

# 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-2015-00294-WOM  
Issue Date: February 8, 2016  
Expiration Date: March 9, 2016

## 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 City Department of Environmental Protection  
96-05 Horace Harding Expressway  
5<sup>th</sup> Floor  
Corona, New York 11368

**ACTIVITY:** Shoreline stabilization of two areas in the southwestern portion of the Kensico Reservoir to improve water quality. Work would include placement of rip-rap in approximately 1.32 acres of the reservoir.

**WATERWAY:** Kensico Reservoir

**LOCATION:** Town of Valhalla, Westchester 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

**CENAN-OP-RW  
PUBLIC NOTICE NO. NAN-2015-00294-WOM**

provided will become a part of the public record for this action.

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. All written comments, including names and addresses, 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.

Our preliminary determination is that the activity for which authorization is sought herein is not likely to adversely affect any Federally endangered or threatened species or their critical habitat. However, pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the District Engineer is consulting with the appropriate Federal agency to determine the presence of and potential impacts to listed species in the project area or their critical habitat.

Based upon a review of the latest published version of the National Register of Historic Places, there are no known sites eligible for, or included in, the Register within the permit area. Presently unknown archeological, scientific, prehistorical, or historical data may be lost by work accomplished under the required permit.

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

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) 790-8417 and ask for Melanie O'Meara.

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**

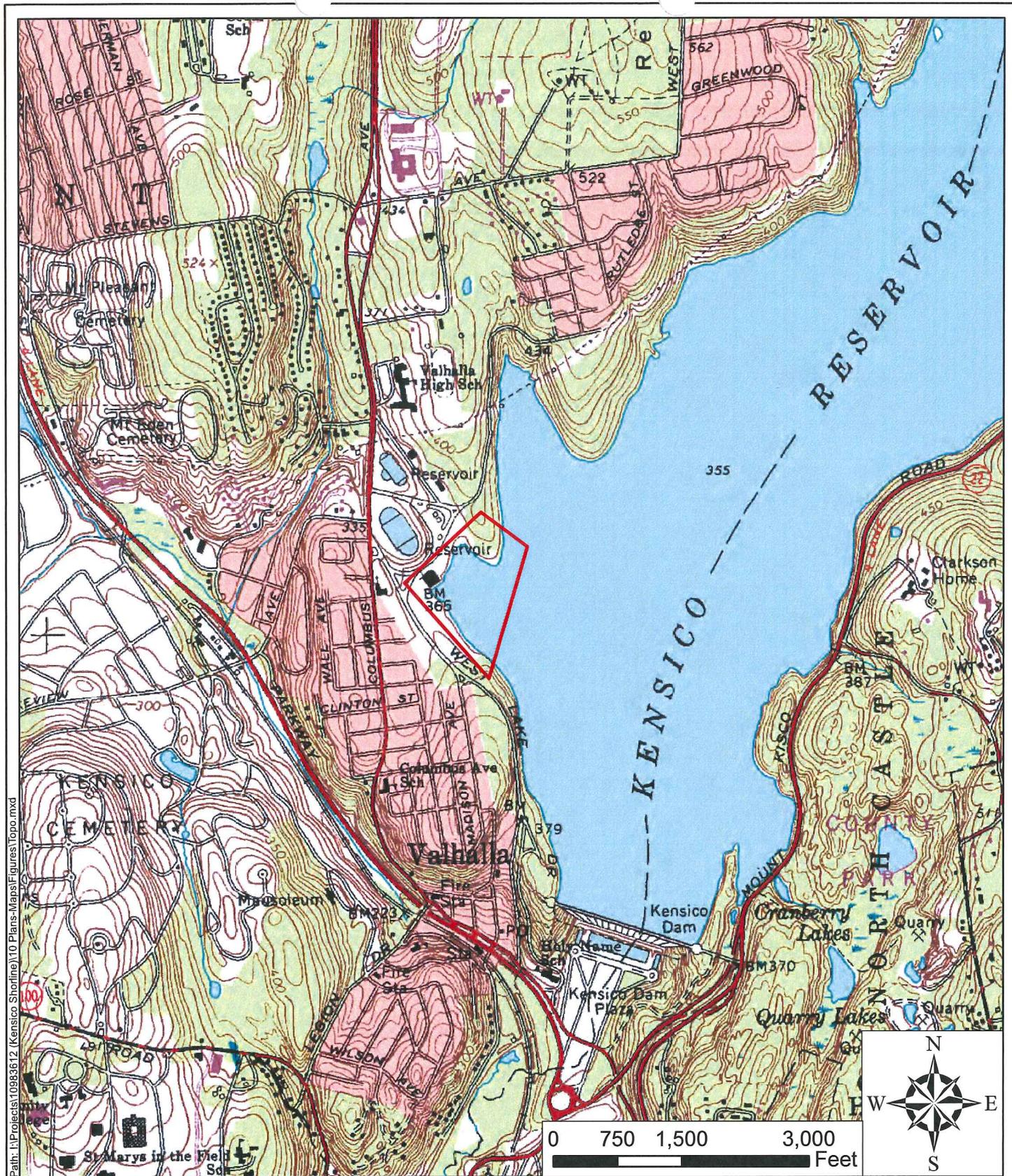
The applicant, New York City Department of Environmental Protection, has requested Department of the Army authorization for installation of rip-rap along approximately 1,200 linear feet of the Kensico Reservoir shoreline, divided into two locations, to facilitate the improvement of water quality within the reservoir. The project site is located in the Town of Valhalla, Westchester County, New York.

The work would involve installation of approximately 10,280 cubic yards of approximately 24-inch-thick rip-rap, 5,890 cubic yards of which would be placed below the ordinary high water mark (OHWM) over a layer of gravel bedding and geotextile fabric. Prior to placement of the bank stabilization material, the shoreline areas would be excavated to a depth of approximately three (3) feet, allowing the final elevation of the rip-rap to be the same as the existing grade. All excavated material would be disposed of off-site and in accordance with local, state, and federal laws. The rip-rap would be installed in a fixed pattern approximately three (3) feet long by two (2) feet wide. The portion below the OHWM would be placed by machine, and the portion above the water line would be placed by hand. The work would occur in two areas located in the southwestern portion of the reservoir: the southernmost area would be approximately 0.75 acres in size, and the northern area would be approximately 0.57 acres. In the southern area, approximately 0.44 acres of submerged aquatic vegetation (SAV) would be disturbed, and in the northern area, approximately 0.57 acres of SAV would be disturbed.

To maintain water quality outside the work zone during construction, multi-barrier turbidity curtains and sheet piling cofferdams would be placed within the reservoir at each location, and the work areas would be dewatered. These activities would result in approximately 0.15 acres of temporary impacts in the southernmost work area, of which 0.11 acres would include SAV, and approximately 0.14 acres of temporary impacts in the northern area, of which 0.06 acres would include SAV. Monitoring probes would be installed and, if turbidity levels exceed allowable limits, work would be halted until conditions are corrected. The turbidity curtains and cofferdams would be removed at the conclusion of the work.

To compensate for unavoidable impacts to the reservoir in regards to disturbance of SAV, mitigation would be completed off-site resulting in the creation of approximately 1.32 acres of wetlands, as part of a larger wetland creation and stream restoration project. This work would provide habitat for fish and wildlife to mitigate for the potential loss of habitat due to the disturbance of SAV, and would contribute to water quality improvements to the water supply system of which the reservoir is a part. The applicant did consider on-site SAV mitigation. The off-site mitigation was found to be a more beneficial alternative because it would provide greater habitat and water quality improvements than the replacement of SAV. The overall amount of SAV within the reservoir is very large compared to the area of disturbance so planting additional SAV within the reservoir would not create a significant increase in habitat and water quality improvement, like the off-site mitigation would.

The stated purpose of this project is to provide water quality improvement through decreased shoreline erosion and reduction in associated turbidity, especially during severe storms.



Path: I:\Projects\10933612 (Kensico Shoreline)\10 Plans-Maps\Figures\Topo.mxd

**Legend**

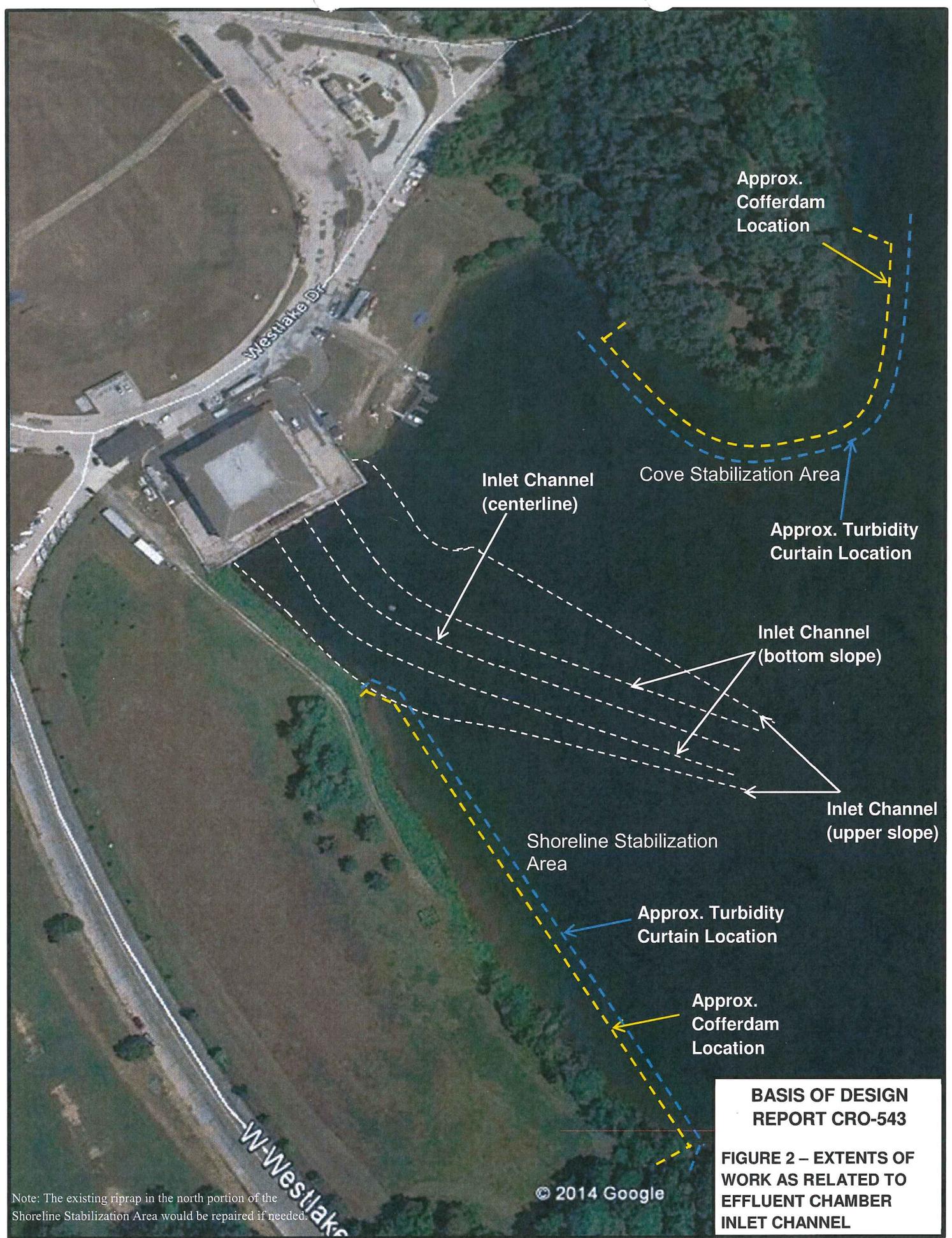
 Project Boundary

USGS Topography Map  
Kensico Shoreline Stabilization Protection Project  
Valhalla, NY

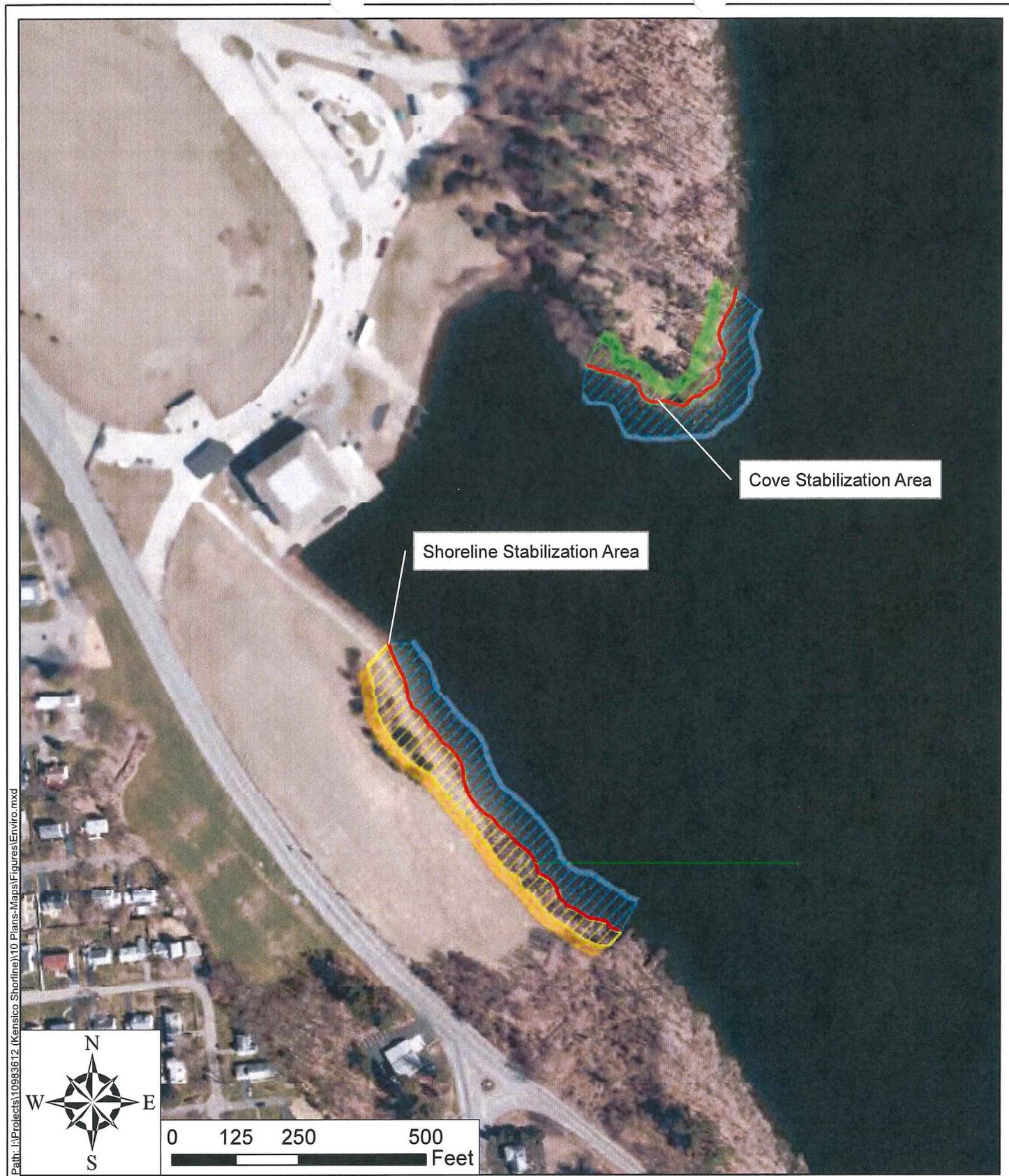
Source:  
NY State Department of Environmental  
Conservation, USGS 7.5' Topographic  
Maps, White Plains



Figure 1



Note: The existing riprap in the north portion of the Shoreline Stabilization Area would be repaired if needed.



Path: L:\Projects\10983612 (Kensico Shoreline)\10 Plans-Maps\Figures\Enviro.mxd

Legend	
	Stabilization Areas
<b>Temporary Impact Type</b>	<b>Permanent Impact Type</b>
	 SAV & Open Water Habitat
	 Upland Forest Habitat
	 Upland Mowed Lawn Habitat

Habitat Impacts Map  
 Kensico Shoreline Stabilization Protection Project  
 20 Westlake Drive, Valhalla, NY 10595

Source:  
 New York State Digital Orthophotography  
 Program, High Resolution Statewide Imagery  
 2013

**URS**  
 Clifton, New Jersey

Figure 6



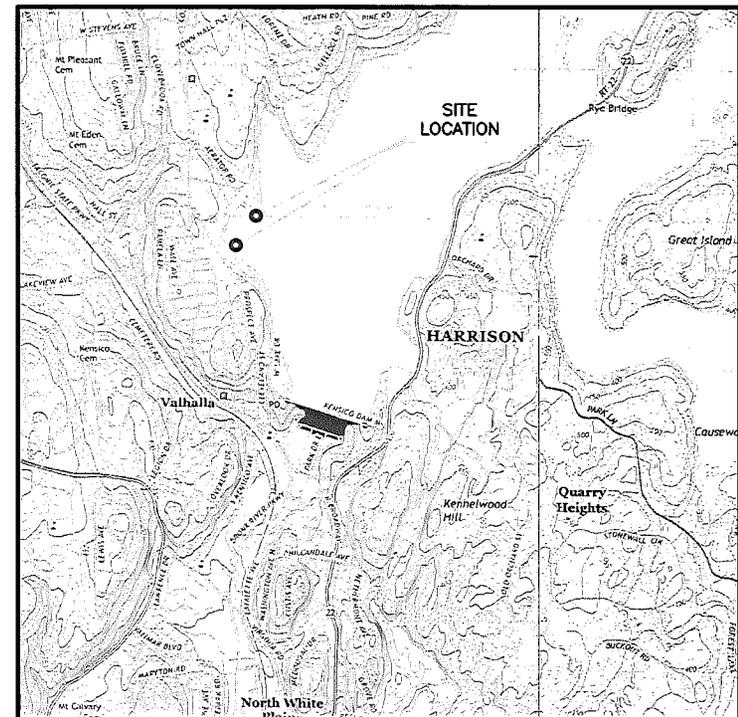
# NEW YORK CITY ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION

## CONTRACT CRO-543 KENSICO RESERVOIR SHORELINE STABILIZATION

MOUNT PLEASANT, NEW YORK  
SEPTEMBER 2015

### INDEX OF DRAWINGS

DWG. NO.	DRAWING TITLE
C-01	COVER SHEET, INDEX OF DRAWINGS, AND LOCATION PLAN
C-02	COVE AREA - EXISTING SITE CONDITIONS PLAN
C-03	COVE AREA - STABILIZATION PLAN
C-04	SHORELINE AREA - EXISTING SITE CONDITIONS PLAN
C-05	SHORELINE AREA - STABILIZATION PLAN
C-06	COVE AREA - STABILIZATION SECTIONS
C-07	SHORELINE AREA - STABILIZATION SECTIONS



LOCATION PLAN

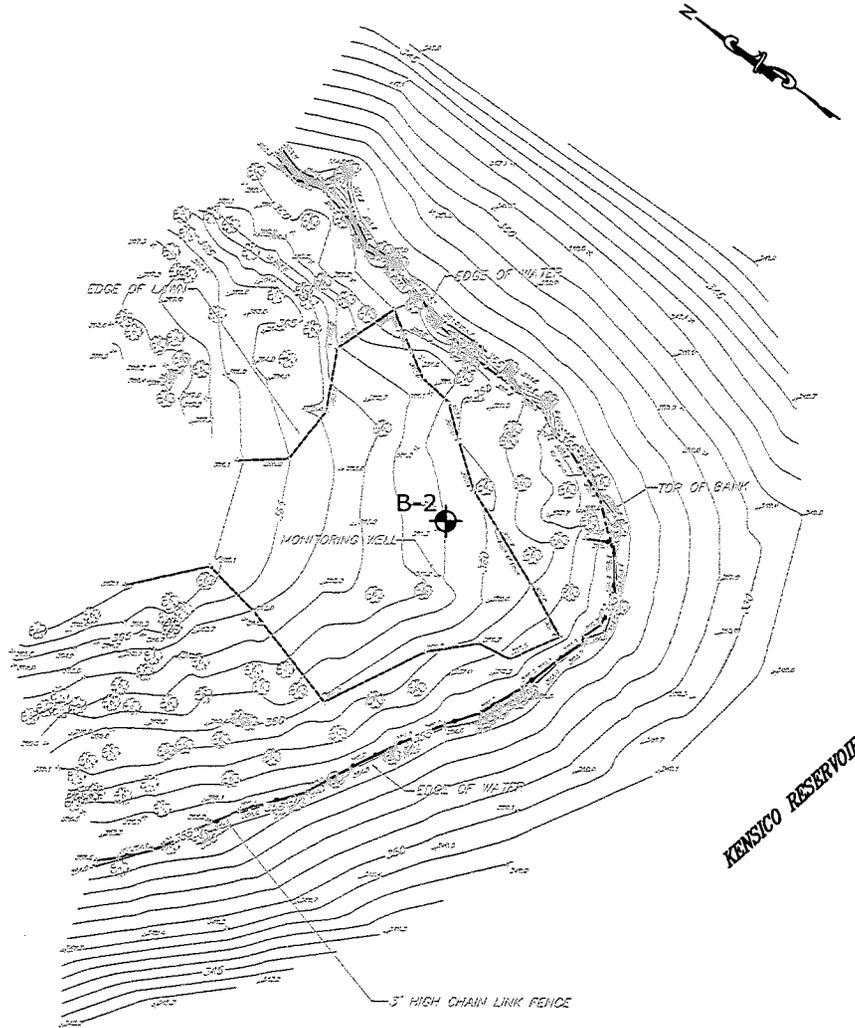
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SCALE (FEET)

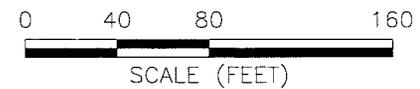
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K:\Cadd\10983612(Kensico)\PermitApplication(9-2015)\02-Cove-Exs.dwg, 9/9/2015 2:48:59 PM



- LEGEND**
- B-2  GEOTECHNICAL BORING
  -  EXISTING TREE

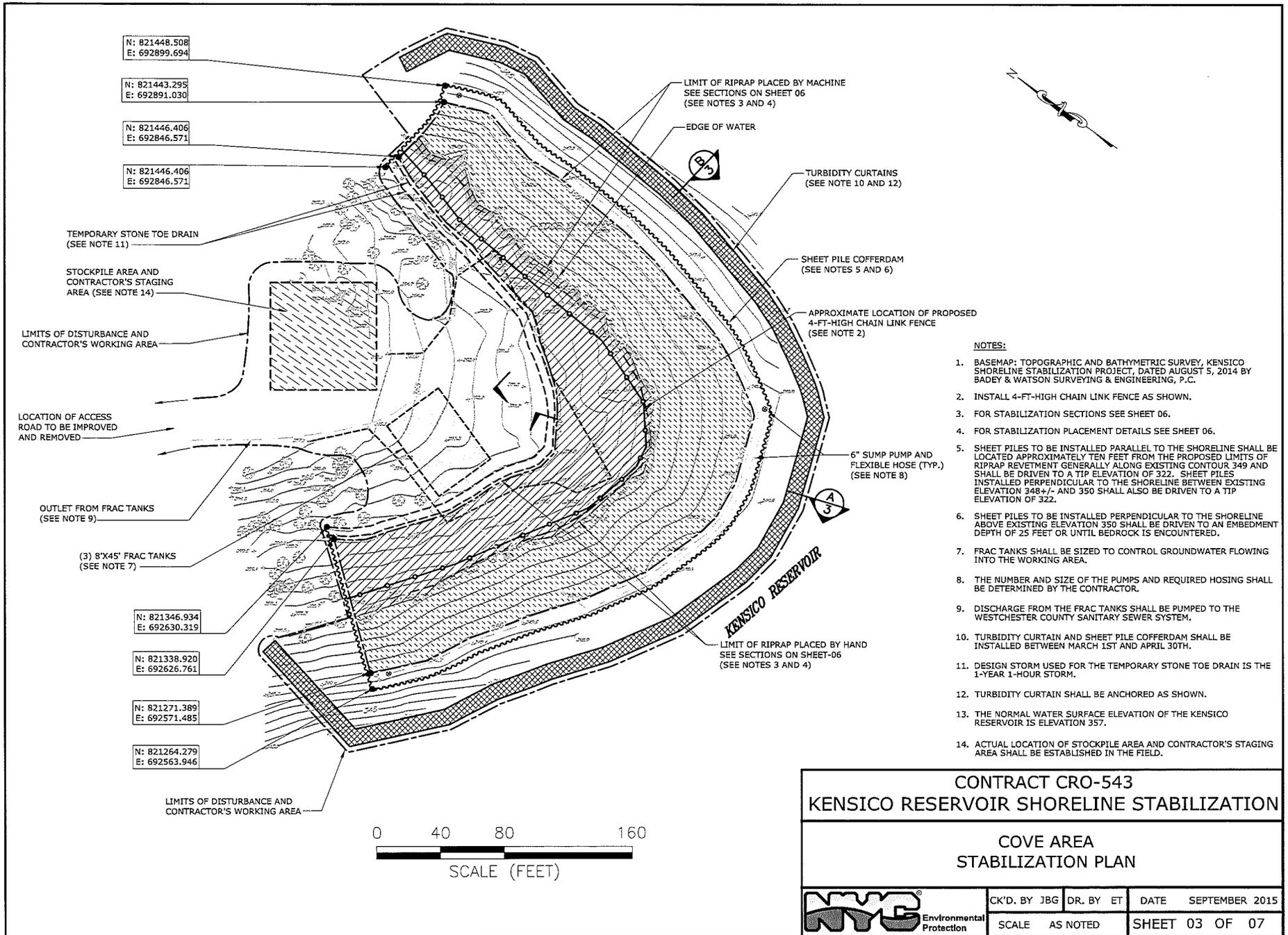
- NOTES:**
1. BASEMAP: TOPOGRAPHIC AND BATHYMETRIC SURVEY, KENSICO SHORELINE STABILIZATION PROJECT, DATED AUGUST 5, 2014 BY BADEY & WATSON SURVEYING & ENGINEERING, P.C.
  2. ALL ELEVATIONS SHOWN REFER TO NAVD 88 VERTICAL DATUM.



CONTRACT CRO-543  
KENSICO RESERVOIR SHORELINE STABILIZATION

COVE AREA  
EXISTING SITE CONDITIONS PLAN

	CK'D. BY JBG	DR. BY ET	DATE SEPTEMBER 2015
	SCALE AS NOTED	SHEET 02 OF 07	



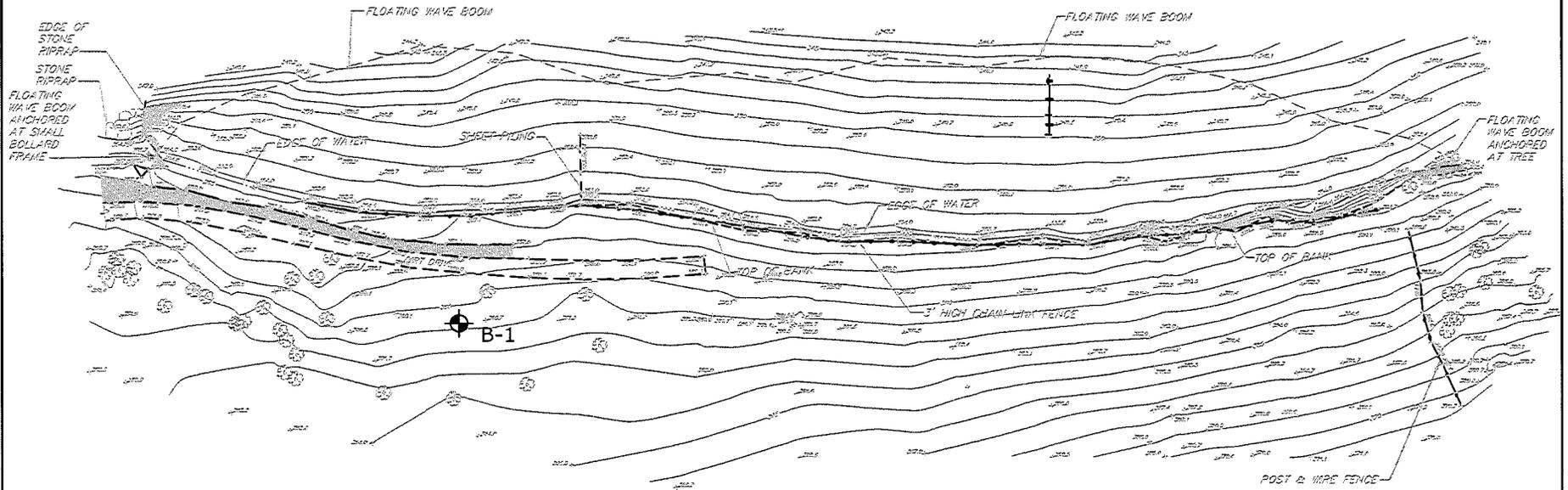
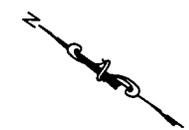
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**NOTES:**

1. BASEMAP: TOPOGRAPHIC AND BATHYMETRIC SURVEY, KENSICO SHORELINE STABILIZATION PROJECT, DATED AUGUST 5, 2014 BY BADEY & WATSON SURVEYING & ENGINEERING, P.C.
2. INSTALL 4-FT-HIGH CHAIN LINK FENCE AS SHOWN.
3. FOR STABILIZATION SECTIONS SEE SHEET 06.
4. FOR STABILIZATION PLACEMENT DETAILS SEE SHEET 06.
5. SHEET PILES TO BE INSTALLED PARALLEL TO THE SHORELINE SHALL BE LOCATED APPROXIMATELY TEN FEET FROM THE PROPOSED LIMITS OF RIPRAP REVETMENT GENERALLY ALONG EXISTING CONTOUR 349 AND SHALL BE DRIVEN TO A TIP ELEVATION OF 322. SHEET PILES INSTALLED PERPENDICULAR TO THE SHORELINE BETWEEN EXISTING ELEVATION 348+/- AND 350 SHALL ALSO BE DRIVEN TO A TIP ELEVATION OF 322.
6. SHEET PILES TO BE INSTALLED PERPENDICULAR TO THE SHORELINE ABOVE EXISTING ELEVATION 350 SHALL BE DRIVEN TO AN EMBEDMENT DEPTH OF 25 FEET OR UNTIL BEDROCK IS ENCOUNTERED.
7. FRAC TANKS SHALL BE SIZED TO CONTROL GROUNDWATER FLOWING INTO THE WORKING AREA.
8. THE NUMBER AND SIZE OF THE PUMPS AND REQUIRED HOISING SHALL BE DETERMINED BY THE CONTRACTOR.
9. DISCHARGE FROM THE FRAC TANKS SHALL BE PUMPED TO THE WESTCHESTER COUNTY SANITARY SEWER SYSTEM.
10. TURBIDITY CURTAIN AND SHEET PILE COFFERDAM SHALL BE INSTALLED BETWEEN MARCH 1ST AND APRIL 30TH.
11. DESIGN STORM USED FOR THE TEMPORARY STONE TOE DRAIN IS THE 1-YEAR 1-HOUR STORM.
12. TURBIDITY CURTAIN SHALL BE ANCHORED AS SHOWN.
13. THE NORMAL WATER SURFACE ELEVATION OF THE KENSICO RESERVOIR IS ELEVATION 357.
14. ACTUAL LOCATION OF STOCKPILE AREA AND CONTRACTOR'S STAGING AREA SHALL BE ESTABLISHED IN THE FIELD.

<b>CONTRACT CRO-543</b>			
<b>KENSICO RESERVOIR SHORELINE STABILIZATION</b>			
<b>COVE AREA</b>			
<b>STABILIZATION PLAN</b>			
	CK'D. BY JBG	DR. BY ET	DATE SEPTEMBER 2015
	SCALE AS NOTED	SHEET 03 OF 07	

**KENSICO RESERVOIR**



**LEGEND**

B-1 GEOTECHNICAL BORING

EXISTING TREE

**NOTES:**

1. BASEMAP: TOPOGRAPHIC AND BATHYMETRIC SURVEY, KENSICO SHORELINE STABILIZATION PROJECT, DATED AUGUST 5, 2014 BY BADEY & WATSON SURVEYING & ENGINEERING, P.C.
2. ALL ELEVATIONS SHOWN REFER TO NAVD 88 VERTICAL DATUM.

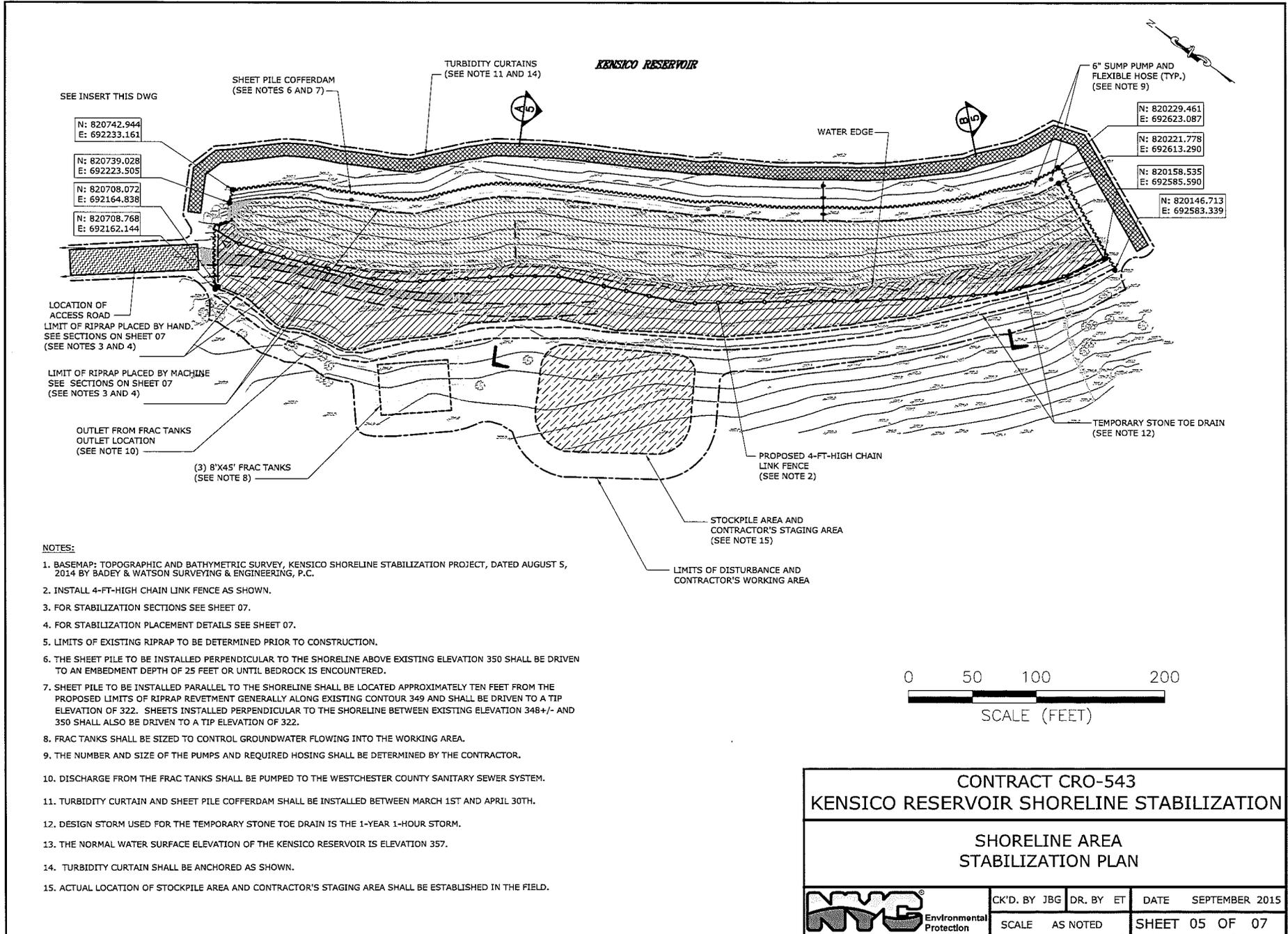


**CONTRACT CRO-543  
KENSICO RESERVOIR SHORELINE STABILIZATION**

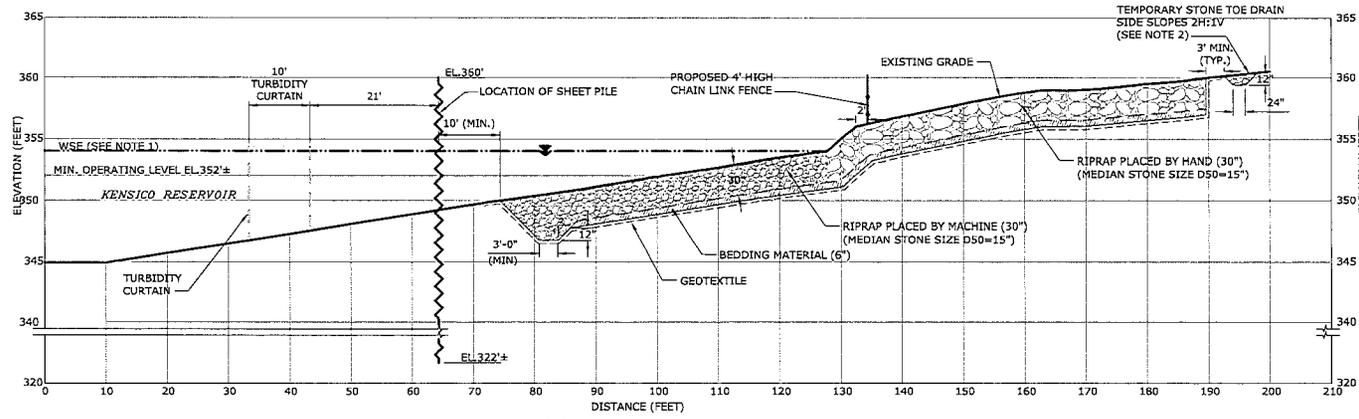
**SHORELINE AREA  
EXISTING SITE CONDITIONS PLAN**

	CK'D. BY JBG	DR. BY ET	DATE	SEPTEMBER 2015
	SCALE	AS NOTED	SHEET 04 OF 07	

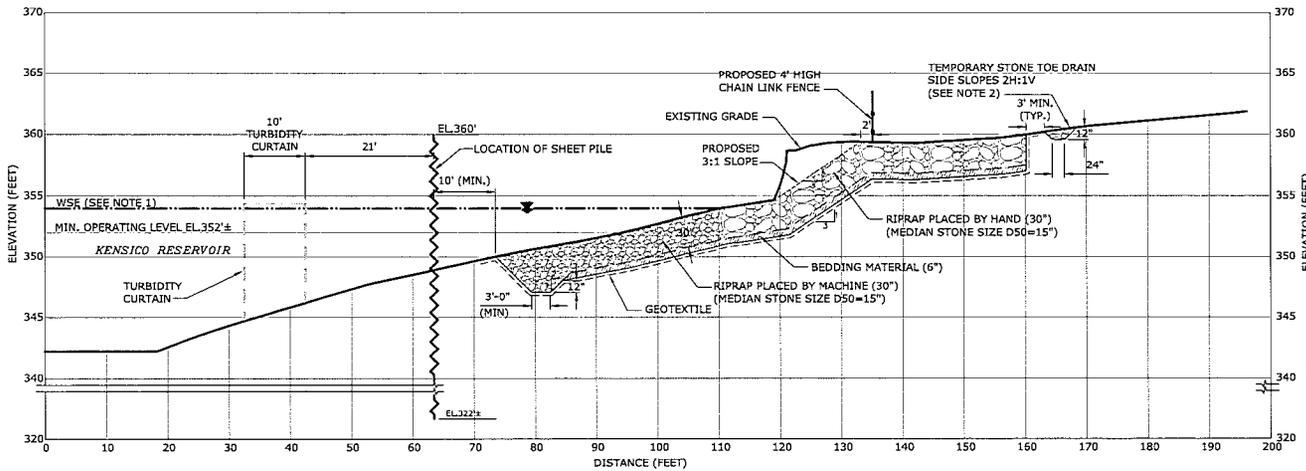
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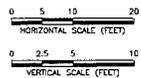
**A**  
SECTION  
SCALE:  
1"=10'



**B**  
SECTION  
SCALE:  
1"=10'

**NOTES:**

1. WATER ELEVATION AS PER AUGUST 5, 2014.
2. INSTALL TEMPORARY STONE TOE DRAIN FOR CONTROL OF SURFACE RUNOFF DURING CONSTRUCTION. REMOVE AND RESTORE UPON COMPLETION OF BANK STABILIZATION.



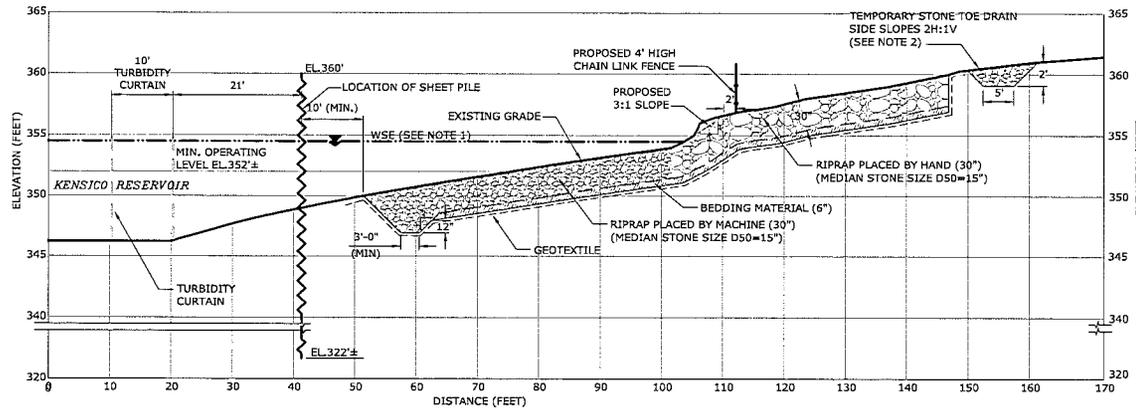
CONTRACT CRO-543  
 KENSICO RESERVOIR SHORELINE STABILIZATION

COVE AREA  
 STABILIZATION SECTIONS

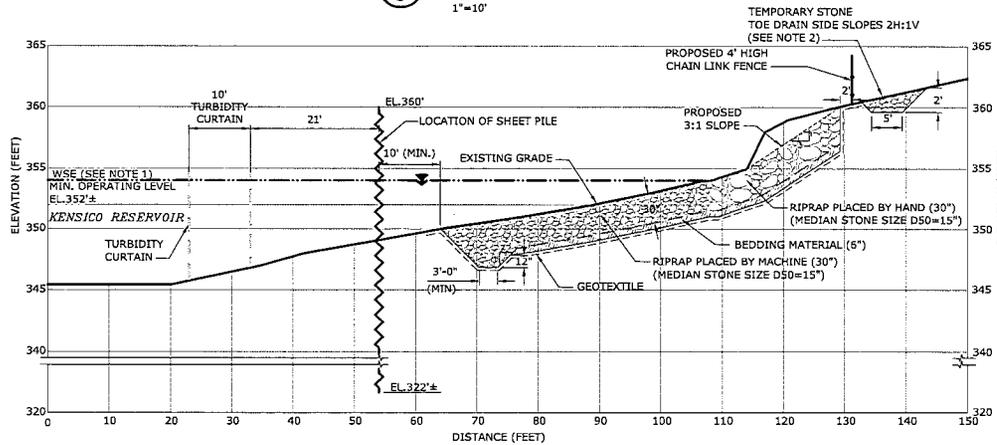
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	SCALE AS NOTED	SHEET 06 OF 7	

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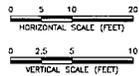
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**A**  
SECTION  
SCALE:  
1"=10'



**B**  
SECTION  
SCALE:  
1"=10'



**NOTES:**

1. WATER ELEVATION AS PER AUGUST 5, 2014.
2. INSTALL TEMPORARY STONE TOE DRAIN FOR CONTROL OF SURFACE RUNOFF DURING CONSTRUCTION. REMOVE AND RESTORE UPON COMPLETION OF BANK STABILIZATION.

CONTRACT CRO-543  
 KENSICO RESERVOIR SHORELINE STABILIZATION

SHORELINE  
 STABILIZATION SECTIONS



CK'D. BY	JBG	DR. BY	ET	DATE	SEPTEMBER 2015
SCALE	AS NOTED			SHEET 07 OF 7	

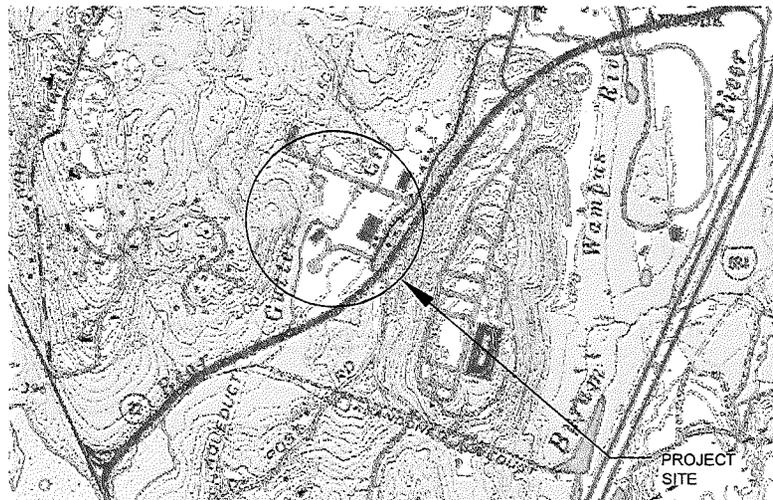


CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518

KENSICO WATERSHED STORMWATER  
BEST MANAGEMENT FACILITIES  
WETLAND AND OPEN WATER MITIGATION

FORMER ARMONK BOWLING ALLEY SITE  
TOWN OF NORTH CASTLE, WESTCHESTER COUNTY, NEW YORK  
SECTION-BLOCK-LOT: 2-II-II.A, 2-II-II.AI.-3, 2-II-II.AI.-2

JULY 2015



LOCATION MAP  
SCALE: 1" = 2000'

TODD A. WEST, P.E.  
DIRECTOR, PLANNING  
BUREAU OF WATER SUPPLY

PAUL V. RUSH, PE  
DEPUTY COMMISSIONER  
BUREAU OF WATER SUPPLY

EMILY LLOYD  
COMMISSIONER  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

LEGEND	
	PROPERTY LINE
	SURVEY MONUMENT
	WATERS OF THE U.S. DELINEATED BY HDR ENGINEERING, INC. ON 12/8/2009 (BOUNDARIES CONFIRMED BY HDR ENGINEERING, INC. ON 6/10/2015)
	WETLAND BOUNDARY, BY HAZEN AND SAWYER AND CAMP, DRESSER, & MCKEE JOINT VENTURE
	WA-3 WETLAND FLAG
	SA-23 STREAMCOURSE FLAG
	EXISTING WETLAND ADJACENT AREA BUFFER
	EXISTING STREAM ADJACENT AREA BUFFER
	EXISTING EASEMENT
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING TREE/TREELINE
	EXISTING SANITARY SEWER LINE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING ROCK/BOULDER
	EXISTING UTILITY POLE
	EXISTING OVERHEAD WIRES
	EXISTING DRAINAGE LINE
	EXISTING CATCH BASIN
	EXISTING LIGHT POLE
	EXISTING BUILDING
	EXISTING EDGE OF PAVEMENT
	EXISTING UTILITY/COMM MANHOLE
	EXISTING SIGN
	EXISTING CULVERT/HEADWALL
	EXISTING GUIDE RAIL
	EXISTING WELL LOCATION (APPROXIMATE)
	GRAVEL SUBBASE TO REMAIN
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED EDGE OF STREAM
	RELOCATED STREAM
	PROPOSED CROSS VANES FOR EROSION CONTROL
	PROPOSED STREAM ADJACENT AREA BUFFER LINE
	PROPOSED GRAVEL ACCESS DRIVE
	PROPOSED BOULDER CLUSTER
	MW #02 PERMANENT MONITORING WELL LOCATION
	PROPOSED CONSTRUCTION FENCE
	PROPOSED PHASE LIMITS
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED SPOT ELEVATION
	PROPOSED WETLAND ADJACENT AREA BUFFER LINE
	PROPOSED DRAINAGE LINE
	PROPOSED RIP RAP
	PROPOSED SILT FENCE
	PROPOSED INLET PROTECTION
	PROPOSED SOIL STOCKPILE
	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED DEER PROTECTION FENCE
	PROPOSED TREE PROTECTION FENCE
	PROPOSED STOCKPILE AREA
	PROPOSED GOOSE FENCE
	SHALLOW EMERGENT MARSH
	FLOODPLAIN FOREST/SHRUB SWAMP
	UPLAND MEADOW
	WETLAND MEADOW COMMUNITY
	OVERFLOW VEGETATION
	SOD FILTER STRIP/COIR LOG (16" DIAMETER)
	RED MAPLE
	SHRUBS
	REGULATORY FLOODWAY
	FLOODPLAIN
	UV MITIGATION PROPOSED CONTOURS
	PROPOSED ELECTRIC GUY WIRE
	PROPOSED PARKING LOT
	EXISTING TREE TO REMAIN (PROTECT IN PLACE)
	TREE TO BE REMOVED
	EXISTING TREE, TO BE REMOVED BY OTHERS, SEE NOTE 19
	ROCK/BOULDER TO BE REMOVED
	UTILITY POLE TO BE REMOVED
	CATCH BASIN TO BE REMOVED
	DRAINAGE LINE TO BE REMOVED
	LIGHT POLE TO BE REMOVED
	BUILDING TO BE REMOVED
	EDGE OF PAVEMENT TO BE REMOVED
	SIGN TO BE REMOVED
	GUIDE RAIL TO BE REMOVED
	COMM MANHOLE TO BE REMOVED
	SANITARY SEWER MANHOLE TO BE REMOVED
	EXISTING WELL TO BE REMOVED
	BUILDING, FOUNDATION, PIPES AND STRUCTURES TO BE REMOVED
	PAVEMENT TO BE REMOVED
	GRAVEL SUBBASE TO REMAIN



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**LEGEND**

DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:** NTS  
**DATE:** JULY 2015  
**EXHIBIT NUMBER:** 00G-03

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

**GENERAL NOTES:**

1. THE WORK INCLUDED IN THESE CONTRACT DOCUMENTS PROVIDES WETLAND MITIGATION FOR THE FOLLOWING PROJECT:  
CRO-498: KENSICO WATERSHED STORMWATER BEST MANAGEMENT FACILITY  
CRO-543: SHAFT 18 SHORELINE STABILIZATION
2. ALL WORK SHALL CONFORM TO NATIONAL, STATE, AND LOCAL BUILDING CODES.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROJECT SITE PRIOR TO COMMENCING WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL INFORMATION ON THE DRAWINGS AND IN THE SPECIFICATIONS AND FOR THE CONSEQUENCES OF ANY UNAUTHORIZED SUBSTITUTIONS, OMISSIONS, DELETIONS AND ANY NON-COMPLIANCE WITH THE CONTRACT DOCUMENTS.
5. DO NOT SCALE THE DRAWINGS. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER ANY SCALED DIMENSIONS.
6. THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES SHALL OCCUR PRIOR TO ANY LAND DISTURBANCE.
7. NO BLASTING WILL BE ALLOWED ON SITE.
8. DEER FENCING PROVIDED SHALL NOT BE NAILED TO ANY TREES.
9. REFER TO DETAILED SPECIFICATION 01570 FOR NOISE CONTROL RESTRICTIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING HIS BID TO FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUB-SURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED AND THE EQUIPMENT, LABOR AND MATERIAL REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER HIS CONTRACT.

**SURVEY CONTROL NOTES:**

1. THE CONTRACTOR SHALL VERIFY ALL COORDINATES, DISTANCES, AZIMUTHS AND BEARINGS SHOWN ON THESE PLANS PRIOR TO THEIR USE FOR ANY STAKEOUT OR ANY OTHER CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL USE THE ACCESS ROUTE AS SHOWN ON THIS PLAN UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
4. SURVEY INFORMATION TAKEN FROM DRAWING SET ENTITLED "CATSKILL AND DELAWARE WATER TREATMENT ULTRAVIOLET LIGHT DISINFECTION FACILITY, CAPITAL PROJECT WM-30 WETLAND MITIGATION, CONTRACT CAT-210WL, NORTH CASTLE" DATED JULY 2009, AS REFERENCED BY HAZEN AND SAWYER/CAMP, DRESSER, & McKEE JOINT VENTURE. THE SURVEY WAS PREPARED FOR HAZEN AND SAWYER BY EWELL FINLEY AND CHAS SELLS, DATED FEBRUARY 14, 2008.
5. HORIZONTAL CONTROL DATUM IS NAVD 1983, NEW YORK STATE PLANE SYSTEM, REFERENCE MONUMENTS ARE NGS STATIONS LAMT, RVD & SHKL. VERTICAL CONTROL DATUM IS NGVD 29, BENCH MARKS NGS STATIONS L355 & K355.
6. PROPERTY LINE AND EASEMENT INFORMATION LOCATED AS PER BADEY AND WATSON SURVEY PREPARED FOR CITY OF NEW YORK DEP, DATED JULY 23, 2008.
7. SITE IS LOCATED IN A 100 YEAR FLOODPLAIN, ZONE AE, SPECIAL STUDY AREA FOR THE TOWNS OF MOUNT PLEASANT (360919) AND NORTH CASTLE (360923), MAP NUMBER 36119C0276F.

**PLANTING NOTES:**

1. CONTRACTOR SHALL CONFIRM THE FINAL GRADES WITH THE RESIDENT ENGINEER AND OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF PLANTING OPERATIONS.
2. CONTRACTOR SHALL LAYOUT ALL PLANTING ZONES FOR THE APPROVAL OF THE PROJECT ENGINEER AND OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. ALL PLANTS WITHIN THE FLOODPLAIN SHRUB ZONE SHALL BE PLANTED AT 3'-0" ON CENTER STAGGERED SPACING UNLESS OTHERWISE NOTED.
4. ALL SHRUBS SHALL BE PLANTED IN STAGGERED ROWS 7'-0" ON CENTER OVERALL TO ESTABLISH PLANT COUNT. DURING THE TIME FRAME LISTED IN THE SPECIFICATIONS, INSTALL PERMANENT SEEDING IN THE EXISTING SLOPES. LOCATIONS SHALL BE APPROVED BY ENGINEER PRIOR TO PLANTING.
5. MULCH SHRUB AND TREE PLANTING ZONES TO A DEPTH OF 2".

**DEMOLITION & EXCAVATION NOTES:**

1. REMOVE ALL MATERIALS AS REQUIRED TO ACCOMMODATE NEW MATERIALS AND ACHIEVE ELEVATIONS NOTED ON THE LAYOUT AND GRADING PLANS.
2. CONTRACTOR SHALL MARK THE LIMITS OF THE PROPOSED GRADING OPERATION (WITH FLAGGING, FENCING OR OTHER APPROVED METHOD) WITH THE PROJECT ENGINEER AND INSTALL SILT FENCING AS INDICATED ON THE DRAWINGS PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
3. SOILS SUITABLE FOR REUSE SHALL BE STOCKPILED IN DESIGNATED AREAS ONLY. SOIL STOCKPILE LOCATIONS SHALL BE SET-UP PRIOR TO PLACEMENT OF ANY STOCKPILED MATERIAL. ALL STOCKPILES SHALL BE COMPACTED AND STABILIZED TO PREVENT SLOPE MOVEMENT. SEE PLANS FOR LOCATIONS AND DETAILS.
4. ALL MATERIALS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN A LEGAL MANNER AT CONTRACTOR'S EXPENSE.
5. MATERIAL NOT DEEMED SUITABLE FOR REUSE ON SITE SHALL BE LEGALLY DISPOSED OFF-SITE BY THE CONTRACTOR, UNLESS OTHERWISE DIRECTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
6. ANY ROCKS MEETING SPECIFICATIONS, SHALL BE STOCKPILED FOR REUSE WITHIN THE PROPOSED WETLAND AREAS. SEE PLANS FOR STOCKPILE AREAS AND DETAILS.
7. CONTRACTOR SHALL GRUBB AND DISPOSE OF ALL ROOTS LARGER THAN 2" DIAMETER, STUMPS, BURIED LOGS, MATTED ROOTS AND ORGANIC MATERIALS OFF SITE IN A LEGAL MANNER.

**CONTRACTOR CLEARING AND GRUBBING NOTES:**

1. SMALL TREES AND SHRUBS SHALL BE CLEARED BY MEANS OF A BUSH HOG.
2. IF FINAL CONTRACT SEEDING (i.e. WARM SEASON GRASSES) CAN NOT OCCUR WITHIN 14 CALENDAR DAYS, AN INTERIM SEEDING (SHORT TERM VEGETATION) IS REQUIRED TO STABILIZE THE SLOPES UNTIL THE APPROPRIATE SEASON OCCURS AGAIN. CONTRACTOR SHALL APPLY SHORT TERM VEGETATION (RYE GRASS) AT A RATE OF 1/2 POUND PER 1,000 SQUARE FEET.
3. IN AREAS WHERE TEMPORARY VEGETATION IS NOT APPROPRIATE, THE SOIL MAY BE STABILIZED WITH STRAW MULCH, WHICH WILL CONSERVE MOISTURE, PREVENT SURFACE COMPACTION, REDUCE WEED GROWTH AND REDUCE RUNOFF AND EROSION.
4. BARE GROUND IS TO BE STABILIZED AT THE EARLIEST PRACTICAL TIME, NOT TO EXCEED A 24 HOUR DAY DURATION.
5. STOCKPILES SHALL BE COMPACTED AND STABILIZED TO PREVENT SLOPE MOVEMENT. ALL STOCKPILES SHALL BE SURROUNDED BY SILT FENCE AND HAYBALES TO PREVENT EROSION. SEE DETAIL ON PLANS. STOCKPILES SHALL BE COVERED IF NOT SEEDED AND MULCHED. HAYBALES USED IN ACCESS LOCATIONS ARE TO BE IN PLACE WHEN SITE IS INACTIVE AND AT NIGHT.
6. THE USE OF STRAW MULCH OR TEMPORARY VEGETATION FOR DUST CONTROL ON DISTURBED SOIL AREAS SHALL PROTECT AGAINST WIND EROSION.
7. TILLING THE SOILS, FOR DUST CONTROL, MAY ALSO BE USED TO ROUGHEN THE SURFACE AND REDUCE SOIL FROM BECOMING AIRBORNE ON THE WINDY DAYS.
8. DURING DRY WEATHER CONDITIONS, DAILY SPRAYING WITH WATER ON ALL UNPAVED AREAS SUBJECT TO DISTURBANCE WILL BE REQUIRED.
9. ONCE THE ROUGH GRADING IS COMPLETED, A TEMPORARY GROUND COVER CONSISTING OF ANNUAL RYE GRASS SHALL BE SEEDED AT A RATE OF 1/2 POUND PER 1,000 SQUARE FEET OF AREA.
10. FILL MATERIAL SHALL BE FREE OF ALL DECOMPOSABLE MATERIAL.
11. ALL MICROPPOOL AREAS USED AS SEDIMENTATION BASINS OR TRAPS SHALL BE CLEARED WHEN THEY BECOME 50% FILLED OR AS DIRECTED BY THE RESIDENT ENGINEER OR OWNERS REPRESENTATIVE.
12. ALL SILT AND SEDIMENT THAT ACCUMULATES BEHIND STRAW BALE BERMS OR SILT FENCES SHALL BE REMOVED AND PLACED AS FILL.
13. AT PROJECT COMPLETION, ALL TEMPORARY SILTATION CONTROL DEVICES SHALL BE REMOVED AND THE AFFECTED AREAS REGRADED, PLANTED OR TREATED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.



PROJECT TITLE	CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE
SHEET TITLE	<b>CONSTRUCTION NOTES (1 OF 4)</b>

DESIGNED	J.R.
DRAWN	S.C./J.W.
CHECKED	S.D.
PROJ. DIR.	M.P.
PROJ. MNGR.	L.P.

SCALE:	NTS
DATE:	JULY 2015
EXHIBIT NUMBER:	00G-04

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

MAINTENANCE AND PROTECTION OF TRAFFIC

1. ALL TRAFFIC CONTROL DEVICES USED FOR MAINTENANCE AND PROTECTION OF TRAFFIC SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS AS SET FORTH IN THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 OR LATEST EDITION AND THE NEW YORK STATE SUPPLEMENT (AS AMENDED).
2. THE CONTRACTOR SHALL NOT PARK EQUIPMENT OR STORE MATERIAL OVERNIGHT WHERE IT IS DEEMED BY THE ENGINEER TO BE A HAZARD TO TRAFFIC.
3. THE CONTRACTOR'S SUPPLIER SHALL USE I-684 TO ROUTE 22 TO OLD ROUTE 22 TO ACCESS SITE AND EXIT SITE. TRUCKS SHALL AVOID NYS ROUTE 128.
4. PARKING AND STAGING ADJACENT TO THE TRAVELED WAY ON OLD ROUTE 22 SHALL BE PROHIBITED. THE CONTRACTOR SHALL ABIDE BY ALL TRAFFIC LAWS AND ORDINANCES IN PLACE BY ANY AGENCY HAVING JURISDICTION.
5. THE CONTRACTOR SHALL NOT ALLOW CONSTRUCTION RELATED VEHICLES OR ACTIVITIES TO IMPEDE OR ADVERSELY AFFECT THE FLOW OF TRAFFIC ON THE ROAD LEADING TO THE WORK SITES. THE CONTRACTOR SHALL NOT ALLOW CONSTRUCTION RELATED VEHICLES TO QUEUE ALONG PUBLIC ROADWAYS. QUEUING OF CONSTRUCTION RELATED VEHICLES SHALL BE LIMITED TO ONSITE ONLY.
6. DURING THE PROGRESS OF CONSTRUCTION, TRUCKS ENTERING OR LEAVING THE SITE SHALL USE ONLY ROADS THAT PERMIT TRUCK TRAVEL AS GOVERNED BY ANY AGENCY HAVING JURISDICTION. ALL ROADWAYS AFFECTED BY CONSTRUCTION OF THIS PROJECT SHALL BE RESTORED TO PRECONSTRUCTION CONDITIONS, AT NO ADDITIONAL COST TO THE CITY OF NEW YORK.
7. FLAGMEN PROVIDED BY THE CONTRACTOR SHALL BE ON SITE WHENEVER TRUCKS ENTER OR EXIT THE SITE TO ALLOW THE SAFE ENTERING AND EXITING OF SINGLE VEHICLES ONTO OLD ROUTE 22 AND TO MINIMIZE QUEUING ON OLD ROUTE 22.
8. FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WETLAND MITIGATION AND PARKING LOT CONSTRUCTION, REPAIR OF OLD ROUTE 22 BETWEEN GEORGE SMITH PLACE AND NYS ROUTE 22 (SOUTH OF THE SITE) SHALL BE IN ACCORDANCE WITH THE DRAWING C-18. FOR THIS WORK, THE CONSTRUCTION OF THE PARKING LOT, AND ALL WORK WITHIN THE RIGHT OF WAY, THE CONTRACTOR SHALL SUBMIT WORK ZONE TRAFFIC CONTROL PLANS FOR ENGINEER'S APPROVAL. REFER TO MUTCD FIGURE 6H-6 AND 6H-10 FOR TYPICAL NOTES AND DETAILS. SEE DETAILED SPECIFICATION SECTION 01415 AND 01550 FOR MOT PLAN REQUIREMENTS.

SITE AND TREE PROTECTION NOTES:

1. LIMITS OF DISTURBANCE AND TREES TO BE REMOVED AND PROTECTED UNDER THIS CONTRACT SHALL BE STAKED OUT BY THE CONTRACTOR BEFORE CONTRACTOR MOBILIZATION OCCURS.
2. CONTRACTOR SHALL PROTECT EXISTING VEGETATION AREAS TO REMAIN FOR THE DURATION OF THE CONTRACT.
3. CONTRACTOR SHALL MARK THE LIMITS OF THE EXISTING VEGETATION TO REMAIN BY THE INSTALLATION OF CONSTRUCTION FENCE, TO BE REVIEWED BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.
4. CONTRACTOR SHALL NOT STOCKPILE MATERIALS WITHIN THE DRIPLINE OF ANY TREES.
5. NO CONSTRUCTION EQUIPMENT SHALL BE PARKED UNDER THE TREE CANOPY OF ANY TREE THAT IS TO REMAIN.
6. THERE SHALL BE NO EXCAVATION OR STOCKPILING OF EARTH UNDERNEATH THE DRIPLINE OF ANY TREE TO REMAIN.
7. TREES TO BE PRESERVED SHALL BE MARKED CONSPICUOUSLY ON ALL SIDES.
8. IN AREAS OF CONCENTRATED ACTIVITY, TREES TO BE PRESERVED SHALL BE FENCED AT THE OUTER DRIPLINE.
9. DEER FENCING SHALL BE INSTALLED IMMEDIATELY FOLLOWING SEEDING OPERATIONS. CONTRACTOR IS RESPONSIBLE TO MAINTAIN THIS FENCING FOR THE DURATION OF THE MONITORING AND MAINTENANCE PERIOD.
10. CONTRACTOR SHALL REMOVE ITEMS SHOWN ON CONTRACT DRAWINGS, INCLUDING TREES AND STUMPS INDICATED FROM THE SITE TO AN AUTHORIZED DISPOSAL SITE.
11. AT NO POINT SHALL CONTRACTOR DISTURB ANY AREA WITHIN THE EXISTING WETLANDS MITIGATION AREA, ADJOINING THE SITE TO THE NORTH.

ACCESS TO UV WETLAND MITIGATION SITE:

1. ACCESS TO THE UV WETLAND MITIGATION SITE SHALL BE MAINTAINED AT ALL TIMES.
2. DURING PHASE 1 WORK, GEORGE SMITH PLACE WILL BE USED FOR ACCESS TO ADJACENT SITE.
3. AT THE BEGINNING OF PHASE 2, INSTALL TEMPORARY STREAM CROSSING AS INDICATED IN DWG. C-04.
4. DURING PHASE 2 WORK, USE TEMPORARY ACCESS FROM KAYSAL COURT ROAD.
5. FOLLOWING LIVE STREAM DIVERSION (IN PHASE 3), REMOVE TEMPORARY STREAM CROSSING, AND PERFORM FINAL GRADING AS INDICATED IN DWG. C-12, FILLING IN STREAM CHANNEL. CONSTRUCT PERMANENT ACCESS TO THE UV MITIGATION SITE.

CONSTRUCTION SEQUENCE NOTES:

GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL SEQUENCE ALL OPERATIONS ON-SITE SO THAT NO MORE THAN FIVE (5) ACRES OF ACTIVE DISTURBANCE OCCURS AT ANY POINT FOR THE DURATION OF THE PROJECT.
2. ALL ACCESS TO THE PHASES OF WORK SHALL BE MAINTAINED THROUGH THE ANTI-TRACKING PADS (SEE DWGS. C-08 & C-09 FOR LOCATIONS). NO OTHER POINTS OF INGRESS/EGRESS WILL BE ALLOWED.
3. A COMMERCIAL BUILDING IS LOCATED ACROSS THE PROJECT SITE ALONG OLD ROUTE 22. CONTRACTOR TO MAINTAIN ACCESS TO BUILDING DURING CONSTRUCTION.

INITIAL WORK:

1. PRIOR TO CONTRACTOR MOBILIZATION, INSTALL "PROTECTED AREA" SIGNAGE, FLAG BOUNDARIES OF EXISTING WETLANDS AND ACCESS ROADS, AND TAG TREES TO BE REMOVED AND PROTECTED UNDER THIS CONTRACT. SEE THIS SHEET, DWG C-01, AND C-06 FOR ADDITIONAL INFORMATION.
2. INSTALL CONSTRUCTION LIMIT FENCING FOR ENTIRE SITE.
3. PERFORM SOIL AND MATERIAL SAMPLING, ANALYSIS AND MATERIAL CLASSIFICATION REQUIRED FOR DISPOSAL OF ALL DEMOLISHED MATERIALS AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. CUT AND CAP EXISTING WATER AND GAS SERVICE LINES INTO THE SITE, 5 FEET (WEST) FROM THE EXISTING VALVES IN GEORGE SMITH PLACE (SEE DWG. C-02 FOR LOCATIONS). NOTIFICATION SHALL BE MADE TO ALL UTILITY COMPANIES PRIOR TO ANY WORK BEING PERFORMED.
5. DO NOT REMOVE TREES FROM AREA DESIGNATED UPLAND MEADOW/FOREST THAT ARE WITHIN CLEARING LIMITS.

PHASE 1:

1. THROUGHOUT PHASE 1 AND 2; STREAM FLOW FROM BEAR GUTTER CREEK SHALL REMAIN IN ITS EXISTING LOCATION (DITCH). PLACE TRAILER SOUTH OF BEAR GUTTER CREEK AS SHOWN HEREIN.
2. INSTALL INITIAL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED AS NECESSARY AS CONSTRUCTION PROGRESSES REQUIRED FOR PHASE 1 ACTIVITIES AND SHOWN ON DWG C-08.
3. CUT AND CAP ALL REMAINING UTILITIES SERVICING THE BUILDING. SEE DWG. C-06.
4. PERFORM PHASE 1 DEMOLITION AND REMOVALS PER DEMOLITION PLAN. MATERIAL STOCKPILING SHALL BE AS INDICATED ON DWG. C-08 AND PER THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
5. PAVEMENT ON GEORGE SMITH PLACE TO REMAIN DURING PHASE 1. WHEN REMOVING OTHER PAVEMENT, LEAVE 50 FT STRIP OF PAVEMENT ADJACENT TO BUILDING FOUNDATION. THIS 50-FT STRIP TO BE REMOVED UNDER PHASE 2. DO NOT REMOVE OR CUT ANY EXISTING STORM DRAIN PIPE AT THIS TIME.
6. EXCAVATE, DEMOLISH AND REMOVE BUILDING FOUNDATION AND CONCRETE SLAB. SEE DWG C-07 FOR DETAILS.
7. PERFORM SITE GRADING WITHIN PHASE 1 PER CONTRACT DRAWINGS C-11, C-12, C-13 & C-14. WHEN CONSTRUCTING NEW STREAM CHANNEL, BEGIN GRADING AT THE SOUTHERN EXTENT OF THE PROPOSED CHANNEL AND CONTINUE IN A NORTHERLY FASHION. DO NOT MAKE FINAL CONNECTION TO THE EXISTING STREAM.
8. STABILIZE NEWLY FORMED STREAM BED BY INSTALLING IN-STREAM STABILIZING STRUCTURES (SEE DWG. C-10 AND DWG. GC-04, DETAILS 2, 3, & 4 FOR ADDITIONAL INFORMATION).
9. INSTALL SANDBAG BLOCKAGE #1 TO PREVENT BEAR GUTTER CREEK FLOWS FROM ENTERING THE CONSTRUCTION SITE AT THE DOWNSTREAM END OF THE PROPOSED BYPASS CHANNEL. SEE DWG. C-03 AND C-08 FOR LOCATION.
10. EXCAVATE AND STABILIZE PROPOSED BYPASS CHANNEL CONNECTION TO EXISTING WETLAND ON ADJACENT SITE.
11. REMOVE EXISTING 18" CMP AS SHOWN ON DWG. C-06. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS AS NOTED ON DWG. C-08.
12. PERFORM FINAL GRADING OF PHASE 1 INCLUDING TOPSOIL AS DEFINED IN THE CONTRACT DOCUMENTS.
13. REMOVE TEMPORARY SEDIMENT CONTROLS AND STABILIZE PHASE 1 WITH PERMANENT AND TEMPORARY SEEDING AS NEEDED AND REQUIRED.

PHASE 2:

1. RELOCATE TRAILER AND PARKING ZONE FOR PHASE 2 AS SHOWN HEREIN.
2. INSTALL PHASE 2 EROSION AND SEDIMENTATION CONTROLS AS DETAILED ON DWG. C-09. MATERIAL STOCKPILING SHALL BE AS NOTED ON DWG. C-09 AND PER THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
3. CONSTRUCT TEMPORARY STREAM CROSSING AND TEMPORARY ACCESS TO GEORGE SMITH PLACE AS INDICATED ON THIS SHEET AND DWG. C-10. SEE DETAIL 7, DWG. GC-03 FOR ADDITIONAL INFORMATION.
4. DEMOLISH AND REMOVE ALL PAVEMENT/STRUCTURES/TREES DETAILED FOR REMOVAL IN PHASE 2. WELL SHALL BE ABANDONED AS PER NOTE 16 ON DWG. C-06.
5. ROUGH GRADE SITE TO PROPOSED GRADES AS SHOWN IN DWG C-11, C-12, C-13 AND C-14.
6. INSTALL SANDBAG BLOCKAGE #2 TO PREVENT BEAR GUTTER CREEK FLOWS FROM ENTERING THE CONSTRUCTION SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW FROM CULVERT UNDER KAYSAL COURT ROAD OVER/THRU SANDBAG BLOCKAGE #2 TO BEAR GUTTER CREEK.
7. CONSTRUCT PROPOSED CHANNEL IN PHASE 2.
8. CONSTRUCT CHANNEL IMPROVEMENTS AND CONNECTION AS DETAILED ON DWGS. C-10 AND C-11.
9. PERFORM FINAL GRADING OF PHASE 2 INCLUDING TOPSOIL AS DEFINED IN THE CONTRACT DOCUMENTS.
10. REMOVE TEMPORARY SEDIMENT CONTROLS AND STABILIZE PHASE 2 WITH PERMANENT AND TEMPORARY SEEDING AS NEEDED AND REQUIRED.



PROJECT TITLE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

SHEET TITLE

**CONSTRUCTION NOTES (2 OF 4)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

SCALE: NTS  
DATE: JULY 2015  
EXHIBIT NUMBER: 00G-05

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

**PHASE 3:**

1. PHASE 3 PARKING AND TRAILER LOCATION SHALL BE COORDINATED WITH PARKING LOT CONSTRUCTION.
2. INSTALL DEER FENCING. SEE DWG. L-01.
3. CONSTRUCT PARKING LOT AS SHOWN ON DWG C-16, C-17 AND DETAILED ON GL-03.
4. PLANT ENTIRE SITE PER WETLAND PLANTING PLAN ON DWG. L-01 AND THE CONTRACT SPECIFICATIONS. INSTALL GOOSE EXCLUSION FENCING AS WETLAND PLANTING PROGRESSES.
5. MAKE FINAL CONNECTION TO BEAR GUTTER CREEK AT NORTHERN EDGE OF SITE TO INTRODUCE STREAM FLOW TO THE NEWLY CONSTRUCTED STREAM CHANNEL. THE FOLLOWING SHALL BE DONE CONCURRENTLY:
  - a. INSTALL SANDBAG BLOCKAGE #3.
  - b. REMOVE SANDBAG BLOCKAGE #1.
  - c. INTRODUCE FLOW FROM CULVERT UNDER KAYSAL COURT ROAD.
6. CONSTRUCT CROSS VANE IN BEAR GUTTER CREEK DITCH:
  - a. INSTALL SANDBAG BLOCKAGE #4.
  - b. DEWATER DITCH AS NECESSARY.
  - c. CONSTRUCT CROSSVANE #10.
7. REMOVE SANDBAG BLOCKAGES #3 AND #4 TO INTRODUCE FLOW TO SOUTHERLY SECTION OF NEWLY CONSTRUCTED STREAM CHANNEL.
8. FILL IN BYPASS CHANNEL.
9. REMOVE TEMPORARY ACCESS TO GEORGE SMITH PLACE AND TEMPORARY STREAM CROSSING AND GRADE NORTHWESTERLY CORNER OF SITE TO PROPOSED GRADES SHOWN ON DWG. C-11 AND C-12.
10. SEED AND STABILIZE GRADED AREAS.
11. CONSTRUCT PERMANENT GRAVEL ACCESS DRIVE TO GEORGE SMITH PLACE.
12. ONCE SITE IS STABILIZED, REMOVE AND DISPOSE OF ALL WASTE AND EROSION & SEDIMENTATION CONTROL MEASURES OFF-SITE IN A LEGAL MANNER.
13. RESTORE ALL REMAINING DISTURBED AREAS USING APPROPRIATE NATIVE SEED MIX AND PLANTINGS AS SHOWN ON THE PLANTING PLAN, DWG L-01.

2. PERMANENT AND TEMPORARY SEEDING MIXTURES  
 PERMANENT EROSION CONTROL MEASURES INCLUDE INSTALLATION OF JUTE MESH EROSION CONTROL SEED MATTING ON ALL SLOPES 2:1 OR GREATER. PERMANENT AND TEMPORARY SEEDING, MULCH, FERTILIZER, SOIL AMENDMENTS, AND SLOPE STABILIZATION WILL BE USED ON SEEDED AREAS. LAND THAT IS STRIPPED OF VEGETATION WILL BE LEFT BARE FOR THE SHORTEST TIME POSSIBLE. ANY AREA THAT WILL REMAIN CLEARED, BUT NOT UNDER CONSTRUCTION FOR 24 DAYS OR LONGER, WILL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 14 DAYS OF LAST DISTURBANCE. TOPSOIL SHALL BE STOCKPILED, STABILIZED WITH TEMPORARY SEEDING, AND SAVED FOR REUSE ON THE SITE.

3. SLOPE STABILIZATION  
 ALL SLOPES SHALL BE STABILIZED TO MINIMIZE EROSION. SLOPES SHALL BE STABILIZED WITH TEMPORARY SEEDING MIXTURES AND STRAW MULCH. SLOPES IN EXCESS OF TWO HORIZONTAL TO ONE VERTICAL SHALL BE STABILIZED WITH JUTE NETTING AND HYDRO-SEED. EXISTING VEGETATION, WHICH IS NOT TO BE REMOVED, WILL ALSO ACT AS FILTER STRIPS TO PROTECT DOWN SLOPE AREAS. RUNOFF WILL BE DIVERTED FROM NEWLY GRADED AREAS TO PREVENT EROSION UNTIL A PERMANENT GROUND COVER HAS BEEN ESTABLISHED.

4. DUST CONTROL  
 MEASURES FOR DUST CONTROL DURING CONSTRUCTION SHALL BE IMPLEMENTED AS NEEDED (DAILY WATER SPRAYS WILL BE USED DURING DRY CONDITIONS). IN ADDITION TO WATER SPRAYS, TEMPORARY PLANTINGS WILL AID IN MINIMIZING DUST.

5. STABILIZED CONSTRUCTION ENTRANCE  
 TOWN, COUNTY AND STATE ROADWAYS WILL BE PROTECTED BY INSTALLATION OF CRUSHED STONE BLANKET FOR CLEANING CONSTRUCTION VEHICLE WHEELS. BLANKETS SHALL BE PLACED AT ANY INTERSECTION OF A CONSTRUCTION ROAD WITH A PAVED OR PUBLICLY OWNED ROAD. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED IN THE LOCATION AND BE OF SIZE AND TYPE SPECIFIED.

6. TEMPORARY DIVERSION SWALE  
 THE TEMPORARY DIVERSION SWALE WILL BE IMPLEMENTED TO DIVERT STORMWATER RUNOFF FROM THE EXISTING CATCH BASIN FROM ENTERING THE SITE PRIOR TO THE COMPLETION OF GRADING UNDER PHASE 1. THE TEMPORARY DIVERSION SWALE WILL DISCHARGE INTO A PROPOSED TEMPORARY SEDIMENTATION BASIN. THE SEDIMENTATION BASIN SHALL BE CONSTRUCTED FIRST. THE TEMPORARY DIVERSION SWALE SHALL BE REMOVED AFTER THE COMPLETION OF THE PHASE 1 GRADING AND THE INSTALLATION OF THE PROPOSED STORM PIPE, END SECTION, RIP-RAP APRON AND SETTLING BASIN. THE SWALE SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT.

7. TEMPORARY SEDIMENTATION BASIN  
 THE TEMPORARY SEDIMENTATION BASINS WILL BE IMPLEMENTED TO COLLECT STORMWATER RUNOFF THROUGHOUT THE SITE AS WELL AS FROM THE TEMPORARY DIVERSION SWALE PRIOR TO ENTERING THE EXISTING WETLAND AREAS ON-SITE. THE TEMPORARY SEDIMENTATION BASIN CONNECTED TO THE TEMPORARY DIVERSION SWALE SHALL BE REMOVED AFTER THE COMPLETION OF THE PHASE 1 GRADING AND THE INSTALLATION OF THE PROPOSED STORM PIPE, END SECTION, RIP-RAP APRON AND SETTLING BASIN. ALL THE TEMPORARY SEDIMENTATIONS BASINS SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT.

8. TREE PROTECTION  
 TREES TO BE PRESERVED WITHIN AREAS OF CONSTRUCTION SHALL BE PROTECTED. IN AREAS OF CONCENTRATED CONSTRUCTION ACTIVITY TEMPORARY FENCING WILL BE PLACED AROUND THE DRIP LINES. IN ALL OTHER AREAS, CONSTRUCTION WORKERS WILL BE DIRECTED TO AVOID THE STORING OF EQUIPMENT OR SOIL UNDER TREES TO BE PRESERVED, IN ORDER TO PREVENT SOIL COMPACTION.

9. INSPECTION  
 THE GENERAL CONTRACTOR WILL ENLIST A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) TO ASSIST IN PREPARATION OF THE ESC PLAN AND TO CONDUCT WEEKLY INSPECTIONS.

**B. EROSION CONTROL SEQUENCE:**

PRIOR TO ANY SITE DISTURBANCE, THE CONTRACTOR SHOULD THOROUGHLY REVIEW AND FAMILIARIZE THE APPROVED EROSION CONTROL PLAN. THE INSTALLATION OF EROSION CONTROL MEASURES SHOULD BEGIN WITH THE MOST DOWNSTREAM DEVICE, THEN WORKING UPSTREAM. WHEN INSTALLING EROSION CONTROL MEASURES, THE SEQUENCE SHOULD GENERALLY BE AS FOLLOWS:

1. PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, THE LIMITS OF CLEARING AND GRADING SHALL BE CLEARLY MARKED. PERIMETER SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCES SHALL BE PUT IN PLACE.
2. UPON COMPLETION OF CLEARING AND GRUBBING ACTIVITIES, TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO BE DISTURBED AND STOCKPILED. STOCKPILED TOPSOIL SHALL BE STABILIZED BY TEMPORARY SEEDING AND SURROUNDED WITH A PERIMETER SILT FENCE, WITH HAYBALE ACCESS POINTS.
3. ANY AREAS NOT REQUIRING FURTHER EARTHWORK SHALL BE FINE GRADED, TOP SOILED AND STABILIZED AS EARLY AS POSSIBLE.

**PARKING LOT CONSTRUCTION (AFTER PHASE 3 STARTS AND CONCURRENT WITH PHASE 3):**

1. REMOVE ALL ROCK, DEBRIS, AND VEGETATION.
2. COORDINATE WITH UTILITY FOR RELOCATION OF UTILITY POLE GUY WIRES BY THE UTILITY (CON EDISON).
3. PERFORM ROUGH GRADING AND PREPARE SOIL SUBGRADE FOR PARKING LOT. CONTRACTOR IS REQUIRED TO DEMOBILIZE ITS TRAILER PRIOR TO COMMENCEMENT OF THIS WORK.
4. PERFORM EXCAVATION AND GRADING FOR CONSTRUCTION OF BIO-RETENTION AREA.
5. CONSTRUCT 6-INCH CAST IN PLACE CONCRETE CURB AND CURB CUTS AROUND PERIMETER OF PARKING LOT.
6. CONSTRUCT FLUSH CONCRETE CURB ON THE INTERIOR OF THE PARKING LOT.
7. INSTALL CAST IN PLACE CELLULAR PAVEMENT SYSTEM BETWEEN THE INTERIOR FLUSH CONCRETE CURB AND THE EXTERIOR 6-INCH CONCRETE CURB.
8. INSTALL CONDUIT FOR STREET LIGHTING.
9. INSTALL CAST IN PLACE CONCRETE CURBING FOR PEDESTRIAN RAMPS.
10. SAWCUT EXISTING PAVEMENT ALONG OLD ROUTE 22.
11. INSTALL BELGIAN BLOCK CURBING ALONG OLD ROUTE 22 AND FOR PEDESTRIAN RAMPS. INSTALL FLUSH BELGIAN BLOCK CURB AT PARKING LOT ENTRANCE AND EXIT.
12. INSTALL PRECAST POROUS CONCRETE PANELS IN PARKING LOT BETWEEN FLUSH CONCRETE CURB AND FOR SIDEWALKS ALONG OLD ROUTE 22.
13. INSTALL ASPHALT PAVEMENT FOR PARKING LOT APRON AND BETWEEN SAW CUT LINE AND BELGIAN BLOCK CURB ON OLD ROUTE 22.
14. INSTALL LIGHT POLE FOUNDATIONS AND STREET LIGHTING.
15. INSTALL PARKING LOT SIGNAGE AND PAVEMENT MARKINGS.
16. REMOVE AND DISPOSE OF ALL WASTE OFF-SITE IN A LEGAL MANNER.
17. PREPARE SITE UNTIL FINAL WORK ITEMS CAN COMMENCE DURING PLANTING SEASON.

**EROSION AND SEDIMENT CONTROL NOTES:**

FULL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INCORPORATED INTO THE PROJECT CONSTRUCTION. THESE PRACTICES SHALL BE IN ACCORDANCE WITH THOSE SET FORTH IN THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PUBLICATION ENTITLED "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL".

**A. EROSION CONTROL MEASURES:**

THE FOLLOWING EROSION CONTROL MEASURES SHALL BE INCORPORATED TO MINIMIZE EROSION POTENTIAL:

1. FILTER FABRIC SILT FENCE  
 SILT FENCE SHALL BE USED TO CONTROL EROSION FROM SHEET FLOW ON SLOPES NOT TO EXCEED TWO HORIZONTAL TO ONE VERTICAL. CONCENTRATED FLOWS SHALL NOT BE DIRECTED TOWARD SILT FENCE AND SPACING SHALL VARY FROM 50' TO 200' DEPENDING ON SLOPE STEEPNESS.



<b>PROJECT TITLE</b>	CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE
<b>SHEET TITLE</b>	<b>CONSTRUCTION NOTES (3 OF 4)</b>

DESIGNED	J.R.
DRAWN	S.C./J.W.
CHECKED	S.D.
PROJ. DIR.	M.P.
PROJ. MNGR.	L.P.

<b>SCALE:</b>	NTS
<b>DATE:</b>	JULY 2015
<b>EXHIBIT NUMBER:</b>	00G-06

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

C. MAINTENANCE OF EROSION CONTROL DEVICES:

ALL EROSION CONTROL DEVICES WILL BE MONITORED, CLEANED, AND RESTORED THROUGHOUT CONSTRUCTION TO MAINTAIN THEIR EFFECTIVENESS.

1. SPECIFIC MAINTENANCE SHALL INCLUDE:

- a. MAINTAINING SEEDED AREAS INCLUDING RESEEDING WEAK AREAS, RE-GRADING WASH OUTS AND FERTILIZING AS NEEDED.
- b. MAINTAINING MULCHED AREAS INCLUDING REPLACEMENT OF DISTURBED MULCHED AREAS.
- c. ALL DEVICES SHALL BE INSPECTED ONCE PER WEEK AND REPAIRED AS NEEDED.
- d. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN BULGES START TO OCCUR AND FENCING RESET TO ORIGINAL CONDITION.
- e. CONSTRUCTION EQUIPMENT SHALL NOT UNNECESSARILY CROSS DRAINAGE SWALES. CROSSING OF DRAINAGE CHANNELS SHALL BE BY MEANS OF BRIDGES, CULVERTS OR OTHER APPROVED METHODS.
- f. CULVERTS SHALL BE MAINTAINED FREE OF SILT OR DEBRIS.
- g. TREE PROTECTION FENCING TO BE INSPECTED DAILY DURING GRADING AND FINISH GRADING OPERATIONS.
- h. DAILY WATER SPRAYS WILL BE USED AS NEEDED OR AS DIRECTED BY THE CONSULTING ENGINEER OR NYCDEP REPRESENTATIVES. WATER SPRAYS WILL BE USED TO PREVENT POLLUTION FROM DUST UNTIL CONSTRUCTION IS COMPLETED AND SOIL COVER IS ESTABLISHED.

2. THE CONTRACTOR SHALL BE THE RESPONSIBLE PARTY FOR MAINTAINING THE EROSION AND SEDIMENT CONTROL PLAN.

D. REMOVAL OF EROSION CONTROL DEVICES:

NO EROSION CONTROL STRUCTURES SHALL BE REMOVED UNTIL ALL WORK UPSTREAM HAS BEEN COMPLETED, STABILIZED, AND APPROVED BY THE CONSULTING ENGINEER AND NYCDEP REPRESENTATIVES.

1. THE REMOVAL OF EROSION CONTROL DEVICES SHOULD GENERALLY BE AS FOLLOWS:

- a. AFTER CONSTRUCTION, THE TEMPORARY EROSION CONTROL STRUCTURES ARE TO BE REMOVED IN REVERSE ORDER WITH THE MOST UPSTREAM STRUCTURE REMOVED FIRST AND THENCE PROCEEDING DOWNSTREAM.
- b. ALL TREE PROTECTION FENCING SHALL BE REMOVED AFTER ADJACENT AREAS HAVE BEEN GRADED, TOP SOILED, SEEDED, AND VEGETATION HAS BEEN ESTABLISHED.
- c. ANY WASHOUTS SHALL BE RE-TOP SOILED AND SEEDED.

SPECIFICATIONS FOR SEEDING, MULCHING, AND NETTING:

STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA SEEDING, MULCHING AND NETTING. (NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL)

A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER SEC., SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE WATERWAY DURING THE ESTABLISHMENT OF THE VEGETATION.

B. FOR DESIGN VELOCITIES OF MORE THAN 3.5 FT. PER SEC., THE WATERWAY SHALL BE STABILIZED WITH SOD, WITH SEEDING PROTECTED BY JUTE MESH OR WITH SEEDING AND MULCHING, AND SHALL INCLUDE TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.

NOTES:

1. PROVIDE 8" DEPTH, 12' WIDE MINIMUM OF GRAVEL FOR ACCESS DRIVE WHERE EXISTING GRAVEL SUBBASE DOES NOT OCCUR. USE #3 STONE AGGREGATE FOR ACCESS DRIVE.
2. RIP RAP APRONS #1 AND #2 SHALL CONSIST OF #50 STONE, SIZE = 6" IN ANY DIRECTION. THEY ARE TO BE PLACED ACCORDING TO THE FOLLOWING GRADATION:
 

RIP RAP ROCK SIZE	PERCENT OF RIP RAP SMALLER THAN
1.5D <sub>50</sub> -1.7D <sub>50</sub>	100
1.2D <sub>50</sub> -1.4D <sub>50</sub>	85
1.0D <sub>50</sub> -1.15D <sub>50</sub>	50
0.4D <sub>50</sub> -0.6D <sub>50</sub>	15
3. CONTRACTOR SHALL VERIFY THE EXISTING INVERT ELEVATION (AT THE EXISTING CATCH BASIN TO REMAIN) OF THE EXISTING STORM PIPE PRIOR TO INSTALLATION OF THE PROPOSED 18" HDPE STORM PIPE.
4. HIGH WATER MARK (BANKFUL ELEVATION) IS INDICATED ON DRAWINGS AS TOP OF BANK (TB).
5. DEMOLITION OR GRADING NEAR MONITORING WELLS SHOULD BE CONDUCTED WITH HAND TOOLS AND CARE SHOULD BE TAKEN TO ENSURE WELL CASINGS ARE NOT DAMAGED. ANY DAMAGE TO MONITORING WELLS SHOULD BE REPORTED TO THE ENGINEER AND REPAIRED IN A TIMELY MANNER.
6. CONTRACTOR TO FOLLOW FINISHED GRADES AND TO BE RESPONSIBLE FOR OVEREXCAVATION IN AREAS WHERE 6" TOPSOIL IS SPECIFIED.
7. 6" TOPSOIL REQUIRED EVERYWHERE EXCEPT FOR STREAMBED.
8. SEE SHEET GC-02 FOR CROSS SECTIONS.
9. CASING AND COVERS FOR REMAINING MONITORING WELLS SHALL BE EXTENDED OR CUT TO MEET FINAL GRADE.

SITE DEMOLITION NOTES:

1. DEMOLITION OF TEMPORARY STRUCTURES IS TO OCCUR AS SUGGESTED IN THE CONSTRUCTION SEQUENCING PLAN FOR PHASE 1, PHASE 2, AND PHASE 3 IN DWG C-03, C-04, C-05, OR PER REVISED SEQUENCE DEVELOPED BY THE CONTRACTOR. TEMPORARY STRUCTURES ARE SHOWN IN DWGS. C-08, C-09, AND C-10.
2. CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-962-7892 AT LEAST TWO FULL WORKING DAYS PRIOR TO COMMENCEMENT OF ANY WORK IN ACCORDANCE WITH UFPO CODE RULE 53, 16 NYCRR PART 753.
3. CONTRACTOR SHALL NOTIFY THE TOWN OF NORTH CASTLE 48 HOURS PRIOR TO INITIALIZATION OF ANY WORK ON THE SITE.
4. ANY ITEM THAT MAY CONFLICT WITH THE PROPOSED MITIGATION PLAN AND IS NOT IDENTIFIED ON THIS PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER AS SOON AS POSSIBLE.
5. ADDITIONAL UNDERGROUND PIPES MAY BE PRESENT WITHIN THE LIMITS OF THE PROPOSED WORK. CONTRACTORS SHALL CONTACT ANY AND ALL PERSONNEL RESPONSIBLE FOR DETERMINING THE LOCATIONS. SEE NOTE 4 FOR FURTHER INFORMATION.
6. EXISTING BOWLING ALLEY BUILDING FOUNDATION SHOWN HEREON SERVED BY UNDERGROUND UTILITIES.
7. ALL DEMOLITION DEBRIS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY, AND STATE RULES AND REGULATIONS.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, OFFSETS AND CLEARANCES PRIOR TO PERFORMANCE OF THE WORK. DISCREPANCIES SHALL BE COMMUNICATED IMMEDIATELY TO THE PROJECT ENGINEER OR THE DESIGNATED ON-SITE REPRESENTATIVE.
9. UNLESS OTHERWISE DIRECTED BY THESE DRAWINGS, OR ALLOWED BY AUTHORITIES HAVING JURISDICTION, ALL EXISTING FACILITIES NOT NOTED FOR REMOVAL SHALL BE LOCATED, MARKED AND PROTECTED DURING THE DURATION OF DEMOLITION AND CONSTRUCTION.
10. WHEN DISTURBED, EXISTING FACILITIES SHALL BE REPAIRED OR REPLACED IN KIND AND IN ACCORDANCE WITH THE REQUIREMENTS OR THE DIRECTION OF THE AUTHORITY HAVING JURISDICTION. ASSOCIATED COSTS SHALL BE PAID BY THE CONTRACTOR.
11. EXISTING UTILITIES TO REMAIN, UNLESS OTHERWISE NOTED, FIELD MONITORING WELLS AND PIEZOMETERS SHALL BE LOCATED, MARKED AND PROTECTED DURING THE DURATION OF CONSTRUCTION, UNLESS OTHERWISE SPECIFIED.
12. CONTRACTOR SHALL CONDUCT ACTIVITIES ASSOCIATED WITH THIS WORK IN A MANNER CONSISTENT WITH ANY AND ALL REQUIREMENTS OF THE SITE OWNER/OPERATOR INCLUDING, BUT NOT LIMITED TO, SITE USE, PROTECTION OF PERSONS AND PROPERTY, WASTE CONTAINMENT, SITE SECURITY, AND NOTIFICATION.
13. ANY POLE AND ANCHOR REMOVAL OR RELOCATION REQUIRED FOR CONSTRUCTION SHALL BE COORDINATED WITH CON EDISON GAS AND ELECTRIC CORPORATION AND VERIZON, OR ANY OTHER UTILITIES OR SERVICES LOCATED ON POLES.
14. CONTRACTOR SHALL DISCONNECT ALL SERVICES AND UTILITIES TO THE EXISTING BOWLING ALLEY PRIOR TO DEMOLITION, INCLUDING DISCONNECTING SANITARY SYSTEM FROM THE ON-SITE POTABLE WATER. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER AND RESPECTIVE UTILITY COMPANIES.
15. EXISTING ON-SITE SEPTIC TANK(S), PUMP CHAMBER, DOSING CHAMBER, DISTRIBUTION BOX, ABSORPTION FIELDS AND ALL ASSOCIATED PIPING FOR THE BOWLING ALLEY BUILDING AND WASTEWATER COLLECTION SYSTEM SHALL BE REMOVED IN ACCORDANCE WITH LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS. EXISTING SEPTIC TANKS SHALL BE PUMPED OUT AND CLEANED BY A NYSDEC CERTIFIED HAULER. MATERIAL REMOVED FROM THE SEPTIC TANKS SHALL BE DISPOSED OF AT AN APPROVED FACILITY. ALL EXCAVATED MATERIAL CONTAMINATED WITH WASTEWATER MUST BE REMOVED, HAULED AND DISPOSED OF IN A PROPER DISPOSAL FACILITY WHICH ACCEPTS HAZARDOUS WASTE IN CONFORMANCE WITH NYSDEC REGULATIONS.
16. ANY POTABLE WELLS ENCOUNTERED ON THE PROPERTIES SHALL BE DECOMMISSIONED BY REMOVING PUMPS AND OTHER EQUIPMENT AND SEALING THE WELLS IN ACCORDANCE WITH AWWA A100, LATEST EDITION AND WITH NYSDEC WATER SUPPLY WELL DECOMMISSIONING RECOMMENDATIONS (AVAILABLE AT THE NYSDEC WEBSITE). CUT AND CAP WELL A MINIMUM OF 2 FEET BELOW FINISHED GRADE. WELL ABANDONMENT PERMITS FOR THE SITE SHALL BE OBTAINED FROM THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH AND NYSDEC PRIOR TO COMMENCEMENT OF ABANDONMENT WORK. A NYS LICENSED PROFESSIONAL ENGINEER MUST CERTIFY THAT THE WELL HAS BEEN PROPERLY ABANDONED.
17. ALL STRUCTURES ASSOCIATED WITH THE BOWLING ALLEY INCLUDING, BUT NOT LIMITED TO BUILDING, ASPHALT PAVEMENT, CURBING, SLAB AND FOUNDATIONS SHALL BE DEMOLISHED AND REMOVED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, COUNTY AND STATE GUIDELINES AND REGULATIONS.
18. EXISTING WATER AND GAS SERVICES FOR THE BOWLING ALLEY BUILDING SHALL BE CUT, CAPPED AND REMOVED TO THE MAIN.
19. THE BUILDING HAS BEEN DEMOLISHED BY OTHERS. THE BUILDING DEMOLITION CONTRACT ALSO INCLUDED THE REMOVAL OF THE EXISTING NINE HONEY LOCUST TREES (NO. #8- #16). THE CONTRACTOR WAS REQUIRED TO CUT THE TREES AT THE BASE, REMOVE THE LIMBS FLUSH WITH THE TRUNK, AND STORE THE TRUNKS ON-SITE FOR USE IN THIS CONTRACT TO CONSTRUCT LOG WEIRS AND LOG CROSS VANES. MINIMUM TRUNK DIAMETER FOR REUSE ON THIS PROJECT IS AS DEFINED IN THE SPECIFICATIONS.
20. SELECTED TREES, AS SHOWN IN THE CONTRACT DRAWING, SHALL BE REMOVED IN ACCORDANCE WITH ALL THE REQUIRED PERMITS AND REGULATIONS. THE CONTRACTOR SHALL SUBMIT A TREE AND SHRUB REMOVAL SCHEDULE TO THE NYCDEP FOR APPROVAL PRIOR TO CONSTRUCTION COMMENCEMENT IF CONDITIONS ARE DIFFERENT FROM EXISTING, AS SHOWN ON THE CONTRACT DRAWINGS, AT THE TIME OF CONSTRUCTION COMMENCEMENT. REMOVED TREES AND OTHER ITEMS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
21. SYSTEM OF EXISTING CATCH BASINS AND PIPES ALONG THE EAST AND SOUTH SIDE OF THE EXISTING BOWLING ALLEY BUILDING ARE TO REMAIN INTACT & UNDAMAGED.
22. TREES #1, #2 AND #3 TO BE REMOVED SHALL HAVE STUMPS GROUND TO A DEPTH OF 2 FEET, AND HOLES BACKFILLED WITH CLEAN TOPSOIL. DO NOT RIP OR USE EQUIPMENT TO EXCAVATE STUMPS FROM THE GROUND.
23. DEMOLITION OR GRADING NEAR MONITORING WELLS SHOULD BE CONDUCTED WITH HAND TOOLS AND CARE SHOULD BE TAKEN TO ENSURE WELL CASINGS ARE NOT DAMAGED. ANY DAMAGE TO MONITORING WELLS SHOULD BE REPORTED TO THE ENGINEER AND REPAIRED IN A TIMELY MANNER.
24. EXISTING SEWER LINES LOCATED WITHIN WETLAND MITIGATION SITE, BUT BEYOND THE SEWER EASEMENT, TO BE ABANDONED. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER PRIOR TO ABANDONMENT.
25. CONTRACTOR SHALL LOCATE, CUT AND PERMANENTLY CAP EXISTING WATER AND SEWER SERVICE LINES INTO THE SITE, 5 FEET WEST OF EXISTING VALVES.
26. DO NOT REMOVE TREES FROM AREA DESIGNATED UPLAND MEADOW/FOREST THAT ARE WITHIN THE CLEARING LIMITS.



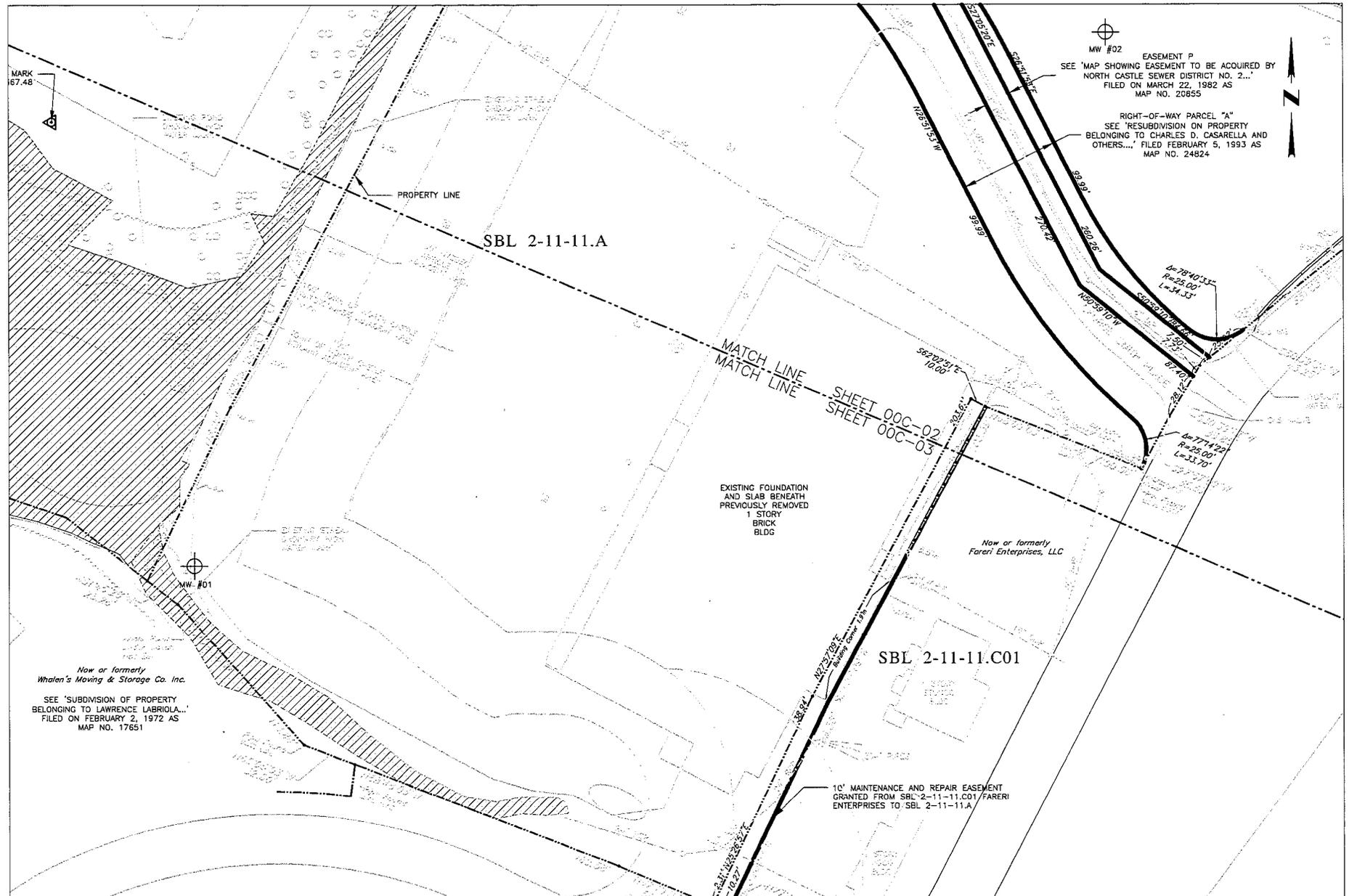
**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-51B, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**CONSTRUCTION NOTES (4 OF 4)**

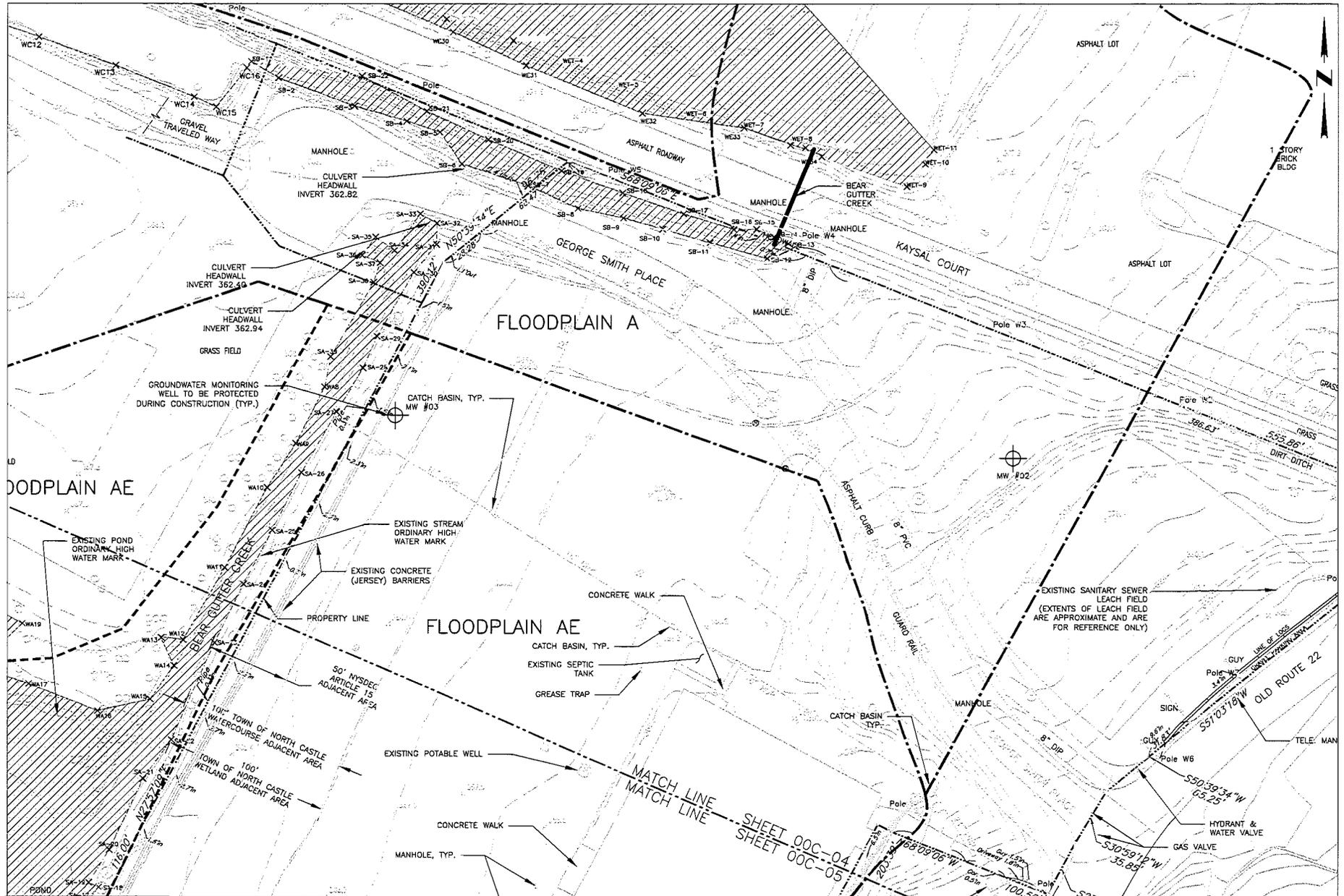
DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:** NTS  
**DATE:** JULY 2015  
**EXHIBIT NUMBER:** 00G-07





		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80'  <b>DATE:</b> JULY 2015  <b>EXHIBIT NUMBER:</b> OOC-03
		<b>SHEET TITLE</b> <b>EXISTING CONDITIONS PLAN (2 OF 4)</b>		



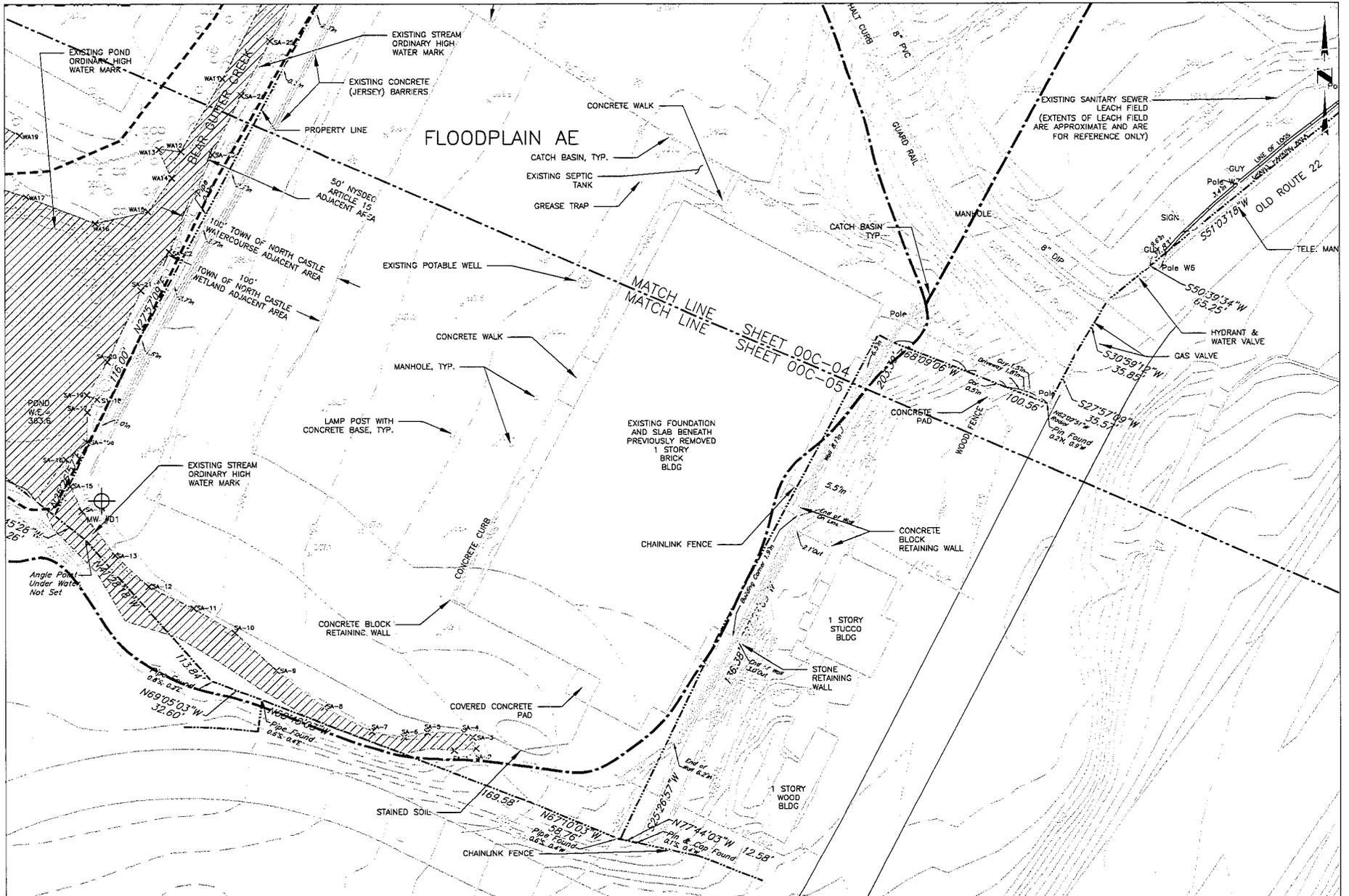
**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-51B, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**

**EXISTING CONDITIONS PLAN (3 OF 4)**

DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:** 1"=80'  
**DATE:** JULY 2015  
**EXHIBIT NUMBER:** 00C-04



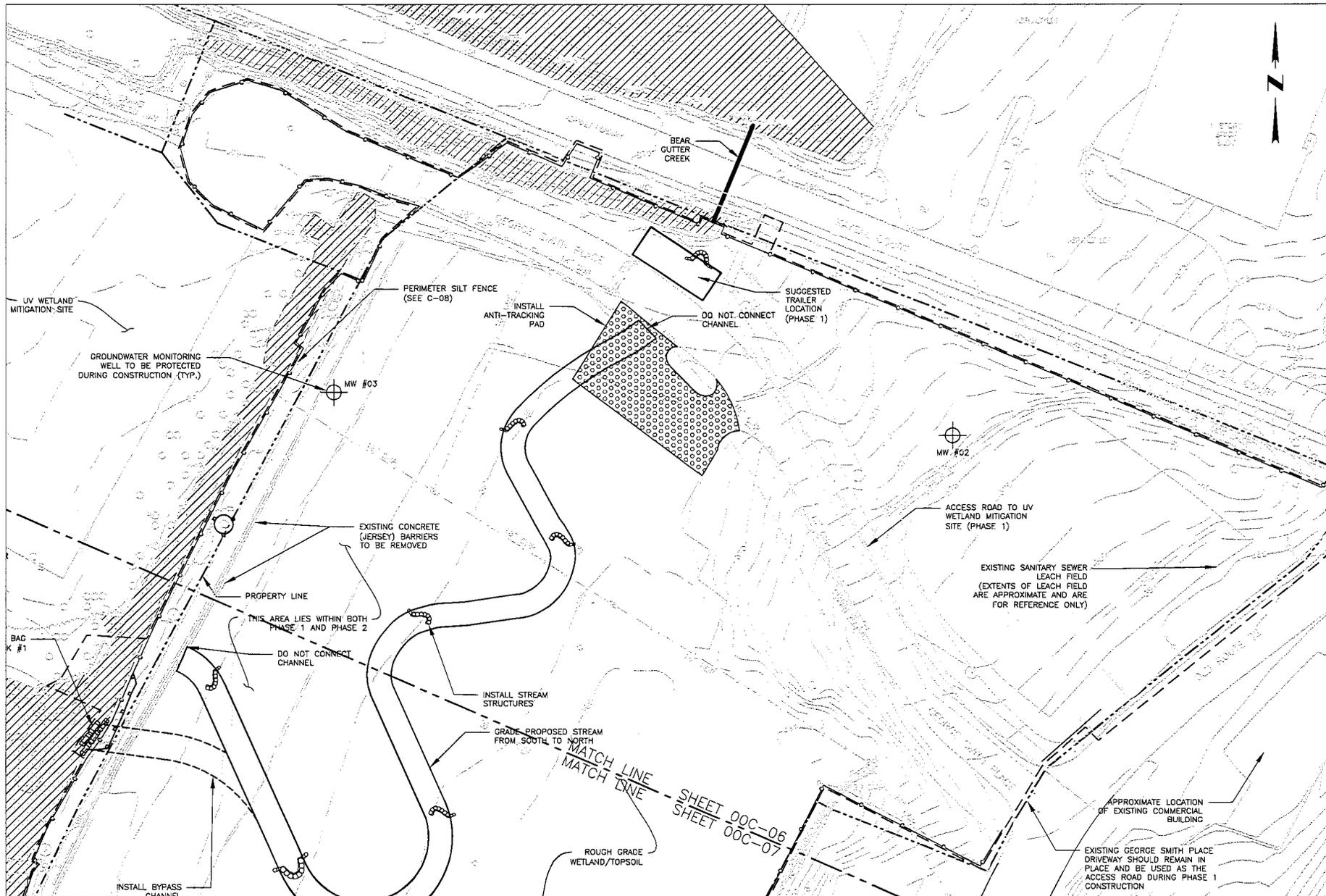
**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CR0-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**EXISTING CONDITIONS PLAN (4 OF 4)**

DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:** 1"=80'  
**DATE:** JULY 2015  
**EXHIBIT NUMBER:** 00C-05

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**CONSTRUCTION SEQUENCING PHASE 1 (1 OF 2)**

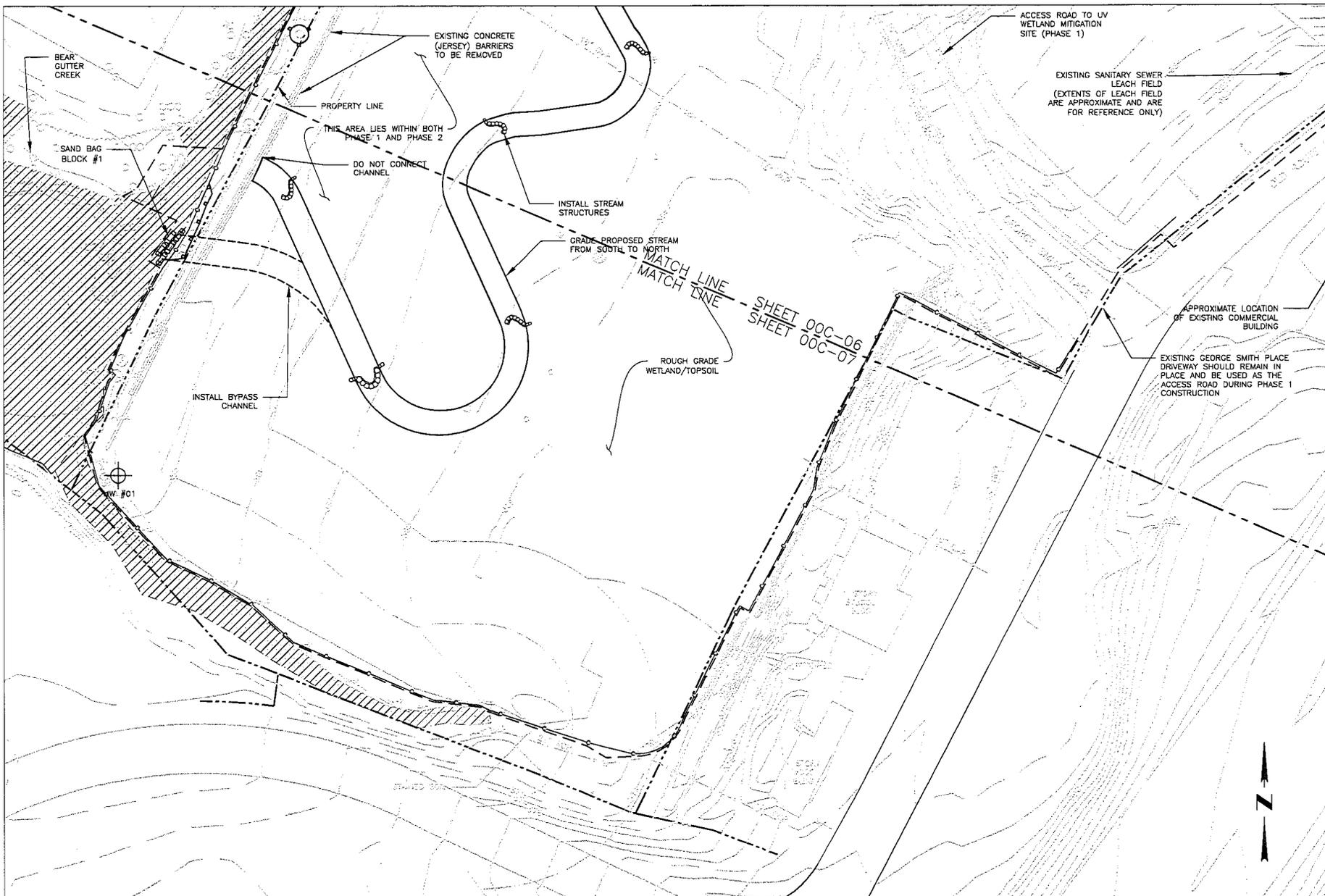
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 PROJ. MNGR. L.P.

**SCALE:**  
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**DATE:**  
 JULY 2015

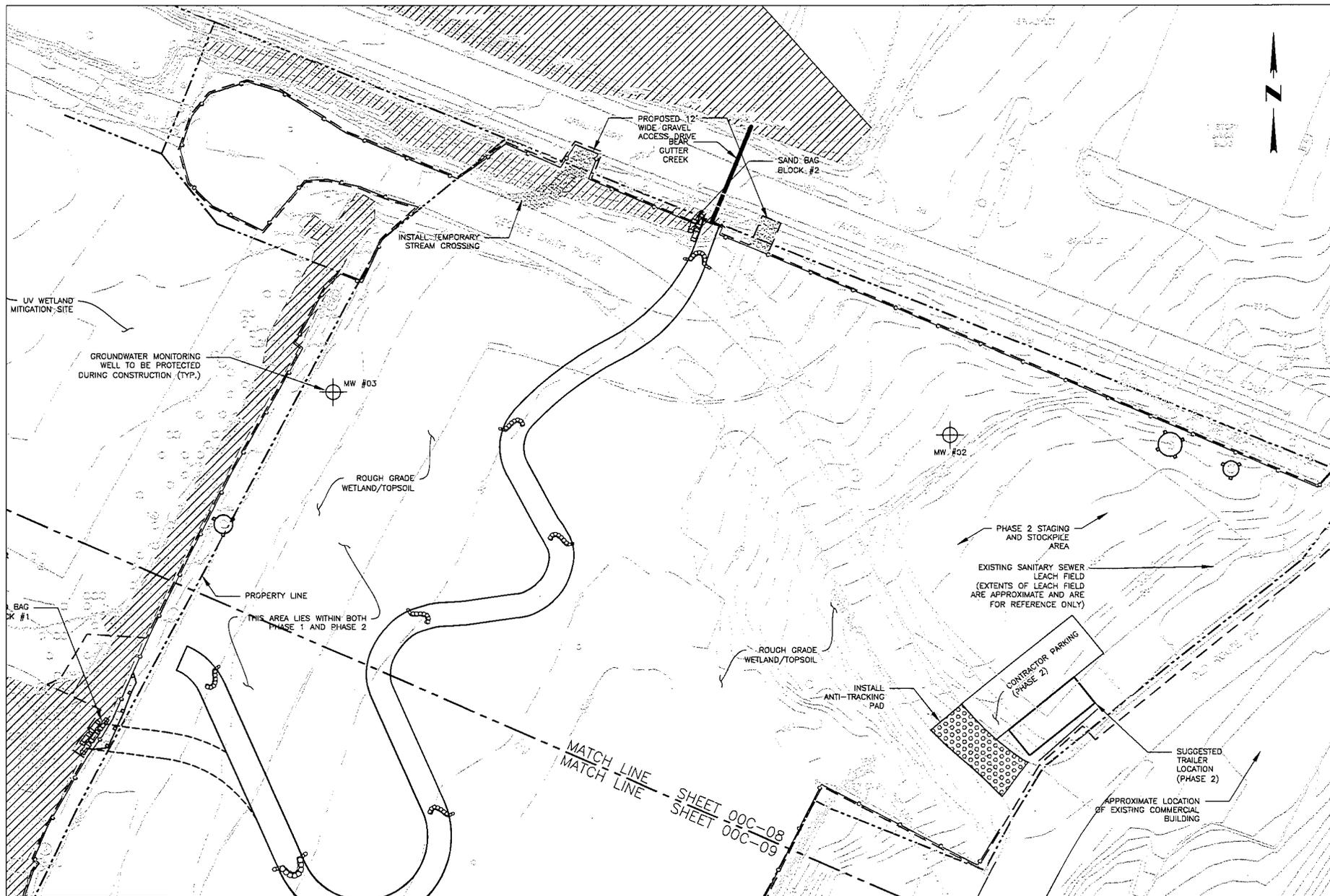
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APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



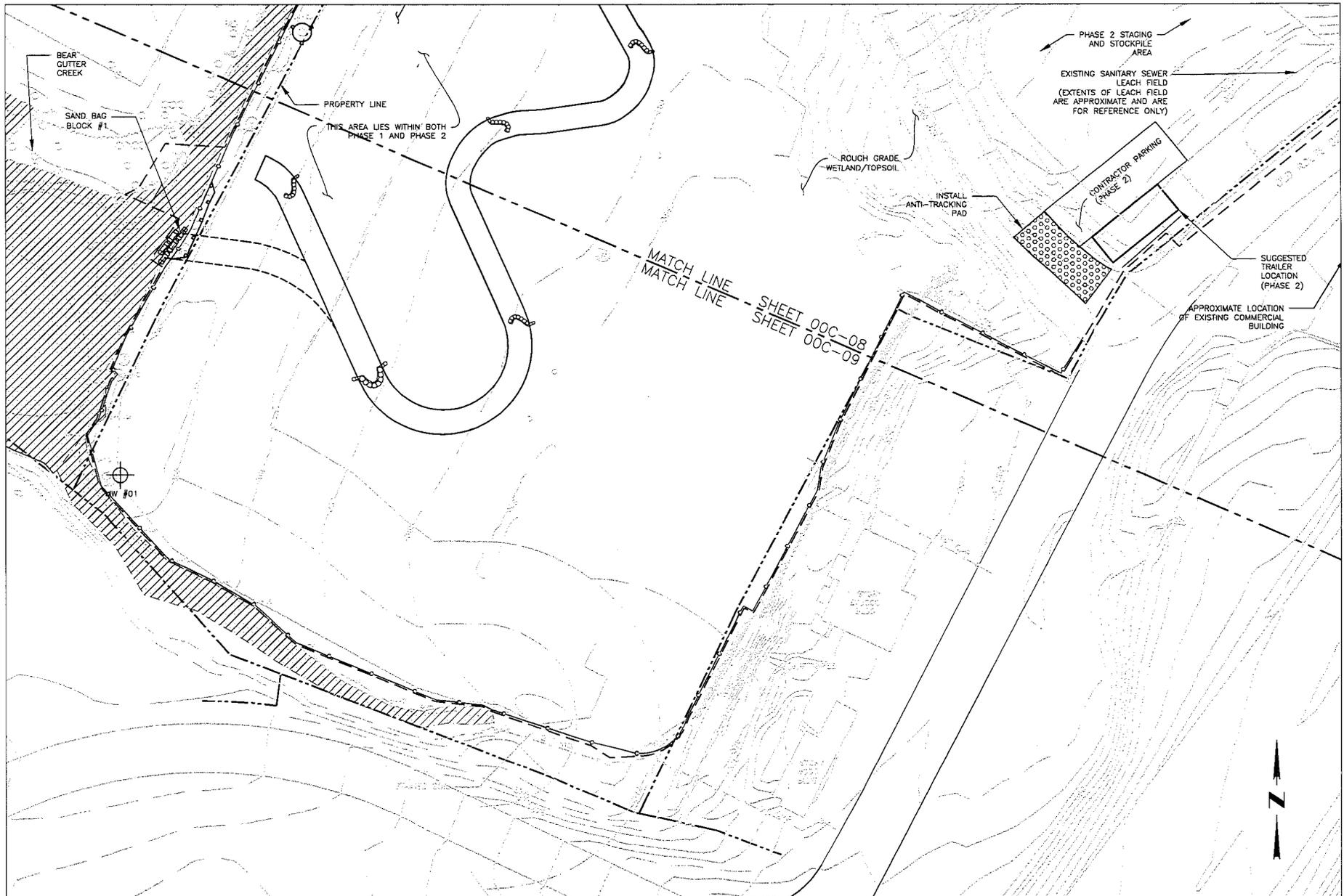
		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-07
		<b>SHEET TITLE</b> <b>CONSTRUCTION SEQUENCING PHASE 1 (2 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



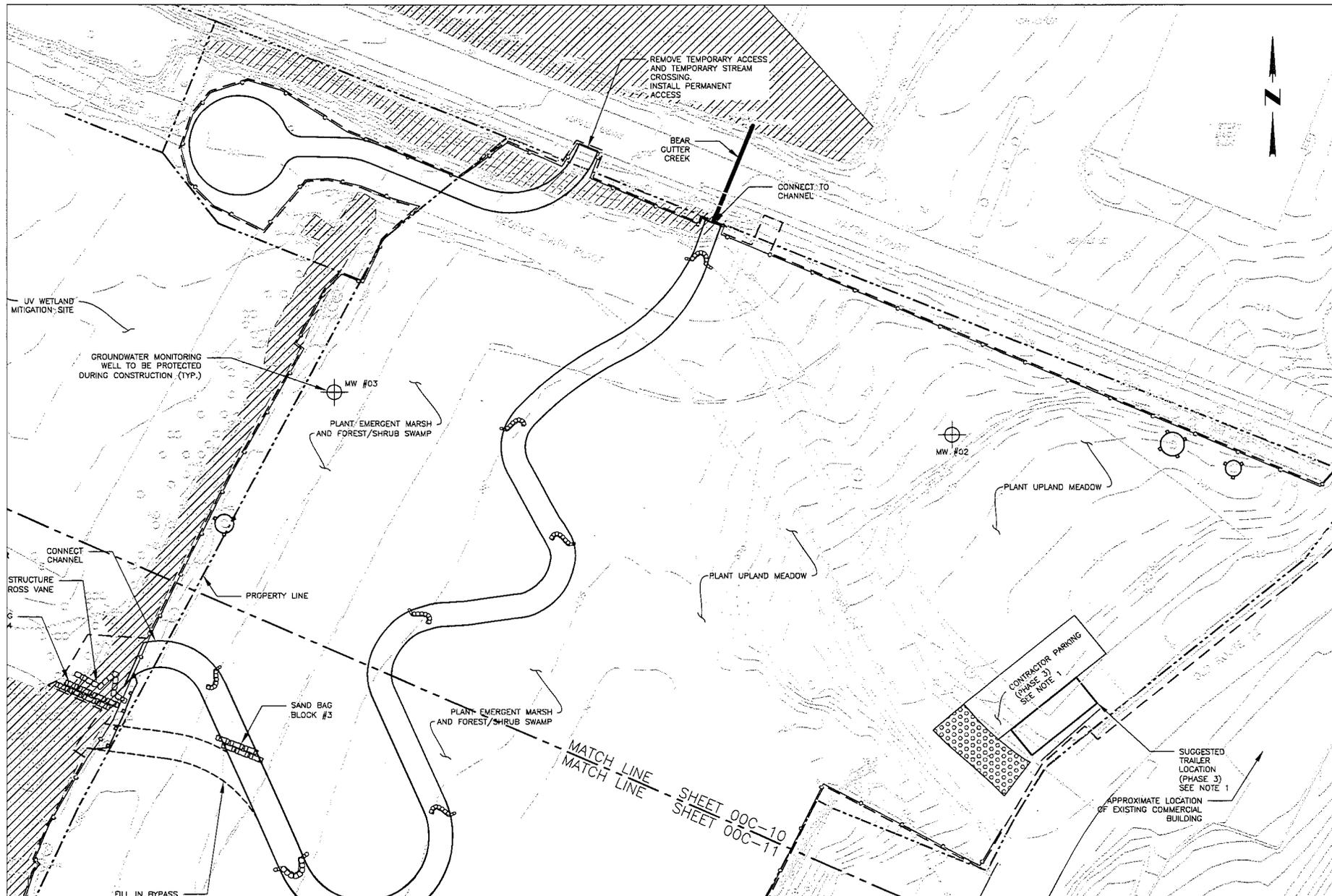
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		<b>SHEET TITLE</b> <b>CONSTRUCTION SEQUENCING PHASE 2 (1 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



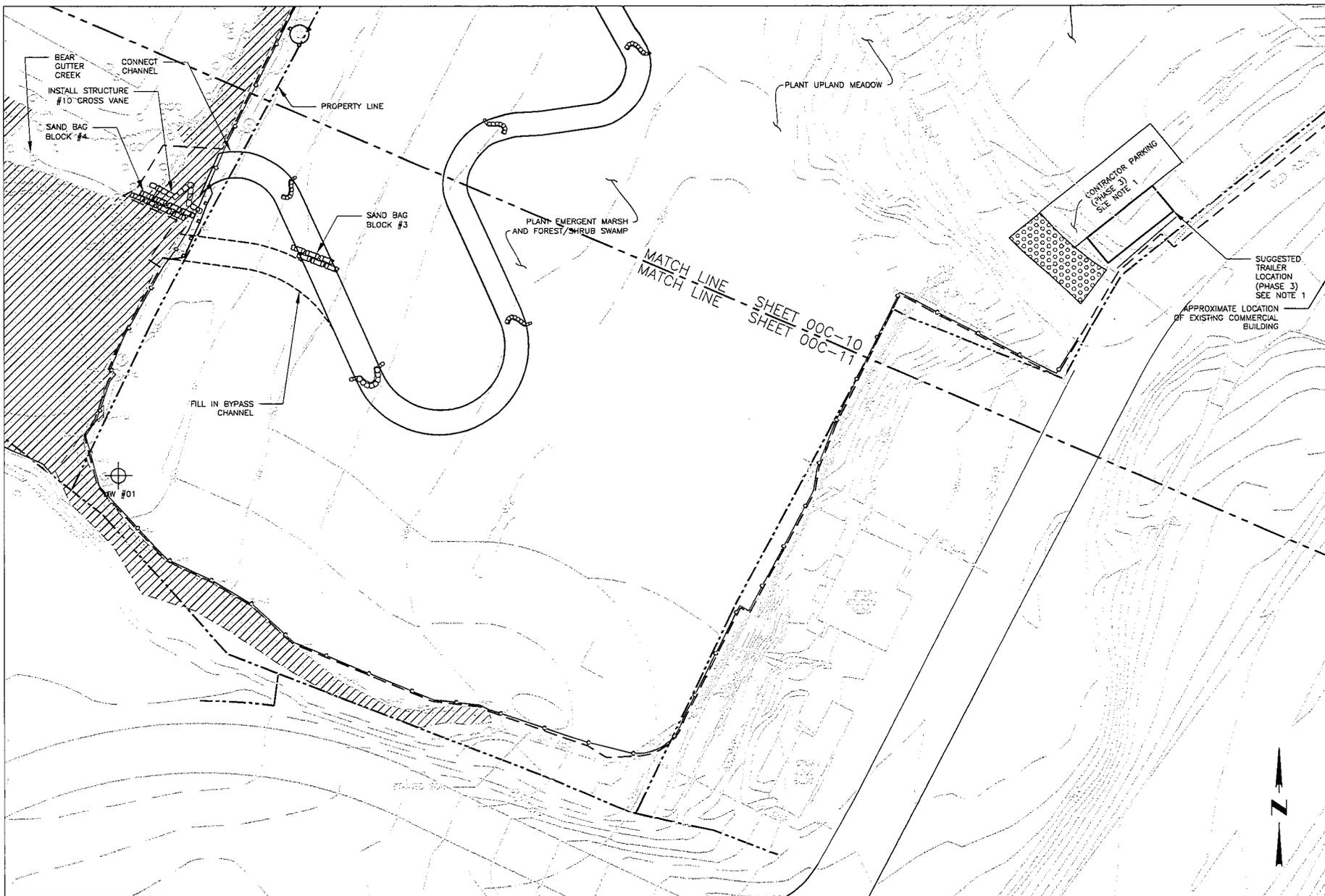
		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>    J.R.    </u> DRAWN <u>    S.C./J.W.    </u> CHECKED <u>    S.D.    </u> PROJ. DIR. <u>    M.P.    </u> PROJ. MNGR. <u>    L.P.    </u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-09
		<b>SHEET TITLE</b> <b>CONSTRUCTION SEQUENCING PHASE 2 (2 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



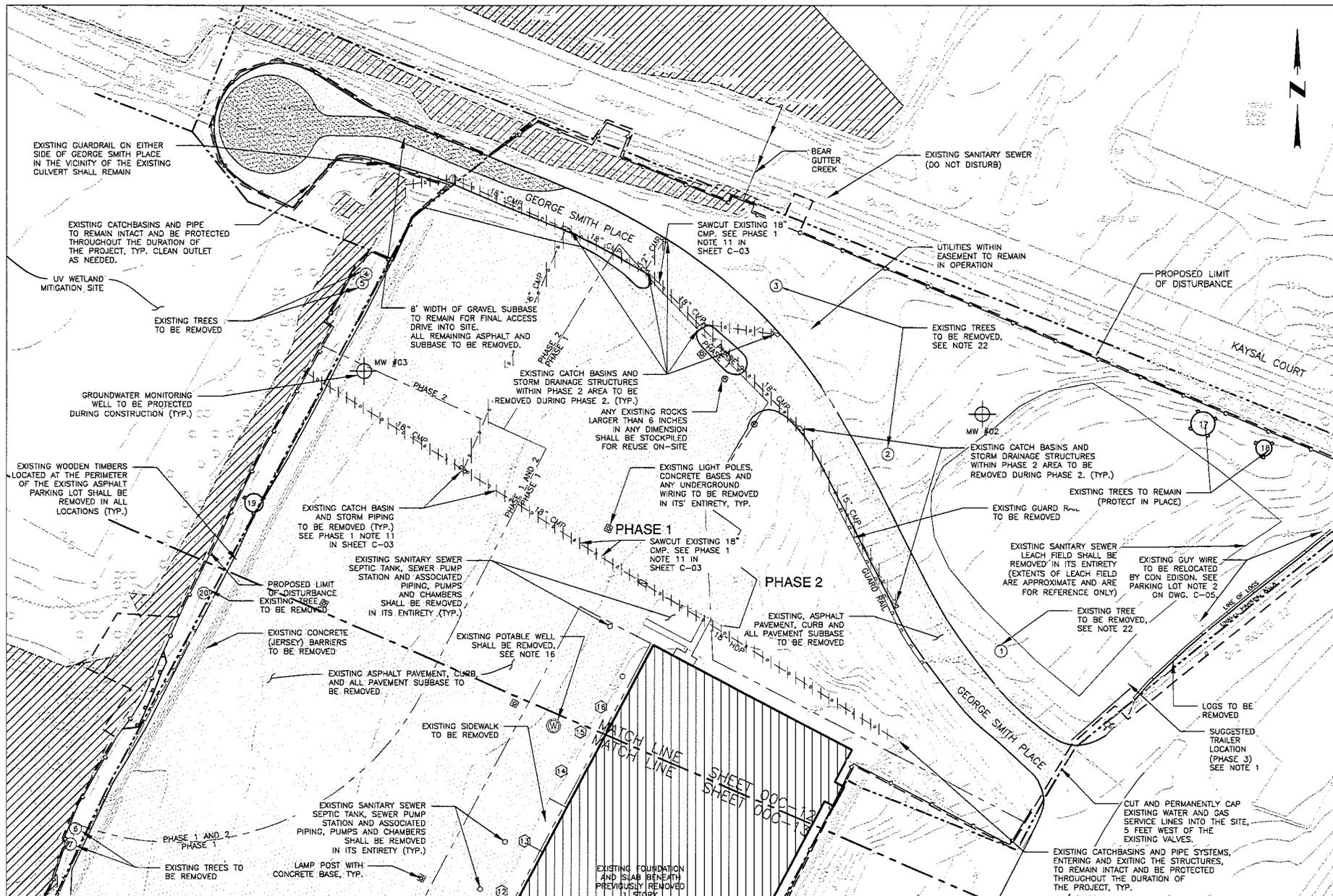
		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-10
		<b>SHEET TITLE</b> <b>CONSTRUCTION SEQUENCING PHASE 3 (1 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-11
		<b>SHEET TITLE</b> <b>CONSTRUCTION SEQUENCING PHASE 3 (2 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**SITE DEMOLITION PLAN (1 OF 2)**

DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

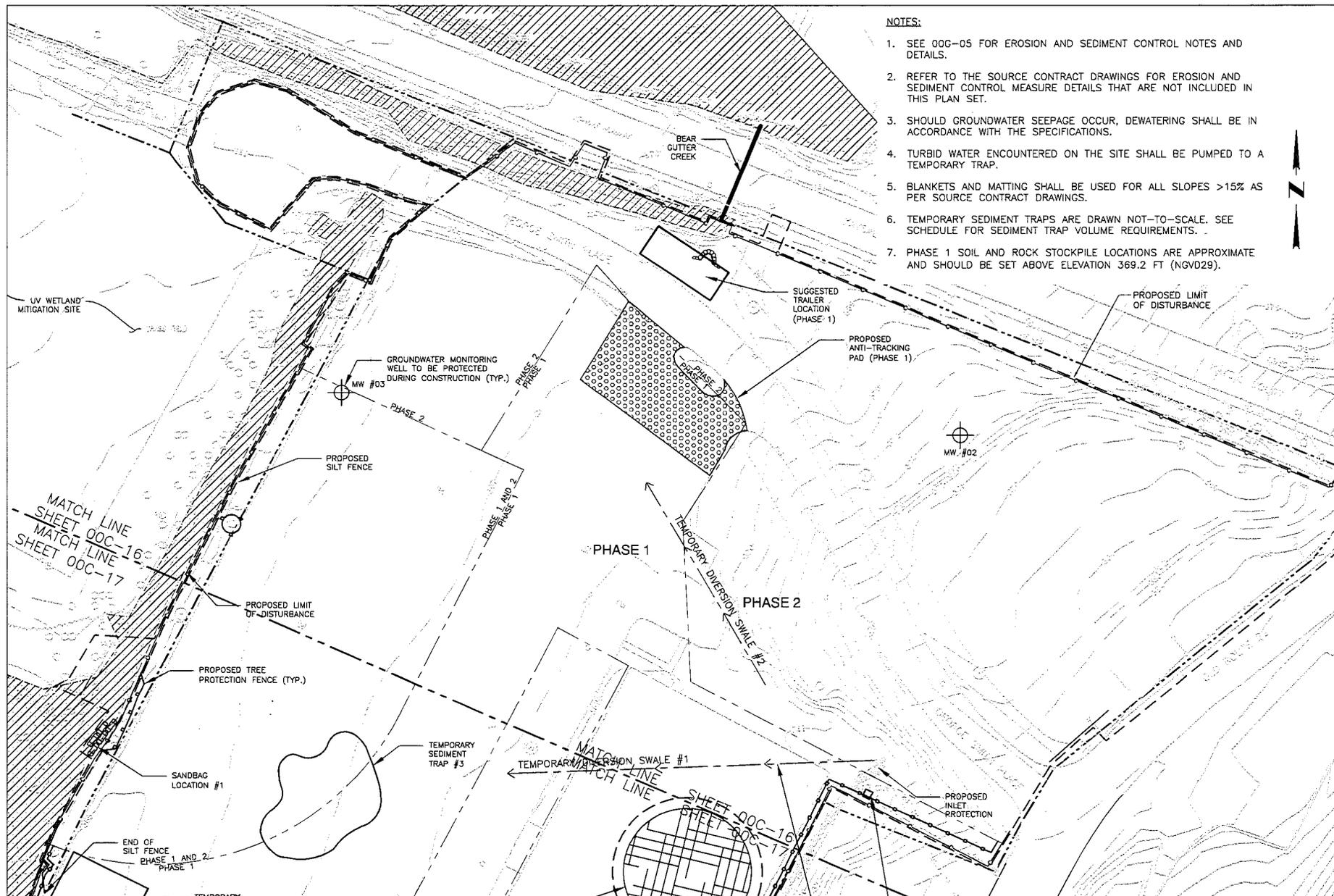
**SCALE:**  
 1" = 80'

**DATE:**  
 JULY 2015

**EXHIBIT NUMBER:**  
 00C-12



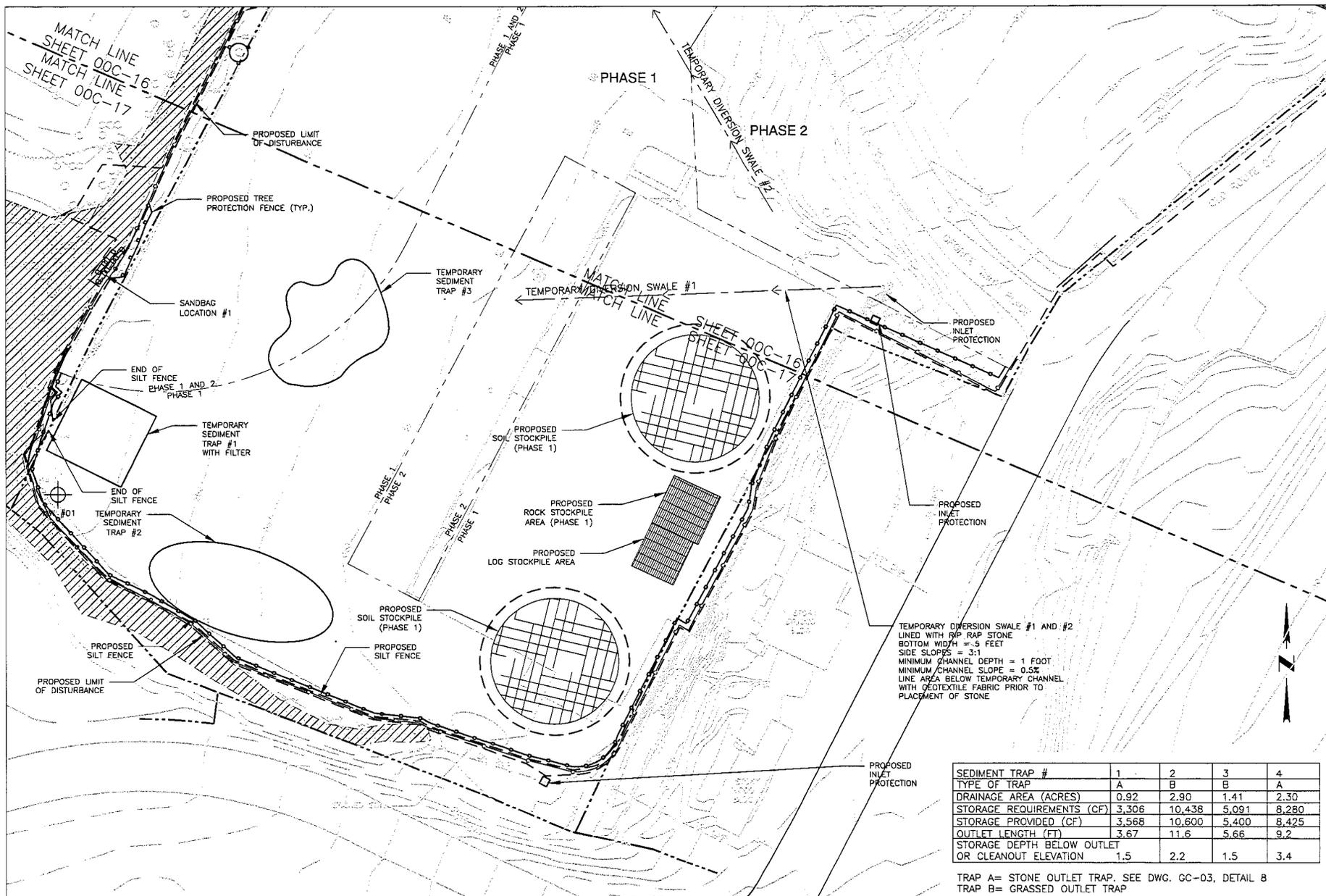
APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



- NOTES:**
1. SEE 00C-05 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
  2. REFER TO THE SOURCE CONTRACT DRAWINGS FOR EROSION AND SEDIMENT CONTROL MEASURE DETAILS THAT ARE NOT INCLUDED IN THIS PLAN SET.
  3. SHOULD GROUNDWATER SEEPAGE OCCUR, DEWATERING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
  4. TURBID WATER ENCOUNTERED ON THE SITE SHALL BE PUMPED TO A TEMPORARY TRAP.
  5. BLANKETS AND MATTING SHALL BE USED FOR ALL SLOPES >15% AS PER SOURCE CONTRACT DRAWINGS.
  6. TEMPORARY SEDIMENT TRAPS ARE DRAWN NOT-TO-SCALE. SEE SCHEDULE FOR SEDIMENT TRAP VOLUME REQUIREMENTS.
  7. PHASE 1 SOIL AND ROCK STOCKPILE LOCATIONS ARE APPROXIMATE AND SHOULD BE SET ABOVE ELEVATION 369.2 FT (NGVD29).

 	<p><b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE</p>	<p>DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u></p>	<p><b>SCALE:</b> 1" = 80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-16</p>
	<p><b>SHEET TITLE</b> <b>SOIL EROSION &amp; SEDIMENT CONTROL PLAN - PHASE 1 (1 OF 2)</b></p>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



TEMPORARY DIVERSION SWALE #1 AND #2  
 LINED WITH RMP RAP STONE  
 BOTTOM WIDTH = 5 FEET  
 SIDE SLOPES = 3:1  
 MINIMUM CHANNEL DEPTH = 1 FOOT  
 MINIMUM CHANNEL SLOPE = 0.5%  
 LINE AREA BELOW TEMPORARY CHANNEL  
 WITH GEOTEXTILE FABRIC PRIOR TO  
 PLACEMENT OF STONE

SEDIMENT TRAP #	1	2	3	4
TYPE OF TRAP	A	B	B	A
DRAINAGE AREA (ACRES)	0.92	2.90	1.41	2.30
STORAGE REQUIREMENTS (CF)	3,306	10,438	5,091	8,280
STORAGE PROVIDED (CF)	3,568	10,600	5,400	8,425
OUTLET LENGTH (FT)	3.67	11.6	5.66	9.2
STORAGE DEPTH BELOW OUTLET OR CLEANOUT ELEVATION	1.5	2.2	1.5	3.4

TRAP A = STONE OUTLET TRAP. SEE DWG. GC-03, DETAIL B  
 TRAP B = GRASSED OUTLET TRAP



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**SOIL EROSION & SEDIMENT CONTROL PLAN - PHASE 1 (2 OF 2)**

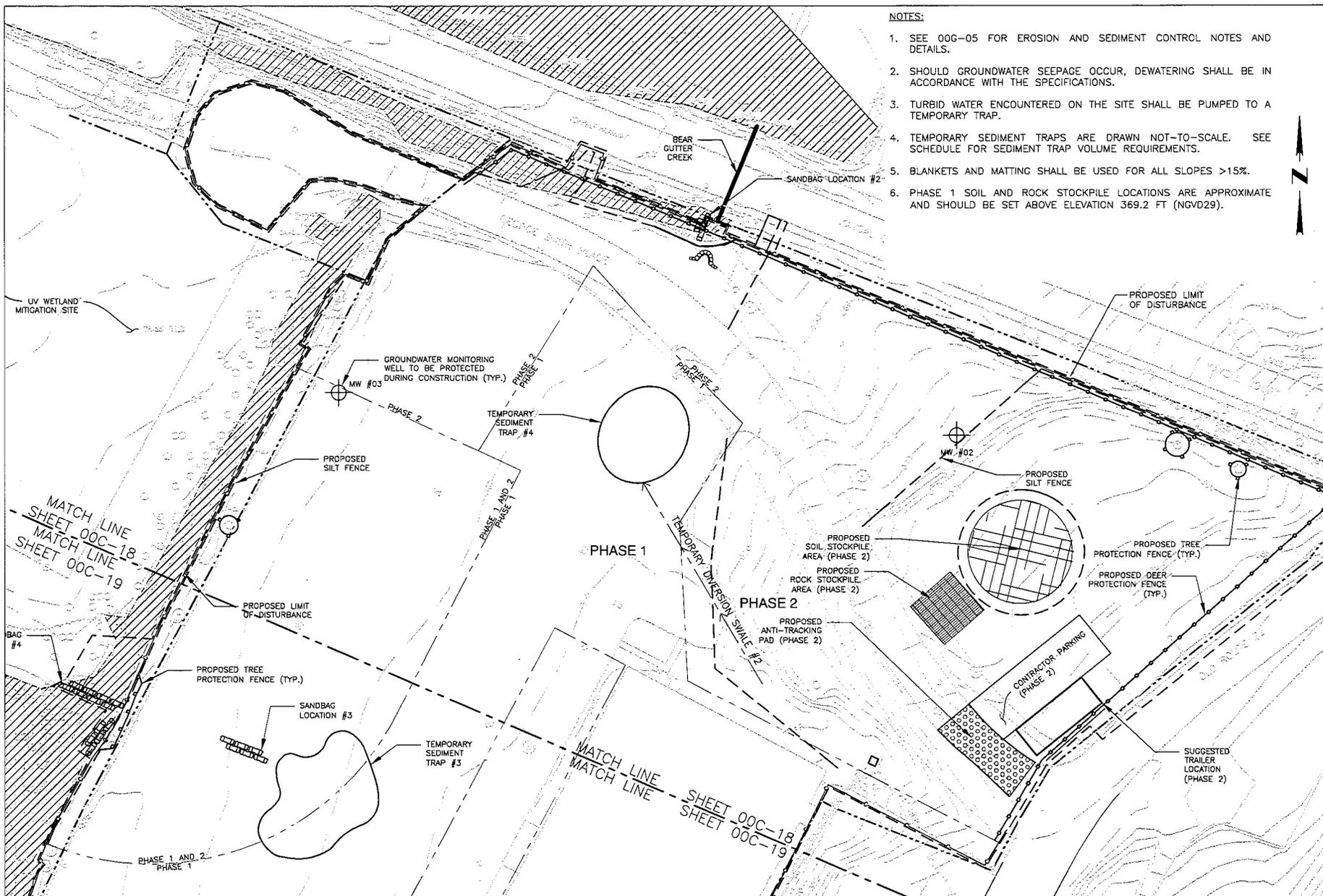
DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:**  
 1" = 80'

**DATE:**  
 JULY 2015

**EXHIBIT NUMBER:**  
 OOC-17

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



- NOTES:**
1. SEE 00G-05 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
  2. SHOULD GROUNDWATER SEEPAGE OCCUR, DEWATERING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
  3. TURBID WATER ENCOUNTERED ON THE SITE SHALL BE PUMPED TO A TEMPORARY TRAP.
  4. TEMPORARY SEDIMENT TRAPS ARE DRAWN NOT-TO-SCALE. SEE SCHEDULE FOR SEDIMENT TRAP VOLUME REQUIREMENTS.
  5. BLANKETS AND MATTING SHALL BE USED FOR ALL SLOPES >15%.
  6. PHASE 1 SOIL AND ROCK STOCKPILE LOCATIONS ARE APPROXIMATE AND SHOULD BE SET ABOVE ELEVATION 369.2 FT (NGVD29).



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

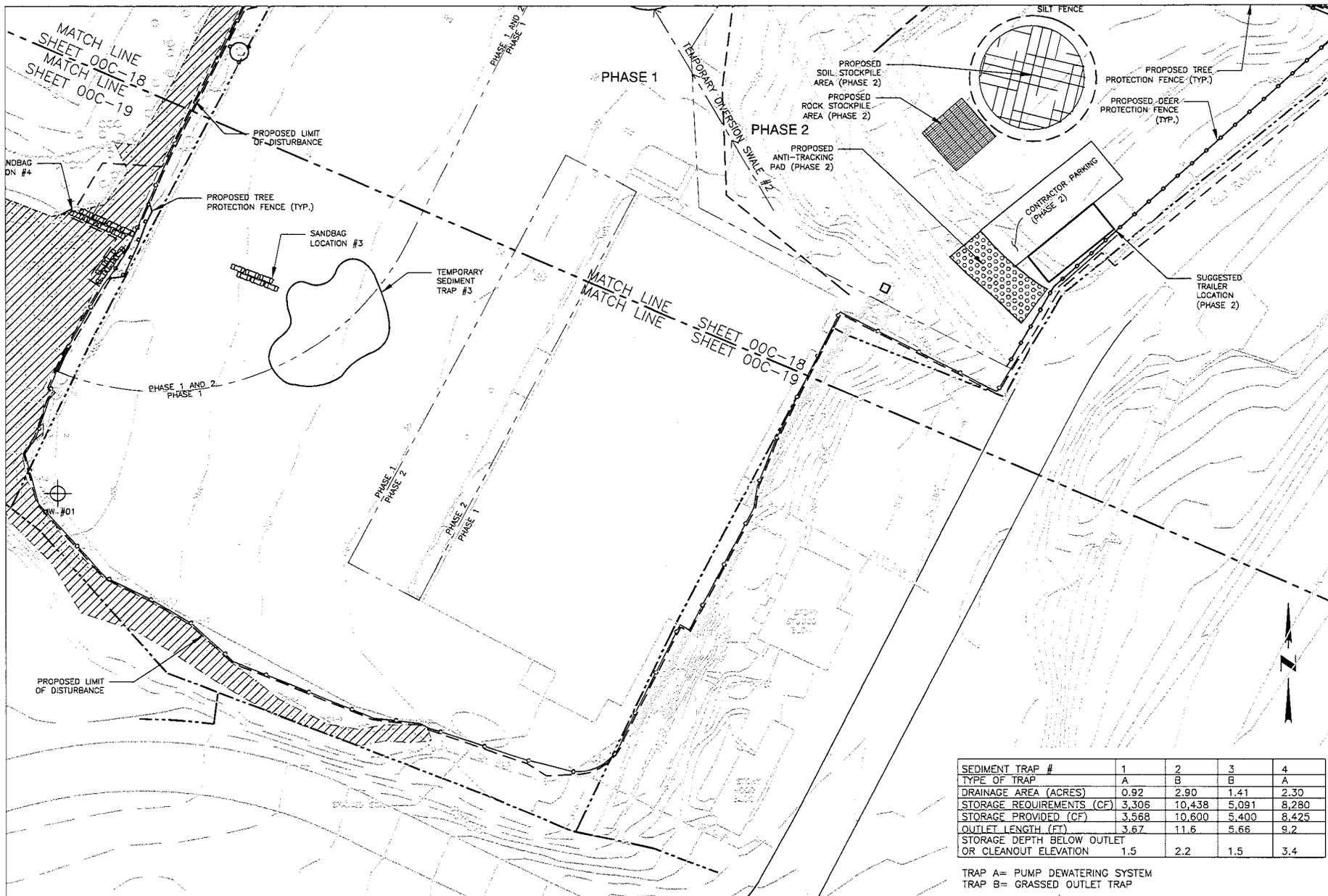
**SHEET TITLE**  
**SOIL EROSION & SEDIMENT CONTROL PLAN - PHASE 2 (1 OF 2)**

DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:**  
 1"=80'

**DATE:**  
 JULY 2015

**EXHIBIT NUMBER:**  
 00C-18



SEDIMENT TRAP #	1	2	3	4
TYPE OF TRAP	A	B	B	A
DRAINAGE AREA (ACRES)	0.92	2.90	1.41	2.30
STORAGE REQUIREMENTS (CF)	3,306	10,438	5,091	8,280
STORAGE PROVIDED (CF)	3,568	10,600	5,400	8,425
OUTLET LENGTH (FT)	3.67	11.6	5.66	9.2
STORAGE DEPTH BELOW OUTLET OR CLEANOUT ELEVATION	1.5	2.2	1.5	3.4

TRAP A= PUMP DEWATERING SYSTEM  
TRAP B= GRASSED OUTLET TRAP



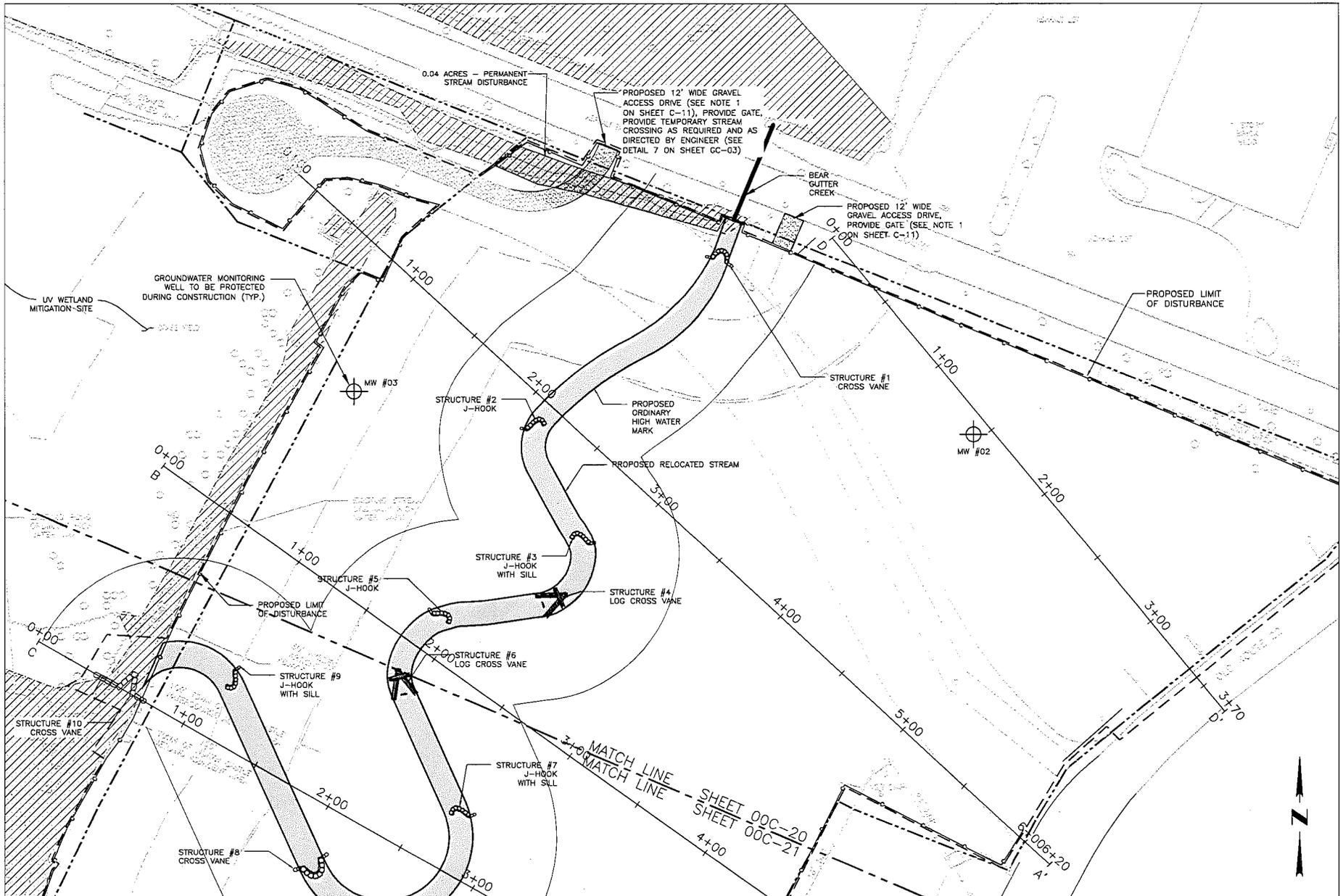
**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**SOIL EROSION & SEDIMENT CONTROL PLAN - PHASE 2 (2 OF 2)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

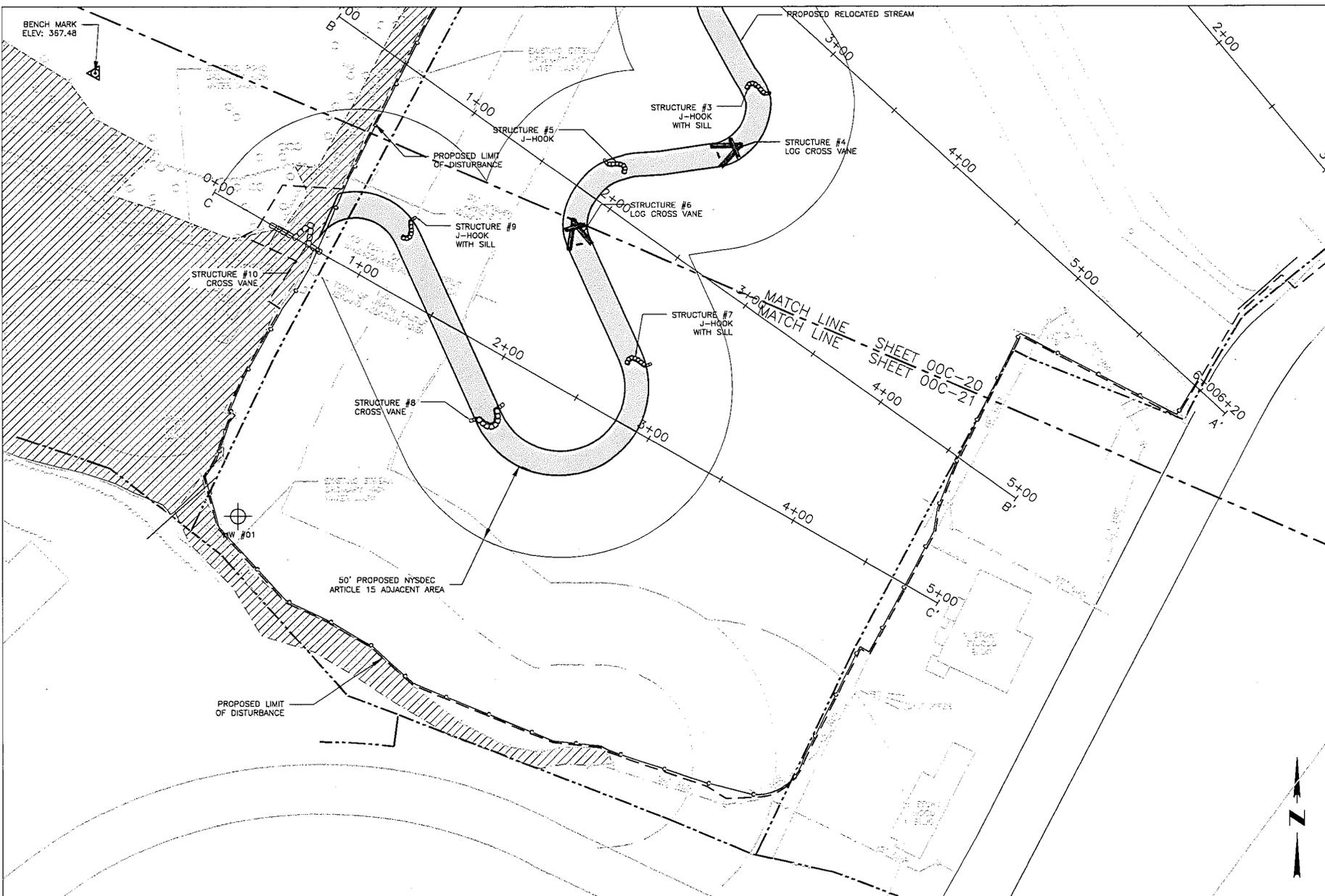
**SCALE:**  
1"=80'  
**DATE:**  
JULY 2015  
**EXHIBIT NUMBER:**  
00C-19

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



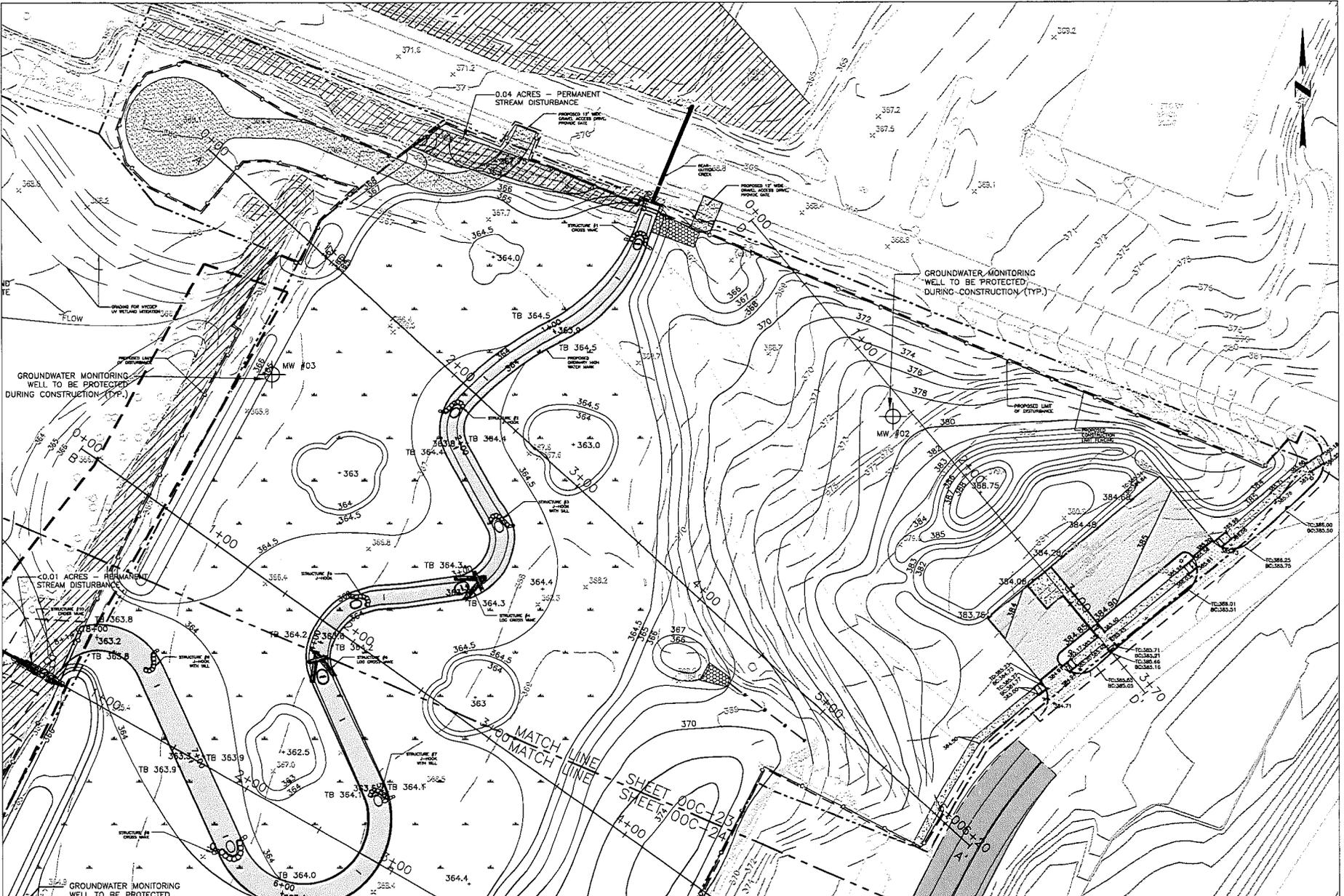
		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-20
		<b>SHEET TITLE</b> <b>WETLAND ELEMENTS PLAN (1 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



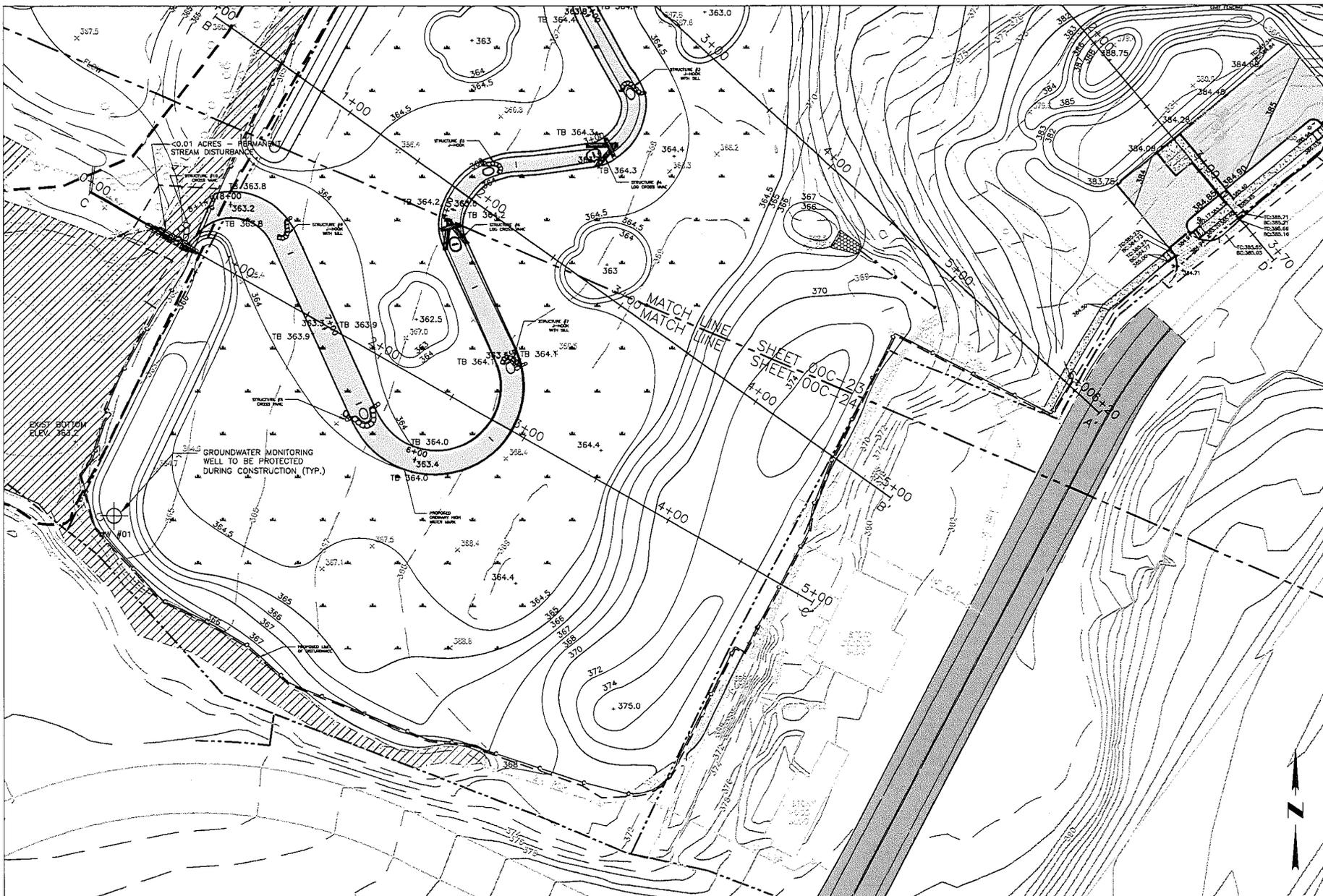
		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-21
		<b>SHEET TITLE</b> <b>WETLAND ELEMENTS PLAN (2 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

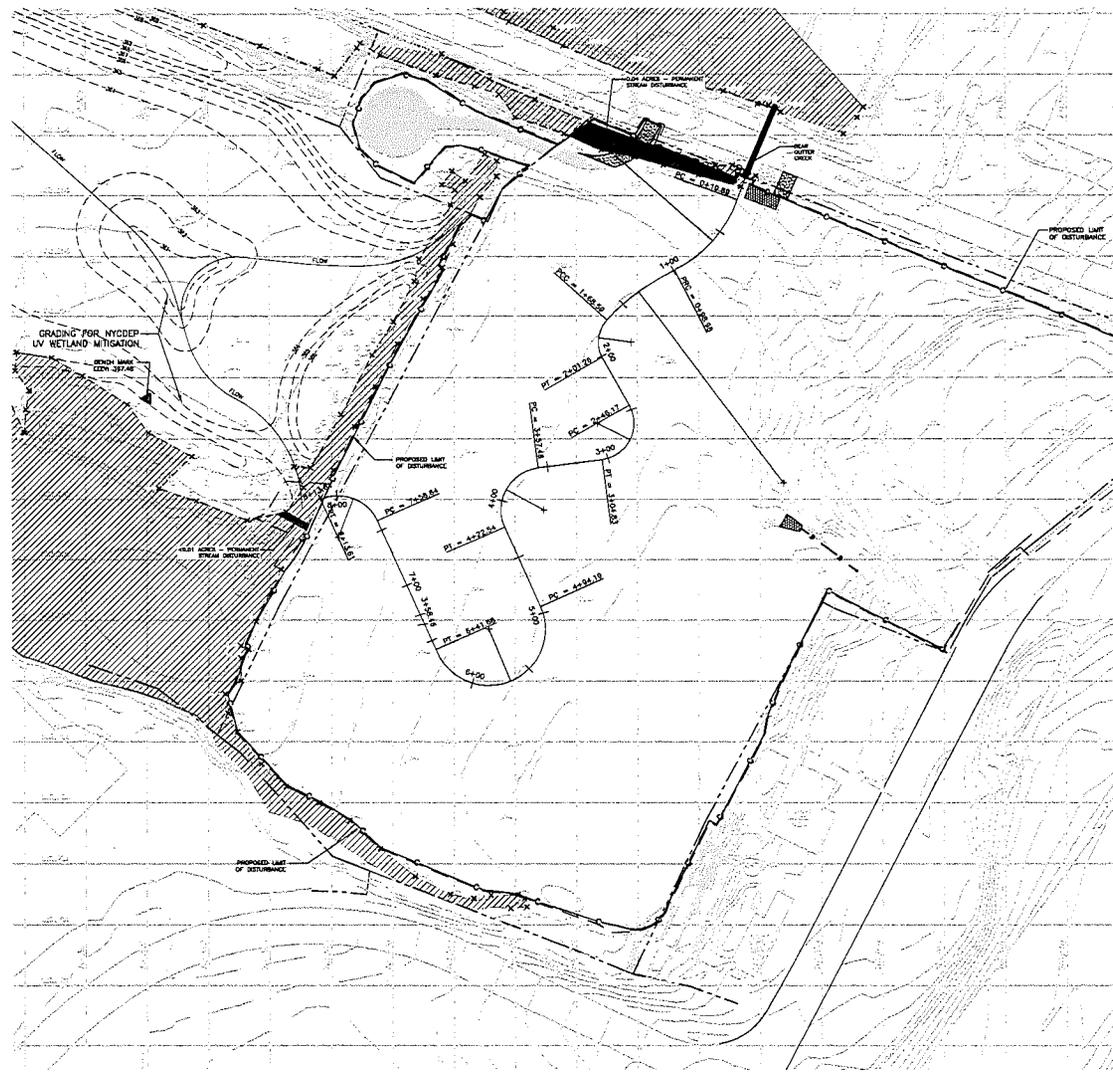


		PROJECT TITLE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	SCALE: 1"=80' DATE: JULY 2015 EXHIBIT NUMBER: 00C-23
		SHEET TITLE <b>GRADING PLAN (1 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00C-24
		<b>SHEET TITLE</b> <b>GRADING PLAN (2 OF 2)</b>		



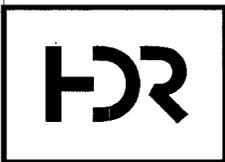
**NOTES:**

1. SURVEY INFORMATION TAKEN FROM DRAWING SET ENTITLED "CATSKILL AND DELAWARE WATER TREATMENT ULTRAVIOLET LIGHT DISINFECTION FACILITY, CAPITAL PROJECT WM-30 WETLAND MITIGATION, CONTRACT CAT-210WL, NORTH CASTLE" DATED JULY 2009, AS REFERENCED BY HAZEN AND SAWYER/CAMP, DRESSER, & McKEE JOINT VENTURE.
2. THE BASE SURVEY WAS PREPARED FOR HAZEN AND SAWYER BY EWELL FINLEY AND CHAS SELLS, DATED FEBRUARY 14, 2006.
3. HORIZONTAL CONTROL DATUM IS NAVD 1983, IN NY STATE PLANE COORDINATE SYSTEM. VERTICAL CONTROL DATUM IS NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29), REFERENCE BENCHMARKS NGS STATIONS L355 AND K355.
4. PROPERTY LINE AND EASEMENT INFORMATION TAKEN, WITH PERMISSION FROM THE SURVEYOR, FROM THE BADEY AND WATSON SURVEY, DATED JULY 23, 2008.



BEAR GUTTER CREEK ALIGNMENT CONSTRUCTION TABLE				
#	Transition Type	Station	Northing	Easting
1	Start	0+00	833,315.0502	706,888.2554
2	Point of Curvature	0+19.89	833,296.3456	706,881.4895
3	Radius = 104.77'		833,331.9820	706,782.9715
4	Point of Reverse Curvature	0+98.98	833,238.5181	706,830.3027
5	Radius = 196.23'		833,063.4515	706,918.9585
6	Point of Compound Curvature	1+68.59	833,196.8261	706,775.0162
7	Radius = 26.53'		833,178.7927	706,794.4784
8	Point of Tangent	2+01.26	833,166.4487	706,770.9921
9	Point of Curvature	2+46.17	833,127.3851	706,793.1577
10	Radius = 30'		833,112.5798	706,767.0655
11	Point of Tangent	3+04.83	833,082.8398	706,771.0068
12	Point of Curvature	3+57.48	833,075.9226	706,718.8123
13	Radius = 35'		833,041.2260	706,723.4106
14	Point of Tangent	4+22.54	833,026.9553	706,691.4521
15	Point of Curvature	4+94.19	832,961.5326	706,720.6658
16	Radius = 46.30'		832,942.6525	706,678.3849
17	Point of Tangent	6+41.68	832,925.6292	706,635.3228
18	Point of Curvature	7+58.64	833,032.4102	706,587.6060
19	Radius = 34.93'		833,018.1591	706,555.7147
20	Point of Tangent/End	8+13.61	833,050.0086	706,541.3705

MITIGATION SIDE CHANNEL ALIGNMENT CONSTRUCTION TABLE				
#	Transition Type	Station	Northing	Easting
1	Start	0+00	832,697.9872	706,852.5939
2	Point of Curvature	0+03.46	832,701.0777	706,770.5369
3	Radius = 20'		832,685.8654	706,997.9207
4	Point of Tangent	0+19.26	832,710.7090	706,758.5241
5	Point of Curvature	0+57.83	832,722.2209	706,721.9253
6	Radius = 159.34'		832,842.7425	706,879.5699
7	Point of Compound Curvature	1+27.97	832,757.2279	706,681.5725
8	Radius = 56.04'		832,792.3741	706,699.6233
9	Point of Reverse Curvature	1+76.99	832,801.1878	706,649.6505
10	Radius = 27.16'		832,802.5513	706,616.5263
11	Point of Compound Curvature	2+02.23	832,823.4693	706,633.8473
12	Radius = 81.54'		832,760.6653	706,581.9427
13	Point of Tangent	2+23.99	832,834.9605	706,615.4428
14	Point of Curvature	2+27.12	832,836.3189	706,612.6216
15	Radius = 17.64'		832,852.2161	706,620.2733
16	Point of Reverse Curvature	2+55.24	832,867.4141	706,611.9129
17	Radius = 22.56'		832,886.8448	706,599.8569
18	Point of Reverse Curvature	2+99.96	832,897.1585	706,619.9173
19	Radius = 16.46'		832,904.6847	706,634.5558
20	Point of Reverse Curvature	3+14.60	832,911.8515	706,619.7380
21	Radius = 56.51'		832,936.4950	706,588.8669
22	Point of Tangent/End	3+58.46	832,954.5357	706,622.4054



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**STREAM ALIGNMENT PLAN**

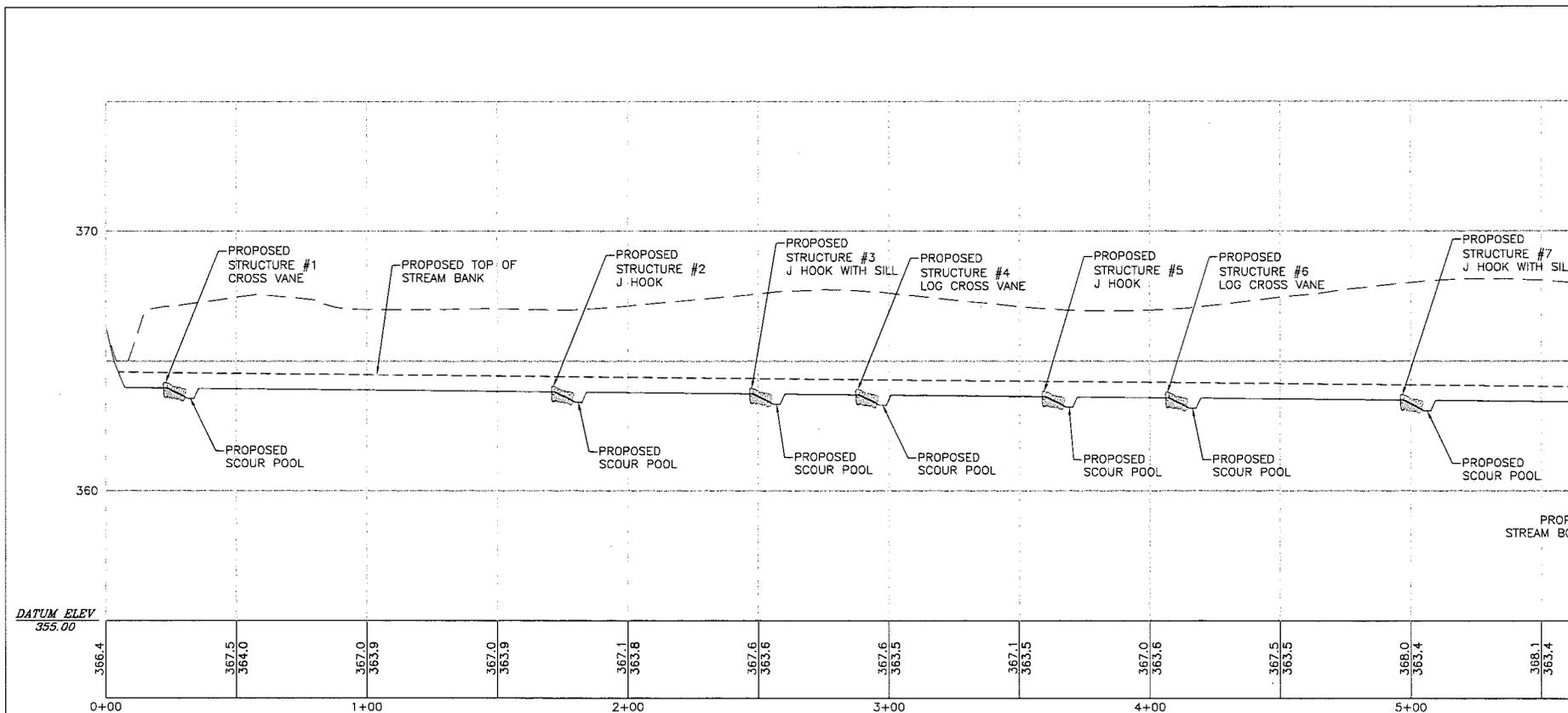
DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:**  
 1" = 150'

**DATE:**  
 JULY 2015

**EXHIBIT NUMBER:**  
 00C-25

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



BEAR GUTTER CREEK

VERTICAL GRAPHIC SCALE



( IN FEET )  
1 inch = 6 ft.

HORIZONTAL GRAPHIC SCALE



( IN FEET )  
1 inch = 60 ft.



PROJECT TITLE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

SHEET TITLE

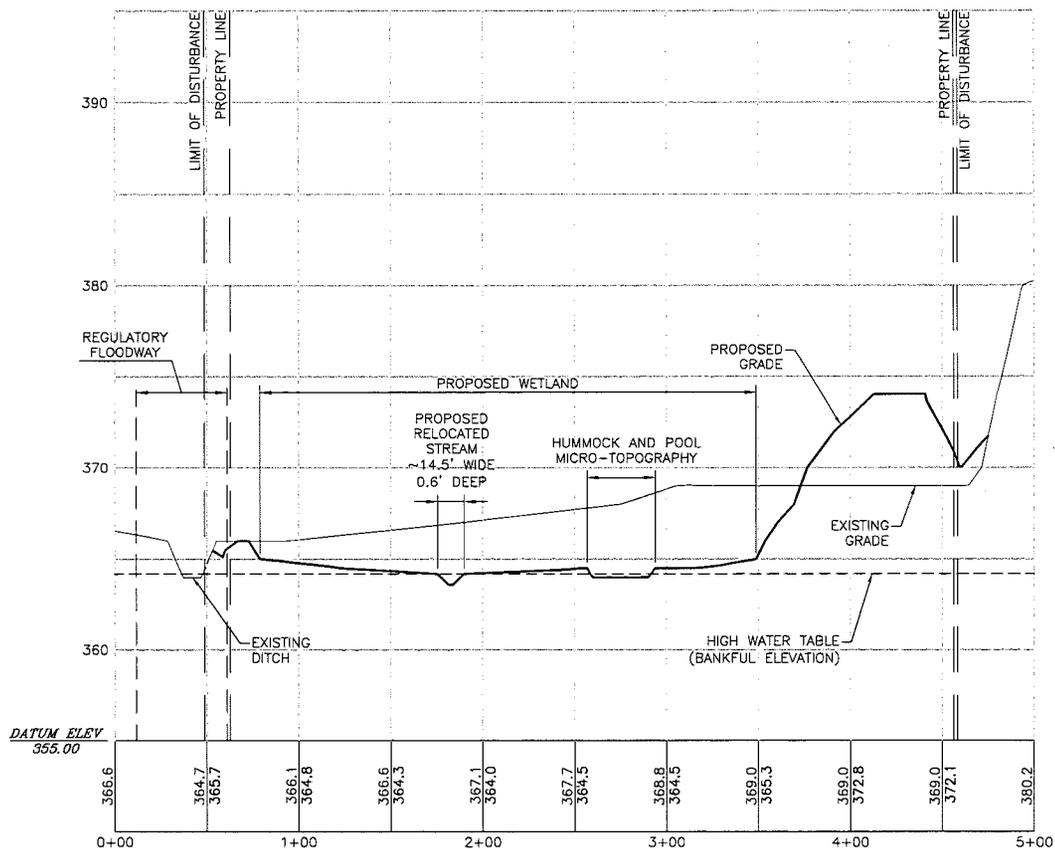
**STREAM PROFILE (1 OF 2)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

SCALE: 1"=60'  
DATE: JULY 2015  
EXHIBIT NUMBER: OGC-01







CROSS SECTION B-B' (00C-24)

VERTICAL GRAPHIC SCALE



( IN FEET )  
1 inch = 10 ft.

HORIZONTAL GRAPHIC SCALE



( IN FEET )  
1 inch = 100 ft.

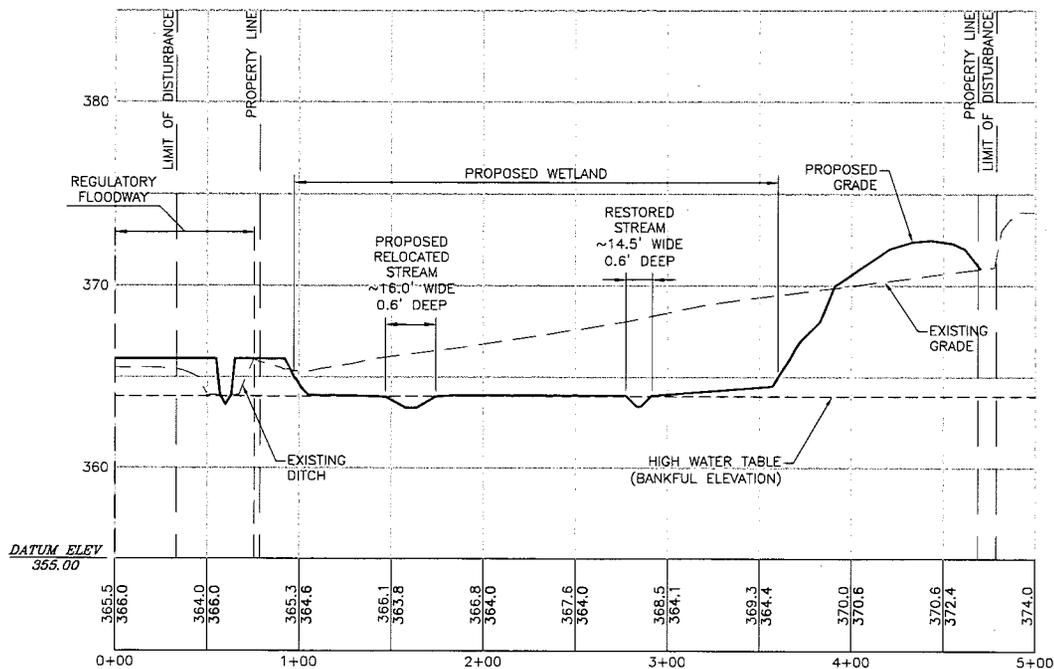


**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-51B, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**CROSS SECTIONS (2 OF 4)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

**SCALE:** 1" = 100'  
**DATE:** JULY 2015  
**EXHIBIT NUMBER:** OGC-05



CROSS SECTION C-C' (OOC-24)

VERTICAL GRAPHIC SCALE



( IN FEET )  
1 inch = 10 ft.

HORIZONTAL GRAPHIC SCALE



( IN FEET )  
1 inch = 100 ft.

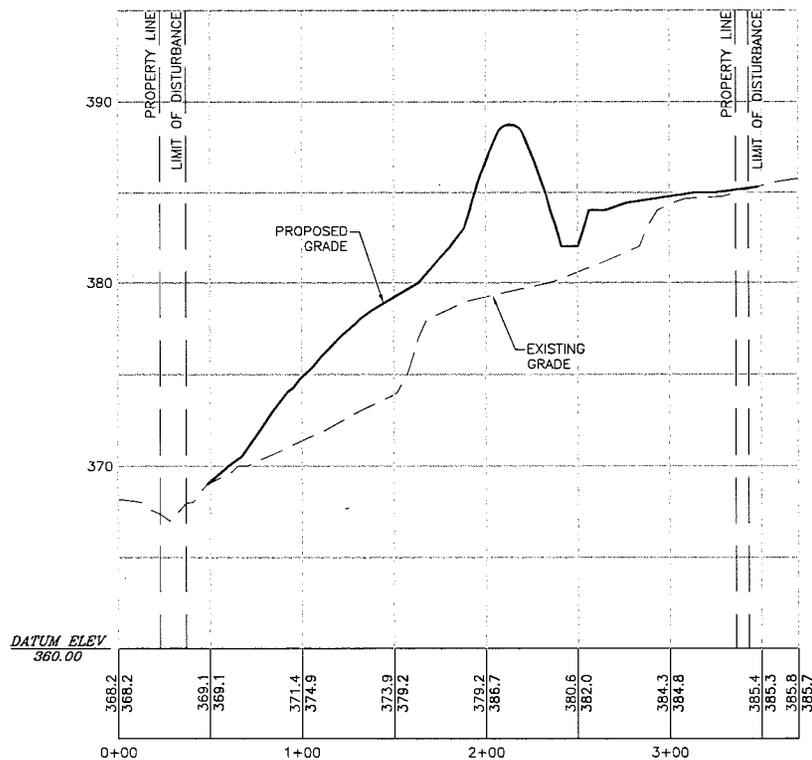


PROJECT TITLE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

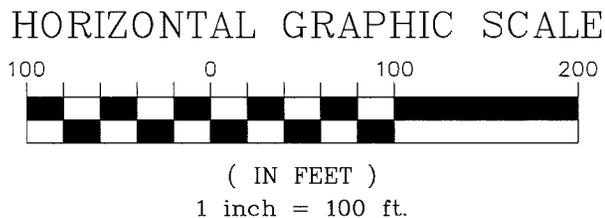
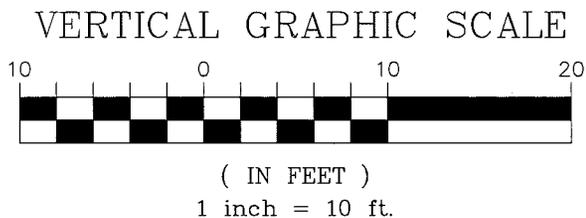
SHEET TITLE  
**CROSS SECTIONS (3 OF 4)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

SCALE: 1"=100'  
DATE: JULY 2015  
EXHIBIT NUMBER: OGC-05



CROSS SECTION D-D' (00C-23)

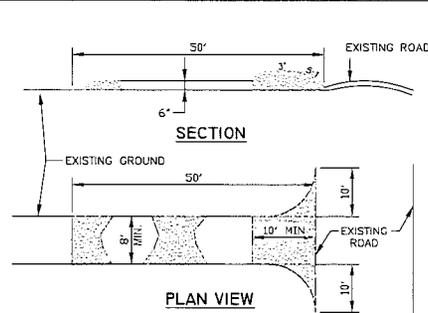


PROJECT TITLE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

SHEET TITLE  
**CROSS SECTIONS (4 OF 4)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

SCALE: 1" = 100'  
DATE: JULY 2015  
EXHIBIT NUMBER: OGC-06



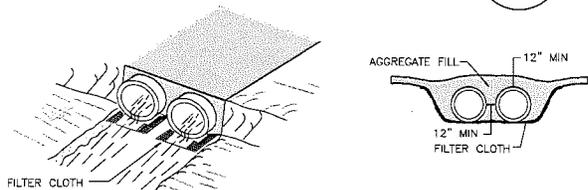
**CONSTRUCTION SPECIFICATION:**

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - EIGHT (8) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPE WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH A STONE BASE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

**STABILIZED CONSTRUCTION ENTRANCE**

NOT TO SCALE

1  
GC-08



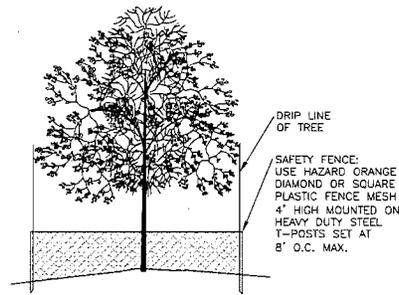
NOTE:

- IN ALL AREAS WHERE A TEMPORARY CULVERT IS USED, THE TEMPORARY CULVERT AND ASSOCIATED FILL MUST BE IMMEDIATELY REMOVED AND THE STREAM BANKS REGRADED UPON COMPLETION OF WORK.

**TEMPORARY STREAM CROSSING DETAIL**

NOT TO SCALE

4  
GC-08



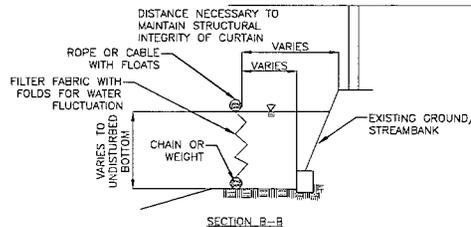
NOTES:

- THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTION TO SAVE SPECIMEN QUALITY TREES IN AREAS NOTED ON THE PLANS FOR CLEARING. WHEN POSSIBLE THE CONTRACTOR SHALL PROTECT INDIVIDUAL SPECIMEN TREES THROUGH THE INSTALLATION OF SAFETY FENCING AROUND THE DRIP LINE PERIMETER OF THE TREE.
- SAFETY FENCING SHALL BE INSTALLED AT THE ON SET OF SITE CONSTRUCTION TO PREVENT VEHICLE TRAFFIC FROM COMPACTING THE SOILS IN THE VICINITY OF THE TREE ROOT STRUCTURE.

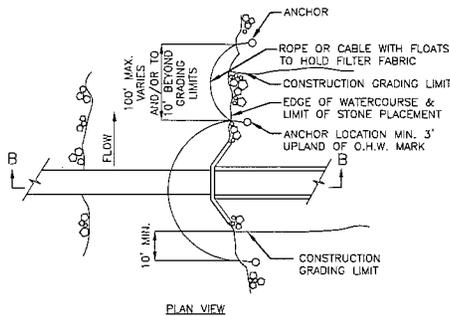
**TREE PROTECTION DETAIL**

NOT TO SCALE

2  
GC-08



SECTION B-B



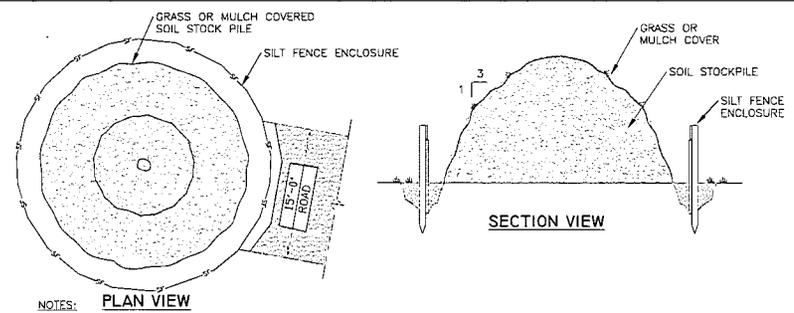
PLAN VIEW

NOTE:  
TO BE CONSTRUCTED ACCORDING TO DESIGN REQUIREMENTS OF CREEK FLOWS.

**TURBIDITY CURTAIN DETAIL**

NOT TO SCALE

5  
GC-08



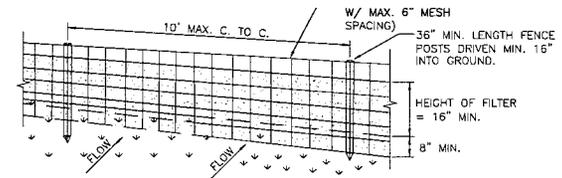
NOTES:

- SOIL REMOVED DURING SITE PREPARATION SHALL BE STOCKPILED ON-SITE AT A MAXIMUM SLOPE OF 3:1 FOR FUTURE USE IN SITE RECLAMATION AND REVEGETATION.
- SOIL STOCKPILE SHALL BE ENCIrcLED WITH SILT FENCING, AS PER SILT FENCING DETAIL.
- PROVIDE TEMPORARY GRASS OR MULCH COVER IF STOCKPILE IS TO REMAIN UNDISTURBED FOR FOURTEEN DAYS OR MORE. TEMPORARY COVER SHALL CONSIST OF PRACTICES IN CONFORMANCE WITH SOIL STABILIZATION TECHNIQUES SUCH AS SEEDING, MULCHING, ETC.
- PASSAGEWAY IS TO REMAIN CLOSED WHEN STOCKPILE IS INACTIVE AND NIGHTLY.

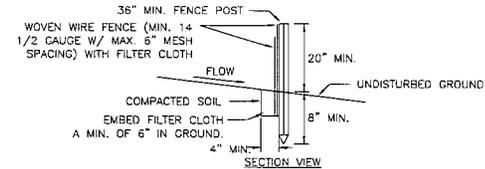
**SOIL AND ROCK STOCKPILE DETAIL**

NOT TO SCALE

3  
GC-08



PERSPECTIVE VIEW



SECTION VIEW

**CONSTRUCTION SPECIFICATIONS**

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
- ALL SILT FENCES SHALL BE VISUALLY INSPECTED AT LEAST ONCE PER WEEK ANY MAINTENANCE OR REPAIR ISSUES NEED TO BE ADDRESSED WITHIN ONE DAY OF IDENTIFYING ANY PROBLEMS.
- DITCH-WITCH OR BACKHOE WITH BUCKET NO WIDER THAN 6 INCHES SHALL BE USED TO EXCAVATE 6" TRENCH FOR EMBEDMENT/INSTALLING SILT FENCE.

**SILT FENCE DETAIL**

NOT TO SCALE

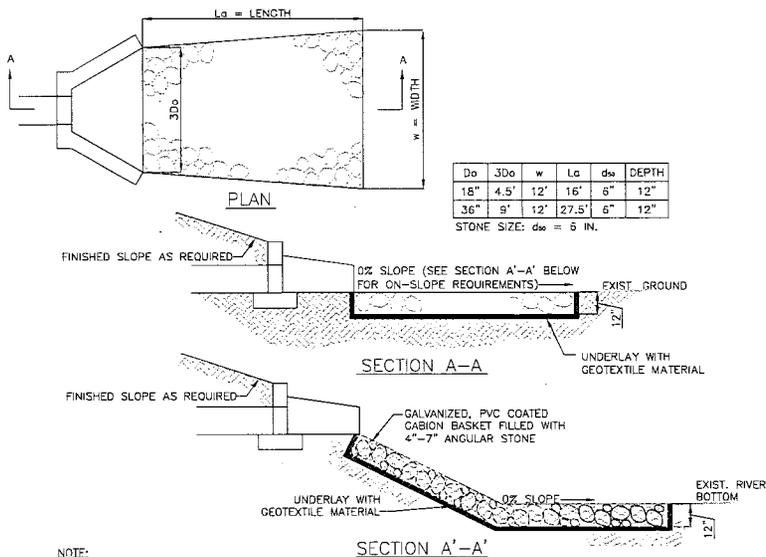
6  
GC-08



<b>PROJECT TITLE</b>	CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE
<b>SHEET TITLE</b>	<b>SOIL EROSION &amp; SEDIMENT CONTROL DETAILS (1 OF 2)</b>

DESIGNED	J.R.
DRAWN	S.C./J.W.
CHECKED	S.D.
PROJ. DIR.	M.P.
PROJ. MNGR.	L.P.

<b>SCALE:</b>	NTS
<b>DATE:</b>	JULY 2015
<b>EXHIBIT NUMBER:</b>	OGC-07



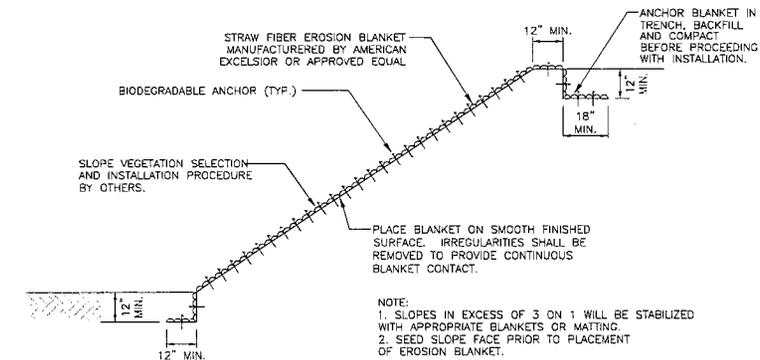
NOTE:

1. RIPRAP PLACED ON SLOPE AT OUTFALL LOCATION SHALL BE CONTAINED IN A GABION MATTRESS TO PREVENT STONE DISPLACEMENT WITHIN THE RIVER.

**DISCHARGE AREA - RIP RAP DETAIL**

NOT TO SCALE

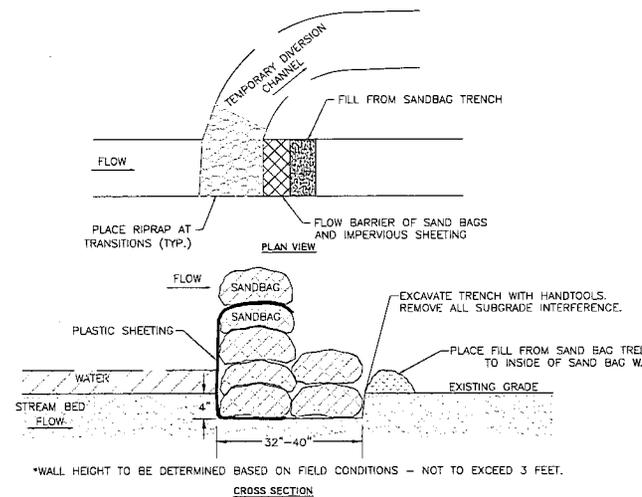
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GC-09



**TEMPORARY EROSION CONTROL BLANKET**

NOT TO SCALE

3  
GC-09

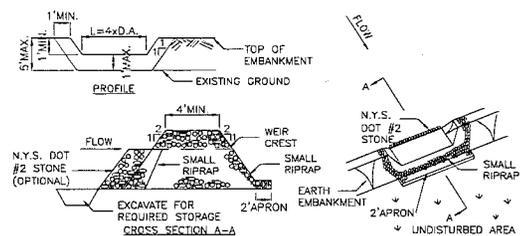


**SANDBAG DETAIL**

NOT TO SCALE

2  
GC-09

WOVEN WIRE (MIN. 14 1/2)



OPTION: A ONE FOOT LAYER OF N.Y.S. DOT #2 STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP IN PLACE OF THE EMBEDDED FILTER CLOTH.

**CONSTRUCTION SPECIFICATIONS**

- AREA UNDER EMBANKMENT SHALL BE CLEARED, CRIBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
- THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
- THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
- SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
- THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. MAXIMUM DRAINAGE AREA 5 ACRES

**SEDIMENT TRAP**

NOT TO SCALE

4  
GC-09



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**

**SOIL EROSION & SEDIMENT CONTROL DETAILS (2 OF 2)**

DESIGNED J.R.

DRAWN S.C./J.W.

CHECKED S.D.

PROJ. DIR. M.P.

PROJ. MNGR. L.P.

**SCALE:**  
NTS

**DATE:**  
JULY 2015

**EXHIBIT NUMBER:**  
OGC-08

**LOG WEIR DETAIL**  
NOT TO SCALE

NOTE:  
1. LOGS NEED TO BE FROM A HARDWOOD TREE SPECIES (USE ON-SITE LOGS/CUTS IF POSSIBLE) WITH A MINIMUM TRUNK DIAMETER OF 1 1/2" (D50 MAX). THE LENGTH OF EACH LOG SHALL BE SUFFICIENT TO ALLOW PROPER CONSTRUCTION IN ACCORDANCE WITH THE LOG CROSS VANE DETAIL.  
2. SEE SPECIFICATIONS FOR INSTALLATION.

STRUCTURE #	BOTTOM ELEVATION	BANKFULL ELEVATION
STRUCTURE #4	363.71	364.31
STRUCTURE #5	363.55	364.15

**J-HOOK VANE AND CROSS VANE STRUCTURE LOCATION AND SPACING DETAIL**  
NOT TO SCALE

NOTE:  
1. FINAL DIMENSIONS AND ELEVATION TO BE DETERMINED IN THE FIELD UNDER THE SUPERVISION OF THE ENGINEER/OR LANDSCAPE ARCHITECT.  
2. NUMBERS ON ROCKS IN DETAIL INDICATE WHERE THAT SAME ROCK SHOWS UP IN PLAN VIEW AND PROFILE VIEW.  
3. STONE FILL TO BE TYPE 1 CRUSHED STONE OR LOCALLY DERIVED NATIVE STONE, IRREGULAR IN SHAPE. THE BANKFILL STONE SHALL BE REASONABLE WELL GRADED, STONE BETWEEN 3" AND 2" DOWN TO DUST AND EVERY SIZE BETWEEN.

STRUCTURE #	BOTTOM ELEVATION	BANKFULL ELEVATION
STRUCTURE #2	363.83	364.43
STRUCTURE #3	363.75	364.35
STRUCTURE #5	363.64	364.24
STRUCTURE #7	363.55	364.15
STRUCTURE #9	363.24	363.84

**W- WEIR DETAIL**  
NOT TO SCALE

NOTE:  
1. FINAL DIMENSIONS AND ELEVATIONS TO BE DETERMINED IN THE FIELD UNDER THE SUPERVISION OF THE ENGINEER.  
2. LETTERS ON ROCKS IN DETAIL INDICATE WHERE THAT SAME ROCK IS LOCATED IN PLAN VIEW AND PROFILE VIEW.  
3. STONE FILL TO BE TYPE 1 CRUSHED STONE OR LOCALLY DERIVED NATIVE STONE, IRREGULAR IN SHAPE. THE BANKFILL STONE SHALL BE REASONABLE WELL GRADED, STONE BETWEEN 3" AND 2" DOWN TO DUST AND EVERY SIZE BETWEEN.

STONE SIZE AND GRADATION:  
A. THE MEDIAN STONE DIAMETER, D50, SHALL BE 3 INCHES.  
B. THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 3 INCHES.

STRUCTURE #	BOTTOM ELEVATION	BANKFULL ELEVATION
STRUCTURE #8	363.37	363.97

**ROCK SIZING DETAIL**  
NOT TO SCALE

	LENGTH	WIDTH	HEIGHT
MINIMUM SIZE	4"	2"	1.5"
MAXIMUM SIZE	6"	4"	3"



**PROJECT TITLE** CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

**SHEET TITLE**  
**WEIR DETAILS (1 OF 2)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

**SCALE:**  
NTS

**DATE:**  
JULY 2015

**EXHIBIT NUMBER:**  
OGC-09

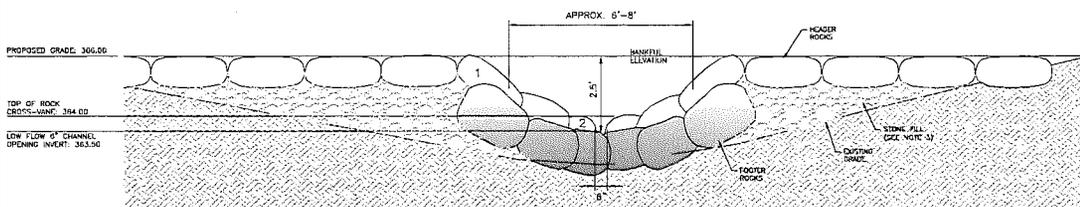
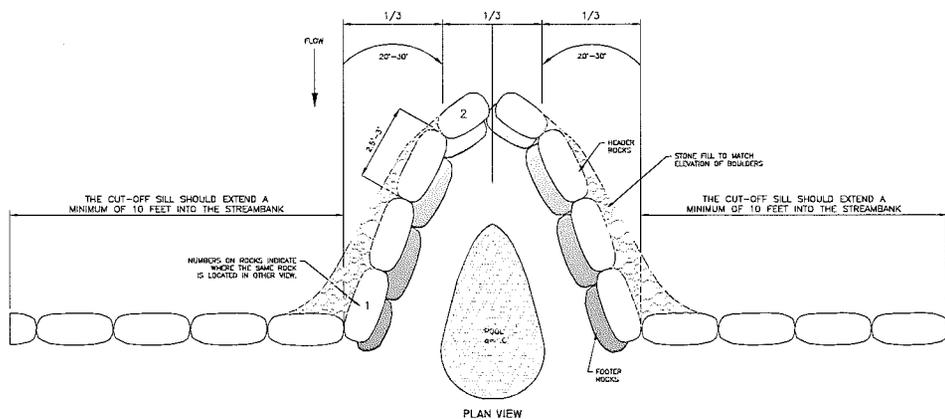


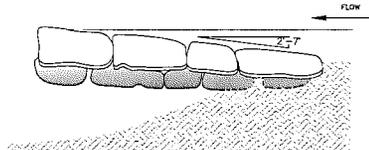
TABLE 5: CHANNEL CROSS VANE BANK/ELEVATIONS

STRUCTURE #10	BOTTOM ELEVATION	BANK/ELEVATION
	303.50	306.00

- NOTES:
- FINAL DIMENSIONS AND ELEVATION TO BE DETERMINED IN THE FIELD UNDER THE SUPERVISION OF THE ENGINEER/GR LANDSCAPE ARCHITECT.
  - NUMBERS ON ROCKS IN DETAIL INDICATE WHERE THAT SAME ROCK IS IN PLAN VIEW AND PROFILE.
  - STONE FILL TO BE TYPE 1 CRUSHED STONE OR LOCALLY SOURCED NATIVE STONE, IRREGULAR IN SHAPE. THE BACKFILL STONE SHALL BE REASONABLE WELL GRADED, STONE BETWEEN 3" AND 24" DOWN TO DUST AND EVERY SIZE BETWEEN.

- STONE SIZE AND GRADATION:
- THE MEDIAN STONE DIAMETER, D50, SHALL BE 3 INCHES.
  - THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 3 INCHES.

CROSS SECTION VIEW

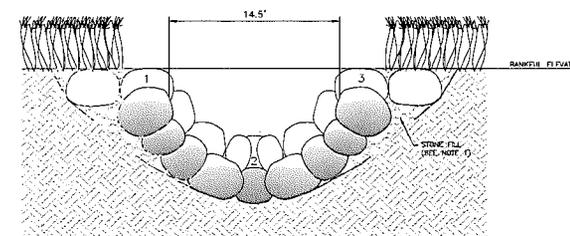
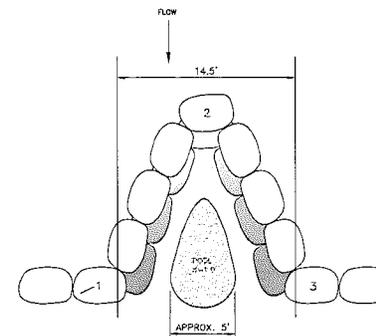


PROFILE VIEW

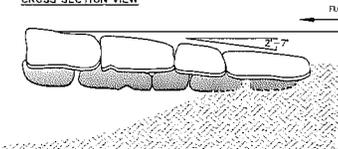
CHANNEL CROSS VANE

NOT TO SCALE

1  
GC-11



CROSS SECTION VIEW



PROFILE VIEW

TABLE 6: CROSS VANE BANK/ELEVATIONS

STRUCTURE #1	BOTTOM ELEVATION	BANK/ELEVATION
	303.60	304.58
STRUCTURE #8	303.37	303.87

- NOTES:
- STONE FILL TO BE TYPE 1 CRUSHED STONE OR LOCALLY SOURCED NATIVE STONE, IRREGULAR IN SHAPE. THE BACKFILL STONE SHALL BE REASONABLE WELL GRADED; STONE BETWEEN 3" AND 24" DOWN TO DUST AND EVERY SIZE BETWEEN.

- STONE SIZE AND GRADATION:
- THE MEDIAN STONE DIAMETER, D50, SHALL BE 3 INCHES.
  - THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 3 INCHES.

STREAM CROSS VANE

NOT TO SCALE

2  
GC-11



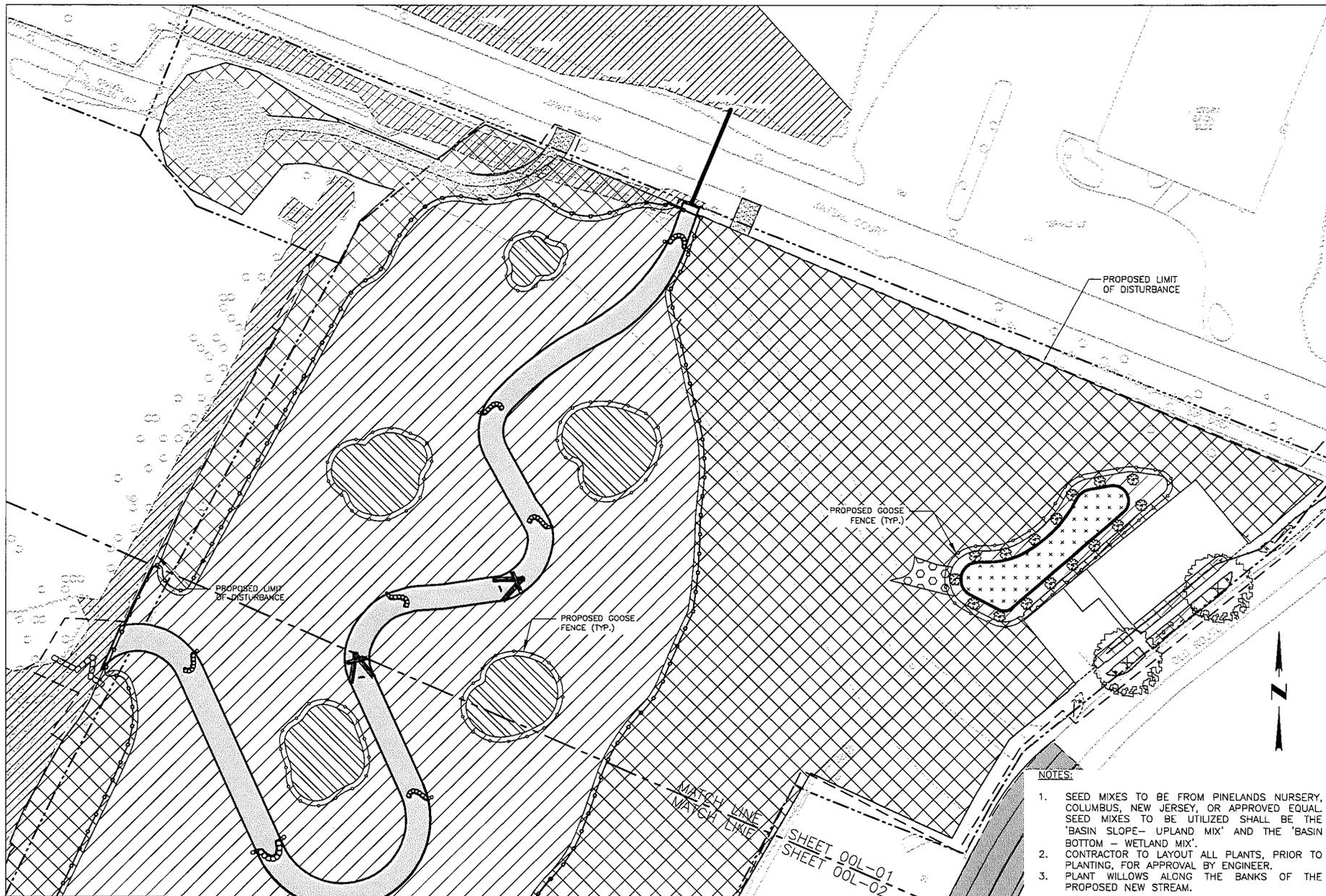
PROJECT TITLE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY  
CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
WETLAND AND OPEN WATER MITIGATION  
FORMER ARMONK BOWLING ALLEY SITE

SHEET TITLE  
**WEIR DETAILS (2 OF 2)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

SCALE:  
NTS  
DATE:  
JULY 2015  
EXHIBIT NUMBER:  
OGC-10

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



NOTES:

1. SEED MIXES TO BE FROM PINELANDS NURSERY, COLUMBUS, NEW JERSEY, OR APPROVED EQUAL. SEED MIXES TO BE UTILIZED SHALL BE THE 'BASIN SLOPE- UPLAND MIX' AND THE 'BASIN BOTTOM - WETLAND MIX'.
2. CONTRACTOR TO LAYOUT ALL PLANTS, PRIOR TO PLANTING, FOR APPROVAL BY ENGINEER.
3. PLANT WILLOWS ALONG THE BANKS OF THE PROPOSED NEW STREAM.

		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-51B, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00L-01
		<b>SHEET TITLE</b> <b>WETLAND PLANTING PLAN (1 OF 2)</b>		

APPLICANT: NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



		<b>PROJECT TITLE</b> CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER SUPPLY CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK WETLAND AND OPEN WATER MITIGATION FORMER ARMONK BOWLING ALLEY SITE	DESIGNED <u>J.R.</u> DRAWN <u>S.C./J.W.</u> CHECKED <u>S.D.</u> PROJ. DIR. <u>M.P.</u> PROJ. MNGR. <u>L.P.</u>	<b>SCALE:</b> 1"=80' <b>DATE:</b> JULY 2015 <b>EXHIBIT NUMBER:</b> 00L-02
		<b>SHEET TITLE</b> <b>WETLAND PLANTING PLAN (2 OF 2)</b>		

Bioswale Plant List						
Plant Community	Symbol	Quantity	Scientific Name	Common Name	Type of Stock	Spacing
Wet Meadow - Biofilter Infiltration Basin (seasonally flooded)						
	AC	50	<i>Acorus calamus</i>	Sweet flag	rhizomes	18' OC
	CL	30	<i>Carex lasiocarpa</i>	Shallow sedge	seeds	18' OC
	CS	40	<i>Carex stricta</i>	Tussock sedge	plugs	2' OC
	JE	40	<i>Juncus effusus</i>	Softstem rush	plugs	18' OC
	PV	(15 lbs/acre)	<i>Panicum virgatum</i>	Switchgrass	Seeds	
	TOTAL		160			
Berm and Overflow (seasonally flooded)						
	AA	5	<i>Agrilus alba</i>	Redtop	seeds	
	AG	5	<i>Andropogon gerardi</i>	Big bluestem	seeds	
	PV	5	<i>Panicum virgatum</i>	Switchgrass	seeds	
	TOTAL		15	lbs/acre		
Overseed with FOCV and FAC seed mix (to overseed entire area)						
	AV	30%	<i>Andropogon virginicus</i>	Broomsedge bluestem	seeds	
	EV	30%	<i>Elymus virginicus</i>	Virginia Wild-Rye	seeds	
	PV	15%	<i>Panicum virgatum</i>	Switchgrass	seeds	
	ER	15%	<i>Elymus Repens</i>	Riverbank Wild-Rye	seeds	
	TOTAL		15lbs/acre	(or 1/2 lb to 1/2 lb per 1,000 sq. feet)		
Meadow Wildflowers (lbs of seed) (to overseed entire area)						
	ASA	25%	<i>Symphoricarpos angustifolius</i>	Redtop	seeds	
	EH	25%	<i>Eupatorium hyssopifolium</i>	Hyssop-leaved boneset	seeds	
	ET	25%	<i>Euthamia tenuifolia</i>	Flat-topped goldenrod	seeds	
	TOTAL		15lbs/acre	(or 1/2 lb to 1/2 lb per 1,000 sq. feet)		

Armonk Upland Meadow						
Symbol	Numbers	Scientific Name	Common Name	Size	Cond.	Spacing
Seed Mix						
GRASSES (Graminoides)						
AS	2	<i>Andropogon scoparius</i>	Little bluestem grass	seeds	50%	
CP	100	<i>Carex pennsylvanica</i>	Pennsylvania sedge	plugs	0% 3' OC	
CV	100	<i>Carex vulpinoidea</i>	Fox sedge	plugs	0% 3' OC	
PV	10	<i>Panicum virgatum</i>	Switchgrass	seeds	30%	
SG	3	<i>Setaria geniculata</i>	Foxtail grass	seeds	20%	
					100%	
MEADOW WILDFLOWER						
AI	200	<i>Asclepia incarnata</i>	Swamp milkweed	seeds	1%	
AT	200	<i>Asclepia tuberosa</i>	Butterflyweed	seeds	10%	
AL	200	<i>Aster linariifolius</i>	Stiff-leaved aster	seeds	10%	
AN	200	<i>Aster novae-angliae</i>	New England aster	seeds	20%	
EP	200	<i>Eupatoriadelphus purpureum</i>	Purple Joe-Pye-weed	seeds	5%	
ET	200	<i>Euthamia tenuifolia</i>	Flat-topped goldenrod	seeds	4%	
LC	200	<i>Lobelia cardinalis</i>	Cardinal flower	seeds	30%	
VH	200	<i>Verbena hastata</i>	Blue vervain	seeds	20%	
	Subtotal:				100%	
TOTALS						

Old Route 22 Plantings						
Symbol	Numbers	Scientific Name	Common Name	Size	Cond.	Spacing
Trees						
ARO	2	<i>Acer Rubrum</i> "October Glory"	"October Glory" Red Maple	2-2 1/2" DBH	B+B	~40'

Armonk Floodplain Forest/shrub swamp						
Symbol	Numbers	Scientific Name	Common Name	Size	Cond.	Spacing
TREES						
AR	120	<i>Alnus rugosa</i>	Speckled alder	6-8 ft.	# 7 CAN	10' OC
AS	45	<i>Acer saccharinum</i>	Silver maple	6-8 ft.	# 7 CAN	10' OC
AC	60	<i>Amelanchier canadensis</i>	Shadbush	6-8 ft.	# 7 CAN	10' OC
BN	100	<i>Betula nigra</i>	River birch	6-8 ft.	# 7 CAN	10' OC
NS	100	<i>Nyssa sylvatica</i>	Black gum	6-8 ft.	# 7 CAN	10' OC
po	120	<i>Platanus occidentalis</i>	American sycamore	6-8 ft.	# 7 CAN	10' OC
qb	150	<i>Quercus bicolor</i>	Swamp white oak			
qp	200	<i>Quercus palustris</i>	Pin oak			
	Subtotal:		895	trees		
SHRUBS						
AA	200	<i>Aronia arbutifolia</i>	Red chokeberry	4-5 ft.	#2 CAN	7' OC
CO	200	<i>Cephalanthus occidentalis</i>	Buttonbush	4-5 ft.	#2 CAN	7' OC
ca	100	<i>Clethra alnifolia</i>	Sweet pepperbush	4-5 ft.	#2 CAN	7' OC
IG	80	<i>Ilex glabra</i>	Inkberry	4-5 ft.	#2 CAN	7' OC
IV	100	<i>Ilex verticillata</i>	Winterberry	4-5 ft.	#2 CAN	7' OC
LB	60	<i>Lindera benzoin</i>	Northern spicebush	4-5 ft.	#2 CAN	7' OC
VR	62	<i>Viburnum regognitum</i>	Northern arrowwood	4-5 ft.	#2 CAN	7' OC
	Subtotal:		802	shrubs		
Forbs						
AC	50	<i>Asclepias incarnata</i>	Swamp milkweed	Tubelings	30% of area	10' OC
AN	50	<i>Aster novae-angliae</i>	New York aster	Tubelings	30% of area	10' OC
CP	50	<i>Caltha palustris</i>	Marsh marigold	Tubelings	30% of area	10' OC
LC	25	<i>Lobelia cardinalis</i>	Cardinal flower	Tubelings	30% of area	10' OC
RT	20	<i>Rudbeckia triloba</i>	Thin-leaf coneflower	Tubelings	30% of area	10' OC
VN	20	<i>Veronica noveboracensis</i>	New York ironweed	Tubelings	30% of area	10' OC
	Subtotal:		215	forbs		
Graminoids						
GRASSES (Graminoides)						
GC	0	<i>Calamagrostis canadensis</i>	Bluejoint	seeds	50%	
CC	100	<i>Carex crinita</i>	Crinkled sedge	plugs	0% 3' OC	
CV	100	<i>Carex vulpinoidea</i>	Fox sedge	plugs	0% 3' OC	
DC	0	<i>Deschampsia cespitosa</i>	Tufted hairgrass	seeds	30%	
SA	0	<i>Scirpus atrovirens</i>	Black bullrush	seeds	20%	
	Subtotal:		200		100%	
Ferns						
PA	50	<i>Onclea sensibilis</i>	Sensitive fern	Quarts	30% of area	10' OC
	40	<i>Osmunda cinnamomea</i>	Cinnamon fern	Quarts	30% of area	10' OC
	Subtotal:		90	ferns		
TOTALS						
				2,002	trees, shrubs, forbs, graminoids and ferns	

Armonk Emergent Marsh						
Symbol	Numbers	Scientific Name	Common Name	Size	Cond.	Spacing
Shrubs (average spacing to be clustered)						
CO	7	<i>Cephalanthus occidentalis</i>	Buttonbush	4-5 ft.	#3 CAN	10' OC
Shrubs (4 in the largest marsh; 1 in each of the other 3)						
Grasses						
GRASSES (Graminoides)						
AV	na	<i>Andropogon virginicus</i>	Broomsedge	seeds	50%	
CC	180	<i>Carex crinita</i>	Crinkled sedge	2"	plugs	3' OC
CS	120	<i>Carex stricta</i>	Tussock sedge	2"	plugs	3' OC
CV	120	<i>Carex vulpinoidea</i>	Fox sedge	2"	plugs	3' OC
JE	150	<i>Juncus effusus</i>	Soft rush	seeds	30% 3' OC	
SA	240	<i>Scirpus atrovirens</i>	Black bullrush	seeds	20% 3' OC	
	Subtotal:		810		100%	15 LBS/acre
Wildflowers						
MEADOW WILDFLOWER						
AI	na	<i>Asclepia incarnata</i>	Swamp milkweed	seeds	30%	
AN	na	<i>Aster novae-angliae</i>	New England aster	seeds	30%	
ANO	50	<i>Aster novi-belgii</i>	New York aster	plugs	3' OC	
CP	50	<i>Caltha palustris</i>	Marsh marigold	plugs	(1-2' apart)	3' OC
LC	na	<i>Lobelia cardinalis</i>	Cardinal flower	seeds	5%	
VN	na	<i>Veronica noveboracensis</i>	New York ironweed	seeds	15%	
	Subtotal:		100		80%	15 LBS/acre



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 BUREAU OF WATER SUPPLY  
 CONTRACT CRO-518, TOWN OF NEW CASTLE, WESTCHESTER COUNTY, NEW YORK  
 WETLAND AND OPEN WATER MITIGATION  
 FORMER ARMONK BOWLING ALLEY SITE

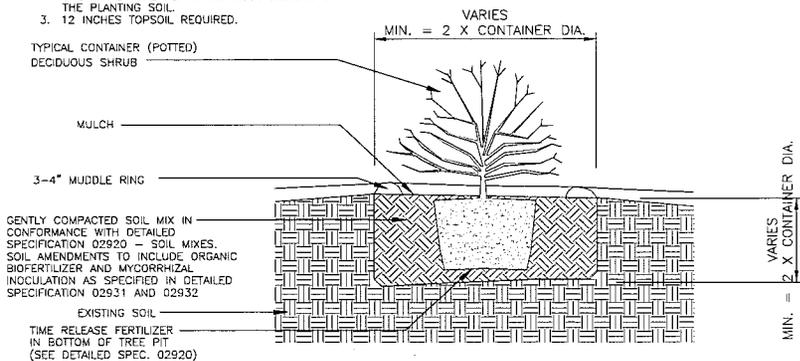
SHEET TITLE  
**PLANTING SCHEDULE**

DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

SCALE: 1"=80'  
 DATE: JULY 2015  
 EXHIBIT NUMBER: 00L-03

NOTE:

- MULCH SHOULD BE PLACED 3" FROM TRUNK BASE TO PREVENT ROTTING.
- PRUNE SHRUB AS RECOMMENDED BY GROWER ONLY AFTER THE PLANT HAS BEEN WATERED IN TO THE PLANTING SOIL.
- 12 INCHES TOPSOIL REQUIRED.



SHRUB PLANTING DETAIL

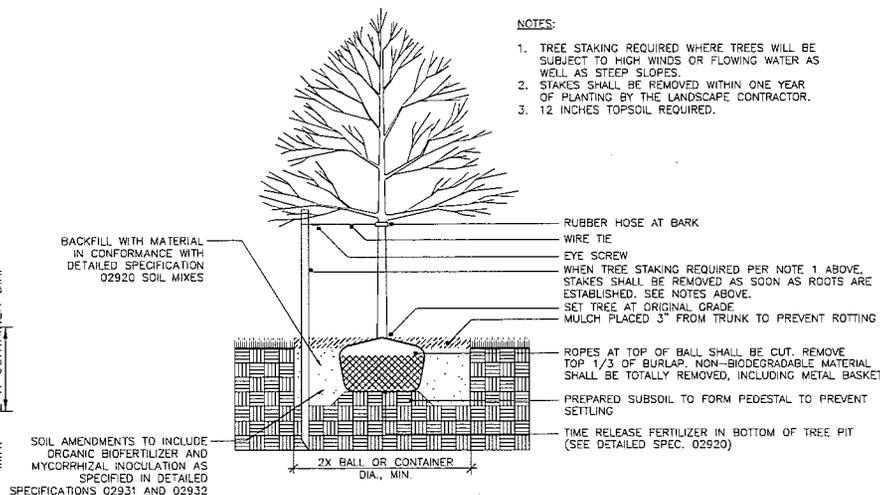
NOT TO SCALE

1

GL-01

NOTES:

- TREE STAKING REQUIRED WHERE TREES WILL BE SUBJECT TO HIGH WINDS OR FLOWING WATER AS WELL AS STEEP SLOPES.
- STAKES SHALL BE REMOVED WITHIN ONE YEAR OF PLANTING BY THE LANDSCAPE CONTRACTOR.
- 12 INCHES TOPSOIL REQUIRED.

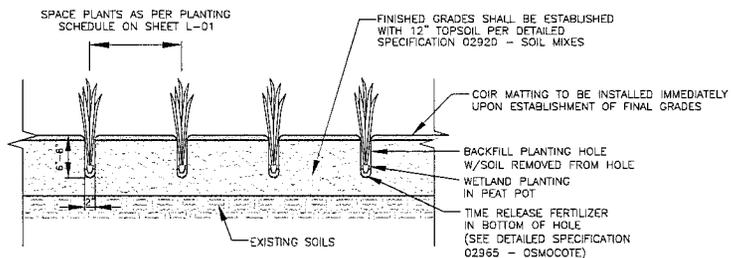


DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

2

GL-01

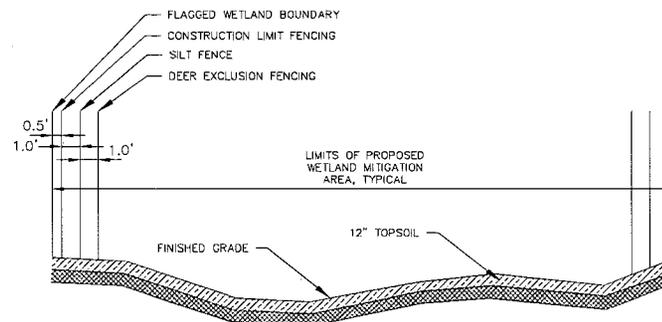


EMERGENT PLANTING DETAIL

NOT TO SCALE

3

GL-01



TYPICAL FENCING INSTALLATION AT SITE BOUNDARY

NOT TO SCALE

4

GL-01



PROJECT TITLE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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FORMER ARMONK BOWLING ALLEY SITE

SHEET TITLE

WETLAND PLANTING DETAILS (1 OF 4)

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

SCALE:

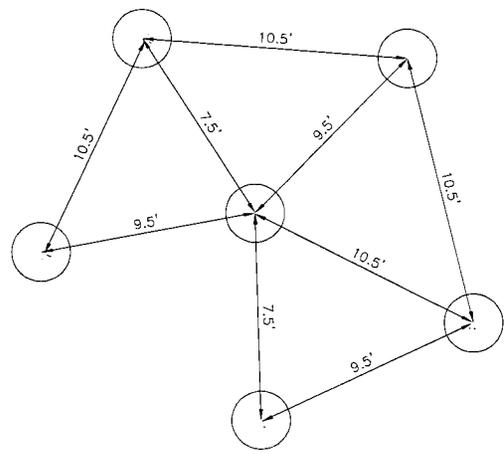
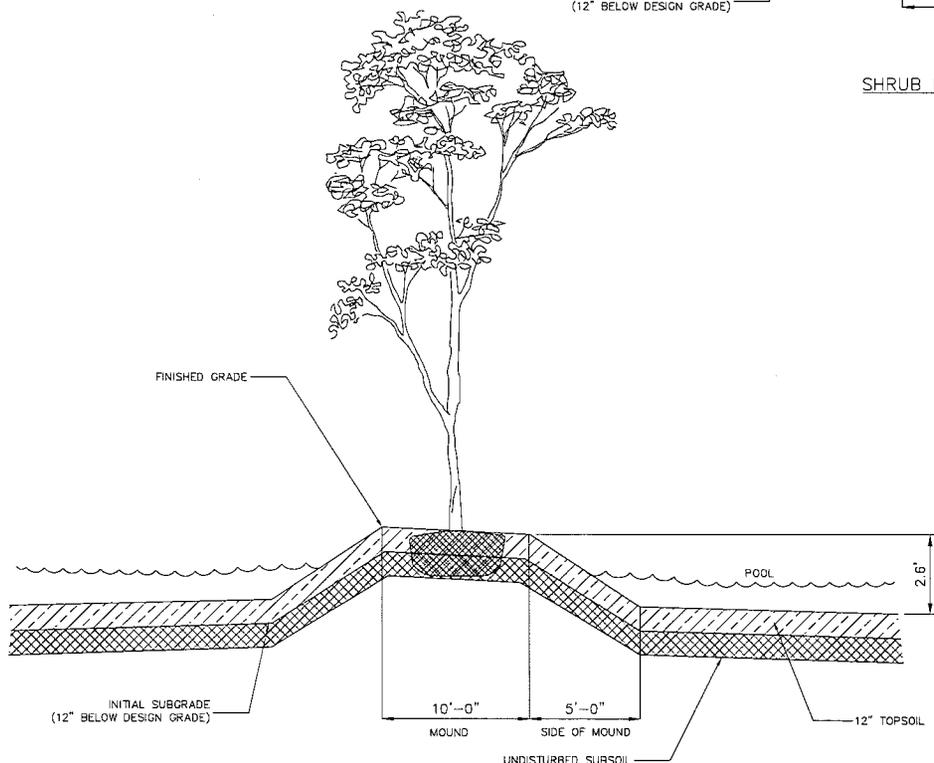
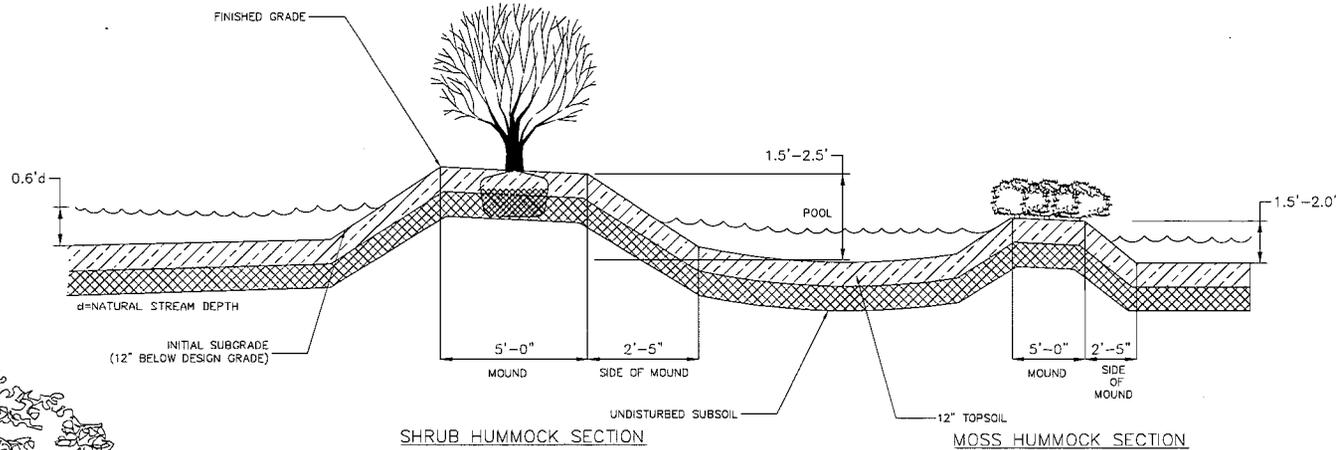
NTS

DATE:

JULY 2015

EXHIBIT NUMBER:

OGL-01



- NOTES:
1. TREE HUMMOCK = 10' TOP DIAMETER
  2. SHRUB HUMMOCK = 5' TOP DIAMETER
  3. MOSS HUMMOCK = 1' TO DIAMETER

HUMMOCK SPACING PLAN

HUMMOCK DETAIL  
NOT TO SCALE

1  
GL-02

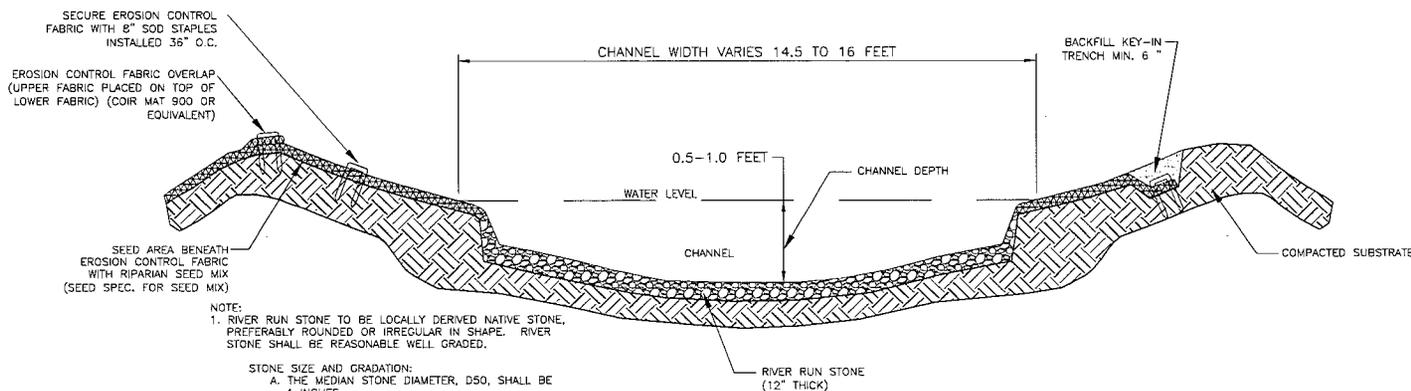


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SHEET TITLE  
**WETLAND PLANTING DETAILS (2 OF 4)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

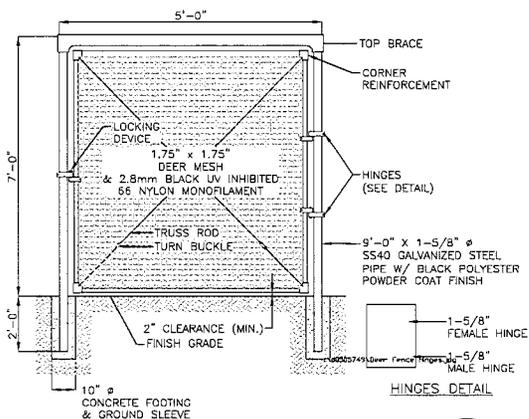
SCALE: NTS  
DATE: JULY 2015  
EXHIBIT NUMBER: OGL-02



**STREAM CHANNEL DETAIL**

NOT TO SCALE

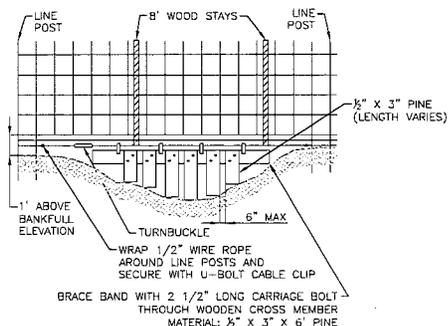
1  
GL-03



**DEER FENCE GATE DETAIL**

NOT TO SCALE

2  
GL-03



**DEER FENCE STREAM CROSSING DETAIL**

NOT TO SCALE

3  
GL-03

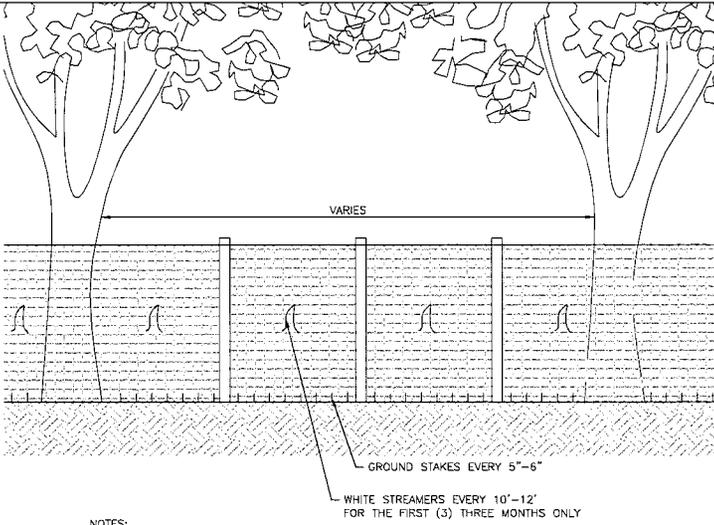


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SHEET TITLE  
**WETLAND PLANTING DETAILS (3 OF 4)**

DESIGNED J.R.  
DRAWN S.C./J.W.  
CHECKED S.D.  
PROJ. DIR. M.P.  
PROJ. MNGR. L.P.

SCALE: NTS  
DATE: JULY 2015  
EXHIBIT NUMBER: OGL-03

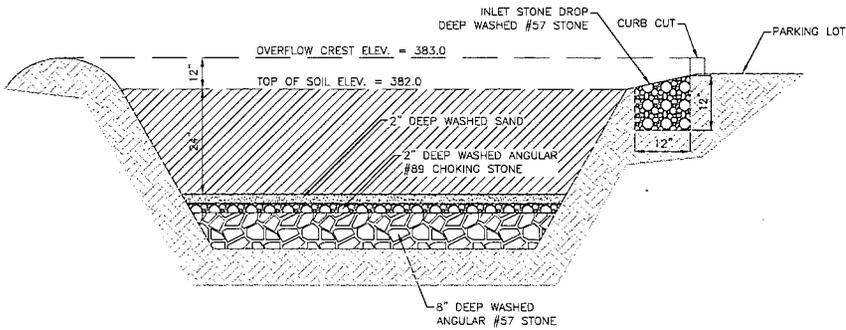


**NOTES:**

1. 7.5' OPEN MESH POLY PROPYLENE DEER FENCING SYSTEM (E.G. BENNER'S GARDEN HEAVY PERIMETER FENCE, OR APPROVED EQUAL) TO BE INSTALLED AROUND THE PERIMETER OF THE PLANTING AS SHOWN ON THIS DRAWING.
2. TREES MAY BE USED TO SUPPORT DEER FENCE.
3. ALL DEER FENCING SHALL BE MAINTAINED FOR THE DURATION OF THE CONTRACT.
4. DEER FENCING SHALL NOT BE NAILED TO ANY TREES.

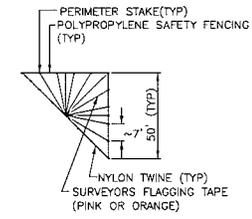
**DEER FENCE DETAIL**  
 NOT TO SCALE

1  
 GL-04

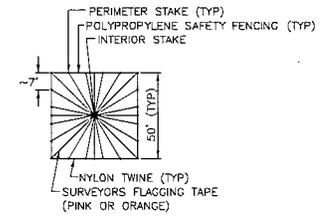


**BIORETENTION DETAIL**  
 NOT TO SCALE

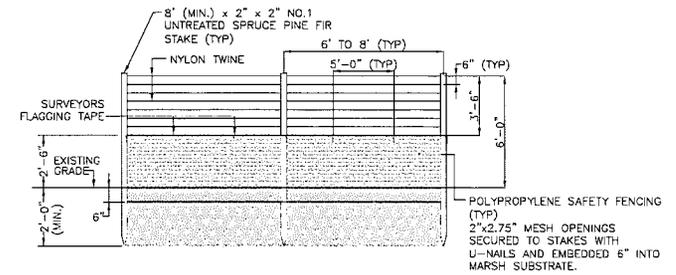
4  
 GL-04



**IRREGULAR GOOSE EXCLUSION FENCE  
 CELL INTERIOR TWINE DETAIL  
 PLAN VIEW**



**GOOSE EXCLUSION FENCE  
 CELL INTERIOR TWINE DETAIL  
 PLAN VIEW**



**NOTES:**

1. GOOSE EXCLUSION FENCE TO BE INSTALLED AROUND THE PERIMETER OF ALL WETLAND PLANTING AREAS AS DETAILED IN SPECIFICATION 02960 - GOOSE EXCLUSION FENCE.

**GOOSE EXCLUSION FENCE SIDE DETAIL**  
 NOT TO SCALE

5  
 GL-04



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**SHEET TITLE**

**WETLAND PLANTING DETAILS (4 OF 4)**

DESIGNED J.R.  
 DRAWN S.C./J.W.  
 CHECKED S.D.  
 PROJ. DIR. M.P.  
 PROJ. MNGR. L.P.

**SCALE:**  
 NTS  
**DATE:**  
 JULY 2015  
**EXHIBIT NUMBER:**  
 OGL-04