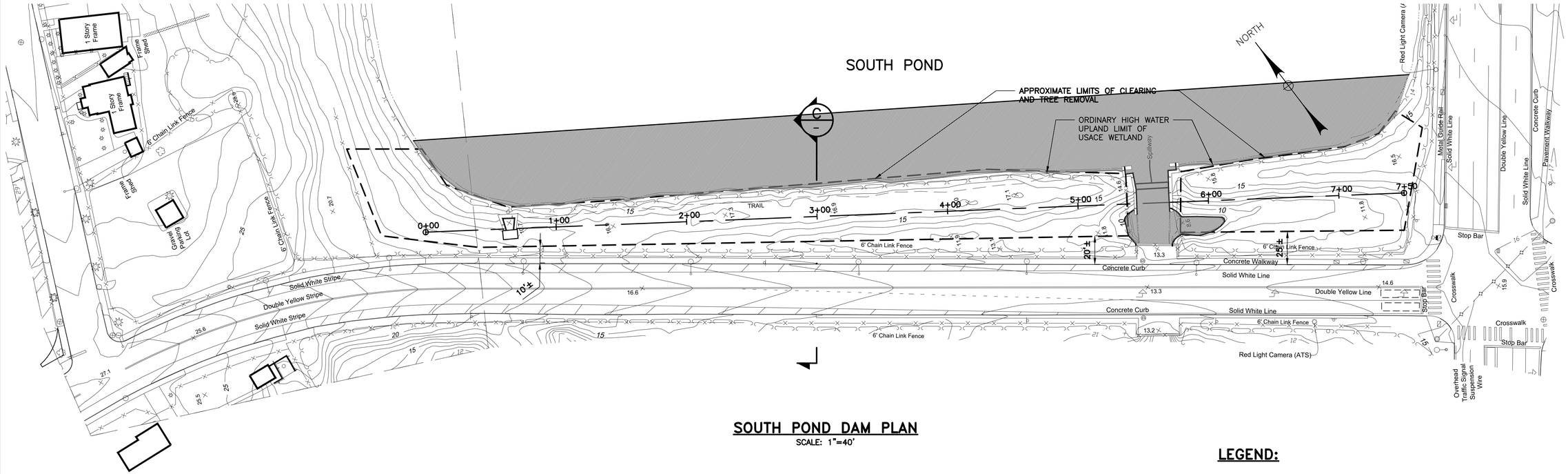
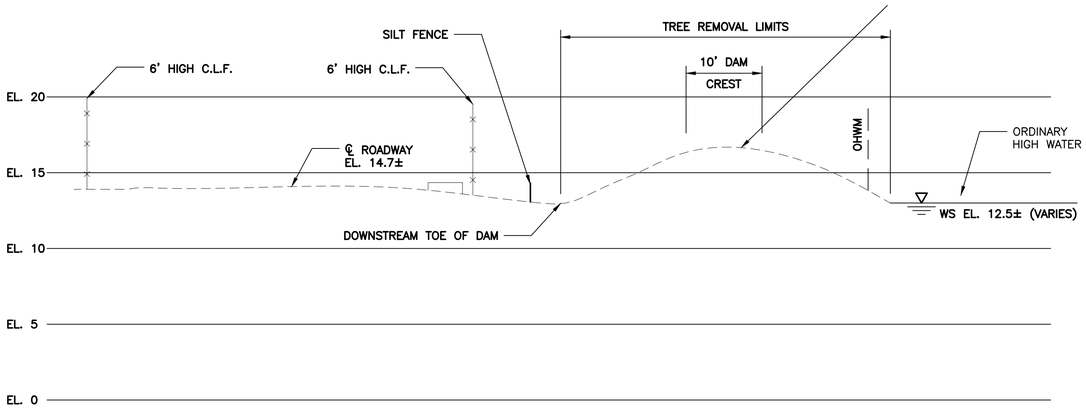


SOUTH POND DAM PLAN

SCALE: 1"=40'



SECTION C–C

SCALE: HORIZ: 1"=10'
VERT: 1"=5'

SOUTH POND DAM TREE REMOVAL				
STATION	UPSTREAM EMBANKMENT		DOWNSTREAM EMBANKMENT	
	TREE COUNT	AVG. DIA.	TREE COUNT	AVG. DIA.
STA 0+00 to 1+00	9	12" - 18"	11	12"- 24"
STA 1+00 to 2+00	13	12" - 18"	29	6" - 12"
STA 2+00 to 3+00	13	3" - 12"	23	12" - 18"
STA 3+00 to 4+00	17	3" - 6"	24	12" - 18"
STA 4+00 to 5+00	25	6" - 12"	27	12" - 18"
STA 5+00 to 6+00	5	6" - 12"	25	12"- 24"
STA 6+00 to 7+00	0	-	46	6" - 12"
STA 7+00 to 7+50	0	-	15	6" - 12"
TOTAL	**82**		**200**	

LEGEND:

USACE DELINEATED WETLAND

NOTES:

2 1. TREE REMOVALS UPON THE DAMS SHALL BE PERFORMED UNDER THE SUPERVISION OF A CERTIFIED ARBORIST IN A SAFE AND CAREFUL MANNER. TREE REMOVALS SHALL BE COMPLETED ON THE UPSTREAM SIDE OF THE DAM PRIOR TO REMOVALS ON THE CREST. TREE REMOVALS SHALL BE PERFORMED AND COMPLETED ON THE CREST OF THE DAM PRIOR TO REMOVALS ON THE DOWNSTREAM EMBANKMENT. VEGETATION AND TREE REMOVALS ON EARTHEN EMBANKMENT SHALL INCLUDE REMOVAL OF THE ROOT BALL. BACKFILL WITH SUITABLE MATERIAL, AND COMPACTION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. IN ADDITION TO TREE REMOVAL, ALL REMAINING AREA WITHIN THE TREE REMOVAL LIMITS SHALL BE CLEARED AND GRUBBED. THIS INCLUDES THE REMOVAL AND DISPOSAL OF ALL UNDERSTORY, VEGETATION, SHRUBS, GRASSES, VINES, ETC.

2. AFTER TREES ARE REMOVED, AND THE REMAINING WORK AREA IS CLEARED AND GRUBBED, CLEAN FILL SHALL BE PLACED AND COMPACTED TO ACHIEVE DESIRED SUBGRADE ELEVATION. APPLY 4" TOPSOIL AND SEED WITH A NATIVE SEED MIX.

3. APPLY EROSION CONTROL BLANKETS

1 4. TREE REMOVAL PROCEDURE
   - SEE DWG TRD–1 FOR TREE REMOVAL DETAIL AND NOTES.

5. TREE REMOVAL OPERATION TO BE LIMITED TO 20% OF THE DAM AT ANY ONE TIME.

EROSION CONTROL NOTES:

1. INSTALL SILT FENCE ALONG PERIMETER OF DOWNSTREAM TOE AND ALONG SPILLWAY OUTLET CHANNEL
2. INSTALL TURBIDITY CURTAIN ALONG UPSTREAM TOE FROM EDGE OF WEIR TO 25 FEET BEYOND CLEARING LIMIT AT EACH END OF DAM. MAINTAIN FLOW AT WEIR DURING TREE REMOVAL AND REGRADING WORK
3. INSTALL TURBIDITY CURTAIN ALONG SIDES OF OUTLET CHANNEL AS NEEDED TO PREVENT SEDIMENT TRANSPORT DOWNSTREAM

0 40' 80'

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Revisions

Number	Description	Date:
1	REVISED NOTES AS PER NYSDEC COMMENTS	10/31/17
2	REVISED NOTES AS PER NYSDEC COMMENTS	3/01/18
3		
4		
5		

Project Title

HEMPSTEAD LAKE STATE PARK

CONTRACT
HEMPSTEAD LAKE AND SOUTH POND DAM TREE REMOVAL D005314

PROJECT #: HL 2017-003
DATE: MARCH 2018
DESIGNED BY: C.P.
DRAWN BY: E.J.Z.
CHECKED BY: M.W. REVIEWED BY: B.E.
4419-06

SHEET TITLE

SOUTH POND DAM TREE REMOVAL LIMITS

SHEET # 82
TR-3

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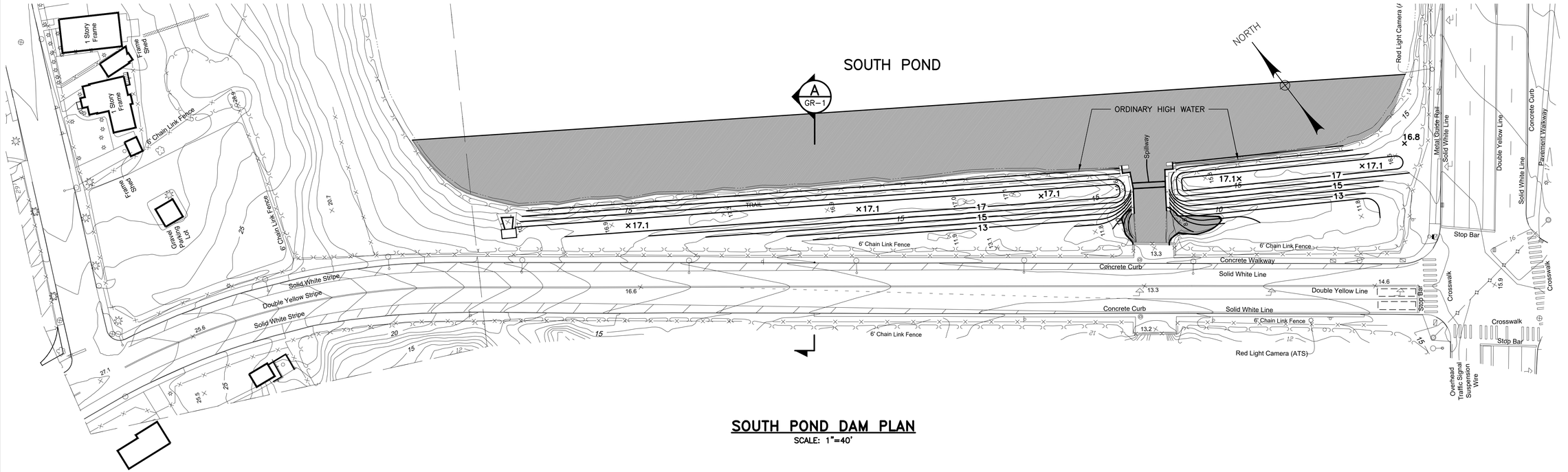
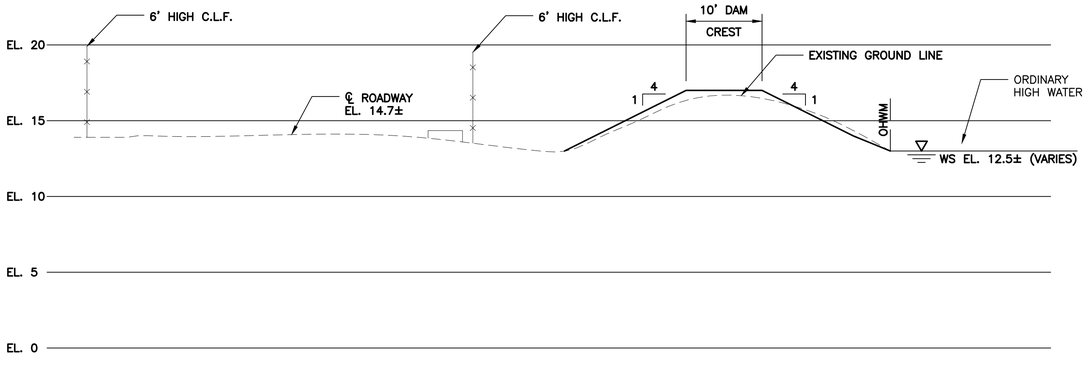


SOUTH POND DAM PLAN

SCALE: 1"=40'



SECTION A–A

SCALE: HORIZ: 1"=10'
VERT: 1"=5'

NOTES:

1. SEE DWG E&S–2 FOR EROSION AND SEDIMENT CONTROL PLAN
2. SEE DWG TRD–1 FOR TREE REMOVAL PROCEDURE

LEGEND:

USACE DELINEATED WETLAND

0 40' 80'

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4419-06

SHEET TITLE

SOUTH POND DAM GRADING PLAN

SHEET # 83
GR-1

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