CATSKILL AQUEDUCT REPAIR AND REHABILITATION PROJECT

Permit Applications for Wetland Disturbance, Tree Removal, Floodplain Development, and Excavation

Town of Yorktown, NY

Prepared for:



Prepared by:

Henningson, Durham & Richardson Architecture and Engineering, P.C.

July 2018

Town of Yorktown Permit Application Forms

- 1. Wetland and Tree (Including Excavation)
- 2. Floodplain Development
- 3. Excavation

Attachment A - Project Description and Need

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Town of Yorktown Permit Application Forms



TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

Section 36.09	Approval Authority: TE[]PB[]TB[] Application #: Date Received:
Block 1	Date Issued: 1st 90 day Ext:
Lot #34	2 nd 90 day Ext: Paid: \$
Job Site Address: Yorktown-2: Hunters Brook SPS	North Chamber, located west of Hunterbrook Road
City/State/Zip: Yorktown, NY	NOTE: Application, Fee, Short/Long Form EAF, Map/Survey to be submitted to the Engineering
10567	Map/ourvey to be submitted to the Engineering
APPLICANT: (PLEASE PRINT)	OWNER: (PLEASE PRINT)
Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager	YOUR NAME: Wendy Sperduto, P.E., DEP-BEDC Program Manager
NYCDEP Bureau of Eng. Design & COMPANY: Construction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
ADDRESS: 96-05 Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
Corona, New York ZIP_11368	Corona, New York ZIP 11368
PHONE: (718) 595-6133	PHONE: (718) 595-6133
EMAIL: wsperduto@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

APPROVED PLANS AND PERMIT SHALL BE ON-SITE AT ALL TIMES

Permit Type	Approval Authority	Cost – Application Fees are Non-Refundable
WETLAND - LEVEL ONE: ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
WETLAND LEVEL TWO: ADMINISTRATIVE	TOWN ENGINEER	\$800.00 (*) Includes \$500 escrow fee
WETLAND- LEVELTHREE: NON-ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,800.00 (*) Includes \$1,500 escrow fee
BASIC - STORMWATER POLLUTION PREVENTION PLAN - ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
FULL - STORMWATER POLLUTION PREVENTION PLAN - NON- ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,500.00 (*) Includes \$1,200 escrow fee
ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

No application will be processed without the above-mentioned, required information.

Signature:

GENERAL CONDITIONS

1. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the law, all applicable regulations and the conditions specified herein or attached hereto.

Yorktown-2

- 2. The permittee is responsible for maintaining an active application. If no activity occurs within a six (6) month period, as measured from the date of application, the application will become null and void. Applications fees are non-refundable. In addition to the application fee, the applicant will be required to post a bond (refundable) to ensure job completion.
- 3. The permitted work shall be subject to inspection by an authorized representative of the Town of Yorktown, which may order work suspended if the public interest so requires.
- 4. The Town of Yorktown reserves the right to modify, suspend or revoke this permit at any time after due notice when:
 - a) scope of the project is exceeded or a violation of any condition of the permit or provision of the law pertinent regulations are found; or
 - b) permit was obtained by misrepresentation or failure to disclose relevant facts; or
 - c) newly discovered information or significant physical changes are discovered.
- 5. The permittee is responsible for keeping the permit active by requesting renewal from the Approval Authority, including any forms, fees or supplemental information that may be required by the Approval Authority, by written notification, 30 days prior to the expiration date. The expiration date is one year from the date the bond is paid to the Engineering Department. In accordance with Chapter 178 of the Town Code, Freshwater Wetlands, Section 178-16 -Expiration of a Permit.
- 6. This permit shall not be construed as conveying to the applicant any right to trespass upon private lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any right, title or interest in real or personal property held or vested in person not party to this permit.
- 7. The permittee is responsible for obtaining any other permits, approvals, easements and right-of-way, which may be required.
- 8. Any modification of this permit granted by the Approval Authority must be in writing and attached hereto.
- 9. Granting of this permit does not relieve the applicant of the responsibility of obtaining any other permission, consent or approval from the U.S. Army Corps of Engineers, N.Y.C. Department of Environmental Protection, N.Y.S. Department of Environmental Conservation or local government, which may be required.
- 10. All necessary precautions shall be taken to prelude contamination of any wetland or waterway by suspended solids, sediment, fuels, solvents, lubricants, epoxy coating, paints, concrete, leachate or other environmentally deleterious materials associated with the project.
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Werldy Sperduto	
PRINT NAME	
Which Solderto SIGNATURE OF APPLICANT	6/15/18 DATE

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

Section	36.09	Application #:
Block	of solosou what backers who	Date Received: Date Issued:
Lot#	61	1 st 90 day Ext: 2 nd 90 day Ext:
	dress: Yorktown-2A: Hunters Brook SPS Simately 0.25 mile southeast of Jacob Road	Paid: \$ SPS Access Manholes and Blow-off Chambers; located
City/State/Z	V 11 ADV	NOTE: Application, Fee, Short/Long Form EAF, Map/Survey to be submitted to the Engineering
	10598	to A presentative in the train prosper of consequences.
APPLICANT	: (PLEASE PRINT)	OWNER: (PLEASE PRINT)
YOUR NAMI	Wendy Sperduto, P.E., DEP-BEDC E: Program Manager	Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager
COMPANY:	NYCDEP Bureau of Eng. Design & Construction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
ADDRESS:	96-05 Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
Corona, New	York ZIP 11368	Corona, New York ZIP 11368
PHONE: (7	718) 595-6133	PHONE: (718) 595-6133
EMAIL: W	sperduto@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

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FULL - STORMWATER POLLUTION PREVENTION PLAN - NON- ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,500.00 (*) Includes \$1,200 escrow fee
ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

hereby authorize _______to apply for this SWPPP/Wetland Permit/Tree Permit on my behalf.

Signature: Date:

- 1. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the law, all applicable regulations and the conditions specified herein or attached hereto.
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 - a) scope of the project is exceeded or a violation of any condition of the permit or provision of the law pertinent regulations are found; or
 - b) permit was obtained by misrepresentation or failure to disclose relevant facts; or
 - c) newly discovered information or significant physical changes are discovered.
- 5. The permittee is responsible for keeping the permit active by requesting renewal from the Approval Authority, including any forms, fees or supplemental information that may be required by the Approval Authority, by written notification, 30 days prior to the expiration date. The expiration date is one year from the date the bond is paid to the Engineering Department. In accordance with Chapter 178 of the Town Code, Freshwater Wetlands, Section 178-16 -Expiration of a Permit.
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PRINT NAME

Wendy Sperduto

PRINT NAME

SIGNATURE OF APPLICANT

6/20/18 DATE

Property Owner	Property Owner's Address	Section, Block and Lot
VAN DUSEN, H. & WOLF, W.	2200 HUNTERBROOK RD.	36.13-1-8
TOWN OF YORKTOWN	WHITE HILL RD.	36.14-1-20
AHMAD, SYED I. &	2150 HUNTERBROOK RD.	36.13-1-9
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	36.18-1-5
WILKENS, BARBARA J.	1313 WHITE HILL RD.	36.14-1-17
ALVAREZ, ALEJANDRO	1475 WHITE HILL RD.	36.14-1-19
SCHLOMANN, SIDNEY	1510 WHITE HILL RD.	36.13-1-7
PINETREE LANE, LLC	2205 HUNTERBROOK RD.	36.13-1-3
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	36.14-1-21
WILKENS FAMILY FARM, INC.	WHITE HILL RD.	36.18-1-6
GILL, THOMAS K. &	1441 WHITE HILL RD.	36.14-1-18

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

Section 47	.05	Approval Authority: TE [] PB [] TB [] Application #:
Block	Description of the control of the co	Date Received: Date Issued: 1st 90 day Ext:
Lot #1	3 100000	2 nd 90 day Ext:
Job Site Address: roposed location for a new boa	Yorktown-5: Yorktown CCT Acces thole; located north of Turkey Mour Yorktown, NY	ss Manhole, Turkey Mountain SPS North Chamber and the stain Brook and west of the Taconic State Parkway. NOTE: Application, Fee, Short/Long Form EAF, Map/Survey to be submitted to the Engineering
APPLICANT: (PLE	ASE PRINT)	OWNER: (PLEASE PRINT)
Wend YOUR NAME: <u>Prog</u>	dy Sperduto, P.E., DEP-BEDC ram Manager	Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager
COMPANY: NYCD Consti	EP Bureau of Eng. Design & uction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
ADDRESS: 96-05	Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
Corona, New York	ZIP11368	Corona, New York ZIP 11368
PHONE: (718)	595-6133	PHONE: (718) 595-6133
EMAIL: wsperdu	to@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

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ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

a. Lake/pond		Control area of lake/p	ond
b. Stream/River/Brook	and the service of th	Control area of stream	
c. Wetlands		Control area of wetlan	
	Mills Remaind		
work including the driveway, culverts, in	following: i.e. mai	ntenance, constructio	Describe the proposed n of dwelling, addition,
Not applicable		pareen (Asia) en asia su a la la	entro econolidos anticidad
			C' surst methods
minimized to the Committee	Att projecting the ne		324
2b. <u>Stormwater/Excavat</u>	ion - Description o	f proposed activity:	
DEP is proposing the establish	nment of a staging are	ea between Baldwin Road	and Underhill Avenue that
vould cover an area of approx			
he installation of a stabilized of			
equire approximately 730 squ			
000 square feet (0.01 acre) of			f a new boathole. For
more information, see Attachn	nent A of the permit a	pplication package.	
3. TREE REMOVAL:			
Amount of trees and/or st	umps to be remov	red: ²	
Sizes; approximate DBH:			Attachment C
Species of trees to be ren			ack walnut and tulip poplar
		prace manowing.	cement for access road stabilization
Trees marked In field (tre			
Tree removal contractor:		bioi to inspection).	
riee removal contractor.	Not applicable		Date of tree tagging was 08/11/2015
	- 17 S n S n S n	30 785	
Attach survey/sketch indi	cating property bo	oundaries, existing stru	ctures, driveways,
roadways and location of	existing trees. Tre	es must be marked in	the field before
inspection. No. 497 and 499	and can be found on C	id tree index sneets. Trees st -315: Stading Area Plan NRF	the field before cheduled to be removed include Tag I14 Underhill Avenue and Cl-606: Eas
of Hudson Tree L	ocation. Type and Dispo	sition Schedule Sheet 2 of 3.	114 Olideiliiii Aveilde alid Cl-000. Las
of Hudson Tree L. 4. PROPERTY OWNER C	ONSENT: If some	one (e.g. contractor, co	nsultant) is applying on
the owner's behalf, the PR	ROPERTY OWNER	is to complete, sign and	d date this authorization:
PLEASE PRINT:			
CALADA PLANE CONTROL			
	hereby author		to apply
for this SWPPP/Wetland I	Permit/Tree Permit	on my behalf.	
Simpotuno		duran approximation and are	The state of the second second second
Signature:			Date:

PROPOSED ACTIVITY - If not located in wetland/wetland buffer (skip to 2b)

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PRINT NAME		
SIGNATURE OF APPLICANT	6(15/18	
SIGNATURE OF APPLICANT	DATE	

Approval Authority: TE [] PR [] TR []

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

Section	47.19	Application #:
	4	Date Received:
Block	til rakisasil rallita iya list	Date Issued:
	elizate Temperaturanes per	1 st 90 day Ext:
Lot#	25	2 nd 90 day Ext:
		Paid: \$
Job Site Address located within the me City/State/Zi	edian of the Taconic State Parkway,	tain SPS Blow-off Chambers and Access Manholes; blow-off chamber immediately north of Turkey Mountain Brook. NOTE: Application, Fee, Short/Long Form EAF,
Editor	10598	Map/Survey to be submitted to the Engineering
APPLICANT	: (PLEASE PRINT)	OWNER: (PLEASE PRINT)
YOUR NAME	Wendy Sperduto, P.E., DEP-BE Program Manager	Wendy Sperduto, P.E., DEP-BEDC Program Manager VOUR NAME:
COMPANY:	NYCDEP Bureau of Eng. Design 8 Construction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
ADDRESS:	96-05 Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
Corona, New	York ZIP 113	68 Corona, New York ZIP 11368
PHONE: (7	18) 595-6133	PHONE: (_718) 595-6133
EMAIL: WS	sperduto@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

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ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

1.	Description of wetlands (check all that	t apply):		
a. b. c.	Lake/pond Stream/River/Brook Wetlands	X	Control area of lake/po Control area of stream/ Control area of wetland	river/brook	X
DE_act_inc_dis_tem_fee_app	Description of activity in work including the follow driveway, culverts, included P is proposing reconstruction of ivities and streambank restorate ude the installation of a permanent durbance to Turkey Mountain B inporary and permanent disturbed to (0.20 acre). For more informatication package. Stormwater/Excavation -	wing: i.e. ma ling size and of the existing b ion and protect nent new concr rook would be a pance to the 100 tion on the prop	intenance, construction location. low-off chambers, which would ion of Turkey Mountain Broomete culvert. Anticipated temperapproximately 1,160 square in Defoot control area would be a cosed activities, see Attachments.	of dwelling, ald require excave k. Proposed active orary and permand feet (0.03 acre). approximately 8,	ration vities also anent Anticipated 830 square
Bloom ap Br ard 3.]	EP is proposing the excavation ow-off Chambers that would imporary disturbance. Excavation proximately 210 square feet ook, and 7,230 square feet (ea. For more information, see TREE REMOVAL: Dount of trees and/or stumples; approximate DBH:rangers.	result in approation for stream (<0.01 acre) of pee Attachment sto be removed.	oximately 1,600 square feet mbank restoration and protof permanent disturbance permanent disturbance to a A of the permit application wed:	et (0.04 acre) o tection would re to Turkey Mour the 100-foot co n package.	f esult in ntain ntrolled
Spe	cies of trees to be removed son for removal: Clearing/g	d (i.e. Birch, 🤄	Spruce - if known):		
	es marked in field (trees m			es: <u>X</u> No	:
Tree	e removal contractor: Not a			Date of tree 08/13/2015	tagging was
road insp 4. <u>F</u> the	ch survey/sketch indicating dways and location of existence section. See Attachment C for projection and can be found on CI-24 Preparation and Restoration PROPERTY OWNER CONSIDERATE OWNER SEE PRINT:	ting trees. Treet drawings and tree: 0: Site Access Room Turkey Mountaine ENT: If some	ees must be marked in the ree index sheets. Trees scheduled ad Improvements Turkey Mountain SPS, and CI-606: East of Hudson teone (e.g. contractor, cor	he field before to be removed inclu- SPS Blow-off Cham Tree Location, Typ nsultant) is ap	de Tag No. 500-507, hbers, CI-349: Site e and Disposition. plying on
		horoby suth	orizo		to annly
for t	his SWPPP/Wetland Perm	_ nereby auth it/Tree Permi	t on my behalf.		_ to apply
Sign	nature:		Da	ate:	

GENERAL CONDITIONS

Yorktown-6

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PRINT NAME

Wendy Spenduto

PRINT NAME

SIGNATURE OF APPLICANT

Property Owner	Property Owner's Address	Section, Block and Lot
GOJCAJ, JOHN & VALENTINA	1204 UNDERHILL AVE.	47.20-1-6
HAXHIAJ, IDRIZ &	1315 ECHO HILL PATH	47.19-1-17
RING, DAVID & ANNE	1140 BALDWIN RD.	47.19-1-24
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	47.15-1-13
BRUCAJ, SADIK	1303 ECHO HILL PATH	47.19-1-15
YANCOPOULOS, KAREN	1280 ECHO HILL PATH	47.19-1-22
LENSETH, ROBERT L., JR. &	1145 &1155 BALDWIN RD.	47.19-1-12
GRIFFIN, WILLIAM A. &	1211 UNDERHILL AVE.	47.20-1-3
BRICCETTI, JOHN & LOREN	1275 ECHO HILL PATH	47.19-1-14
STANTON, HENRY J. &	1221 UNDERHILL AVE.	47.20-1-5
SANCHEZ, JOAN	1241 UNDERHILL AVE.	47.19-1-11
CELAJ, SEJDIJA &	1217 UNDERHILL AVE.	47.20-1-4

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

Section	58.08	Approval Authority: TE [] PB [] TB [] Application #:
Block	1 variet beelle us to leg	Date Received: Date Issued: 1st 90 day Ext: 2nd 90 day Ext:
Job Site Add	Iress: Yorktown-7: Turkey Mountain South	Paid: \$ Chamber; located east of the Taconic State Parkway
City/State/Zi	Yorktown, NY	NOTE: Application, Fee, Short/Long Form EAF,
	10598	Map/Survey to be submitted to the Engineering
APPLICANT:	(PLEASE PRINT)	OWNER: (PLEASE PRINT)
YOUR NAME	Wendy Sperduto, P.E., DEP-BEDC Program Manager	YOUR NAME: Wendy Sperduto, P.E., DEP-BEDC Program Manager
	NYCDEP Bureau of Eng. Design & Construction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
ADDRESS:	96-05 Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
Corona, New	York ZIP 11368	Corona, New York ZIP 11368
PHONE: (7	18) 595-6133	PHONE: (718) 595-6133
EMAIL: WS	perduto@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

APPROVED PLANS AND PERMIT SHALL BE ON-SITE AT ALL TIMES

Permit Type	Approval Authority	Cost – Application Fees are Non-Refundable
WETLAND - LEVEL ONE: ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
WETLAND – LEVEL TWO: ADMINISTRATIVE	TOWN ENGINEER	\$800.00 (*) Includes \$500 escrow fee
WETLAND- LEVELTHREE: NON-ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,800.00 (*) Includes \$1,500 escrow fee
BASIC - STORMWATER POLLUTION PREVENTION PLAN - ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
FULL - STORMWATER POLLUTION PREVENTION PLAN - NON- ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,500.00 (*) Includes \$1,200 escrow fee
ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

	Description of wetlar	ıds (check all tha	at apply):	tavis, ota
a.	Lake/pond		Control area of lake/pon	q
b.	Stream/River/Brook	Approval Author	Control area of stream/r	
C.	Wetlands	E model legal	Control area of wetlands	MARKAN S
2a.		ollowing: i.e. m	l and/or wetland buffer. Daintenance, construction diocation.	
No	t applicable			part contraling and Wallet
(80)	rant approprie		To the second services	
	Aug and the self-	still it you wit quality	- MGU	
2b.	Stormwater/Excavati	on - Description	of proposed activity:	
Not	applicable	republicano su propie	oranger an arms	TO MINE TO SERVICE HEAVY
		age Versions		Action may 1986 William
_		The Company was		Carte de la contraction de
Amo		18.3 dbh; see Cl	oved: 1 -607.00 in Attachment C , Spruce - if known) : White	e Ash
	son for removal: Tre			
	es marked In field (tree	s must be mark	ed prior to inspection). Ve	
			ed prior to mapections. Te	es: <u>X</u> No:
Tre	e removal contractor:			Date of tree tagging was 11/09/2016
Tre				Date of tree tagging was
Attaroacinsp	e removal contractor: ach survey/sketch indi dways and location of pection. See Attachment C and can be found of 4 and CI-606: E PROPERTY OWNER C	cating property I existing trees. To for project drawings on CI-242: Site Accessat of Hudson Tree I ONSENT: If som	boundaries, existing struct rees must be marked in the and tree index sheets. The tree s	Date of tree tagging was 11/09/2016 tures, driveways, e field before cheduled for removal is Tag No. 1109 ountain SPS South Chamber Sheet 2 hedule Sheet 2 of 3. sultant) is applying on
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PROPOSED ACTIVITY - If not located in wetland/wetland buffer (skip to 2b)

GENERAL CONDITIONS
Yorktown-7

1. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the law, all applicable regulations and the conditions specified herein or attached hereto.

- 2. The permittee is responsible for maintaining an active application. If no activity occurs within a six (6) month period, as measured from the date of application, the application will become null and void. Applications fees are non-refundable. In addition to the application fee, the applicant will be required to post a bond (refundable) to ensure job completion.
- 3. The permitted work shall be subject to inspection by an authorized representative of the Town of Yorktown, which may order work suspended if the public interest so requires.
- 4. The Town of Yorktown reserves the right to modify, suspend or revoke this permit at any time after due notice when:
 - a) scope of the project is exceeded or a violation of any condition of the permit or provision of the law pertinent regulations are found; or
 - b) permit was obtained by misrepresentation or failure to disclose relevant facts; or
 - c) newly discovered information or significant physical changes are discovered.
- 5. The permittee is responsible for keeping the permit active by requesting renewal from the Approval Authority, including any forms, fees or supplemental information that may be required by the Approval Authority, by written notification, 30 days prior to the expiration date. The expiration date is one year from the date the bond is paid to the Engineering Department. In accordance with Chapter 178 of the Town Code, Freshwater Wetlands, Section 178-16 -Expiration of a Permit.
- 6. This permit shall not be construed as conveying to the applicant any right to trespass upon private lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any right, title or interest in real or personal property held or vested in person not party to this permit.
- 7. The permittee is responsible for obtaining any other permits, approvals, easements and right-of-way, which may be required.
- 8. Any modification of this permit granted by the Approval Authority must be in writing and attached hereto.
- 9. Granting of this permit does not relieve the applicant of the responsibility of obtaining any other permission, consent or approval from the U.S. Army Corps of Engineers, N.Y.C. Department of Environmental Protection, N.Y.S. Department of Environmental Conservation or local government, which may be required.
- 10. All necessary precautions shall be taken to prelude contamination of any wetland or waterway by suspended solids, sediment, fuels, solvents, lubricants, epoxy coating, paints, concrete, leachate or other environmentally deleterious materials associated with the project.
- 11. All activities authorized by this permit must be in strict conformance with the approved plans submitted by the 1 applicant or his agent as part of the permit application.
- 12. To prevent silting to the wetlands, erosion controls shall be installed. The erosion controls shall be continuously maintained to prevent silting of the wetlands and shall be replaced as necessary or upon the direction of the Environmental Code Officer.

PRINT NAME

Lilian Spender do

SIGNATURE OF APPLICANT

DATE

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

Section 58.08	Approval Authority: TE[] PB[] TB[] Application #:
Block 2	Date Received: Date Issued: 1st 90 day Ext:
Lot # Not applicable	2 nd 90 day Ext:
Job Site Address: Yorktown-8: Croton Lake PT Down Chamber; site access is provided by an access road that connects Yorktown, NY 10598	ntake Chamber, and Croton Lake PT Blow-off and Waste-Gate to Chapman Road NOTE: Application, Fee, Short/Long Form EAF, Map/Survey to be submitted to the Engineering
APPLICANT: (PLEASE PRINT) Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager	OWNER: (PLEASE PRINT) Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager
NYCDEP Bureau of Eng. Design & COMPANY: Construction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
ADDRESS: 96-05 Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
Corona, New York ZIP 11368	Corona, New York ZIP 11368
PHONE: (718) 595-6133	PHONE: (718) 595-6133
EMAIL: wsperduto@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

APPROVED PLANS AND PERMIT SHALL BE ON-SITE AT ALL TIMES

Permit Type	Approval Authority	Cost – Application Fees are Non-Refundable
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FULL - STORMWATER POLLUTION PREVENTION PLAN - NON- ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,500.00 (*) Includes \$1,200 escrow fee
ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

b. Stream/River/Brook Control area of stream/river/brook C. Wetlands Control area of stream/river/brook C. Wetlands Control area of wetlands 2a. Description of activity in the wetland and/or wetland buffer. Describe the prop work including the following: i.e. maintenance, construction of dwelling, add driveway, culverts, including size and location. Not applicable 2b. Stormwater/Excavation - Description of proposed activity: DEP is proposing the replacement of blow-off valves and waste gate. This location would as a primary staging area, encompassing approximately 33.590 square feet (0.77 acre) and would entail approximately 3.750 square feet of excavation (0.09 acre). Proposed activities including access road improvements, including placement of steel plates over two existing culverts and leveling. For more information, see Attachment A of the application package. 3. TREE REMOVAL: Amount of trees and/or stumps to be removed: Not applicable Sizes; approximate DBH: Not applicable Species of trees to be removed (i.e. Birch, Spruce - if known): Not applicable Reason for removal: Not applicable Trees marked in field (trees must be marked prior to inspection): Yes: No: Tree removal contractor: Attach survey/sketch indicating property boundaries, existing structures, driveways, roadways and location of existing trees. Trees must be marked in the field before inspection. 4. PROPERTY OWNER CONSENT: If someone (e.g. contractor, consultant) is applying the owner's behalf, the PROPERTY OWNER is to complete, sign and date this authoriza PLEASE PRINT: In hereby authorize for this SWPPP/Wetland Permit/Tree Permit on my behalf.	a.	Lake/pond	Control area of lake/pond
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	3. The Size Specked Tree Tree Attacroad insp	cies of trees and/or stumps to s; approximate DBH: Not applicies of trees to be removed (i. Son for removal: Not applicables marked In field (trees must removal contractor: Ch survey/sketch indicating plways and location of existing ection. ROPERTY OWNER CONSENT OWNER'S behalf, the PROPERTY CASE PRINT:	be removed: Not applicable e. Birch, Spruce - if known): Not applicable be marked prior to inspection): Yes: No: roperty boundaries, existing structures, driveways, trees. Trees must be marked in the field before I: If someone (e.g. contractor, consultant) is applying OWNER is to complete, sign and date this authorization.
Signature: Date:	3. TAMO Size Spec Reas Tree Tree Attacroad insp	cies of trees and/or stumps to s; approximate DBH: Not applicate of trees to be removed (i. son for removal: Not applicable marked In field (trees must removal contractor:	be removed: Not applicable e. Birch, Spruce - if known): Not applicable le be marked prior to inspection): Yes: No: roperty boundaries, existing structures, driveways, trees. Trees must be marked in the field before T: If someone (e.g. contractor, consultant) is applying YOWNER is to complete, sign and date this authorizative preby authorize to ree Permit on my behalf.

PROPOSED ACTIVITY - If not located in wetland/wetland buffer (skip to 2b)

- 1. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the law, all applicable regulations and the conditions specified herein or attached hereto.
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 - a) scope of the project is exceeded or a violation of any condition of the permit or provision of the law pertinent regulations are found; or
 - b) permit was obtained by misrepresentation or failure to disclose relevant facts; or
 - c) newly discovered information or significant physical changes are discovered.
- 5. The permittee is responsible for keeping the permit active by requesting renewal from the Approval Authority, including any forms, fees or supplemental information that may be required by the Approval Authority, by written notification, 30 days prior to the expiration date. The expiration date is one year from the date the bond is paid to the Engineering Department. In accordance with Chapter 178 of the Town Code, Freshwater Wetlands, Section 178-16 -Expiration of a Permit.
- 6. This permit shall not be construed as conveying to the applicant any right to trespass upon private lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any right, title or interest in real or personal property held or vested in person not party to this permit.
- 7. The permittee is responsible for obtaining any other permits, approvals, easements and right-of-way, which may be required.
- 8. Any modification of this permit granted by the Approval Authority must be in writing and attached hereto.
- 9. Granting of this permit does not relieve the applicant of the responsibility of obtaining any other permission, consent or approval from the U.S. Army Corps of Engineers, N.Y.C. Department of Environmental Protection, N.Y.S. Department of Environmental Conservation or local government, which may be required.
- 10. All necessary precautions shall be taken to prelude contamination of any wetland or waterway by suspended solids, sediment, fuels, solvents, lubricants, epoxy coating, paints, concrete, leachate or other environmentally deleterious materials associated with the project.
- 11. All activities authorized by this permit must be in strict conformance with the approved plans submitted by the 1 applicant or his agent as part of the permit application.
- 12. To prevent silting to the wetlands, erosion controls shall be installed. The erosion controls shall be continuously maintained to prevent silting of the wetlands and shall be replaced as necessary or upon the direction of the Environmental Code Officer.

Vendy Sperauto	
PRINT NAME	
Ukidy Spenderto	6/25/18
SIGNATURE OF APPLICANT	DATE

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

	Section	58.16	minute ocumo tono	Approval Authority: IE[] PB[] IB[] Application #:
		7		Date Received:
	Block	7	nothing mirrors to	Date Issued:
				1 st 90 day Ext:
	Lot #	Not applicabl	е	2 nd 90 day Ext:
				Paid: \$
A	Job Site Ad	dress: Yorktow	vn-9: Croton Lake PT L	Jptake Chamber, Croton CCT Boathole, Leak 7, Croton CCT
Acces	s Manhole; site	access is provided	by a DEP access road	d that connects to Croton Dam Road NOTE: Application, Fee, Short/Long Form EAF,
	City/State/2	Zip: Yor	ktown, NY	
		106	562	Map/Survey to be submitted to the Engineering
			J02	
	APPI ICAN	T: (PLEASE PF	DINT	OWNER: (PLEASE PRINT)
	AFFLIOAN			
	YOUR NAM	IE: Program Mai	duto, P.E., DEP-BEDC	Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager
			au of Eng. Design &	NYCDEP Bureau of Eng. Design &
	COMPANY:	Construction	tu or Eng. Design &	COMPANY: Construction
	ADDRESS:	96-05 Horace H	larding Expressway	ADDRESS: 96-05 Horace Harding Expressway
	Conser No.	V= d-	112C0	0 N N 1
	Corona, Nev	V YORK	ZIP11368_	Corona, New York ZIP 11368
	PHONE: (718) 595-6133		PHONE: (718) 595-6133
4	THOME. L	1 292-0133	Fig. 1 (2010) Halleston	
	EMAIL: V	vsperduto@dep	o.nyc.gov	EMAIL: wsperduto@dep.nyc.gov
		•		

APPROVED PLANS AND PERMIT SHALL BE ON-SITE AT ALL TIMES

Permit Type	Approval Authority	Cost – Application Fees are Non-Refundable
WETLAND - LEVEL ONE: ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
WETLAND – LEVEL TWO: ADMINISTRATIVE	TOWN ENGINEER	\$800.00 (*) Includes \$500 escrow fee
WETLAND- LEVELTHREE: NON-ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,800.00 (*) Includes \$1,500 escrow fee
BASIC - STORMWATER POLLUTION PREVENTION PLAN - ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
FULL - STORMWATER POLLUTION PREVENTION PLAN - NON- ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,500.00 (*) Includes \$1,200 escrow fee
ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

PRO	OPOSED ACTIVITY -	If not located in	wetland/wetland buffer	(skip to 2b)	Yorktown-9
1.	Description of wetla	nds (check all th	at apply):		
a.	Lake/pond		Control area of lake/	oond	
b.	Stream/River/Brook	TOTAL ENGINEE	Control area of stream	m/river/brook	
c.	Wetlands	de uniten entit	Control area of wetla	nds _	Sumbers.
2a.	Description of activition work including the driveway, culverts, i	following: i.e. m	d and/or wetland buffer. naintenance, construction d location.	Describe the poor of dwelling, a	roposed addition,
No	t applicable		Outro TO LIVERS OF		
runii	out the majoritan		**************************************		entitions)
				EQ.	W1-
2b.	Stormwater/Excavat	tion - Description	of proposed activity:		
500 s activi leak 5.0 c	square feet (0.01 acre) of ities also include internal repair is unsuccessful. In ubic yards of excavation	f excavation to acce repairs to Leak 7, a stallation of the pas . The footprint of dis	t at the CCT Boathole that was the cover of the existing and installation of a passive dechlorination system turbance for this work is apparent A of the permit application.	boathole. Proposed dechlorination syste would require appro proximately 15,200 s	m if ximately
3. <u>1</u>	REE REMOVAL:				
Amo Size	ount of trees and/or ses; approximate DBH:	tumps to be remo	oved: 3 dbh to 9.0 dbh; see Cl-60	07.00 in Attachme	nt C
Rea	son for removal: Tre	e removal for acc	, Spruce - if known): Reess road improvements		- Intal
	es marked In field (tre e removal contractor:		ed <u>prior</u> to inspection):	Yes: X No: Date of tree ta 11/09/2016	gging was
		FREE PARTY	MB MOOF II BOOKE		
road	dways and location of ection. See Attachment C f and 1098, and can	f existing trees. T	boundaries, existing straces must be marked in tree index sheets. Trees schedule Preparation and Restoration Leaule Sheet 3 of 3.	the field before	
	ROPERTY OWNER C	ONSENT: If som	neone (e.g. contractor, c R is to complete, sign ar		
PL	EASE PRINT:				
·		hereby aut			to apply
for t	his SWPPP/Wetland	Permit/Tree Perm	nit on my behalf.		
Sigr	nature:	all and the Williams and	Estedin two gilles to its on its	Date:	

GENERAL CONDITIONS
Yorktown-9

1. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the law, all applicable regulations and the conditions specified herein or attached hereto.

- 2. The permittee is responsible for maintaining an active application. If no activity occurs within a six (6) month period, as measured from the date of application, the application will become null and void. <u>Applications fees are non-refundable</u>. In addition to the application fee, the applicant will be required to post a bond (refundable) to ensure job completion.
- 3. The permitted work shall be subject to inspection by an authorized representative of the Town of Yorktown, which may order work suspended if the public interest so requires.
- 4. The Town of Yorktown reserves the right to modify, suspend or revoke this permit at any time after due notice when:
 - a) scope of the project is exceeded or a violation of any condition of the permit or provision of the law pertinent regulations are found; or
 - b) permit was obtained by misrepresentation or failure to disclose relevant facts; or
 - c) newly discovered information or significant physical changes are discovered.
- 5. The permittee is responsible for keeping the permit active by requesting renewal from the Approval Authority, including any forms, fees or supplemental information that may be required by the Approval Authority, by written notification, 30 days prior to the expiration date. The expiration date is one year from the date the bond is paid to the Engineering Department. In accordance with Chapter 178 of the Town Code, Freshwater Wetlands, Section 178-16 -Expiration of a Permit.
- 6. This permit shall not be construed as conveying to the applicant any right to trespass upon private lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any right, title or interest in real or personal property held or vested in person not party to this permit.
- 7. The permittee is responsible for obtaining any other permits, approvals, easements and right-of-way, which may be required.
- 8. Any modification of this permit granted by the Approval Authority must be in writing and attached hereto.
- 9. Granting of this permit does not relieve the applicant of the responsibility of obtaining any other permission, consent or approval from the U.S. Army Corps of Engineers, N.Y.C. Department of Environmental Protection, N.Y.S. Department of Environmental Conservation or local government, which may be required.
- 10. All necessary precautions shall be taken to prelude contamination of any wetland or waterway by suspended solids, sediment, fuels, solvents, lubricants, epoxy coating, paints, concrete, leachate or other environmentally deleterious materials associated with the project.
- 11. All activities authorized by this permit must be in strict conformance with the approved plans submitted by the 1 applicant or his agent as part of the permit application.
- 12. To prevent silting to the wetlands, erosion controls shall be installed. The erosion controls shall be continuously maintained to prevent silting of the wetlands and shall be replaced as necessary or upon the direction of the Environmental Code Officer.

Wendy Sperduto	
PRINT NAME	
Wardy Sperdento	6125/18
SIGNATURE OF APPLICANT	DATE

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

	Section 70	0.09	Application #:
	Block	18	Date Received:
	Lot # Not	applicable applicable	1 st 90 day Ext: 2 nd 90 day Ext: Paid: \$
	Job Site Address		ess Manhole with Culvert Drain; located north of Kitchawan Road
mm	ediately north of unname City/State/Zip:	d tributary 3 to New Croton Reservoir Yorktown, NY	NOTE: Application, Fee, Short/Long Form EAF,
	of sent state to the	10562	Map/Survey to be submitted to the Engineering
	APPLICANT: (PLE	EASE PRINT)	OWNER: (PLEASE PRINT)
	YOUR NAME: Pro	endy Sperduto, P.E., DEP-BEDC ogram Manager	Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager
		DEP Bureau of Eng. Design & ruction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
	ADDRESS: 96-05	Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
	Corona, New York	ZIP11368	Corona, New York ZIP 11368
	PHONE: (718)	595-6133	PHONE: (718) 595-6133
	EMAIL: wsperdu	uto@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

APPROVED PLANS AND PERMIT SHALL BE ON-SITE AT ALL TIMES

Permit Type	Approval Authority	Cost – Application Fees are Non-Refundable
WETLAND - LEVEL ONE: ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
WETLAND - LEVEL TWO: ADMINISTRATIVE	TOWN ENGINEER	\$800.00 (*) Includes \$500 escrow fee
WETLAND- LEVELTHREE: NON-ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,800.00 (*) Includes \$1,500 escrow fee
BASIC - STORMWATER POLLUTION PREVENTION PLAN - ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
FULL - STORMWATER POLLUTION PREVENTION PLAN - NON- ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,500.00 (*) Includes \$1,200 escrow fee
ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

1.	Description of wetlan	nds (check all tha	at apply):	
a. b. c.	Lake/pond Stream/River/Brook Wetlands	X	Control area of lake/pond Control area of stream/river Control area of wetlands	r/brook X
2a.		following: i.e. m	and/or wetland buffer. Desc aintenance, construction of o	
div	ich would entail restoration of ersion, and installation of ess road construction are	on of the riprap apr f a turbidity curtain. nd staging. Anticipa	acement and streambank restora ons at the culvert's inlet and outle Proposed activities would also in ated temporary disturbance to trib feet (0.01 acre). Anticipated temp	et, a temporary stream nclude temporary outary 3 to New Croton
the	100-foot control area wo	ould be approximat	ely 4,810 square feet (0.11 acre). nation, see Attachment A of the a	. Permanent effects
	Stormwater/Excavati			pplication package.
			d temporarily disturbed 4,810 so he application package.	quare reet (0.11 acre).
	TREE REMOVAL: ount of trees and/or st	tumps to be remo	oved: 4	
Size	es; approximate DBH:	Ranges from 10.0 d	bh to 26.0 dbh; see CI-606.00 & CI-60	
			Spruce - if known): _Tulip Poporary access road construction	plar
Tre	es marked in field (tree	es must be mark	ed prior to inspection): Yes:	X No:
Tre	e removal contractor:	Not applicable		Date of tree tagging was 08/18/2015
Atta	nch survey/sketch indi	cating property k	ooundaries, existing structure	es, driveways,
road insp	Dection. See Attachment C for can be found on EA-	or project drawings and t -158: Area Plan STA 348	rees must be marked in the figure index sheets. Trees scheduled for rem 30+00 to STA 3503+00, CI-606: East of Hudson Tree Location, Type and the state of Hudson Tree Location, Type and Tree Location T	noval include Tag No. 654-657 a adson Tree Location, Type and
	PROPERTY OWNER C	ONSENT: If som	eone (e.g. contractor, consult	tant) is applying on
the	owner's behalf, the PR	ROPERTY OWNER	R is to complete, sign and date	this authorization:
PL	EASE PRINT:			
,		hereby autl	horize	to apply
for	this SWPPP/Wetland F	Permit/Tree Perm	it on my behalf.	
Sig	nature:	a prince throw years in the	Date:	Mines a 2 year military
N	o application will be p	orocessed withou	at the above-mentioned, requi	ired information.

PROPOSED ACTIVITY - If not located in wetland/wetland buffer (skip to 2b)

GENERAL CONDITIONS

Yorktown-10

1. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the law, all applicable regulations and the conditions specified herein or attached hereto.

- 2. The permittee is responsible for maintaining an active application. If no activity occurs within a six (6) month period, as measured from the date of application, the application will become null and void. Applications fees are non-refundable. In addition to the application fee, the applicant will be required to post a bond (refundable) to ensure job completion.
- 3. The permitted work shall be subject to inspection by an authorized representative of the Town of Yorktown, which may order work suspended if the public interest so requires.
- 4. The Town of Yorktown reserves the right to modify, suspend or revoke this permit at any time after due notice when:
 - a) scope of the project is exceeded or a violation of any condition of the permit or provision of the law pertinent regulations are found; or
 - b) permit was obtained by misrepresentation or failure to disclose relevant facts; or
 - c) newly discovered information or significant physical changes are discovered.
- 5. The permittee is responsible for keeping the permit active by requesting renewal from the Approval Authority, including any forms, fees or supplemental information that may be required by the Approval Authority, by written notification, 30 days prior to the expiration date. The expiration date is one year from the date the bond is paid to the Engineering Department. In accordance with Chapter 178 of the Town Code, Freshwater Wetlands, Section 178-16 -Expiration of a Permit.
- 6. This permit shall not be construed as conveying to the applicant any right to trespass upon private lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any right, title or interest in real or personal property held or vested in person not party to this permit.
- 7. The permittee is responsible for obtaining any other permits, approvals, easements and right-of-way, which may be required.
- 8. Any modification of this permit granted by the Approval Authority must be in writing and attached hereto.
- 9. Granting of this permit does not relieve the applicant of the responsibility of obtaining any other permission, consent or approval from the U.S. Army Corps of Engineers, N.Y.C. Department of Environmental Protection, N.Y.S. Department of Environmental Conservation or local government, which may be required.
- 10. All necessary precautions shall be taken to prelude contamination of any wetland or waterway by suspended solids, sediment, fuels, solvents, lubricants, epoxy coating, paints, concrete, leachate or other environmentally deleterious materials associated with the project.
- 11. All activities authorized by this permit must be in strict conformance with the approved plans submitted by the 1 applicant or his agent as part of the permit application.
- 12. To prevent silting to the wetlands, erosion controls shall be installed. The erosion controls shall be continuously maintained to prevent silting of the wetlands and shall be replaced as necessary or upon the direction of the Environmental Code Officer.

Wendy Sperduto PRINT NAME		
PRINT NAME		
SIGNATURE OF APPLICANT	6/25/18	
SIGNATURE OF APPLICANT	DATE	

Adjacent property owne	rs within 100 feet of Yorktown-10 Wor	k Site (Wetland Application)
Property Owner	Property Owner's Address	Section, Block and Lot
INTERNATIONAL BUSINESS	AQUEDUCT ST.	70.05-1-5
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	70.09-1-18
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	70.05-1-2
CENTERLINE FARM LLC	800 OLD KITCHAWAN RD. NORTH	70.05-1-9
TEATOWN LAKE RESERVATION	800 KITCHAWAN RD.	70.05-1-1
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	70.05-1-15
TEATOWN LAKE RESERVATON,	KITCHAWAN RD.	70.09-1-17
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	70.05-1-14

Yorktown-11

TOWN OF YORKTOWN - ENGINEERING DEPARTMENT STORMWATER POLLUTION PREVENTION PERMIT APPLICATION WETLAND PERMIT APPLICATION and/or TREE PERMIT APPLICATION

Section 70.09	Approval Authority: TE [] PB [] TB [] Application #:
Block 1	Date Received: Date Issued: 1st 90 day Ext:
Lot # Not applicable	2 nd 90 day Ext:
Job Site Address: Yorktown-11: Kitchawan CCT Ac	cess Manhole; site is accessed from Pines Bridge Road
City/State/Zip: Yorktown, NY	NOTE: Application, Fee, Short/Long Form EAF,
10562	Map/Survey to be submitted to the Engineering
APPLICANT: (PLEASE PRINT)	OWNER: (PLEASE PRINT)
Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager	Wendy Sperduto, P.E., DEP-BEDC YOUR NAME: Program Manager
NYCDEP Bureau of Eng. Design & COMPANY: Construction	NYCDEP Bureau of Eng. Design & COMPANY: Construction
ADDRESS: 96-05 Horace Harding Expressway	ADDRESS: 96-05 Horace Harding Expressway
Corona, New York ZIP 11368	Corona, New York ZIP 11368
PHONE: (718) 595-6133	PHONE: (718) 595-6133
EMAIL: wsperduto@dep.nyc.gov	EMAIL: wsperduto@dep.nyc.gov

APPROVED PLANS AND PERMIT SHALL BE ON-SITE AT ALL TIMES

Permit Type	Approval Authority	Cost – Application Fees are Non-Refundable
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BASIC - STORMWATER POLLUTION PREVENTION PLAN - ADMINISTRATIVE	TOWN ENGINEER	\$300.00 – application fee
FULL - STORMWATER POLLUTION PREVENTION PLAN - NON- ADMINISTRATIVE	TOWN BOARD/PLANNING BOARD	\$1,500.00 (*) Includes \$1,200 escrow fee
ADMINISTRATIVE TREE PERMIT	TOWN ENGINEER	\$0.00

Application fees are doubled (i.e.\$300 becomes \$600) with issuance of a Stop Work Order as per amended Town Code Section 178-18(a).

No application will be processed without the above-mentioned, required information.

Signature:

Date:

GENERAL CONDITIONS
Yorktown-11

1. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the law, all applicable regulations and the conditions specified herein or attached hereto.

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 - b) permit was obtained by misrepresentation or failure to disclose relevant facts; or
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Wendy Sperduto
PRINT NAME

Wendy Sperduto

Clis 18

SIGNATURE OF APPLICANT

DATE

Property Owner	Property Owner's Address	Section, Block and Lot
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	70.09-1-18
MORMON CHURCH	KITCHAWAN RD.	70.09-1-34
PUFF, ERWIN & ANNE	210 CHADEAYNE RD.	70.09-1-40
LIPS, RAYMOND OTTO	800 PINES BRIDGE RD.	70.13-1-42
CALVERT &	KITCHAWAN RD.	70.09-1-31
COMM. BIBLE CHURCH N.	301 CHADEAYNE RD.	70.09-1-36
CUSTONS, MARGARET	PINES BRIDGE RD.	70.13-1-40
RUSTAD, KAREN	220 CHADEAYNE RD.	70.09-1-39
DI LEO, HECTOR & ALICE	170 CHADEAYNE RD.	70.13-1-35
INDBERG, LARS & BRONNER,	797 PINES BRIDGE RD.	70.13-1-36
CITY OF N.Y. D.W.S.G. &	DEPT OF WATER RES	70.13-1-53
KRUSE, CHRISTOPHER &	190 CHADEAYNE RD.	70.13-1-34
PLITNICK, EDWARD & LAURA	875 KITCHAWAN RD.	70.09-1-32
HANLEY, ARLO & SARA	791 PINES BRIDGE RD.	70.14-1-11
VALENZA, MICHAEL &	796 PINES BRIDGE RD.	70.13-1-52
FYLER, MICHAEL & PETER	781 PINES BRIDGE RD.	70.10-1-2
AVON, GREGORY &	700 ERIN CT.	70.09-1-41
PUFF, KENNETH & KARIN	240 CHADEAYNE RD.	70.09-1-38
KYER, MICHAEL & LISA	200 CHADEAYNE RD.	70.13-1-33
COMM. BIBLE CHURCH N.	250 CHADEAYNE RD.	70.09-1-37
LA SALA, ANDREW &	787 PINES BRIDGE RD.	70.10-1-1
KARP, STEVEN & SUSAN	795 PINES BRIDGE RD.	70.13-1-38





Town of Yorktown www.yorktownny.org

Building Department

Town Hall, 363 Underhill Avenue, Yorktown Heights, NY 10598 Tel. (914) 962-5722 ext.233 Fax (914) 962-1731

Page 1 of 4

FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

Applicati	ion # Date Received:
	Please submit 2 copies of this entire application, 4 pages).
	SECTION 1: GENERAL PROVISIONS (Applicant to read and sign):
1. 2. 3. 4. 5. 6. 7.	No work may start until a permit is issued. The permit may be revoked if any false statements are made herein. If revoked, all work must cease until permit is re-issued. Development shall not be used or occupied until a Certificate of Compliance is issued. The permit will expire if no work is commenced within six months of issuance. Applicant is hereby informed that other permits may be required to fulfill local, state and federal regulatory requirements. Applicant hereby gives consent to the Local Administrator or his/her representative to make reasonable inspections required to verify compliance. I, THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN PAGES #s 1 through 4, AND IN ATTACHMENTS THERETO, TO THE BEST OF MY KNOWLEDGE, ARE TRUE AND ACCURATE.
APPLICA	ANT'S SIGNATURE: Wedge DATE: 6/15/18 'S SIGNATURE): DATE:
OWNER'	'S SIGNATURE): DATE:
(If differe	ent from Applicant)
	Wendy Sperduto, P.E., DEP-BEDC Owner: Program Manager Telephone #: (718)- 595-6133
	Contact for This Project: Wendy Sperduto P.E. Talenhone #: (718)- 595-6133
Fax:	DEP-BEDC Program Manager
Present	Address of Owner*: 96-05 Horace Harding Expressway Corona, New York 11368
Address Section:	/Location of Proposed Work: Yorktown-2A: Hunters Brook SPS SPS Blow-off Chambers; located approximately 0.25 mile southeast of Jacob Road Lot(s): 61 Verified by: James W. Date: 7/23/2013
	d Work: Blow-off chamber reconstruction that would require excavation for site preparation and streambank protection and
Contract	restoration, a temporary stream diversion, and construction staging. Telephone #:
Address	
Westche	ester County Home Improvement Contractors Lic. #
	t or Engineer CDM Smith Telephone #(516)-496-8400
	60 Crossways Park Drive West Suite 340, Woodbury, NY 11797 Fax/Email Contact person:
	David Tanzi

Town of Yorktown 2

To avoid delay in processing the application, please provide enough information to easily identify the project location. Provide the street address, lot number or legal description (attach) and, outside urban areas, the distance to the nearest intersecting road or will known landmark. A drawing, attached to this application, showing the project location would be helpful. **See CI-360.00 in Attachment C for a detailed drawing of the project location.**

DESCRIPTION OF WORK (Check all applicable boxes):

A. STRUCTURAL D	EVELOPMENT
ACTIVITY	STRUCTURE TYPE
New Structures ■	□ Residential (1-4 Family)
□ Addition	☐ Residential (More than 4 Family)
☑ Alteration	■ Non-residential
Dala sellen	Flood proofing? a Yes • No
☐ Relocation ☐ Demolition	□ Combined Use (Residential & Commercial)
□ Replacement	☐ Manufactured (Mobile) Home☐ "Substantial Improvement"
ESTIMATED COST OF F	
B. OTHER DEVELO	costs include the site work traffic control, and blow-off
🛭 Fill 🗆 Mining	□ Drilling ☑ Grading
☐ Excavation (Exc	ept for Structural Development Checked Above)
	Iteration (Including Dredging and Channel Modifications)
	vements (Including culvert Work)
	Bridge Construction
□ Subdivision (Ne	
□ Individual Water □ Other (Please S	
	ON 2, APPLICANT should submit form to Local Administrator for review. (Office Use Only) PLAIN DETERMINATION (To be completed by LOCAL ADMINISTRATOR):
	nent is: located on FIRM Panel No, Dated, Pre-FIRM map? □ Yes □ No
	in a Special Flood Hazard Area (Notify the applicant that the application plete and NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED).
☐ located in a S	pecial Flood Hazard Area,
FIRM zone de	esignation is,
□ 100 – Year flo	ood elevation at the site is:,
	Ft. NGVD (MSL) Unavailable,
☐ The proposed	d development is located in a <u>Floodway,</u>
FBFM Panel	noDated
	DATED

(Office Use Only) SECTION 4: ADDITIONAL INFORMATION (To be completed by LOCAL ADMINISTRATOR):

cant must submit the documents checked below before the application can be d: site plan showing the location of all existing structures, water bodies, adjacent roads, lot be densions and proposed development. velopment plans, drawn to scale, and specifications, including where applicable: details for choring structures, proposed elevation of lowest floor (including basement), types of water distant materials used below the first floor, details of flood proofing of utilities located below the tifloor and details of enclosures below the first floor. In must also show bodivision or other development plans (If the subdivision or other development exceeds 50 or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if y are not otherwise available). In showing the extent of watercourse relocation and/or landform alterations. In of proofing protection level (non-residential only) Ft. NGVD (MSL). For flood ofed structures, applicant must attach certification from registered engineer or architect. Intification from a registered engineer that the proposed activity in a regulatory floodway will result in any increase in the height of the 100-year flood. A copy of all data and calculations apporting this finding must also be submitted. Interception of the development plans (If the subdivision or other development exceeds 50 or 5 acres, whichever is the lesser, the applicant must attach certification from registered engineer or architect.
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result in <u>any</u> increase in the height of the 100-year flood. A copy of all data and calculations oporting this finding must also be submitted.
ner:
ner:
CTION 5: PERMIT DETERMINATION (To be completed by LOCAL ADMINISTRATOR):
ave determined that the property and/or proposed work:
ls .
☐ Is not
In conformance with provisions of Local Law # 11, 2007. The permit is issued
subject to the conditions attached to and made part of this permit.
SNED DATE
LOCAL ADMINISTRATOR
BOX A is checked, the Local Administrator may issue a Development Permit upon payment or signated fee.
BOX B is checked, the Local Administrator will provide a written summary of deficiencies.
3

Floodplain I		-				
	•	Received	by:	Dat	e:	
APPEALS:	Appealed to	Board of Appeals?				
Yes						
No						
Hearing dat	e:		=			
Appeals Bo	ard Decision –	Approved?				
Yes						
No						
	Conditions_		шшш			
-						
10-11-1						
SECTION 6	AS-RIIII D ELE	VATIONS (To be s	ibmitted by APPLIC	ANT bofo	ro Cortifio	ato of
Compliance		AVIIO DE 2	DITIILLED DY AFFEL	MINI DELC	ne Certific	ate or
Compliance	is issued).					
COMPHANCE	is issued).					
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The following	is issued). g information mu	st be provided for p	roject structures. Th d land surveyor (or	nis section rattach a d	must be co certification	ompleted by a to this
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Town of Yorktown www.yorktownny.org

Building Department

Town Hall, 363 Underhill Avenue, Yorktown Heights, NY 10598 Tel. (914) 962-5722 ext.233 Fax (914) 962-1731

Page 1 of 4

FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

	Please sul	omit <u>2 copies</u> of this en	tire application	, 4 pages) .
	SECTION 1: G	ENERAL PROVISIONS	(Applicant to	read and sign):
1. No w	ork may start until a	a permit is issued.		
2. The	permit may be revol	ked if any false statements	s are made herei	n.
If rev	oked, all work must	cease until permit is re-is	sued.	
Deve	lopment shall not b	e used or occupied until a	Certificate of Co	mpliance is issued.
		no work is commenced wit		
	cant is hereby infor atory requirements.		y be required to	fulfill local, state and federal
7. Appl	cant hereby gives o	consent to the Local Admir	nistrator or his/he	r representative to make reasonable
8. I, TH	ections required to v E APPLICANT, CE	RTIFY THAT ALL STATE	MENTS HEREI	N PAGES #s 1 through 4, AND IN E, ARE TRUE AND ACCURATE.
				6/15/18
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OWNER"S SIG	NATURE):		DATE:	
(If different from				
	CTION 2: PROPO			ted by APPLICANT): e marked "Office use only".
Applicant	CTION 2: PROPO Complete <u>all</u> in Wendy Sperdut r: Program Manag	formation lines, below o, P.E., DEP-BEDC ger	, <u>except</u> those Telepho	e marked "Office use only".
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Town of Yorktown 2

To avoid delay in processing the application, please provide enough information to easily identify the project location. Provide the street address, lot number or legal description (attach) and, outside urban areas, the distance to the nearest intersecting road or will known landmark. A drawing, attached to this application, showing the project location would be helpful. **See CI-361.00** in **Attachment C for a detailed drawing of the project location.**

DESCRIPTION OF WORK (Check A. STRUCTURAL DEVELOPM	all applicable boxes): IENT
ACTIVITY	STRUCTURE TYPE
⊠ New Structures	Residential (1-4 Family)
Addition	Residential (More than 4 Family)
⊠ Alteration	⊠ Non-residential
	Flood proofing? Yes No
□ Relocation	□ Combined Use (Residential & Commercial)
Demolition	□ Manufactured (Mobile) Home
□ Replacement	□ "Substantial Improvement"
B. OTHER DEVELOPMENT A	costs include the site work, traffic control, and blow-off
🗆 Fill 🔳 Mining 🔲 Drill	· ·
□ Excavation (Except for Street)	uctural Development Checked Above)
·	ncluding Dredging and Channel Modifications)
☑ Drainage Improvements (Ir	
⊠ Road, Street or Bridge Cor	nstruction (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
□ Subdivision (New or Expar	
☐ Individual Water or Sewer☐ Other (Please Specify)	System
*After completing SECTION 2, APF	PLICANT should submit form to Local Administrator for review. (Office Use Only)
SECTION 3: FLOODPLAIN DE	TERMINATION (To be completed by LOCAL ADMINISTRATOR):
	cated on FIRM Panel No, Dated, Pre-FIRM map? □ Yes □ No
	al Flood Hazard Area (Notify the applicant that the application NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED).
located in a Special Flo	ood Hazard Area,
FIRM zone designation	is,
100 – Year flood elevat	ion at the site is:,
Ft. NO	GVD (MSL) Unavailable,
The proposed develop	ment is located in a <u>Floodway,</u>
FBFM Panel no	Dated
SIGNED	

(Office Use Only)

SEC	CTION 4: ADDITIONAL INFORMATION (To be completed by LOCAL ADMINISTRATOR):
The appl	icant must submit the documents checked below before the application can be ed:
	site plan showing the location of all existing structures, water bodies, adjacent roads, lot mensions and proposed development.
ar re fir	evelopment plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, proposed elevation of lowest floor (including basement), types of water esistant materials used below the first floor, details of flood proofing of utilities located below the st floor and details of enclosures below the first floor.
lo	ubdivision or other development plans (If the subdivision or other development exceeds 50 ts or 5 acres, whichever is the lesser, the applicant <u>must</u> provide 100-year flood elevations if ey are not otherwise available).
P	ans showing the extent of watercourse relocation and/or landform alterations.
T	op of new fill elevationFt. NGVD (MSL).
FI pr	lood proofing protection level (non-residential only) Ft. NGVD (MSL). For flood coofed structures, applicant must attach certification from registered engineer or architect.
- no	ertification from a registered engineer that the proposed activity in a regulatory floodway will ot result in <u>any</u> increase in the height of the 100-year flood. A copy of all data and calculations upporting this finding must also be submitted.
_	ther:
<u>s</u>	ECTION 5: PERMIT DETERMINATION (To be completed by LOCAL ADMINISTRATOR):
11	have determined that the property and/or proposed work:
	Is not In conformance with provisions of Local Law # 11, 2007. The permit is issued subject to the conditions attached to and made part of this permit.
S	IGNEDDATE
	LOCAL ADMINISTRATOR
de <u>If</u> A	BOX A is checked, the Local Administrator may issue a Development Permit upon payment of esignated fee. BOX B is checked, the Local Administrator will provide a written summary of deficiencies. pplicant may revise and resubmit an application of the Local Administrator or may request a earing from the Board of Appeal.

□ Paid	militare, in	Received by:		ate:	
APPEALS:	Appealed to Board of	of Appeals?			
Yes					
No					
Hearing dat	e:				
	ard Decision – Approv				
Yes					
No					
	Conditions				
SECTION 6:	AC DILLI DELEVATIO	NS (To be submitted b	y APPLICANT be	efore Certificate o	<u>•f</u>
Compliance	is issued)				
Compliance	is issued).				
Compliance The following registered p	is issued). information must be professional engineer of Complete 1 or 2 below.	or a licensed land sur	ctures. This secti veyor (or attach	on must be comple a certification to th	eted by a is
Compliance The following registered papplication). 1. Actual (A	is issued). information must be professional engineer of	or a licensed land sur	veyor (or attach	a certification to the	is of lowes
The following registered papplication). 1. Actual (Astructura	is issued). information must be professional engineer of Complete 1 or 2 below. As-Build) Elevation of the second secon	or a licensed land sur the top of the lowest flo loor, excluding piling a	veyor (or attach oor, including base nd columns) is	a certification to the ement and bottom FT. NG	is of lowes /D (MSL)
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Attachment A Project Description and Need

1. OVERALL PROJECT DESCRIPTION

The New York City Department of Environmental Protection (DEP) is responsible for supplying clean drinking water to eight million New York City (City) residents and one million upstate customers through the management of the City's three surface water supply systems: the Catskill, Delaware, and Croton systems. Water from these watersheds is conveyed to the City's distribution system by gravity via three main aqueducts: the Catskill Aqueduct, Delaware Aqueduct, and Croton Aqueduct (see **Figure B-1**). In particular, the Delaware Aqueduct provides approximately 50 percent of the City's water supply. The Delaware Aqueduct is comprised of several sections, the longest section is the Rondout-West Branch Tunnel (RWBT). The RWBT is currently leaking between 15 and 35 million gallons of water per day.

The Water for the Future Program (WFF) was developed to repair leaks in the RWBT. As part of WFF, a three-mile long bypass tunnel is being constructed in the Towns of Newburgh (Orange County, New York) and Wappingers (Dutchess County, New York). To facilitate the necessary repairs, the RWBT would be temporarily shut down and drained to allow for the connection of the bypass tunnel to the existing RWBT and to make repairs in the Town of Wawarsing (Ulster County, New York). During this temporary shutdown, water from the Delaware system west of the Hudson River would be unavailable. DEP is now undertaking several projects to support the connection of the bypass tunnel to the RWBT, including the rehabilitation and repair of the Catskill Aqueduct to increase its capacity. The Catskill Aqueduct Repair and Rehabilitation (CAT-RR) will involve the following activities:

Site Access and Staging Area Improvements – Construction would require the use of multiple central staging areas established at relatively even increments along the aqueduct throughout the duration of the project. The Croton Lake Pressure Tunnel (PT) Downtake Chamber located within the Town would serve as a central staging area to serve locations within the Town of Yorktown. Smaller, localized staging areas would also be used to support clusters of work sites. These smaller, localized staging areas would be used throughout the duration of the project work activities to support the four central staging areas by providing additional parking, equipment storage and laydown (an area that has been cleared for the temporary storage of equipment and supplies). Some of these staging areas would require minor disturbance, such as excavation and tree clearing. Tree removal would be kept to the minimum necessary, and trees would be replanted where possible. Workers would access these staging areas via local roads, access roads, driving along the top of the aqueduct. Seven localized staging areas are proposed within the Town of Yorktown located at the Hunters Brook Steel Pipe Siphon (SPS) North Chamber, the Hunters Brook SPS Blow-off Chambers, the Hunters Brook SPS South Chamber, the Yorktown Cut-and-Cover Tunnel (CCT) Access Manhole and Turkey Mountain SPS North Chamber, the Turkey Mountain SPS Blow-off Chambers, Turkey

Mountain SPS South Chamber, the Leak 7 site, and the Kitchawan CCT Access Manhole and Culvert Drain.

- Chlorination and Dechlorination Sodium hypochlorite or chlorine dioxide would be added to the Catskill Aqueduct at a new chlorination facility at the Ashokan Screen Chamber to reduce the extent of biofilm in the aqueduct in advance of biofilm removal (see Biofilm Removal below). This chlorination process is a temporary measure that will be used only during the duration of this project to maintain the increased Catskill Aqueduct capacity by limiting biofilm regrowth. To remove anticipated sodium hypochlorite, chlorine dioxide, and/or chlorine residuals generated during temporary chlorination, sodium bisulfite would be added to the aqueduct at a new dechlorination facility at the Pleasantville Alum Plant prior to water entering Kensico Reservoir.
- Leak Repair and Local Dechlorination Several leaks along the aqueduct must be repaired to prevent dissemination of chlorine and chlorine dioxide residuals into the surrounding environment. If repairs are not feasible, local dechlorination systems would be installed at the leaks prior to chlorination of the aqueduct. There is one leak site within the Town of Yorktown.
- Mechanical and Structural Repairs Aging mechanical and structural components of the aqueduct infrastructure would be repaired or replaced. Repairs would restore systems used in unwatering the aqueduct and would facilitate future work. Repairs include: installation of new components, such as air vent structures and boatholes (large points of entry on the aqueduct); repair of bridge structures; replacement of siphon drain blow-off valves, culvert drain sluice gates, and air valve chambers; and permanently sealing unused culvert drain sluice gates. Streambank restoration and protective measures would be implemented prior to and following mechanical and structural repairs to protect the streambed and banks of water resources. These activities will be completed at 10 sites within the Town of Yorktown.
- Biofilm Removal Removal of biofilm from the aqueduct will be completed through air
 or water pressure washing, scraping or vacuuming, or an operated cleaning system.
 Biofilm removal by pressure washing would require the use of wash water treatment
 systems at select collection points. Biofilm removal will be conducted at all site locations
 within the Town of Yorktown.

2. PROJECT PURPOSE AND NEED

Work proposed within the Town of Yorktown would restore DEP's ability to unwater portions of the Catskill Aqueduct, which are required to facilitate the completion of additional elements of the overall CAT-RR project (e.g., biofilm removal, condition assessment, and repair within the aqueduct) and allow future DEP inspection, repair, and maintenance. Work within the Town includes:

- Establishment of a primary staging area at the Croton Lake PT Downtake Chamber;
- Replacement of seven siphon drain blow-off valves;
- Sealing of three culvert drain sluice gates;
- Replacement of one culvert drain sluice gate;
- Installation of two new boatholes;
- New air vent installation:
- Repair of one waste gate;
- Internal repair at one leak (Leak 7);
- Installation of a local, passive dechlorination system at Leak 7 if internal repair is not completely effective; and
- Staging and access road improvements.

These activities, in conjunction with the overall CAT-RR project, would ultimately restore Catskill Aqueduct capacity to historic levels, and would extend the longevity of existing aqueduct infrastructure. These activities are summarized in **Table 1** and discussed in more detail in the following sections.

3. PROPOSED WORK LOCATIONS

The CAT-RR project will consist of multiple work sites across 4 counties and 17 municipalities, all along a 74-mile portion of the Catskill Aqueduct (see **Figures B-2** and **B-3**). There are 13 sites within the Town of Yorktown; however, only 9 sites require Town of Yorktown approval of regulated activities. The following locations have proposed activities within the Town of Yorktown (see **Figure B-4**):

- Yorktown-1: The site can be accessed directly from Field Street. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction at Station 3193+03 on the aqueduct. This site includes the Peekskill CCT Access Manhole with Culvert Drain (Station 3193+03).
- <u>Yorktown-2</u>: The site is located west of Hunterbrook Road and is accessed directly from Jacob Road. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction between Stations 3225+83 and 3226+35 on the aqueduct. This site includes the

Hunters Brook SPS North Chamber (Station 3226+35) and the location of a new boathole (Station 3225+83).

- Yorktown-2A: The site is located approximately 0.25 mile southeast of Jacob Road, just north of Hunter Brook. The site is accessed directly from White Hill Road. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction between Stations 3233+27 and 3235+85 on the aqueduct. This site includes the Hunters Brook SPS Access Manholes (Station 3233+27 to 3233+62) and Hunters Brook SPS Blow-off Chambers (Station 3235+72 to 3235+85).
- <u>Yorktown-3</u>: The South Siphon Chamber is located east of Hunterbrook Road and is accessed by an access road from Hunterbrook Road to a private driveway to a DEP access gate. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction at Station 3241+44. This site includes the Hunters Brook SPS South Chamber (Station 3241+44).
- Yorktown-3A: The site is accessed via an access point from Baptist Church Road and then driving along the aqueduct. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction between Stations 3307+23 and 3320+72. This site includes the Yorktown CCT Access Manhole (Station 3307+23) and Yorktown CCT Access Manhole with Culvert Drain (Station 3320+72).
- Yorktown-4: The site is accessed by an access point from Baldwin Road then driving along the aqueduct. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction at Station 3339+32. This site includes an additional Yorktown CCT Access Manhole with Culvert Drain (Station 3339+32).
- Yorktown-5: This site is located north of Turkey Mountain Brook and west of the Taconic State Parkway. Access to the site would be provided directly from Underhill Avenue. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction between Stations 3354+75 and 3361+02. This site includes the Yorktown CCT Access Manhole (Station 3354+75), the proposed location of a new boathole (Station 3360+50), and Turkey Mountain SPS North Chamber (Station 3361+02).
- Yorktown-6: This site is located within the median of the Taconic State Parkway, immediately north of Turkey Mountain Brook, and would be accessed from the left travel lane of the northbound side of the parkway. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction between Stations 3368+33 and 3369+54. This site includes the Turkey Mountain SPS Blow-off Chambers (Station 3368+33 to 3369+17) and Turkey Mountain SPS Access Manholes (3369+45 to 3369+54).

- Yorktown-7: This site is located east of the Taconic State Parkway. Access to the South Chamber would be provided by a gravel road off Chapman Road, which leads to the Croton Lake Pressure Tunnel (PT) Downtake Chamber (Station 3397+40), then driving along an access road parallel to the aqueduct. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction at Station 3376+40. This site includes the Turkey Mountain SPS South Chamber (Station 3376+40).
- Yorktown-8: This site would be accessed from an access road that connects to Chapman Road. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction at Station 3397+40 on the aqueduct. This site includes the Croton Lake PT Downtake Chamber (Station 3397+40) and Croton Lake PT Blow-off and Waste-Gate Chamber (Station 3397+40).
- Yorktown-9: Access to this site is provided by a DEP access road that connects to Croton Dam Road. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction between Stations 3424+03 and 3447+82 on the aqueduct. This site includes the Croton Lake PT Uptake Chamber (Station 3424+03), Croton CCT Boathole (Station 3425+33), Leak 7 (Station 3429+55), and Croton CCT Access Manhole (Station 3447+82). Unnamed tributary 1 to New Croton Reservoir and a delineated wetland (7-WL) are located to the west and downstream of Leak 7.
- Yorktown-10: The site is located north of Kitchawan Road immediately north of the unnamed tributary 3 to New Croton Reservoir. The site is accessed by driving over the aqueduct from an entrance off Kitchawan Road. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction at Station 3482+33 on the aqueduct. This site includes the Kitchawan CCT Access Manhole with Culvert Drain (Station 3482+33).
- <u>Yorktown-11</u>: The site is accessed from the Pines Bridge Road. The Catskill Aqueduct crosses the proposed site in a northwest to southeast direction at Station 3512+19 on the aqueduct. This site includes the Kitchawan CCT Access Manhole (Station 3512+19).

Table 1. Summary of Work Activities within the Town of Yorktown

Location	Chlorination and Dechlorination	Leak Repair or Local Dechlorination	Mechanical and Structural Repairs	Site Access and Staging Area Improvements	Biofilm Removal	Land Use/Zoning
Yorktown-1 (3193+03)			✓	✓	✓	Public Services/R1-40
Yorktown-2 (3225+83 to 3226+35)			√	✓	✓	Public Services/R1-160
Yorktown-2A (3233+27 to 3235+85)			✓	✓	✓	Public Services/ R1-160/R1-40
Yorktown-3 (3241+44)				✓	✓	Public Services/R1-160
Yorktown-3A (3307+23 and 3320+72)			√	✓	✓	Public Services/Unknown
Yorktown-4 (3339+32)			√		✓	Public Services/R1-160
Yorktown-5 (3354+75 to 3361+02)			√	✓	✓	Public Services/R1-160
Yorktown-6 (3368+33 to 3369+54)			√	✓	✓	Taconic State Parkway/Unzoned
Yorktown-7 (3376+40)				✓	✓	Public Services/R1-200
Yorktown-8 (3397+40)			√	✓	✓	Public Services/R1-200
Yorktown-9 (3424+03 to 3447+82)		√	√	✓	✓	Public Services/ R1-200
Yorktown-10 (3482+33)			√	✓	✓	Public Services/R1-200
Yorktown-11 (3512+19)				✓	✓	Public Services/R1-200

4. PERMIT NEEDS

The proposed activities described below would require work activities within Federal Emergency Management Agency (FEMA) Zone A¹ Special Flood Hazard Areas, excavation activities, work within and/or adjacent to watercourses, and tree removal. These activities are regulated by the Town of Yorktown in accordance with the following codes: Chapter 175, Flood Damage Prevention, Chapter 178, Freshwater Wetlands, and Chapter 270, Trees.

Based on DEP's preliminary outreach to Town Supervisor, Michael Grace, in October 2015, maintenance activities, such as aqueduct access via existing manholes, and other structures, do not require permits. Work activities proposed at Yorktown-1, Yorktown-3, Yorktown-3A, and Yorktown-4, would be considered maintenance activities; therefore, they are not subject to the Town of Yorktown municipal regulations and are not discussed further in this application. In addition, activities associated with non-jurisdictional waters, such as flowpath for Leak 7 (Station 3429+55) within Yorktown-9, are not regulated by the Town. Work activities regulated by the Town of Yorktown will occur at nine sites listed below. Complete descriptions of work activities associated with the CAT-RR contract that are regulated by the Town of Yorktown are provided in Section 5.

- Yorktown-2
- Yorktown 2-A
- Yorktown-5
- Yorktown-6
- Yorktown-7
- Yorktown-8
- Yorktown-9
- Yorktown-10
- Yorktown-11

In addition to the Town of Yorktown, this project is being coordinated with the U.S. Army Corps of Engineers (USACE), New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Transportation (NYSDOT), DEP, and Westchester County agencies for activities related to work within regulated wetlands or watercourses, activities within the DEP watershed, and curb cuts on county-owned roads, respectively. Proposed activities would result in soil disturbances regulated under NYSDEC's State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002). A stormwater pollution prevention plan

¹ Zone A represents areas subject to inundation by the 1-percent annual-chance flood event.

(SWPPP) has been prepared for the project for all of the applicable sites within the Town. As a Municipal Separate Stormwater Sewer System (MS4) municipality, the SWPPP and MS4 Acceptance Form were submitted to the Town for review. Erosion and sediment control measures are discussed in the SWPPP. The potential project-wide permits for the project sites within the Town of Yorktown are listed in **Table 2**.

All work activities at Yorktown-6 will occur on DEP property; however, coordination with the NYSDOT is ongoing for a highway road permit required as part of the work zone traffic control plan associated with site access for blow-off chamber reconstruction at the Turkey Mountain SPS Blow-off Chambers (Yorktown-6; Station 3368+33 to 3369+17).

Table 2. Potential Project-wide Permits for Work Activities within the Town of Yorktown

	USACE			USACE NYSDEC		We	stchester Cou	unty			Town of \	Yorktown	
Location	NWP 3	NWP 7	POW	SPDES	Highway Work Permit	County USDA Consultation	Planning Approval	Public Works Coordination	Wetlands	Excavation	Trees	Floodplain Development	SWPPP/MS4 Approval
Yorktown-1 (3193+03)						✓	✓						✓
Yorktown-2 (3225+83 to 3226+35)						✓	√			✓			✓
Yorktown-2A (3233+27 to 3235+85)			✓	✓		√	✓		✓	✓	✓	✓	✓
Yorktown-3 (3241+44)						✓	✓						✓
Yorktown-3A (3307+23 and 3320+72)						✓	√						√
Yorktown-4 (3339+32)						✓	✓						✓
Yorktown-5 (3354+75 to 3361+02)						√	✓			✓	√		√
Yorktown-6 (3368+33 to 3369+54)	✓	✓	✓	√	✓	✓	✓		✓	✓	✓	✓	✓
Yorktown-7 (3376+40)						✓	✓				✓		✓
Yorktown-8 (3397+40)				√		✓	✓			✓			√
Yorktown-9 (3424+03 to 3447+82)						✓	✓	✓		✓	✓		✓

Table 2. Potential Project-wide Permits for Work Activities within the Town of Yorktown (Continued)

	USACE		NYSDEC NYSDOT		We	Westchester County			Town of Yorktown				
Location	NWP 3	NWP 7	POW	SPDES	Highway Work Permit	County USDA Consultation	Planning Approval	Public Works Coordination	Wetlands	Excavation	Trees	Floodplain Development	SWPPP/MS4 Approval
Yorktown-10 (3482+33)	✓					✓	✓		✓		✓		✓
Yorktown-11 (3512+19)						√	✓		√		√		√

Notes:

POW = Protection of Waters
SPDES = State Pollutant Discharge Elimination System
USDA = United States Department of Agriculture

5. REGULATED WORK ACTIVITIES

Proposed work activities regulated by the Town of Yorktown would occur at the following locations and are described in more detail below: Yorktown -2, Yorktown 2-A, Yorktown-5, Yorktown-6, Yorktown-7, Yorktown-8, Yorktown-9, Yorktown-10, and Yorktown-11. Work activities would include excavation and tree removal for access road construction and/or improvements and staging, streambank restoration and protection, and upgrades at the blow-off chambers. The activities proposed in this application are needed to support the CAT-RR project, and due to the location of existing Catskill Aqueduct infrastructure, the proposed activities cannot be located elsewhere. In addition, without the proposed activities, DEP would not be able to shutdown the RWBT for repairs. Detailed drawings of these activities are provided in **Attachment C.**

Yorktown-2: Proposed work activities include excavation for the establishment of two localized staging areas. The Croton Lake PT Downtake Chamber would serve as the primary staging area located approximately three miles southeast from the site, and two additional staging areas would be developed at this location to facilitate boathole preparation and installation. The localized staging areas would total approximately 16,140 square feet (0.37 acre). Boathole preparation and installation would include 500 square feet (0.01 acre) of excavation. These work activities would be completed outside of regulated watercourse areas and floodplain zones. Upon completion of the work, grades will be restored to match existing elevations. Tree removal is not anticipated at this site.

<u>Yorktown-2A</u>: Proposed work activities at this location include reconstruction of the Hunters Brook SPS Blow-off Chambers and streambank restoration and protection. The Croton Lake PT Downtake Chamber, located approximately three miles southeast from the site, would serve as the primary staging area, while a localized staging area would be established at the Blow-off Chambers. Access to the site would be directly from the shoulder of White Hill Road.

The Hunters Brook SPS Blow-off Chambers are located adjacent to Hunter Brook, a NYSDEC Class B (TS)² stream, and Town of Yorktown regulated watercourse. Based on field observations, the substrate of Hunter Brook is comprised of sand and cobble and is best classified as a "Riverine, Lower Perennial, Unconsolidated Bottom, Sand" system based on the Cowardin System (Cowardin et al. 1979). Existing soils at the site are best described as Paxton fine sandy loam, Ridgebury loam, Woodbridge loam, and Fluvaquent-Udifluvents complex, frequently flooded.

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² Class B represents waters used for swimming and other contact recreation. TS indicates trout spawning.

A tree survey conducted on August 11, 2015, found the area surrounding the Blow-off Chambers to be comprised of a beech-maple mesic forest community. Tree species near the Blow-off Chambers include red maple (*Acer rubrum*), Norway maple (*Acer platanoides*), black oak (*Quercus velutina*), sweet birch (*Betula lenta*), slippery elm (*Ulmus rubra*), black locust (*Robinia pseudoacacia*), pignut hickory (*Carya glabra*) and an understory of royal paulownia (*Paulownia spp.*), flowering dogwood (*Cornus florida*), sassafras (*Sassafras albidum*), sycamore (*Platanus occidentalis*), and red elm (*Ulmus rubra*)

Blow-off chamber reconstruction would require excavation, a temporary stream diversion, a turbidity curtain to prevent sediment from moving downstream, and the construction of a gabion retaining wall and riprap aprons to protect the banks of Hunter Brook. Upon completion of the work, grades will be restored to match existing elevations.

An additional staging area would be established at the blow-off chambers to provide additional parking and equipment laydown, and would require brush clearing and the removal of 11 trees ranging from approximately 4.0 diameter at breast height (dbh) to 17.0 dbh (see **Attachment C** for CI-605.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 1 of 3 and CI-606.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 2 of 3).

The Hunters Brook SPS Blow-off Chambers lie within a FEMA designated 100-year floodplain (Zone A). The floodplain surrounds Hunter Brook and is located between the Hunters Brook SPS Blow-off Chambers and the Hunters Brook SPS Access Manholes. No FEMA designated floodways are located within the site. The proposed activities would not result in permanent grade changes once the work activities are complete. In addition, the proposed temporary and staging work would not increase the watercourse's water surface elevation. Sediment and erosion control measures, such as silt fences and haybale lines, would be installed, as appropriate, to prevent disturbed soils from migrating to the surrounding areas during construction. Floodplain fill has been kept to a minimum so as not to interfere with floodflow passage or storage.

Overall, proposed activities at Yortown-2A would encompass approximately 11,630 square feet (0.27 acre). Of this area, approximately 10,310 square feet (0.24 acre) would be disturbed within Hunter Brook and the 100-foot control area. The temporary stream diversion would result in approximately 650 square feet (0.01 acre) of temporary disturbance to Hunter Brook. Approximately, 4,240 square feet (0.10 acre) of the 100-foot control area would be temporarily affected due to staging. The installation of the gabion retaining wall, riprap aprons, and excavation following blow-off chamber reconstruction would permanently disturb approximately 820 square feet (0.02 acre) of Hunter Brook and approximately 4,600 square feet (0.11 acre) of the 100-foot control area. See **Attachment C** for detailed project drawings.

<u>Yorktown-5</u>: Proposed work activities include excavation for the preparation and installation of a new boathole. Primary staging would occur at the Croton Lake PT Downtake Chamber located

approximately 0.75 mile southwest from the site. An additional staging area would be established between Baldwin Road and Underhill Avenue and would encompass an area of approximately 15,600 square feet (0.36 acre). Access to the site would be provided directly from Underhill Avenue and would require the installation of a stabilized construction entrance at the access point off Underhill Avenue. The construction entrance would require approximately 730 square feet (0.02 acre) of excavation. The anticipated footprint of disturbance for the new boathole is approximately 2,000 square feet (0.05 acre) and would include 500 square feet of excavation (0.01 acre). These activities would occur outside of regulated watercourse areas and floodplain zones. Upon completion of the work, grades will be restored to match existing elevations. Proposed activities would require the removal of two trees ranging from approximately 12.0 dbh to 18.0 dbh (see **Attachment C** for CI-606.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 2 of 3).

<u>Yorktown-6</u>: Proposed work activities at this location include reconstruction of the Turkey Mountain SPS Blow-off Chambers, construction of a new access road just east of the easternmost blow-off chamber, and streambank restoration and protection. The Croton Lake PT Downtake Chamber located approximately 0.5 mile south of the site, would serve as the primary staging area while a localized staging area would be established at the Blow-off Chambers.

The Turkey Mountain SPS Blow-off Chambers are located adjacent to Turkey Mountain Brook, a NYSDEC Class B stream and Town of Yorktown regulated watercourse. Based on field observations, Hunter Brook is best classified as a "Riverine, Upper Perennial, Unconsolidated Bottom, Sand, Seasonally Flooded" based on the Cowardin System (Cowardin et al. 1979). Existing soils at the site are best described as Paxton fine sandy loam.

Tree surveys conducted during field visits on August 11, 2015 and September 17, 2015, found the area surrounding the Turkey Mountain SPS Blow-off Chambers is comprised of oak-tulip tree forest community. Tree species include tulip tree (*Liriodendron tulipfera*) black walnut (*Juglans nigra*), white ash (*Fraxinus americana*), black cherry (*Prunus serotina*), and black willow (*Salix nigra*). The area is heavily overgrown in areas with Oriental bittersweet (*Celastrus orbiculatus*), fox grape (*Vitis labrusca*), and porcelain berry (*Ampelopsis brevipedunculata*). Other dominant vegetation consists of multiflora rose (*Rosa multiflora*), gray dogwood (*Cornus racemosa*), poison ivy (*Toxicodendron radicans*), privet (*Ligustrum* spp.), and pussy willow (*Salix discolor*)

Blow-off chamber reconstruction would require excavation, and the installation of streambank restorative and protective measures to protect the streambed and banks of Turkey Mountain Brook. Protective measures would include the installation of a temporary cofferdam to divert flows, the installation of a turbidity curtain, and a gabion retaining wall to protect the banks of Turkey Mountain Brook from future scouring. These protective measures would disturb Turkey

Mountain Brook and the 100-foot control area. Upon completion of proposed work activities, grades will be restored to match existing elevations.

Site access road improvements would be required to cross Turkey Mountain Brook, including the installation of a new permanent culvert. On-site staging would be located adjacent to the left lane of the northbound lanes of the Taconic State Parkway, where no guiderail is located and where no additional excavation is required. The removal of eight trees ranging from approximately 4.0 dbh to 18.0 dbh is anticipated for this site (see **Attachment C** for CI-606.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 2 of 3 and CI-607.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 3 of 3).

The Turkey Mountain Brook SPS Blow-off Chambers lie within a FEMA designated 100-year floodplain (Zone A). The floodplain surrounds Turkey Mountain Brook and runs through the central portion of the site. The proposed activities would not result in permanent grade changes once the work activities are complete. In addition, the proposed temporary and staging work would not increase the watercourse's water surface elevation. Sediment and erosion control measures, such as silt fences and haybale lines, would be installed, as appropriate during construction. Floodplain fill has been kept to a minimum so as not to interfere with floodflow passage or storage.

Overall, proposed activities at Yorktown-6 would encompass approximately 10,510 square feet (0.24 acre). Of this area, approximately 9,990 square feet (0.23 acre) would be disturbed within Turkey Mountain Brook and the 100-foot control area. The temporary stream diversion would result in approximately 950 square feet (0.02 acre) of temporary disturbance to Turkey Mountain Brook. Approximately 1,600 square feet (0.04 acre) would be temporarily disturbed within the 100-foot control area due to excavation for site access improvements and staging. The installation of the gabion retaining walls and new concrete culvert, and excavation after blow-off chamber reconstruction would result in approximately 210 square feet (<0.01 acre) of permanent disturbance to Turkey Mountain Brook and 7,230 square feet (0.17 acre) of permanent disturbance to the 100-foot control area. See **Attachment C** for detailed project drawings.

Yorktown-7: Proposed work activities at this site include access road improvements that would require the placement of steel plates over two culverts along an existing access road off Chapman Road, brush clearing 5 feet from the western edge of the road for approximately 360 linear feet, approximately 375 linear feet of underbrush trimming, and approximately 1,020 square feet of stabilization along the access road. The anticipated disturbance would be located outside of regulated watercourse areas and floodplain zones and would not require excavation. The removal of one tree, measuring approximately 18.3 dbh, is anticipated at this site (see Attachment C for CI-606.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 2 of 3).

Yorktown-8: Proposed work activities at this site include the replacement of blow-off valves and waste gate. This location would serve as the primary staging area for Stations 2390+96 to 3711+50 on the aqueduct from the Town of Fishkill to the Town of Mount Pleasant. Staging at this site would cover approximately 33,590 square feet (0.77 acre) and would entail approximately 3,750 square feet of excavation (0.09 acre). This site would be accessed from an existing access road that connects to Chapman Road and would require the placement of steel plates over two existing culverts, leveling, and tree removal. Work activities would be located outside of regulated watercourse areas and floodplain zones. Upon completion of the work, grades will be restored to match existing elevations. Tree removal is not anticipated at this site.

<u>Yorktown-9</u>: Proposed work activities include installation of a new air vent at the CCT Boathole, internal repairs to Leak 7, and installation of a passive dechlorination facility if leak repair is unsuccessful. Primary staging would occur at the Croton Lake PT Downtake Chamber located approximately 0.5 mile north from the site. An additional staging area would be established at the Croton Lake Gate house to provide additional parking. Access to this site is provided by a DEP access road that connects to Croton Dam Road. The proposed work zone for air vent installation would be approximately 1,200 square feet (0.03 acre) and would include approximately 500 square feet (0.01 acre) of excavation to access the cover of the existing boathole.

The site contains two existing culverts that would require protection through the placement of steel plates during construction. Access road improvements would entail underbrush clearing and gravel placement in trail ruts. The removal of three trees ranging from approximately 3.8 dbh to 9.0 dbh is anticipated at this site to improve access from the top of the access road at the aqueduct to Croton Dam Road (see **Attachment C** for the East of Hudson Tree Location, Type and Disposition Schedules). The disturbed area for this work is approximately 15,200 square feet (0.35 acre). This includes approximately 210 square feet (<0.01 acre) for work at Leak 7. If leak repair is unsuccessful, a dechlorination system would be installed south of Leak 7 and would require approximately 5.0 cubic yards of excavation. Leak 7 primarily provides wetland hydrology, however surface drainage and groundwater flow from the surrounding hillside also contribute wetland hydrology. Leak repair may result in the permanent loss of Wetland 7-WL; however, this wetland is approximately 0.07 acre in size and provides limited functions and values. These work activities would be located outside of regulated watercourse areas and floodplain zones.

<u>Yorktown-10</u>: Proposed work activities at this location include culvert drain sluice gate replacement and streambank restoration and protection. The Croton Lake PT Downtake Chamber, located approximately 1.5 miles north from the site would serve as the primary staging area while a localized staging area would be established on top of the aqueduct at this location. The Kitchawan CCT Access Manhole and Culvert Drain site is accessible from an entrance off Kitchawan Road to an access road over the Catskill Aqueduct, leading to the work site. The site

contains the unnamed tributary 3 to New Croton Reservoir, a NYSDEC Class B (TS) ³ stream and Town of Yorktown regulated watercourse. Based on field observations, unnamed tributary 3 to New Croton Reservoir is best classified as "Riverine, Lower Perennial, Unconsolidated Bottom, Intermittently Flooded" based on the Cowardin System (Cowardin et al. 1979). Beyond the limits of proposed work, unnamed tributary 3 flows north to New Croton Reservoir. Existing soils at the site are best described as Ridgebury loam.

A tree survey conducted on November 8, 2016, found the area surrounding the Kitchawan CCT Access Manhole and Culvert Drain site to be comprised primarily of a deciduous forest that may be similar to a rich mesophytic forest (Edinger et al. 2014).

The site can be accessed directly from Kitchawan Road. Work activities at this site would temporarily affect the unnamed tributary 3 to New Croton Reservoir and the Town's designated 100-foot control area. Restoration and protection of the unnamed tributary would entail restoration of riprap aprons at the culvert's inlet and outlet to their as-built condition. Temporary protective measures would entail a stream diversion and installation of a turbidity curtain to prevent sediment from moving downstream during construction. In addition, excavation and gravel placement would occur for temporary access road construction. The two temporary roads would extend from the aqueduct to the inlet and outlet of the culvert drains. Upon completion of the work, grades will be restored to match existing elevations, and the temporary roads would be reseeded and restored to pre-existing conditions through the use of comparable, native species. The removal of four trees ranging from approximately 10.0 dbh to 26.0 dbh is anticipated for this site (see **Attachment C** for CI-606.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 2 of 3 and CI-607.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 3 of 3).

Overall, proposed activities at Yorktown-10 would encompass approximately 6,020 square feet (0.14 acre). Of this area, approximately 5,370 square feet (0.12 acre) would be disturbed within unnamed tributary 3 to New Croton Reservoir and the 100-foot control area. The temporary stream diversion would result in approximately 560 square feet (0.01 acre) of temporary disturbance within unnamed tributary 3 to New Croton Reservoir. Excavation for site access and staging would temporarily disturbed 4,810 square feet (0.11 acre) of the 100-foot control area. Permanent disturbance within unnamed tributary 3 to New Croton Reservoir and the Town's 100-foot control area is not anticipated. See **Attachment C** for detailed project drawings.

<u>Yorktown-11</u>: Proposed work activities include placement of fill within the 100-foot control area for new access road construction, excavation, and tree removal. The site contains the

³ Class B (TS) indicates a best usage for swimming and other contact recreation. TS indicates trout spawning.

unnamed tributary 4 to New Croton Reservoir, a NYSDEC Class B (T) stream and Town of Yorktown regulated watercourse. Based on a desktop analyses, unnamed tributary 4 to New Croton Reservoir is best classified as "Riverine, intermittent, Streambed, Seasonally Flooded" based on the Cowardin System (Cowardin et al. 1979). Beyond the limits of proposed work, unnamed tributary 4 flows north to New Croton Reservoir. In addition, the site can be characterized as deciduous forest that may be similar to a rich mesophytic forest (Edinger et al. 2014).

The anticipated footprint of disturbance for temporary staging is approximately 10,000 square feet (0.23 acre). The new access road would include approximately 7,730 square feet (0.18 acre) of excavation. Of this area, approximately 2,330 square feet (0.05 acre) would permanently disturb the Town's designated 100-foot control area of unnamed tributary 3 to New Croton Reservoir. The removal of two trees ranging from approximately 4.0 dbh to 20.0 dbh is anticipated at this site. See **Attachment C** for detailed project drawings, and CI-606.00 East of Hudson Tree Location, Type, and Disposition Schedule Sheet 2 of 3 and CI-607.00 East of Hudson Tree Location, Type and Disposition Schedule.

6. SUMMARY OF PROJECT DISTURBANCES

Provided below are details on the proposed disturbances to water resources, including watercourses, and their regulated control area, floodplains, and terrestrial resources from excavation activities.

6.1 WATER RESOURCES

A summary of anticipated temporary and permanent disturbances to regulated water resources (watercourses and/or the municipal regulated control area) at Yorktown-2A, Yorktown-6, Yorktown-10, and Yorktown-11 is provided in **Table 3**.

Across the nine sites located within the Town of Yorktown, approximately 28,090 square feet (0.64 acre) of regulated water resources would be disturbed by CAT-RR. Appropriate restorative and protective measures would be installed within regulated watercourses when access is required for proposed work. These measures would be temporary in nature and removed upon the completion of the proposed work. Areas of temporary disturbance within the Town's 100-foot control area would be planted with native species at the conclusion of the proposed work and/or would revegetate naturally, representing a restoration to baseline conditions in these regarded locations.

Table 3. Regulated Water Resources Disturbance

Location	Watercourse Below Ordinary High Water (Square Feet)		100-foot Control Area (Square Feet)	
	Temporary	Permanent	Temporary	Permanent
Yorktown-2A	650	820	4,240	4,600
Yorktown-6	950	210	1,600	7,320
Yorktown-10	560	0	4,810	0
Yorktown-11	0	0	0	2,330
Total	2,160	1,030	10,650	14,250
Total Watercourse Disturbance	3,190 NA		Α	
Total 100-foot Control Area Disturbance	NA		24,900	
Total Disturbance to Regulated Water Resources (Watercourses and Control Areas)	28,090			
Notes:				

All estimates have been rounded to the nearest hundredth

NA = Not Applicable

6.2 SPECIAL FLOOD HAZARD AREA AND FLOODPLAINS

At Yorktown-2A, the streambank restoration measures would have minor encroachment on the Special Flood Hazard Area, as they would be keyed into the existing streambank. These measures would not displace a significant portion of the cross-sectional area of the stream. These activities are not anticipated to result in an alteration of elevations or flood capacity in the mapped floodplain. At Yorktown-6, the streambank restoration measures would have minor encroachment on the 100-year floodplain with base flood elevation ranges from 282 to 290 feet, as they would be keyed into the existing streambank and would not displace a significant portion of the cross-sectional area of the stream. Proposed activities within the FEMA floodplain at Yorktown-2A and Yorktown-6 would not result in any alteration, or relocation of on-site watercourses.

At each of these sites, floodplain fill has been kept to a minimum so as not to interfere with floodflow passage or storage. Sediment and erosion control measures, such as silt fences and haybale lines, would be installed, as appropriate, to prevent disturbed soils from migrating to the surrounding areas during construction. In addition, areas of disturbance within floodplains in Yorktown-2A and Yorktown-6 would be reseeded and restored to pre-existing conditions through the use of native shrub and herbaceous species adapted to floodplain habitat.

6.3 EXCAVATION

Site preparation, including access road construction and improvements, the installation of in-water stream protection measures, construction staging, and boathole preparation and installation will require excavation. A total of approximately 500 square feet of excavation would occur at Yorktown-2; approximately 5,420 square feet at Yorktown-2A; 1,230 square feet at Yorktown-5; 7,440 square feet at Yorktown-6; 3,750 square feet at Yorktown-8; 5 cubic yards associated with Leak 7 and 500 square feet for activities at the boathole at Yorktown-9; 4,810 square feet at Yorktown-10; and 7,730 square feet at Yorktown-11.

Proposed activities requiring topsoil excavation are discussed in more detail within each site-specific narrative in Section 5, and the areas of disturbance located within and/or adjacent to regulated water resources are broken out in Section 6.1, and Table 3. Excavation activities for construction of the new access road, at the steel pipe siphon sites, for boathole installation and preparation, and for staging would result in the temporary loss of vegetation and the modification of existing topography. Excavated areas associated with blow-off chamber reconstruction and piping would be revegetated with native species that would largely restore these sites to baseline or improved conditions and restore habitat value at these sites. Other areas temporarily affected by site preparation activities would be reseeded and restored to pre-existing conditions.

6.4 TREE REMOVAL

Approximately 31 trees would be removed from the work sites. Removals within the work limits have been noted and trees located in forested areas beyond the work limits will be preserved. In addition, two trees located within the work limits will require protection: Tree No. 1103 located along the access road in Yorktown-9 and Tree No. 524 located within the 100-foot control area of unnamed tributary 3 to New Croton Reservoir in Yorktown-11 (see **Attachment C** for CI-606.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 2 of 3 and CI-607.00 East of Hudson Tree Location, Type and Disposition Schedule Sheet 3 of 3). Additional information can be found on the Tree Permit Applications included as part of this permit application package.

7. ANTICIPATED PROJECT SCHEDULE

The timeline for implementation of the Upstate Water Supply Resiliency project and all construction components are scheduled to be completed by the end of 2022 to support the RWBT temporary shutdown for the connection of the RWBT Bypass Tunnel in 2023. CAT-RR would need to be completed prior to the shutdown. Site preparation would be completed first followed by leak repair, installation of the dechlorination systems, mechanical

repairs and then biofilm removal. After completion of the connection of the Bypass Tunnel to the RWBT, the water supply system would return to normal operations.

CAT-RR requires a phased approach to construction and operation that would span several years. Since biofilm removal would be the key activity that would restore the aqueduct's capacity to support the RWBT temporary shutdown, much of the proposed work is phased to support this activity. Overall, CAT-RR is anticipated to begin in 2018 and finish in 2023. However, staging areas used to support construction activities would be restored to natural conditions, as it is anticipated that activities would be completed by that time.

8. LIST OF ATTACHMENTS, FIGURES, AND DRAWINGS

Below, please find a list of Attachments, figures, and drawings related to this application:

- o Town of Yorktown Permit Application Forms
- o Project Description and Need (Attachment A)
- o Figures (Attachment B)
 - B-1: New York City Surface Water Supply System Map
 - B-2: Upper Catskill Aqueduct
 - B-3: Leak Repair, Local Dechlorination, and Mechanical and Structural Repairs Along the Upper Catskill Aqueduct
 - B-4: Site Location Map Town of Yorktown, Westchester County, NY
 - B-5: Soil Map Westchester County, New York (Jacob Road Study Area)
 - B-6: Soil Map Westchester County, New York (Chapman Road Study Area)
 - B-7: Soil Map Westchester County, New York (Kitchawan Road Study Area)
- Project Drawings (Attachment C)
- o SEQR EAS Form (Attachment D)

Attachment B Figures

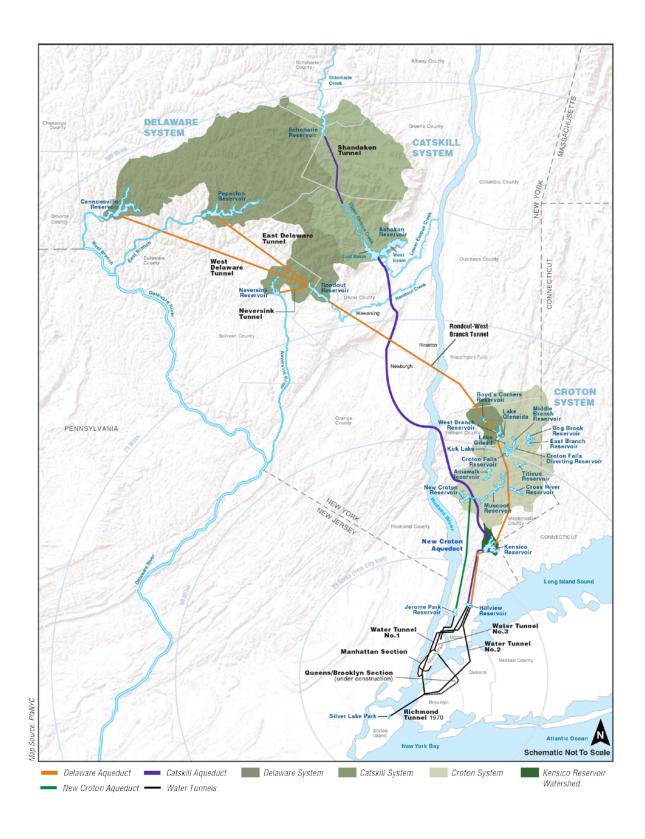


Figure B-1: New York City Surface Water Supply System Map

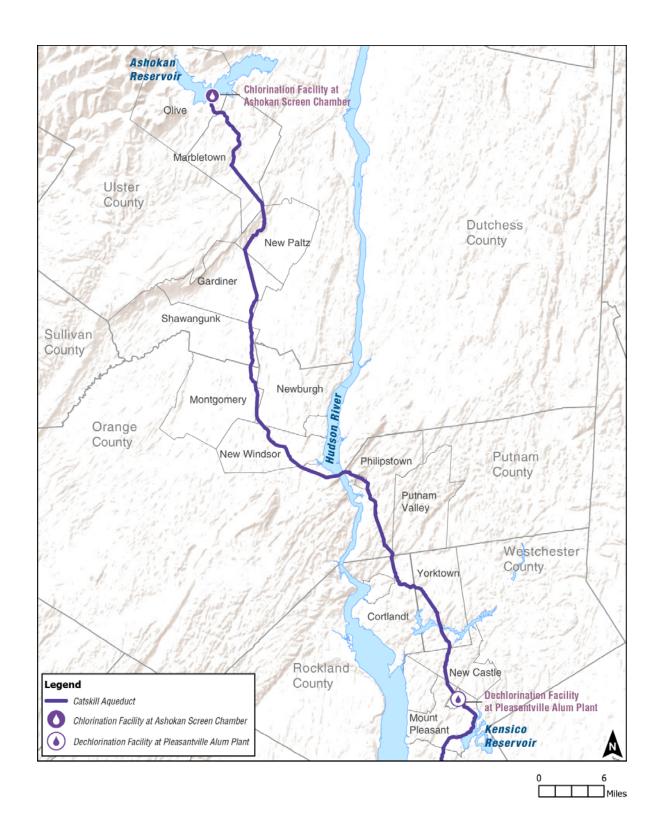


Figure B-2: Upper Catskill Aqueduct

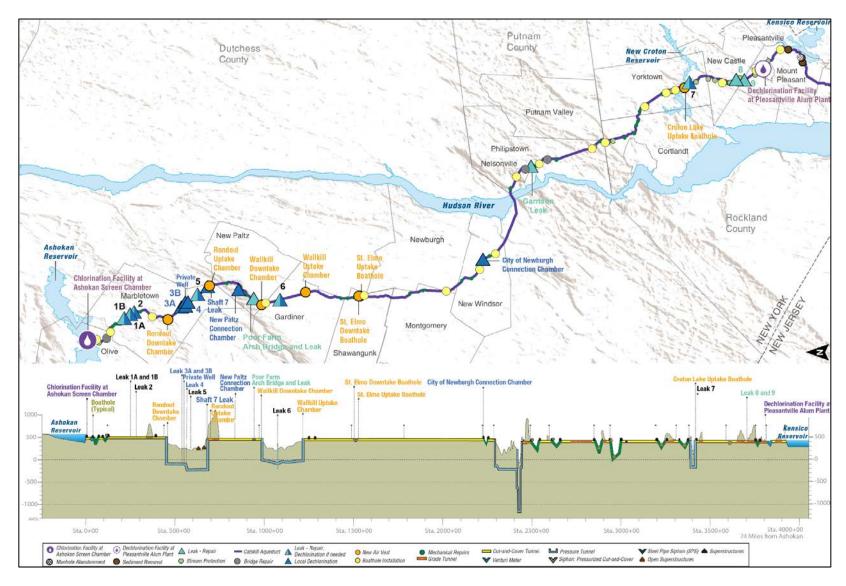
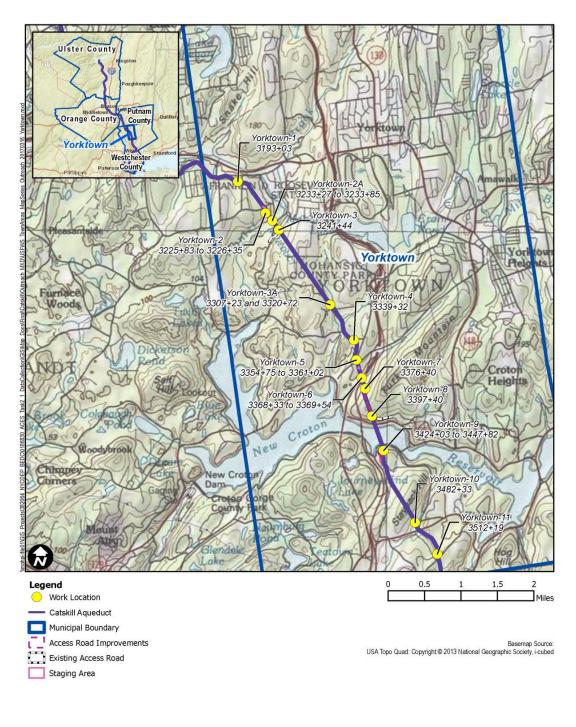


Figure B-3: Leak Repair, Local Dechlorination, and Mechanical and Structural Repairs Along the Upper Catskill Aqueduct





Town of Yorktown Westchester County

Figure B-4: Site Location Map

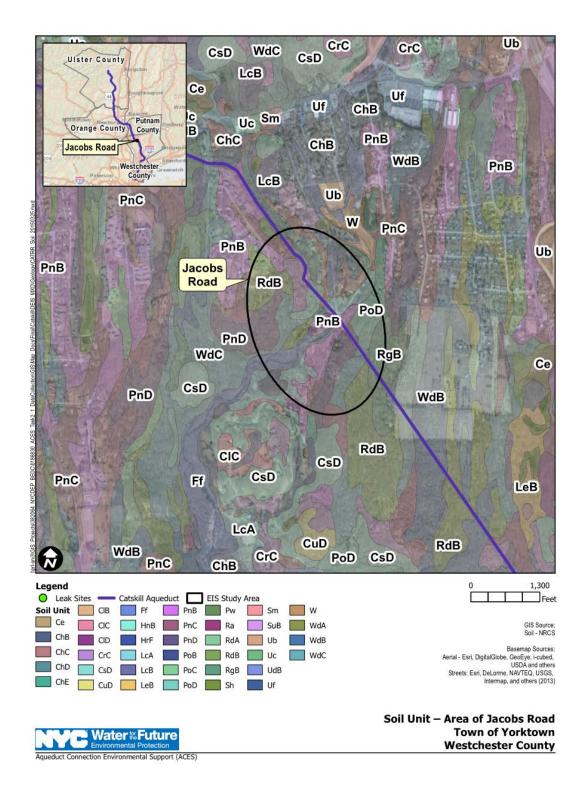


Figure B-5 Soil Map – Westchester County, New York (Jacob Road Study Area)

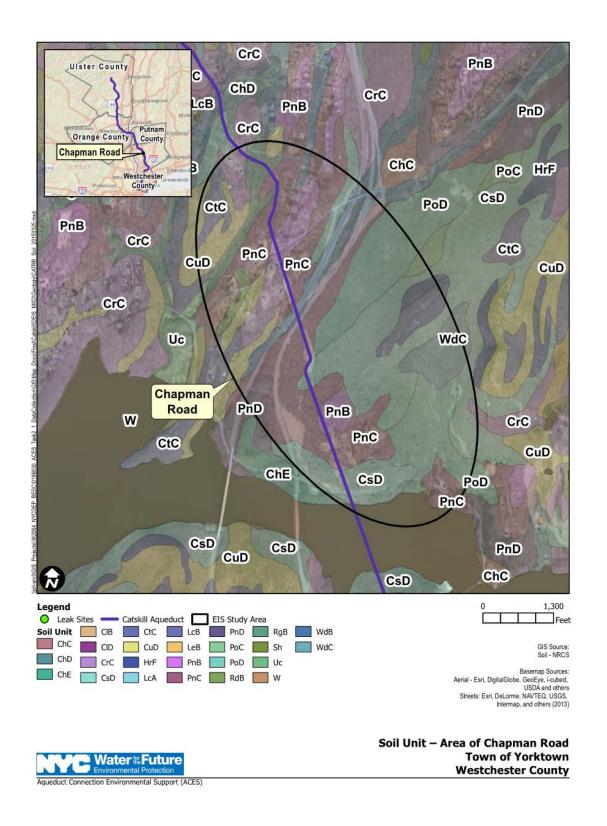


Figure B-6 Soil Map – Westchester County, New York (Chapman Road Study Area)

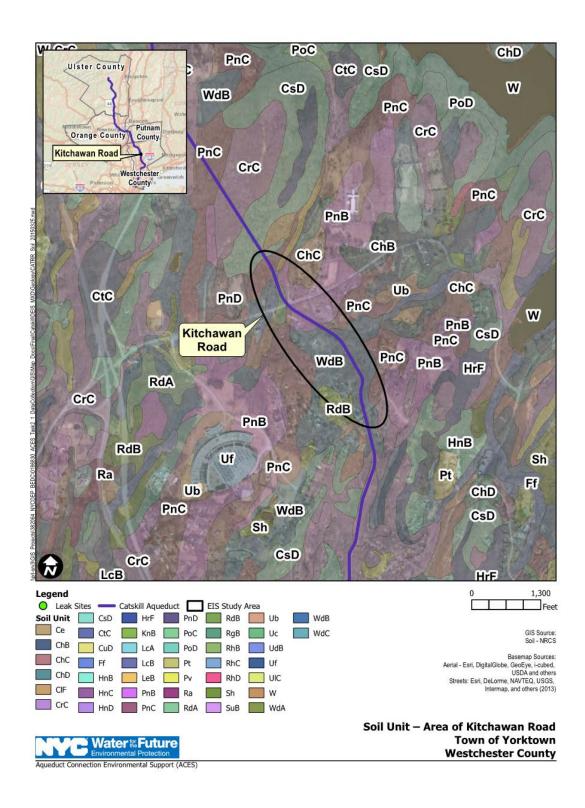


Figure B-7 Soil Map – Westchester County, New York (Kitchawan Road Study Area)

Attachment C Project Drawings

YORKTOWN-2		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-148	AREA PLAN STA 3199+00 TO STA 3228+00	
CI-314	STAGING AREA PLAN NBH13 JACOBS ROAD	
CI-332	SITE PREPARATION AND RESTORATION NEW AND EXISTING BOATHOLES - TYPICAL	
CI-348	SITE PREPARATION AND RESTORATION HUNTERS BROOK SPS	
ST-061	NEW BOATHOLE KEY PLANS AND LOCATION SCHEDULE	
ST-062	NEW BOATHOLE CONCRETE COLLAR	
ST-063	NEW BOATHOLE FRP LINING	
ST-064	NEW BOATHOLE FRP LINING POST INSTALLATION REPAIRS	
ST-065	NEW BOATHOLE REMOVABLE PRECAST CONCRETE SLAB	

YORKTOWN-2A		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-149	AREA PLAN STA 3228+00 TO STA 3256+00	
CI-348	SITE PREPARATION AND RESTORATION HUNTERS BROOK SPS	
CI-360	HUNTERS BROOK SPS BLOW-OFF CHAMBER PIPNG AND GRADING PLAN	
CI-605	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 1 OF 3	
CI-606	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3	
	SPS BLOW-OFF CHAMBER REHABILITATION CHAMBER TOP REPLACEMENT PLANS AND	
ST-186	SECTIONS	
ME-041	STEEL PIPE SIPHON BLOW-OFF CHAMBER DEMOLITION SECTIONS	
ME-042	STEEL PIPE SIPHON BLOW-OFF CHAMBER DOUBLE KNIFE GATE VALVE DETAILS	
ME-043	STEEL PIPE SIPHON BLOW-OFF CHAMBER SCHEDULE	
ME-045	STEEL PIPE SIPHON BLOW-OFF CHAMBER DETAILS	
LP-003	HUNTERS BROOK SPS BLOW-OFF CHAMBER PLANTING PLAN AND SCHEDULE	
LP-005	PLANTING DETAILS	

YORKTOWN-5		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-153	AREA PLAN STA 3341+00 TO STA 3370+00	
CI-315	STAGING AREA PLAN NBH14 UNDERHILL AVENUE	
CI-332	SITE PREPARATION AND RESTORATION NEW AND EXISTING BOATHOLES - TYPICAL	
CI-349	SITE PREPARATION AND RESTORATION TURKEY MOUNTAIN SPS	
CI-606	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3	
ST-061	NEW BOATHOLE KEY PLANS AND LOCATION SCHEDULE	
ST-062	NEW BOATHOLE CONCRETE COLLAR	
ST-063	NEW BOATHOLE FRP LINING	
ST-064	NEW BOATHOLE FRP LINING POST INSTALLATION REPAIRS	
ST-065	NEW BOATHOLE REMOVABLE PRECAST CONCRETE SLAB	

YORKTOWN-6		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-153	AREA PLAN STA 3341+00 TO STA 3370+00	
CI-101	TRAFFIC CONTROL ACCESS TO TURKEY MOUNTAIN SPS BLOW-OFF CHAMBER SHEET 1 OF 2	
CI-102	TRAFFIC CONTROL ACCESS TO TURKEY MOUNTAIN SPS BLOW-OFF CHAMBER SHEET 2 OF 2	
CI-161	SITE ACCESS ROAD IMPROVEMENTS TONGORE SPS BLOW-OFF CHAMBERS PLAN AND PROFILE	
CI-240	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS BLOW-OFF CHAMBERS	
CI-331	SITE PREPARATION AND RESTORATION ACCESS MANHOLE AND SPS ACCESS MANHOLE - TYPICAL	
CI-349	SITE PREPARATION AND RESTORATION TURKEY MOUNTAIN SPS	
CI-361	TURKEY MOUNTAIN SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN	
CI-363	TURKEY MOUNTAIN SPS PRECAST CONCRETE CULVERT	
CI-606	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3	
ST-172	SPS REHABILITATION CML REPAIRS	
ST-186	SPS BLOW-OFF CHAMBER REHABILITATION CHAMBER TOP REPLACEMENT PLANS AND SECTIONS	
ME-034	MANHOLE REHABILITATION	
ME-041	STEEL PIPE SIPHON BLOW-OFF CHAMBER DEMOLITION SECTIONS	
ME-042	STEEL PIPE SIPHON BLOW-OFF CHAMBER DOUBLE KNIFE GATE VALVE DETAILS	
ME-043	STEEL PIPE SIPHON BLOW-OFF CHAMBER SCHEDULE	
ME-045	STEEL PIPE SIPHON BLOW-OFF CHAMBER DETAILS	

YORKTOWN-7		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-154	AREA PLAN STA 3370+00 TO STA 3398+00	
CI-241	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 1 OF 4	
CI-242	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 2 OF 4	
CI-243	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 3 OF 4	
CI-244	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 4 OF 4	
CI-349	SITE PREPARATION AND RESTORATION TURKEY MOUNTAIN SPS	
CI-606	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3	

YORKTOWN-8		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-154	AREA PLAN STA 3370+00 TO STA 3398+00	
CI-241	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 1 OF 4	
CI-242	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 2 OF 4	
CI-243	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 3 OF 4	
CI-244	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 4 OF 4	
CI-309	STAGING AREA PLAN CROTON LAKE PT DOWNTAKE CHAMBER PRIMARY STAGING	
ST-181	CROTON LAKE DOWNTAKE CHAMBER PLANS	
ST-182	CROTON LAKE DOWNTAKE CHAMBER SECTIONS	
ST-183	CROTON LAKE DOWNTAKE CHAMBER SECTIONS 2	
ST-184	CROTON LAKE DOWNTAKE CHAMBER DETAILS	
ME-021	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION PLAN EL. 379.79	
ME-022	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION SECTIONS I	
ME-023	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION SECTIONS II	
ME-024	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION SECTIONS III	
ME-025	CROTON LAKE DOWNTAKE CHAMBER PLAN AT EL. 379.79	
ME-026	CROTON LAKE DOWNTAKE CHAMBER SECTIONS I	
ME-027	CROTON LAKE DOWNTAKE CHAMBER SECTIONS II	
ME-028	CROTON LAKE DOWNTAKE CHAMBER SECTIONS III	

ME-029	CROTON LAKE DOWNTAKE CHAMBER DETAILS I
ME-030	CROTON LAKE DOWNTAKE CHAMBER DETAILS II

YORKTOWN-9		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-155	AREA PLAN STA 3398+00 TO STA 3425+00	
EA-156	AREA PLAN STA 3425+00 TO STA 3451+00	
CI-269	SITE PREPARATION AND RESTORATION LEAK REPAIR LEAK 7	
CI-270	SITE PREPARATION AND RESTORATION PASSIVE DECHLORINATION SYSTEM LEAK 7	
CI-283	LEAK 7 PASSIVE DECHLORINATION SYSTEM	
CI-284	PASSIVE DECHLORINATION SYSTEM TYPICAL DETAIL	
	SITE PREPARATION AND RESTORATION ACCESS MANHOLE AND SPS ACCESS MANHOLE -	
CI-331	TYPICAL	
CI-332	SITE PREPARATION AND RESTORATION NEW AND EXISTING BOATHOLES - TYPICAL	
CI-606	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3	
CI-607	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 3 OF 3	
ST-145	LEAK 7 LEAK REPAIR - GROUTING OR LINING	
ST-157	AQUEDUCT ACCESS MANHOLE DETAIL	
ST-158	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 1 OF 3	
ST-159	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 2 OF 3	
ST-160	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 3 OF 3	
ST-161	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR LINING	
ST-171	TYPICAL AQUEDUCT LINER DEFECT TYPES CONCRETE REHABILITATION	

ME-034	MANHOLE REHABILITATION
ME-059	CROTON LAKE PT UPTAKE CHAMBER DEMOLITION PLAN
ME-060	CROTON LAKE PT UPTAKE CHAMBER NEW AIR VENT PLAN AND SECTIONS

YORKTOWN-10		
DRAWING No.	DRAWING TITLE	
GE-001	COVER SHEET	
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4	
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4	
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4	
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4	
GE-021	ABBREVIATIONS AND SYMBOLS	
GE-022	ABBREVIATIONS AND SYMBOLS	
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61	
EA-020	EXISTING AND ACCESS NOTES	
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3	
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3	
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE	
EA-158	AREA PLAN STA 3480+00 TO STA 3503+00	
	SITE PREPARATION AND RESTORATION ACCESS MANHOLE CULVERT DRAIN SLUICE GATE -	
CI-333	TYPICAL	
CI-334	CDSG MECHANICAL WORK (REPLACE) SECTIONS	
CI-335	CDSG MECHANICAL WORK (REPLACE) PLANS	
CI-606	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3	
CI-607	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 3 OF 3	
ST-157	AQUEDUCT ACCESS MANHOLE DETAIL	
ME-031	ACCESS MANHOLE CULVERT DRAIN SLUICE GATE DEMOLITION SECTIONS	
ME-032	CDSG MECHANICAL WORK SEAL AND REPLACE SECTIONS	
ME-033	CDSG MECHANICAL WORK SEAL AND REPLACE DETAILS	
ME-034	MANHOLE REHABILITATION	

	YORKTOWN-11		
DRAWING No.	DRAWING TITLE		
GE-001	COVER SHEET		
GE-011	INDEX OF DRAWINGS SHEET 1 OF 4		
GE-012	INDEX OF DRAWINGS SHEET 2 OF 4		
GE-013	INDEX OF DRAWINGS SHEET 3 OF 4		
GE-014	INDEX OF DRAWINGS SHEET 4 OF 4		
GE-021	ABBREVIATIONS AND SYMBOLS		
GE-022	ABBREVIATIONS AND SYMBOLS		
EA-003	KEY PLAN STA 2850+00 TO ST 4066+61		
EA-020	EXISTING AND ACCESS NOTES		
EA-021	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3		
EA-023	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3		
EA-024	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE		
EA-159	AREA PLAN STA 3503+00 TO STA 3530+00		
CI-245	SITE ACCESS ROAD IMPROVEMENTS KITCHAWAN ACCESS MANHOLE (MH25)		
CI-246	SITE ACCESS ROAD IMPROVEMENTS KITCHAWAN ACCESS MANHOLE (MH25) PROFILE		
	SITE PREPARATION AND RESTORATION ACCESS MANHOLE AND SPS ACCESS MANHOLE -		
CI-331	TYPICAL		
CI-606	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3		
CI-607	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 3 OF 3		
ST-157	AQUEDUCT ACCESS MANHOLE DETAIL		
ME-034	MANHOLE REHABILITATION		



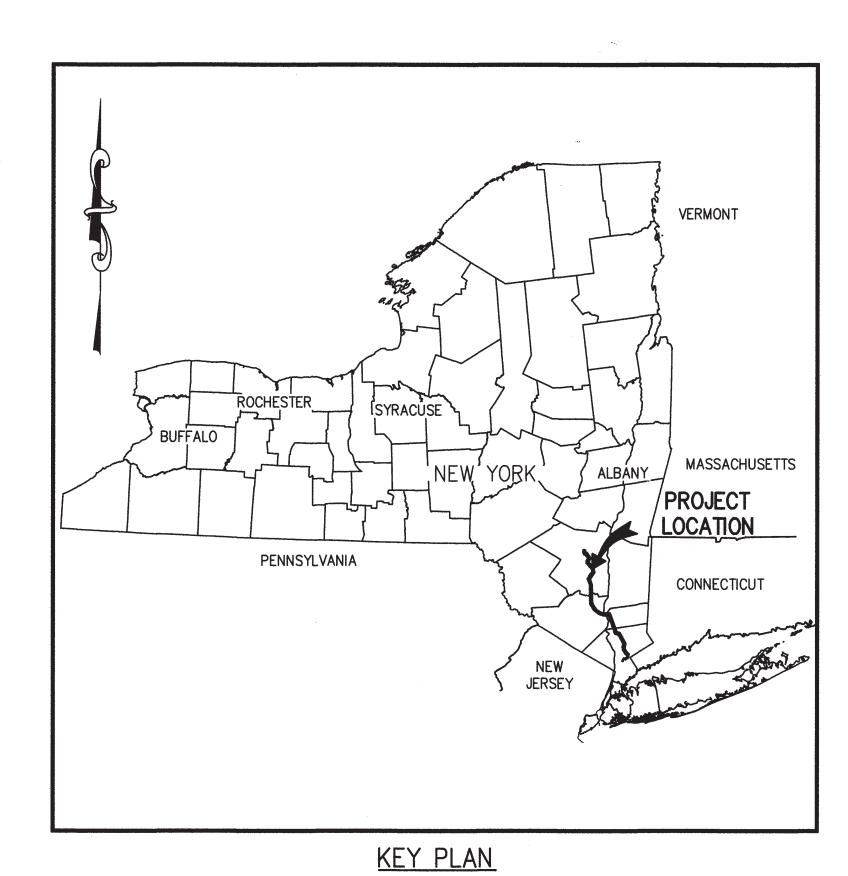
NEW YORK CITY ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION

96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

Engineer: John Murray, PE **McMillen Jacobs Associates** 183 Madison Ave Suite 505 New York, NY 10016 212.376.1319 murray@mcmjac.com

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

CONTRACT WFF-CAT-RR



All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

SEAN MCANDREW, P.E.

BID SET DATE: OCTOBER 2017

ASHOKAN RESERVOIR ULSTER COUNTY DUTCHESS COUNTY SULLIVAN COUNTY ORANGE COUNTY PUTNAM COUNTY CATSKILL AQUEDUCT WESTCHESTER COUNTY HUDSON RIVER KENSICO RESERVOIR LONG ISLAND SOUND

LOCATION PLAN

DIRECTOR, WATER FOR THE FUTURE PROGRAM BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION ACTING DEPUTY COMMISSIONER
BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION

VINCENT SAPIENZA, P.E DEPARTMENT OF ENVIRONMENTAL PROTECTION

> IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

SHEET NO	DRAWING NO	DRAWING TITLE
14	EA-001.00	KEY PLAN STA 0+00 TO STA 1350+00
15	EA-002.00	KEY PLAN STA 1350+00 TO 2850+00
16	EA-003.00	KEY PLAN STA 2850+00 TO STA 4066+61
17	EA-020.00	EXISTING AND ACCESS NOTES
18	EA-021.00	EXISTING AND ACCESS SCHEDULE SHEET 1 OF 3
19	EA-022.00	EXISTING AND ACCESS SCHEDULE SHEET 2 OF 3
20	EA-023.00	EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3
21	EA-024.00	ACCESS POINT AND TRAFFIC CONTROL SCHEDULE
22	EA-025.00	OVERHEAD WIRE SCHEDULE EAST OF HUDSON
23	EA-026.00	OVERHEAD WIRE SCHEDULE WEST OF HUDSON
24	EA-027.00	CA STATION LIMIT SCHEDULES BY COUNTY, MUNCIPALITY AND TUNNEL TYPE
25	EA-030.00	AREA PLAN STA 0+00 TO STA 15+00
26	EA-031.00	AREA PLAN STA 15+00 TO STA 30+00
27	EA-032.00	AREA PLAN STA 30+00 TO STA 60+00
28	EA-033.00	AREA PLAN STA 60+00 TO STA 86+00
29	EA-034.00	AREA PLAN STA 86+00 TO STA 111+00
30	EA-035.00	AREA PLAN STA 111+00 TO STA 139+00
31	EA-036.00	AREA PLAN STA 139+00 TO STA 168+00
32	EA-037.00	AREA PLAN STA 168+00 TO STA 198+00
33	EA-038.00	AREA PLAN STA 198+00 TO STA 220+00
34	EA-039.00	AREA PLAN STA 220+00 TO STA 249+00
35	EA-040.00	AREA PLAN STA 249+00 TO STA 277+00
36	EA-041.00	AREA PLAN STA 277+00 TO STA 305+00
37	EA-042.00	AREA PLAN STA 305+00 TO STA 333+00
38	EA-043.00	AREA PLAN STA 333+00 TO STA 360+00
39	EA-044.00	AREA PLAN STA 360+00 TO STA 389+00
40	EA-045.00	AREA PLAN STA 389+00 TO STA 412+00
41	EA-046.00	AREA PLAN STA 412+00 TO STA 438+00
42	EA-047.00	AREA PLAN STA 438+00 TO STA 463+00
43	EA-048.00	AREA PLAN STA 463+00 TO STA 491+00
44	EA-049.00	AREA PLAN STA 491+00 TO STA 518+00
45	EA-050.00	AREA PLAN STA 518+00 TO STA 546+00
46	EA-051.00	AREA PLAN STA 546+00 TO STA 572+00
47	EA-052.00	AREA PLAN STA 572+00 TO STA 601+00
48	EA-053.00	AREA PLAN STA 601+00 TO STA 631+00
49	EA-054.00	AREA PLAN STA 631+00 TO STA 660+00
50	EA-055.00	AREA PLAN STA 660+00 TO STA 688+60
51	EA-056.00	AREA PLAN STA 688+60 TO STA 714+00
52	EA-057.00	AREA PLAN STA 714+00 TO STA 742+00
53	EA-058.00	AREA PLAN STA 742+00 TO STA 771+00
54	EA-059.00	AREA PLAN STA 771+00 TO STA 798+00

SHEET NO	DRAWING NO	DRAWING TITLE
56	EA-061.00	AREA PLAN STA 825+00 TO STA 851+00
57	EA-062.00	AREA PLAN STA 851+00 TO STA 873+00
58	EA-063.00	AREA PLAN STA 873+00 TO STA 892+00
59	EA-064.00	AREA PLAN STA 892+00 TO STA 919+00
60	EA-065.00	AREA PLAN STA 919+00 TO STA 946+00
61	EA-066.00	AREA PLAN STA 946+00 TO STA 973+00
62	EA-067.00	AREA PLAN STA 973+00 TO STA 1000+00
63	EA-068.00	AREA PLAN STA 1000+00 TO STA 1028+00
64	EA-069.00	AREA PLAN STA 1028+00 TO STA 1056+00
65	EA-070.00	AREA PLAN STA 1056+00 TO STA 1084+00
66	EA-071.00	AREA PLAN STA 1084+00 TO STA 1112+00
67	EA-072.00	AREA PLAN STA 1112+00 TO STA 1140+00
68	EA-073.00	AREA PLAN STA 1140+00 TO STA 1167+00
69	EA-074.00	AREA PLAN STA 1167+00 TO STA 1194+00
70	EA-075.00	AREA PLAN STA 1194+00 TO STA 1221+00
71 72	EA-076.00 EA-077.00	AREA PLAN STA 1221+00 TO STA 1241+00 AREA PLAN STA 1241+00 TO STA 1271+00
73	EA-077.00 EA-078.00	AREA PLAN STA 1241+00 TO STA 1271+00 AREA PLAN STA 1271+00 TO STA 1301+00
74	EA-078.00 EA-079.00	AREA PLAN STA 1271+00 TO STA 1301+00 AREA PLAN STA 1301+00 TO STA 1330+00
75	EA-080.00	AREA PLAN STA 1330+00 TO STA 1357+00
76	EA-081.00	AREA PLAN STA 1357+00 TO STA 1385+00
77	EA-082.00	AREA PLAN STA 1385+00 TO STA 1413+00
78	EA-083.00	AREA PLAN STA 1413+00 TO STA 1443+00
79	EA-084.00	AREA PLAN STA 1443+00 TO STA 1473+00
80	EA-085.00	AREA PLAN STA 1473+00 TO STA 1502+00
81	EA-086.00	AREA PLAN STA 1502+00 TO STA 1528+00
82	EA-087.00	AREA PLAN STA 1528+00 TO STA 1554+00
83	EA-088.00	AREA PLAN STA 1554+00 TO STA 1583+00
84	EA-089.00	AREA PLAN STA 1583+00 TO STA 1612+00
85	EA-090.00	AREA PLAN STA 1612+00 TO STA 1639+00
86 87	EA-091.00	AREA PLAN STA 1639+00 TO STA 1667+00
88	EA-092.00 EA-093.00	AREA PLAN STA 1667+00 TO STA 1694+00 AREA PLAN STA 1694+00 TO STA 1721+00
89	EA-094.00	AREA PLAN STA 1721+00 TO STA 1749+00
90	EA-095.00	AREA PLAN STA 1749+00 TO STA 1779+00
91	EA-096.00	AREA PLAN STA 1779+00 TO STA 1809+00
92	EA-097.00	AREA PLAN STA 1809+00 TO STA 1839+00
93	EA-098.00	AREA PLAN STA 1839+00 TO STA 1869+00
94	EA-099.00	AREA PLAN STA 1869+00 TO STA 1899+00
95	EA-100.00	AREA PLAN STA 1899+00 TO STA 1928+00
96	EA-101.00	AREA PLAN STA 1928+00 TO STA 1958+00
97	EA-102.00	AREA PLAN STA 1958+00 TO STA 1985+00
98	EA-103.00	AREA PLAN STA 1985+00 TO STA 2015+00
99	EA-104.00	AREA PLAN STA 2015+00 TO STA 2042+00
100	EA-105.00	AREA PLAN STA 2042+00 TO STA 2070+00
101	EA-106.00	AREA PLAN STA 2070+00 TO STA 2098+00
102	EA-107.00 EA-108.00	AREA PLAN STA 2098+00 TO STA 2126+00 AREA PLAN STA 2126+00 TO STA 2155+00
104	EA-109.00	AREA PLAN STA 2155+00 TO STA 2184+00
105	EA-110.00	AREA PLAN STA 2184+00 TO STA 2213+00
106	EA-111.00	AREA PLAN STA 2213+00 TO STA 2241+00
107	EA-112.00	AREA PLAN STA 2241+00 TO STA 2269+00
108	EA-113.00	AREA PLAN STA 2269+00 TO STA 2297+00
109	EA-114.00	AREA PLAN STA 2297+00 TO STA 2322+00
110	EA-115.00	AREA PLAN STA 2322+00 TO STA 2349+00
111	EA-116.00	AREA PLAN STA 2349+00 TO STA 2378+00
112	EA-117.00	AREA PLAN STA 2378+00 TO STA 2406+00
113	EA-118.00	AREA PLAN STA 2406+00 TO STA 2425+00
114	EA-119.00	AREA PLAN STA 2425+00 TO STA 2449+00
115	EA-120.00	AREA PLAN STA 2449+00 TO STA 2477+00
116	EA-121.00	AREA PLAN STA 2477+00 TO STA 2506+00

SHEET NO	DRAWING NO	DRAWING TITLE
118	EA-123.00	AREA PLAN STA 2533+00 TO STA 2558+00
119	EA-124.00	AREA PLAN STA 2558+00 TO STA 2581+00
120	EA-125.00	AREA PLAN STA 2581+00 TO STA 2609+00
121	EA-126.00	AREA PLAN STA 2609+00 TO STA 2638+00
122	EA-127.00	AREA PLAN STA 2638+00 TO STA 2659+00
123	EA-128.00	AREA PLAN STA 2659+00 TO STA 2688+00
124	EA-129.00	AREA PLAN STA 2688+00 TO STA 2716+00
125	EA-130.00	AREA PLAN STA 2716+00 TO STA 2744+00
126	EA-131.00	AREA PLAN STA 2744+00 TO STA 2772+00
127	EA-132.00	AREA PLAN STA 2772+00 TO STA 2801+00
128	EA-133.00	AREA PLAN STA 2801+00 TO STA 2830+00
129	EA-134.00	AREA PLAN STA 2830+00 TO STA 2859+00
130	EA-135.00	AREA PLAN STA 2859+00 TO STA 2885+00
131	EA-136.00	AREA PLAN STA 2885+00 TO STA 2914+00
132	EA-137.00	AREA PLAN STA 2914+00 TO STA 2939+00
133	EA-138.00	AREA PLAN STA 2939+00 TO STA 2966+00
134	EA-139.00	AREA PLAN STA 2966+00 TO STA 2994+00
135	EA-140.00	AREA PLAN STA 2994+00 TO STA 3023+00
136	EA-141.00	AREA PLAN STA 3023+00 TO STA 3047+00
137	EA-142.00	AREA PLAN STA 3047+00 TO STA 3072+00
138	EA-143.00	AREA PLAN STA 3072+00 TO STA 3092+00
139	EA-144.00	AREA PLAN STA 3092+00 TO STA 3120+00
140	EA-145.00	AREA PLAN STA 3120+00 TO STA 3143+00
141	EA-146.00	AREA PLAN STA 3143+00 TO STA 3171+00
142	EA-147.00	AREA PLAN STA 3171+00 TO STA 3199+00
143	EA-148.00	AREA PLAN STA 3199+00 TO STA 3228+00
144	EA-149.00	AREA PLAN STA 3228+00 TO STA 3256+00
145	EA-150.00	AREA PLAN STA 3256+00 TO STA 3284+00
146	EA-151.00	AREA PLAN STA 3284+00 TO STA 3312+00
147	EA-152.00	AREA PLAN STA 3312+00 TO STA 3341+00
148	EA-153.00	AREA PLAN STA 3341+00 TO STA 3370+00
149	EA-154.00	AREA PLAN STA 3370+00 TO STA 3398+00
150	EA-155.00	AREA PLAN STA 3398+00 TO STA 3425+00
151	EA-156.00	AREA PLAN STA 3425+00 TO STA 3451+00
152	EA-157.00	AREA PLAN STA 3451+00 TO STA 3480+00
153	EA-158.00	AREA PLAN STA 3480+00 TO STA 3503+00
154	EA-159.00	AREA PLAN STA 3503+00 TO STA 3530+00
155 156	EA-160.00 EA-161.00	AREA PLAN STA 3530+00 TO STA 3555+00 AREA PLAN STA 3555+00 TO STA 3583+00
156	EA-161.00 EA-162.00	AREA PLAN STA 3555+00 TO STA 3585+00 AREA PLAN STA 3583+00 TO STA 3610+00
158	EA-162.00 EA-163.00	AREA PLAN STA 3585+00 TO STA 3610+00 AREA PLAN STA 3610+00 TO STA 3633+00
159	EA-163.00 EA-164.00	AREA PLAN STA 3610+00 TO STA 3650+00 AREA PLAN STA 3633+00 TO STA 3660+00
160	EA-164.00 EA-165.00	AREA PLAN STA 3660+00 TO STA 3688+00
161	EA-166.00	AREA PLAN STA 3688+00 TO STA 3716+00
101	EA-167.00	AREA PLAN STA 3716+00 TO STA 3744+00
162		1.1.2.1.1.2.11. OTA
162 163	FA-168 00	ARFA PLAN STA 3744+00 TO STA 3772+00
163	EA-168.00 EA-169.00	AREA PLAN STA 3744+00 TO STA 3772+00 AREA PLAN STA 3772+00 TO STA 3800+00
163 164	EA-169.00	AREA PLAN STA 3772+00 TO STA 3800+00
163 164 165	EA-169.00 EA-170.00	AREA PLAN STA 3772+00 TO STA 3800+00 AREA PLAN STA 3800+00 TO STA 3829+00
163 164	EA-169.00 EA-170.00 EA-171.00	AREA PLAN STA 3772+00 TO STA 3800+00 AREA PLAN STA 3800+00 TO STA 3829+00 AREA PLAN STA 3829+00 TO STA 3857+00
163 164 165 166 167	EA-169.00 EA-170.00 EA-171.00 EA-172.00	AREA PLAN STA 3772+00 TO STA 3800+00 AREA PLAN STA 3800+00 TO STA 3829+00 AREA PLAN STA 3829+00 TO STA 3857+00 AREA PLAN STA 3857+00 TO STA 3885+00
163 164 165 166	EA-169.00 EA-170.00 EA-171.00 EA-172.00 EA-173.00	AREA PLAN STA 3772+00 TO STA 3800+00 AREA PLAN STA 3800+00 TO STA 3829+00 AREA PLAN STA 3829+00 TO STA 3857+00 AREA PLAN STA 3857+00 TO STA 3885+00 AREA PLAN STA 3885+00 TO STA 3913+00
163 164 165 166 167 168 169	EA-169.00 EA-170.00 EA-171.00 EA-172.00 EA-173.00 EA-174.00	AREA PLAN STA 3772+00 TO STA 3800+00 AREA PLAN STA 3800+00 TO STA 3829+00 AREA PLAN STA 3829+00 TO STA 3857+00 AREA PLAN STA 3857+00 TO STA 3885+00 AREA PLAN STA 3885+00 TO STA 3913+00 AREA PLAN STA 3913+00 TO STA 3928+00
163 164 165 166 167 168	EA-169.00 EA-170.00 EA-171.00 EA-172.00 EA-173.00	AREA PLAN STA 3772+00 TO STA 3800+00 AREA PLAN STA 3800+00 TO STA 3829+00 AREA PLAN STA 3829+00 TO STA 3857+00 AREA PLAN STA 3857+00 TO STA 3885+00 AREA PLAN STA 3885+00 TO STA 3913+00

* Red boxes identify drawings in package

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Environmental Protection Water for Future

ACCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E. PROGRAM DIRECTOR OF WFF SEAN MCANDREW, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION

174

175

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EA-180.00

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AREA PLAN STA 4043+00 TO STA 4066+61

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

> INDEX OF DRAWINGS SHEET 1 OF 4

DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO: 1 OF **485** DRAWING NO. GE-011.00

02	CIVIL
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SHEET NO	DRAWING NO	DRAWING TITLE
208	CI-001.00	CIVIL GENERAL NOTES
209	CI-002.00	SUGGESTED WORK SEQUENCE NOTES
210	CI-003.00	TYPICAL ACCESS ROAD SECTIONS AND DETAIL
211	CI-011.00	TYPICAL CIVIL DETAILS SHEET 1 OF 3
212	CI-012.00	TYPICAL CIVIL DETAILS SHEET 2 OF 3
213	CI-013.00	TYPICAL CIVIL DETAILS SHEET 3 OF 3
214	CI-021.00	TYPICAL EROSION CONTROL MEASURES SHEET 1 OF 4
215	CI-022.00	TYPICAL EROSION CONTROL MEASURES SHEET 2 OF 4
216	CI-023.00	TYPICAL EROSION CONTROL MEASURES SHEET 3 OF 4
217	CI-024.00	TYPICAL EROSION CONTROL MEASURES SHEET 4 OF 4
218	CI-030.00	TRAFFIC CONTROL NOTES, TABLES AND LEGEND
219	CI-031.00	TYPICAL TRAFFIC CONTROL MEASURES ACCESS FROM VILLAGE, TOWN, CITY AND COUNTY ROADS — SHEET 1 OF 2
220	CI-032.00	TYPICAL TRAFFIC CONTROL MEASURES ACCESS FROM VILLAGE, TOWN, CITY AND COUNTY ROADS — SHEET 2 OF 2
221	CI-050.00	TRAFFIC CONTROL ACCESS TO RONDOUT PT DOWNTAKE CHAMBER
222	CI-051.00	TRAFFIC CONTROL LEAK 5/CANAL ROAD PARTIAL CLOSURE
223	CI-061.00	TRAFFIC CONTROL ACCESS TO WALLKILL PT DOWNTAKE CHAMBER
224	CI-090.00	TRAFFIC CONTROL ACCESS TO HUNTERS BROOK SPS
225	CI-101.00	TRAFFIC CONTROL, ACCESS TO TURKEY MOUNTAIN SPS BLOW-OFF CHAMBER SHEET 1 OF 2
226	CI-102.00	TRAFFIC CONTROL, ACCESS TO TURKEY MOUNTAIN SPS BLOW-OFF CHAMBER SHEET 2 OF 2
227	CI-121.00	TRAFFIC CONTROL ACCESS TO HARLEM RR SPS NORTH CHAMBER
228	CI-141.00	TRAFFIC CONTROL ACCESS TO CATSKILL INFLUENT CHAMBER SHEET 1 OF 2
229	CI-142.00	TRAFFIC CONTROL ACCESS TO CATSKILL INFLUENT CHAMBER SHEET 2 OF 2
230	CI-161.00	SITE ACCESS ROAD IMPROVEMENTS TONGORE SPS BLOW-OFF CHAMBERS PLAN AND PROFILE
231	CI-162.00	SITE ACCESS ROAD IMPROVEMENTS TONGORE SPS SOUTH CHAMBER SHEET 1 OF 3
232	CI-163.00	SITE ACCESS ROAD IMPROVEMENTS TONGORE SPS SOUTH CHAMBER SHEET 2 OF 3
233	CI-164.00	SITE ACCESS ROAD IMPROVEMENTS TONGORE SPS SOUTH CHAMBER SHEET 3 OF 3
234	CI-171.00	SITE ACCESS ROAD IMPROVEMENTS RONDOUT PT DOWNTAKE CHAMBER SHEET 1 OF 3
235	CI-172.00	SITE ACCESS ROAD IMPROVEMENTS RONDOUT PT DOWNTAKE CHAMBER SHEET 2 OF 3
236	CI-173.00	SITE ACCESS ROAD IMPROVEMENTS RONDOUT PT DOWNTAKE CHAMBER SHEET 3 OF 3

		02 CIVIL
SHEET NO	DRAWING NO	DRAWING TITLE
237	CI-181.00	SITE ACCESS ROAD IMPROVEMENTS LEAK 3A SHEET 1 OF 2
238	CI-182.00	SITE ACCESS ROAD IMPROVEMENTS LEAK 3A SHEET 2 OF 2
239	CI-183.00	SITE ACCESS ROAD IMPROVEMENTS LEAK 3A PROFILE
240	CI-185.00	SITE ACCESS ROAD IMPROVEMENTS LEAK 4
241	CI-186.00	SITE ACCESS ROAD IMPROVEMENTS LEAK 4 PROFILE
242	CI-201.00	SITE ACCESS ROAD IMPROVEMENTS RONDOUT PT UPTAKE CHAMBER SHEET 1 OF 2
243	CI-202.00	SITE ACCESS ROAD IMPROVEMENTS RONDOUT PT UPTAKE CHAMBER SHEET 2 OF 2
244	CI-206.00	SITE ACCESS ROAD IMPROVEMENTS WALLKILL PT DOWNTAKE CHAMBER SHEET 1 OF 2
245	CI-207.00	SITE ACCESS ROAD IMPROVEMENTS WALLKILL PT DOWNTAKE CHAMBER SHEET 2 OF 2
246	CI-210.00	SITE ACCESS ROAD IMPROVEMENTS WASHINGTON SQUARE SPS NORTH CHAMBER
247	CI-211.00	SITE ACCESS ROAD IMPROVEMENTS WASHINGTON SQUARE SPS NORTH CHAMBER PROFILE
248	CI-221.00	SITE ACCESS ROAD IMPROVEMENTS FOUNDRY BROOK SPS NORTH CHAMBER
249	CI-225.00	SITE ACCESS ROAD IMPROVEMENTS FOUNDRY BROOK SPS NORTHERN AND SOUTHERN BLOW-OFF CHAMBERS
250	CI-226.00	SITE ACCESS ROAD IMPROVEMENTS FOUNDRY BROOK SPS NORTHERN AND SOUTHERN BLOW-OFF CHAMBERS PROFILE
251	CI-231.00	SITE ACCESS ROAD IMPROVEMENTS INDIAN BROOK SPS BLOW-OFF CHAMBERS PLAN AND PROFILE
252	CI-235.00	SITE ACCESS ROAD IMPROVEMENTS SPROUT BROOK SPS BLOW-OFF CHAMBERS
253	CI-236.00	SITE ACCESS ROAD IMPROVEMENTS SPROUT BROOK SPS BLOW-OFF CHAMBERS PROFILE
254	CI-237.00	SITE ACCESS ROAD IMPROVEMENTS PEEKSKILL SPS NORTHERN BLOW-OFF CHAMBERS SHEET 1 OF 2
255	CI-238.00	SITE ACCESS ROAD IMPROVEMENTS PEEKSKILL SPS NORTHERN BLOW-OFF CHAMBERS SHEET 2 OF 2
256	CI-240.00	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS BLOW-OFF CHAMBERS
257	CI-241.00	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 1 OF 4
258	CI-242.00	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 2 OF 4
259	CI-243.00	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 3 OF 4
260	CI-244.00	SITE ACCESS ROAD IMPROVEMENTS TURKEY MOUNTAIN SPS SOUTH CHAMBER SHEET 4 OF 4
261	CI-245.00	SITE ACCESS ROAD IMPROVEMENTS KITCHAWAN ACCESS MANHOLE (MH25)
262	CI-246.00	SITE ACCESS ROAD IMPROVEMENTS KITCHAWAN ACCESS MANHOLE (MH25) PROFILE
263	CI-251.00	SITE ACCESS ROAD IMPROVEMENTS HARLEM RR SPS BLOW-OFF CHAMBERS
264	CI-252.00	SITE ACCESS ROAD IMPROVEMENTS HARLEM RR SPS BLOW-OFF CHAMBERS PROFILE
265	CI-253.00	SITE ACCESS ROAD IMPROVEMENTS CATSKILL INFLUENT CHAMBER
266	CI-255.00	SITE ACCESS ROAD IMPROVEMENTS KENSICO BYPASS MANHOLE (MH34) PLAN AND PROFILE
267	CI-257.00	SITE PREPARATION AND RESTORATION LEAK REPAIR GARRISON LEAK
268	CI-258.00	SITE PREPARATION AND RESTORATION LEAK REPAIR LEAK 1A/1B ACCESS AND SUPPORT
269	CI-259.00	SITE PREPARATION AND RESTORATION PASSIVE DECHLORINATION SYSTEM LEAK 1A/1B
270	CI-262.00	SITE PREPARATION AND RESTORATION LEAK REPAIR LEAK 2 ACCESS AND SUPPORT
271	CI-263.00	SITE PREPARATION AND RESTORATION PASSIVE DECHLORINATION SYSTEM LEAK 2
272	CI-264.00	SITE PREPARATION PASSIVE DECHLORINATION SYSTEM LEAK 3A
273	CI-265.00	SITE PREPARATION PASSIVE DECHLORINATION SYSTEM LEAK 4
274	CI-266.00	SITE PREPARATION AND RESTORATION ACTIVE DECHLORINATION FACILITY LEAK 5
275	CI-267.00	SITE PREPARATION AND RESTORATION LEAK REPAIR LEAK POOR FARM ARCH ACCESS AND SUPPORT
276	CI-268.00	SITE PREPARATION AND RESTORATION PASSIVE DECHLORINATION SYSTEM LEAK 6
277	CI-269.00	SITE PREPARATION AND RESTORATION LEAK REPAIR LEAK 7
278	CI-270.00	SITE PREPARATION AND RESTORATION PASSIVE DECHLORINATION SYSTEM LEAK 7
279	CI-271.00	SITE PREPARATION AND RESTORATION LEAK REPAIR SURFACE EXPRESSIONS 8/9
280	CI-273.00	NEW PALTZ ACTIVE DECHLORINATION FACILITY LOCATION PLAN
281	CI-275.00	LEAK 1A/1B PASSIVE DECHLORINATION SYSTEM
282	CI-276.00	LEAK 2 PASSIVE DECHLORINATION SYSTEM
283	CI-277.00	LEAK 3A PASSIVE DECHLORINATION SYSTEM SHEET 1 OF 2
284	CI-278.00	LEAK 3A PASSIVE DECHLORINATION SYSTEM SHEET 2 OF 2
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LEAK 4 PASSIVE DECHLORINATION SYSTEM

LEAK 7 PASSIVE DECHLORINATION SYSTEM

TABLET DECHLORINATION SYSTEM DETAILS

STAGING AREA PLAN ASHOKAN HEADWORKS

PASSIVE DECHLORINATION SYSTEM TYPICAL DETAIL

TYPICAL DUPLEX SODIUM BISULFITE METERING PUMP SKID

SHEET NO	DRAWING NO	DRAWING TITLE
301	CI-302.00	STAGING AREA PLAN RONDOUT PT DOWNTAKE CHAMBER
302	CI-303.00	STAGING AREA PLAN WALLKILL PT DOWNTAKE CHAMBER
303	CI-304.00	STAGING AREA PLAN WALLKILL PT DRAINAGE CHAMBER SECONDARY STAGING
304	CI-305.00	STAGING AREA PLAN DELAWARE SHAFT 4 PRIMARY STAGING
305	CI-306.00	STAGING AREA PLAN SHERWOOD CORNERS SECONDARY STAGING
306	CI-307.00	STAGING AREA PLAN MOODNA PT DOWNTAKE CHAMBER
307	CI-308.00	STAGING AREA PLAN SPROUT BROOK SPS NORTH CHAMBER
308	CI-309.00	STAGING AREA PLAN CROTON LAKE PT DOWNTAKE CHAMBER PRIMARY STAGING
309	CI-310.00	STAGING AREA PLAN CATSKILL INFLUENT CHAMBER PRIMARY STAGING
310	CI-311.00	STAGING AREA PLAN KENSICO UPPER EFFLUENT CHAMBER
311	CI-312.00	STAGING AREA PLAN NBH3 PEAK ROAD
312	CI-313.00	STAGING AREA PLAN NBH5 STRAWBRIDGE ROAD
313	CI-314.00	STAGING AREA PLAN NBH13 JACOBS ROAD
314	CI-315.00	STAGING AREA PLAN NBH14 UNDERHILL AVENUE
315	CI-316.00	STAGING AREA PLAN NBH15 MILLWOOD ROAD
316	CI-317.00	STAGING AREA PLAN NBH17 BROADWAY AVE (NY 141)
317	CI-331.00	SITE PREPARATION AND RESTORATION ACCESS MANHOLE AND SPS ACCESS MANHOLE - TYPICAL
318	CI-332.00	SITE PREPARATION AND RESTORATION NEW AND EXISTING BOATHOLES — TYPICAL
319	CI-333.00	SITE PREPARATION AND RESTORATION ACCESS MANHOLE CULVERT DRAIN SLUICE GATE — TYPICAL
320	CI-334.00	CDSG MECHANICAL WORK (REPLACE) SECTIONS
321	CI-335.00	CDSG MECHANICAL WORK (REPLACE) PLANS
322	CI-336.00	SITE PREPARATION AND RESTORATION NEW AIR VENTS NV2, NV4, NV6, NV7
323	CI-337.00	SITE PREPARATION AND RESTORATION SPS AIR VALVE CHAMBER
324	CI-338.00	SPS AIR VALVE CHAMBER MECHANICAL WORK DETAILS
325	CI-341.00	SITE PREPARATION AND RESTORATION ESOPUS SPS
326	CI-342.00	SITE PREPARATION AND RESTORATION TONGORE SPS
327	CI-343.00	SITE PREPARATION AND RESTORATION WASHINGTON SQUARE SPS
328	CI-344.00	SITE PREPARATION AND RESTORATION FOUNDRY BROOK SPS
329	CI-345.00	SITE PREPARATION AND RESTORATION INDIAN BROOK SPS
330	CI-346.00	SITE PREPARATION AND RESTORATION SPROUT BROOK SPS
331	CI-347.00	SITE PREPARATION AND RESTORATION PEEKSKILL SPS
332	CI-348.00	SITE PREPARATION AND RESTORATION HUNTERS BROOK SPS
333	CI-349.00	SITE PREPARATION AND RESTORATION TURKEY MOUNTAIN SPS
334	CI-350.00	SITE PREPARATION AND RESTORATION HARLEM RAILROAD SPS
335	CI-351.00	ESOPUS SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
336	CI-352.00	TONGORE SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
337	CI-353.00	WASHINGTON SQUARE SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
338	CI-354.00	FOUNDRY BROOK SPS NORTHERN BLOW-OFF CHAMBER PIPING AND GRADING PLAN
339	CI-355.00	FOUNDRY BROOK SPS SOUTHERN BLOW-OFF CHAMBER PIPING AND GRADING PLAN
340	CI-356.00	INDIAN BROOK SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
341	CI-357.00	SPROUT BROOK SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
342	CI-358.00	PEEKSKILL SPS NORTHERN BLOW-OFF CHAMBER PIPING AND GRADING PLAN
343	CI-359.00	PEEKSKILL SPS SOUTHERN BLOW-OFF CHAMBER PIPING AND GRADING PLAN
344	CI-360.00	HUNTERS BROOK SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
345	CI-361.00	TURKEY MOUNTAIN SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
346	CI-362.00	HARLEM RAILROAD SPS BLOW-OFF CHAMBER PIPING AND GRADING PLAN
347	CI-363.00	TURKEY MOUNTAIN SPS PRECAST CONCRETE CULVERT
348	CI-364.00	CIW REHABILITITATION WORK
349	CI-541.00	SITE PREPARATION AND RESTORATION MH34 PERMANENT CLOSURE WORK
350	CI-601.00	WEST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 1 OF 4
351	CI-602.00	WEST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 4
352	CI-603.00	WEST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 3 OF 4
353	CI-604.00	WEST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 4 OF 4
354	CI-605.00	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 1 OF 3
755	CI-606.00	EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3
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CI-292.00 CI-293.00

CI-294.00

CI-301.00

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LEAK 5 ACTIVE DECHLORINATION FACILITY RONDOUT DRAINAGE CHAMBER PLAN AND FLOW DIAGRAM

LEAK 6 PASSIVE DECHLORINATION SYSTEM AT WALLKILL DRAINAGE CHAMBER

NEW PALTZ ACTIVE DECHLORINATION FACILITY PLAN AND FLOW DIAGRAM

LEAK 5 ACTIVE DECHLORINATION FACILITY RONDOUT DRAINAGE CHAMBER ENLARGED PLAN AND SECTIONS

SOLIDER PILE AND LAGGING RETAINING WALL HARLEM RR SPS BLOW-OFF CHAMBERS PLAN AND PROFILE

SOLIDER PILE AND LAGGING RETAINING WALL HARLEM RR SPS BLOW-OFF CHAMBERS PLAN AND PROFILE

SOLIDER PILE AND LAGGING RETAINING WALL HARLEM RR SPS BLOW-OFF CHAMBERS DETAIL SHEET 1 OF 4

SOLIDER PILE AND LAGGING RETAINING WALL HARLEM RR SPS BLOW-OFF CHAMBERS DETAIL SHEET 2 OF 4 SOLIDER PILE AND LAGGING RETAINING WALL HARLEM RR SPS BLOW-OFF CHAMBERS DETAIL SHEET 3 OF 4

SOLIDER PILE AND LAGGING RETAINING WALL HARLEM RR SPS BLOW-OFF CHAMBERS DETAIL SHEET 4 OF 4

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> INDEX OF DRAWINGS SHEET 2 OF 4

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	02 CIVIL			
SHEET NO	DRAWING NO	DRAWING TITLE		
357	CI-700.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 1313+60 TO STA 1308+00		
358	CI-701.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 1308+00 TO STA 1290+00		
359	CI-702.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 1290+00 TO STA 1281+50		
360	CI-703.00	NEW PALTZ TEMPORARY WATER SUPPLY SHAFT 4 PARTIAL PLAN AND SECTION		
361	CI-704.00	NEW PALTZ TEMPORARY WATER SUPPLY WALLKILL BLOW-OFF CHAMBER		
362	CI-705.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 0+00 TO STA 25+00		
363	CI-706.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 25+00 TO STA 52+00		
364	CI-707.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 52+00 TO STA 79+00		
365	CI-708.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 79+00 TO STA 102+00		
366	CI-709.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 102+00 TO STA 123+50		
367	CI-710.00	NEW PALTZ TEMPORARY WATER SUPPLY STA 123+50 TO 130+10		
368	CI-711.00	NEW PALTZ TEMPORARY WATER SUPPLY WALLKILL DOWNTAKE CHAMBER		
369	CI-712.00	NEW PALTZ TEMPORARY WATER SUPPLY DETAILS		
370	CI-713.00	NEW PALTZ TEMPORARY TRANSMISSION MAIN PROCESS & INSTRUMENTATION DIAGRAM		
371	CI-714.00	NEW PALTZ TEMPORARY WATER SUPPLY ELECTRICAL DETAILS		

		03 PREPARATION AND ENTRY
SHEET NO	DRAWING NO	DRAWING TITLE
372	PE-011.00	VENTILATION ZONES SHEET 1 OF 2
373	PE-012.00	VENTILATION ZONES SHEET 2 OF 2
374	PE-021.00	TYPICAL SPS SOUTH CHAMBER AND MANHOLE CONCEPTUAL VENTILATION LAYOUT
375	PE-022.00	TYPICAL SPS NORTH CHAMBER CONCEPTUAL VENTILATION LAYOUT
376	PE-023.00	CROTON LAKE DOWNTAKE CHAMBER VENTILATION EXHAUST
377	PE-141.00	STEEL PIPE SIPHON ISOLATION SHEET 1 OF 2
378	PE-142.00	STEEL PIPE SIPHON ISOLATION SHEET 2 OF 2
379	PE-143.00	RESERVOIR ISOLATION

		04 BIOFILM REMOVAL
SHEET NO	DRAWING NO	DRAWING TITLE
380	BR-011.00	BIOFILM REMOVAL WORK ZONE CUT AND COVER TUNNELS, GRADE TUNNELS AND CCT SIPHONS
381	BR-012.00	BIOFILM REMOVAL WORK ZONE CCT, GT AND CCT SIPHON TYPICAL SECTIONS
382	BR-023.00	BIOFILM HANDLING STEEL PIPE SIPHONS
383	BR-052.00	KENSICO BYPASS TUNNEL SEDIMENT REMOVAL CIC ACCESS PLAN
384	BR-053.00	KENISCO BYPASS TUNNEL SEDIMENT REMOVAL CIC ACCESS SECTIONS
385	BR-054.00	KENSICO BYPASS TUNNEL SEDIMENT REMOVAL UEC ACCESS PLAN
386	BR-091.00	IN-AQUEDUCT WASHWATER AND CONSTRUCTION WATER HANDLING
387	BR-092.00	WATER TREATMENT PLANT SCHEMATIC
388	BR-093.00	WATER TREATMENT CONCEPTUAL LAYOUT

05 STRUCTURAL

SHEET NO	DRAWING NO	DRAWING TITLE
389	ST-001.00	GENERAL NOTES AND TABLES
390	ST-061.00	NEW BOATHOLE KEY PLANS AND LOCATION SCHEDULE
391	ST-062.00	NEW BOATHOLE CONCRETE COLLAR
392	ST-063.00	NEW BOATHOLE FRP LINING
393	ST-064.00	NEW BOATHOLE FRP LINING POST INSTALLATION REPAIRS
394	ST-065.00	NEW BOATHOLE REMOVABLE PRECAST CONCRETE SLAB
395	ST-101.00	SIPHON BRIDGE REHABILITATION GENERAL ARRANGEMENT AND TEMPORARY BRIDGE CROSSING
396	ST-102.00	SIPHON BRIDGE REHABILITATION EDGE BEAM AND TOP SLAB REPAIRS AND GUARDRAIL REPLACEMENT
397	ST-103.00	SIPHON BRIDGE REHABILITATION FOUNDRY BROOK BOTTOM SLAB DEMOLITION AND SIPHON BRIDGE MOVEMENT CRITERI
398	ST-104.00	SIPHON BRIDGE REHABILITATION FOUNDRY BROOK BOTTOM SLAB REPLACEMENT
399	ST-105.00	SIPHON BRIDGE REHABILITATION TYPICAL CONCRETE DEFECT TYPES REPAIR METHODS AND DETAILS
400	ST-106.00	POOR FARM ARCH BRIDGE REHABILITATION GENERAL ARRANGEMENT
401	ST-131.00	MH15 PERMANENT CLOSURE
402	ST-132.00	MH34 SEDIMENT AND DEBRIS REMOVAL AND DISPOSAL AND PERMANENT CLOSURE
403	ST-141.00	LEAK 1A/1B LEAK REPAIR — GROUTING
404	ST-142.00	LEAK 2 LEAK REPAIR— LINING
405	ST-143.00	LEAK POOR FARM ARCH LEAK REPAIR — GROUTING
406	ST-144.00	GARRISON LEAK LEAK REPAIR — GROUTING OR LINING
407	ST-145.00	LEAK 7 LEAK REPAIR — GROUTING OR LINING
408	ST-146.00	SURFACE EXPRESSIONS 8/9 LEAK REPAIR — GROUTING OR LINING
409	ST-157.00	AQUEDUCT ACCESS MANHOLE DETAIL
410	ST-158.00	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 1 OF 3
411	ST-159.00	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 2 OF 3
412	ST-160.00	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 3 OF 3
413	ST-161.00	TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR LINING
414	ST-171.00	TYPICAL AQUEDUCT LINER DEFECT TYPES CONCRETE REHABILITATION
415	ST-172.00	SPS REHABILITATION CML REPAIRS
416	ST-173.00	ABANDONED TAP REMOVAL TAP TYPE A
417	ST-174.00	ABANDONED TAP REMOVAL TAP TYPE B
418	ST-181.00	CROTON LAKE DOWNTAKE CHAMBER PLANS
419	ST-182.00	CROTON LAKE DOWNTAKE CHAMBER SECTION
420	ST-183.00	CROTON LAKE DOWNTAKE CHAMBER SECTIONS 2
421	ST-184.00	CROTON LAKE DOWNTAKE CHAMBER DETAILS
422	ST-185.00	TYPICAL STRUCTURAL DETAILS
423	ST-186.00	SPS BLOW-OFF CHAMBER REHABILITATION CHAMBER TOP REPLACEMENT PLANS AND SECTIONS
424	ST-187.00	ST ELMO CCT BOATHOLES NEW HATCH/AIR VENTS AND TYPICAL BOATHOLE HATCH REPLACEMENT PLANS
425	ST-188.00	ST ELMO CCT BOATHOLES NEW HATCH/AIR VENTS AND TYPICAL BOATHOLE HATCH REPLACEMENT SECTIONS
	ST-189.00	CIW REHABILITATION PLANS AND SECTIONS

DESIGNED BY:
TH
CS

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PROJECT MANAGER:
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dba Jacobs Associates

Environmental Protection
Water for Future

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

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SHEET NO:

3 OF 485

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DATE: **10/2/2017**

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INDEX OF DRAWINGS SHEET 3 OF 4

BID SET

DATE ISSUED: 10/2/2017

SHEET NO	DRAWING NO	DRAWING TITLE
427	ME-021.00	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION PLAN EL. 379.79
428	ME-022.00	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION SECTIONS I
429	ME-023.00	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION SECTIONS II
430	ME-024.00	CROTON LAKE DOWNTAKE CHAMBER DEMOLITION SECTIONS III
431	ME-025.00	CROTON LAKE DOWNTAKE CHAMBER PLAN AT EL. 379.79
432	ME-026.00	CROTON LAKE DOWNTAKE CHAMBER SECTIONS I
433	ME-027.00	CROTON LAKE DOWNTAKE CHAMBER SECTIONS II
434	ME-028.00	CROTON LAKE DOWNTAKE CHAMBER SECTIONS III
435	ME-029.00	CROTON LAKE DOWNTAKE CHAMBER DETAILS I
436	ME-030.00	CROTON LAKE DOWNTAKE CHAMBER DETAILS II
437	ME-031.00	ACCESS MANHOLE CULVERT DRAIN SLUICE GATES DEMOLITION SECTIONS
438	ME-032.00	CDSG MECHANICAL WORK SEAL AND REPLACE SECTIONS
439	ME-033.00	CDSG MECHANICAL WORK SEAL AND REPLACE DETAILS
440	ME-034.00	MANHOLE REHABILITATION
441	ME-041.00	STEEL PIPE SIPHON BLOW-OFF CHAMBER DEMOLITION SECTIONS
442	ME-042.00	STEEL PIPE SIPHON BLOW-OFF CHAMBER DOUBLE KNIFE GATE VALVE DETAILS
443	ME-043.00	STEEL PIPE SIPHON BLOW-OFF CHAMBER SCHEDULE
444	ME-044.00	DELETED
445	ME-045.00	STEEL PIPE SIPHON BLOW-OFF CHAMBER DETAILS
446	ME-046.00	SIPHON DRAINAGE CHAMBER DETAILS
447	ME-051.00	RONDOUT PT DOWNTAKE CHAMBER AND UPTAKE CHAMBER DEMOLITION PLAN
448	ME-052.00	RONDOUT PT DOWNTAKE CHAMBER NEW AIR VENT PLAN AND SECTIONS
449	ME-053.00	RONDOUT PT UPTAKE CHAMBER NEW AIR VENT PLAN AND SECTIONS
450	ME-054.00	WALLKILL PT DOWNTAKE CHAMBER AND UPTAKE CHAMBER DEMOLITION PLAN
451	ME-055.00	WALLKILL PT DOWNTAKE CHAMBER NEW AIR VENT PLAN AND SECTIONS
452	ME-056.00	WALLKILL PT UPTAKE CHAMBER NEW AIR VENT PLAN AND SECTIONS
453	ME-057.00	ST. ELMO CCT DOWNTAKE AND UPTAKE BOATHOLE DEMOLITION PLAN
454	ME-058.00	ST. ELMO CCT DOWNTAKE AND UPTAKE BOATHOLE NEW AIR VENT PLANS, SECTIONS AND DETAILS
455	ME-059.00	CROTON LAKE PT UPTAKE CHAMBER DEMOLITION PLAN
456	ME-060.00	CROTON LAKE PT UPTAKE CHAMBER NEW AIR VENT PLAN AND SECTIONS
457	ME-061.00	NEW AIR VENT DETAILS I
458	ME-062.00	NEW AIR VENT DETAILS II
459	ME-063.00	TYPICAL EXISTING BOATHOLE ACCESS HATCH DEMOLITION
460	ME-071.00	RONDOUT AND WALLKILL DRAINAGE CHAMBER DEMOLITION PLANS
461	ME-072.00	RONDOUT AND WALLKILL DRAINAGE CHAMBER DEMOLITION SECTIONS
462	ME-073.00	DRAINAGE CHAMBER MECHANICAL WORK PLUG INSTALLATION DETAILS I
463	ME-074.00	DRAINAGE CHAMBER MECHANICAL WORK PLUG INSTALLATION DETAILS II
464	ME-081.00	GAUGING CHAMBER REHABILITATION
464 465	ME-081.00 ME-082.00	GAUGING CHAMBER REHABILITATION ASKOKAN, PEAK, WALLKILL AND CROTON GAUGING CHAMBER SUPER STRUCTURE

	07 ELECTRICAL								
SHEET NO	HEET NO DRAWING NO DRAWING TITLE								
468	EL-001.00	ELECTRICAL LEGEND I							
469	EL-002.00	ELECTRICAL LEGEND II							
470	EL-021.00	CROTON LAKE DOWNTAKE CHAMBER ELECTRICAL POWER PLAN							
471	EL-022.00	CROTON LAKE DOWNTAKE CHAMBER ELECTRICAL SHAFT LIGHTING ELEVATIONS							
472	EL-023.00	ELECTRICAL DETAILS							
473	EL-050.00	LEAK 5 ACTIVE DECHLORINATION FACILITY RONDOUT DRAINAGE CHAMBER POWER PLAN							
474	EL-051.00	LEAK 5 ACTIVE DECHLORINATION FACILITY RONDOUT DRAINAGE CHAMBER ENLARGED POWER PLAN AND SINGLE LINE DIAGRAM							
475	EL-052.00	NEW PALTZ ACTIVE DECHLORINATION FACILITY POWER PLAN							
476	EL-053.00	NEW PALTZ ACTIVE DECHLORINATION FACILITY SINGLE LINE DIAGRAM							

	08 INSTRUMENTATION								
SHEET NO	DRAWING NO	DRAWING TITLE							
477	IN-001.00	ACTIVE DECHLORINATION FACILITIES INSTRUMENTATION AND CONTROLS							
478	IN-002.00	ACTIVE DECHLORINATION FACILITIES INSTRUMENTATION SCHEDULE							
479	IN-011.00	LEAK 5 ACTIVE DECHLORINATION FACILITY RONDOUT DRAINAGE CHAMBER INSTRUMENTATION AND CONTROLS							
480	IN-012.00	NEW PALTZ ACTIVE DECHLORINATION FACILITY INSTRUMENTATION AND CONTROLS							

09 LANDSCAPE PLAN								
SHEET NO	DRAWING NO	DRAWING TITLE						
481	LP-001.00	SPROUT BROOK SPS BLOW-OFF CHAMBER PLANTING PLAN AND SCHEDULE						
482	LP-002.00	PEEKSKILL NORTHERN SPS BLOW-OFF CHAMBER PLANTING PLAN AND SCHEDULE						
483	LP-003.00	HUNTERS BROOK SPS BLOW-OFF CHAMBER PLANTING PLAN AND SCHEDULE						
484	LP-004.00	KENSICO BYPASS MANHOLE (MH34) PLANTING PLAN AND SCHEDULE						
485	LP-005.00	PLANTING DETAILS						

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Environmental Protection Water for Future

ACCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E. PROGRAM DIRECTOR OF WFF SEAN MCANDREW, P.E.

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

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STRUCTURE ABBREVIATIONS:

BH	BOATHOLE
BOC	BLOW-OFF CHAMBER
CC	. CONNECTION CHAMBER
CCT	. CUT AND COVER TUNNEL
CIC	CATSKILL INFLUENT CHAMBER
CIW	CATSKILL INFLUENT WEIR
CLBO	CROTON LAKE BLOW-OFF
CLDC	CROTON LAKE DOWNTAKE CHAMBER
CLWG	CROTON LAKE WASTE GATE
CP	. COAGULATING PLANT
DEL	DELAWARE SHAFT
DC	. DRAINAGE CHAMBER
DS	. DRAINAGE SHAFT
DTC	DOWNTAKE CHAMBER
EC	. EFFLUENT CHAMBER
EV	EXISTING AIR VENT
GC	. GAUGING CHAMBER
GT	. GRADE TUNNEL
GTC	GATE CHAMBER
L	LEAK
LGC	LOWER GATE CHAMBER
LMH	LEAK MANHOLE
LPFA	LEAK POOR FARM ARCH
MH	MANHOLE
MHS	MANHOLE WITH CULVERT DRAIN SLUICE GATE
NBH	NEW BOATHOLE
NV	. NEW AIR VENT
PFA	POOR FARM ARCH
PT	PRESSURE TUNNEL
RDC	RONDOUT PRESSURE TUNNEL DRAINAGE CHAMBER
SC	. SCREEN CHAMBER
SE	. SURFACE EXPRESSION
SHWD COR	. SHERWOOD CORNERS
SPS	. STEEL PIPE SIPHON
SPS-B	STEEL PIPE SIPHON BLOW-OFF
SPS-BN	STEEL PIPE SIPHON BLOW—OFF NORTH
CDC DC	CTEEL DIDE CIDLIAN DI AN AFE CALITU

SPS-BS STEEL PIPE SIPHON BLOW-OFF SOUTH

SPS-M. STEEL PIPE SIPHON ACCESS MANHOLE

SPS-NC STEEL PIPE SIPHON PUMPING STATION NORTH CHAMBER

SPS-SC STEEL PIPE SIPHON PUMPING STATION SOUTH CHAMBER

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SPS-C. STEEL PIPE SIPHON CHAMBER

SPS-SB STEEL PIPE SIPHON BRIDGE

UGC. UPPER GATE CHAMBER

CCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

PROGRAM DIRECTOR OF WFF

WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

Environmental

UEC. KENSICO UPPER EFFLUENT CHAMBER

GENERAL ABBREVIATIONS:

A	C
ABUT ABUTMENT	CA
ABV ABOVE ACI AMERICAN CONCRETE INSTITUTE	CAT-RR CATSKILL AQUEDUCT REPAIR AND REHABILITATION
ACM ASBESTOS CONTAINING MATERIALS	CCT CUT AND COVER TUNNEL
ADDL ADDITIONAL	CDSG CULVERT DRAIN SLUICE GATE
AL OR ALUM ALUMINUM	CF CONTAMINANT FILTRATION
ANSI AMERICAN NATIONAL	CFR CODE OF FEDERAL REGULATIONS
STANDARDS INSTITUTE AP	CFRP CARBON FIBER REINFORCED POLYMER
APPROX APPROXIMATE	CHKRD CHECKERED
ASTM AMERICAN SOCIETY FOR	CI
TESTING OF MATERIAL	CIP
AVE AVENUE	CLR CLEAR
	CML CEMENT MORTAR LINING
В	CMP CORRUGATED METAL PIPE
BF BACKFILL, BOTTOM	CO COMPANY
FLANGE, BLIND FLANGE	CONC CONCRETE
BFV BUTTERFLY VALVE	CONST JOINT CONSTRUCTION JOINT
BGS BELOW GROUND SURFACE	CORP CORPORATION
BIT	COUP COUPLING
BLDG BUILDING	CTDR CENTERED
BLVD BOULEVARD	CTR CENTER
BOTT BOTTOM	CU FT CUBIC FEET
BRG PL BEARING PLATE	€
BV BALL VALVE	
BWS BUREAU OF WATER SUPPLY	

SECTION DESIGNATION OR DETAIL NUMBER GE - 021– DWG. NUMBER ON WHICH THE SECTION OR DETAIL IS CUT OR SHOWN

NOTE:

1. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL ABBREVIATIONS.

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-	4 i	nquiries	regarding this drawing(s) or project sho	uld be r	nade to NYC Environment	al Protection, Bureau of	Engineering Design and	Construction.

JA-UNDERGROUND · P. C.

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CHECKED BY:

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ABBREVIATIONS AND SYMBOLS

DRAWING NO. GE-021.00

DATE: **10/2/2017**

NYS. NEW YORK STATE S W D HWY. HIGHWAY NYSDEC. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION DO. GRAVEL MATERIAL SC. SLIP-CRITICAL NYSDOT. NEW YORK STATE DEPARTMENT OF ICRI. INTERNATIONAL CONCRETE REPAIR INSTITUTE DBH. DIAMETER OF TREE AT BREAST HEIGHT SCH. SCHEDULE W/O. WITHOUT TRANSPORTATION ID. INNER DIAMETER DBL. DOUBLE SEC OR SECT. SECTION WA. WALLKILL #. NUMBER DEG. DEGREE SF. SILT FENCE WL. WATER LEVEL INV INVERT 0 DEL. DELAWARE SIM SIMILAR WOG. WATER, OIL, AND GAS * INDICATES A DIMENSION DEP. DEPARTMENT OF SMACNA. SHEET METAL AND AIR CONDITIONING TO BE VERIFIED IN THE FIELD OBL. OBLIGATE WETLAND WT. WEIGHT IN POUNDS ENVIRONMENTAL PROTECTION CONTRACTORS' NATIONAL ASSOCIATION K WTP. WATER TREATMENT PLANT OC. ON CENTER DEPT. DEPARTMENT SP AND SPP. SPECIES OD. OUTER DIAMETER WV. WATER VALVE DI. DUCTILE IRON SPDES. STATE POLLUTANT DISCHARGE OHW. OVERHEAD WIRE WWF. WELDED WIRE FABRIC KGV. KNIFE GATE VALVE DIA, DIAM AND ϕ DIAMETER ELIMINATION SYSTEM OPNG. OPENING KSI KILO POUNDS PER SQUARE INCH DIM. DIMENSION SQ. SQUARE OSHA. OCCUPATIONAL SAFETY AND KW. KILOWATT D. ANGULAR ROCK RIPRAP SQ FT. SQUARE FEET HEALTH ADMINISTRATION DT. DOWNTAKE SQ IN. SQUARE INCH P DWG AND DWGS. DRAWING/DRAWINGS SS AND SST STAINLESS STEEL L. LENGTH ST. STREET PC. POINT OF CURVATURE LAT. LATERAL STA. STATION PE. PLAIN END LB AND LBS. POUND/POUNDS EA. EACH STL. STEEL PF. PROTECTIVE FENCE LF. LINEAR FEET SWMP. STORM WATER MANAGEMENT PROGRAM EEWS. EMERGENCY EYEWASH/SHOWER PH. POTENTIAL HYDROGEN LG. LARGE EF. EACH FACE SWPPP. STORM WATER POLLUTION PL. PANEL LH. LEFT HAND EL. ELEVATION PREVENTION PLAN PROJ. PROJECTED LLV. LONG LEG VERTICAL EMBD OR EMBED. EMBEDDED SYM. SYMMETRIC PRZ. PROTECTED ROOT ZONE LN. LANE EQUIP OR EQPM. EQUIPMENT PSF. POUND PER SQUARE FOOT Τ LOCS. LOCATIONS EW. EACH WAY LOD LIMIT OF DISTURBANCE T&B TOP AND BOTTOM EXIST. EXISTING PSIG. POUND PER SQUARE INCH GAUGE LP. LOW POINT TBD. TO BE DETERMINED EXP. EXPANDING PT. POINT OF TANGENCY THK. THICKNESS M PVC. POLYVINYL CHLORIDE F TOC. TOP OF CHANNEL PVMS. PORTABLE VARIABLE MESSAGE SIGN MAX. MAXIMUM TOPO. TOPOGRAPHY FAC. FACULATIVE PW. POTABLE WATER MECH. MECHANICAL FACU. FACULATIVE UPLAND TRC. TOTAL RESIDUAL CHLORINE PWY. PARKWAY MFR. MANUFACTURER FACW. FACULATIVE WETLAND TW. TOP LEVEL OF WALL R MGD. MILLIONS OF GALLONS PER DAY TYP. TYPICAL MIN. MINIMUM F, FL AND FLG. FLANGE R. RADIUS U MJ MECHANICAL JOINT FNPT. FEMALE NATIONAL PIPE THREAD MM. MILLIMETER UID. UNIDENTIFIED FRP. FIBERGLASS REINFORCED PLASTIC REST CPLG. RESTRAINED COUPLING MPH. MILE PER HOUR UNO. UNLESS NOTED OTHERWISE FS. FAR SIDE RO. RONDOUT MSE. MECHANICALLY STABILIZED EARTH UON UNLESS OTHERWISE NOTED FT. FEET RQD/REQ'D. REQUIRED MT. MOUNT FT/S. FOOT PER SECOND RR. RAILROAD MTD. MOUNTED RT. RAIL TRAIL G MUTCD. MANUAL OF UNIFORM TRAFFIC CONTROL RWBT. RONDOUT-WEST BRANCH TUNNEL N (R) REGISTERED TRADE MARK VCP. VITRIFIED CLAY PIPE GAC. GRANULAR ACTIVATED CARBON NA. NOT APPLICABLE VENT. VENTILATION GALV. GALVANIZED NAD. NORTH AMERICAN DATUM GFRP. GLASS FIBER REINFORCED POLYMER NAVD. NORTH AMERICAN VERTICAL DATUM VLY. VALLEY GPM. GALLONS PER MINUTE NGVD. NORTH GEODETIC VERTICAL DATUM VT. VENT NO. NUMBER GV. GATE VALVE NS. NEAR SIDE VZ. VENTILATION ZONE H NTS. NOT TO SCALE NYC. NEW YORK CITY HDPE. HIGH DENSITY POLYETHYLENE NYCDEP. NEW YORK CITY DEPARTMENT OF GRAPHIC SCALES CHECK BEFORE USE ENVIRONMENTAL PROTECTION **BID SET** HSS. HOLLOW STEEL SECTION IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE HVAC HEATING, VENTILATION & AIR CONDITIONING DATE ISSUED: 10/2/2017 ACCORDINGLY DRAWN BY: DATE: **10/2/2017** DESIGNED BY: ACCOUNTABLE MANAGER "WARNING-IT IS A VIOLATION, OF THE NEW | **NEW YORK CITY** CATSKILL AQUEDUCT REPAIR AND YORK STATE EDUCATION LAW, SECTION, SCALE: NOT TO SCALE JONATHAN HOFFMAN, P.E. 7209.2, FOR ANY PERSON, UNLESS (S)HI IS ACTING UNDER THE DIRECTION OF A CHECKED BY: **ENVIRONMENTAL PROTECTION** REHABILITATION

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PROGRAM DIRECTOR OF WFF

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SHEET NO:

ABBREVIATIONS AND SYMBOLS

6 OF **485**

DRAWING NO.

GE-022.00

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REVISIONS/DESCRIPTION

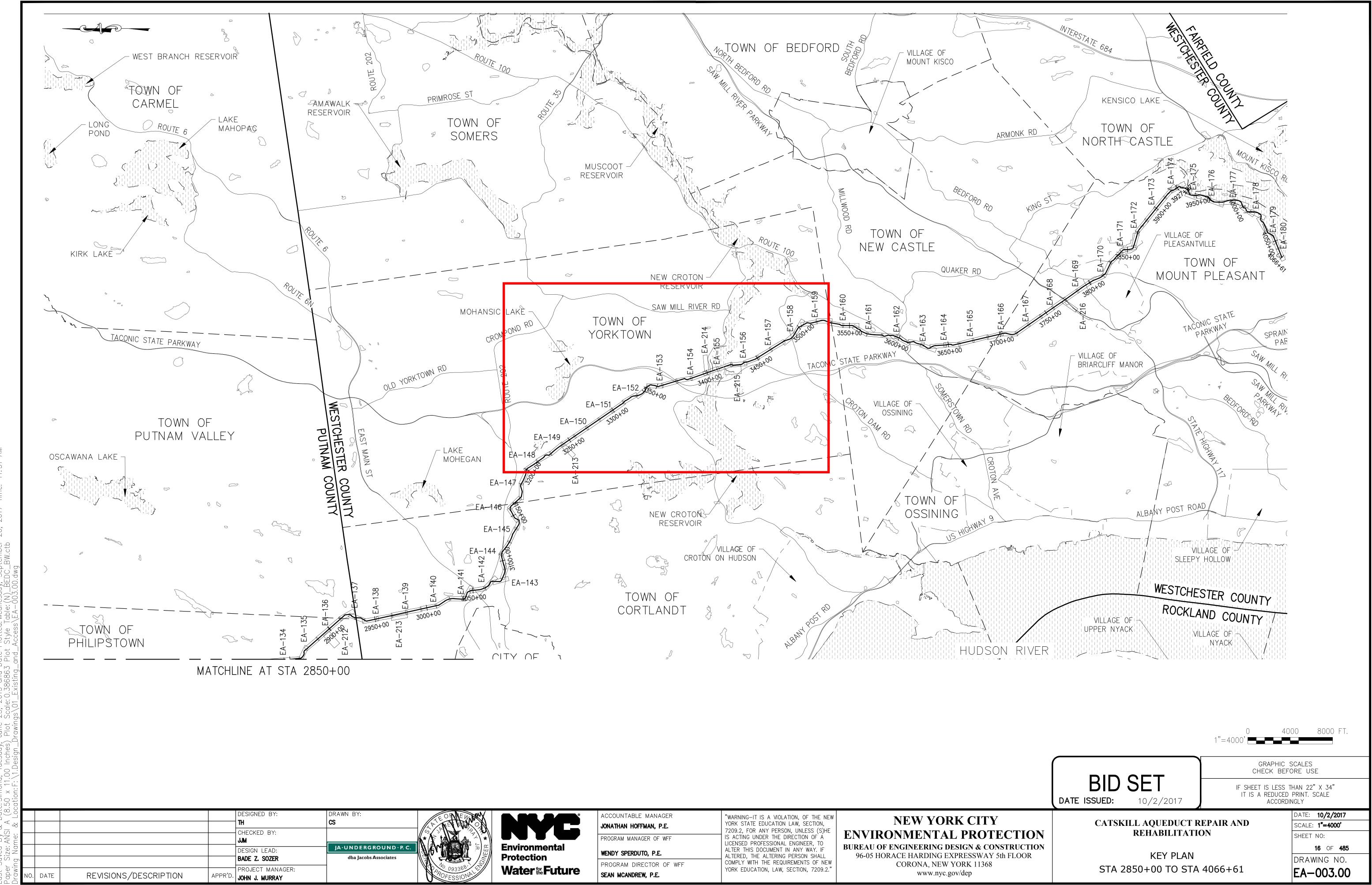
BADE Z. SOZER

JOHN J. MURRAY

PROJECT MANAGER:

JA-UNDERGROUND · P. C.

dba Jacobs Associates



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EA SERIES GENERAL NOTES:

- CAT-RR PROJECT AQUEDUCT STATIONING IS CONSISTENT WITH RECORD STATIONING ESTABLISHED DURING CONSTRUCTION OF THE CATSKILL AQUEDUCT. REFER TO THE CAT-RR REFERENCE DRAWINGS, CA PLAN AND PROFILE RECORD DRAWINGS IN THE CAT-RR BID EXHIBITS. LOCATION OF BASELINE AND STATIONING SHOWN ON THE EA DRAWINGS IS BEST FIT BASED ON RECORD STATIONING KNOWN AT CENTERLINES OF AQUEDUCT STRUCTURES AND SHOULD BE CONSIDERED APPROXIMATE.
- 2. THE INFORMATION PRESENTED IN THE CAT-RR DRAWINGS FOR THE CATSKILL AQUEDUCT AND ITS STRUCTURES WERE DEVELOPED BASED THE REFERENCE DRAWINGS PROVIDED BY THE NYCDEP AND APPLYING THE FOLLOWING HIERARCHY: RECORD, WORKING AND CONTRACT. THE REFERENCE DRAWINGS ARE INCLUDED IN THE BID EXHIBIT AND ARE ARRANGED BY CONTRACT NUMBER AND GROUPED BY DOCUMENT TYPE IN THE FOLLOWING CATEGORIES: CONTRACT, WORKING AND RECORD DOCUMENTS. NOT ALL DOCUMENT TYPES ARE AVAILABLE FOR EACH AQUEDUCT STRUCTURE. THE CONTRACTOR SHALL APPLY THE FOLLOWING HIERARCHY WHEN USING REFERENCE DRAWINGS: RECORD, WORKING AND CONTRACT.
- SURFACE FEATURES AND TOPOGRAPHY PROVIDED BY RETTEW ENGINEERING & SURVEYING, P.C. OF DELHI, NEW YORK. HORIZONTAL GROUND CONTROL SURVEY BASED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM EAST, 3101 NAD 83/2011. VERTICAL DATUM BASED UPON NATIONAL GEODETIC VERTICAL DATUM OF 1988 (GEOID 12A).
- 4. THE CONTRACTOR SHALL VERIFY ELEVATIONS AND DIMENSIONS PRIOR TO EXECUTING THE RESPECTIVE WORK AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMPACTING THE WORK AS DESIGNED.
- 5. TAX MAP LOT LINES INDICATED ON THE DRAWINGS, ARE ESTIMATES AT BEST OF PROPERTY LINES, AND DO NOT REPRESENT ACTUAL SURVEYED PROPERTY BOUNDARIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROPERTY BOUNDARIES WHERE PRUDENT, PRIOR TO THE COMMENCEMENT OF ANY ASSOCIATED WORK.
- SUPERSTRUCTURES MAY POTENTIALLY BE IN DETERIORATED CONDITION. INTERIOR DEBRIS NETTING SHALL BE INSTALLED WITHIN SUPERSTRUCTURES AT THE SIPHON CHAMBERS, GAGING CHAMBERS AND THE CLDC WHERE WORK IS BEING PERFORMED OR SUPPORTED. DEBRIS NETS SHOULD BE INSTALLED AT A HEIGHT FROM WORKING SURFACE THAT IS CLEAR OF OBSTRUCTIONS AND ALSO NOT INTERFERE WITH WORK OPERATIONS. DEBRIS NETTING SHALL MEET AMERICAN NATIONAL STANDARD A10.11-2010 - SAFETY REQUIREMENTS FOR PERSONNEL AND DEBRIS NETS, AND ALL APPLICABLE OSHA REQUIREMENTS. INTERIOR NETTING SHALL BE REMOVED UPON COMPLETION OF WORK UNLESS DIRECTED BY THE ENGINEER.
- SUPERSTRUCTURES MAY POTENTIALLY BE IN DETERIORATED CONDITION. CONTRACTOR SHALL PROVIDE SUPERSTRUCTURE PROTECTION AT ALL CAT-RR SUPERSTRUCTURES WHERE WORK IS BEING PERFORMED OR SUPPORTED FROM. THIS INCLUDES EXTERIOR DEBRIS NETTING INSTALLED OVER THE ENTRYWAYS AND GROUND BARRIERS AROUND THE REMAINING PERIMETER OF SUPERSTRUCTURES. DEBRIS NETS SHOULD BE INSTALLED AT A HEIGHT FROM SURFACE GRADE THAT IS CLEAR OF OBSTRUCTIONS AND ALSO NOT INTERFERE WITH WORK OPERATIONS. DEBRIS NETTING SHALL MEET AMERICAN NATIONAL STANDARD A10.11-2010 - SAFETY REQUIREMENTS FOR PERSONNEL AND DEBRIS NETS, AND ALL APPLICABLE OSHA REQUIREMENTS. CONTRACTOR TO INSTALL PROTECTION FENCING ALONG THE PERIMETER OF THE SUPERSTRUCTURE AS SHOWN ON THE DRAWINGS. PROTECTION FENCING SHOULD BE LOCATED OUTSIDE OF THE ROOF EAVE DRIP EDGE TO KEEP WORKERS OUT OF HARM'S WAY FROM FALLING STONE AND ROOF TILE. EXTERIOR NETTING SHALL BE REMOVED UPON COMPLETION OF WORK UNLESS DIRECTED BY THE ENGINEER.
- INTERIOR DEBRIS NETTING SHALL BE INSTALLED AT THE NEW AIR VENT LOCATIONS TO PREVENT DEBRIS FROM GETTING INTO THE AQUEDUCT DURING AIR VENT INSTALLATION. DEBRIS NETS SHALL BE INSTALLED AT A CERTAIN DISTANCE BELOW GRADE THAT IS CLEAR OF OBSTRUCTIONS AND ALSO NOT INTERFERE WITH WORK OPERATIONS. DEBRIS NETTING SHALL MEET AMERICAN NATIONAL STANDARD A10.11-2010 - SAFETY REQUIREMENTS FOR PERSONNEL AND DEBRIS NETS, AND ALL APPLICABLE OSHA REQUIREMENTS. DEBRIS NETTING SHALL BE REMOVED UPON COMPLETION OF WORK UNLESS DIRECTED BY THE ENGINEER.
- 9. SEE CI-031 THRU CI-032 FOR TYPICAL TRAFFIC CONTROL MEASURES.
- 10. SEE CI-601 THRU CI-607 FOR TREE LOCATION, TYPE AND DISPOSITION SCHEDULE.
- 11. THE CONTRACTOR SHALL ASSESS THE SAFETY OF STRUCTURES, FLOORS AND OPENINGS PRIOR TO COMMENCEMENT OF WORK WITHIN A STRUCTURE. THE FOLLOWING EXISTING STRUCTURES SHALL BE CONSIDERED FOR ACCESS INTO THE AQUEDUCT:
 - ACCESS MANHOLES (MH)
 - BOATHOLES (BH)
 - ACCESS MANHOLES WITH CULVERT DRAIN SLUICE GATES (MHS)
 - STEEL PIPE SIPHON CHAMBERS (SPS-C)
 - DOWNTAKE CHAMBERS (DTC)
 - UPTAKE CHAMBERS (UTC)
 - ASHOKAN SCREEN CHAMBER (SC1)
 - CATSKILL INFLUENT CHAMBER (CIC)
 - KENSICO UPPER EFFLUENT CHAMBER (UEC)
- 11. THE CONTRACTOR SHALL ADHERE TO THE CATSKILL VEHICLE LOAD RESTRICTIONS OF SECTION 01 55 00 VEHICLE ACCESS AND PARKING.

- 12. NOTE TO CONTRACTOR THAT CAT-RR CONTRACT DOCUMENTS ARE BASED ON BOTH THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) AND THE BOARD OF WATER SUPPLY (BWS) DATUM (ALSO REFERRED TO AS SANDY HOOK). BASE SURVEY AND TOPOGRAPHY BY PHOTOGRAMMETRY SHOWN ON CONTRACT DOCUMENTS ARE BASED ON THE NAVD 88 DATUM. ALL OTHER ELEVATIONS PROVIDED ON CAT-RR CONTRACT DOCUMENTS ARE BASED ON THE BWS DATUM. CONTRACT DOCUMENTS MAY CONTAIN ELEVATION INFORMATION FROM BOTH DATUMS. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERSTAND IMPACTS TO HIS WORK AND TO DETERMINE THE CONVERSION BETWEEN BOTH DATUMS AT EACH SITE WHERE NECESSARY. SEE GE-037 FOR CONVERSIONS BETWEEN NAVD88 AND BWS DATUMS AT SELECTED SITES ALONG THE AQUEDUCT ALIGNMENT.
- 13. CONTRACTOR SHALL HANDLE CONCRETE COVERS THAT LAY ON TOP OF THE EXISTING ACCESS HATCHES AT ACCESS MANHOLES AND ACCESS MANHOLES WITH CULVERT DRAIN SLUICE GATES TO GAIN ACCESS INTO THE AQUEDUCT AT THOSE LOCATIONS. CONCRETE COVERS ARE APPROXIMATELY 1800 LBS.

BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: CHECKED BY: JA-UNDERGROUND · P. C. DESIGN LEAD: dba Jacobs Associates BADE Z. SOZER PROJECT MANAGER: REVISIONS/DESCRIPTION NO. DATE JOHN J. MURRAY

Environmental Protection Water # Future

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PROGRAM DIRECTOR OF WFF

SEAN MCANDREW, P.E.

ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2. www.nyc.gov/dep

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NEW YORK CITY

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

EXISTING AND ACCESS NOTES

SCALE: NOT TO SCALE SHEET NO: **17** OF **485** DRAWING NO. EA-020.00

STRUCTURE / LEAK ID	STRUCTURE / LEAK STATION	MILES FROM STA 0+00 (NOTE 1)	FROM ACCESS POINT NO (NOTE 2)	STRUCTURE / LEAK NAME	DESCRIPTION OF WORK (NOTES 4 TO 8)	EA SERIES	PE SERIES	CI SERIES
UGC	0+55	0.0	1	ASHOKAN EAST AND WEST UPPER GATE CHAMBERS	_	EA-030	_	_
LGC	6+22	0.1	2	ASHOKAN LOWER GATE CHAMBER	-	EA-030	- DE 044	_
SC1 GC1	13+82 28+29	0.3	2 2	ASHOKAN SCREEN CHAMBER ASHOKAN GAUGING CHAMBER	GAUGING CHAMBER REHABILITATION	EA-030 EA-031	PE-011	_
EV	28+50	0.5	2	EXISTING ABOVE GROUND CHIMNEY VENT	-	EA-031		
DC1	31+09	0.6	2	ASHOKAN VENTURI METER DRAINAGE CHAMBER	_	EA-032	_	_
VMR1	31+59	0.6	2	ASHOKAN VENTURI METER REGISTER	-	EA-032	_	_
DC2	32+72	0.6	2	ASHOKAN VENTURI METER DRAINAGE CHAMBER	-	EA-032	_	_
MH1 NBH1	33+86 48+66	0.6	3	ACCESS MANHOLE NEW BOATHOLE	NEW BOATHOLE	EA-032 EA-032	- PE-011	CI-331 CI-332
SPS1-NC	49+18	0.9	3	ESOPUS SPS NORTH CHAMBER	-	EA-032	-	— — — — — — — — — — — — — — — — — — —
SPS1-B (W)	54+73	1.0	4	ESOPUS SPS BLOW-OFF (W)	MECHANICAL WORK AND REHABILITATION	EA-032	_	CI-341
SPS1-B (M)	55+13	1.0	4	ESOPUS SPS BLOW-OFF (M)	MECHANICAL WORK AND REHABILITATION	EA-032	_	CI-341
SPS1-B (E) SPS1-M1 (M)	55+29 56+16	1.0	4	ESOPUS SPS BLOW-OFF (E) ESOPUS SPS ACCESS MANHOLE (M) M1	MECHANICAL WORK AND REHABILITATION	EA-032	_	CI-341 -
SPS1-M1 (W)	56+24	1.1	4	ESOPUS SPS ACCESS MANHOLE (W) M1	_	EA-032	_	_
SPS1-M1 (E)	56+26	1.1	4	ESOPUS SPS ACCESS MANHOLE (E) M1	_	EA-032	_	_
SPS1-M2 (M)	62+96	1.2	4	ESOPUS SPS ACCESS MANHOLE (M) M2	-	EA-033	_	_
SPS1-M2 (W)	63+08	1.2	4	ESOPUS SPS ACCESS MANHOLE (W) M2	_	EA-033	_	_
SPS1-M2 (E) SPS1-SC	63+09 70+39	1.2	5	ESOPUS SPS ACCESS MANHOLE (E) M2 ESOPUS SPS SOUTH CHAMBER	_	EA-033	PE-011	_
NBH2	100+24	1.9	5	NEW BOATHOLE	NEW BOATHOLE	EA-033	PE-011	CI-332
SPS2-NC	100+75	1.9	5	TONGORE SPS NORTH CHAMBER	_	EA-034	_	_
SPS2-M1 (M)	104+49	2.0	5	TONGORE SPS ACCESS MANHOLE (M) M1	_	EA-034	_	_
SPS2-M1 (E)	104+50	2.0	5	TONGORE SPS ACCESS MANHOLE (E) M1	_	EA-034	_	_
SPS2-M1 (W) SPS2-SB	104+50	2.0	5	TONGORE SPS ACCESS MANHOLE (W) M1 TONGORE CREEK SIPHON BRIDGE	SIPHON BRIDGE REHABILITATION	EA-034 EA-034		CI-342
SPS2-B (W)	105+39	2.0	5	TONGORE SPS BLOW-OFF (W)	MECHANICAL WORK AND REHABILITATION	EA-034	_	CI-342
SPS2-B (E)	105+51	2.0	5	TONGORE SPS BLOW-OFF (E)	MECHANICAL WORK AND REHABILITATION	EA-034	_	CI-342
SPS2-B (M)	105+54	2.0	5	TONGORE SPS BLOW-OFF (M)	MECHANICAL WORK AND REHABILITATION	EA-034	_	CI-342
SPS2-SC	107+84	2.0	6	TONGORE SPS SOUTH CHAMBER ACCESS MANHOLE WITH CULVERT DRAIN	MECHANICAL WORK (SEAL) AND MH	EA-034	PE-011	_
MHS1	131+57	2.5	6	SLUICE GATE	REHABILITATION	EA-035	_	CI-333
MH2	178+17	3.4	7	ACCESS MANHOLE ACCESS MANHOLE WITH CULVERT DRAIN	MECHANICAL WORK (SEAL) AND MH	EA-037	_	CI-331
MHS2	208+65	3.9	8,9	SLUICE GATE	REHABILITATION	EA-038	_	CI-333
L1A	251+07	4.7	9	LEAK 1A	LEAK REPAIR GROUTING AND DECHLORINATION	EA-040	_	CI-258 CI-259
L1B	251+48	4.8	9	LEAK 1B	LEAK REPAIR GROUTING AND DECHLORINATION	EA-040	_	CI-258 CI-259
MH3	255+23	4.8	9	ACCESS MANHOLE	_	EA-040	_	CI-331
L2	273+25	5.2	9	LEAK 2	LEAK REPAIR LINING AND DECHLORINATION	EA-040	_	CI-262 CI-263
MHS3	317+78	6.0	9,10	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-042	_	CI-333
MH4	343+37	6.5	10	ACCESS MANHOLE	-	EA-043	_	CI-331
NBH3	383+60	7.3	11	NEW BOATHOLE	NEW BOATHOLE	EA-044	PE-011	CI-332
MHS4	386+85	7.3	11	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-044	_	CI-333
GC2	395+87	7.5	11,12	PEAK GAUGING CHAMBER	GAUGING CHAMBER REHABILITATION	EA-045	- DE 011	- 01 770
BH1	460+19	8.7	12	ESOPUS CCT BOATHOLE RONDOUT PRESSURE TUNNEL DOWNTAKE	NEW AID VENT	EA-047	PE-011	CI-332
DTC1/NV1	461+25	8.7	12	CHAMBER	NEW AIR VENT	EA-047 EA-052	_	CI 336
L3A L3B	578+40 579+35	10.9	13	LEAK 3A LEAK 3B	DECHLORINATION _	EA-052		CI-264 CI-264
L4	585+47	11.1	14	LEAK 4	DECHLORINATION	EA-052	_	CI-265
RDC/CC1	613+15	11.6	15A	RONDOUT PRESSURE TUNNEL DRAINAGE CHAMBER AND HIGH FALLS WATER DISTRICT CONNECTION CHAMBER	MECHANICAL WORK	EA-053	_	_
L5	613+33	11.6	15A	LEAK 5	DECHLORINATION	EA-053	_	CI-266
UTC1/NV2	697+34	13.2	16	RONDOUT PRESSURE TUNNEL UPTAKE CHAMBER	NEW AIR VENT	EA-056	_	CI-336
BH2	698+19	13.2	16	CCT TRANSITION TO BONTICOU GT BOATHOLE		EA-056	PE-011	CI-332
MHS5	770+09	14.6	17	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-058	_	CI-333
MH5	814+76	15.4	17	ACCESS MANHOLE	-	EA-060	_	CI-331
MH6/CC2/TAP DECHLORINATIO N	834+72	15.8	17	ACCESS MANHOLE AND NEW PALTZ, VILLAGE AND TOWN CONNECTION CHAMBER	MANHOLE REHABILITATION AND DECHLORINATION	EA-061	_	CI-331
MHS6	846+74	16.0	17	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-061	_	CI-333

STRUCTURE / LEAK ID	STRUCTURE / LEAK STATION	MILES FROM STA 0+00 (NOTE 1)	FROM ACCESS POINT NO (NOTE 2)	STRUCTURE / LEAK NAME	DESCRIPTION OF WORK (NOTES 4 TO 8)	EA SERIES	PE SERIES	CI SERIES	
MHS7	890+19	16.8	18	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-063	_	CI-333]
LPFA	928+51	17.6	18	LEAK POOR FARM ARCH	LEAK REPAIR GROUTING	EA-065	_	CI-267	1
PFA	928+51	17.6	18	POOR FARM ARCH BRIDGE	ARCH BRIDGE REHABILITATION	EA-065	-	CI-267	╛┎
MH7	930+19	17.6	18	ACCESS MANHOLE	_	EA-065	_	CI-331	4
NBH4 BH3	969+05 969+32	18.3	18 18	NEW BOATHOLE WALLKILL NORTH CCT BOATHOLE	NEW BOATHOLE	EA-066 EA-066	PE-011	CI-332 CI-332	+
DTC2/NV3	970+43	18.4	18	WALLKILL PRESSURE TUNNEL DOWNTAKE	NEW AIR VENT	EA-066		CI-332	┤ L
DICZ/NVJ	970+43	10.4	10	CHAMBER WALLKILL PRESSURE TUNNEL DRAINAGE	NEW AIR VENT	EA-000	_	CI-267	4
WDC	1064+92	20.2	19	CHAMBER	MECHANICAL WORK	EA-070	_	CI-304	
L6	1065+07	20.2	19	LEAK 6	DECHLORINATION	EA-070	_	CI-268	_
UTC2/NV4	1204+33	22.8	20A, 20B	WALLKILL PRESSURE TUNNEL UPTAKE CHAMBER	NEW AIR VENT	EA-075	_	CI-267	
BH4	1205+22	22.8	20A, 20B	WALLKILL SOUTH CCT BOATHOLE	-	EA-075	PE-011	CI-332	_
GC3	1220+40	23.1	20	WALLKILL GAUGING CHAMBER	GAUGING CHAMBER REHABILITATION	EA-075	_	_	
BOC MH8	1281+83 1282+19	24.3	21	WALLKILL BLOW-OFF CHAMBER ACCESS MANHOLE	_	EA-078 EA-078		- CI-331	4
DEL4-MH1	1312+14	24.8	22	DEL SHAFT 4 SAMPLE MANHOLE 1		EA-078	_	CI-305	-
DEL4	1313+54	24.9	22	DEL SHAFT 4 INTERCONNECTION	_	EA-079	_	CI-305	1
DEL4-MH2	1314+15	24.9	22	DEL SHAFT 4 SAMPLE MANHOLE 2	-	EA-079	_	CI-305	=
MHS8	1333+22	25.2	22, 23	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (SEAL) AND MH	EA-080	_	CI-333	
MHS9/CC3	1390+22	26.3	24	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE AND WALLKILL CORRECTIONAL FACILITY CONNECTION CHAMBER	REHABILITATION MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-082	_	CI-333	_
MH9	1441+66	27.3	25, 26	ACCESS MANHOLE	_	EA-083	_	CI-331	-
MH10	1482+12	28.1	25, 26	ACCESS MANHOLE	-	EA-085	_	CI-331	
SHWD COR	1501+00	28.4	26	SHERWOOD CORNERS	-	EA-085	_	CI-306	_
MHS10	1521+65	28.8	27	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-086	_	CI-333	
NBH5	1526+73	28.9	27	NEW BOATHOLE	NEW BOATHOLE	EA-086	PE-011	CI-332	
BH5/NV5	1527+00	28.9	27	ST ELMO CCT DOWNTAKE BOATHOLE	NEW AIR VENT	EA-086	_	CI-267 CI-332	1
BH6/NV6	1530+30	29.0	28	ST ELMO CCT UPTAKE BOATHOLE	NEW AIR VENT	EA-087	PE-011	CI-267	1
MH11	1590+37	30.1	28, 29	ACCESS MANHOLE	-	EA-089	-	CI-332 CI-331	-
				ACCESS MANHOLE WITH CULVERT DRAIN	MECHANICAL WORK (SEAL) AND MH				-
MHS11	1649+12	31.2	29, 30A	SLUICE GATE	REHABILITATION	EA-091	_	CI-333	4
MH12	1687+55	32.0	30B	ACCESS MANHOLE ACCESS MANHOLE WITH CULVERT DRAIN	MECHANICAL WORK (SEAL) AND MH	EA-092	_	CI-331	-
MHS12	1708+97	32.4	31, 32	SLUICE GATE	REHABILITATION	EA-093	_	CI-333	
MH13	1760+92	33.3	32, 33	ACCESS MANHOLE	-	EA-095	_	CI-331	4
MH14 NBH6	1808+27 1810+80	34.2 34.3	34	ACCESS MANHOLE NEW BOATHOLE	_	EA-096 EA-097		CI-331 CI-332	-
MH15	1853+01	35.1	_	ACCESS MANHOLE (NOTE 3)	PERMANENT CLOSURE	EA-097 EA-098	_	- CI-332	-
MHS13	1898+63	35.9	36	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE (NOTE 10)	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-099	_	CI-333	
MHS14/CC4	1944+61	36.8	37	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE AND TOWN OF NEW WINDSOR, JACKSON AVE PS CONNECTION CHAMBER	MECHANICAL WORK (SEAL) AND MH REHABILITATION	EA-101	_	CI-333	
MH16/CC5	1978+27	37.5	38	ACCESS MANHOLE AND WORLD MISSION SOCIETY (FORMERLY MT .ST. JOSEPH CONVENT) CONNECTION CHAMBER	_	EA-102	_	CI-331	
NBH7	1999+20	37.9	38, 39	NEW BOATHOLE	NEW BOATHOLE	EA-103	PE-011	CI-332	
SPS3-NC	1999+72	37.9	38, 39	WASHINGTON SQUARE SPS NORTH CHAMBER WASHINGTON SQUARE SPS ACCESS	_	EA-103	_	_	-
SPS3-M1 (W) SPS3-M1 (E)	2006+98	38.0	39, 40A 39, 40A	MANHOLE (W) M1 WASHINGTON SQUARE SPS ACCESS	_	EA-103 EA-103	_	_	
SPS3-M1 (M)	2007+00	38.0	39, 40A	MANHOLE (E) M1 WASHINGTON SQUARE SPS ACCESS MANHOLE (M) M1	_	EA-103	_	_	-
SPS3-M2 (W)	2012+81	38.1	40A, 40B	WASHINGTON SQUARE SPS ACCESS MANHOLE (W) M2	_	EA-103	_	_	
SPS3-M2 (E)	2012+83	38.1	40A, 40B	WASHINGTON SQUARE SPS ACCESS MANHOLE (E) M2	-	EA-103	_	_	
SPS3-M2 (M)	2012+84	38.1	40A, 40B	WASHINGTON SQUARE SPS ACCESS MANHOLE (M) M2	_	EA-103	_	_	
SPS3-M3 (W)	2019+83	38.2	40A, 40B	WASHINGTON SQUARE SPS ACCESS MANHOLE (W) M3	-	EA-104	_	_	
SPS3-M3 (E)	2019+84	38.2	40A, 40B	WASHINGTON SQUARE SPS ACCESS MANHOLE (E) M3	_	EA-104	_	_	
SPS3-M3 (M)	2019+86	38.2	40A, 40B	WASHINGTON SQUARE SPS ACCESS MANHOLE (M) M3	-	EA-104	_	_	
SPS3-B (M)/CC6	2025+71	38.4	40	WASHINGTON SQUARE SPS BLOW-OFF (M) AND CITY OF NEWBURGH CONNECTION CHAMBER	MECHANICAL WORK AND REHABILITATION	EA-104	_	CI-341	

NOTES:

- 1. STA 0+00 IS 1.45 FT DOWNSTREAM FROM THE CENTERLINE INTERSECTION OF THE TWO NORTHERLY INLETS WITHIN THE UPPER GATE CHAMBER (UGC).
- 2. REFER TO EA AREA PLAN SERIES FOR ACCESS POINT LOCATION. ONLY NUMBERED ACCESS POINTS INDICATED SHALL BE USED BY THE CONTRACTOR TO ACCESS CA STRUCTURES AND LEAKS.
- 3. NOT TO BE USED FOR ACCESS OR TO SUPPORT IN-AQUEDUCT OPERATIONS IN ANYWAY.
- 4. EXISTING AIR VENT REHABILITATION WORK IS NOT INCLUDED IN THE DESCRIPTION OF WORK AND WILL BE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CLEAN EXISTING AIR VENTS ALONG THE AQUEDUCT AT THE FOLLOWING LOCATIONS:
 - A. ASHOKAN ABOVE GROUND CHIMNEY VENT B. ESOPUS SPS NORTH AND SOUTH CHAMBERS
 - C. TONGORE SPS NORTH AND SOUTH CHAMBERS
 - D. RONDOUT UPTAKE CHAMBER
 - E. WASHINGTON SQUARE SPS NORTH AND SOUTH CHAMBERS
- F. MOODNA DOWNTAKE CHAMBER
- G. BREAKNECK UPTAKE CHAMBER
- H. FOUNDRY BROOK SPS NORTH AND SOUTH CHAMBERS
- INDIAN BROOK SPS NORTH AND SOUTH CHAMBERS
- J. SPROUT BROOK SPS NORTH AND SOUTH CHAMBERS
- K. PEEKSKILL SPS NORTH AND SOUTH CHAMBERS L. HUNTERS BROOK SPS NORTH AND SOUTH CHAMBERS
- M. TURKEY MOUNTAIN SPS NORTH AND SOUTH CHAMBERS
- N. CROTON LAKE DOWNTAKE CHAMBER
- O. HARLEM RR SPS NORTH AND SOUTH CHAMBERS
- 5. CONCRETE REHABILITATION, MANHOLE REHABILITATION, AND EXISTING BOATHOLE REHABILITATION WORK IS NOT INCLUDED IN THE "DESCRIPTION OF WORK" AND WILL BE AS DIRECTED BY THE ENGINEER. REFER TO SECTION 01 11 00 - SUMMARY OF WORK FOR DESCRIPTION OF CONCRETE REHABILITATION, MANHOLE REHABILITATION, AND EXISTING BOATHOLE REHABILITATION WORK.
- 6. BIOFILM, SEDIMENT AND DEBRIS REMOVAL WORK IS NOT INCLUDED IN THE "DESCRIPTION OF WORK". REFER TO SECTION 31 80 05 - BIOFILM, SEDIMENT, AND DEBRIS REMOVAL AND HANDLING FOR LIMITS OF THIS WORK.
- 7. UNWATERING WORK IS NOT INCLUDED IN THE DESCRIPTION OF WORK. REFER TO SECTION 31 79 00-AQUEDUCT UNWATERING, START-UP AND RECOMMISSIONING.
- 8. SEE EA-020 FOR DEBRIS NETTING REQUIREMENTS.

SEE EA -020 FOR EXISTING AND ACCESS GENERAL NOTES.

10. NOT TO BE USED FOR ACCESS OR TO SUPPORT IN-AQUEDUC OPERATIONS IN ANYWAY EXCEPT FOR ACCESS AND SUPPORT OF CDSG MECHANICAL WORK.

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DESIGNED BY: CHECKED BY: JA·UNDERGROUND·P. C. DESIGN LEAD: dba Jacobs Associates BADE Z. SÖZER PROJECT MANAGER: APPR'D. JOHN J. MURRAY REVISIONS/DESCRIPTION

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NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

EXISTING AND ACCESS SCHEDULE

SHEET 1 OF 3

SCALE: NOT TO SCALE SHEET NO: **18** OF **485** DRAWING NO. EA-021.00

DATE: **10/2/2017**

STRICTION STATE CASE ACCESS ACCESS STRICTION CASE CASE STRICTION CASE CASE STRICTION CASE CAS									
1967 1971 1984 1965 1971		/ LEAK	FROM STA 0+00	POINT NO	STRUCTURE / LEAK NAME				CI SERIES
1979-1976 1979	SPS7-M5 (M)	2984+13	56.5	57	PEEKSKILL SPS ACCESS MANHOLE (M) M5	-	EA-139	_	_
977-148 (2) 988-33 9-39 9-39 PER PREPARE TO SECURIS PREPARE (5) PER PARE (5) PER PA	SPS7-M5 (E)	2984+14	56.5	57	PEEKSKILL SPS ACCESS MANHOLE (E) M5	-	EA-139	_	_
	SPS7-M5 (W)	2984+14	56.5	57	PEEKSKILL SPS ACCESS MANHOLE (W) M5	-	EA-139	_	_
1987 PM 1989-84	SPS7-M6 (E)	2989+53	56.6	57	PEEKSKILL SPS ACCESS MANHOLE (E) M6	-	EA-139	_	_
1979-1979 1986-998	SPS7-M6 (M)	2989+53	56.6	57	PEEKSKILL SPS ACCESS MANHOLE (M) M6	-	EA-139	_	_
Section 1986 1987 1988	SPS7-M6 (W)	2989+54	56.6	57	PEEKSKILL SPS ACCESS MANHOLE (W) M6	-	EA-139	_	_
987-14-16 (2)	SPS7-M7 (M)	2996+88	56.7	57	PEEKSKILL SPS ACCESS MANHOLE (M) M7	-	EA-140	_	_
Section 1975	SPS7-M7 (E)	2996+96	56.8	57	PEEKSKILL SPS ACCESS MANHOLE (E) M7	-	EA-140	_	_
\$857-867 \$9.00-997	SPS7-M7 (W)	2996+98	56.8	57	PEEKSKILL SPS ACCESS MANHOLE (W) M7	_	EA-140	_	_
Section Sect	SPS7-M8 (M)	3003+96	56.9	57	PEEKSKILL SPS ACCESS MANHOLE (M) M8	_	EA-140	_	_
1997 1997 1997 1998	SPS7-M8 (E)	3003+97	56.9	57	PEEKSKILL SPS ACCESS MANHOLE (E) M8	-	EA-140	_	_
MHS/CULE	SPS7-M8 (W)	3003+98	56.9	57	PEEKSKILL SPS ACCESS MANHOLE (W) M8	-	EA-140	_	_
### MODIFICATION 2004-10 2014 201	SPS7-SC	3011+31	57.0	58	PEEKSKILL SPS SOUTH CHAMBER	-	EA-140	PE-012	_
March Marc	MHS21	3029+45	57.4	58			EA-141	_	CI-333
M-952 3.091-93 3.09 3.09 3.00 3.	MH21/CC13	3052+42	57.8	59		-	EA-142	_	CI-331
Missay M	MHS22	3081+57	58.4	60			EA-143	_	CI-333
No.	MHS23	3120+46	59.1	61			EA-145	_	CI-333
MISS 593-943 601 613 614 615 615 614 615	MHS24	3141+71	59.5	61			EA-145	_	CI-333
STOR-NC 3224-30	MHS25	3193+03	60.5	62			EA-147	_	CI-333
SPSB-MI (W) 2033-77	NBH13	3225+83	61.1	63	NEW BOATHOLE	NEW BOATHOLE	EA-148	PE-012	CI-332
SPSB-MIN (2) 3233452 61.2 64 MINTERS BROOK SPS ACCESS WAN-IDEE (5)	SPS8-NC	3226+35	61.1	63		_	EA-148	-	-
### SPSB-HI (N) 3233-62 61.2 64 HINTER BROOK SPS ACCESS MANHOLE (N) -	SPS8-M1 (M)	3233+27	61.2	64		-	EA-149	_	_
SPSS-B (V) 325-72 51.3 64 HUNTERS BROOK SPS BLOW-OFF (V) MECHANICAL WORK AND RELIABILITATION CA-149 - C-3	SPS8-M1 (E)	3233+52	61.2	64	, ,	-	EA-149	_	_
SPSB-B (W) 3235+80 61.3 84	SPS8-M1 (W)	3233+62	61.2	64	1	-	EA-149	_	_
SPS8-B () 325-85	SPS8-B (M)	3235+72	61.3	64	HUNTERS BROOK SPS BLOW-OFF (M)	MECHANICAL WORK AND REHABILITATION	EA-149	_	CI-348
SPS8-SC 3241-44	SPS8-B (W)	3235+80	61.3	64	HUNTERS BROOK SPS BLOW-OFF (W)	MECHANICAL WORK AND REHABILITATION	EA-149	_	CI-348
Mil	<u> </u>			64		MECHANICAL WORK AND REHABILITATION			CI-348
MHS26 3320172 62.9 66 ACCESS MANHOLE WITH CULVERT DRAIN MECHANICAL WORK (SEAL) AND WH EA-152 - 0.1-3						_			-
MHS27 3339+32 63.2 67 ACCESS MARHOLE WTH CULVERT DRAIN MECHANICAL WORK (SEAL) AND MH EA-152 C-3 CH-3 MHS28 3354+75 63.5 67. 68 ACCESS MARHOLE - NEW BOATHOLE NEW BALLEY NEW BOATHOLE NEW BALLEY NEW BOATHOLE NEW BALLEY NEW BOATHOLE NEW BALLEY					ACCESS MANHOLE WITH CULVERT DRAIN				CI-331
MH23 3369+50 63.5 67, 68 NEW BOATHOLE — EA-153 — C-3 NBH14 3360+50 63.6 68 NEW BOATHOLE NEW BOATHOLE EA-153 PE-012 C1-3 SPS9-NC 3361+02 63.6 68 TURKEY MOUNTAIN SPS NORTH CHAMBER — EA-153 EA-153 — C-3 SPS9-B (E) 3368+33 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (E) MECHANICAL WORK AND REHABILITATION EA-153 — C1-3 SPS9-B (W) 3369+44 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (W) MECHANICAL WORK AND REHABILITATION EA-153 — C1-3 SPS9-B (W) 3369+45 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (W) MECHANICAL WORK AND REHABILITATION EA-153 — C1-3 SPS9-MI (E) 3369+45 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) MI (NOTE 6) SPS9-MI (W) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) MI (NOTE 6) SPS9-MI (W) 3369+54 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) MI (NOTE 6) SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) MI (NOTE 6) SPS9-SC 3376+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — EA-154 — C-3 CC14 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD HILL (2 HOMES) CONNECTION — MECHANICAL WORK — EA-154 PE-012 C1-3 CLWG 3397+40 64.3 71 CORCHARD					ACCESS MANHOLE WITH CULVERT DRAIN	MECHANICAL WORK (SEAL) AND MH			CI-333
NBH14 3360+50 63.6 68 NEW BOATHOLE NEW BOATHOLE EA-153 PE-012 CI-3 SPS9-NC 3361+02 63.6 68 TURKEY MOUNTAIN SPS NORTH CHAMBER - EA-153 CI-3 CI-3 SPS9-B (E) 3388+33 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (E) MECHANICAL WORK AND REHABILITATION EA-153 - CI-3 SPS9-B (M) 3369+44 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (M) MECHANICAL WORK AND REHABILITATION EA-153 - CI-3 SPS9-B (M) 3369+45 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (W) MECHANICAL WORK AND REHABILITATION EA-153 - CI-3 SPS9-M1 (E) 3369+45 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE - EA-153 - CI-3 SPS9-M1 (W) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE - EA-153 - CI-3 SPS9-M1 (W) 3369+54 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE - EA-153 - CI-3 SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE - EA-154 EA-154 - CI-3 SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE - EA-154 CI-3 CI									
SPS9-NC 3361+02 63.6 68 TURKEY MOUNTAIN SPS NORTH CHAMBER - EA-153 - CA-153 - CA-153 CA-155 CA-15									CI-331
SPS9-B (E) 3368+33 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (E) MECHANICAL WORK AND REHABILITATION EA-153 - CI-3 SPS9-B (M) 3368+44 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (M) MECHANICAL WORK AND REHABILITATION EA-153 - CI-3 SPS9-B (W) 3369+17 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) MI (NOTE 6) - EA-153 - CI-3 SPS9-MI (W) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) MI (NOTE 6) - EA-153 - - SPS9-MI (W) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) MI (NOTE 6) - EA-153 - - SPS9-SC 3376+40 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) MI (NOTE 6) - EA-154 - - CC14 3396+60 64.3 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) MI (NOTE 6) - EA-154 - - DTC4 3397+40 64.3 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) MI (NOTE 6)									CI-332
SPS9-B (W) 3368+44 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (W) MECHANICAL WORK AND REHABILITATION EA-153 — CI-3 SPS9-B (W) 3369+17 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (W) MECHANICAL WORK AND REHABILITATION EA-153 — CI-3 SPS9-M1 (E) 3369+45 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) MI (NOTE 6) — EA-153 — — SPS9-M1 (W) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) MI (NOTE 6) — EA-153 — — SPS9-M1 (W) 3369+54 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) MI (NOTE 6) — EA-153 — — SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS SOUTH CHAMBER — — EA-154 — — CC14 3396+60 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION — EA-154 — — DTC4 3397+40 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION MECHANICAL WORK EA-154 — <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>CI-349</td>									CI-349
SPS9-B (W) 3369+17 63.8 70 TURKEY MOUNTAIN SPS BLOW-OFF (W) MECHANICAL WORK AND REHABILITATION EA-153 - CI-3 SPS9-M1 (E) 3369+45 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) M1 (NOTE 6) - EA-153 - - - SPS9-M1 (W) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) M1 (NOTE 6) - EA-153 - - SPS9-M1 (W) 3369+54 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1 (NOTE 6) - EA-153 - - SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1 (NOTE 6) - EA-154 - - CC14 3396+60 63.9 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1 (NOTE 6) - EA-154 - - DTC4 3397+40 63.9 71 TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1 (NOTE 6) - EA-154 - - CLBO 3397+40 64.3 71 CROTIN LAKE PRESSURE TUNNEL (W) M1 (NOTE 6) MECHANI	. ,								CI-349
SPS9-M1 (E) 3369+45 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) M1 (NOTE 6) - EA-153 - - SPS9-M1 (W) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) M1 (NOTE 6) - EA-153 - - SPS9-M1 (W) 3369+54 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1 (NOTE 6) - EA-153 - - SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS SOUTH CHAMBER - EA-154 - - CC14 3396+60 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION - EA-154 - - DTC4 3397+40 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION - EA-154 PE-012 CI-3 CLB0 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL MASTE GAMBER MECHANICAL WORK EA-154 - CI-3 CLWG 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 <	• • • • • • • • • • • • • • • • • • • •				, ,				CI-349
SPS9-M1 (M) 3369+49 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) M1 (NOTE 6) - EA-153 - - SPS9-M1 (W) 3369+54 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1 (NOTE 6) - EA-153 - - SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS SOUTH CHAMBER - EA-154 - - CC14 3396+60 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION (HAMBER HERSOURE TUNNEL DOWNTAKE CHAMBER HERSOURE TUNNEL MASTE MECHANICAL WORK EA-154 PE-012 CI-3 CLBO 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL MASTE BLOW-OFF MECHANICAL WORK EA-154 - CI-3 CLWG 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 UTC4/NV7 3424+03 64.8 72 CROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE -					TURKEY MOUNTAIN SPS ACCESS MANHOLE			_	-
SPS9-M1 (W) 3369+54 63.8 70 TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1 (NOTE 6) - EA-153 - - SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS SOUTH CHAMBER - EA-154 - - CC14 3396+60 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION CHAMBER - EA-154 - - DTC4 3397+40 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION CHAMBER MECHANICAL WORK EA-154 - - CLBO 3397+40 64.3 71 OROTON LAKE PRESSURE TUNNEL DOWNTAIN ELEMANTE CHAMBER MECHANICAL WORK EA-154 - CI-3 CLWG 3397+40 64.3 71 OROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 UTC4/NV7 3424+03 64.8 72 CROTON LAKE PRESSURE TUNNEL UPTAKE CHAMBER NEW AIR VENT EA-155 - CI-2 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE - LEAK REPAIR AND DECHLORINATION EA-156 </td <td>SPS9-M1 (M)</td> <td>3369+49</td> <td>63.8</td> <td>70</td> <td>TURKEY MOUNTAIN SPS ACCESS MANHOLE</td> <td>_</td> <td>EA-153</td> <td>_</td> <td>_</td>	SPS9-M1 (M)	3369+49	63.8	70	TURKEY MOUNTAIN SPS ACCESS MANHOLE	_	EA-153	_	_
SPS9-SC 3376+40 63.9 71 TURKEY MOUNTAIN SPS SOUTH CHAMBER - EA-154 - - CC14 3396+60 64.3 71 ORCHARD HILL (2 HOMES) CONNECTION CHAMBER - EA-154 - - DTC4 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL DOWNTAKE CHAMBER MECHANICAL WORK EA-154 PE-012 CI-3 CLBO 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL BLOW-OFF MECHANICAL WORK EA-154 - CI-3 CLWG 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 UTC4/NV7 3424+03 64.8 72 CROTON LAKE PRESSURE TUNNEL UPTAKE CHAMBER NEW AIR VENT EA-155 - CI-2 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE - EA-156 PE-012 CI-3 L7 3429+55 64.9 72 LEAK 7 LEAK REPAIR AND DECHLORINATION EA-156 - CI-2	SPS9-M1 (W)	.3369+54	63.8	70	TURKEY MOUNTAIN SPS ACCESS MANHOLE	_	FA-153	_	_
DTC4 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL DOWNTAKE CHAMBER MECHANICAL WORK EA-154 PE-012 CI-3 CLBO 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL BLOW-OFF MECHANICAL WORK EA-154 - CI-3 CLWG 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 UTC4/NV7 3424+03 64.8 72 CROTON LAKE PRESSURE TUNNEL UPTAKE CHAMBER NEW AIR VENT EA-155 - CI-2 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE - EA-156 PE-012 CI-3 L7 3429+55 64.9 72 LEAK 7 LEAK REPAIR AND DECHLORINATION EA-156 - CI-2 GC5 3432+98 65.0 72 CROTON GAUGING CHAMBER GAUGING CHAMBER REHABILITATION EA-156 - -	. ,					_			_
DTC4 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL DOWNTAKE CHAMBER MECHANICAL WORK EA-154 PE-012 CI-3 CLB0 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL BLOW-OFF MECHANICAL WORK EA-154 - CI-3 CLWG 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 UTC4/NV7 3424+03 64.8 72 CROTON LAKE PRESSURE TUNNEL UPTAKE CHAMBER NEW AIR VENT EA-155 - CI-2 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE - EA-156 PE-012 CI-3 L7 3429+55 64.9 72 LEAK 7 LEAK REPAIR AND DECHLORINATION EA-156 - CI-2 CI-2 CI-2 GC5 3432+98 65.0 72 CROTON GAUGING CHAMBER GAUGING CHAMBER REHABILITATION EA-156 - -	CC14		64.3	71		-		_	_
CLBO 3397+40 64.3 71 BLOW-OFF MECHANICAL WORK EA-154 - CI-3 CLWG 3397+40 64.3 71 CROTON LAKE PRESSURE TUNNEL WASTE GATE MECHANICAL WORK EA-154 - CI-3 UTC4/NV7 3424+03 64.8 72 CROTON LAKE PRESSURE TUNNEL UPTAKE CHAMBER NEW AIR VENT EA-155 - CI-2 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE - EA-156 PE-012 CI-3 L7 3429+55 64.9 72 LEAK 7 LEAK REPAIR AND DECHLORINATION EA-156 - CI-2 CI-2 CI-2 CI-2 CI-2 CI-2 CI-2 CI-2	DTC4	3397+40	64.3	71	CROTON LAKE PRESSURE TUNNEL	MECHANICAL WORK	EA-154	PE-012	CI-309
CLWG 3397+40 64.3 71 GATE MECHANICAL WORK EA-154 - CI-3 UTC4/NV7 3424+03 64.8 72 CROTON LAKE PRESSURE TUNNEL UPTAKE CHAMBER NEW AIR VENT EA-155 - CI-2 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE - EA-156 PE-012 CI-3 L7 3429+55 64.9 72 LEAK 7 LEAK REPAIR AND DECHLORINATION EA-156 - CI-2 GC5 3432+98 65.0 72 CROTON GAUGING CHAMBER GAUGING CHAMBER REHABILITATION EA-156 - - -	CLBO	3397+40	64.3	71	CROTON LAKE PRESSURE TUNNEL	MECHANICAL WORK	EA-154	_	CI-309
BH9 3424+03 64.8 72 CHAMBER NEW AIR VENT EA-155 - CI-2 BH9 3425+33 64.9 72 CROTON CCT BOATHOLE - EA-156 PE-012 CI-3 L7 3429+55 64.9 72 LEAK 7 LEAK REPAIR AND DECHLORINATION EA-156 - CI-2 GC5 3432+98 65.0 72 CROTON GAUGING CHAMBER GAUGING CHAMBER REHABILITATION EA-156 - - -	CLWG	3397+40	64.3	71	CROTON LAKE PRESSURE TUNNEL WASTE	MECHANICAL WORK	EA-154	_	CI-309
L7 3429+55 64.9 72 LEAK 7 LEAK REPAIR AND DECHLORINATION EA-156 - CI-2 CI-2 CI-2 CI-2 CI-2 CI-2 CI-2 CI-2	UTC4/NV7	3424+03	64.8	72		NEW AIR VENT	EA-155	_	CI-267
CI-2 GC5 3432+98 65.0 72 CROTON GAUGING CHAMBER GAUGING CHAMBER REHABILITATION EA-156 - CI-2	ВН9	3425+33	64.9	72	CROTON CCT BOATHOLE	_	EA-156	PE-012	CI-334
	L7	3429+55	64.9	72	LEAK 7	LEAK REPAIR AND DECHLORINATION	EA-156	-	CI-269 CI-270
MH24 3447+82 65.3 72 ACCESS MANHOLE - EA-156 - CI-3	GC5	3432+98	65.0	72	CROTON GAUGING CHAMBER	GAUGING CHAMBER REHABILITATION	EA-156	_	_
	MH24	3447+82	65.3	72	ACCESS MANHOLE	-	EA-156	_	CI-331

STRUCTURE / LEAK ID	STRUCTURE / LEAK STATION	MILES FROM STA 0+00 (NOTE 1)	FROM ACCESS POINT NO (NOTE 2)	STRUCTURE / LEAK NAME	DESCRIPTION OF WORK (NOTES 4 TO 8)	EA SERIES	PE SERIES	CI SERIES
MHS28	3482+31	65.9	73	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (REPLACE) AND MH REHABILITATION	EA-158	_	CI-333
MH25	3512+19	66.5	73B	ACCESS MANHOLE	-	EA-159	_	CI-331
MHS29	3542+58	67.1	74	ACCESS MANHOLE WITH CULVERT DRAIN	MECHANICAL WORK (REPLACE) AND MH	EA-160	_	CI-333
				SLUICE GATE ACCESS MANHOLE WITH CULVERT DRAIN	REHABILITATION MECHANICAL WORK (REPLACE) AND MH			
MHS30	3575+73	67.7	74	SLUICE GATE	REHABILITATION .	EA-161	_	CI-333
NBH15	3602+40	68.2	75	NEW BOATHOLE	NEW BOATHOLE	EA-162	_	CI-332
MH26	3608+40	68.3	75	ACCESS MANHOLE	_	EA-162	_	CI-331
BH10	3608+70	68.3	75	MILLWOOD NORTH CCT BOATHOLE	-	EA-162	PE-012	CI-332
DC3	3611+22	68.4	76	PUTNAM SIPHON DRAINAGE CHAMBER	-	EA-163	-	-
BH11	3615+65	68.5	76	MILLWOOD SOUTH CCT BOATHOLE	- WESTANIS TO MOSTA (DEST 195) AND 141	EA-163	PE-012	CI-332
MHS31	3633+45	68.8	76, 77	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (REPLACE) AND MH REHABILITATION	EA-164	_	CI-333
MH27/CC15	3653+80	69.2	77	ACCESS MANHOLE AND NEW CASTLE AND PLEASANTVILLE, MILLWOOD CONNECTION CHAMBER	-	EA-164	_	CI-331
MH28	3704+36	70.1	78	ACCESS MANHOLE	_	EA-166	_	CI-331
SE8	3707+95	70.2	78	SURFACE EXPRESSION 8	LEAK REPAIR	EA-166	_	CI-271
MHS32	3710+55	70.3	78	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (REPLACE) AND MH REHABILITATION	EA-166	_	CI-333
SE9	3710+55	70.3	78	SURFACE EXPRESSION 9	LEAK REPAIR	EA-166	_	CI-271
NBH16	3769+62	71.4	79	NEW BOATHOLE	NEW BOATHOLE	EA-168	PE-012	CI-332
SPS10-NC	3770+14	71.4	79	HARLEM RAILROAD SPS NORTH CHAMBER	-	EA-168	_	_
SPS10-M1 (E)	3773+27	71.5	80	HARLEM RR SPS ACCESS MANHOLE (E) M1	-	EA-169	_	-
SPS10-M1 (W)	3773+30	71.5	80	HARLEM RR SPS ACCESS MANHOLE (W) M1	-	EA-169	_	-
SPS10-M1 (M)	3773+37	71.5	80	HARLEM RR SPS ACCESS MANHOLE (M) M1	-	EA-169	_	_
SPS10-B (M)	3773+67	71.5	80	HARLEM RR SPS BLOW-OFF (M)	MECHANICAL WORK AND REHABILITATION	EA-169	_	CI-350
SPS10-B (W)	3773+67	71.5	80	HARLEM RR SPS BLOW-OFF (W)	MECHANICAL WORK AND REHABILITATION	EA-169	_	CI-350
SPS10-B (E)	3773+79	71.5	80	HARLEM RR SPS BLOW-OFF (E)	MECHANICAL WORK AND REHABILITATION	EA-169	_	CI-350
SPS10-SC	3777+30	71.5	81	HARLEM RAILROAD SPS SOUTH CHAMBER	_	EA-169	PE-012	-
MH29	3793+67	71.8	82	ACCESS MANHOLE	-	EA-169	_	CI-331
CP	3808+39	72.1	83	PLEASANTVILLE ALUM PLANT	-	EA-170	_	_
MHS33	3811+60	72.2	83	ACCESS MANHOLE WITH CULVERT DRAIN SLUICE GATE	MECHANICAL WORK (REPLACE) AND MH REHABILITATION	EA-170	_	CI-333
NBH17	3820+32	72.3	83	NEW BOATHOLE	NEW BOATHOLE	EA-170	_	CI-332
BH12	3820+57	72.3	83	PLEASANTVILLE CCT BOATHOLE	_	EA-170	_	CI-332
DC4	3822+10	72.4	83	PLEASANTVILLE VENTURI METER DRAINAGE CHAMBER	-	EA-170	_	-
VMR2	3822+60	72.4	83	PLEASANTVILLE VENTURI METER REGISTER	-	EA-170	_	_
DC5	3823+74	72.4	83	PLEASANTVILLE VENTURI METER DRAINAGE CHAMBER	-	EA-170	_	_
BH13	3824+91	72.4	83	PLEASANTVILLE CCT BOATHOLE	-	EA-170	_	CI-332
MH30	3837+64	72.7	84	ACCESS MANHOLE	-	EA-171	_	CI-331
MH31	3848+54	72.9	85	ACCESS MANHOLE	-	EA-171	_	CI-331
MH32	3874+59	73.4	85	ACCESS MANHOLE	_	EA-172	_	CI-331
MH33	3913+74	74.1	_	ACCESS MANHOLE (NOTE 3)	_	EA-174	_	
NBH18	3924+74	74.3	87	NEW BOATHOLE	NEW BOATHOLE	EA-174	PE-012	CI-332
CIW	3925+64	74.3	87	CATSKILL INFLUENT WEIR BEGIN STA.	CIW REHABILITATION WORK	EA-174	_	CI-310
CIW	3927+79	74.4	87	CATSKILL INFLUENT WEIR END STA.	CIW REHABILITATION WORK	EA-174	_	CI-310
CIC	3927+97	74.4	87	CATSKILL INFLUENT CHAMBER	-	EA-174	PE-012	CI-310
MH34	4045+07	76.6	88	ACCESS MANHOLE (LOCATED 15 FEET OFFSHORE)	PERMANENT CLOSURE	EA-180	_	CI-331
UEC	4066+61	77.0	89	KENSICO UPPER EFFLUENT CHAMBER	LIMITS OF WORK	EA-180	PE-012	CI-311

NOTES:

SEE EA-021 FOR EXISTING AND ACCESS SCHEDULE

BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34"
IT IS A REDUCED PRINT. SCALE
ACCORDINGLY

DESIGNED BY: CHECKED BY: JA·UNDERGROUND·P.C. DESIGN LEAD: dba Jacobs Associates BADE Z. SOZER PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. JOHN J. MURRAY



Water for Future

"WARNING-IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A CCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF WENDY SPERDUTO, P.E. ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2." PROGRAM DIRECTOR OF WFF SEAN MCANDREW, P.E.

NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

EXISTING AND ACCESS SCHEDULE SHEET 3 OF 3

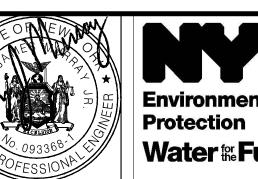
		ACCESS	POINT AND	TRAFFIC CO	ONTROL SCHEDULE
ACCESS PNTS NO.	EA DWG NO.	LATITUDE	LONGITUDE	FROM PUBLIC ROAD	TRAFFIC CONTROL (NOTE 1)
1	EA-201	N41° 56' 53.37"	W74° 12' 03.70"	NY28A	-
2	EA-201	N41° 56' 48.45"	W74° 12' 08.25"	NY28A	-
3	EA-031	N41° 56′ 33.22″	W74° 12' 24.69"	NY28A	-
4	EA-033	N41° 56′ 05.12″	W74° 12' 35.33"	NY28A	ADVANCED WARNING SIGNS
5	EA-203	N41° 56' 00.55"	W74° 12' 53.19"	BWS RD	ADVANCED WARNING SIGNS
6	EA-204	N41° 55' 04.45"	W74° 12' 37.55"	CR4/ATWOOD RD	FLAGGING OPERATION
7	EA-037	N41° 55' 00.68"	W74° 10' 57.68"	STILLWATER RD	-
8	EA-037	N41° 54' 47.36"	W74° 10' 54.22"	CR4/ATWOOD RD	ADVANCED WARNING SIGNS
9	EA-039	N41° 54' 17.73"	W74° 10' 29.40"	VLY ATWOOD RD	ADVANCED WARNING SIGNS
10	EA-042	N41° 52' 59.25"	W74° 09' 36.71"	BUSH RD	_
11	EA-044	N41° 52' 18.89"	W74° 10' 12.54"	PEAK RD	ADVANCED WARNING SIGNS
12	EA-048	N41° 50′ 46.88″	W74° 10' 06.09"	PINE BUSH RD	FLAGGING OPERATION TRAFFIC CONTROL AT RONDOUT PT DOWNTAKE (CI-050)
13	EA-052	N41° 49' 58.37"	W74°08'29.80"	WARRENS WAY	_
14	EA-052	N41° 49′ 26.85″	W74° 08' 29.80"	CR1/LUCAS TPKE	_
15A	EA-053	N41° 49′ 13.42″	W74° 08' 25.36"	CANAL RD	FLAGGING OPERATION TRAFFIC CONTROL AT ACCESS TO LEAK 5 CANAL ROAD PARTIAL CLOSURE (CI-051)
16	EA-206	N41° 48' 11.27"	W74° 07′ 26.79″	LOWER 27 KNOLLS RD	_
17	EA-061	N41° 45' 55.84"	W74° 07' 27.23"	CR6/MTN REST RD	ADVANCED WARNING SIGNS
18	EA-207	N41° 44' 12.41"	W74° 09' 12.91"	NY 299 W/ NEW PALTZ-MINNEWASKA RD	FLAGGING OPERATION, TRAFFIC CONTROL AT ACCESS TO WALLKILL PT DOWNTAKE CHAMBER (CI-061)
19	EA-071	N41° 42' 15.75"	W74°08'26.08"	FOREST GLEN RD	-
20A	EA-075	N41° 40′ 45.08″	W74°07'46.98"	LEFEVRE LN	-
20B	EA-075	N41° 40' 27.40"	W74° 07' 50.40"	US44/NY55	ADVANCED WARNING SIGNS
21	EA-078	N41° 39' 38.34"	W74° 08' 23.94"	NY208	ADVANCED WARNING SIGNS
22	EA-079	N41° 39' 07.03"	W74° 08' 21.54"	NY208	ADVANCED WARNING SIGNS
23	EA-080	N41° 38' 28.18"	W74° 08' 32.72"	NY208	ADVANCED WARNING SIGNS
24	EA-081	N41° 38' 14.12"	W74°08′30.02″	CR20	ADVANCED WARNING SIGNS
25	EA-083	N41° 37' 22.40"	W74° 08' 24.69"	CR21	ADVANCED WARNING SIGNS
26	EA-086	N41° 36′ 00.80″	W74° 08' 23.45"	NY300	ADVANCED WARNING SIGNS
27	EA-086	N41° 35′ 42.33″	W74° 08' 20.45"	STRAWRIDGE RD	ADVANCED WARNING SIGNS
28	EA-088	N41° 34′ 59.68″	W74° 08′ 31.26″	ST. MICHAELS LN	ADVANCED WARNING SIGNS
29	EA-089	N41° 34' 19.77"	W74° 08' 26.54"	KINGS HILL RD	ADVANCED WARNING SIGNS
30A	EA-092	N41° 33′ 22.47″	W74° 07' 57.81"	ST. ANDREWS RD	ADVANCED WARNING SIGNS
30B	EA-092	N41° 33′ 10.40″	W74° 07' 56.87"	SHAWANGUNK RD	ADVANCED WADNING CIONG
31	EA-093	N41° 32′ 56.96″	W74° 07' 48.38"	ST. ANDREWS RD	ADVANCED WARNING SIGNS
32 33	EA-093	N41° 32' 43.87"	W74° 07' 45.52"	NY52 NY17K	ADVANCED WARNING SIGNS
34	EA-096 EA-096	N41° 31′ 34.31″ N41° 31′ 13.67″	W74° 07' 52.73" W74° 07' 52.25"	SOUTH DRURY LN	ADVANCED WARNING SIGNS -
36	EA-100	N41° 30' 02.50"	W74° 06' 48.03"	(CR54) STEWART AP	
37	EA-100	N41° 29° 24.30"	W74 06 48.03 W74° 06' 38.79"	CLARK ST	ADVANCED WARNING SIGNS
38	EA-101	N41 29 24.30 N41° 28' 59.58"	W74° 06' 11.03"	NY207	ADVANCED WARNING SIGNS ADVANCED WARNING SIGNS
39	EA-102	N41° 28° 45.18"	W74° 05' 42.84"	MT AIRY RD	ADVANCED WARNING SIGNS ADVANCED WARNING SIGNS
40A	EA-103	N41° 28′ 43.29″	W74 05 42.84 W74° 05' 30.82"	MOORES HILL RD	- MANAGED MANAGE GIONS
40B	EA-207	N41° 28′ 45.39″	W74° 05' 17.93"	MOORES HILL RD	
41	EA-208	N41° 27' 37.12"	W74° 04' 10.68"	RILEY ROAD	ADVANCED WARNING SIGNS
42	EA-209 EA-210	N41° 25' 35.75"	W73° 57' 56.08"	NY9D	_
43	EA-211	N41° 25' 55.16"	W73° 56' 45.30"	GATEHOUSE RD	_
44	EA-122	N41° 25′ 47.99″	W73° 56' 19.09"	CR10/FISHKILL RD	ADVANCED WARNING SIGNS
45	EA-122	N41° 25′ 44.13″	W73° 56′ 14.08″	HEALY RD	-
46	EA-123	N41° 25' 16.50"	W73° 56' 09.73"	DOUGLAS LN	ADVANCED WARNING SIGNS
47	EA-126	N41° 24' 17.75"	W73° 55' 25.83"	MOOG RD	ADVANCED WARNING SIGNS
48	EA-126	N41° 24' 14.13"	W73° 55' 25.33"	INDIAN BROOK RD	ADVANCED WARNING SIGNS
49	EA-127	N41° 24' 11.94"	W73° 55′ 19.47"	AVERY RD	-
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		ACCESS	S POINT AND) TRAFFIC CO	ONTROL SCHEDULE			
ACCESS PNTS NO.	EA DWG NO.	LATITUDE	LONGITUDE	FROM PUBLIC ROAD	TRAFFIC CONTROL (NOTE 1)			
50	EA-129	N41° 23' 12.29"	W73° 55' 18.37"	PHILIPS BROOK RD	_			
52	EA-134	N41° 20' 54.07"	W73° 54' 25.78"	OLD ALBANY POST RD	_			
53	EA-135	N41° 20′ 35.06″	W73° 54' 07.94"	CR15/SPROUT BROOK RD	FLAGGING OPERATION			
54	EA-212	N41° 20' 07.45"	W73° 54' 02.73"	RIDGE RD	_			
55	EA-137	N41° 20' 02.03"	W73° 53' 35.51"	AQUEDUCT RD	_			
56	EA-213	N41° 19' 08.46"	W73° 53' 33.38"	OREGON RD	-			
57	EA-139	N41° 19' 09.58"	W73° 53' 29.80"	OREGON RD	FLAGGING OPERATION			
58	EA-141	N41° 18' 07.04"	W73° 53' 03.49"	LOCUST AVE	ADVANCED WARNING SIGNS			
59	EA-142	N41° 17' 59.74"	W73° 53' 03.89"	US6	ADVANCED WARNING SIGNS			
60	EA-143	N41° 17' 36.73"	W73° 52' 50.29"	LOCUST AVE	ADVANCED WARNING SIGNS			
61	EA-144	N41° 17′ 30.18″	W73° 52' 05.71"	CROTON AVE	ADVANCED WARNING SIGNS			
62	EA-147	N41° 17' 13.01"	W73° 50' 39.06"	FIELD ST	ADVANCED WARNING SIGNS			
63	EA-148	N41° 16' 56.18"	W73° 50' 18.20"	JACOB RD	ADVANCED WARNING SIGNS			
64	EA-149	N41° 16′ 44.22″	W73° 50' 07.89"	WHITEHILL RD	LANE CLOSURE, TRAFFIC CONTROL AT ACCESS TO HUNTERS BROOK SPS (CI-090)			
65	EA-213	N41° 16' 31.18"	W73° 50' 12.72"	HUNTER BROOK RD	ADVANCED WARNING SIGNS			
66	EA-152	N41° 15' 26.41"	W73° 49' 02.00"	BAPTIST CHURCH RD	_			
67	EA-153	N41° 15' 06.65"	W73°48'50.89"	BALDWIN RD	_			
68	EA-153	N41° 15' 04.47"	W73° 48' 50.12"	CR131/UNDERHILL AVE	ADVANCED WARNING SIGNS			
70	EA-153	N41° 14' 51.39"	W73° 48' 44.96"	TACONIC STATE PKWY (NB)	LANE CLOSURE TRAFFIC CONTROL AT ACCESS TO TURKEY MOUNTAIN SPS BLOW-OFF CHAMBER (CI-101 AND CI-102)			
71	EA-214	N41° 14' 24.84"	W73° 48' 18.72"	CHAPMAN ST	_			
72	EA-155	N41° 14' 05.92"	W73° 48' 23.83"	CROTON DAM RD	_			
73	EA-158	N41° 13′ 04.32″	W73° 47' 53.28"	NY134/KITCHAWAN RD	ADVANCED WARNING SIGNS			
73B	EA-159	N41° 12' 44.65"	W73° 47′ 33.51″	PINES BRIDGE RD	ADVANCED WARNING SIGNS			
74	EA-162	N41° 11' 33.43"	W73° 47' 50.79"	NY100/SOMERSTOWN TPKE	ADVANCED WARNING SIGNS			
75	EA-162	N41° 11' 29.44"	W73° 47' 51.26"	NY120/MILLWOOD RD	ADVANCED WARNING SIGNS			
76	EA-163	N41° 11' 14.06"	W73° 48' 01.54"	NY133/STATION PLACE	ADVANCED WARNING SIGNS			
77	EA-164	N41° 10′ 34.11″ W73° 48′ 03.39″		CAMPFIRE RD	ADVANCED WARNING SIGNS			
78	EA-166	N41° 09' 46.61"	W73° 47' 49.57"	CHAPPAQUA RD	ADVANCED WARNING SIGNS			
79	EA-216	N41° 08' 45.87"	W73° 47′ 13.60″	SAW MILL RIVER PKWY (SB)	SHOULDER CLOSURE-TRAFFIC CONTROL ACCESS TO HARLEM RR SPS NORTH CHAMBER (CI-121)			
80	EA-169	N41° 08' 45.29"	W73° 47' 05.31"	WASHINGTON AVE	FLAGGING OPERATION			
81	EA-169	N41° 08' 44.34"	W73° 47' 05.77"	WASHINGTON AVE	FLAGGING OPERATION			
82	EA-169	N41° 08' 29.39"	W73° 46' 50.62"	NY117/MANVILLE RD	ADVANCED WARNING SIGNS			
83	EA-170	N41° 08' 13.21"	W73° 46′ 38.80″	NY141/BROADWAY	ADVANCED WARNING SIGNS			
84	EA-171	N41° 07' 58.85"	W73° 46' 13.70"	LELAND AVE	ADVANCED WARNING SIGNS			
85	EA-171	N41° 07' 56.34"	W73° 46' 10.40"	LAKE ST	ADVANCED WARNING SIGNS			
87	EA-174	N41° 07' 11.61"	W73° 44' 56.34"	NANNY HAGEN RD	FLAGGING OPERATION, TRAFFIC CONTROL AT ACCESS TO CATSKILL INFLUENT CHAMBER (CI-141 AND CI-142)			
88	EA-180	N41° 05' 33.72"	W73° 46' 10.09"	WESTLAKE DR	· - · ·			
89	EA-180	N41° 05' 23.87"	W73° 46' 19.70"	WESTLAKE DR	_			

NOTES:

- 1. ADVANCED WARNING SIGN: "CONSTRUCTION VEHICLES ENTERING AND EXISTING ROADWAY".
- 2. FOR TYPICAL FLAGGING OPERATION SEE CI-031 AND CI-032.
- 3. "-": NO TRAFFIC CONTROL REQUIRED.

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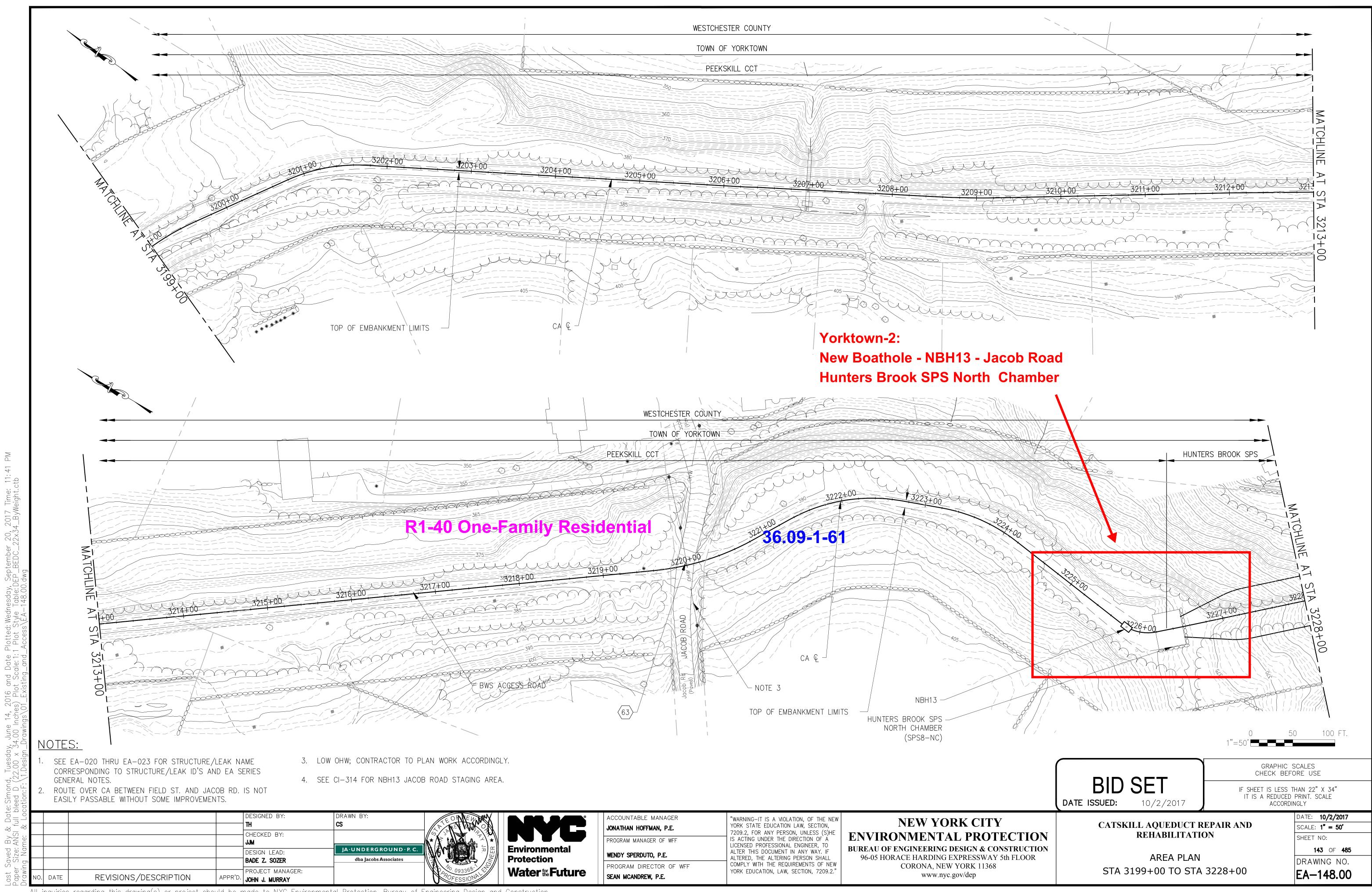
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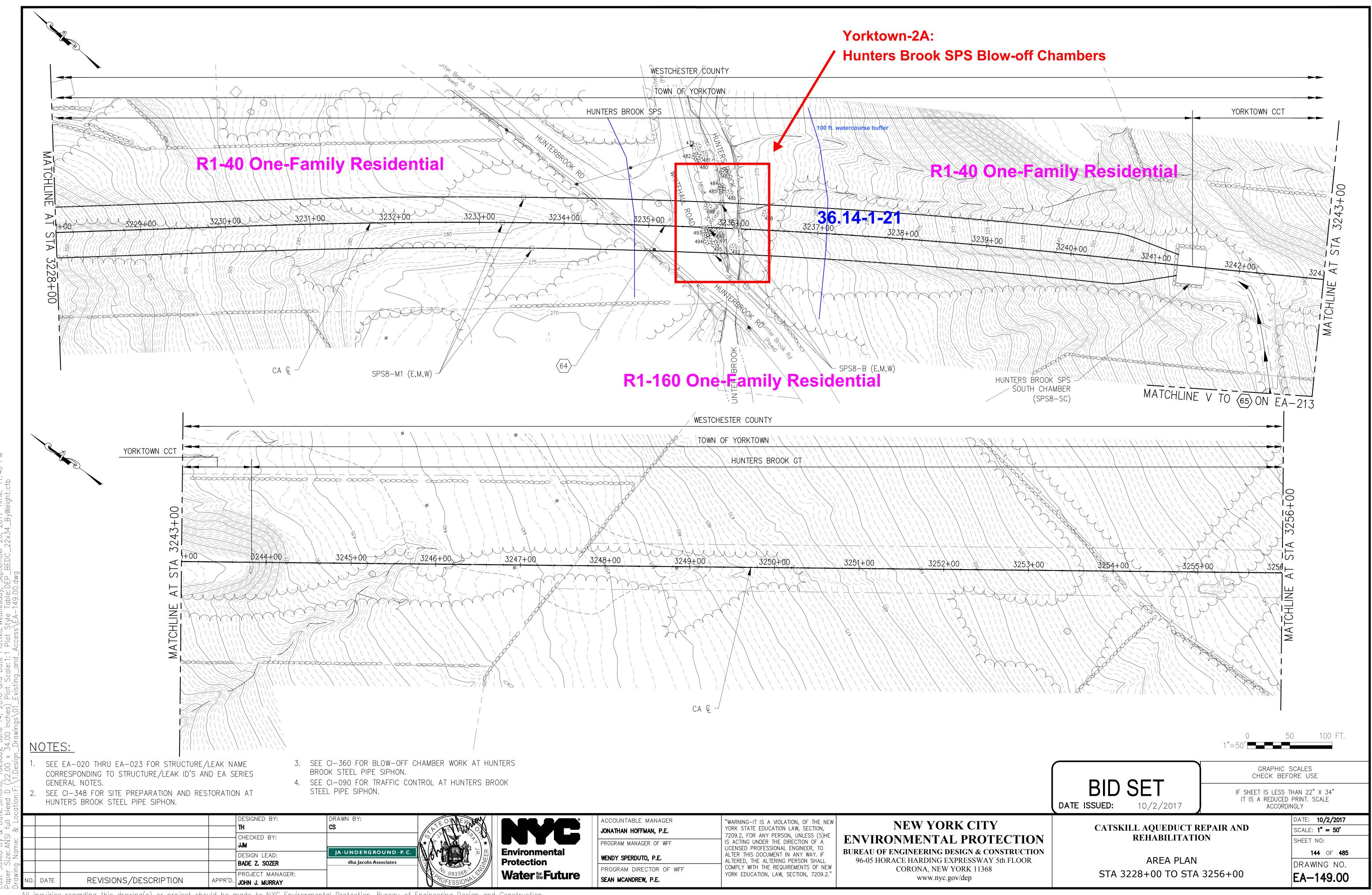
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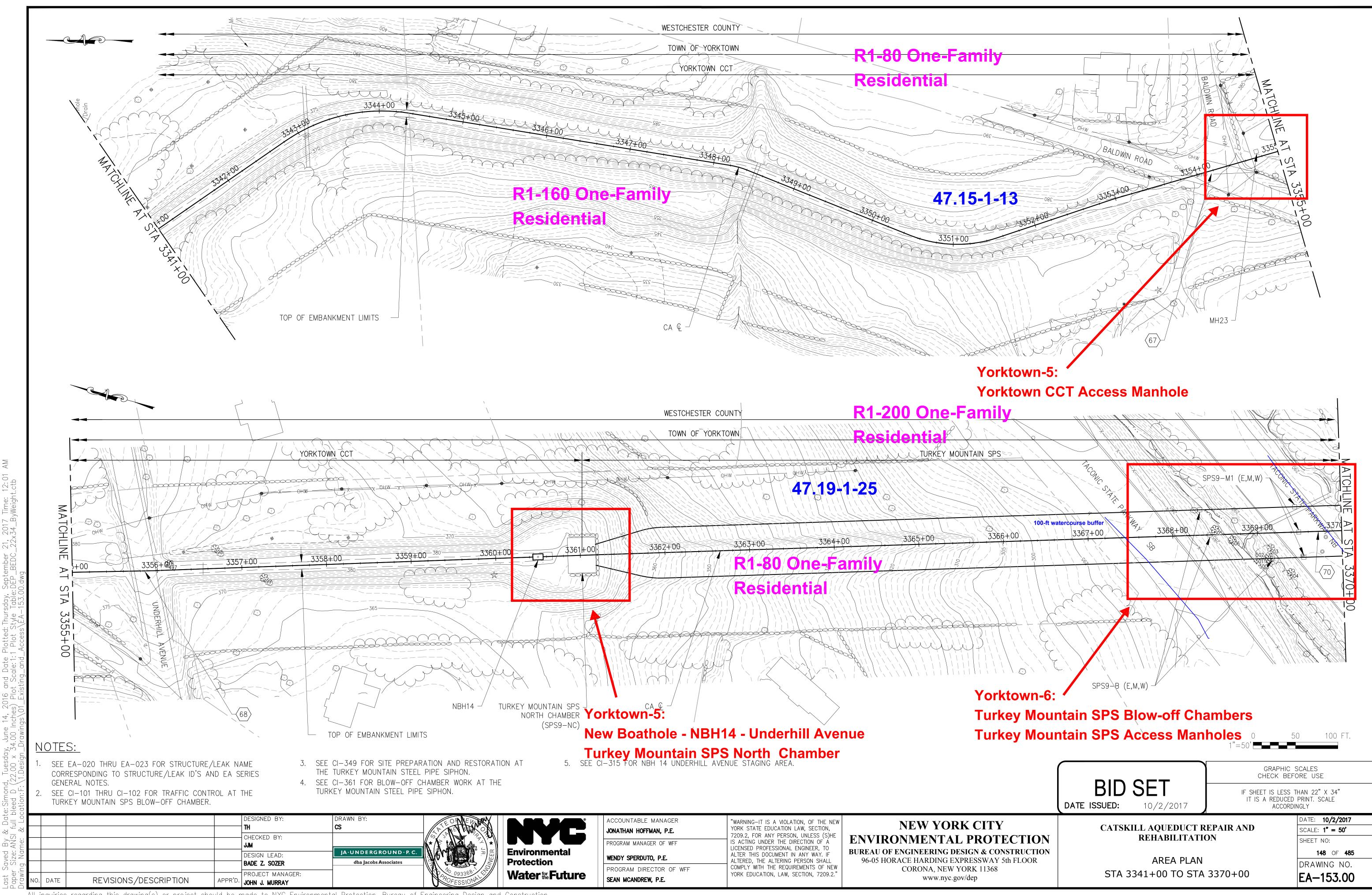
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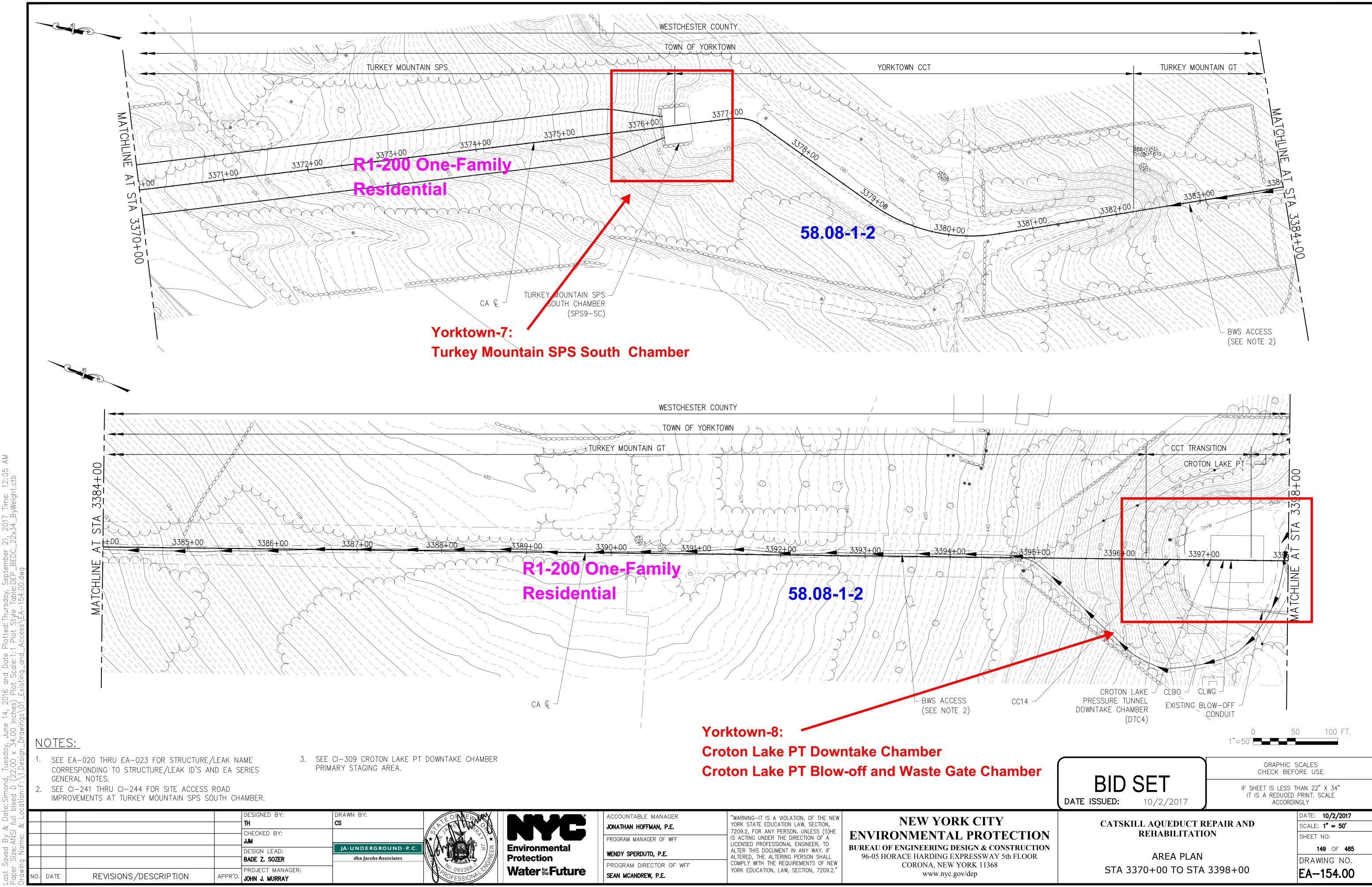
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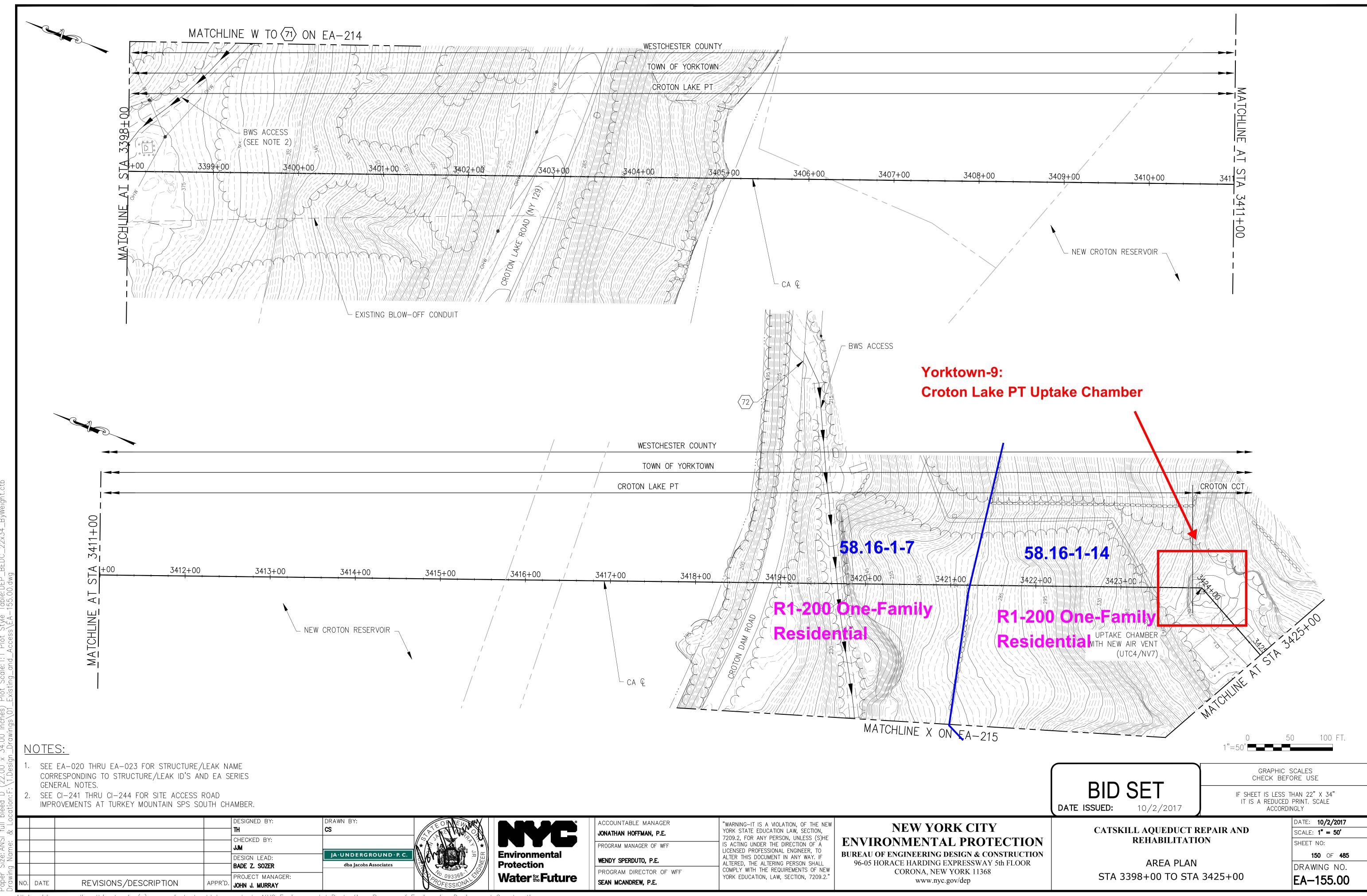
All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

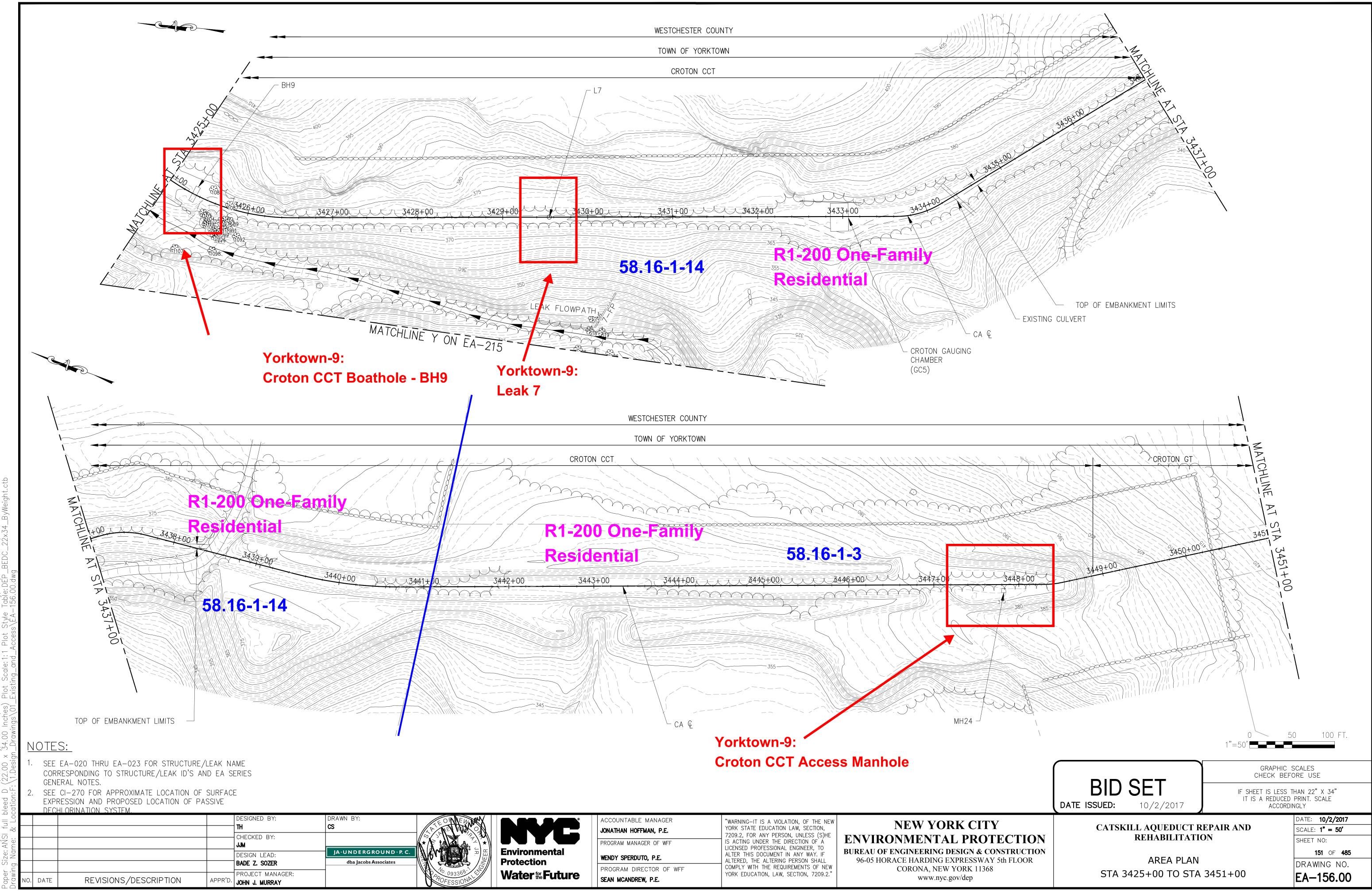


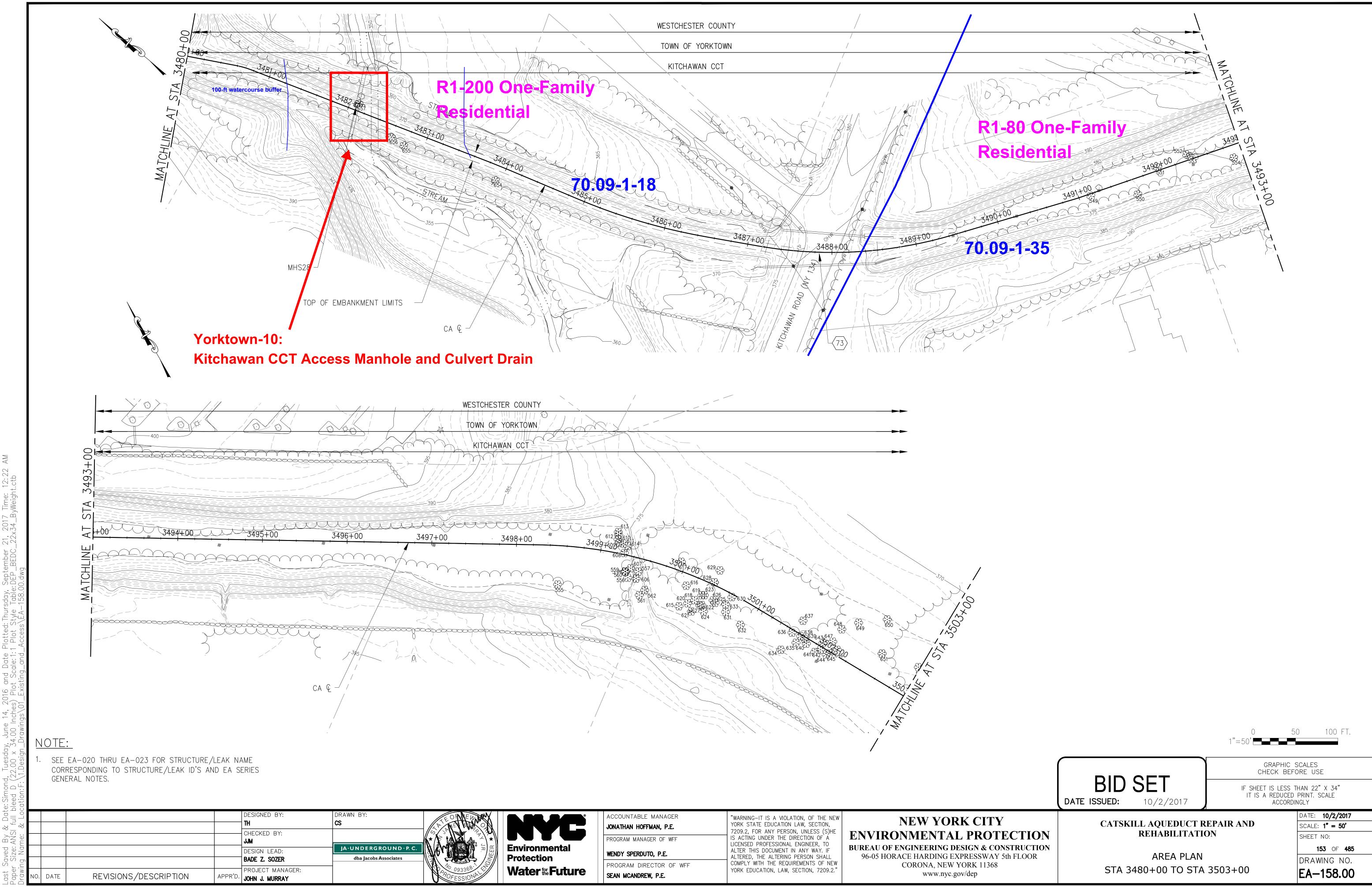


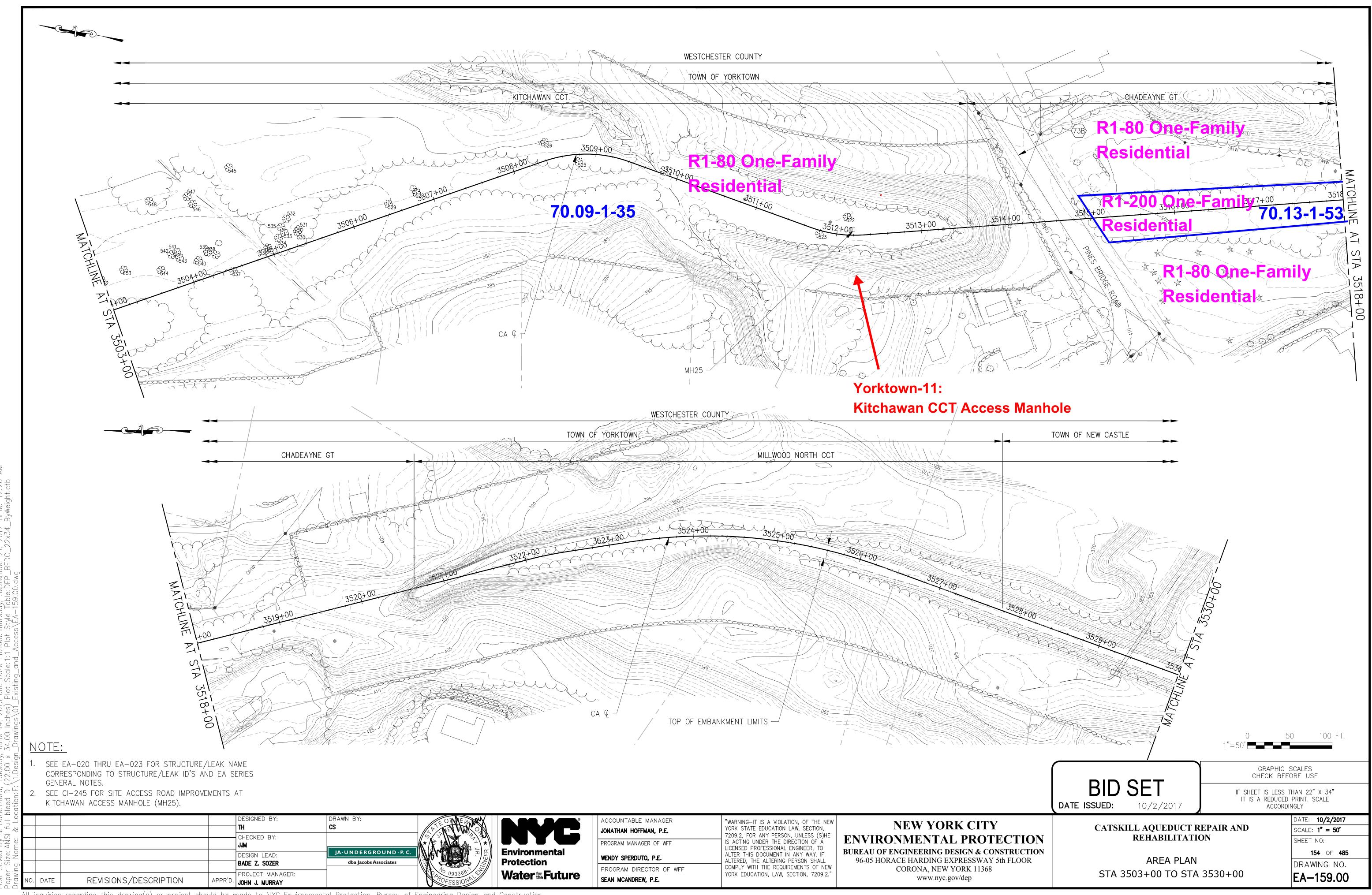












GENERAL NOTES

- SITE SURVEY PROVIDED BY GOLDEN AERIAL SURVEYS, IN MAY 2014. HORIZONTAL GROUND CONTROL IS BASED ON NEW YORK STATE PLANE COORDINATE SYSTEM EAST, VERTICAL DATUM IS BASED ON NAVD 1988.
- SEE EA-021 THRU EA-024 FOR THE EXISTING AND ACCESS SCHEDULE, STRUCTURAL/LEAK NAME, LOCATION AND ACCESS SCHEDULE.
- ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS AUTHORITIES HAVING JURISDICTION OVER THE WORK.
- REFER TO SECTION 01 55 00 VEHICULAR ACCESS AND PARKING FOR ALLOWABLE VEHICULAR LOAD LIMITATIONS ON THE AQUEDUCT. REFER TO ST SERIES FOR LOAD LIMITATIONS, INCLUDING FOR STOCKPILES, ON THE SIPHON BRIDGES.
- CONTRACTOR SHALL NOT STAGE EQUIPMENT OR WORKER VEHICLES WITHIN 30 FEET OF THE AQUEDUCT CENTERLINE EXCEPT WHEN VEHICLES AND EQUIPMENT ARE REQUIRED TO PERFORM THE WORK AND MEET SECTION 01 55 00 - VEHICULAR ACCESS AND PARKING, FOR LOAD LIMITATIONS ON THE AQUEDUCT.
- CONTRACTOR SHALL NOT STAGE EQUIPMENT OR WORKER VEHICLES WITHIN 10 FEET OF THE SPS PIPE CENTERLINE EXCEPT WHEN VEHICLES AND EQUIPMENT ARE REQUIRED TO PERFORM THE WORK.
- CONTRACTOR SHALL NOT BLOCK ACCESS FOR EMERGENCY VEHICLES.
- CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND EXISTING FACILITIES AGAINST DAMAGES FROM THE CONTRACTORS DEMOLITION AND/OR CONSTRUCTION OPERATIONS.
- REFER TO EA SERIES DRAWINGS FOR OVERHEAD WIRE SCHEDULE AT THE AQUEDUCT CROSSINGS.
- 10. REFER TO EA-027 DRAWING FOR ACCESS POINT TRAFFIC CONTROL.
- 11. INSTALLATION OF THE PASSIVE DECHLORINATION SYSTEMS WILL REQUIRE DEWATERING EQUIPMENT AND BYPASS PIPING TO RE-ROUTE THE LEAK WATER AROUND THE CONSTRUCTION AREA. SEE CIVIL DRAWINGS FOR FLOWS. CONTRACTOR SHALL PROVIDE PUMP AND PIPING TO RE-ROUTE LEAK WATER FLOW PATH. CONTRACTOR SHALL PROVIDE ADEQUATE STABILIZATION AT THE TEMPORARY DISCHARGE OUTLET.
- 12. HAZARDOUS MATERIALS MAY BE ENCOUNTERED DURING DEMOLITION. REFER TO SECTION 01 35 45 - HAZARDOUS MATERIALS CONTROL. FOR HAZARDOUS MATERIAL SUMMARY REFER TO SECTION 01 35 45 -ATTACHMENT A FOR QUANTITIES AND LOCATIONS.
- SEE TREE SCHEDULE ON CI-601 THRU CI-607. TREE REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 31 11 00 - CLEARING AND GRUBBING. SEE CI-021 FOR TEMPORARY TREE PROTECTION DETAIL. TREE LOCATIONS ARE APPROXIMATE.
- THE CONTRACTOR MAY REQUEST ADDITIONAL STAGING AREA BEYOND WHAT IS SHOWN ON THE DRAWINGS FROM THE ENGINEER. THE CONTRACTOR MAY BE GRANTED ADDITIONAL STAGING AREAS, IF AVAILABLE, AS APPROVED BY THE ENGINEER.
- STAGING AREA AND WORK ZONE SHALL BE MAINTAINED IN ACCORDANCE WITH SECTION 31 23 26 - SITE PREPARATION, MAINTENANCE AND RESTORATION.
- 16. AT ALL STAGING AREAS AND WORK ZONES, THE CONTRACTOR SHALL SECURE THE EQUIPMENT AND MATERIALS LEFT ON SITE OVERNIGHT. THE CONTRACTOR SHALL LOCK UP ALL SMALL EQUIPMENT AND TOOLS IN CONEX BOXES, OR SIMILAR, FOR OVERNIGHT STORAGE.
- 17. PRIOR TO ANY SITE WORK CONTRACTOR SHALL INSTALL SILT FENCE AND PROTECTIVE FENCE AS SHOWN AND MAINTAIN IT IN ACCORDANCE WITH SECTION 31 25 13 - DUST, SOIL EROSION AND SEDIMENTATION CONTROLS, THROUGHOUT THE CONSTRUCTION. ADDITIONAL SILT FENCE MAY BE REQUIRED FOR EXISTING ACCESS ROADS AS DIRECTED BY ENGINEER IN THE FIELD.

- 18. VARIOUS WORK LOCATIONS MAY BE OVERGROWN WITH VEGETATION, CONTRACTOR SHALL PERFORM CLEARING AND GRUBBING IN ACCORDANCE WITH SECTION 31 11 00 - CLEARING AND GRUBBING.
- 19. CONTRACTOR SHALL ENSURE PROPER DRAINAGE OF NON-SEDIMENT LADEN STORMWATER (I.E. RUNOFF THAT DOES NOT ENCOUNTER THE EXPOSED SOIL WITHIN THE CONTRACTOR'S WORK AREA) TO EXISTING COLLECTION SYSTEMS OR NATURAL FEATURES. PONDING OF WATER WILL NOT BE PERMITTED. TURBIDITY CONTROLS SHALL BE IMPLEMENTED AS SHOWN ON DRAWINGS, OR AS NECESSARY TO COMPLETE THE WORK.
- 20. THE CONTRACTOR SHALL PLACE STONE, AT A MINIMUM, IN STAGING AREAS AND WORK ZONES AS SHOWN ON THE DRAWINGS. IN ADDITION, THE CONTRACTOR SHALL PLACE A MINIMUM OF 6 INCHES OF NYSDOT #3 CRUSHED STONE AT THE FOOTPRINT OF THE WATER TREATMENT FACILITIES WHERE THE CONTRACTOR CHOOSES TO INSTALL WATER TREATMENT FACILITIES, TRUCK WASH AREAS, TRUCK UNLOADING/LOADING AND TRUCK ROUTE AREAS WITHIN THE STAGING AREAS OR WORK ZONES AS PART OF SITE WORK.
- 21. ALL TEMPORARY CONSTRUCTION FACILITIES INCLUDING, BUT NOT LIMITED TO, ENTRANCE FACILITY, STABILIZED CONSTRUCTION ENTRANCE, PROTECTIVE FENCE, AND SILT FENCE SHALL BE REMOVED AT PROJECT COMPLETION, OR AS NECESSARY TO COMPLETE THE WORK.
- 22. PROVIDE BACKFILL AND REGRADE AROUND SIPHON BLOW-OFF CHAMBERS TO SLOPE TO THE STREAM TOP OF BANK.
- 23. UPON CONSTRUCTION COMPLETION ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADE AND SEEDED IN ACCORDANCE WITH SECTION 32 90 00 - PLANTING, AS NECESSARY, TO RESTORE TO ORIGINAL CONDITIONS UNLESS NOTED OTHERWISE OR DIRECTED BY THE ENGINEER. ACCESS ROADS SHALL REMAIN AFTER CONSTRUCTION UNLESS OTHERWISE NOTED. UPON CONSTRUCTION COMPLETION, ALL TEMPORARY CULVERT PROTECTION SHALL BE REMOVED.
- 24. CONTRACTOR TO INSTALL GUARDRAIL SYSTEM IN ACCORDANCE WITH 29 CFR 1926.502(B) AT TEMPORARY RETAINING WALLS OF HEIGHTS 6-FEET AND ABOVE.
- 25. ALL EXCAVATIONS WITHIN ONE FOOT OF EXISTING STRUCTURES. SEWERS. AND OTHER UTILITIES NOT DESIGNATED FOR DEMOLITION SHALL BE DONE BY HAND.
- 26. PRIOR TO EXCAVATION OF DRAIN PIPING IN THE VICINITY OF THE SPS. CONTRACTOR SHALL PERFORM GROUND PENETRATING RADAR (GPR) ALONG THE PROPOSED ALIGNMENT OF THE DRAINAGE PIPE AND STEEL PIPE SIPHON. THE GPR SHALL COVER 10-FEET OF AREA ON EACH SIDE OF THE DRAINAGE PIPE. THE GPR ALONG THE SPS ALIGNMENT IN THE VICINITY OF AND WITHIN THE SPS WORK ZONE SHALL COVER AN AREA OF AT LEAST 20 FEET BEYOND THE WORK ZONE ON EACH SIDE ALONG THE SPS ALIGNMENT.
- 27. WHERE A NEW SITE ACCESS ROAD CROSSES A STEEL PIPE SIPHON, THE CONTRACTOR SHALL PERFORM GPR ALONG THE ACCESS ROAD IN THE VICINITY OF THE SPS TO LOCATE SPS LIMITS AND CONFIRM DEPTH.
- 28. ALL WORK SHALL MEET REQUIREMENTS OF SECTION 31 80 06 WATER TREATMENT AND DISPOSAL FOR WATER COLLECTION, DISCHARGE, AND/OR DISPOSAL. FOR REGULATORY AND PERMIT REQUIREMENTS, REFER TO SECTION 01 41 00 - REGULATORY REQUIREMENTS.
- 29. CONTRACTOR SHALL PROVIDE A CONCRETE WASHOUT AREA FOR CONCRETE TRUCK TROUGH/CHUTE WASH WHERE NEEDED. REFER TO CONCRETE WASHOUT AREA DETAIL ON CI-024. LOCATION SHALL BE FIELD DETERMINED AND COORDINATED WITH ENGINEER.
- 30. TEMPORARY STREAM PROTECTION SHALL BE INSTALLED PRIOR TO IN-WATER WORK OR WORK WITHIN A REGULATED BUFFER OR WETLANDS AND SHALL BE DONE IN ACCORDANCE WITH REGULATORY REQUIREMENTS IDENTIFIED IN SECTION 01 41 00 - REGULATORY REQUIREMENTS. TEMPORARY DIVERSIONS SHALL BE WATER-TIGHT AND INSTALLED IN ACCORDANCE WITH THE SEQUENCE SHOWN ON CI-011. DISTURBED SOILS SHALL BE RESEEDED OR PLANTED IN ACCORDANCE WITH SECTION 32 90 00 PLANTING.

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DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO:

208 OF 485 DRAWING NO.

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

CIVIL GENERAL NOTES CI-001.00

NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: APPR'D. SCOTT DAVIS REVISIONS/DESCRIPTION NO. DATE

Environmental Protection Water # Future

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WENDY SPERDUTO, P.E.

PROGRAM DIRECTOR OF WFF YORK EDUCATION, LAW, SECTION, 7209.2. SEAN MCANDREW, P.E.

CCOUNTABLE MANAGER

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- STEP 2: STABILIZE EXISTING ROADS OR INSTALL NEW ROADS WHERE SHOWN.
- STEP 3: COMPLETE SITE RESTORATION, INCLUDING REMOVAL OF EROSION CONTROL MEASURES.
- 2. SUGGESTED WORK SEQUENCE FOR LEAK REPAIR:
 - STEP 1: COMPLETE AQUEDUCT ACCESS SITE WORK, INCLUDING EROSION CONTROL MEASURES AS REQUIRED.
 - STEP 2: COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT.
 - STEP 3: COMPLETE AQUEDUCT LEAK REPAIR BY GROUTING OR LINING.
 - STEP 4: RESTORE LEAK WATER PATHS UPON LEAK REPAIR COMPLETION.
- SUGGESTED WORK SEQUENCE FOR DECHLORINATION:
- STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, TREE REMOVAL AND PROTECTION WHERE REQUIRED.

FOR LEAK 1A/1B PASSIVE DECHLORINATION FACILITY WORK, INSTALL TEMPORARY BRIDGE FOR EXISTING STREAM CROSSING.

FOR LEAK 2 PASSIVE DECHLORINATION FACILITY WORK, INSTALL ACCESS STAIRS.

FOR LEAK 5 ACTIVE DECHLORINATION FACILITY WORK, DEMOLISH EXISTING CONCRETE PEDESTALS, TAP TO EXISTING WATERMAIN, INSTALL POTABLE WATER LINE, AND GENERATOR CONCRETE PAD.

- STEP 2: INSTALL PASSIVE DECHLORINATION SYSTEM, ACTIVE DECHLORINATION FACILITY OR ADDITIONAL TABLET DECHLORINATION MATS WHERE SHOWN.
- STEP 3: MAINTAIN AND OPERATE THE PASSIVE DECHLORINATION SYSTEM AND ACTIVE DECHLORINATION FACILITY.
- STEP 4: REMOVE THE PASSIVE DECHLORINATION SYSTEM AND ACTIVE DECHLORINATION FACILITY AT SPECIFIED LOCATIONS.
- STEP 5: COMPLETE SITE RESTORATION, INCLUDING GRADING AND REMOVAL OF EROSION CONTROL MEASURES.
- SUGGESTED WORK SEQUENCE FOR STAGING AREA:
 - STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, STONE INSTALLATION, TREE REMOVAL AND PROTECTION AND SITE SUPPORT WHERE REQUIRED.
- STEP 2: USE THE STAGING AREA AS REQUIRED.
- STEP 3: COMPLETE SITE RESTORATION, INCLUDING GRADING AND REMOVAL OF EROSION CONTROL MEASURES AND STONE IF REQUIRED.
- 5. <u>SUGGESTED WORK SEQUENCE FOR EXISTING BOATHOLE REHABILITATION AND OTHER</u> WORK VIA ACCESS BY EXISTING BOATHOLE:
 - STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, AND STONE INSTALLATION.
 - STEP 2: IF DIRECTED TO PERFORM EXISTING BOATHOLE REHABILITATION WORK, COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT. REMOVE EXISTING ACCESS FIXED LADDER AND EXISTING ACCESS HATCH AND REPLACE WITH COVER PLATES, INCLUDING CONCRETE MODIFICATIONS.
 - STEP 3: USE THE EXISTING BOATHOLE FOR AQUEDUCT ACCESS AS REQUIRED TO PERFORM IN-AQUEDUCT WORK.
 - STEP 4: COMPLETE SITE RESTORATION, INCLUDING GRADING, REMOVAL OF EROSION CONTROL MEASURES AND STONE.

*STEPS 2 AND 3 MAY BE COMPLETED IN REVERSE ORDER DEPENDING ON THE CONTRACTOR'S CONSTRUCTION SCHEDULE. STEP 1 AND STEP 4 SHALL BE COMPLETED FOR STEP 2 AND STEP 3, IF NEEDED.

- 6. SUGGESTED WORK SEQUENCE FOR NEW BOATHOLE AND OTHER WORK VIA ACCESS BY NEW BOATHOLE:
 - STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, AND STONE INSTALLATION.
 - STEP 2: CONSTRUCT CAST-IN-PLACE REINFORCED CONCRETE COLLAR. BACKFILL AS
 - STEP 3: COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT.
 - STEP 4: CUT AND REMOVE THE EXISTING CONCRETE ARCH AND INSTALL LINER AND PRECAST CONCRETE COVER.
 - STEP 5: USE THE NEW BOATHOLE FOR AQUEDUCT ACCESS AS REQUIRED TO PERFORM IN-AQUEDUCT WORK.
 - STEP 6: COMPLETE SITE RESTORATION, INCLUDING REMOVAL OF EROSION CONTROL MEASURES AND STONE AND COMPLETION OF GRADING.
- SUGGESTED WORK SEQUENCE FOR STEEL PIPE SIPHON (SPS) MANHOLE REHABILITATION,
- STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, AND STONE INSTALLATION.
- STEP 2: COMPLETE WATER MANAGEMENT. INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT.
- STEP 3: REPLACE EXISTING ACCESS HATCH, INCLUDING CONCRETE MODIFICATIONS AS REQUIRED FOR REMOVAL OF EXISTING ACCESS HATCH, PLACEMENT OF NEW CONCRETE, AND INSTALLATION OF STEEL ACCESS HATCH.
- STEP 4: COMPLETE SITE RESTORATION, INCLUDING REMOVAL OF EROSION CONTROL MEASURES AND STONE AND COMPLETION OF GRADING.
- SUGGESTED WORK SEQUENCE FOR ACCESS MANHOLE REHABILITATION AND OTHER WORK VIA ACCESS BY MHS:
- STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, AND STONE INSTALLATION.
- STEP 2: IF DIRECTED TO PERFORM ACCESS MANHOLE REHABILITATION, COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT, REMOVE ACCESS LADDER AND REPLACE EXISTING ACCESS HATCH, INCLUDING CONCRETE MODIFICATIONS AS REQUIRED FOR REMOVAL OF EXISTING ACCESS HATCH, PLACEMENT OF NEW CONCRETE, AND INSTALLATION OF STEEL ACCESS HATCH.
- STEP 3: USE THE ACCESS MANHOLE FOR AQUEDUCT ACCESS AS REQUIRED TO PERFORM IN-AQUEDUCT WORK.
- STEP 4: COMPLETE SITE RESTORATION. INCLUDING REMOVAL OF EROSION CONTROL MEASURES AND STONE AND COMPLETION OF GRADING.

*STEPS 2 AND 3 MAY BE COMPLETED IN REVERSE ORDER DEPENDING ON THE CONTRACTOR'S CONSTRUCTION SCHEDULE. STEP 1 AND STEP 4 SHALL BE COMPLETED FOR STEP 2 AND STEP 3, IF NEEDED.

- SUGGESTED WORK SEQUENCE FOR NEW AIR VENT MECHANICAL WORK:
- STEP 1: COMPLETE SITE PREPARATION. INCLUDING EROSION CONTROL MEASURES. EARTHWORK. AND STONE INSTALLATION.
- STEP 2: INSTALL NETTING INSIDE AQUEDUCT TO CATCH CONSTRUCTION DEBRIS.
- STEP 3: COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT.
- STEP 4: AT ST. ELMO CCT DOWNTAKE AND UPTAKE LOCATIONS, REPLACE EXISTING ACCESS HATCH AND REMOVE LADDER.
- STEP 5: INSTALL NEW AIR VENTS INCLUDING PRECAST SLABS OR PLACEMENT OF CAST-IN-PLACE CONCRETE SLAB.
- STEP 6: REMOVE NETTING.
- STEP 7: COMPLETE SITE RESTORATION, INCLUDING GRADING AND REMOVAL OF EROSION CONTROL MEASURES AND STONE.

- 10. SUGGESTED WORK SEQUENCE FOR CULVERT DRAIN SLUICE GATE (CDSG) MECHANICAL WORK (SEAL) AND MANHOLE REHABILITATION AND OTHER WORK VIA ACCESS BY MH
- STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, AND STONE INSTALLATION.
- STEP 2* FOR MANHOLE REHABILITATION WORK:

STEP 2A: COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK 70NF IN THE AQUEDUCT.

STEP 2B: REMOVE ACCESS LADDER, REPLACE EXISTING ACCESS HATCH, INCLUDING CONCRETE MODIFICATIONS AS REQUIRED FOR REMOVAL OF EXISTING ACCESS HATCH, PLACEMENT OF NEW CONCRETE, AND INSTALLATION OF STEEL ACCESS HATCH.

• STEP 3* - FOR CDSG MECHANICAL WORK (SEAL):

STEP 3A: COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT, IF STEPS 2 AND 3 ARE COMPLETED IN DIFFERENT AQUEDUCT SHUTDOWNS.

STEP 3B: CLEAN THE AREA AROUND THE SLUICE GATE, DEMOLISH EXISTING SLUICE GATE(S) AND INSTALL A MECHANICAL PLUG(S) AND SEAL BY GROUTING.

- STEP 4*: USE THE ACCESS MANHOLE WITH CDSG FOR AQUEDUCT ACCESS AS REQUIRED TO PERFORM IN-AQUEDUCT WORK.
- STEP 5: COMPLETE SITE RESTORATION, INCLUDING GRADING AND REMOVAL OF EROSION CONTROL MEASURES AND STONE.

*STEPS 2, 3, AND 4 MAY BE COMPLETED IN ANY ORDER DEPENDING ON THE CONTRACTOR'S CONSTRUCTION SCHEDULE. STEP 1 AND STEP 5 SHALL BE COMPLETED FOR STEP 2, STEP 3, AND STEP 4, IF NEEDED.

- 11. <u>SUGGESTED WORK SEQUENCE FOR CDSG MECHANICAL WORK (REPLACE) AND MANHOLE</u> REHABILITATION AND OTHER WORK VIA ACCESS BY MH WITH CDSG:
 - STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, AND STONE INSTALLATION.
 - STEP 2* FOR MANHOLE REHABILITATION WORK:

STEP 2A: COMPLETE WATER MANAGEMENT, INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT.

STEP 2B: REMOVE ACCESS LADDER, REPLACE EXISTING ACCESS HATCH, INCLUDING CONCRETE MODIFICATIONS AS REQUIRED FOR REMOVAL OF EXISTING ACCESS HATCH. PLACEMENT OF NEW CONCRETE, AND INSTALLATION OF STEEL ACCESS HATCH.

• STEP 3* - FOR CDSG MECHANICAL WORK (REPLACE):

STEP 3A: COMPLETE STREAM PROTECTION, INCLUDING INSTALLATION OF RIPRAP, GABION WALLS. TURBIDITY CURTAIN. COFFERDAM. DEWATERING PUMP. FLEXIBLE BYPASS HOSE, DEWATERING BAG, DAMS AND PIPING AND ACCESSORIES.

STEP 3B: COMPLETE WATER MANAGEMENT. INCLUDING INSTALLATION OF DAMS AND PIPING TO ISOLATE A WORK ZONE IN THE AQUEDUCT, IF STEPS 2 AND 3 ARE COMPLETED IN DIFFERENT AQUEDUCT SHUTDOWNS. STEP 3C: CLEAN THE AREA AROUND THE SLUICE GATE, DEMOLISH EXISTING SLUICE

GATE AND THIMBLE AND INSTALL NEW SLIDE GATE AND THIMBLE. • STEP 4*: USE THE ACCESS MANHOLE WITH CDSG FOR AQUEDUCT ACCESS AS REQUIRED TO PERFORM IN-AQUEDUCT WORK.

• STEP 5: COMPLETE SITE RESTORATION, INCLUDING GRADING AND REMOVAL OF EROSION CONTROL MEASURES AND STONE.

*STEPS 2, 3, AND 4 MAY BE COMPLETED IN ANY ORDER DEPENDING ON THE CONTRACTOR'S CONSTRUCTION SCHEDULE. STEP 1 AND STEP 5 SHALL BE COMPLETED FOR STEP 2, STEP 3, AND STEP 4, IF NEEDED.

- 12. SUGGESTED WORK SEQUENCE FOR SPS BLOW-OFF CHAMBER REHABILITATION:
- STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, EARTHWORK, STONE INSTALLATION, TREE REMOVAL AND PROTECTION WHERE REQUIRED.
- STEP 2: COMPLETE STREAM PROTECTION, INCLUDING INSTALLATION OF RIPRAP AND TURBIDITY CURTAIN.
- STEP 3: INSTALL COFFERDAM AND DEWATERING ACCESSORIES.
- STEP 4: COMPLETE REMAINING SPS BLOW-OFF CHAMBER REHABILITATION WORK, INCLUDING SITE RESTORATION.

- 13. SUGGESTED WORK SEQUENCE FOR SPS AIR VALVE CHAMBER MECHANICAL WORK:
- STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES. EARTHWORK, AND STONE INSTALLATION.
- STEP 2: REPLACE SPS AIR VALVES, REPLACE EXISTING ACCESS HATCH, INCLUDING CONCRETE MODIFICATIONS AS REQUIRED.
- STEP 3: COMPLETE SITE RESTORATION, INCLUDING GRADING AND REMOVAL OF EROSION CONTROL MEASURES AND STONE.
- 14. SUGGESTED WORK SEQUENCE FOR CI-541 (MH34 PERMANENT WORK CLOSURE):
- SEE ST-132
- 15. <u>SUGGESTED WORK SEQUENCE FOR CATSKILL INFLUENT WEIR (CIW):</u>
 - STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES WHERE REQUIRED,
 - STEP 2: COMPLETE RESERVOIR ISOLATION. SEE PE-143.
 - STEP 3: PERFORM CIW REHABILITATION WORK. SEE CI-364 AND ST-189.
 - STEP 4: COMPLETE RESERVOIR RECONNECTION AND SITE RESTORATION, INCLUDING REMOVAL OF EROSION CONTROL MEASURES.
- 16. SUGGESTED WORK SEQUENCE CI-251 (SITE ACCESS ROAD IMPROVEMENTS HARLEM RR SPS BLOW-OFF CHAMBERS):
- STEP 1: COMPLETE SITE PREPARATION, INCLUDING EROSION CONTROL MEASURES, TREE REMOVAL AND PROTECTION, AND SITE SUPPORT INCLUDING TRAFFIC CONTROL MEASURES WHERE REQUIRED.
- STEP 2: COMPLETE EARTHWORK AND CONSTRUCT NEW ROAD, GUIDE RAILS, AND STORM DRAIN WHERE SHOWN.
- STEP 3: INSTALL SOLIDER PILES AND LAGGING RETAINING WALLS.
- STEP 4: COMPLETE SITE RESTORATION, INCLUDING REMOVAL OF EROSION CONTROL MEASURES.

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

SUGGESTED WORK SEQUENCE NOTES

SCALE: NOT TO SCALE SHEET NO: 209 OF 485

DRAWING NO. CI-002.00

DATE: 10/2/2017

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: APPR'D. SCOTT DAVIS REVISIONS/DESCRIPTION NO. DATE



Environmental Protection

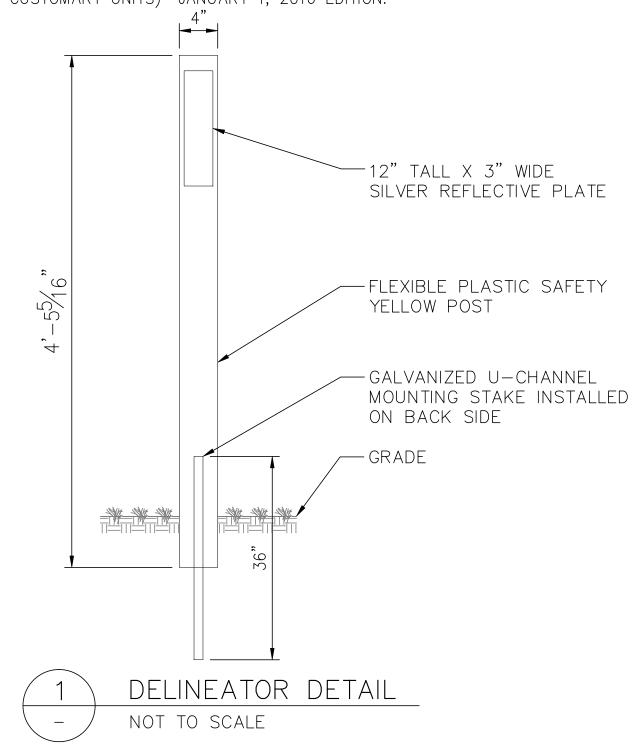
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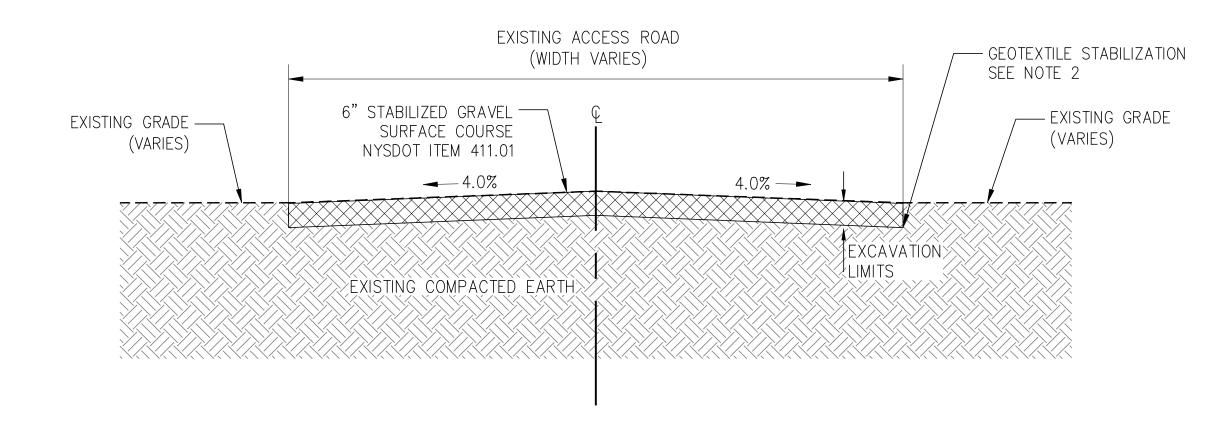
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- 1. REFER TO SECTION 31 23 24 BACKFILL.
- 2. GEOTEXTILE STABILZATION SHALL MEET THE REQUIREMENTS OF TABLE 737-01E OF THE NYSDOT "STANDARD SPECIFICATIONS (US CUSTOMARY UNITS)" JANUARY 1, 2016 EDITION.



NOTES:

- 1. DELINEATORS SHALL HAVE A MINIMUM SPACING OF 4'-0".
- 2. REFER TO SECTION 01 55 00 VEHICULAR ACCESS AND PARKING FOR DELINEATOR REQUIREMENTS.
- 3. DELINEATORS SHALL BE INSTALLED BACK-TO-BACK TO PROVIDE REFLECTION IN BOTH DIRECTIONS.





NOTES:

- 1. SEE CI-161 THRU CI-255 FOR LOCATIONS.
- 2. GEOTEXTILE STABILZATION SHALL MEET THE REQUIREMENTS OF TABLE 737-01E OF THE NYSDOT "STANDARD SPECIFICATIONS (US CUSTOMARY UNITS)" JANUARY 1, 2016 EDITION.

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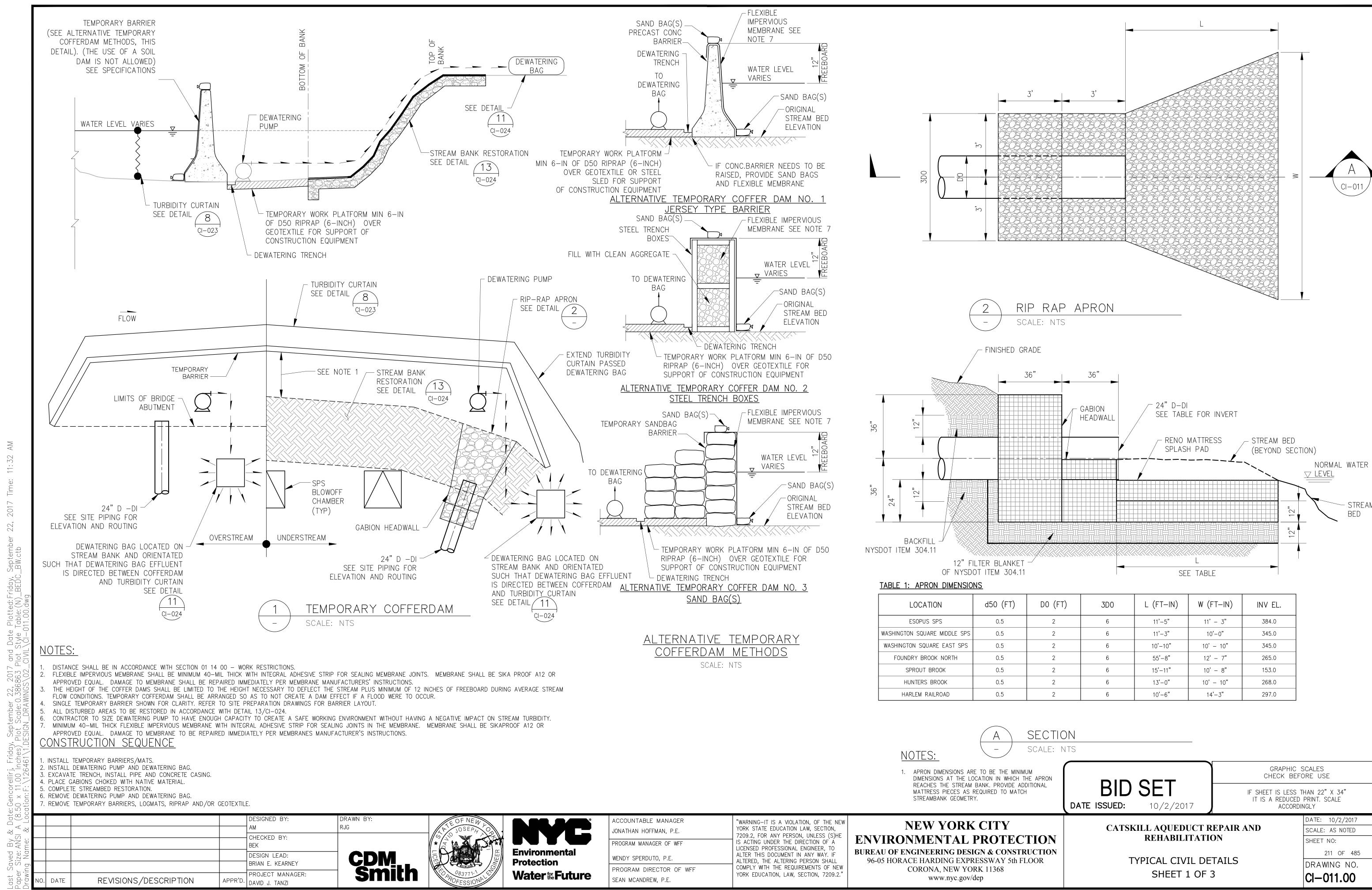
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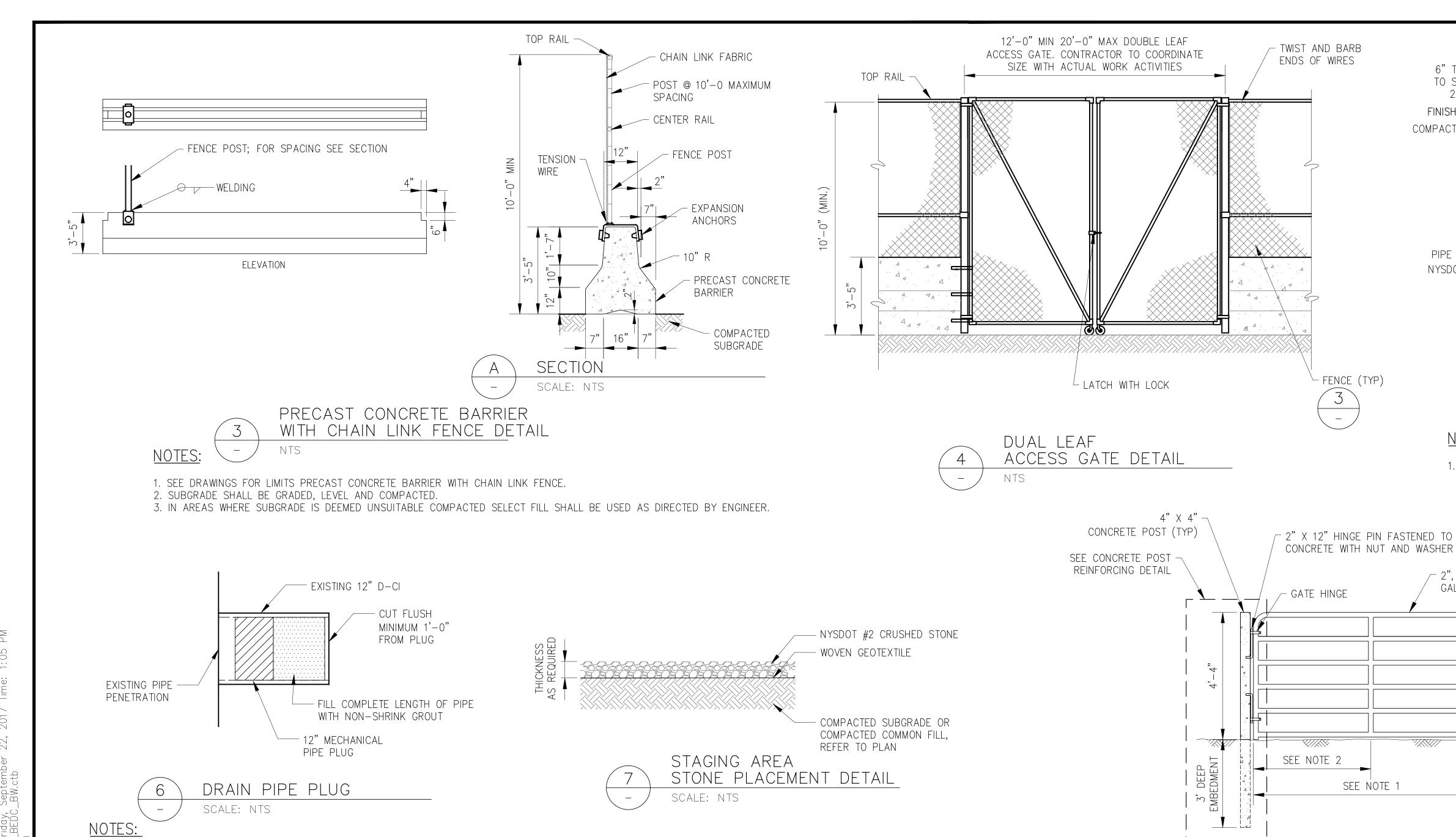
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

TYPICAL ACCESS ROAD SECTIONS AND DETAIL

SCALE: NOT TO SCALE SHEET NO: 210 OF 485 DRAWING NO. CI-003.00

DATE: 10/2/2017





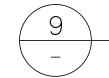
GATE WIDTH MAY VARY AS 8-FOOT, 10-FOOT OR 12-FOOT AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL INSTALL SINGLE OR DOUBLE SWING GATES AS DIRECTED BY THE ENGINEER.

THE NUMBER OF VERTICAL BRACE MEMBERS VARIES WITH GATE WIDTH. THE DETAIL SHOWN IS VALID FOR 8-FOOT AND 10-FOOT GATES. THERE IS AN ADDITIONAL VERTICAL BRACE MEMBER FOR A 12-FOOT GATE.

CONCRETE POST REINFORCING DETAIL SCALE: N.T.S.

NOTE:

1. INSTALLATION IMNCLUDING CONNECTION TO THE GATE SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.



CATTLE FENCE SWING GATE

IF SHEET IS LESS THAN 22" X 34"

DESIGNED BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER:

1. CAST IRON DRAIN PIPE TO BE CUT 1'-0" FROM THE MECHANICAL PIPE

WHERE MECHANICAL PIPE PLUG IS TO BE INSTALLED IN CULVERT

PLUG. IN LOCATIONS WHERE THE DRAIN PIPE RUNS UNDER A SPS. THE

DRAIN PIPE IS TO BE CUT 1'-0" FROM THE OUTER EDGE OF THE SPS.

CONNECTION SO THAT IT SITS IN THE WALL OF THE CONCRETE CULVERT.

Smith

Environmental Protection Water Future

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PREFABRICATED CELLULAR POROUS

NYSDOT #2 CRUSHED STONE

CONNECT PREFABRICATED CELLULAR UNITS

PATTERNS AND METHODS OF INSTALLATION

SEAN MCANDREW, P.E.

IN ACCORDANCE WITH MANUFACTURE'S APPROVED

- COMPACTED SUBGRADE

CRUSHED STONE

SURFACING SYSTEM WITH NYSDOT #2

NEW YORK CITY ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR

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6" TOPSOIL REFER -

24 - BACKFILL

GRASS C

12" MIN

LAND

ROADWAY

AREA

- PAVEMENT RESTORATION

2" BIT. CONC. SURFACE

COURSE, AS SPECIFIED

OR AS PER LOCAL

TACK COAT LIMITS OF

OPENING PRIOR TO

NYSDOT ITEM 304.11

WHERE EXISTING

PROVIDE 8" CONC.

AND 6" BASE

DRAINAGE FILL

FABRIC.

TYPICAL TRENCH SECTION DETAIL

1. AT CONTRACTORS OPTION TO ASSIST IN DEWATERING, CONTRACTOR MAY PLACE

6" TO 12" LAYER OF DRAINAGE FILL WRAPPED IN FABRIC UNDER TRENCH

WRAPPED IN FILTER

BETWEEN SUBGRADE

(95% PROCTOR DENSITY)

SUBBASE IS CONCRETE

(4)-D16 VERTICAL WIRE

(EA CORNER)

MIN 0.5" COVER

OF CONCRETE

→ D8 TIES 12" O.C.

APPLICABLE

PATCHING

COMPACTED

REGULATIONS

TO SECTION 31 23

FINISHED GRADE EL.

PIPE MARKER TAPE

NYSDOT ITEM 304.11

NOTES:

2", 16 GAUGE

GALVANIZED BULL GATE

2', 7 GAUGE WELDED

CHAIN LATCH

COMPACTED COMMON

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

> TYPICAL CIVIL DETAILS SHEET 2 OF 3

DATE: 10/2/2017 SCALE: NTS SHEET NO: 212 OF 485

CI-012.00

APPR'D. DAVID J. TANZI All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

NO. DATE

REVISIONS/DESCRIPTION

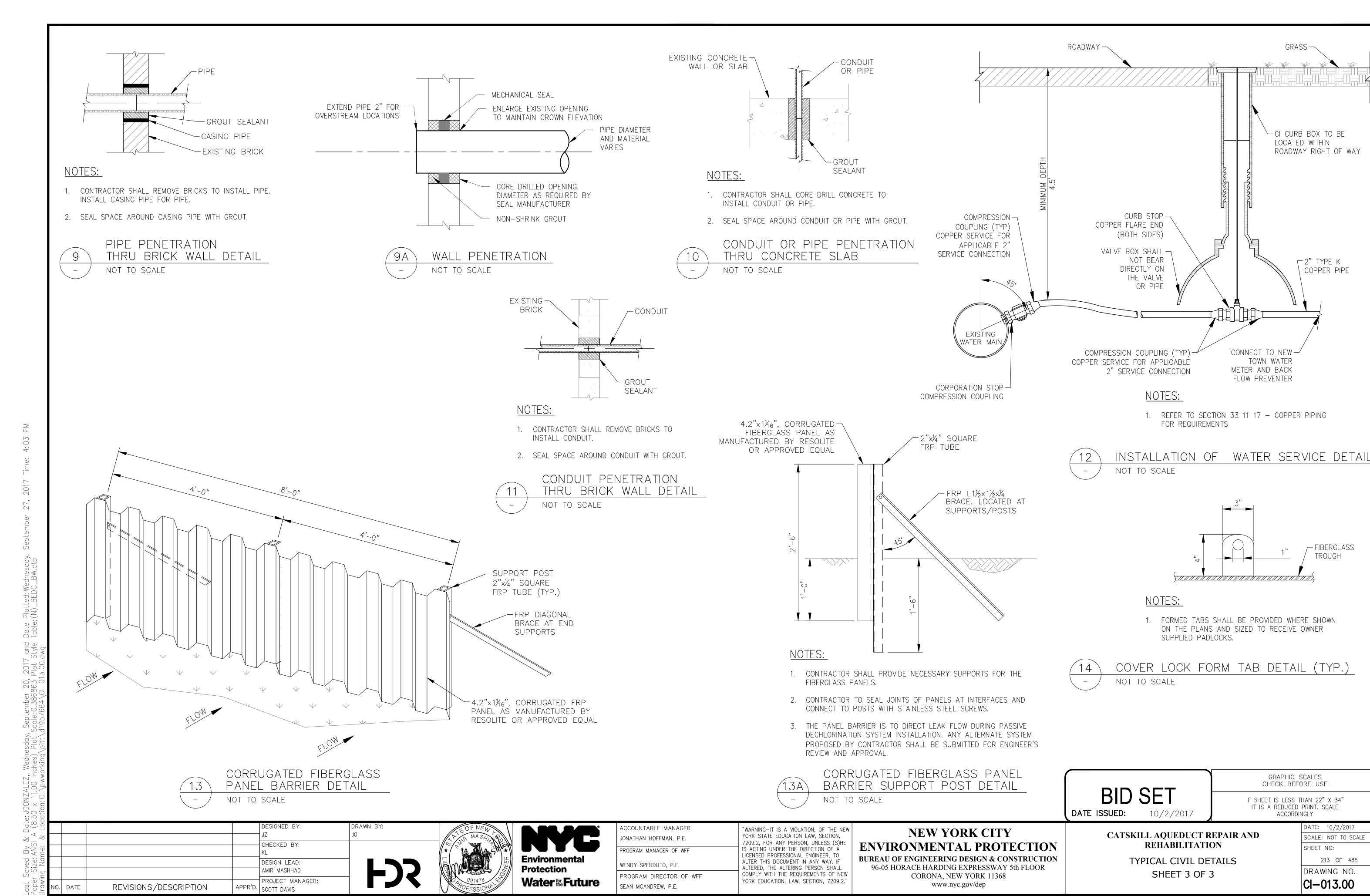
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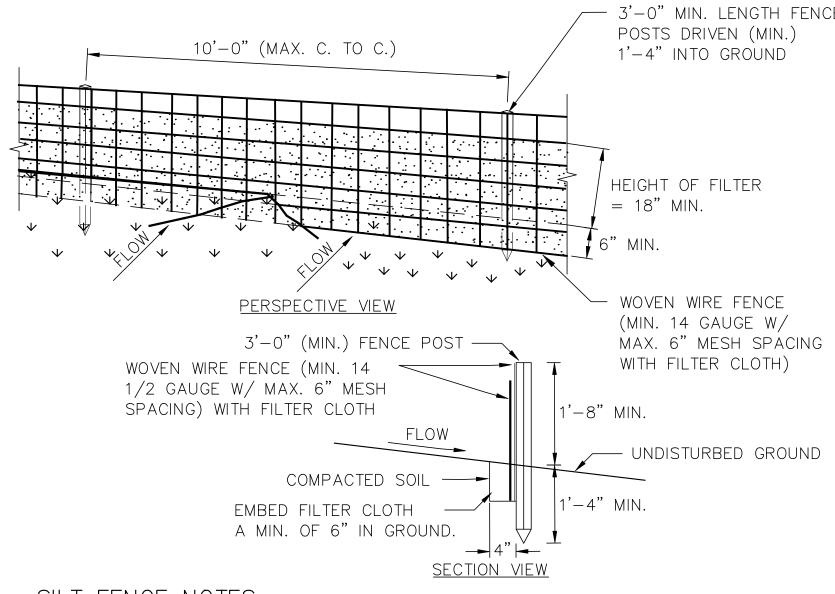


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- 2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED. AREAS OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM SHALL NOT BE DISTURBED. SOIL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS IN ACCORDANCE WITH NYSDEC STANDARDS, INCLUDING AFTER EVERY STORM EVENT.
- 3. ANY DISTURBED AREA AND STOCKPILED MATERIALS THAT WILL BE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND MULCHING. IF THE DISTURBED AREA LIES WITHIN THE WATERSHED OF A WATERBODY LISTED IN APPENDICES C OR E OF THE NOVEMBER 2016 NYSDEC GENERAL PERMIT FOR CONSTRUCTION ACTIVITY (OR LATEST VERSION), SOIL STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) DAYS. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREA SHALL BE MULCHED WITH SALT HAY OR EQUIVALENT AND BOUND IN ACCORDANCE WITH NYSDEC STANDARDS. (i.e. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDER). IF SOIL EROSION CONTINUES, THE AREA SHALL BE STABILIZED WITH EROSION CONTROL MATTING IN ACCORDANCE WITH NYSDEC STANDARDS.
- 4. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN (14) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED, AS PER NYSDEC GP-0-15-002, OR LATEST VERSION. SEEDING SHALL BE CONDUCTED PER CONTRACT SPECIFICATIONS. COMPLETE SOIL STABILIZATION MEASURES WITHIN 7 DAYS IN THE NEW YORK CITY WATERSHED.
- 5. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
- 6. MAXIMUM SIDE SLOPES SHALL NOT EXCEED (H: V) 2:1 FOR EARTH SURFACES OR FOR ROCK SURFACES, UNLESS OTHERWISE SHOWN/NOTED ON DRAWINGS OR SPECIFIED IN CONTRACT DOCUMENTS. ANY SIDE SLOPE REVISION MUST BE APPROVED BY THE ENGINEER.
- 7. ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT THE DEPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARE(S) EITHER BY INSTALLING AND MAINTAINING A STABILIZED CONSTRUCTION ENTRANCE, OR BY WASHING ALL VEHICLE WHEELS IN A SAFE DISPOSAL AREA. ALL MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY. PROPER PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) ARE REMOVED SO THAT THEY DO NOT ENTER DRAINAGE SWALES, CATCH BASINS, STORM SEWERS, OR COMBINED SEWERS.
- 8. STORM DRAINAGE OUTLETS IF ENCOUNTERED, WILL BE PROTECTED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
- 9. DUST SHALL BE CONTROLLED VIA THE APPLICATION OF UNCONTAMINATED WATER OR OTHER APPROVED METHOD IN ACCORDANCE WITH NYSDEC STANDARDS.
- 10. TREES INSIDE LIMITS OF DISTURBANCE TO REMAIN AFTER CONSTRUCTION ARE TO BE PROTECTED WITH A SUITABLE FENCE INSTALLED BEYOND THE DRIP LINE IN ACCORDANCE WITH DETAIL ON THIS SHEET. TREE PROTECTION FENCING SHALL BE INSTALLED WHERE SHOWN ON PLANS AND AS DICTATED BY ENGINEER IN THE FIELD.
- 11. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT ALL POINTS OF ACCESS WHERE A DISTURBED AREA MEETS AN IMPERVIOUS SURFACE.
- 12. ANY REVISION TO THE CERTIFIED SWPPP MUST BE SUBMITTED TO THE ENGINEER AND TOWN FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD. UPON APPROVAL, ALL REVISIONS INCLUDING DOCUMENTATION AND CALCULATIONS MUST BE ADDED TO THE SWPPP PRIOR TO IMPLEMENTATION.
- 13. CONTRACTOR SHALL DETERMINE THE OVERALL EXTENT OF MEASURES REQUIRED IN THE SWPPP, EROSION CONTROL MEASURES AND NOISE ABATEMENT MEASURES, BASED ON ITS PLANNED OPERATIONS. A COPY OF THE CERTIFIED STORMWATER POLLUTION PREVENTION PLAN ALONG WITH ALL ASSOCIATED DOCUMENTATION MUST BE AVAILABLE AT THE PROJECT SITE THROUGHOUT CONSTRUCTION.
- 14. THE LOCATION AND EXTENT OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MODIFIED AT EACH PHASE OF CONSTRUCTION THAT RESULTS IN A CHANGE OF EITHER THE QUANTITY OR DIRECTION OF SURFACE RUNOFF FROM THE CONSTRUCTION AREAS. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE ENGINEER FOR DEVIATIONS FROM THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

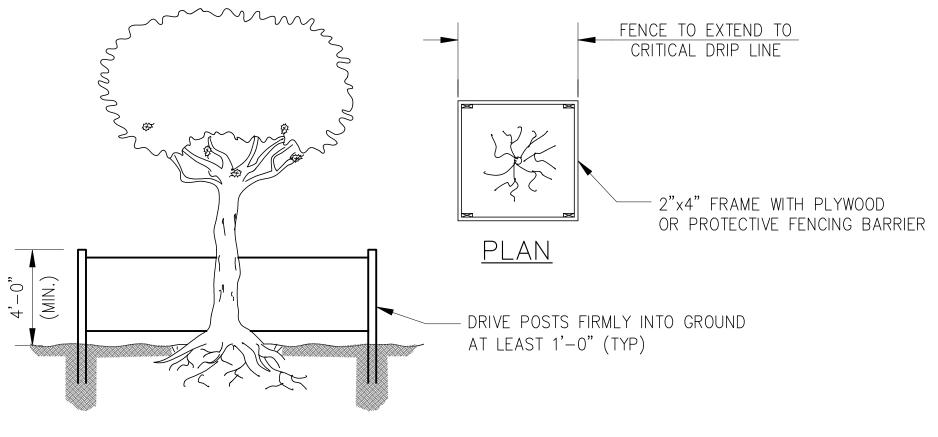
REVISIONS/DESCRIPTION

- 15. CLEARING SHALL BE LIMITED TO AREAS REQUIRED FOR IMMEDIATE CONSTRUCTION ACTIVITIES. MASS CLEARING AND GRADING OF SITES SHALL BE AVOIDED.
- 16. FOR CONSTRUCTION SITES WHERE SOIL DISTURBANCE ACTIVITIES ARE ON-GOING, THE QUALIFIED INSPECTOR SHALL CONDUCT A SITE INSPECTION AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS, PER NYSDEC GP-0-15-002, OR LATEST VERSION. WITHIN ONE BUSINESS DAY OF THE COMPLETION OF AN INSPECTION, THE QUALIFIED INSPECTOR SHALL NOTIFY THE CONTRACTOR OF ANY CORRECTIVE ACTIONS THAT NEED TO BE TAKEN. THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE CORRECTIVE ACTIONS WITHIN ONE BUSINESS DAY OF THIS NOTIFICATION AND SHALL COMPLETE THE CORRECTIVE ACTIONS IN A REASONABLE TIME FRAME.
- 17. REMOVED SEDIMENT SHALL BE DISPOSED OF IN SUCH MANNER AS TO ENSURE FURTHER SEDIMENT TRANSPORT DOES NOT OCCUR.



SILT FENCE NOTES:

- 1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- 2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 2'-0" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
- 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER—LAPPED BY 6" AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- 4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT, AND SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
- 5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- 6. SILT FENCING MAY BE INSTALLED IN PARALLEL ROWS IN 20'-0" INTERVALS IN ORDER TO REDUCE THE MAXIMUM DRAINAGE AREA FOR OVERLAND FLOW, PRIMARILY ON STEEP SLOPES. DRAINAGE AREA CONTRIBUTING TO THE SILT FENCE SHALL NOT EXCEED 1/4 ACRE PER 100'-0" OF FENCE, WITH A MAXIMUM PONDING DEPTH OF 1'-6" BEHIND THE FENCE.
- 7. SILT FENCE SHALL BE IN PLACE BEFORE ANY ACTIVITIES BEGIN AND IS TO BE KEPT IN GOOD REPAIR FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES.



TEMPORARY TREE PROTECTION NOTES:

- 1. ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR).
- 3'-0" MIN. LENGTH FENCE 2. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4'-6" POSTS DRIVEN (MIN.)

 ABOVE GROUND ON THE UPHILL SIDE OF (TREE) IN INCHES.
 - 3. MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.
 - 4. DBH X 1.5: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY, OR SENSITIVE SPECIES.
- 5. DBH X 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES.
- 6. BOARDS OF 2"x4" MUST BE STRAPPED AROUND THE TRUNK TO PROVIDE PROTECTION TO TRUNK IF THREATENED BY EQUIPMENT.
- 7. EACH TREE PROTECTED UNDER THIS PLAN WILL BE MARKED WITH BLUE-COLORED WATER-BASED PAINT.
- 8. ALL REPLANTED OVERSTORY TREES SHALL BE AT LEAST SIX FEET TALL AND HAVE A TRUNK NOT LESS THAN TWO CALIPER INCHES. REPLANTED UNDERSTORY TREES SHALL BE AT LEAST FOUR FEET TALL OR HAVE A TRUNK NOT LESS THAN ONE CALIPER INCH.



CONSTRUCTION AREA

PROTECTIVE FENCE NOTES:

- 1. LOCATE PROTECTIVE FENCE AS SHOWN ON THE DRAWINGS AND/OR AS DIRECTED BY THE DESIGN ENGINEER. AT A MINIMUM, THE PROTECTIVE FENCE AROUND EXISTING TREES SHOULD BE LOCATED OUTSIDE OF THE DRIP LINE OF ANY TREE TO BE RETAINED AND, IN NO CASE, CLOSER THAN 5'-0" TO THE TRUNK OF ANY TREE. NO CLEARING OR GRUBBING ACTIVITIES ARE PERMITTED WITHIN THIS RADIUS.
- 2. FENCING TO BE USED SHALL BE 4'-0" "INTERNATIONAL ORANGE" PLASTIC (POLYETHYLENE) WEB FENCING SECURED TO CONVENTIONAL METAL "T" OR "U" POSTS DRIVEN TO A MINIMUM DEPTH OF 1'-6" ON 6'-0" MAXIMUM CENTERS.
- 3. THE FENCE SHALL HAVE THE FOLLOWING PROPERTIES:

TENSILE YIELD:

AVG. 2,000 LBS PER 4'-0" WIDTH

ULTIMATE TENSILE YIELD:
AVG. 2,900 LBS PER 4'-0" WIDTH
ELONGATION AT BREAK (%): GREATER THAN 1,000%

CHEMICAL RESISTANCE:
INERT TO MOST CHEMICALS AND ACIDS UV STABILIZED

- 4. PROTECTIVE FENCE SHALL BE IN PLACE BEFORE ANY ACTIVITIES BEGIN AND IS TO BE KEPT IN GOOD REPAIR FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES.
- 5. REMOVE FENCING MATERIALS ONLY AFTER FINAL CONSTRUCTION ACTIVITY HAS CEASED ON THE SITE, SUBJECT TO APPROVAL BY ENGINEER.
- 6. PROTECTIVE FENCE DESIGNATED ON THE DRAWINGS IS INTENDED AS A VISUAL WARNING BARRIER. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY.



METAL TIE WIRES

CONVENTIONAL METAL

"T" OR "U" POST

ORANGE POLYETHYLENE FABRIC

NOT TO SCALE

(TENSAR SAFETY BARRIER OR EQUAL)

BID SET
DATE ISSUED: 10/2/2017

GRAPHIC SCALES
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REHABILITATION

TYPICAL EROSION CONTROL MEASURES

CATSKILL AQUEDUCT REPAIR AND

DATE: 10/2/2017

SCALE: NOT TO SCALE

SHEET NO:

214 OF 485

DRAWING NO.

CI-021.00

TYPICAL EROSION CONTROL MEASURES
SHEET 1 OF 4

Drawing Name: & Location: C: \pwworking\pitt\\d1957664\cl-02

Environmental Protection

Water & Future

ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

PROGRAM DIRECTOR OF WFF

SEAN MCANDREW, P.E.

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ENVIRONMENTAL PROTECTION

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NEW YORK CITY

AREA TO BE

PROTECTED

PROTECTION FENCE DETAIL

DESIGNED BY:

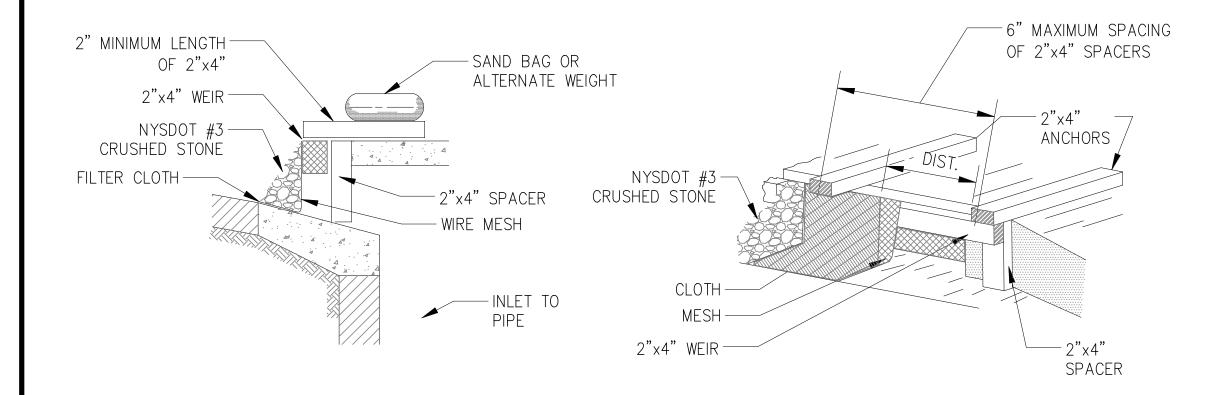
CHECKED BY:

DESIGN LEAD:

AMIR MASHHAD

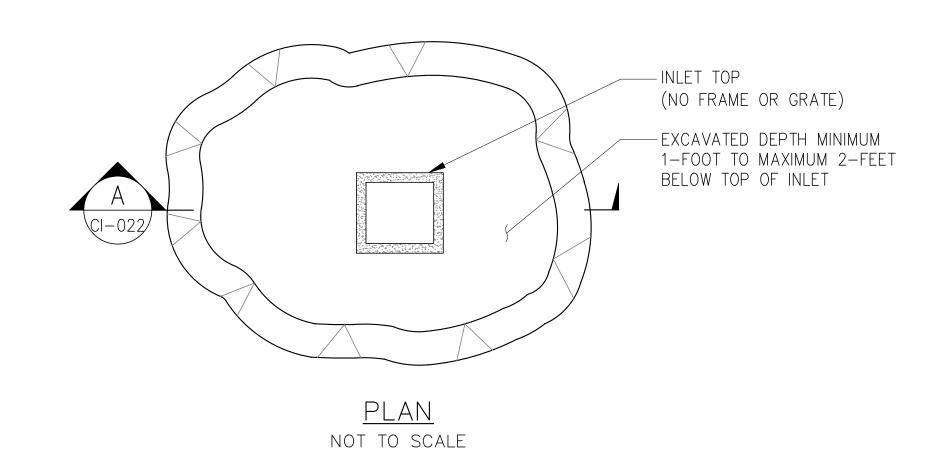
APPR'D. SCOTT DAVIS

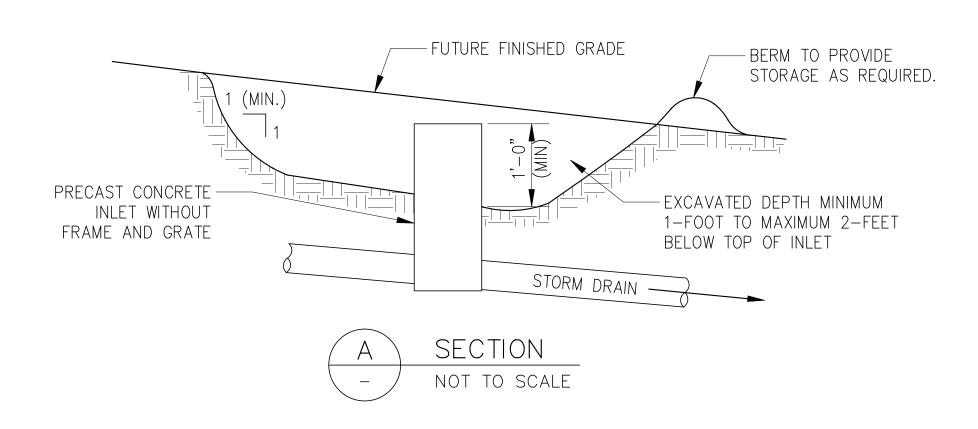
PROJECT MANAGER:



- 1. FILTER FABRIC SHALL HAVE A MESH SIZE OF 40-85.
- 2. WOODEN FRAME SHALL BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER.
- 3. WIRE MESH ACROSS THROAT SHALL BE A CONTINUOUS PIECE 2'-6" MINIMUM WIDTH WITH A LENGTH 4'-0" LONGER THAN THE THROAT. IT SHALL BE SHAPED AND SECURELY NAILED TO A 2"x4" WEIR.
- 4. THE WEIR SHALL BE SECURELY NAILED TO 2"x4" SPACERS 9" LONG SPACED NO MORE THAN 6'-0" APART.
- 5. THE ASSEMBLY SHALL BE PLACED AGAINST THE INLET AND SECURED BY 2"x4" ANCHORS 2'-0" LONG EXTENDING ACROSS THE TOP OF THE INLET AND HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHTS.
- 6. MAXIMUM DRAINAGE AREA 1-ACRE.







NOTES:

WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

PROGRAM DIRECTOR OF WFF

Environmental

Protection

- 1. MAX DRAINAGE AREA IS 1-ACRE.
- 2. REMOVE SEDIMENTS AS NECESSARY TO PROVIDE FOR ACCURATE STORAGE VOLUME FOR SUBSEQUENT RAINS.

LICENSED PROFESSIONAL ENGINEER, TO

ALTER THIS DOCUMENT IN ANY WAY. IF

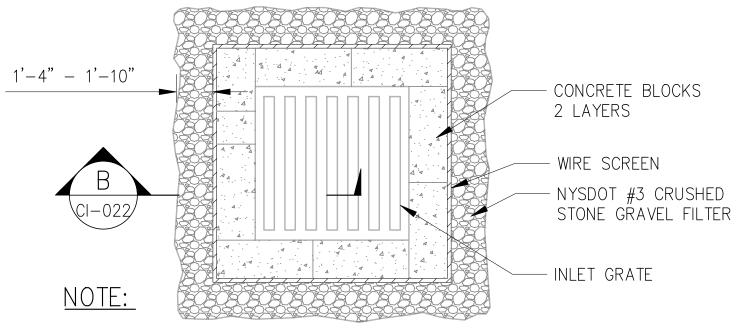
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3. THE BARRIER SHOULD BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS MADE WHERE NEEDED.

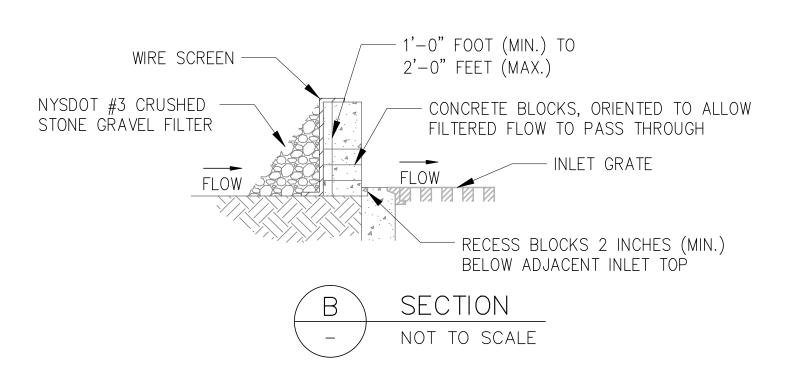




1. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.

PLAN

NOT TO SCALE







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ACCOUNTABLE MANAGER
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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

TYPICAL EROSION CONTROL MEASURES
SHEET 2 OF 4

DATE: 10/2/2017

SCALE: NOT TO SCALE

SHEET NO:

215 OF 485

DRAWING NO.

CI-022.00

NO. DATE REVISIONS/DESCRIPTION APPR'D. PROJECT MANAGER:
SCOTT DAVIS

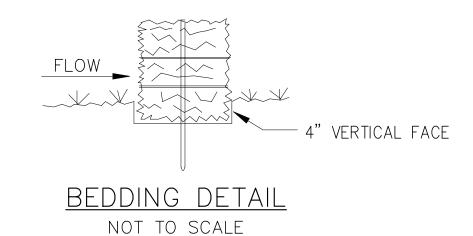
All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

DESIGNED BY:

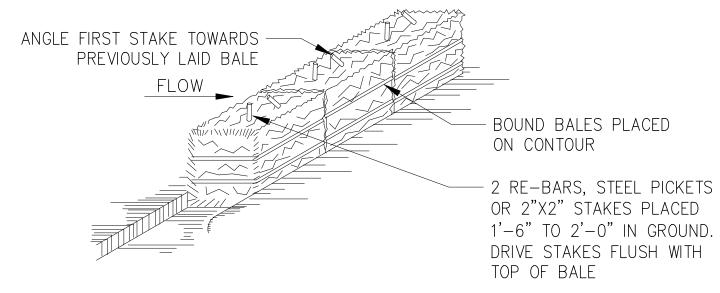
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DESIGN LEAD:

AMIR MASHHAD



DRAINAGE AREA NO MORE THAN 1/4 ACRE PER 100 FEET OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%.



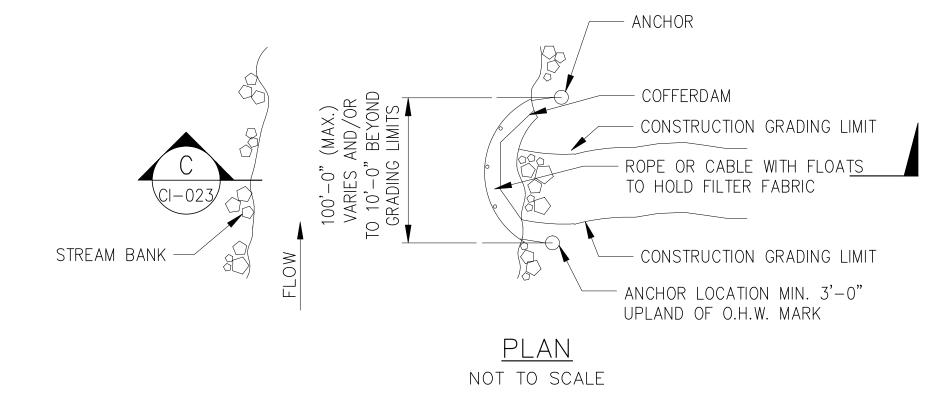
ANCHORING DETAIL

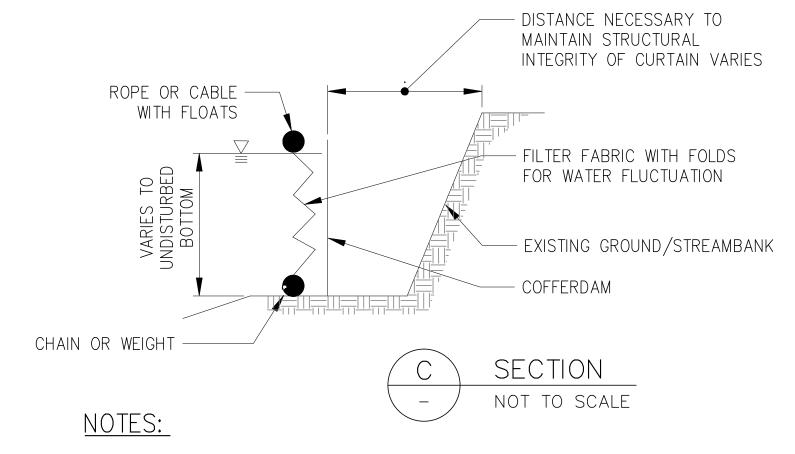
NOT TO SCALE

NOTES:

- 1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- 2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- 3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- 4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL LIFE SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

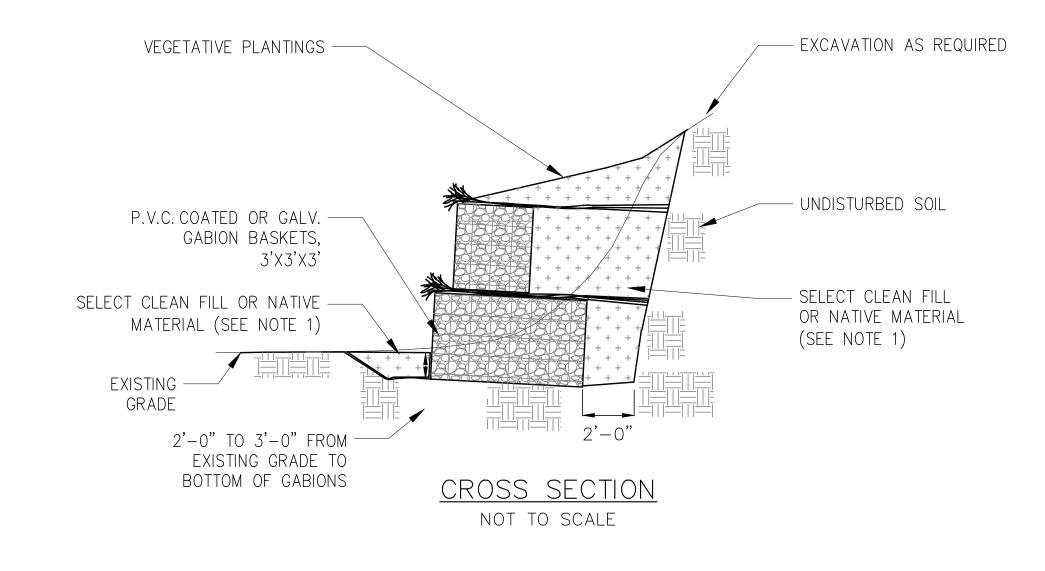






1. COFFERDAM LOCATION WILL VARY PER LOCATION.





NOTES:

- 1. BACKFILL BEHIND GABIONS HAND TAMPED IN 6" LIFTS.
- 2. GABIONS FILLED WITH NATIVE MATERIAL SHALL BE SEEDED AS SOON AS PRACTICAL TO PREVENT EROSION OF THE NATIVE MATERIAL FROM WITHIN THE GABIONS. REFER TO EMBANKMENT AND CHANNEL PROTECTION, AND RIP RAP SPECIFICATION FOR SEEDING DETAILS.



BID SET

DATE ISSUED: 10/2/2017

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DESIGNED BY:

KH

CHECKED BY:

KL

DESIGN LEAD:

AMIR MASHHAD

DESIGN LEAD:

AMIR MASHHAD

Environmental Protection
Water Future

ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

PROGRAM DIRECTOR OF WFF

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TYPICAL EROSION CONTROL MEASURES
SHEET 3 OF 4

CATSKILL AQUEDUCT REPAIR AND

REHABILITATION

SCALE: NOT TO SCALE
SHEET NO:
216 OF 485
DRAWING NO.
CI-023.00

DATE: 10/2/2017

PROJECT MANAGER:

APPR'D. SCOTT DAVIS

REVISIONS/DESCRIPTION

20,

NO. DATE

GEOTEXTILE

STABILIZATION

SEE NOTE 5

1. STONE SIZE — USE NYS DOT #4 CRUSHED STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

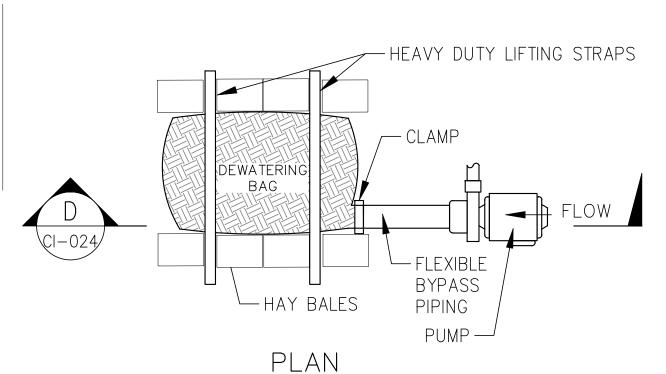
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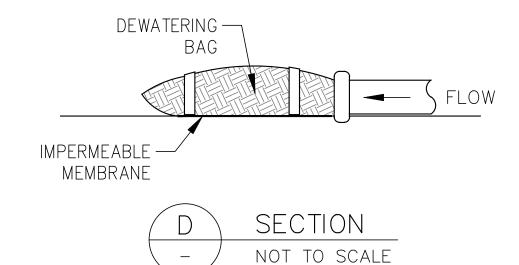
EXISTING

PAVEMENT

- 2. LENGTH NOT LESS THAN 50'-0".
- 3. THICKNESS NOT LESS THAN 6".
- 4. WIDTH TWELVE 12'—0" MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- 5. GEOTEXTILE STABILIZATION WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. IT SHALL MEET THE REQUIREMENTS OF TABLE 737—01E OF THE NYSDOT SPECS.
- 6. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- 7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- 8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



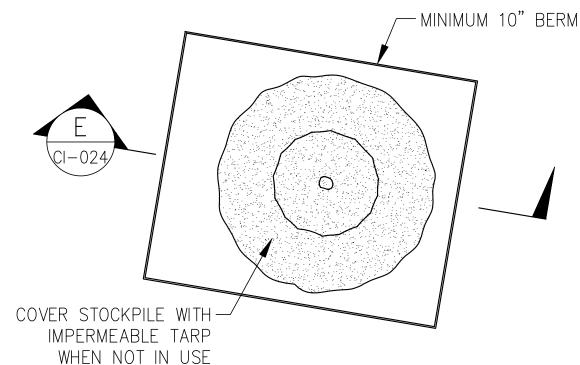




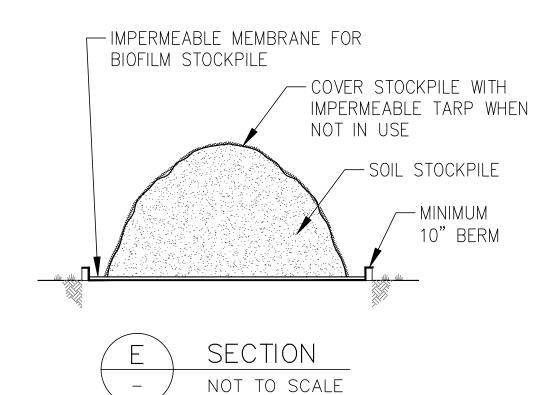
NOTES:

- 1. DEWATERING BAG SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAT 150 MICRONS.
- 2. DEWATERING BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL OF SEDIMENT. SPARE BAGS SHALL BE AVAILABLE FOR REPLACEMENT. A SUITABLE MEANS OF ACCESSING THE BAG IS REQUIRED FOR DISPOSAL PURPOSES.
- 3. DEWATERING BAGS SHALL DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. AN IMPERMEABLE MEMBRANE IS REQUIRED IF THE AREA IS NOT EROSION RESISTANT.
- 4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER.
- 5. DEWATERING BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, CEASE PUMPING UNTIL PROBLEM IS CORRECTED.
- 6. DEWATERING BAG SHALL BE PLACED ON STABLE, FLAT GROUND THAT IS READILY ACCESSIBLE BY THE EQUIPMENT NEEDED TO REMOVE THE BAG WHEN IT IS FULL. CONTRACTOR SHALL PROVIDE HAY BALES AND SILT FENCE AROUND DEWATERING BAG, AT THE DIRECTION OF THE ENGINEER.
- 7. THE DEWATERING BAG SHALL BE PLACED AT LEAST 50 FEET FROM ALL WETLANDS, STREAMS OR OTHER SURFACE WATER UNLESS DIRECTED BY ENGINEER OR AS SHOWN ON THE DRAWINGS.





PLAN



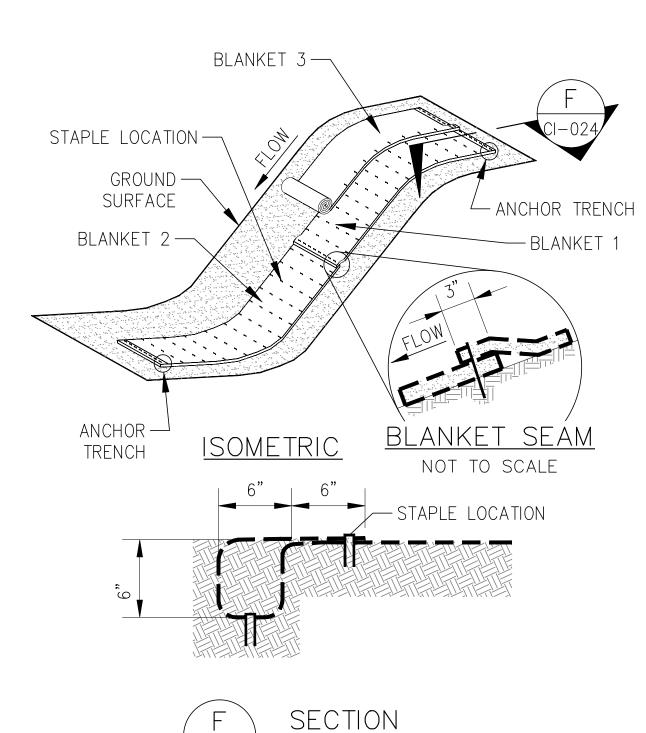
NOTES:

- 1. SOIL STOCKPILES SHALL BE PLACED AWAY FROM SURFACE WATER AND OTHER SENSITIVE LOCATIONS.
- 2. A BERM OR SILT FENCE SHALL BE INSTALLED AROUND THE STOCKPILE TO PREVENT THE MIGRATION OF SOIL.
- 3. STOCKPILES SHALL BE COVERED WITH AN IMPERMEABLE TARP AS DEFINED IN SECTION 31 23 17 SURFACE EXCAVATION WHEN NOT IN USE AND PRIOR TO PRECIPITATION TO PREVENT RAIN OR SURFACE WATER FROM COMING INTO CONTACT WITH THE CONTAMINATED SOIL.
- 4. THE COVER SHALL BE ANCHORED WITH SANDBAGS TO PREVENT IT FROM BEING BLOWN AWAY.
- 5. TEMPORARY BIOFILM OR SEDIMENT STOCKPILE SHALL BE PLACED ON AN IMPERMEABLE MEMBRANE.
- 6. ALLOWED STOCKPILES ARE SHOWN. THE CONTRACTOR MAY NOT STOCKPILE ELSEWHERE UNLESS APPROVED BY THE ENGINEER.



SOIL AND BIOFILM OR SEDIMENT STOCKPILE PROTECTION DETAIL

NOT TO SCALE



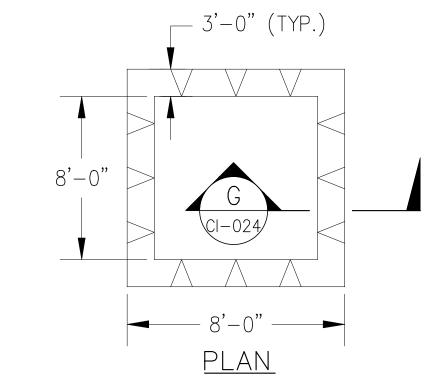
NOTES:

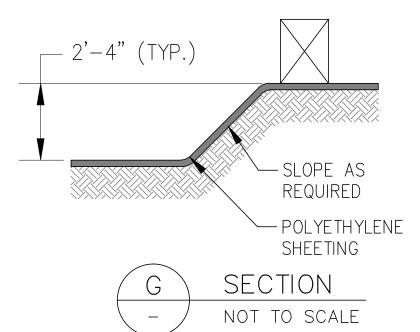
1. EROSION CONTROL BLANKET SHALL BE INSTALLED OVER PERMANENT SEEDING IN AREAS ALONG STREAM BANKS THAT WERE DISTURBED. INSTALLATION SHALL BE CONDUCTED AS FOLLOWS:

NOT TO SCALE

- 2. THE SITE SHALL BE FREE FROM DEBRIS, ROCKS, ETC. AND HAVE A SMOOTH SURFACE TO ENSURE THE MATTING REMAINS IN CONTACT WITH THE SOIL.
- 3. PERMANENT SEEDING SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 32 90 00 PLANTING.
- 4. MINIMUM 6" LONG STAPLES SHALL BE USED TO SECURE THE BLANKET TO THE GROUND SURFACE. IN ROCKY, SANDY OR LOOSE SOILS, LONGER STAPLES MAY BE REQUIRED. THE BODY OF THE BLANKET SHALL BE ANCHORED WITH STAPLES AT EVERY FOOT HORIZONTAL INTERVAL, AND EVERY 2'-0" VERTICAL INTERVAL. THE FIRST (MOST UPGRADIENT) AND LAST (MOST DOWNGRADIENT) ROWS OF STAPLES SHALL BE IN TWICE AS FREQUENT LOCATIONS. BLANKETS SHALL BE INSTALLED WITH A MINIMUM OF THREE 3" OF OVERLAP.
- 5. A 6" WIDE BY 6" DEEP TRENCH SHOULD BE EXCAVATED ALONG THE TOP OF THE SLOPE TO SECURE THE UPSTREAM END OF THE BLANKET. THE BLANKET SHOULD BE STAPLED ALONG THE BOTTOM END OF THE TRENCH AND FILLED WITH COMPACTED SOIL. THE BLANKET SHALL BE OVERLAPPED SURROUNDING THE COMPACTED SOIL AND STAPLED TO THE EXPOSED BLANKET.

(ADAPTED FROM WESTERN EXCELSIOR CORPORATION)





NOTES:

- 1. WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4" OF FREEBOARD.
- 2. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE POLYETHYLENE SHEETING. USE 10-MIL OR THICKER UV RESISTANT, IMPERMEABLE POLYETHYLENE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
- 3. KEEP CONCRETE WASHOUT STRUCTURE WATERTIGHT.
 REPLACE IMPERMEABLE POLYETHYLENE SHEETING IF
 DAMAGED. (E.G., RIPPED OR PUNCTURED). EMPTY OR
 REPLACE WASHOUT STRUCTURE THAT IS 75% FULL,
 AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY.
 DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED
 LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE
 OF IN AN APPROVED MANNER. PRIOR TO
 FORECASTED RAINSTORMS, REMOVE LIQUIDS OR
 COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE
 HARDENED SOLIDS, WHOLE EXCAVATED WASHOUT
 STRUCTURE UNTIL STRUCTURE IS REMOVED.
- 4. CONTRACTOR REQUIRED TO RESTORE EXISTING SITE UPON COMPLETION OF WASHOUT AREA USE FOR CONSTRUCTION ACTIVITIES.
- 5. A PRE-FABRICATED CONTAINER MAY BE USED FOR CONCRETE WASHOUT.
- 6. LOCATION OF WASHOUT AREA SHALL BE FIELD DETERMINED AND COORDINATED WITH THE ENGINEER, BASED ON FIELD CONDITIONS.



CONCRETE WASHOUT DETAIL

/ NOT TO SCALE

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EROSION CONTROL BLANKET DETAIL

BID SET

DATE ISSUED: 10/2/2017

GRAPHIC SCALES
CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

DESIGNED BY:

KH

CHECKED BY:

KL

DESIGN LEAD:

AMIR MASHHAD

PROJECT MANAGER:

REVISIONS/DESCRIPTION

H



Environmental Protection
Water # Future

ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

PROGRAM DIRECTOR OF WFF

SEAN MCANDREW, P.E.

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NEW YORK CITY SECTION, SILESS (S)HE ON OF A NEER, TO SUREALL OF ENGINEERING DESIGN & CONSTRUCTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep REHABILITATION

TYPICAL EROSION CONTROL MEASURES

SHEET 4 OF 4

CATSKILL AQUEDUCT REPAIR AND

SCALE: NOT TO SCALE

SHEET NO:

217 OF 485

DATE: 10/2/2017

DRAWING NO. **CI-024.00**

APPR'D. SCOTT DAVIS

TRAFFIC CONTROL NOTES:

- 1. THE LOCATIONS OF THE SIGNS SHOWN ON THE TRAFFIC CONTROL PLANS AND DETAILS MAY BE ADJUSTED BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS. THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE JURISDICTION OF ROADWAY.
- 2. ANY EXISTING SIGNS, INCLUDING OVERHEAD SIGNS, WHICH CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL SIGN LAYOUT SHALL BE COVERED, REMOVED, STORED OR RESET, AS APPROVED BY THE ENGINEER. ALL APPROPRIATE EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION UNLESS OTHERWISE REPLACED IN THIS CONTRACT.
- 3. SIGNS AT OR NEAR INTERSECTIONS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT A MOTORIST'S LINE OF SIGHT.
- 4. THE DIMENSIONS OF TRAFFIC CONTROL SIGNS ARE DESCRIBED IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 5. NYR9-12 MAY BE USED IN PLACE OF NYR9-11.
- 6. WHERE POSSIBLE, ALL CHANNELIZING AND GUIDING DEVICES ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 2' LATERAL CLEARANCE TO THE TRAVELED WAY.
- 7. CONTRACTOR TO NOTIFY THE ENGINEER IF DRIVEWAYS MAY BE MADE INACCESSIBLE AT LEAST 30 DAYS PRIOR TO RESTRICTING USE OF THE DRIVEWAY. FOR MULTIPLE ACCESS PROPERTIES, AT LEAST ONE DRIVEWAY SHALL BE OPEN AT ALL TIMES. ACCESS SHALL BE RESTORED TO ALL DRIVEWAYS AS SOON AS POSSIBLE.
- 8. THE CONTRACTOR SHALL LOCATE LANE CLOSURES TO PROVIDE OPTIMUM VISIBILITY, I.E. BEFORE CURVES AND CRESTS, TO THE EXTENT CONDITIONS PERMIT.
- 9. THE ENGINEER MAY REQUIRE THAT ALL LANES BE RE-OPENED AT ANY TIME IF THE ROUTE IS NEEDED FOR EMERGENCY PURPOSES. THIS COULD INCLUDE INCIDENTS AT LOCATIONS OUTSIDE THE CONTRACT LIMITS.
- 10. UNLESS AUTHORIZED BY THE ENGINEER, THE MINIMUM LANE WIDTH FOR TRAVEL LANES FOR PARKWAYS IS 11'. THE MINIMUM LANE WIDTH FOR ALL OTHER TYPES OF ROADWAYS IS 10'.
- 11. SEE EA-024 FOR ACCESS POINT AND TRAFFIC CONTROL SCHEDULE.

TABLE NY6H-3 ADVANCE WARNING SIGN SPACING SEE NOTE 2.

	DISTANC	E BETWE	SIGN LEGEND		
ROAD TYPE	A (FT)	B (FT)	C (FT)	XX	YY
URBAN (≤30 MPH*)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH*)	200	200	200	AHEAD	AHEAD
URBAN (≥45 MPH*)	350	350	350	1000-FT	AHEAD
RURAL	500	500	500	1500-FT	1000-FT
EXPRESSWAY / FREEWAY	1000	1500	2640	1 MILE	1/2 MILE

TABLE 6H-4 FORMULAS FOR DETERMINING TAPER LENGTHS			
SPEED LIMIT (S) (MPH)	TAPER LENGTH (L) (FT)	L TADED LENGTH	
(40 MPH) OR LESS	$L = WS^2 / 60$	L = TAPER LENGTH W = WIDTH OF OFFSET (FT) S = PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	
(45 MPH) OR MORE	L = WS		

TRAFFIC CONTROL LEGEND		
SYMBOL DESCRIPTION		
ARROW PANEL		
• •	ARROW PANEL, CAUTION MODE	
556	ARROW PANEL TRAILER OR SUPPORT	
CHANGEABLE MESSAGE SIGN (PVMS)		
■ CHANNELIZING DEVICE		
	CRASH CUSHION/TEMPORARY IMPACT ATTENUATOR	
DIRECTION OF TEMPORARY TRAFFIC DETOUR		
DIRECTION OF TRAFFIC		
•	FLAGGER	
•	FLAG TREE	
LUMINAIRE		
PAVEMENT MARKINGS THAT SHALL BE REMOVED FOR A LONG TERM PROJECT		
SIGN, TEMPORARY		
TEMPORARY BARRIER		
TEMPORARY BARRIER WITH WARNING LIGHTS		
○-► TRAFFIC OR PEDESTRIAN SIGNAL		
TYPE III BARRICADE		
	WARNING LIGHTS	
	WORK SPACE	
	WORK VEHICLE	
	WORK VEHICLE WITH TRUCK MOUNTED ATTENUATOR	

NOTES:

- 1. TABLES SHOWN ARE INCORPORATED FROM NEW YORK STATE DEPT. OF TRANSPORTATION STANDARD SHEETS.
- 2. URBAN CLASSIFICATION DISTANCE MAY BE USED ALONG ROADWAYS WHERE THERE ARE MULTIPLE DRIVEWAYS BETWEEN THE SIGNAGE AND THE WORK ZONE.

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CHECKED BY:
KL
DESIGN LEAD:
AMIR MASHHAD
PROJECT MANAGER:
SCOTT DAVIS

DRAWN BY:
JG
PROJECT MANAGER:
SCOTT DAVIS



Environmental Protection
Water for Future

ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

PROGRAM DIRECTOR OF WFF

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REHABILITATION

TRAFFIC CONTROL NOTES, TABLES

AND LEGEND

CATSKILL AQUEDUCT REPAIR AND

SCALE: NOT TO SCALE

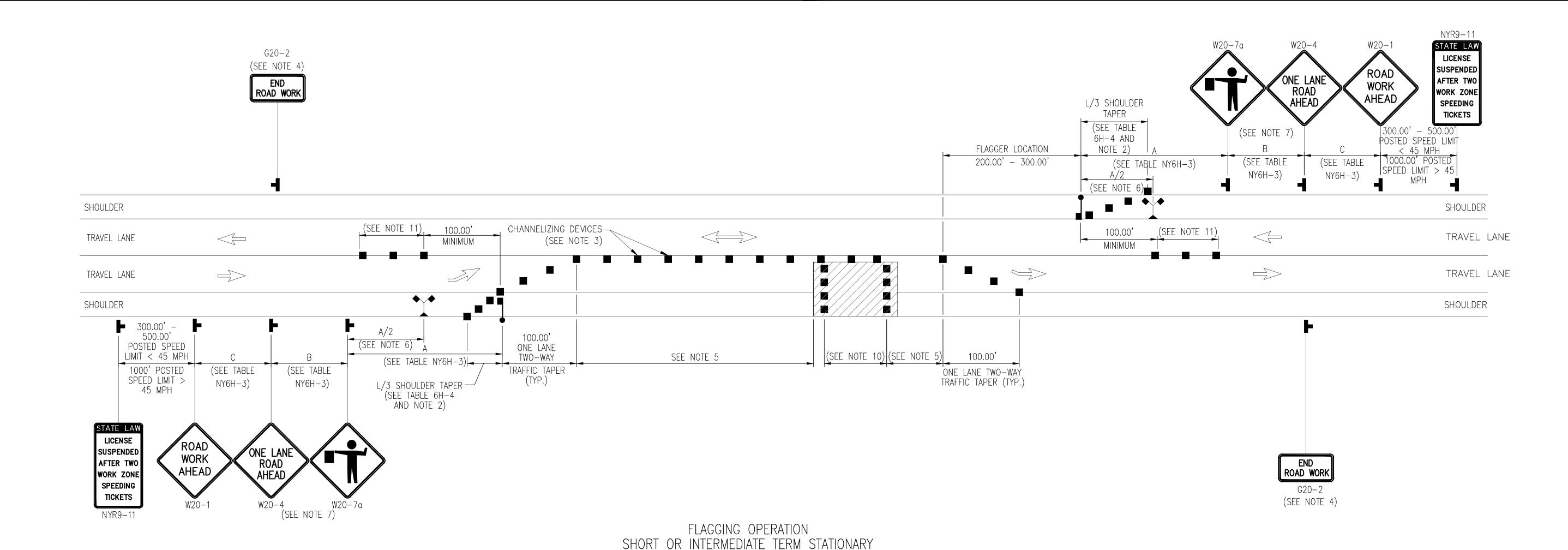
SHEET NO:

218 OF 485

DRAWING NO.

CI-030.00

DATE: 10/2/2017



TRAFFIC CONTROL MEASURES GENERAL NOTES:

- 1. WHEN A SIDE ROAD OR DRIVEWAY INTERSECTS THE ROADWAY WITHIN A TRAFFIC CONTROL AREA, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES AND/OR FLAGGERS SHALL BE PLACED AS NEEDED. ADDITIONAL FLAGGERS SHALL BE LOCATED AT ALL INTERSECTIONS AND COMMERCIAL DRIVEWAYS LOCATED WITHIN OR NEAR THE ACTIVE WORK SPACE.
- 2. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8'-0" OR MORE ARE CLOSED, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK AREA AND DIRECT VEHICULAR TRAFFIC TO REMAIN IN THE TRAVEL LANE.
- 3. CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 40'-0" IN THE ACTIVE WORK SPACE.
- 4. THE END ROAD WORK SIGN (G20-2) SHALL BE PLACED A MAXIMUM OF 500' PAST THE END OF THE WORK SPACE.
- 5. WHERE DIRECTED BY THE ENGINEER, A BUFFER SPACE SHALL BE PROVIDED IN ORDER TO LOCATE THE ONE-LANE, TWO-WAY TRAFFIC TAPER PRIOR TO ANY HORIZONTAL OR VERTICAL CURVE, IN ORDER TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGERS AND/OR A QUEUE OF STOPPED VEHICLES.
- 6. THE FLAG TREE SHALL BE LOCATED ON THE SHOULDER, AT APPROXIMATELY THE DISTANCE BETWEEN THE FLAGGER SIGN (W20-7a) AND THE FLAGGER.

- 7. FLAGGER SIGN (W20-7a) AND ONE LANE ROAD AHEAD SIGN (W20-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE NOT OCCURRING.
- 8. FLAGGER AND FLAG TREE SHALL BE ILLUMINATED TO LEVEL II ILLUMINATION DURING NIGHT TIME OPERATIONS.

LANE CLOSURE ON 2-LANE 2-WAY ROADWAY

(NOT TO SCALE)

- 9. ALL FLAGGERS SHALL USE 2'-0" (MIN.) OCTAGON SHAPED STOP/SLOW PADDLES HAVING 6'-0" STAFF.
- 10. TRANSVERSE DEVICES SHALL BE REQUIRED (AS PER NYSDOT STANDARD SPECIFICATION 619) WHEN A PAVED SHOULDER HAVING A WIDTH OF 8'-0" OR GREATER IS CLOSED FOR A DISTANCE GREATER THAN 1,500'.
- 11. CENTERLINE CHANNELIZING DEVICES ARE OPTIONAL AND MAY BE ELIMINATED WHERE SPACE CONSTRAINTS EXIST.
- 12. NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES, OR MATERIAL SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.
- 13. THIS SHEET IS INCORPORATED FROM NEW YORK STATE DEPT. OF TRANSPORTATION STANDARD SHEET 619-60.
- 14. SEE CI-030 FOR TRAFFIC CONTROL TABLES, NOTES, AND LEGEND.

BID SET DATE ISSUED: 10/2/2017

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DESIGNED BY:
SC
CHECKED BY:
KL
DESIGN LEAD:
AMIR MASHHAD
PROJECT MANAGER:
SCOTT DAVIS

DRAWN BY:
JG
PROJECT MANAGER:
SCOTT DAVIS





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Future	SEAN MCANDREW, P.E.	TORK EDUCATION, LAW, SECTION, 7209.2.

NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep CATSKILL AQUEDUCT REPAIR AND REHABILITATION

TYPICAL TRAFFIC CONTROL MEASURES
ACCESS FROM VILLAGE, TOWN, CITY
AND COUNTY ROADS - SHEET 1 OF 2

DATE: 10/2/2017

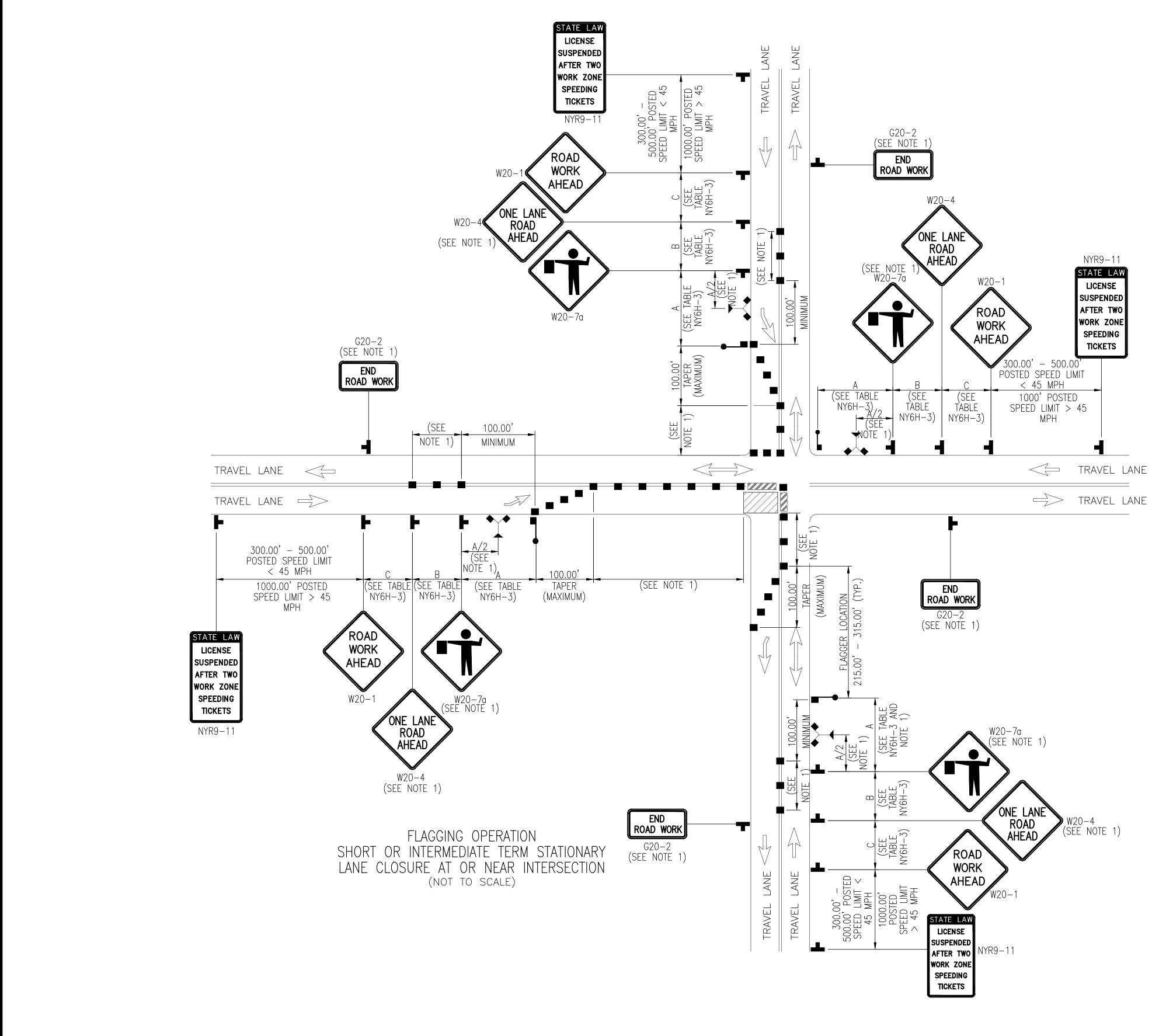
SCALE: NOT TO SCALE

SHEET NO:

219 OF 485

DRAWING NO.

CI-031.00



- 1. SEE CI-031 FOR TRAFFIC CONTROL MEASURES GENERAL NOTES.
- 2. AT SIGNALIZED INTERSECTIONS, SIGNALS SHALL BE TURNED OFF FOR ANY FLAGGING OPERATIONS, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
- 3. ADDITIONAL FLAGGERS SHALL BE LOCATED AT ALL INTERSECTIONS AND COMMERCIAL DRIVEWAYS LOCATED WITHIN OR NEAR THE ACTIVE WORK AREA.
- 4. THIS SHEET IS INCORPORATED FROM NEW YORK STATE DEPT. OF TRANSPORTATION STANDARD SHEET 619-61. SEE TABLE NY6H-3 ON CI-030.

BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: APPR'D. SCOTT DAVIS REVISIONS/DESCRIPTION

Protection Water # Future

Environmental

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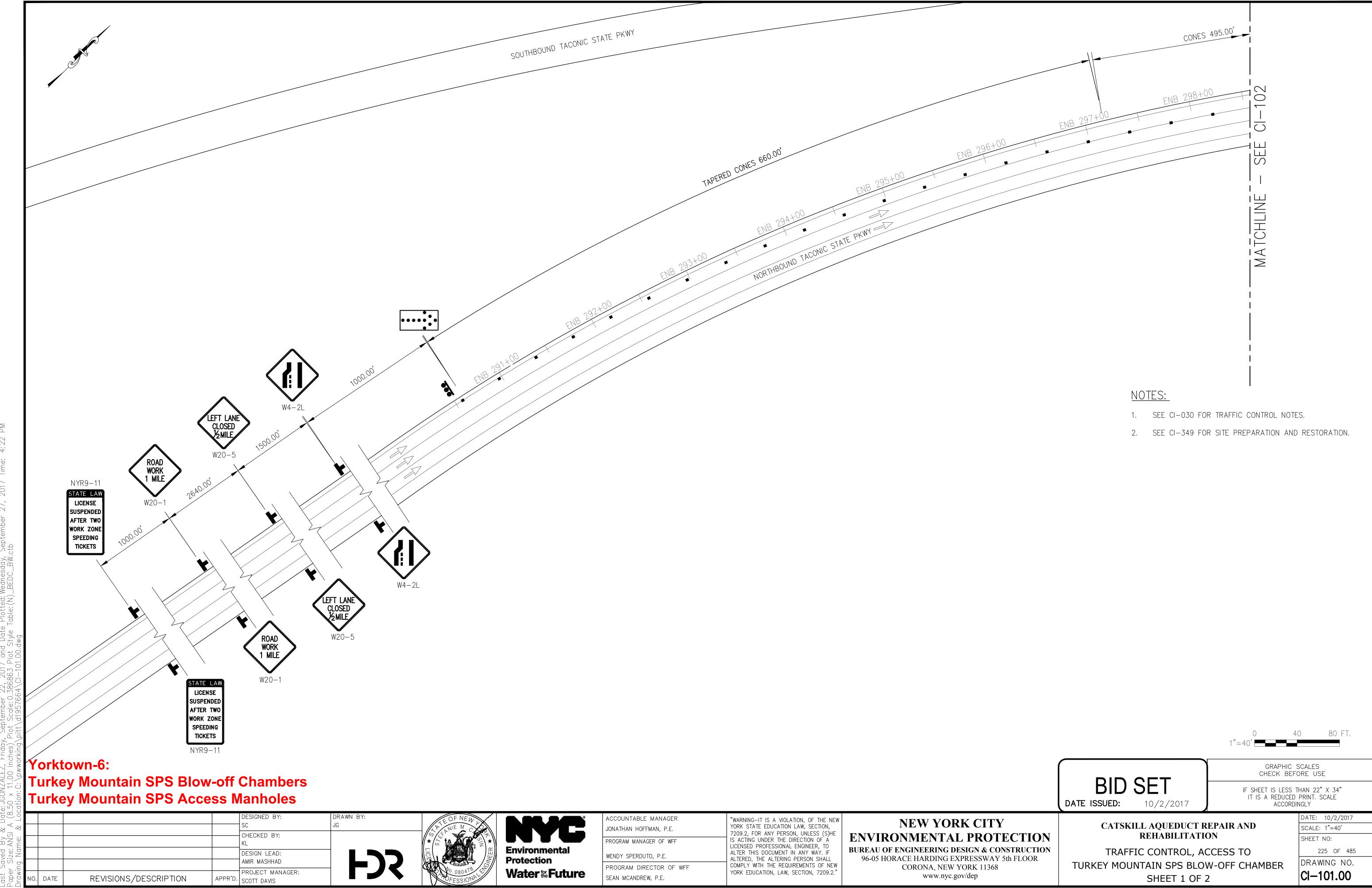
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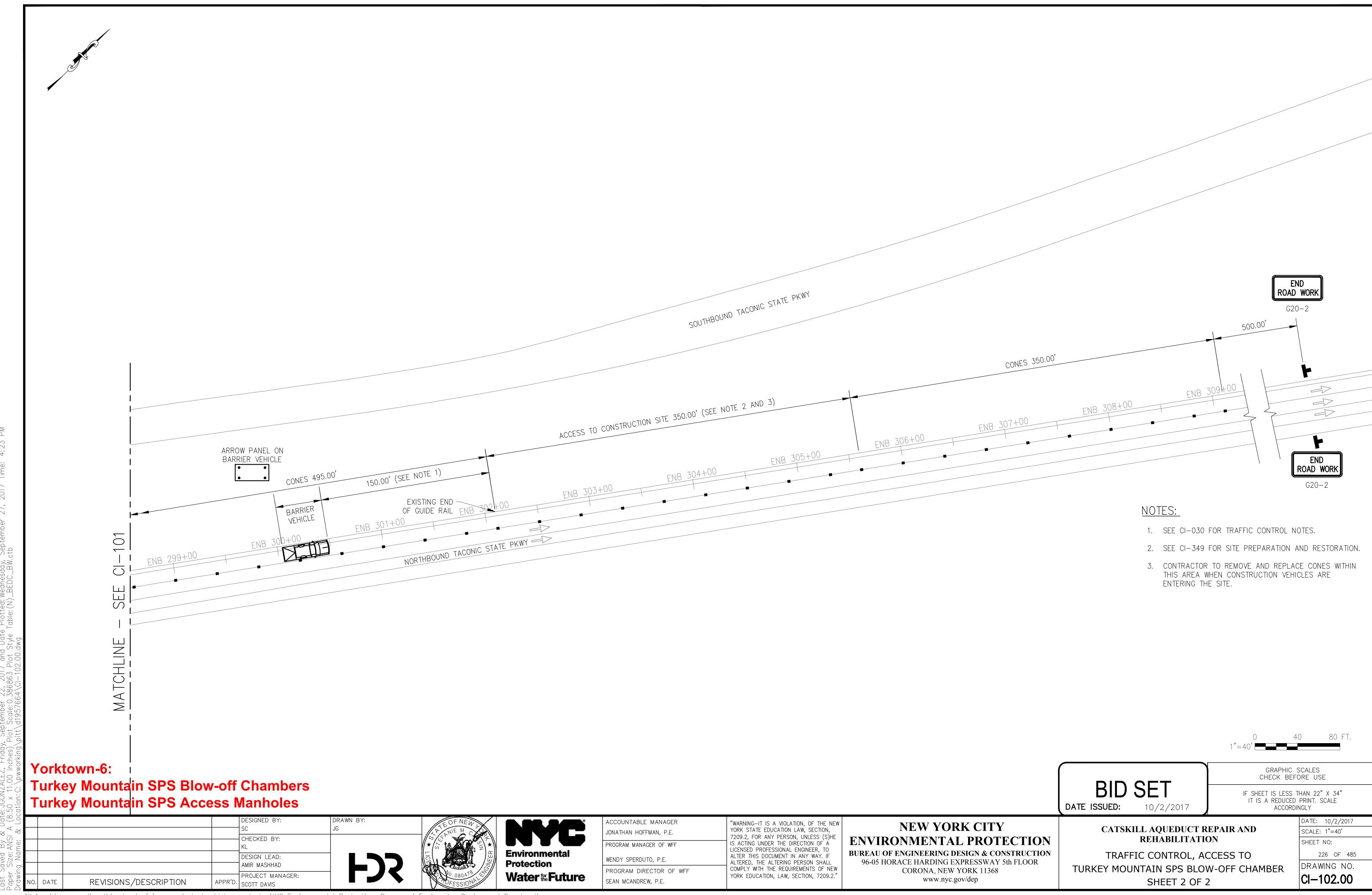
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

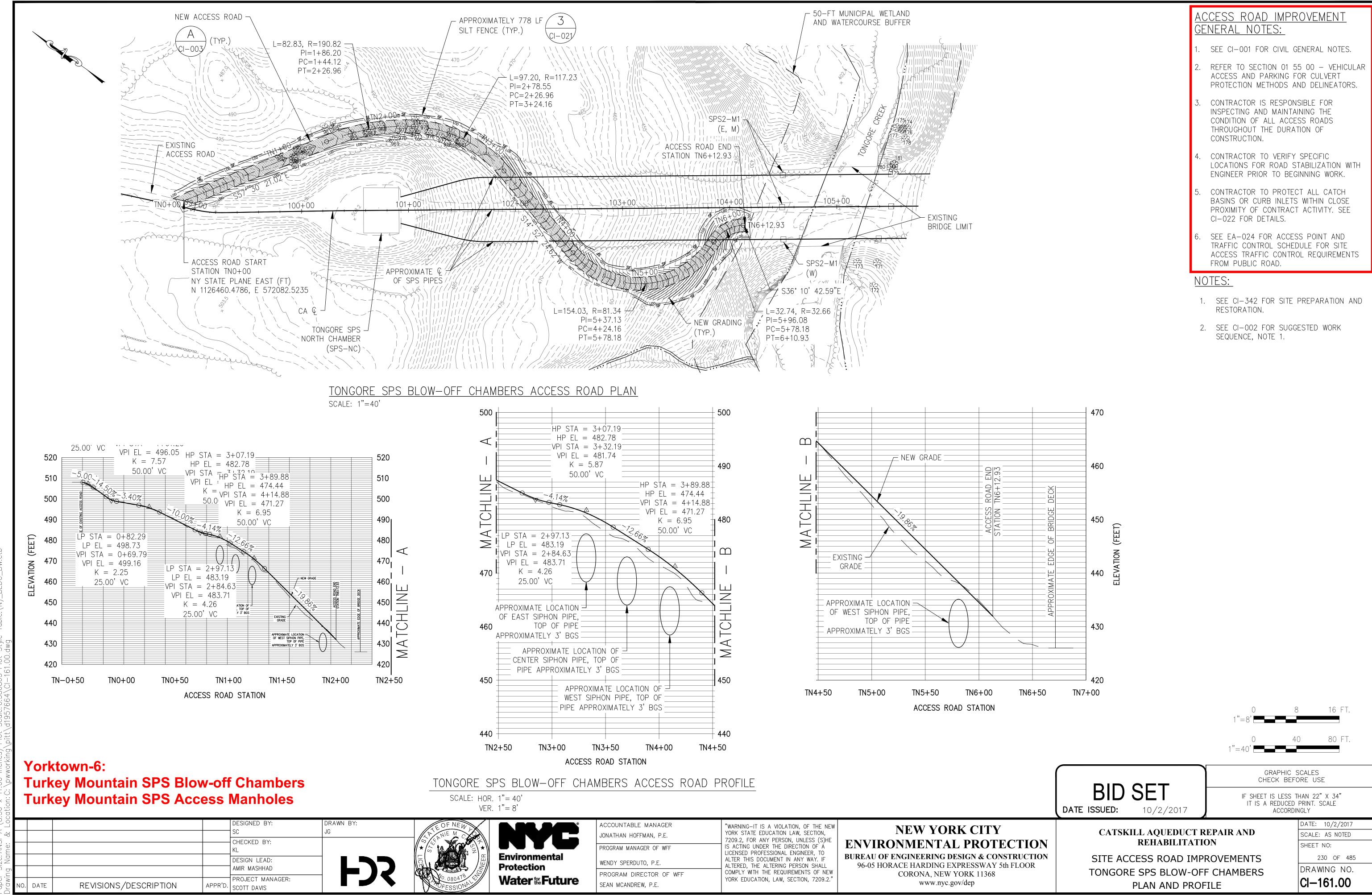
TYPICAL TRAFFIC CONTROL MEASURES ACCESS FROM VILLAGE, TOWN, CITY AND COUNTY ROADS - SHEET 2 OF 2

DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO: 220 OF 485

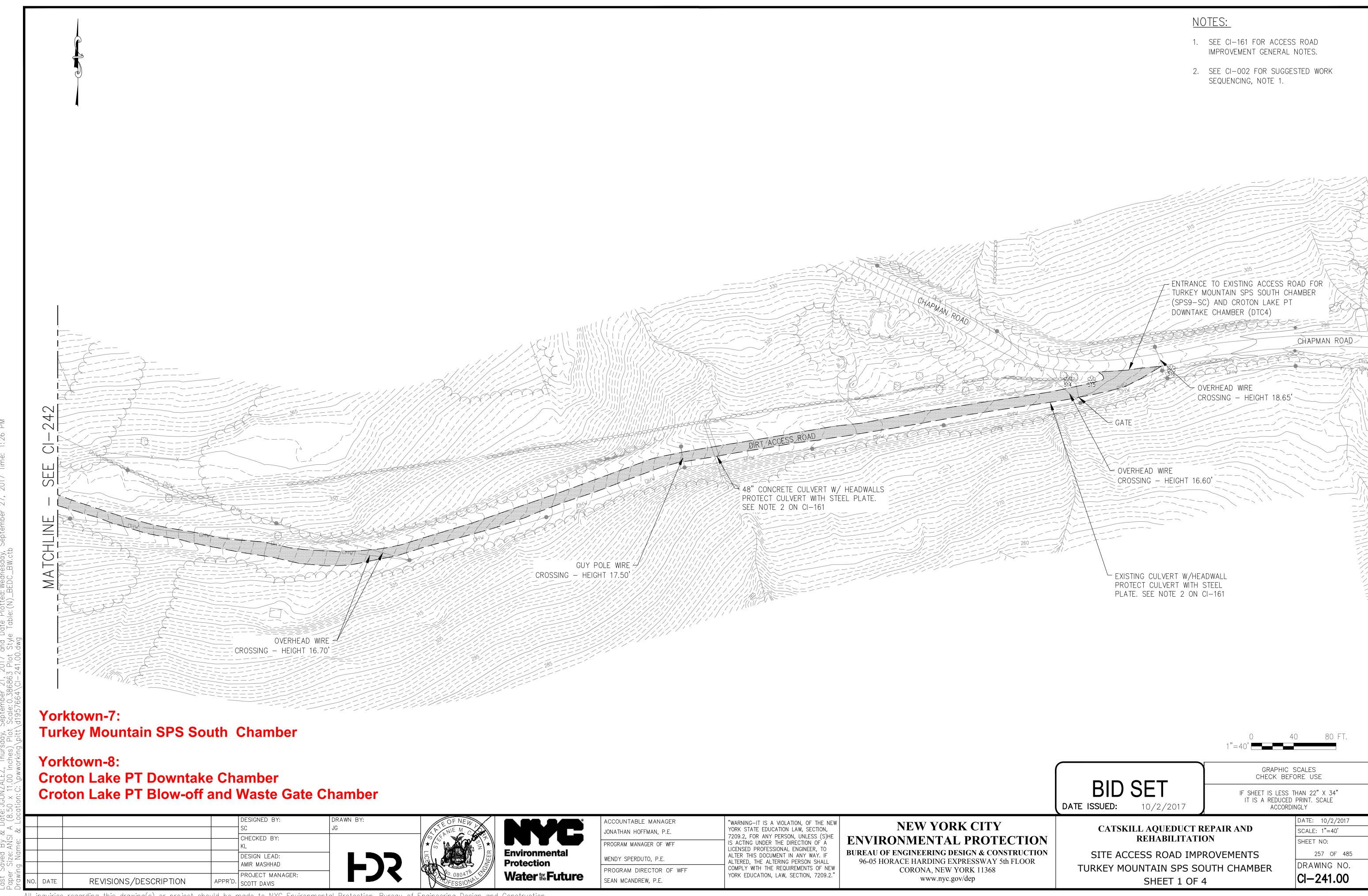
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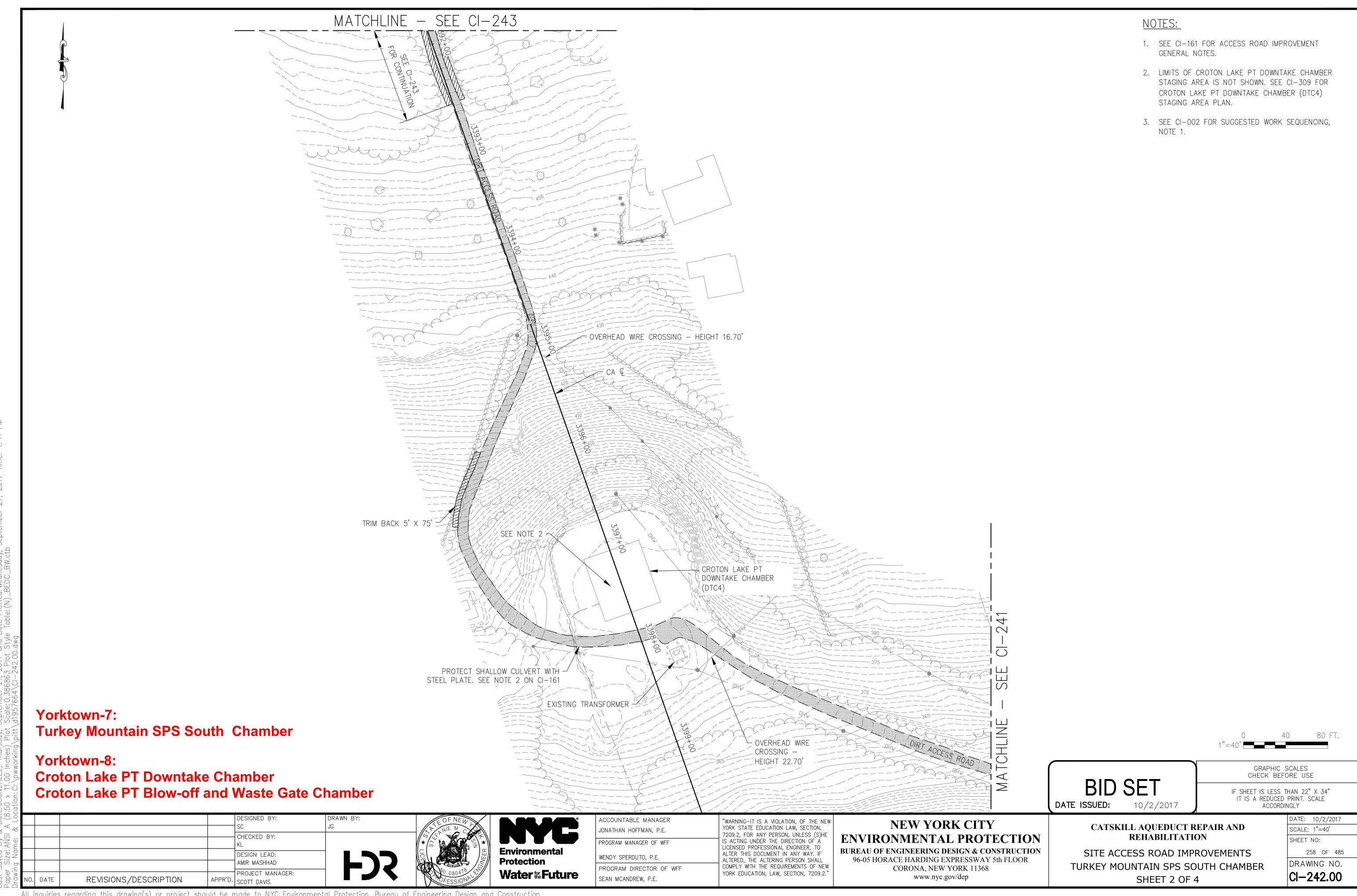


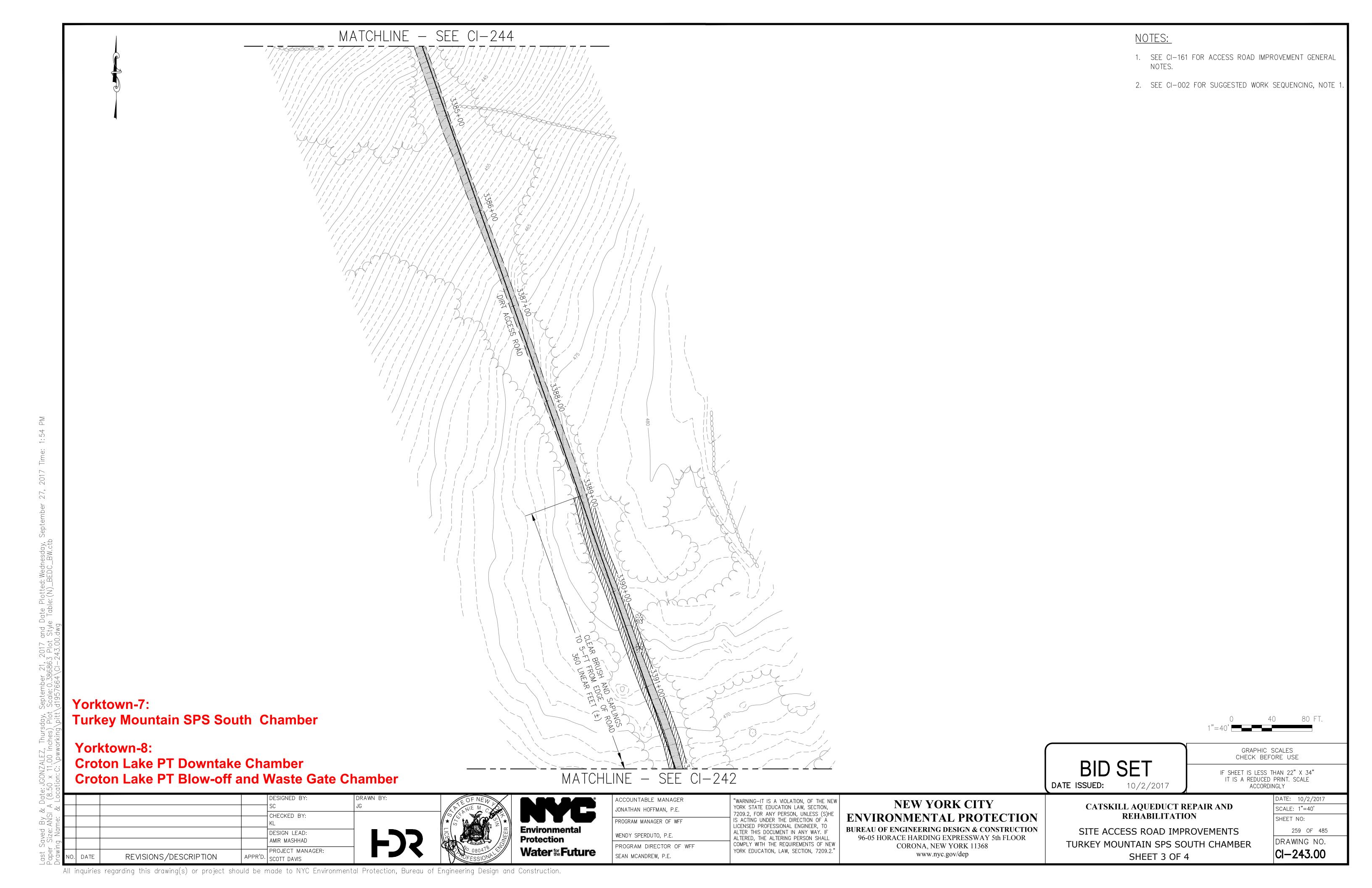


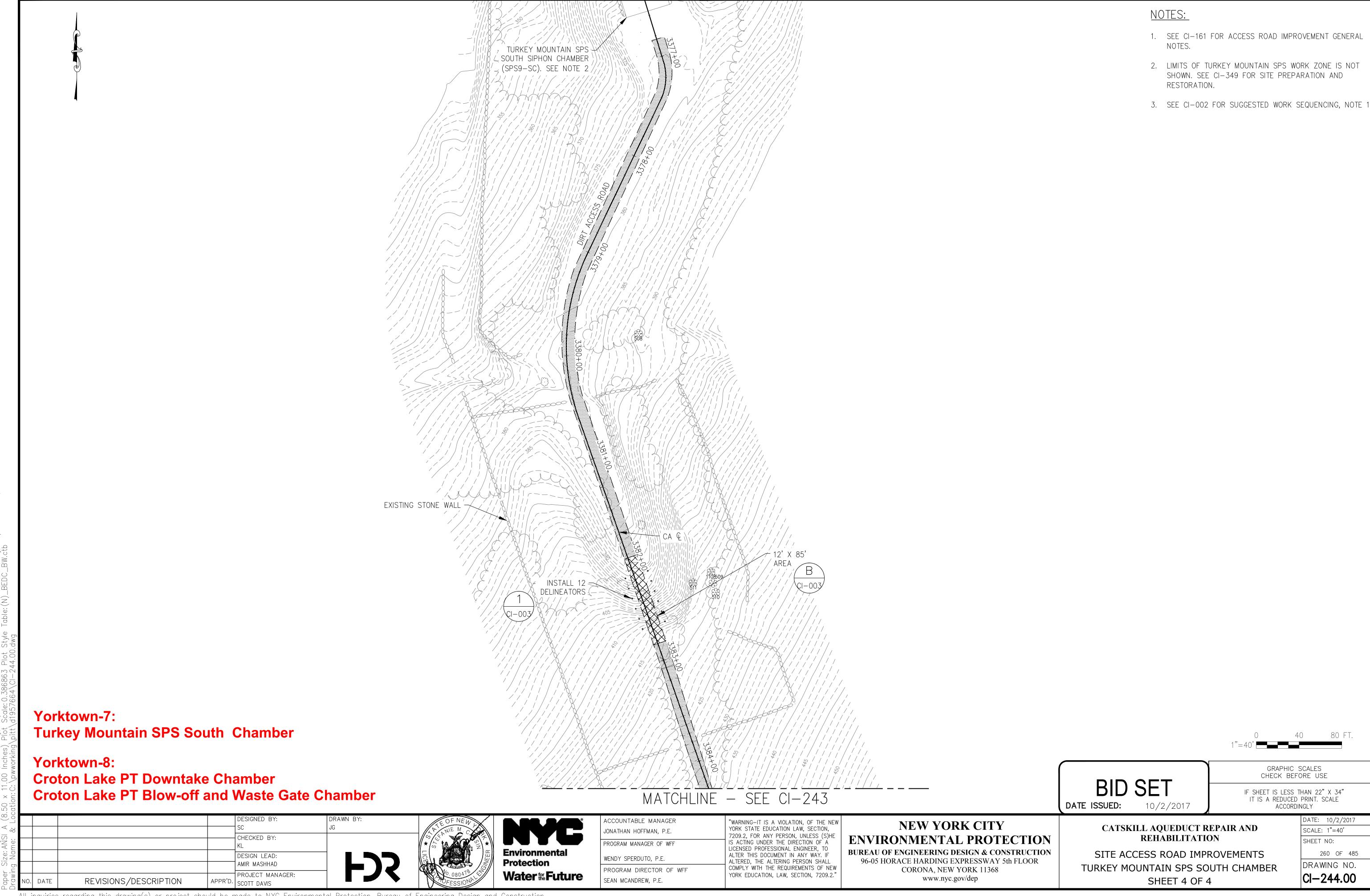


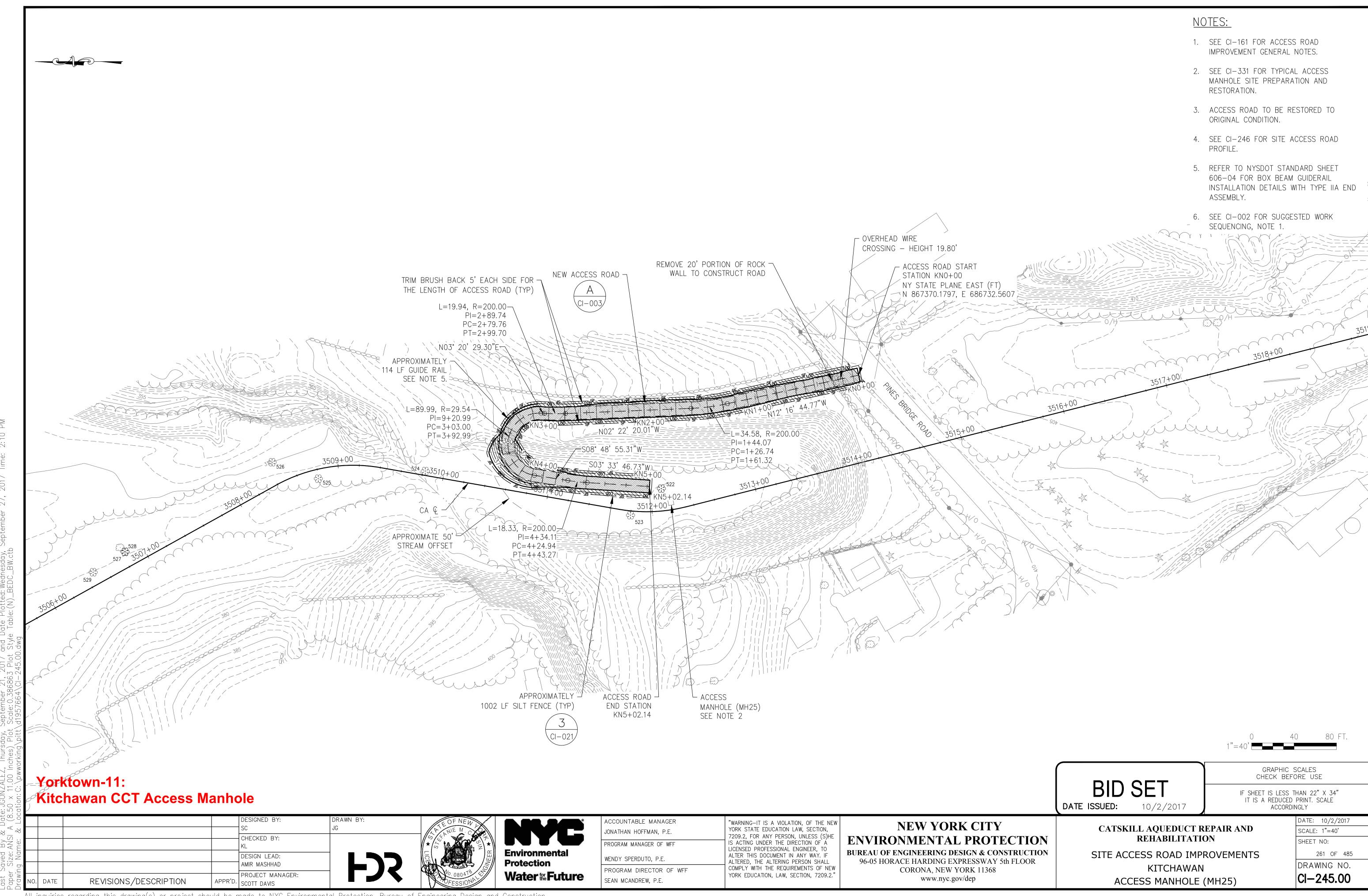
NOTES: 1. SEE CI-161 FOR GENERAL SITE ACCESS ROAD IMPROVEMENT NOTES. 2. SEE CI-361 FOR PIPING AND GRADING PLAN 3. REFER TO NYSDOT STANDARD SHEET 606-D4 FOR BOX BEAM GUIDERAIL INSTALLATION DETAILS WITH TYPE IIA END ASSEMBLY. TRANSITION TO STEEL BRIDGE RAILING AT CULVERT. ACCESS ROAD START STA TMO+00 NY STATE PLANE EAST (FT) 4. SEE CI-002 FOR SUGGESTED WORK SEQUENCING, NOTE 1. N 880339.8597, E 681224.4834 -NEW ACCESS ROAĎ∳ - EDGE OF ROAD MIN. OFFSET 8-FT FROM EXISTING GUIDERAIL ALONG TACONIC STATE PARKWAY TRÌM BRUSH BACK 5' THIS SIDE FOR THE 300 LENGTH OF ACCESS ROAD `APPROXIMATĖLY 138 LF GUIDERAIL SEE NOTE 3. - L=20.55, R=30.00 PI=1+13.96 PC=1+03.26PT=1+23.81NEW GRADING (TYP.) /─ S74° 56' 54.36"W ┌── APPROXIMATELY HP STA = 0+71.52LP STA = 1+34.67 - 1DELINEATOR TO BE PLACED HP EL = 291.04LP EL = 286.49AT EDGE OF CULVERT HEADWALL $-VPI STA = 0 + 81.52^{-1}$ _VPI STA = 1+38.76_ SEE CI-003 VPI EL = 290.97- EXISTING GRADE VPI EL = 286.46 K = 2.33EXISTING CULVERT -K = 1.82NEW CULVERT AND HEADWALLS 20.00' VC AND HEADWALL 10.00' VC TOP OF CONCRETE \\TO REMAIN -ELEVATION = 287.00(\pm) -0.75%SEE NOTE 2 APPROXIMATE TOP OF -GEOTEXTILE, ŞLOPE PROTECTION L=10.20, R=12.00 HEADWALL (BEYOND)_ PI = 1 + 46.40NEW 2-24" STORM DRAINS PC=1+40.97290 등 중 290 ► PT=1+51.17 PROPOSED 7'X12' CULVERT OVER BROOK NEW GRADE -ACCESS ROAD END N56° 21' 08.38"W HP STA = 1+02.16 --HP EL = 289.04 -LP STA = 1+28.94 -VPI STA = 1+09.66 LP EL = 286.51 -\50-FT MUNICIPAL AND NYSDEC WATERCOURSE BUFFER, VPI EL = 288.34 $_{\rm VPI}$ STA = 1+24.67_ K = 5.6515.00' VC K = 0.74⁻8.53' VC NEW 2-24"Ø STORM DRAIN-PIPES UNDER ACCESS ROAD 280 0+50 1+00 1+50 1+70 0+00 ACCESS ROAD STATION ACCESS ROAD IMPROVEMENT PLAN ACCESS ROAD PROFILE SCALE: 1"=20' SCALE: HOR. 1"= 10' VER. 1"= 2' Yorktown-6: GRAPHIC SCALES CHECK BEFORE USE **Turkey Mountain SPS Blow-off Chambers BID SET** IF SHEET IS LESS THAN 22" X 34" **Turkey Mountain SPS Access Manholes** IT IS A REDUCED PRINT. SCALE
ACCORDINGLY DATE ISSUED: 10/2/2017 DESIGNED BY: DRAWN BY: DATE: 10/2/2017 CCOUNTABLE MANAGER "WARNING-IT IS A VIOLATION, OF THE NEW **NEW YORK CITY** CATSKILL AQUEDUCT REPAIR AND YORK STATE EDUCATION LAW, SECTION, SCALE: 1" = 20'JONATHAN HOFFMAN, P.E. 7209.2, FOR ANY PERSON, UNLESS (S)HI REHABILITATION **ENVIRONMENTAL PROTECTION** CHECKED BY: SHEET NO: IS ACTING UNDER THE DIRECTION OF A PROGRAM MANAGER OF WFF LICENSED PROFESSIONAL ENGINEER, TO **Environmental BUREAU OF ENGINEERING DESIGN & CONSTRUCTION** 256 OF 485 SITE ACCESS ROAD IMPROVEMENTS ALTER THIS DOCUMENT IN ANY WAY. IF DESIGN LEAD: WENDY SPERDUTO, P.E. 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR **Protection** ALTERED, THE ALTERING PERSON SHALL AMIR MASHHAD DRAWING NO. TURKEY MOUNTAIN SPS BLOW-OFF CHAMBERS COMPLY WITH THE REQUIREMENTS OF NEW CORONA, NEW YORK 11368 PROGRAM DIRECTOR OF WFF Water # Future PROJECT MANAGER: YORK EDUCATION, LAW, SECTION, 7209.2. CI-240.00 www.nyc.gov/dep APPR'D. SCOTT DAVIS SEAN MCANDREW, P.E. REVISIONS/DESCRIPTION PLAN AND PROFILE



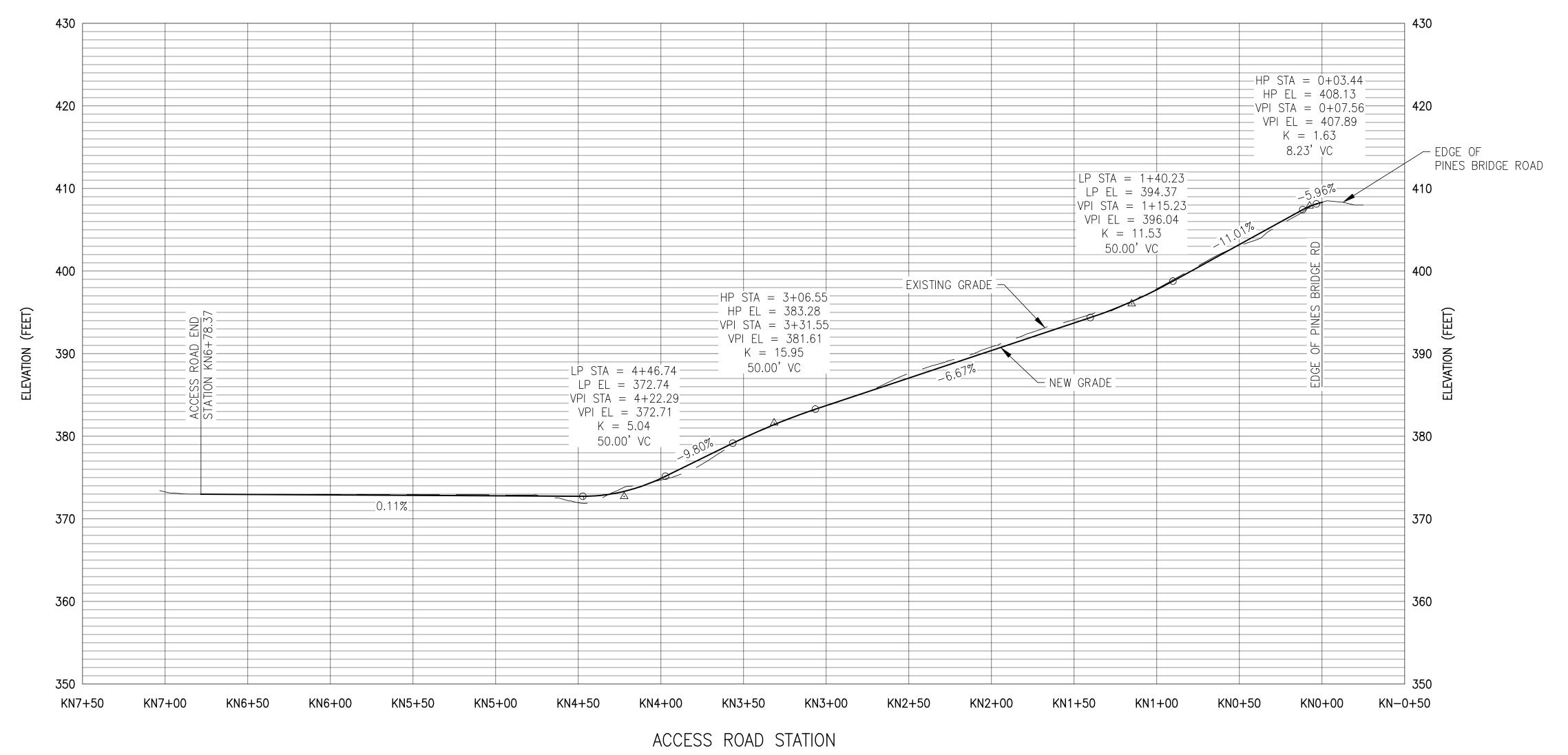






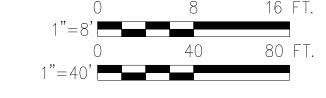


- 1. SEE CI-161 FOR ACCESS ROAD IMPROVEMENT GENERAL NOTES.
- 2. SEE CI-245 FOR SITE ACCESS ROAD IMPROVEMENTS.



KITCHAWAN ACCESS MANHOLE MH25 SITE ACCESS ROAD PROFILE

SCALE: HOR. 1"= 40"
VER. 1"= 8"



GRAPHIC SCALES CHECK BEFORE USE

Yorktown-11: Kitchawan CCT Access Manhole

					DESIGNED BY:	DRAWN
					SC	JG
					CHECKED BY:	
					KL	
					DESIGN LEAD:	
)					AMIR MASHHAD	
	NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.	PROJECT MANAGER: SCOTT DAVIS	

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10/2/2017

BID SET

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SITE ACCESS ROAD IMPROVEMENTS

KITCHAWAN

ACCESS MANHOLE (MH25) PROFILE

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DATE: 10/2/2017
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SHEET NO:
262 OF 485
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CHECKED BY:

DESIGN LEAD:

AMIR MASHHAD

Environmental Protection

Water # Future

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DATE ISSUED: 10/2/2017

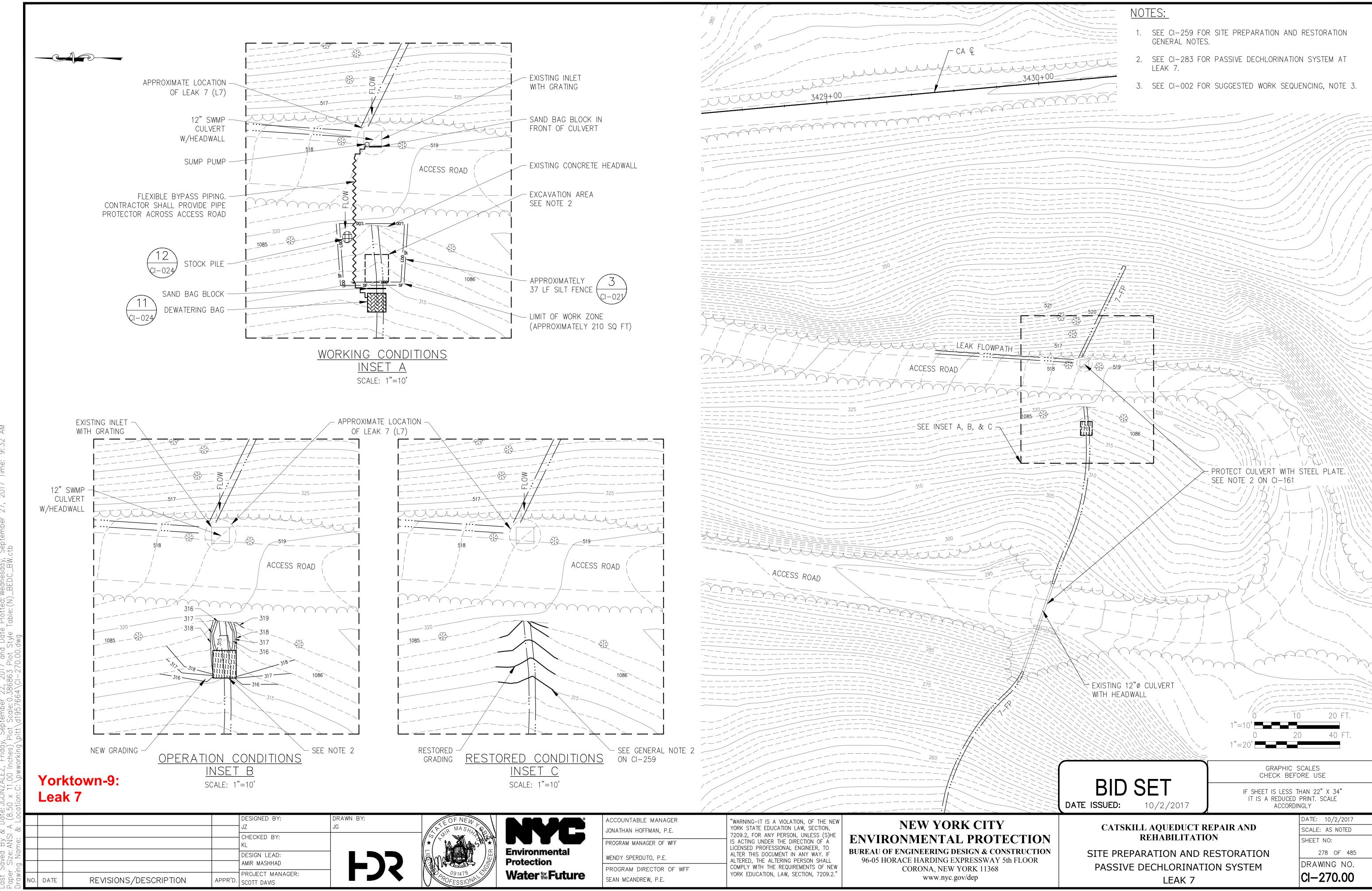
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY CATSKILL AQUEDUCT REPAIR AND

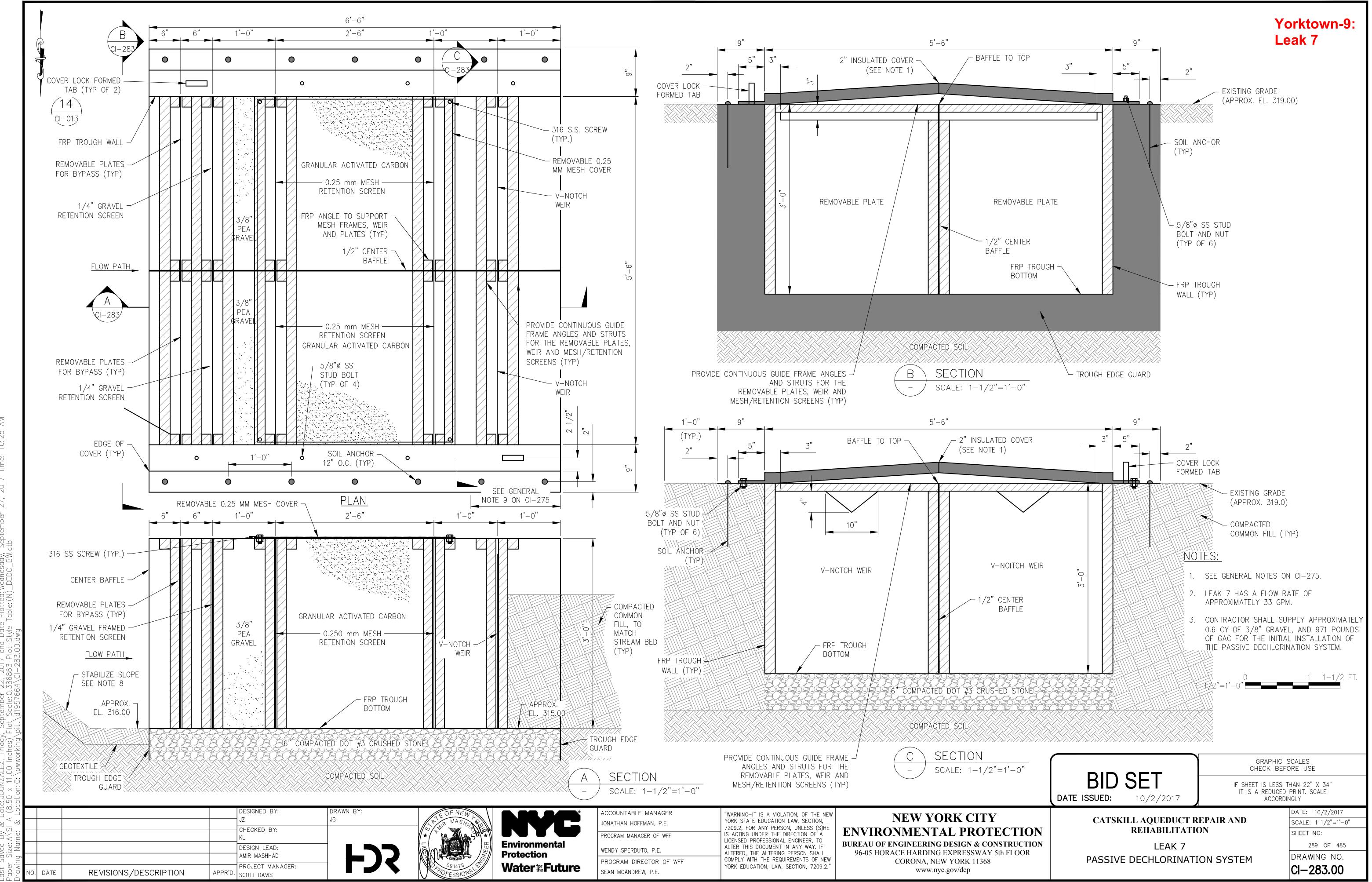
REHABILITATION SITE PREPARATION AND RESTORATION LEAK REPAIR

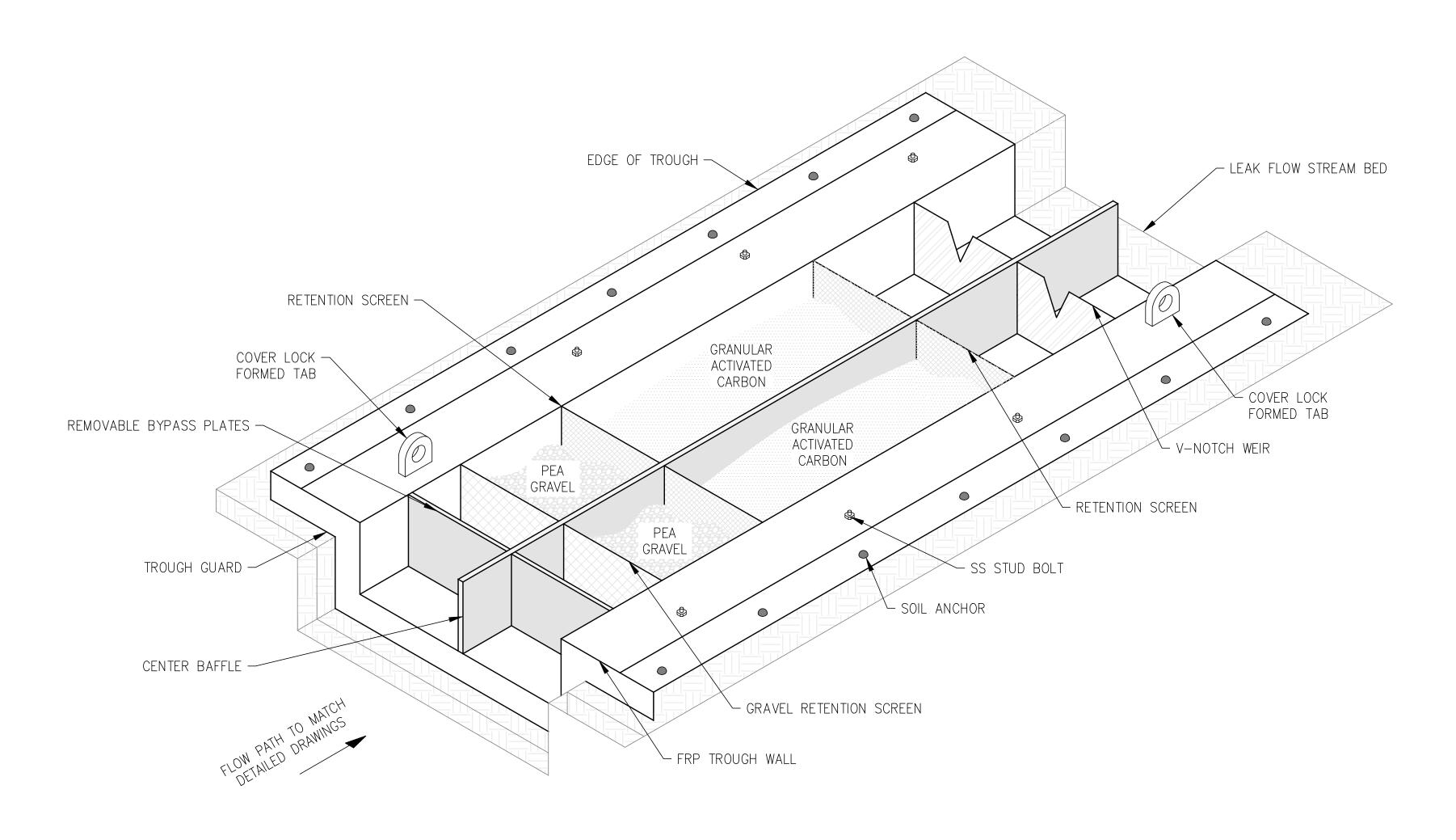
LEAK 7

DATE: 10/2/2017 SCALE: 1"=40' SHEET NO: 277 OF 485 DRAWING NO.

CI-269.00







PASSIVE DECHLORINATION SYSTEM NOT TO SCALE

Yorktown-9: Leak 7

> DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: APPR'D. SCOTT DAVIS REVISIONS/DESCRIPTION

Environmental Protection Water for Future

"WARNING-IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A CCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF WENDY SPERDUTO, P.E. ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2." PROGRAM DIRECTOR OF WFF

SEAN MCANDREW, P.E.

NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

GRAPHIC SCALES CHECK BEFORE USE

BID SET DATE ISSUED: 10/2/2017

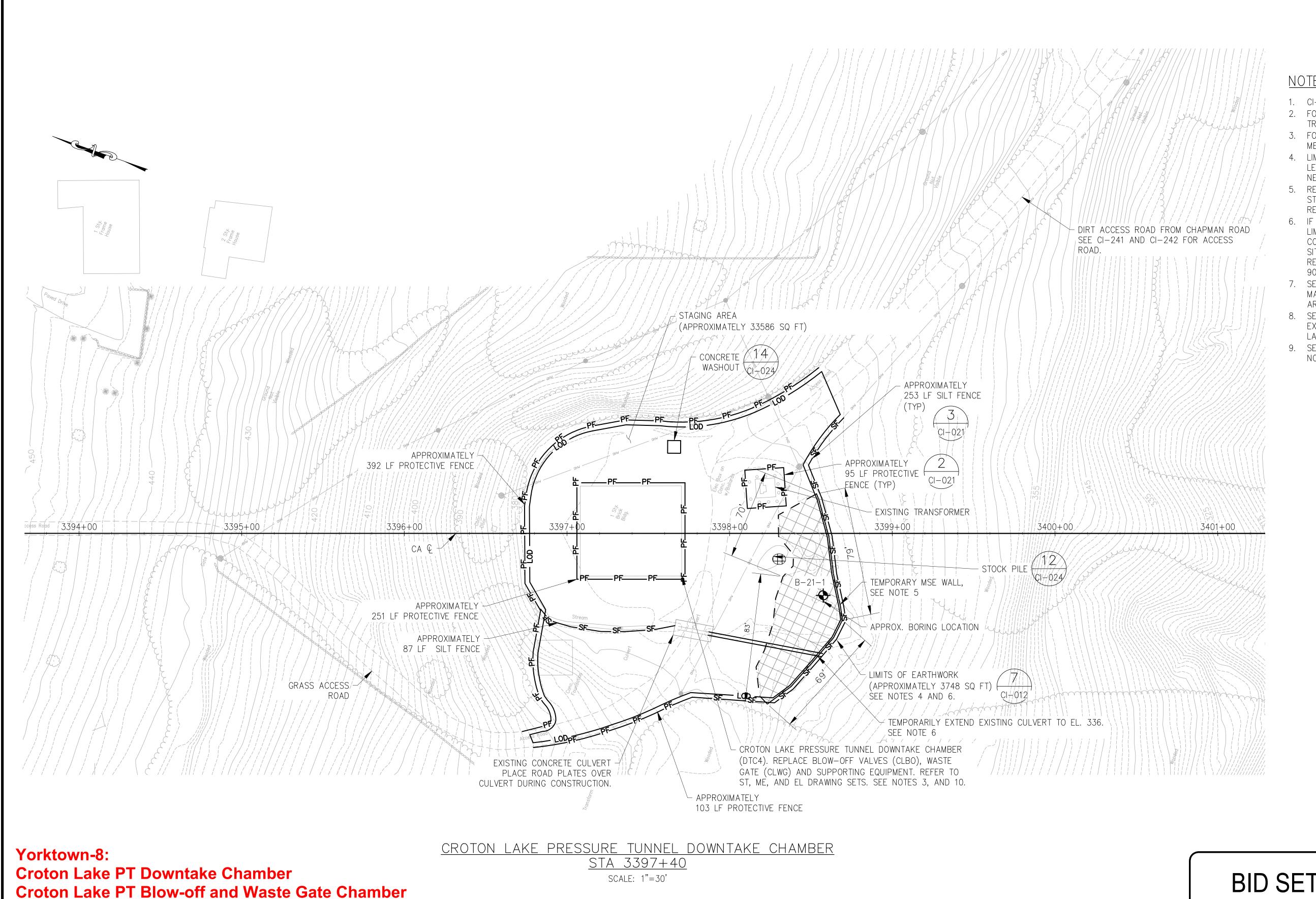
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

PASSIVE DECHLORINATION SYSTEM TYPICAL DETAIL

DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO: 290 OF 485 DRAWING NO.

CI-284.00



- 1. CI-001 FOR CIVIL GENERAL NOTES.
- 2. FOR WASHWATER AND CONSTRUCTION WATER TREATMENT, SEE BR-091 THRU BR-093.
- 3. FOR CROTON LAKE DOWNTAKE CHAMBER MECHANICAL WORK SEE ME-021 THRU ME-030.
- 4. LIMITS OF EARTHWORK SHOWN. CONTRACTOR SHALL LEVEL THE DESIGNATED AREA AS DETERMINED NECESSARY BY THE CONTRACTOR FOR STAGING.
- 5. REFER TO SECTION 31 32 20 MECHANICALLY STABILIZED EARTH FOR TEMPORARY MSE WALL REQUIREMENTS.
- 6. IF THE CONTRACTOR ELECTS TO GRADE WITHIN THE LIMITS OF EARTHWORK UPON CONSTRUCTION COMPLETION, THE CONTRACTOR SHALL RESTORE THE SITE TO ORIGINAL CONDITIONS AND GRADE AND RESEED AREAS IN ACCORDANCE WITH SECTION 32 90 00 - PLANTING.
- 7. SEE SECTION 31 23 26 SITE PREPARATION, MAINTENANCE AND RESTORATION FOR STAGING AREA REQUIREMENTS.
- 8. SEE EA-020 FOR INTERIOR AND EXTERIOR AND EXTERIOR NETTING REQUIREMENTS AT THE CROTON LAKE DOWNTAKE CHAMBER.
- 9. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 4.



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DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY

REVISIONS/DESCRIPTION

CDM Smith



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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

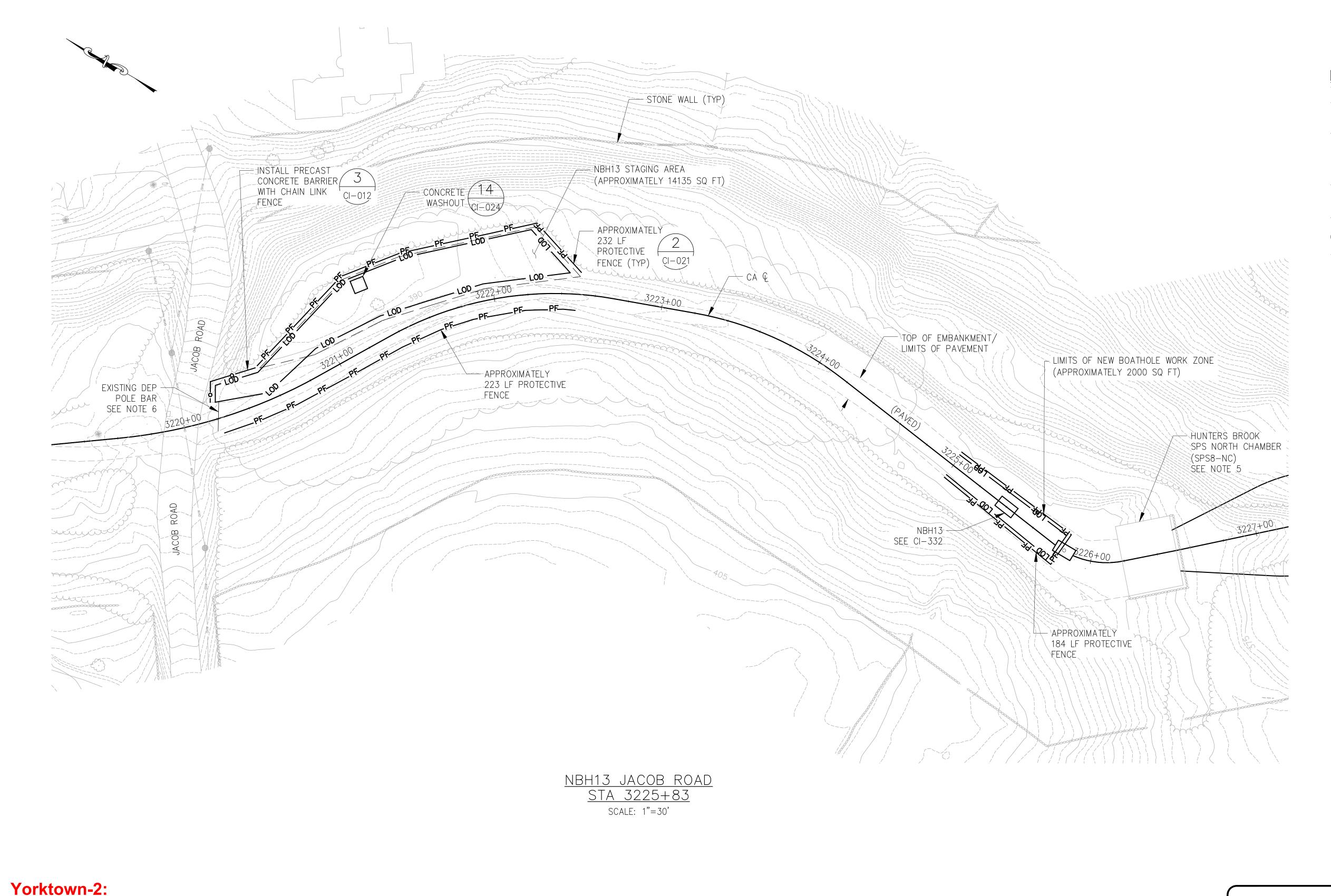
STAGING AREA PLAN CROTON LAKE PT DOWNTAKE CHAMBER PRIMARY STAGING

DATE: 10/2/2017 SCALE: 1" =30' SHEET NO: 308 OF 485

DRAWING NO. CI-309.00

PROJECT MANAGER:

APPR'D. DAVID J. TANZI



1. SEE CI-001 FOR CIVIL GENERAL NOTES.

2. STAGING AREA SHALL BE DELINEATED BY A COMBINATION OF PRECAST CONCRETE BARRIER WITH CHAIN LINK FENCE AND PROTECTIVE FENCE.

3. SITE WORK SHOWN IS REQUIRED. UPON CONSTRUCTION COMPLETION, CONTRACTOR SHALL RESTORE THE STAGING AREA TO ORIGINAL CONDITIONS AND GRADE AND RESEED GRASS AREAS IN ACCORDANCE WITH SECTION 32 90 00 - PLANTING.

4. REFER TO SECTION 31 23 26 - SITE PREPARATION, MAINTENANCE AND RESTORATION FOR STAGING AREA REQUIREMENTS.

5. SEE CI-348 HUNTERS BROOK SPS SITE PREPARATION AND RESTORATION.

6. CONTRACTOR TO UTILIZE EXISTING DEP ENTRANCE FOR

7. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 4 AND 6.



BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

DESIGNED BY: CHECKED BY: **CDM Smith** DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER:

APPR'D. DAVID J. TANZI

New Boathole - NBH13 - Jacob Road

Hunters Brook SPS North Chamber

REVISIONS/DESCRIPTION

Environmental Protection Water for Future

ACCOUNTABLE MANAGER "WARNING-IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, JONATHAN HOFFMAN, P.E. 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A PROGRAM MANAGER OF WFF LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF WENDY SPERDUTO, P.E. ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW PROGRAM DIRECTOR OF WFF YORK EDUCATION, LAW, SECTION, 7209.2. SEAN MCANDREW, P.E.

NEW YORK CITY ENVIRONMENTAL PROTECTION

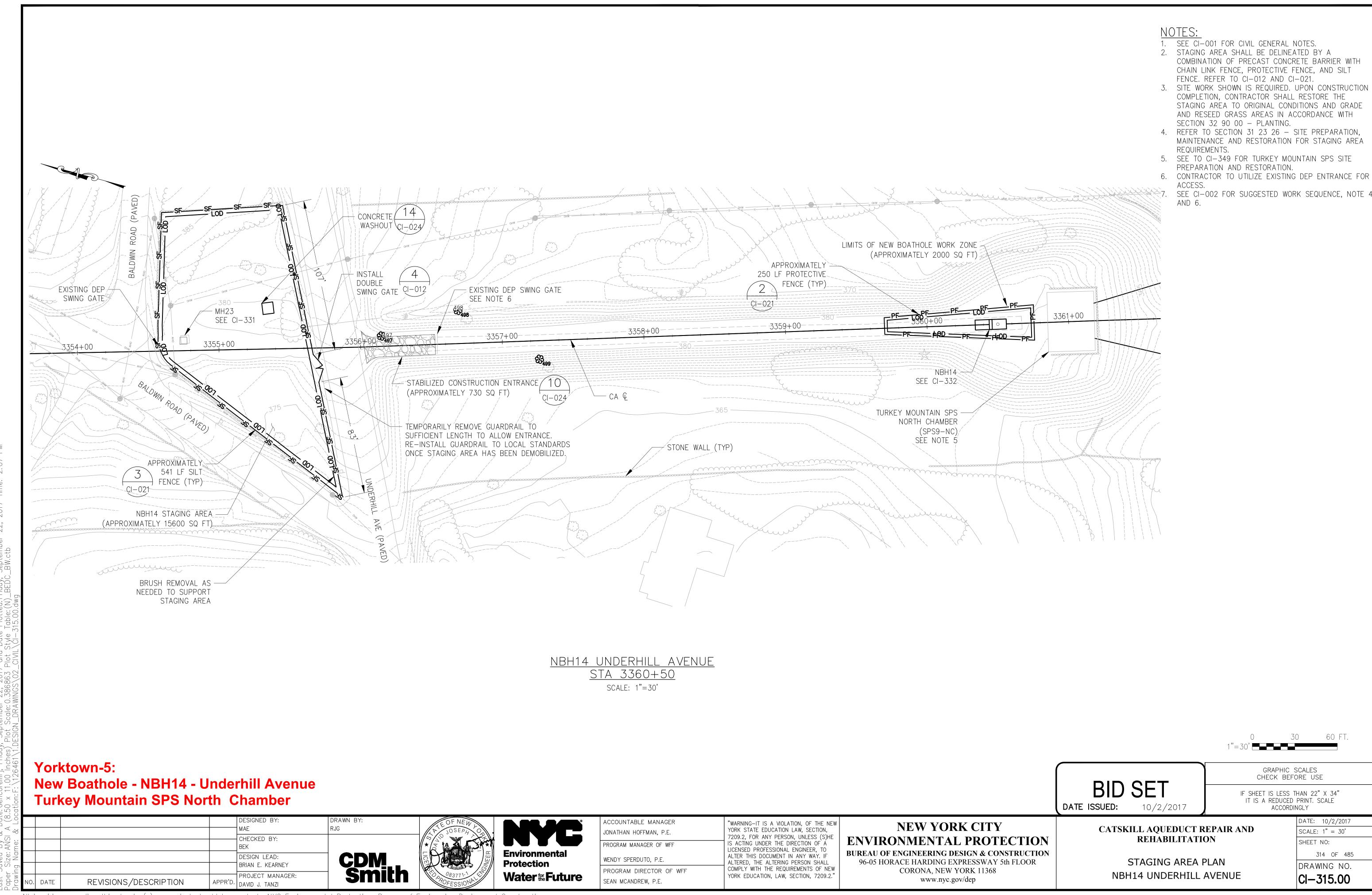
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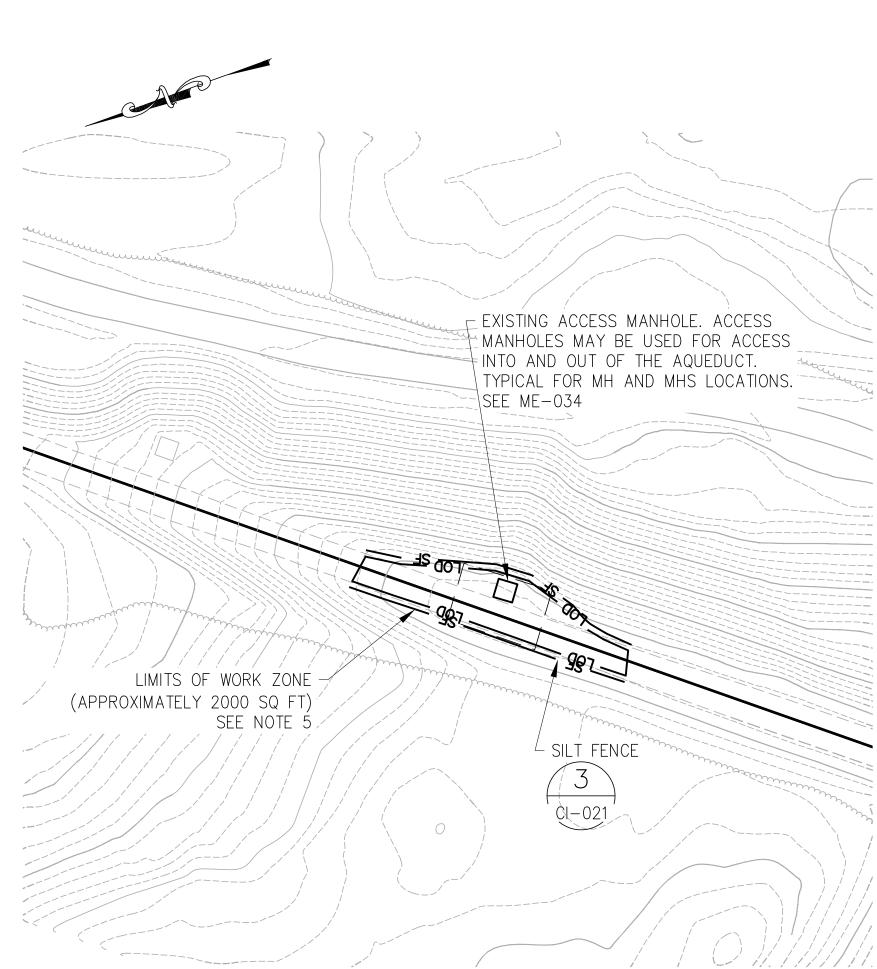
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

> STAGING AREA PLAN NBH13 JACOB ROAD

DATE: 10/2/2017 SCALE: 1" = 50' SHEET NO: 313 OF 485

> DRAWING NO. CI-314.00





TYPICAL ACCESS AND SPS ACCESS MANHOLE SITE PREP SCALE: 1"=30'

NOTES:

- 1. THE PLAN VIEW PRESENTS A TYPICAL REPRESENTATION OF THE RECOMMENDED SILT FENCE ARRANGEMENT. THIS ARRANGEMENT APPLIES TO ALL STATIONS LISTED IN THE SCHEDULE. CONTRACTOR SHALL PROVIDE A WORK ZONE LAYOUT PLAN IN ACCORDANCE WITH SECTION 31 23 26 SITE PREPARATION, MAINTENANCE AND RESTORATION TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 2. REMOVE EXISTING ACCESS LADDERS FROM WITHIN ACCESS MANHOLES. LADDERS SHALL BE REMOVED FROM SPS ACCESS MANHOLES ONLY IF THE CONTRACTOR UTILIZES THE MANHOLE DURING CONSTRUCTION. SEE ME-043.
- 3. ACCESS HATCHES SHALL BE REPLACED AT THE SPS ACCESS MANHOLES ONLY IF THE CONTRACTOR UTILIZES THE MANHOLE DURING CONSTRUCTION. SEE ME-034 FOR ACCESS HATCH DEMOLITION.
- 4. SPS ACCESS MANHOLES ARE FOR CONTINGENCY USE. SPS ACCESS MANHOLE USE SHALL BE APPROVED BY THE ENGINEER PRIOR TO OPENING.
- 5. LIMITS OF EXISTING ACCESS MANHOLE AND LIMITS OF SPS ACCESS MANHOLE WORK ZONES ARE SHOWN IN THIS SCHEDULE. LIMIT OF DISTURBANCE (LOD) SHOWN IS FOR SPS MANHOLES AND MHS MANHOLES. TOTAL DISTURBANCE FOR SPS MANHOLE (EXAMPLE: SPS-M1 (M, W, E) AND TYPICAL FOR OTHER SPS MANHOLES) NOT TO EXCEED 2000 SQFT. FOR MHS MANHOLES LIMIT OF DISTURBANCE REFER TO CI-333.
- 6. CONTRACTOR RESPONSIBLE FOR INCIDENTAL BIOFILM REMOVAL IN ACCORDANCE WITH SECTION 31 80 05 BIOFILM, SEDIMENT AND DEBRIS REMOVAL AND HANDLING.
- 7. REFER TO EA DRAWING SET FOR LOCATION OF ALL ACCESS MANHOLES.
- 8. UPON CONSTRUCTION COMPLETION, CONTRACTOR SHALL RESTORE ORIGINAL GRADE AND RESEED GRASS AREAS IN ACCORDANCE WITH SECTION 32 90 00 - PLANTING.
- 9. REFER TO SECTION 31 23 26 SITE PREPARATION, MAINTENANCE AND RESTORATION, FOR WORK ZONE REQUIREMENT.
- 10. FOR MH15 AND MH34 PERMANENT CLOSURE WORK, SEE ST-131 AND ST-132.
- 11. ACCESS HATCH REPLACEMENT WILL BE COMPLETED AS PART OF SPS BLOWOFF CHAMBER MECHANICAL WORK. SEE ME-034.
- 12. CONTRACTOR SHALL PROTECT ANY PORTION OF THE EXISTING TAP THAT IS LOCATED WITHIN THE AQUEDUCT THAT HAS POTENTIAL TO BE DAMAGED DURING MANHOLE REHABILITATION WORK. EXISTING TAP LOCATIONS ARE DENOTED WITH CC# AND ARE IDENTIFIED IN THE ACCESS MANHOLE AND SPS ACCESS MANHOLE REHABILITATION SCHEDULE ON THIS SHEET.
- 13. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 7 AND 8 14 NO BIOFILM SHALL BE STORED OR STOCKPILED OVERNIGHT AT THE ACCESS MANHOLE SITES

SPS1-M1 (W) SPS1-M1 (E) SPS1-M2 (M) SPS1-M2 (W) SPS1-M2 (E)	56+24 56+26 62+96	ESOPUS SPS ACCESS MANHOLE (W) M1 ESOPUS SPS ACCESS MANHOLE (E) M1	ESOPUS STEEL PIPE SIPHON ESOPUS STEEL PIPE SIPHON	2000 SF 2000 SF
SPS1-M2 (M) SPS1-M2 (W) SPS1-M2 (E)		ESOPUS SPS ACCESS MANHOLE (E) M1	ESOPUS STEEL PIPE SIPHON	2000 SE
SPS1-M2 (M) SPS1-M2 (W) SPS1-M2 (E)		(-)		
SPS1-M2 (W) SPS1-M2 (E)	02130	ESOPUS SPS ACCESS MANHOLE (M) M2	ESOPUS STEEL PIPE SIPHON	2000 SF
SPS1-M2 (E)	63+08	ESOPUS SPS ACCESS MANHOLE (W) M2	ESOPUS STEEL PIPE SIPHON	2000 SF
		` '		
	63+09	ESOPUS SPS ACCESS MANHOLE (E) M2	ESOPUS STEEL PIPE SIPHON	2000 SF
SPS2-M1 (M)	104+49	TONGORE SPS ACCESS MANHOLE (M) M1	TONGORE STEEL PIPE SIPHON	2000 SF
SPS2-M1 (E)	104+50	TONGORE SPS ACCESS MANHOLE (E) M1	TONGORE STEEL PIPE SIPHON	2000 SF
SPS2-M1 (W)	104+50	TONGORE SPS ACCESS MANHOLE (W) M1	TONGORE STEEL PIPE SIPHON	2000 SF
MH2	178+17	ACCESS MANHOLE	ESOPUS CCT	2000 SF
MH3	255+23	ACCESS MANHOLE	ESOPUS CCT	2000 SF
MH4	343+37	ACCESS MANHOLE	ESOPUS CCT	2000 SF
MH5	814+76	ACCESS MANHOLE	WALLKILL NORTH CCT	2000 SF
MH6/CC2/TAP	834+72	ACCESS MANHOLE & NEW PALTZ, VILLAGE AND TOWN	WALLKILL NORTH CCT	2000 SF
DECHLORINATION	070+10	CONNECTION CHAMBER	WALLIZH L NODTH CCT	2000 CF
MH7	930+19	ACCESS MANHOLE	WALLKILL NORTH CCT	2000 SF
MH8	1282+19	ACCESS MANHOLE	WALLKILL NORTH CCT	2000 SF
MH9	1441+66	ACCESS MANHOLE	ST ELMO CCT	2000 SF
MH10	1521+65	ACCESS MANHOLE	ST ELMO CCT	2000 SF
MH11	1590+37	ACCESS MANHOLE	ORANGE CCT	2000 SF
MH12	1687+55	ACCESS MANHOLE	ORANGE CCT	2000 SF
MH13	1760+92	ACCESS MANHOLE	ORANGE CCT	2000 SF
MH14	1808+27	ACCESS MANHOLE	ORANGE CCT	2000 SF
MH15 (NOTE 10)	1853+01	ACCESS MANHOLE	ORANGE CCT	2000 SF
(11012 10)	1000101	ACCESS MANHOLE & WORTLD MISSION SOCIETY (FMR.	OINTIVOL OOT	
MH16/CC5	1978+27	· ·	ORANGE CCT	2000 SF
CDC7 144 (11)	0000 55	MT. ST. JOSEPH CONVENT) CONNECTION CHAMBER	WACHINGTON COULDS STEEL SIZE SIZES	0000
SPS3-M1 (W)	2006+98	WASHINGTON SQUARE SPS ACCESS MANHOLE (W) M1	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M1 (E)	2007+00	WASHINGTON SQUARE SPS ACCESS MANHOLE (E) M1	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M1 (M)	2007+01	WASHINGTON SQUARE SPS ACCESS MANHOLE (M) M1	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M2 (W)	2012+81	WASHINGTON SQUARE SPS ACCESS MANHOLE (W) M2	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M2 (E)	2012+83	WASHINGTON SQUARE SPS ACCESS MANHOLE (M) M2	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
` '		· ,		
SPS3-M2 (M)	2012+84	WASHINGTON SQUARE SPS ACCESS MANHOLE (E) M2	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M3 (W)	2019+83	WASHINGTON SQUARE SPS ACCESS MANHOLE (W) M3	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M3 (E)	2019+84	WASHINGTON SQUARE SPS ACCESS MANHOLE (M) M3	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M3 (M)	2019+86	WASHINGTON SQUARE SPS ACCESS MANHOLE (E) M3	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M4 (W)	2026+85	WASHINGTON SQUARE SPS ACCESS MANHOLE (W) M4	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
` '		` '		
SPS3-M4 (E)	2026+86	WASHINGTON SQUARE SPS ACCESS MANHOLE (E) M4	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS3-M4 (M)	2026+91	WASHINGTON SQUARE SPS ACCESS MANHOLE (M) M4	WASHINGTON SQUARE STEEL PIPE SIPHON	2000 SF
SPS4-M1 (M)	2500+79	FOUNDRY BROOK SPS ACCESS MANHOLE (M) M1	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M1 (E)	2501+01	FOUNDRY BROOK SPS ACCESS MANHOLE (E) M1	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M1 (W)	2501+01	FOUNDRY BROOK SPS ACCESS MANHOLE (W) M1	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
` ,		` '		
SPS4-M2 (M)	2507+79	FOUNDRY BROOK SPS ACCESS MANHOLE (M) M2	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M2 (E)	2507+81	FOUNDRY BROOK SPS ACCESS MANHOLE (E) M2	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M2 (W)	2507+81	FOUNDRY BROOK SPS ACCESS MANHOLE (W) M2	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M3 (E)	2513+90	FOUNDRY BROOK SPS ACCESS MANHOLE (E) M3	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M3 (M)	2513+90	FOUNDRY BROOK SPS ACCESS MANHOLE (M) M3	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M3 (W)	2513+90	FOUNDRY BROOK SPS ACCESS MANHOLE (W) M3	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
` '		· /		
SPS4-M4 (W)	2518+14	FOUNDRY BROOK SPS ACCESS MANHOLE (W) M4	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M4 (E)	2518+33	FOUNDRY BROOK SPS ACCESS MANHOLE (E) M4	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
PS4-M4 (M)/CC9	2518+39	FOUNDRY BROOK SPS ACCESS MANHOLE (M) M4 AND	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
3+ W+ (W)/ CC3	2310+33	COLD SPRING CONNECTION CHAMBER	TOUNDIXT BROOK STELL THE SHITION	2000 31
SPS4-M5 (M)	2524+79	FOUNDRY BROOK SPS ACCESS MANHOLE (M) M5	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M5 (E)	2524+81	FOUNDRY BROOK SPS ACCESS MANHOLE (E) M5	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
SPS4-M5 (W)	2524+84	FOUNDRY BROOK SPS ACCESS MANHOLE (W) M5	FOUNDRY BROOK STEEL PIPE SIPHON	2000 SF
MH17	2547+62	ACCESS MANHOLE		2000 SF
			FOUNDRY BROOK CCT	
SPS5-M1 (W)	2637+32	INDIAN BROOK SPS ACCESS MANHOLE (W) M1	INDIAN BROOK STEEL PIPE SIPHON	2000 SF
SPS5-M1 (E)	2637+33	INDIAN BROOK SPS ACCESS MANHOLE (E) M1	INDIAN BROOK STEEL PIPE SIPHON	2000 SF
SPS5-M1 (M)	2637+48	INDIAN BROOK SPS ACCESS MANHOLE (M) M1	INDIAN BROOK STEEL PIPE SIPHON	2000 SF
MH18	2678+98	ACCESS MANHOLE	GARRISON CCT	2000 SF
MH19	2718+78	ACCESS MANHOLE	GARRISON CCT	2000 SF
		ACCESS MANHOLE AND FRIARS OF THE ATONEMENT		
MH20/CC10	2840+94	CONNECTION CHAMBER	CONTINENTALVILLE CCT	2000 SF
SPS6-M1 (W)	2876+82	SPROUT BROOK SPS ACCESS MANHOLE (W) M1	SPROUT BROOK STEEL PIPE SIPHON	2000 SF
` '				
SPS6-M1 (M)	2876+82	SPROUT BROOK SPS ACCESS MANHOLE (M) M1	SPROUT BROOK STEEL PIPE SIPHON	2000 SF
SPS6-M1 (E)	2876+84	SPROUT BROOK SPS ACCESS MANHOLE (E) M1	SPROUT BROOK STEEL PIPE SIPHON	2000 SF
` '		·		
SPS6-M2 (M)	2883+09	SPROUT BROOK SPS ACCESS MANHOLE (M) M2	SPROUT BROOK STEEL PIPE SIPHON	2000 SF
SPS6-M2 (W)	2883+95	SPROUT BROOK SPS ACCESS MANHOLE (W) M2	SPROUT BROOK STEEL PIPE SIPHON	2000 SF
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SPS6-M2 (E)	2884+10	SPROUT BROOK SPS ACCESS MANHOLE (E) M2	SPROUT BROOK STEEL PIPE SIPHON	2000 SF
SPS7-M1 (E)	2955+37	PEEKSKILL SPS ACCESS MANHOLE (E) M1	PEEKSKILL STEEL PIPE SIPHON	2000 SF
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SPS7-M1 (M)	2955+38	PEEKSKILL SPS ACCESS MANHOLE (M) M1	PEEKSKILL STEEL PIPE SIPHON	2000 SF
(NOTE 11)				
SPS7-M1 (W)	2955+40	PEEKSKILL SPS ACCESS MANHOLE (W) M1	PEEKSKILL STEEL PIPE SIPHON	2000 SF
` '		\		
SPS7-M2 (E)	2962+57	PEEKSKILL SPS ACCESS MANHOLE (E) M2	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M2 (M)	2962+59	PEEKSKILL SPS ACCESS MANHOLE (M) M2	PEEKSKILL STEEL PIPE SIPHON	2000 SF
` '		· ,		
SPS7-M2 (W)	2962+60	PEEKSKILL SPS ACCESS MANHOLE (W) M2	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M3 (E)	2969+81	PEEKSKILL SPS ACCESS MANHOLE (E) M3	PEEKSKILL STEEL PIPE SIPHON	2000 SF
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SPS7-M3 (M)	2969+82	PEEKSKILL SPS ACCESS MANHOLE (M) M3	PEEKSKILL STEEL PIPE SIPHON	2000 SI
The state of the s	2969+84	PEEKSKILL SPS ACCESS MANHOLE (W) M3	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SDS7_N/3 /\/\	2000104			
` ,			DEEKCKILL STEEL DIDE SIDLION	2000 SF
SPS7-M3 (W) SPS7-M4 (E)	2976+65	PEEKSKILL SPS ACCESS MANHOLE (E) M4	PEEKSKILL STEEL PIPE SIPHON	2000 31
SPS7-M4 (E)		· · · · · · · · · · · · · · · · · · ·		
` '	2976+65 2976+66 2976+70	PEEKSKILL SPS ACCESS MANHOLE (E) M4 PEEKSKILL SPS ACCESS MANHOLE (M) M4 PEEKSKILL SPS ACCESS MANHOLE (M) M4	PEEKSKILL STEEL PIPE SIPHON PEEKSKILL STEEL PIPE SIPHON PEEKSKILL STEEL PIPE SIPHON	2000 SF 2000 SF

ACCESS MANHOLE AND SPS ACCESS MANHOLE REHABILITATION SCHEDULE

STRUCTURE NAME

ACCESS MANHOLE

ESOPUS SPS ACCESS MANHOLE (M) M1

	ACCE	SS MANHOLE AND SPS ACCESS MANHOLE REHA	BILITATION SCHEDULE	
STRUCTURE ID	STATION	STRUCTURE NAME	LOCATION	LIMTS OF WORK ZONE
SPS7-M5 (M)	2984+13	PEEKSKILL SPS ACCESS MANHOLE (M) M5	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M5 (E)	2984+14	PEEKSKILL SPS ACCESS MANHOLE (E) M5	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M5 (W)	2984+14	PEEKSKILL SPS ACCESS MANHOLE (W) M5	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M6 (E)	2989+53	PEEKSKILL SPS ACCESS MANHOLE (E) M6	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M6 (M)	2989+53	PEEKSKILL SPS ACCESS MANHOLE (M) M6	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M6 (W)	2989+54	PEEKSKILL SPS ACCESS MANHOLE (W) M6	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M7 (M)	2996+88	PEEKSKILL SPS ACCESS MANHOLE (M) M7	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M7 (E)	2996+96	PEEKSKILL SPS ACCESS MANHOLE (E) M7	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M7 (W)	2996+98	PEEKSKILL SPS ACCESS MANHOLE (W) M7	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M8 (M)	3003+96	PEEKSKILL SPS ACCESS MANHOLE (M) M8	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M8 (E)	3003+97	PEEKSKILL SPS ACCESS MANHOLE (E) M8	PEEKSKILL STEEL PIPE SIPHON	2000 SF
SPS7-M8 (W)	3003+98	PEEKSKILL SPS ACCESS MANHOLE (W) M8	PEEKSKILL STEEL PIPE SIPHON	2000 SF
MH21/CC13	3052+42	ACCESS MANHOLE & NWJWW CONNECTION CHAMBER	PEEKSKILL CCT	2000 SF
SPS8-M1 (M)	3233+27	HUNTERS BROOK SPS ACCESS MANHOLE (M) M1	HUNTERS BROOK STEEL PIPE SIPHON	2000 SF
SPS8-M1 (E)	3233+52	HUNTERS BROOK SPS ACCESS MANHOLE (E) M1	HUNTERS BROOK STEEL PIPE SIPHON	2000 SF
SPS8-M1 (W)	3233+62	HUNTERS BROOK SPS ACCESS MANHOLE (W) M1	HUNTERS BROOK STEEL PIPE SIPHON	2000 SF
MH22	3307+23	ACCESS MANHOLE	YORKTOWN CCT	2000 SF
MH23	3354+75	ACCESS MANHOLE	YORKTOWN CCT	2000 SF
SPS9-M1 (E)	3369+45	TURKEY MOUNTAIN SPS ACCESS MANHOLE (E) M1	TURKEY MOUNTAIN STEEL PIPE SIPHON	2000 SF
SPS9-M1 (M)	3369+49	TURKEY MOUNTAIN SPS ACCESS MANHOLE (M) M1	TURKEY MOUNTAIN STEEL PIPE SIPHON	2000 SF
SPS9-M1 (W)	3369+54	TURKEY MOUNTAIN SPS ACCESS MANHOLE (W) M1	TURKEY MOUNTAIN STEEL PIPE SIPHON	2000 SF
MH24	3447+82	ACCESS MANHOLE	CROTON CCT	2000 SF
MH25	3512+19	ACCESS MANHOLE	KITCHAWAN CCT	2000 SF
MHZb	3608+40	ACCESS MANHULE	MILLWOOD NORTH CCT	2000 SF
MH27/CC15	3653+80	ACCESS MANHOLE AND NEW CASTLE AND PLEASANTVILLE, MILLWOOD CONNECTION CHAMBER	MILLWOOD SOUTH CCT	2000 SF
MH28	3704+36	ACCESS MANHOLE	SARLES CCT	2000 SF
SPS10-M1 (E)	3773+27	HARLEM RR SPS ACCESS MANHOLE (E) M1	HARLEM RR STEEL PIPE SIPHON	2000 SF
SPS10-M1 (M)	3773+30	HARLEM RR SPS ACCESS MANHOLE (W) M1	HARLEM RR STEEL PIPE SIPHON	2000 SF
SPS10-M1 (W)	3773+37	HARLEM RR SPS ACCESS MANHOLE (M) M1	HARLEM RR STEEL PIPE SIPHON	2000 SF
MH29	3793+67	ACCESS MANHOLE	SARLES CCT	2000 SF
MH30	3837+64	ACCESS MANHOLE	PLEASANTVILLE CCT	2000 SF
MH31	3848+54	ACCESS MANHOLE	PLEASANTVILLE CCT	2000 SF
MH32	3874+59	ACCESS MANHOLE	PLEASANTVILLE CCT	2000 SF
MH33	3913+74	ACCESS MANHOLE	PLEASANTVILLE CCT	2000 SF
MH34 (NOTE 10)	4045+07	ACCESS MANHOLE (LOCATED 15 FT OFFSHORE TO BE SEALED)	PLEASANTVILLE CCT	2000 SF
MH35	4082+60	ACCESS MANHOLE/KENSICO AERATOR FEED	KENSICO CCT	2000 SF

Yorktown-5:

Yorktown CCT Access Manhole

Yorktown-6:

Turkey Mountain SPS Access Manholes

Yorktown-9:

Croton CCT Access Manhole

Yorktown-11:

Kitchawan CCT Access Manhole



BID SET DATE ISSUED: 10/2/2017

GRAPHIC SCALES CHECK BEFORE USE IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

	14	. NO BIOTIEM STALL BE STONED ON STO	CKI ILLU	OVERNIGHT AT THE ACCE	.55 WANTOLL SITES.
				DESIGNED BY:	DRAWN BY:
				MAE	RJG
				CHECKED BY:	
				BEK	
				DESIGN LEAD:	CDM_
				BRIAN E. KEARNEY	
NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.	PROJECT MANAGER: DAVID J. TANZI	5mit

STRUCTURE ID

SPS1-M1 (M)

STATION

33+86

56+16



JONATHAN HOFFMAN, P.E. ROGRAM MANAGER OF WFF WENDY SPERDUTO, P.E. ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW PROGRAM DIRECTOR OF WFF YORK EDUCATION, LAW, SECTION, 7209.2. SEAN MCANDREW, P.E.

YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HF IS ACTING UNDER THE DIRECTION OF Á LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF

LIMTS OF

WORK ZONE

2000 SF

2000 SF

LOCATION

ESOPUS CCT

ESOPUS STEEL PIPE SIPHON

NEW YORK CITY ENVIRONMENTAL PROTECTION

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

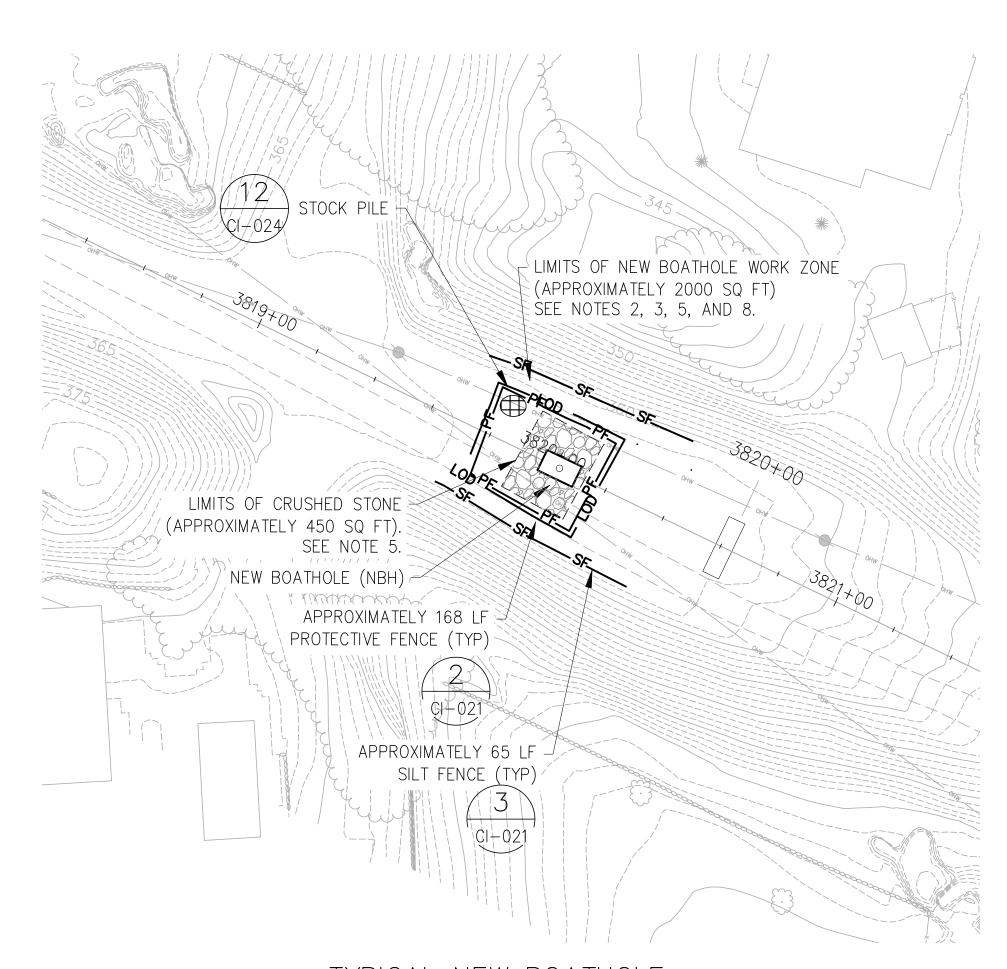
SITE PREPARATION AND RESTORATION ACCESS MANHOLE AND SPS ACCESS MANHOLE - TYPICAL

DATE: 10/2/2017 SCALE: 1" = 30'SHEET NO: 317 OF 485 DRAWING NO.

CI-331.00



	EXISTING BOATHOLE SCHEDULE										
STRUCTURE ID	STATION	LOCATION	ACCESS TO AQUEDUCT	NEW AIR VENT	LIMITS OF WORK ZONE	LADDER REMOVAL					
BH1	460+19	ESOPUS CCT	Y	N	1200 SF	Y					
BH2	698+19	BONTICOU CCT	Y	N	1200 SF	Y					
ВН3	969+32	WALLKILL NORTH CCT	Y	N	1200 SF	Y					
BH4	1205+22	WALLKILL NORTH CCTL	Y	N	1200 SF	Y					
BH5/NV5	1527+00	ST. ELMO SIPHON	Y	Y	1200 SF	Y					
BH6/NV6	1530+30	ST. ELMO SIPHON	Y	Y	1200 SF	Y					
BH7	2107+62	ORANGE CCT	Y	N	1200 SF	Y					
ВН8	2411+64	BREAKNECK CCT	Y	N	1200 SF	Y					
BH9/NV7	3425+33	CROTON CCT	Y	N	1200 SF	Y					
BH10	3608+70	PUTNAM SIPHON	Y	N	1200 SF	Y					
BH11	3615+65	PUTNAM SIPHON	Y	N	1200 SF	Y					
BH12	3820+57	PLEASANTVILLE VENTURI METER	Y	N	1200 SF	Y					
BH13	3824+91	PLEASANTVILLE VENTURI METER	Y	N	1200 SF	Y					
BH14	4095+45	KENSICO RESERVOIR	Y	N	1200 SF	Y					



TYPICAL NEW BOATHOLE SCALE: 1"=30'

NEW BOATHOLE SCHEDULE										
STRUCTURE ID	STATION	LOCATION	STAGING AREA PLAN	LIMITS OF WORK ZONE	LIMITS OF EARTHWORK					
NBH1	48+66	ESOPUS STEEL PIPE SIPHON	CI- 341	2000 SF	500 SF					
NBH2	100+24	TONGORE STEEL PIPE SIPHON	CI-342	2000 SF	500 SF					
NBH3	383+60	ESOPUS CCT/ PEAK ROAD	CI-312	2000 SF	500 SF					
NBH4	969+05	WALLKILL NORTH CCT	CI-322	2000 SF	500 SF					
NBH5	1526+73	ST ELMO CCT	CI-313	2000 SF	500 SF					
NBH6	1810+80	ORANGE CCT	_	2000 SF	500 SF					
NBH7	1999+20	WASHINGTON SQUARE STEEL PIPE SIPHON	CI-343	2000 SF	500 SF					
NBH8	2107+35	WASHINGTON SQUARE STEEL PIPE SIPHON	CI-326	2000 SF	500 SF					
NBH9	2493+86	FOUNDRY BROOK STEEL PIPE SIPHON	CI-344	2000 SF	500 SF					
NBH10	2633+42	INDIAN BROOK STEEL PIPE SIPHON	CI-345	2000 SF	500 SF					
NBH11	2869+17	SPROUT BROOK STEEL PIPE SIPHON	CI-346	2000 SF	500 SF					
NBH12	2916+60	PEEKSKILL STEEL PIPE SIPHON	CI-347	2000 SF	500 SF					
NBH13	3225+83	HUNTERS BROOK STEEL PIPE SIPHON	CI-314	2000 SF	500 SF					
NBH14	3360+50	TURKEY MOUNTAIN STEEL PIPE SIPHON	CI-315	2000 SF	500 SF					
NBH15	3602+40	MILLWOOD SOUTH CCT	CI-316	2000 SF	500 SF					
NBH16	3769+62	HARLEM RAILROAD STEEL PIPE SIPHON	CI-350	2000 SF	500 SF					
NBH17	3820+32	PLEASANTVILLE CCT	CI-317	2000 SF	500 SF					
NBH18	3924+74	CATSKILL INFLUENT CHAMBER	CI-328	2000 SF	500 SF					

- 1. THE PLAN VIEW PRESENTS A TYPICAL REPRESENTATION OF THE RECOMMENDED SILT FENCE ARRANGEMENT. THIS ARRANGEMENT APPLIES TO ALL STATIONS LISTED IN THE SCHEDULE. CONTRACTOR SHALL PROVIDE A WORK ZONE LAYOUT PLAN IN ACCORDANCE WITH SECTION 31 23 26 -SITE PREPARATION, MAINTENANCE AND RESTORATION TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 2. FOR NEW BOATHOLE WORK, SEE ST-061 THRU ST-065
- 3. REFER TO EA DRAWING SET FOR LOCATION OF ALL EXISTING AND NEW BOATHOLES.
- 4. CONTRACTOR SHALL PLACE A MINIMUM OF 500 SQ ST OF 6" NYSDOT #2 CRUSHED STONE OVER GEOTEXTILE FABRIC CENTERED AROUND THE EXISTING BOATHOLE IF THE BOATHOLE IS BEING USED FOR BIOFILM, SEDIMENT AND DEBRIS REMOVAL. REFER TO DETAIL 7/CI-012.
- 5. CONTRACTOR SHALL PLACE A MINIMUM OF 450 SQ FT OF 6" NYSDOT #2 CRUSHED STONE OVER GEOTEXTILE FABRIC AROUND THE NEW BOATHOLE. REFER TO DETAIL 7/CI-012. DURING NBH EXCAVATION THE LIMITS OF THE STONE SHALL BE BEYOND THE EXCAVATION LIMITS AS SHOWN ON ST-062. AFTER COMPLETION OF THE NEW BOATHOLE WORK ADDITIONAL STONE SHALL BE PLACED CENTERED AROUND NBH AS SHOWN FOR USE DURING BIOFILM REMOVAL.
- 6. REFER TO SECTION 31 23 26 SITE PREPARATION, MAINTENANCE, AND RESTORATION FOR WORK ZONE REQUIREMENTS.
- 7. FOR NEW AIR VENT WORK, SEE CI-336. ACCESS HATCH REPLACEMENT AND LADDER REMOVAL WILL BE PART OF NEW AIR VENT MECHANICAL WORK. SEE ME-057 AND ME-058.
- 8. THE CONTRACTOR SHALL MAINTAIN ACCESS AROUND ALL NEW BOATHOLES AT ALL TIMES UNLESS A REQUEST FOR DEVIATION IS MADE AND WRITTEN APPROVED GRANTED BY THE CITY.
- 9. EXISTING BOATHOLE REHABILITATION SHALL BE AS DIRECTED BY THE ENGINEER.
- 10. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 5 AND 6.

Yorktown-2:

New Boathole - NBH13 - Jacob Road

Yorktown-5:

New Boathole - NBH14 - Underhill Avenue

Yorktown-9:

Croton CCT Boathole - BH9



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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

SCALE: 1" = 30'SHEET NO: 318 OF 485 DRAWING NO.

DATE: 10/2/2017

CI-332.00

SITE PREPARATION AND RESTORATION NEW AND EXISTING BOATHOLES -TYPICAL

Environmental PROGRAM DIRECTOR OF WFF **Water fig Future** SEAN MCANDREW, P.E.

Protection

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NEW YORK CITY ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION

96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

Smith

DESIGNED BY:

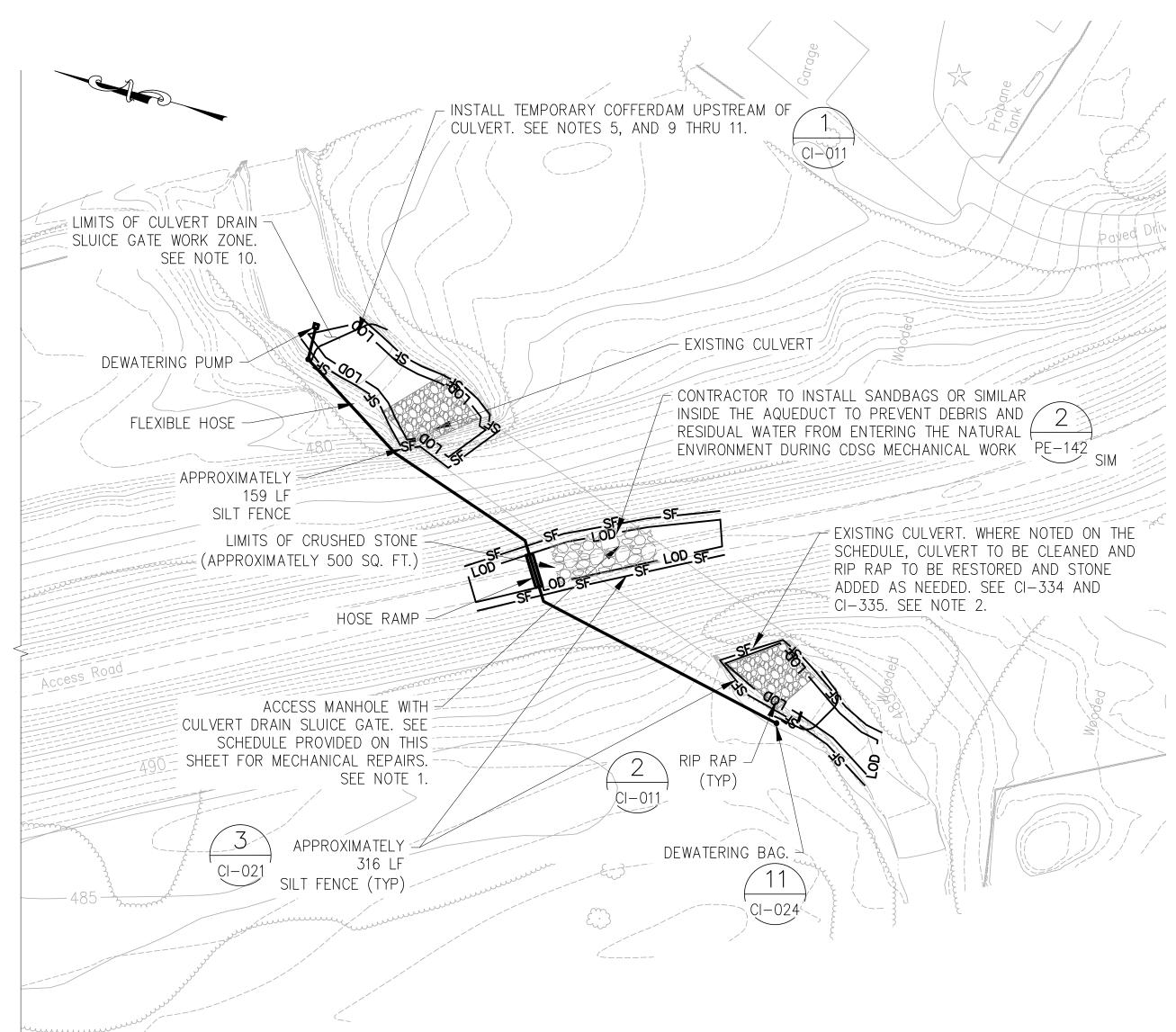
CHECKED BY:

DESIGN LEAD:

REVISIONS/DESCRIPTION

BRIAN E. KEARNEY

PROJECT MANAGER:



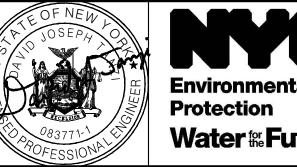
	ACCESS MANHOLE CULVERT DRAIN SLUICE GATE SCHEDULE												
STRUCTURE ID	STATION	LOCATION	DESCRIPTION OF MECHANICAL WORK (ME-032)	LADDER REMOVAL (ME-031)	STEEL ACCESS HATCH REPLACEMENT (ME-034)	RIP-RAP RESTORATION (NOTE 4)	CULVERT CLEANING (NOTE 4)	LIMITS OF WORK ZONE					
MHS1	131+57	ESOPUS CCT	SEAL	Y	Y	N	N	2000 SF					
MHS2	208+65	ESOPUS CCT	SEAL	Y	Y	N	N	2000 SF					
MHS3	317+78	ESOPUS CCT	SEAL	Y	Y	N	N	2000 SF					
MHS4	386+85	ESOPUS CCT	SEAL	Y	Y	N	N	2000 SF					
MHS5	770+09	WALLKILL NORTH CCT	SEAL	Y	Y	N	N	2000 SF					
MHS6	846+74	WALLKILL NORTH CCT	SEAL	Y	Y	N	N	2000 SF					
MHS7	890+18	WALLKILL NORTH CCT	SEAL	Y	Y	N	N	2000 SF					
MHS8	1333+22	WALLKILL SOUTH CCT	SEAL	Y	Y	N	N	2000 SF					
MHS9/CC3	1390+22	ST. ELMO CCT	SEAL	Y	Y	N	N	2000 SF					
MHS10	1521+65	ST. ELMO CCT	SEAL	Y	Y	N	N	2000 SF					
MHS11	1649+12	ORANGE CCT	SEAL	Υ	Υ	N	N	2000 SF					
MHS12	1708+97	ORANGE CCT	SEAL	Υ	Υ	N	N	2000 SF					
MHS13	1898+63	ORANGE CCT	SEAL	Υ	Υ	N	N	2000 SF					
MHS14/CC4	1944+61	ORANGE CCT	SEAL	Y	Y	N	N	2000 SF					
MHS15/CC7	2097+61	ORANGE CCT	SEAL	Y	Y	N	N	2000 SF					
MHS16	2424+12	BREAKNECK CCT	SEAL	Y	Y	N	N	2000 SF					
MHS17	2572+99	NELSONVILLE CCT	SEAL	Y	Y	N	N	2000 SF					
MHS18	2598+69	GARRISON CCT	SEAL	Y	Y	N	N	2000 SF					
MHS19	2701+67	GARRISON CCT	SEAL (NOTE 3)	Y	Y	N	N	2000 SF					
MHS20/CC11	2918+23	CAT HILL CCT	SEAL	Y	Y	N	N	2000 SF					
MHS21	3029+45	PEEKSKILL CCT	SEAL	Y	Y	N	N	2000 SF					
MHS22	3081+57	PEEKSKILL CCT	SEAL	Y	Y	N	N	2000 SF					
MHS23	3120+46	PEEKSKILL CCT	SEAL	Y	Y	N	N	2000 SF					
MHS24	3141+71	PEEKSKILL CCT	SEAL	Y	Y	N	N	2000 SF					
MHS25	3193+03	PEEKSKILL CCT	SEAL	Y	Y	N	N	2000 SF					
MHS26	3320+72	YORKTOWN CCT	SEAL	Y	Y	N	N	2000 SF					
MHS27	3339+32	YORKTOWN CCT	SEAL	Y	Y	N	N	2000 SF					
MHS28	3482+33	MILLWOOD NORTH CCT	REPLACE	Y	Y	Y	Y (NOTE 12)	6000 SF					
MHS29	3542+58	MILLWOOD NORTH CCT	REPLACE	Y	Y	Y	Y	6000 SF					
MHS30	3575+73	MILLWOOD NORTH CCT	REPLACE	Y	Y	Y	N	6000 SF					
MHS31	3633+45	MILLWOOD NORTH CCT	REPLACE	Y	Υ	Y	Y (NOTE 12)	6000 SF					
MHS32	3710+55	SARLES CCT	REPLACE	Y	Y	Y	Y	6000 SF					
MHS33	3811+60	PLEASANTVILLE CCT	REPLACE	Y	Y	Y	Y	6000 SF					

- 1. THE PLAN VIEW PRESENTS A TYPICAL REPRESENTATION OF THE RECOMMENDED SILT FENCE ARRANGEMENT AT MHS28, MHS29, AND MHS31 THRU MHS33. THE SILT FENCE ARRANGEMENT MAY BE ALTERED FOR MHS1 THRU MHS27 AND MHS30 WHERE RIPRAP RESTORATION AND CULVERT NOT CLEANING IS NOT REQUIRED UPON THE REQUEST OF THE CONTRACTOR AND APPROVAL BY THE ENGINEER. THE PLAN VIEW PRESENTS A WORSE CASE BYPASS PUMPING ARRANGEMENT AT MHS28, MHS29 AND MHS31 THRU MHS33. AT THE CONTRACTOR'S OPTION WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY INTERNALLY BYPASS OR BYPASS THROUGH THE SECOND CULVERT FOR CULVERT CLEANING AND MECHANICAL REPAIR. CONTRACTOR SHALL PROVIDE A WORK ZONE LAYOUT PLAN IN ACCORDANCE WITH SECTION 31 23 26 - SITE PREPARATION, MAINTENANCE AND RESTORATION TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 2. CONTRACTOR RESPONSIBLE FOR UNWATERING AND INCIDENTAL BIOFILM REMOVAL IN ACCORDANCE WITH SPECIFICATION 31 80 05-BIOFILM, SEDIMENT AND DEBRIS REMOVAL AND HANDLING.
- 3. MHS19 CONTAINS 2 EXISTING 10" SLUICE GATES TO BE PERMANENTLY SEALED.
- 4. SEE CI-334 AND CI-355 FOR CULVERT SECTIONS AND RIPRAP RESTORATION AND CULVERT CLEANING.
- 5. CONTRACTOR TO DIVERT UPSTREAM WATER FLOW OF CULVERT DOWNSTREAM OF TURBIDITY BARRIER IF NECESSARY FOR UPSTREAM CULVERT RESTORATION USING SANDBAGS AND HOSE.
- 6. SEE EA DRAWING SET FOR LOCATIONS OF ALL CULVERT DRAIN SLUICE GATE ACCESS MANHOLES.
- 7. REFER TO SECTION 31 23 26 SITE PREPARATION, MAINTENANCE, AND RESTORATION FOR WORK ZONE REQUIREMENTS.
- 8. SEE ME-031 THRU ME-033 FOR CD56 MECHANICAL WORK AT MHS1 THRU MHS33.
- CONTRACTOR SHALL VISUALLY MONITOR WATER FOR TURBID CONDITIONS DURING CONSTRUCTION. IF A VISUAL CHANGE IS OBSERVED BETWEEN WATER UPSTREAM AND DOWNSTREAM OF CONSTRUCTION THEN THE CONTRACTOR MUST CEASE OPERATION OF THE ACTIVITY CAUSING THE TURBIDITY EVENT. THE CONTRACTOR SHALL NOT RECOMMENCE WITH ACTIVITY UNTIL THE CONDITION CAUSING THE TURBIDITY IS RESOLVED AND INSPECTED BY THE ENGINEER.
- 10. CONTRACTOR TO EVALUATE FLOW THROUGH EXISTING CULVERT AND PROVIDE DEWATERING PUMP, FLEXIBLE HOSE, DEWATERING BAG AND STABILIZED DRAINAGE AREA TO BYPASS FLOW AROUND OR THROUGH EXISTING CULVERT TO ALLOW FOR CULVERT CLEANING AND RIPRAP RESTORATION AT MHS28, MHS29, AND MHS31 THRU
- 11. IN-WATER WORK INVOLVING A FULL DIVERSION WILL NOT BE PERMITTED IF HEAVY RAINFALL IS FORECAST WITHIN THE NEXT 24 HOURS OR IF A HEAVY RAINFALL HAS OCCURRED WITH THE PAST 48 HOURS. FULL DIVERSIONS WILL BE REMOVED AT THE END OF EACH WORK DAY TO ALLOW FOR OPEN STREAM FLOW. REFER TO 01 14 00 -WORK RESTRICTIONS FOR SEASONAL RESTRICTIONS ON FULL DIVERSIONS.
- 12. TWIN CULVERTS TO BE CLEANED AT THIS LOCATION.
- 13. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 10 AND 11.

Yorktown-10: **Kitchawan CCT Access Manhole and Culvert Drain**

DESIGNED BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER: APPR'D. DAVID J. TANZI REVISIONS/DESCRIPTION NO. DATE

CDM Smith





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SEAN MCANDREW, P.E.

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REHABILITATION SITE PREPARATION AND RESTORATION ACCESS MANHOLE CULVERT

DRAIN SLUICE GATE-TYPICAL

CATSKILL AQUEDUCT REPAIR AND

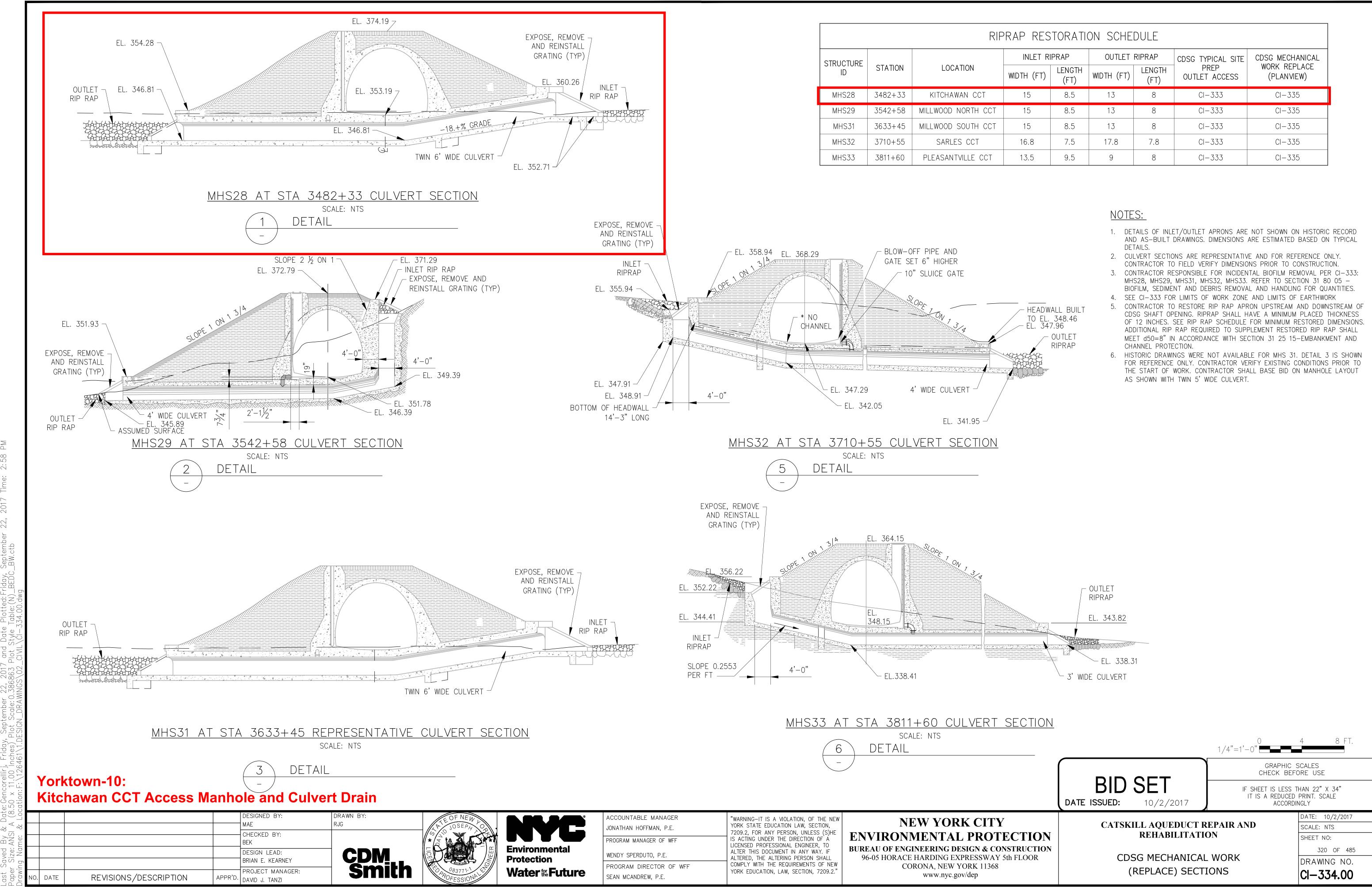
DATE: 10/2/2017 SCALE: 1" = 30'SHEET NO: 319 OF 485

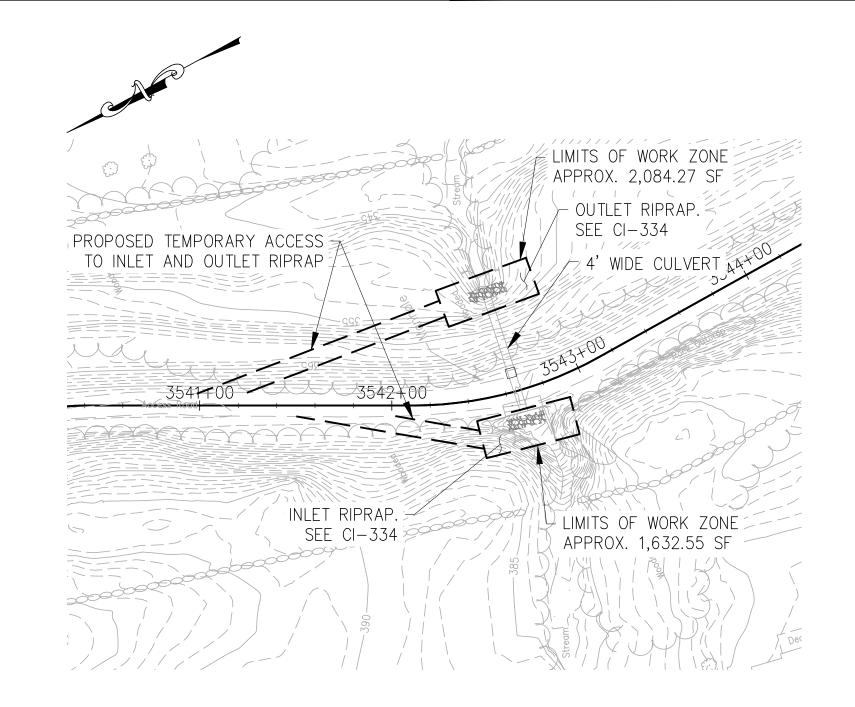
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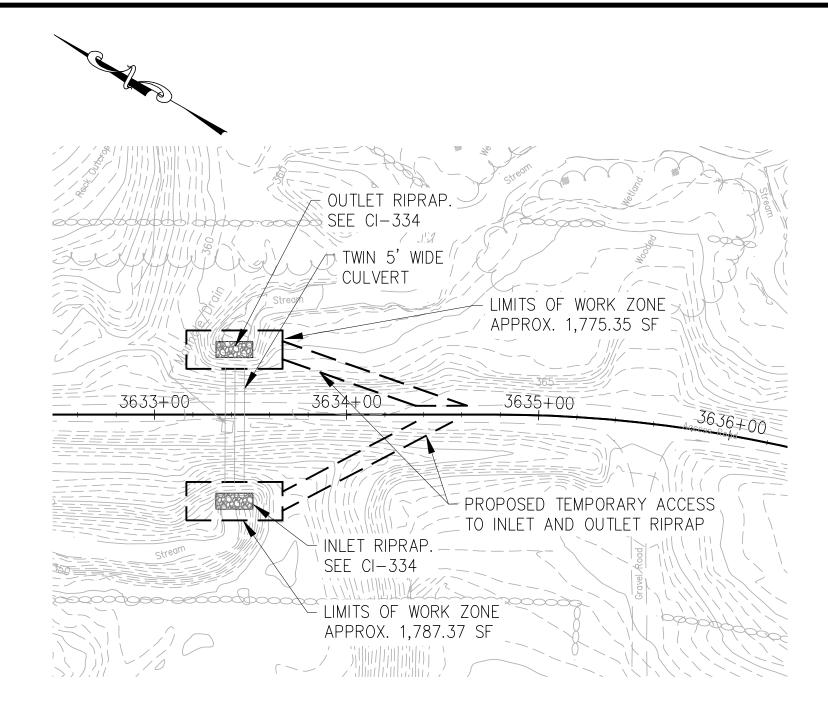
ACCESS MANHOLE CULVERT DRAIN SLUICE GATE

SCALE: 1"=30'

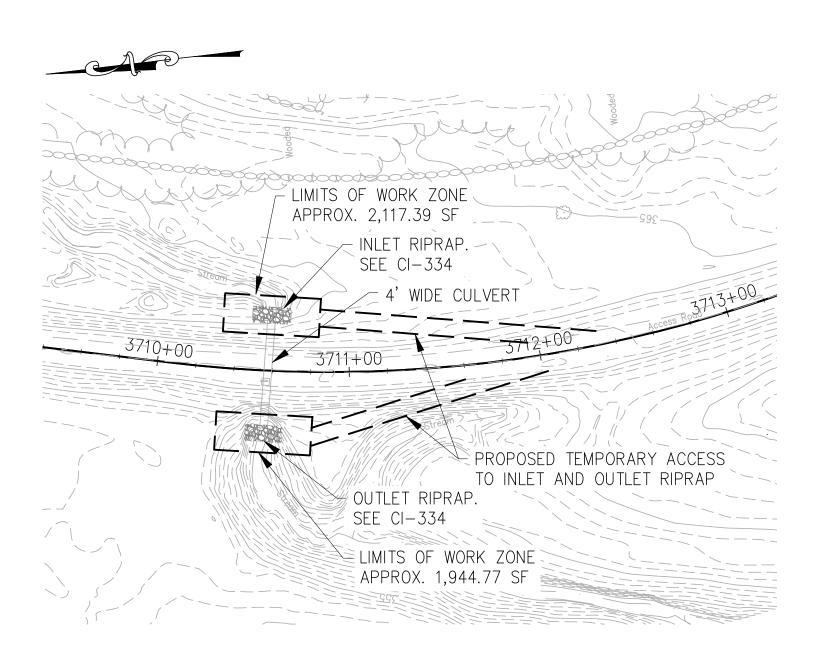




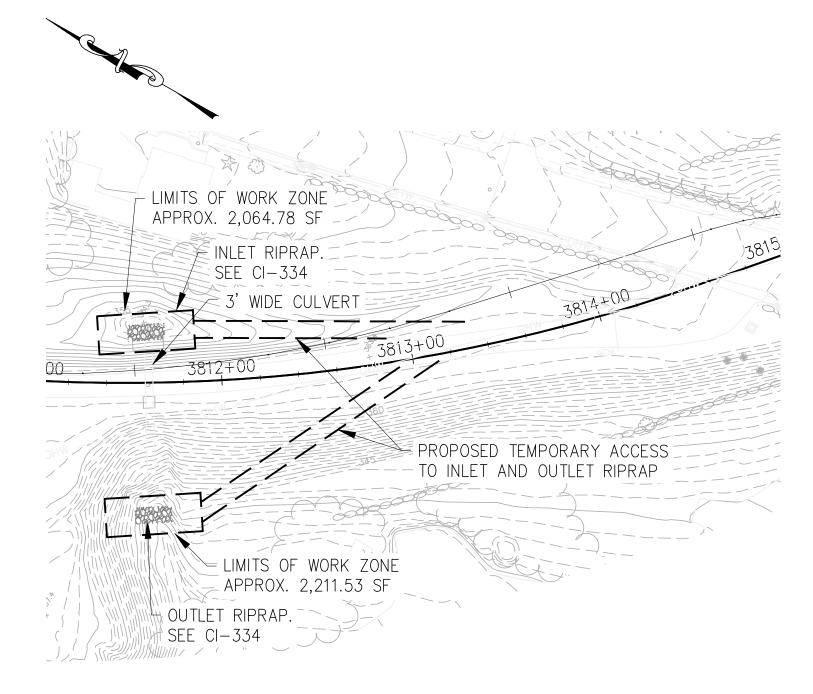
MHS29 STA 3542+58 SCALE: 1"=50'



MHS31 STA 3633+45 SCALE: 1"=50'



MHS32 STA 3710+55 SCALE: 1"=50'



MHS33 STA 3811+60 SCALE: 1"=50'

ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

PROGRAM DIRECTOR OF WFF

WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

NOTES:

- 1. SEE CI-001 FOR CIVIL GENERAL NOTES.
- THE PLAN VIEW PRESENTS PROPOSED TEMPORARY ACCESS ARRANGEMENTS AT MHS28, MHS29, AND MHS31 THRU MHS33 TO FACILITATE CULVERT CLEANING AND RIPRAP RESTORATION. CONTRACTOR SHALL PROVIDE A WORK ZONE LAYOUT PLAN IN ACCORDANCE WITH SECTION 31 23 26 -SITE PREPARATION, MAINTENANCE AND RESTORATION TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 3. MINOR GRADING MAY BE REQUIRED TO ACCESS THE INLET AND OUTLET RIPRAP AREA AS DETERMINED NECESSARY BY THE CONTRACTOR AND AS APPROVED BY THE ENGINEER
- 4. REFER TO SECTION 31 23 26 SITE PREPARATION, MAINTENANCE, AND RESTORATION FOR WORK ZONE REQUIREMENTS

BID SET

DATE ISSUED:

5. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 10 AND 11.

Yorktown-10: **Kitchawan CCT Access Manhole and Culvert Drain**

DESIGNED BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER: APPR'D. DAVID J. TANZI REVISIONS/DESCRIPTION

CDM Smith



Water # Future

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

CDSG MECHANICAL WORK (REPLACE) PLANS

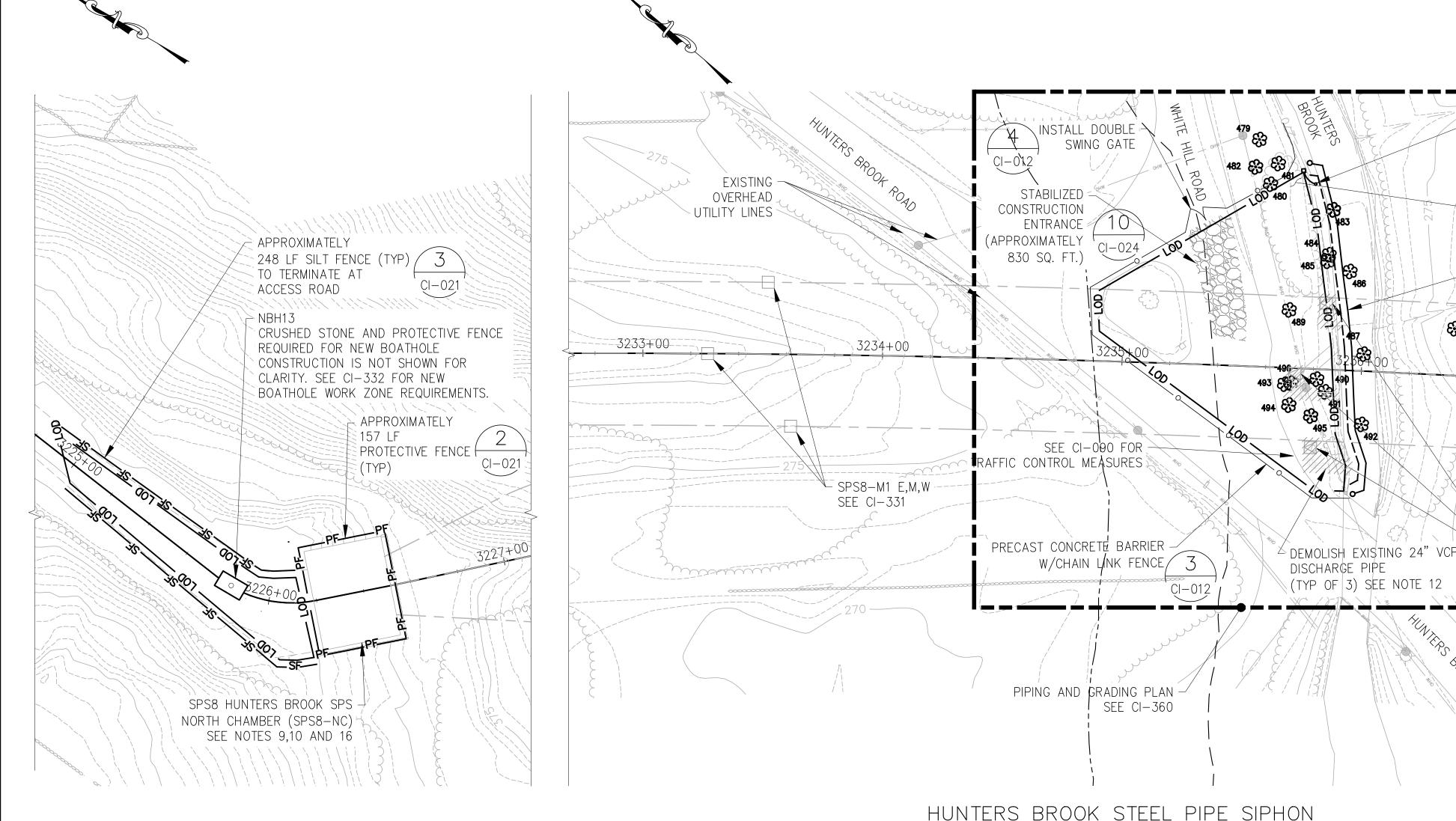
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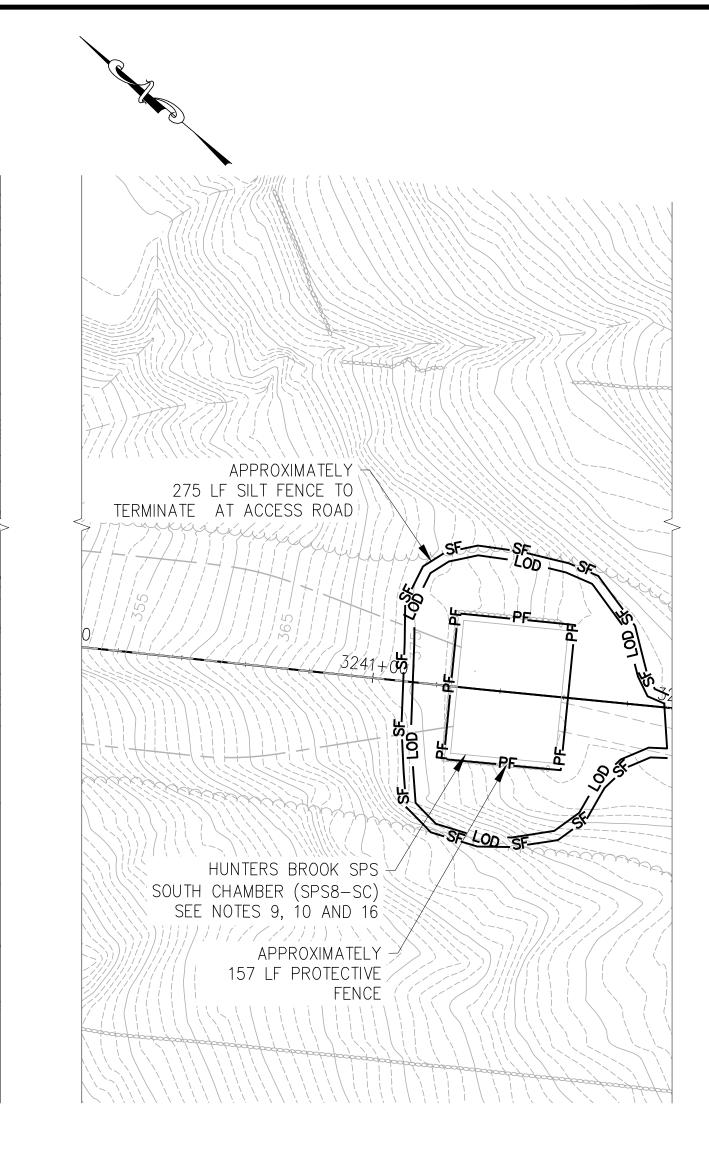
100 FT.

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DATE: 10/2/2017

DRAWING NO. CI-335.00





STA 3226+35 TO STA 3241+44

SCALE: 1"=30'

NOTES:

- 1. SEE CI-001 FOR CIVIL GENERAL NOTES.
- 2. SEE ME-043 FOR STEEL PIPE SIPHON BLOW-OFF CHAMBER SCHEDULE. SEE ME-041 FOR SPS BLOW-OFF CHAMBER DEMOLITION DETAILS. SEE ME-034 FOR SPS ACCESS MANHOLE LADDER AND ACCESS HATCH DEMOLITION DETAILS.
- SEE CI-360 FOR HUNTERS BROOK SPS BLOW-OFF CHAMBER PIPING AND GRADING PLANS. PRIOR TO ANY SITE WORK CONTRACTOR SHALL INSTALL SILT FENCE AND PROTECTIVE FENCE AS SHOWN AND MAINTAIN IT IN ACCORDANCE WITH SECTION 31 23 36 - SITE PREPARATION, MAINTENANCE AND RESTORATION THROUGHOUT CONSTRUCTION.
- 5. LIMITS OF SPS BLOW-OFF CHAMBER WORK ZONES ARE SHOWN AND DEFINED AS THE AREA BETWEEN THE PRECAST CONCRETE BARRIER WITH CHAIN LINK FENCE AND THE HUNTERS BROOK. THE LIMITS OF THE WORK ZONE SHALL NOT EXCEED 7587 SQ FT UNLESS APPROVED BY THE ENGINEER.
- UPON LOCAL CONSTRUCTION COMPLETION, THE CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITIONS UNLESS DIRECTED OTHERWISE BY THE CONTRACT DRAWINGS OR ENGINEER AND GRADE AND RESEED THE AREA IN ACCORDANCE WITH SECTION 32 90 00 - PLANTING.
- DISCHARGE PIPES ARE LOCATED ON THE SLOPED BANK OF THE HUNTERS BROOK. THE SPS BLOW-OFF CHAMBERS ARE LOCATED AT GRADE IN CLOSE PROXIMITY TO ROADS. TREE REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH THE TREE SCHEDULE. SEE CI-601 THRU CI-604.
- 8. REFER TO SECTION 01 55 00 VEHICULAR ACCESS AND PARKING FOR ALLOWABLE LOAD LIMITS ON THE AQUEDUCT
- 9. REFER TO SECTION 05 60 00 STOP SHUTTERS FOR STOP SHUTTER REQUIREMENTS.
- 10. SEE PE DRAWING SET FOR SPS ISOLATION AND SEQUENCE.

REVISIONS/DESCRIPTION

11. CONTRACTOR SHALL VISUALLY MONITOR WATER FOR TURBID CONDITIONS DURING CONSTRUCTION. IF A VISUAL CHANGE IS OBSERVED BETWEEN WATER UPSTREAM AND DOWNSTREAM OF CONSTRUCTION THEN THE CONTRACTOR MUST CEASE OPERATION OF THE ACTIVITY CAUSING THE TURBIDITY EVENT. THE CONTRACTOR SHALL NOT RECOMMENCE WITH THE ACTIVITY UNTIL THE CONDITION CAUSING THE TURBIDITY IS RESOLVED AND INSPECTED BY THE ENGINEER.

- 12. EXISTING DISCHARGE PIPING TO BE DEMOLISHED TO LIMITS AS REQUIRED FOR THE INSTALLATION OF NEW WORK. EXISTING PIPE THAT REMAINS TO BE PLUGGED
- 13. EXCAVATIONS PERFORMED IN THE ROADWAY SHALL BE SECURED DAILY USING ROAD PLATES. DISTURBED PORTIONS OF THE ROADWAYS SHALL BE RESTORED UPON LOCAL CONSTRUCTION COMPLETION. REFER TO DETAIL 5/CI-012 - SEC TITLE FOR PAVEMENT RESTORATION REQUIREMENTS ON WHITE HILL ROAD.
- 14. DEWATERING PUMP, HOSE, DEWATERING BAG AND STABILIZED DRAINAGE AREA SHOWN FOR ILLUSTRATED PURPOSES ONLY. CONTRACTOR TO COORDINATE ACTUAL LOCATION WITH ON SITE ACTIVITIES.
- 15. DISCHARGE PIPING COULD NOT BE LOCATED IN THE FIELD DURING PRE-CONSTRUCTION EVALUATIONS. CONTRACTOR TO EXPOSE AND CONFIRM IF BLOW-OFF CHAMBERS ARE CONSTRUCTED WITH DISCHARGE PIPES AND/OR HEADWALLS PRIOR TO COMMENCING WITH CONSTRUCTION.
- 16. SEE EA-020 FOR INTERIOR AND EXTERIOR NETTING REQUIREMENTS.
- 17. SEE EA DRAWING SET FOR ACCESS POINT SCHEDULE.
- 18. PRIOR TO SPS BLOW-OFF CHAMBERS MECHANICAL AND REHABILITATION WORK CONTRACTOR SHALL INSTALL TEMPORARY TURBIDITY CURTAIN AND COFFERDAM FOR STREAM PROTECTION. THE LIMITS OF

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THE STREAM PROTECTION SHALL BE IN ACCORDANCE WITH SECTION 01 14 00-WORK RESTRICTIONS. 19. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 7 AND 12.

Yorktown-2:

New Boathole - NBH13 - Jacob Road **Hunters Brook SPS North Chamber**

Yorktown-2A: **Hunters Brook SPS Blow-off Chambers**

BID SET DATE ISSUED: 10/2/2017

GRAPHIC SCALES CHECK BEFORE USE IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

DESIGNED BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER: DRAWN BY: Smith



Environmental Water # Future

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NEW YORK CITY ENVIRONMENTAL PROTECTION

TEMPORARY DEWATERING 『∠PUMP, FLEXIBLE BYPASS

HOSE, AND DEWATERING

CI-024

BAG. SEE NOTE 14

FLIMITS OF WORK ZONE

|INSTALL TEMPORARY/

SEE NOTE 11 AND 18

TURBIDITY CURTAIN

AND COFFERDAM

ES3 488

SEE NOTE 5

(APPROXIMATELY 7587 SQ FT)

3237+00

APPROXIMATE & OF

- SPS8-B E,M,W

SEE ME-043

SEE NOTE 15

SPS PIPES

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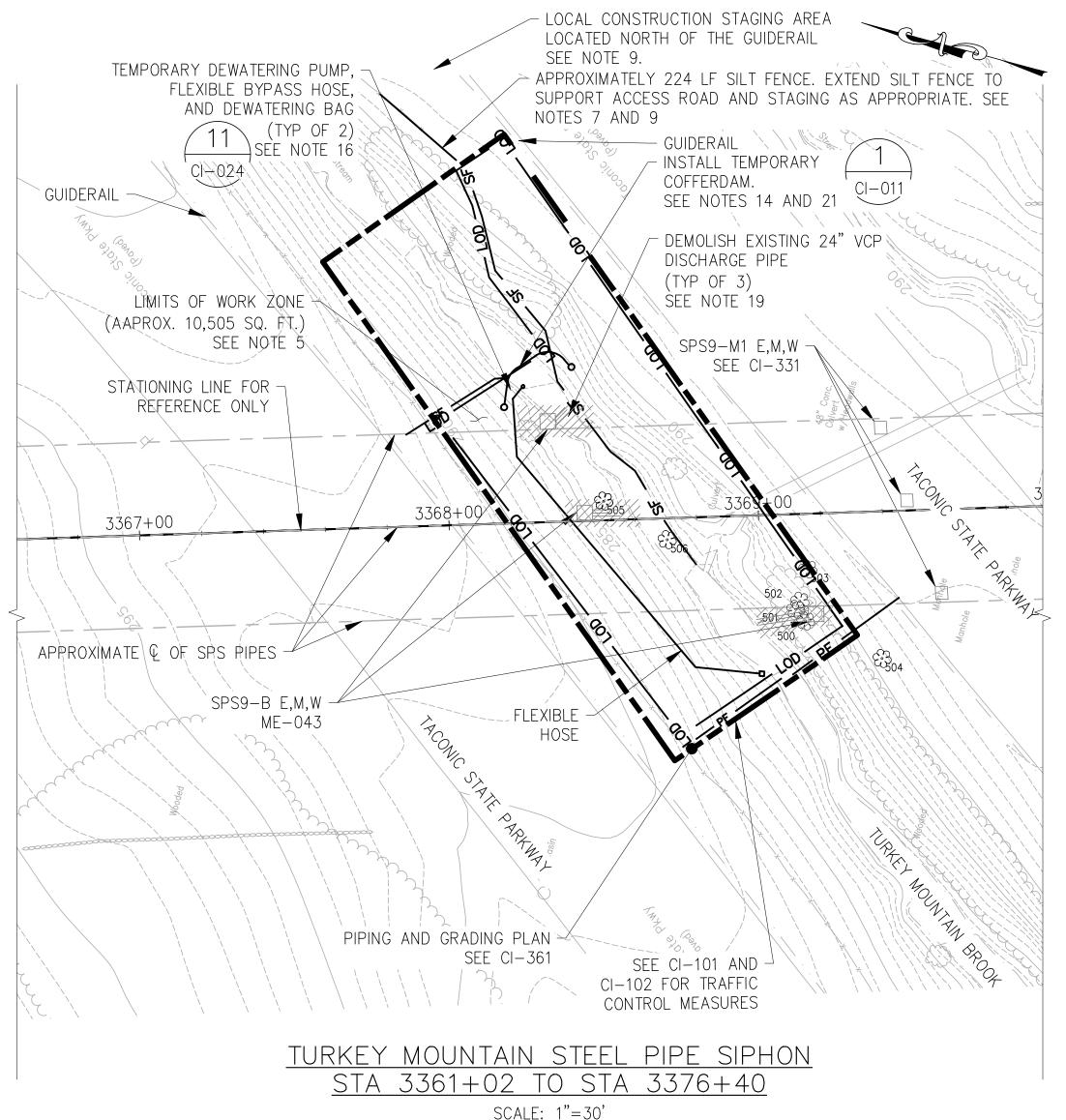
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

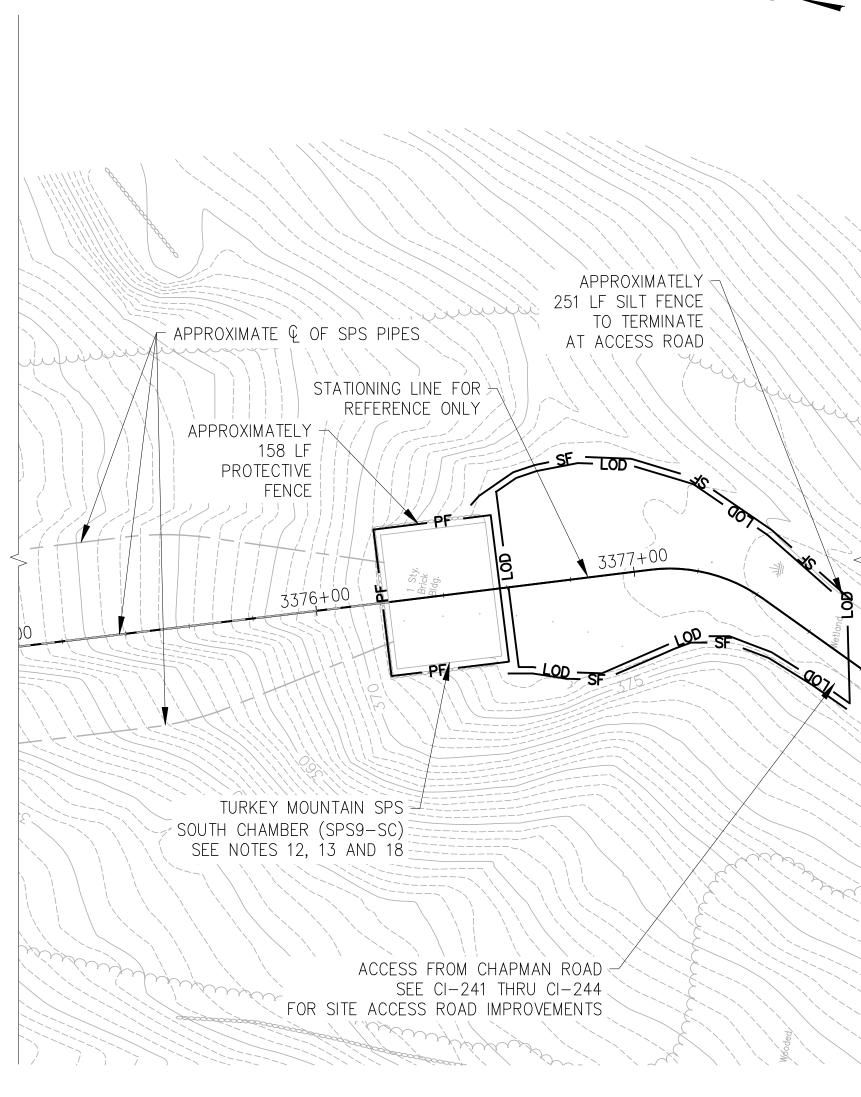
SITE PREPARATION AND RESTORATION **HUNTERS BROOK SPS**

DATE: 10/2/2017 SCALE: 1" = 30'SHEET NO: 332 OF 485

> DRAWING NO. CI - 348.00

APPR'D. DAVID J. TANZI





- SEE ME-043 FOR STEEL PIPE SIPHON BLOW-OFF CHAMBER SCHEDULE. SEE ME-041 FOR SPS BLOW-OFF CHAMBER DEMOLITION DETAILS.
- PRIOR TO ANY SITE WORK CONTRACTOR SHALL INSTALL SILT FENCE AND PROTECTIVE FENCE AS SHOWN AND MAINTAIN IT IN ACCORDANCE
- LIMITS OF SPS BLOW-OFF CHAMBER WORK ZONES ARE SHOWN AND DEFINED AS THE AREA BETWEEN THE GUIDE RAILS AND SILT FENCE.
- UPON LOCAL CONSTRUCTION COMPLETION, THE CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITIONS UNLESS DIRECTED OTHERWISE BY THE CONTRACT DRAWINGS OR ENGINEER AND GRADE AND RESEED THE AREA IN ACCORDANCE WITH SECTION 32 90 00 -
- ACCESS TO THE SPS BLOW-OFF CHAMBERS LAY DOWN AREA SHALL BE FROM THE NORTH BOUND LANES OF THE TACONIC PARKWAY. SEE CI-101 AND CI-102 FOR TRAFFIC CONTROL ACCESS TO THE TURKEY MOUNTAIN SPS BLOW-OFF CHAMBERS. ACCESS TO THE SPS BLOW-OFF CHAMBERS FROM THE LAY DOWN AREA SHALL BE FROM A TEMPORARY ACCESS ROAD. SEE CI-240 FOR SITE ACCESS ROAD
- CLEARING AND GRUBBING OF AN ESTIMATED 11,701 SQ FT OF THE VEGETATED MEDIAN EXTENDING FROM NORTH OF THE SPS BLOW-OFF EAST CHAMBER TO THE SPS BLOW-OFF WEST CHAMBER IS REQUIRED FOR BLOW-OFF REPAIR AND NEW CULVERT CONSTRUCTION
- THE LOCAL STAGING AND LAYDOWN AREA SHALL BE LOCATED ADJACENT TO THE LEFT LANE OF THE NORTHBOUND LANES OF THE TACONIC PARKWAY, WHERE NO GUARDRAIL IS CONSTRUCTED AND WHERE NO ADDITIONAL CLEARING IS REQUIRED. THE CONTRACTOR SHALL COORDINATE WITH THE NYSDOT AND/OR WESTCHESTER COUNTY AS NECESSARY. THE CONTRACTOR SHALL PROVIDE SILT FENCE TO
- 11. REFER TO SECTION 01 55 00 VEHICULAR ACCESS AND PARKING FOR ALLOWABLE LOAD LIMITS ON THE AQUEDUCT.
- 13. SEE PE DRAWING SET FOR SPS ISOLATION AND SEQUENCE.

REVISIONS/DESCRIPTION

NO. DATE

- 14. CONTRACTOR SHALL VISUALLY MONITOR WATER FOR TURBID CONDITIONS DURING CONSTRUCTION. IF A VISUAL CHANGE IS OBSERVED BETWEEN WATER UPSTREAM AND DOWNSTREAM OF CONSTRUCTION THEN THE CONTRACTOR MUST CEASE OPERATION OF THE ACTIVITY CAUSING THE TURBIDITY EVENT. THE CONTRACTOR SHALL NOT RECOMMENCE WITH THE ACTIVITY UNTIL THE CONDITION CAUSING THE TURBIDITY IS RESOLVED AND INSPECTED BY THE ENGINEER.
- 15. EXISTING DISCHARGE PIPING TO BE DEMOLISHED TO LIMITS AS REQUIRED FOR THE INSTALLATION OF NEW WORK. EXISTING PIPE THAT REMAINS TO BE PLUGGED
- 16. DEWATERING PUMP, HOSE, DEWATERING BAG AND STABILIZED DRAINAGE AREA SHOWN FOR ILLUSTRATED PURPOSES ONLY. CONTRACTOR TO COORDINATE ACTUAL LOCATION WITH ON SITE ACTIVITIES.
- 17. SPS BLOW-OFF WORK SHALL BE COMPLETED AFTER THE NEW CULVERT IS CONSTRUCTED. SEE CI-363 FOR PRECAST CONCRETE CULVER DETAILS. THE PROPOSED SEQUENCE OF CONSTRUCTION IS AS FOLLOWS:
 - 1. SITE MOBILIZATION AND PREPARATION.
 - 2. INSTALL NEW CULVERT WITH PIPING.
 - 3. CAP PIPING.
 - 4. MAKE INTERIOR MECHANICAL REPAIR
 - 5. SITE RESTORATION AND DEMOLITION.

SEAN MCANDREW, P.E.

- 18. SEE EA-020 FOR INTERIOR AND EXTERIOR NETTING REQUIREMENTS. 19. DISCHARGE PIPING COULD NOT BE LOCATED IN THE FIELD AT SPS9-BN DURING PRE-CONSTRUCTION EVALUATIONS.
- 20. SEE EA DRAWING SET FOR ACCESS POINT SCHEDULE
- 21. PRIOR TO SPS BLOW-OFF CHAMBERS MECHANICAL AND REHABILITATION WORK AND SIPHON BRIDGE REHABILITATION WORK CONTRACTOR SHALL INSTALL TEMPORARY TURBIDITY CURTAIN AND COFFERDAM FOR STREAM PROTECTION. THE LIMITS OF THE STREAM PROTECTION SHALL BE IN ACCORDANCE WITH SECTION 01 14 00-WORK RESTRICTIONS.
- 22. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 7 AND 12.

Yorktown-5:

New Boathole - NBH14 - Underhill Avenue **Turkey Mountain SPS North Chamber**

Yorktown-6:

Turkey Mountain SPS Blow-off Chambers Turkey Mountain SPS Access Manholes

Yorktown-7:

Turkey Mountain SPS South Chamber



GRAPHIC SCALES

BID SET DATE ISSUED: 10/2/2017

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CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY

Smith





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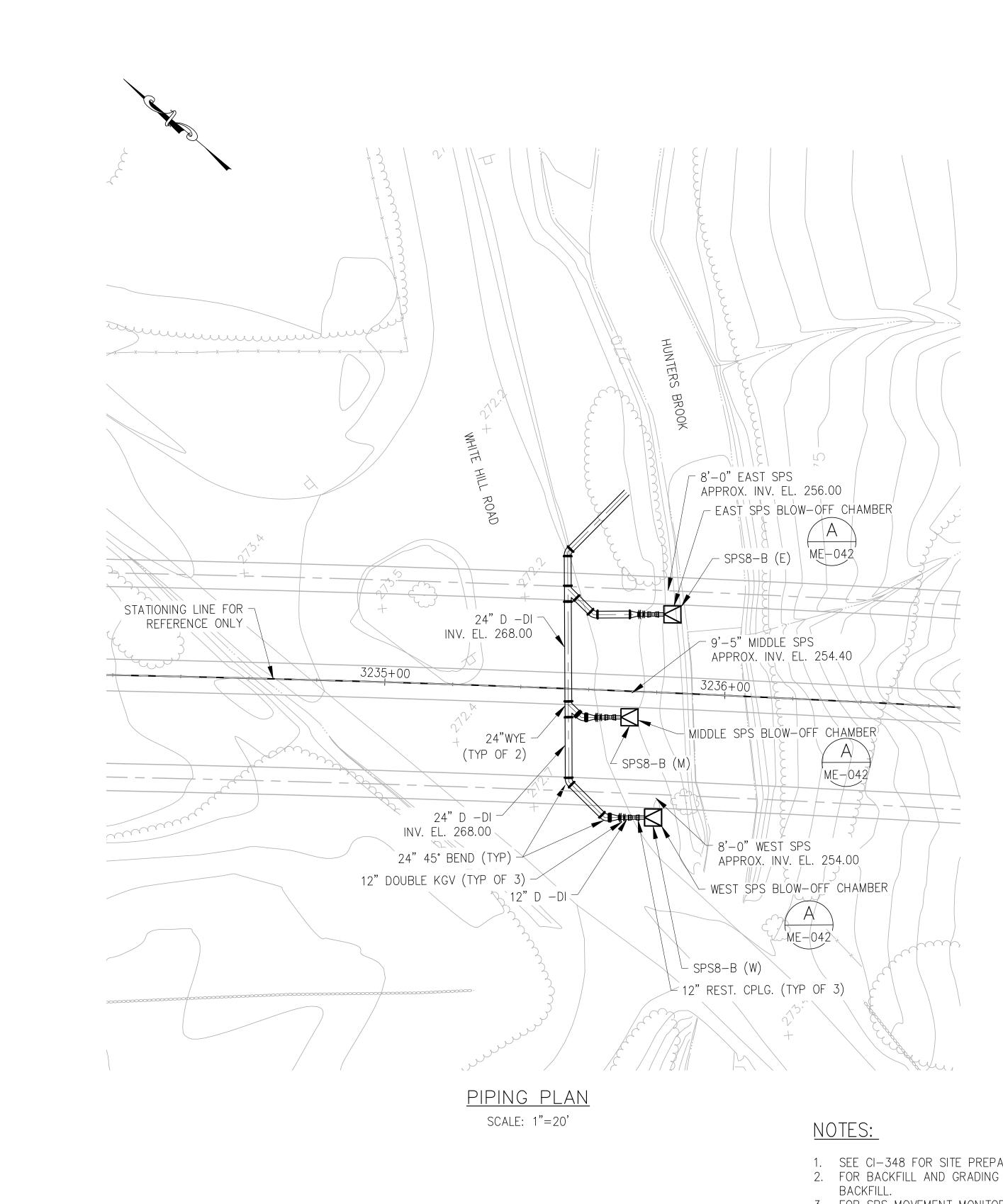
SITE PREPARATION AND RESTORATION TURKEY MOUNTAIN SPS

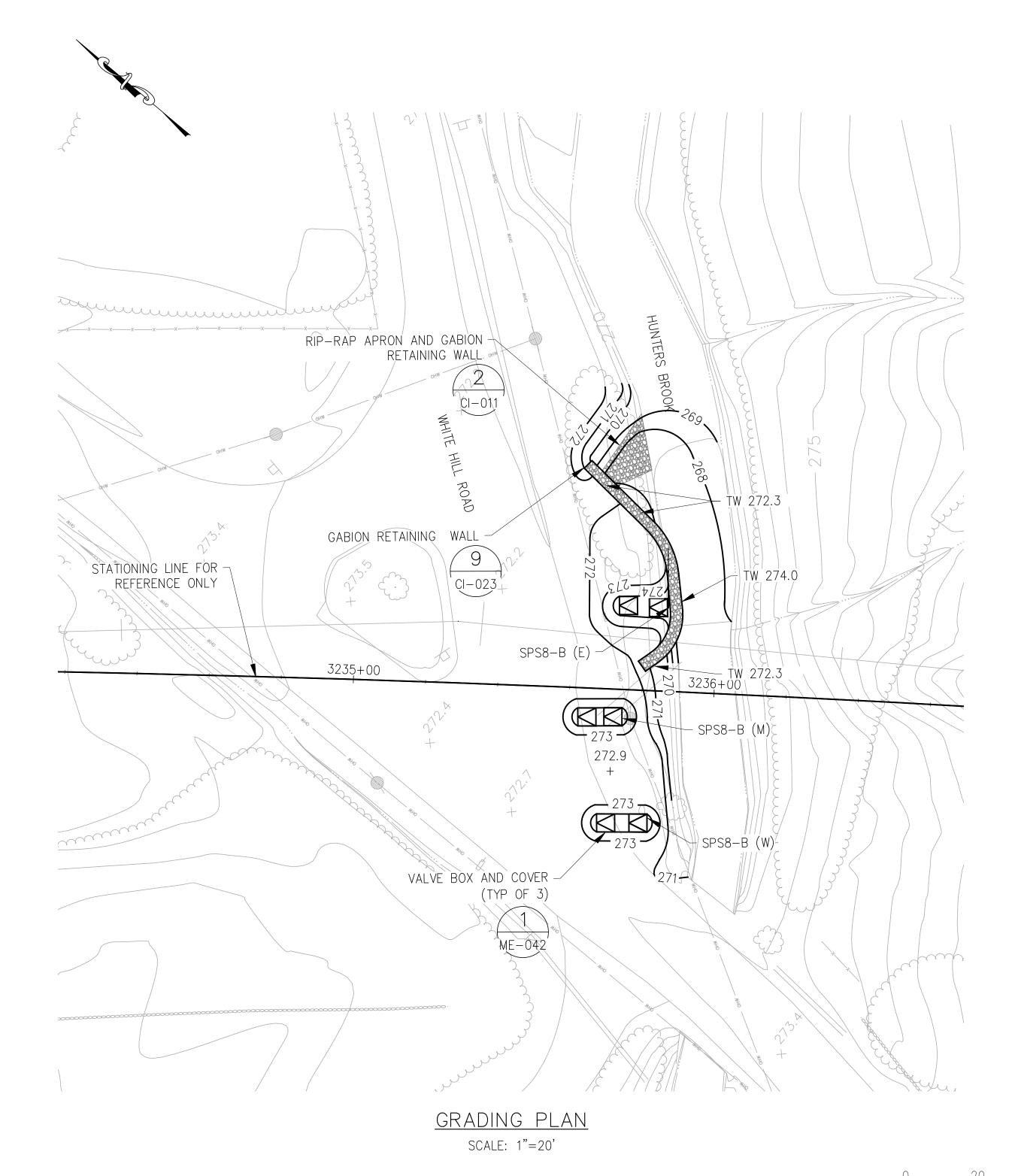
DATE: 10/2/2017 SCALE: 1" = 30'SHEET NO: 333 OF 485

DRAWING NO.

CI - 349.00

PROJECT MANAGER:





1. SEE CI-348 FOR SITE PREPARATION, DEMOLITION, AND RESTORATION WORK. 2. FOR BACKFILL AND GRADING REQUIREMENTS REFER TO SECTION 31 23 24 -

3. FOR SPS MOVEMENT MONITORING REQUIREMENTS REFER TO SECTION 31 23 17 - SURFACE EXCAVATION.

4. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 12.

BID SET DATE ISSUED: 10/2/2017

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HUNTERS BROOK SPS BLOW-OFF CHAMBER

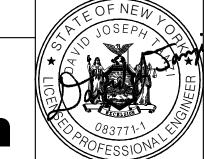
DATE: 10/2/2017 SCALE: 1" = 20' SHEET NO: 344 OF 485 DRAWING NO.

CI-360.00

Yorktown-2A: **Hunters Brook SPS Blow-off Chambers**

DESIGNED BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. DAVID J. TANZI

CDM Smith





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PIPING AND GRADING PLAN

– GABION RETAINING WALL (TYP OF 2) - STATIONING LINE FOR PRECAST REINFORCED CONCRETE BOX REFERENCE ONLY 3368+00 VALVE BOX AND COVER

GRADING PLAN SCALE: 1"=20'

Yorktown-6: **Turkey Mountain SPS Blow-off Chambers Turkey Mountain SPS Access Manholes**

NOTES:

- 1. SEE CI-349 FOR SITE PREPARATION, DEMOLITION, AND RESTORATION WORK.
- 2. FOR BACKFILL AND GRADING REQUIREMENTS REFER TO SECTION 31 23 24 -
- 3. FOR SPS MOVEMENT MONITORING REQUIREMENTS REFER TO SECTION 31 23 17 - SURFACE EXCAVATION.
- 4. SEE CI-002 FOR SUGGESTED WORK SEQUENCE, NOTE 12.

ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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CDM Smith



Environmental Water for Future

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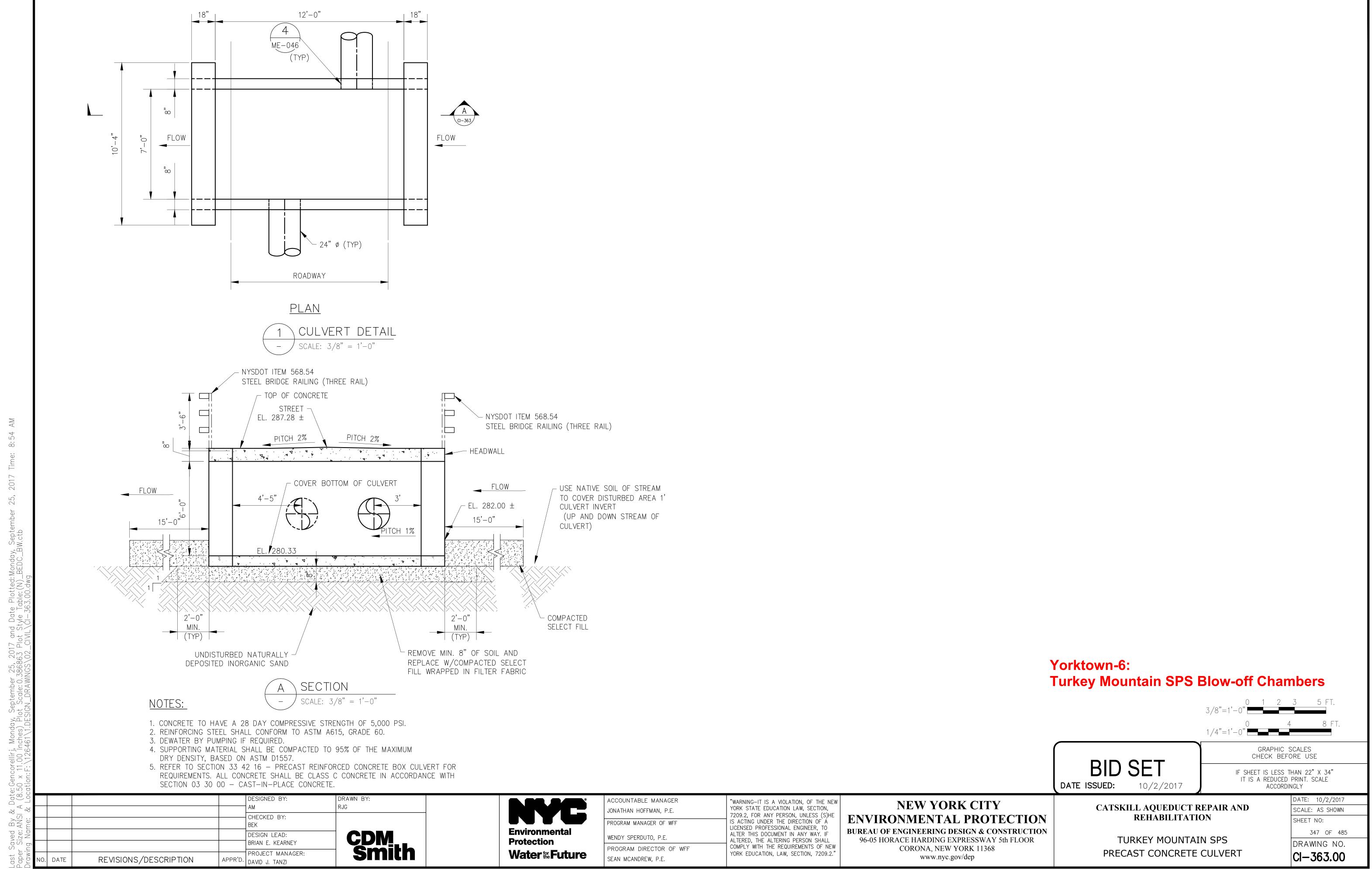
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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

TURKEY MOUNTAIN SPS **BLOW-OFF CHAMBER** PIPING AND GRADING PLAN

SCALE: 1" = 20'SHEET NO: 345 OF 485 DRAWING NO. CI-361.00

DATE: 10/2/2017



				TREE SURVEY - EAST (OF HUDSON	RIVER		
TAG NO.	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	DBH (INCH)	DISPOSITION	LOC
344	947,779.533	643,996.310	BLACK BIRCH	BETULA LENTA	GOOD	6.0	PROTECT IN-PLACE	FOUNDRY BROOK NORTH
345 346	947,779.339 947,781.039	643,977.056 643,972.556	BLACK BIRCH BLACK BIRCH	BETULA LENTA BETULA LENTA	GOOD GOOD	9.0	PROTECT IN-PLACE PROTECT IN-PLACE	FOUNDRY BROOK NORTH FOUNDRY BROOK NORTH
347	947,787.640	643,973.450	BLACK BIRCH	BETULA LENTA	POOR	4.0	REMOVE	FOUNDRY BROOK NORTH
348	947,808.801	643,965.177	BLACK BIRCH	BETULA LENTA	GOOD	4.0	REMOVE	FOUNDRY BROOK NORTH
349 350	947,822.103 947,853.345	643,902.539 643,818.995	SUGAR MAPLE BASSWOOD	ACER SACCHARUM TILIA AMERICANA	GOOD	14.0 9.0	REMOVE REMOVE	FOUNDRY BROOK NORTH FOUNDRY BROOK NORTH
350	947,853.345	643,818.995	BASSWOOD	TILIA AMERICANA	GOOD	19.0	REMOVE	FOUNDRY BROOK NORTH
350	947,853.345	643,818.995	BASSWOOD	TILIA AMERICANA	GOOD	20.0	REMOVE	FOUNDRY BROOK NORTH
351	947,840.929	643,823.962	BASSWOOD	TILIA AMERICANA	GOOD	11.0	REMOVE	FOUNDRY BROOK NORTH
351 352	947,840.929 947,835.222	643,823.962 643,828.693	BASSWOOD BLACK OAK	TILIA AMERICANA QUERCUS VELUTINA	GOOD	12.0 8.0	REMOVE REMOVE	FOUNDRY BROOK NORTH FOUNDRY BROOK NORTH
353	947,864.685	643,803.558	BLACK BIRCH	BETULA LENTA	GOOD	8.0	REMOVE	FOUNDRY BROOK NORTH
354	947,873.532	643,791.815	BLACK BIRCH	BETULA LENTA	GOOD	7.0	REMOVE	FOUNDRY BROOK NORTH
355	946,763.465	645,563.651	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	11.0	PREVIOUSLY REMOVED	FOUNDRY BROOK NORTH BLOW-OFFS
356	946,773.809	645,567.528	BLACK LOCUST	ROBINIA PSEUDOACACIA	POOR	8.0	PREVIOUSLY REMOVED	FOUNDRY BROOK NORTH BLOW-OFFS
357	946,589.142	645,706.093	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD		PREVIOUSLY REMOVED	FOUNDRY BROOK NORTH BLOW-OFFS
358 359	936,917.385 936,915.017	650,403.709 650,399.495	SUGAR MAPLE SUGAR MAPLE	ACER SACCHARUM ACER SACCHARUM	GOOD GOOD	14.0	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS INDIAN BROOK SPS
360	936,916.546	650,397.041	RED MAPLE	ACER RUBRUM	GOOD	10.0	BEYOND WORK AREA	INDIAN BROOK SPS
361	914,257.564	656,594.426	GREEN ASH	FRAXINUS	GOOD	9.0	BEYOND WORK AREA	SPROUT BROOK SPS
362	914,265.722	656,590.193	GREEN ASH	PENNSYLVANICA FRAXINUS	GOOD	4.0	BEYOND WORK AREA	SPROUT BROOK SPS
363	914,261.534	656,580.622	GREEN ASH	PENNSYLVANICA FRAXINUS	GOOD	6.0	REMOVE	SPROUT BROOK SPS
364	914,255.560	656,582.123	RED MAPLE	PENNSYLVANICA ACER RUBRUM	GOOD	10.0	REMOVE	SPROUT BROOK SPS
365	914,244.442	656,580.233	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	8.0	REMOVE	SPROUT BROOK SPS
366	914,262.409	656,567.652	GREEN ASH	FRAXINUS PENNSYLVANICA	FAIR	12.0	REMOVE	SPROUT BROOK SPS
367	914,284.668	656,557.181	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	8.0	REMOVE	SPROUT BROOK SPS
368	914,297.787	656,566.760	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	6.0	REMOVE	SPROUT BROOK SPS
368	914,297.787	656,566.760	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	8.0	REMOVE	SPROUT BROOK SPS
369	914,282.984 914,230.790	656,563.594 656,580.199	RED MAPLE RED MAPLE	ACER RUBRUM	GOOD	13.0	REMOVE ADEA	SPROUT BROOK SPS
370 370	914,230.790	656,580.199	RED MAPLE	ACER RUBRUM ACER RUBRUM	FAIR FAIR	6.0 12.0	BEYOND WORK AREA BEYOND WORK AREA	SPROUT BROOK SPS SPROUT BROOK SPS
371	914,232.694	656,560.570	BLACK CHERRY	PRUNUS SEROTINA	GOOD	7.0	REMOVE	SPROUT BROOK SPS
372	914,232.823	656,555.789	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	6.0	REMOVE	SPROUT BROOK SPS
373	914,303.109	656,539.419	BLACK CHERRY	PRUNUS SEROTINA	FAIR	8.0	REMOVE	SPROUT BROOK SPS
374	914,307.387	656,548.137	BLACK CHERRY	PRUNUS SEROTINA	GOOD	7.0	REMOVE	SPROUT BROOK SPS
375 376	914,320.685 914,328.555	656,536.076 656,537.864	BLACK CHERRY RED MAPLE	PRUNUS SEROTINA ACER RUBRUM	GOOD GOOD	9.0 5.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
377	914,363.753	656,541.231	RED MAPLE	ACER RUBRUM	GOOD	5.0	REMOVE	SPROUT BROOK SPS
377	914,363.753	656,541.231	RED MAPLE	ACER RUBRUM	GOOD	6.0	REMOVE	SPROUT BROOK SPS
377	914,363.753	656,541.231	RED MAPLE	ACER RUBRUM	GOOD	8.0	REMOVE	SPROUT BROOK SPS
377 377	914,363.753 914,363.753	656,541.231 656,541.231	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	8.0 16.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
377	914,363.753	656,541.231	RED MAPLE	ACER RUBRUM	GOOD	22.0	REMOVE	SPROUT BROOK SPS
378	914,355.393	656,564.669	RED MAPLE	ACER RUBRUM	GOOD	7.0	REMOVE	SPROUT BROOK SPS
379	914,358.620	656,561.527	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	7.0	REMOVE	SPROUT BROOK SPS
380	914,370.440	656,553.398	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	16.0	REMOVE	SPROUT BROOK SPS
381	914,376.950	656,555.187	RED MAPLE	ACER RUBRUM	GOOD	8.0	REMOVE	SPROUT BROOK SPS
382	914,360.540	656,554.432	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	14.0	REMOVE	SPROUT BROOK SPS
383	914,378.850	656,555.690	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	11.0	REMOVE	SPROUT BROOK SPS
384	914,390.846	656,532.550	GREEN ASH	FRAXINUS PENNSYLVANICA	GOOD	10.0	REMOVE	SPROUT BROOK SPS
385	914,389.781	656,541.053	GREEN ASH	FRAXINUS PENNSYLVANICA FRAXINUS	GOOD	14.0	REMOVE	SPROUT BROOK SPS
386	914,353.317	656,527.206	GREEN ASH	PENNSYLVANICA FRAXINUS	FAIR	11.0	REMOVE	SPROUT BROOK SPS
386	914,353.317	656,527.206	GREEN ASH	PENNSYLVANICA FRAXINUS	FAIR	11.0	REMOVE	SPROUT BROOK SPS
387	914,374.595	656,519.037	GREEN ASH	PENNSYLVANICA	DEAD	7.0	REMOVE	SPROUT BROOK SPS
388 388	914,380.490 914,380.490	656,513.611 656,513.611	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	FAIR FAIR	6.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
388	914,380.490	656,505.940	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD	12.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
390	914,385.295	656,507.775	RED MAPLE	ACER RUBRUM	POOR	4.0	REMOVE	SPROUT BROOK SPS
391	914,401.187	656,510.322	RED MAPLE	ACER RUBRUM	FAIR	15.0	REMOVE	SPROUT BROOK SPS
392 393	914,433.524 914,425.763	656,501.693 656,504.155	RED MAPLE BLACK CHERRY	ACER RUBRUM PRUNUS SEROTINA	FAIR GOOD	7.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
394	914,426.008	656,500.788	RED MAPLE	ACER RUBRUM	GOOD	7.0	REMOVE	SPROUT BROOK SPS
394	914,426.008	656,500.788	RED MAPLE	ACER RUBRUM	GOOD	8.0	REMOVE	SPROUT BROOK SPS
394 394	914,426.008 914,426.008	656,500.788 656,500.788	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	9.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
394	914,426.008	656,500.788	RED MAPLE	ACER RUBRUM	GOOD	14.0	REMOVE	SPROUT BROOK SPS
395	914,434.041	656,482.696	RED MAPLE	ACER RUBRUM	GOOD	6.0	BEYOND WORK AREA	SPROUT BROOK SPS
395 306	914,434.041 914,430.614	656,482.696 656,505,501	RED MAPLE	ACER RUBRUM	GOOD	9.0	BEYOND WORK AREA	SPROUT BROOK SPS
396 396	914,430.614	656,505.591 656,505.591	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	8.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
397	914,440.479	656,501.847	GREEN ASH	FRAXINUS PENNSYLVANICA	FAIR	15.0	REMOVE	SPROUT BROOK SPS
398	914,440.641	656,501.155	RED MAPLE	ACER RUBRUM	GOOD	8.0	REMOVE	SPROUT BROOK SPS
399 400	914,412.565 914,396.254	656,520.438 656,526.881	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	9.0	REMOVE REMOVE	SPROUT BROOK SPS SPROUT BROOK SPS
	· · · · · · · · · · · · · · · · · · ·			FRAXINUS				
401	914,411.690	656,522.978	GREEN ASH	PENNSYLVANICA	GOOD	7.0	REMOVE	SPROUT BROOK SPS

TAG	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	DBH	DISPOSITION	LOC
NO. 402	914,424.370	656,529.069	GREEN ASH	FRAXINUS	GOOD	(INCH) 7.0	REMOVE	SPROUT BROOK SPS
403	914,427.137	656,535.093	GREEN ASH	PENNSYLVANICA FRAXINUS	GOOD	6.0	REMOVE	SPROUT BROOK SPS
404	914,415.414	656,553.994	GREEN ASH	PENNSYLVANICA FRAXINUS	GOOD	8.0	REMOVE	SPROUT BROOK SPS
	·	,		PENNSYLVANICA FRAXINUS				
404	914,415.414	656,553.994	GREEN ASH	PENNSYLVANICA	GOOD	10.0	REMOVE	SPROUT BROOK SPS
405	914,398.458	656,546.807	SHAGBARK HICKORY	CARYA OVATA	GOOD	11.0	REMOVE	SPROUT BROOK SPS
406	914,298.854	656,414.580	SHAGBARK HICKORY	CARYA OVATA	GOOD	5.0	PROTECT IN-PLACE	SPROUT BROOK SPS
407	914,321.385	656,406.694	SHAGBARK HICKORY	CARYA OVATA	GOOD	12.0	PROTECT IN-PLACE	SPROUT BROOK SPS
408	914,316.078	656,403.801	SHAGBARK HICKORY	CARYA OVATA	GOOD	4.0	REMOVE	SPROUT BROOK SPS
409	914,321.252	656,404.837	SHAGBARK HICKORY	CARYA OVATA	GOOD	5.0	REMOVE	SPROUT BROOK SPS
410	914,329.143	656,399.619	SHAGBARK HICKORY	CARYA OVATA	GOOD	6.0	REMOVE	SPROUT BROOK SPS
411	914,326.970	656,405.543	SHAGBARK HICKORY	CARYA OVATA	GOOD	4.0	PROTECT IN-PLACE	SPROUT BROOK SPS
412 412	914,325.828 914,325.828	656,408.398 656,408.398	NORWAY MAPLE NORWAY MAPLE	ACER PLATANOIDES ACER PLATANOIDES	GOOD GOOD	10.0 15.0	PROTECT IN-PLACE PROTECT IN-PLACE	SPROUT BROOK SPS SPROUT BROOK SPS
413	908,238.894	658,737.757	WHITE ASH	FRAXINUS AMERICANA	DEAD	8.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
414	908,239.173	658,744.717	RED MAPLE	ACER RUBRUM	GOOD	7.0	REMOVE AND	PEEKSKILL SPS
415	908,197.280	658,749.325	TULIP POPLAR	LIRIODENDRON	GOOD		REPLACE PREVIOUSLY REMOVED	PEEKSKILL SPS
415	908,197.280	658,749.325	TULIP POPLAR	TULIPIFERA LIRIODENDRON	GOOD		PREVIOUSLY REMOVED	PEEKSKILL SPS
416	908,199.861	658,716.570	WHITE ASH	TULIPIFERA FRAXINUS AMERICANA	FAIR		REMOVE AND REPLACE BY TWO (2)	PEEKSKILL SPS
+10		000,710.070	WHILE ASH	TRAMINOS AMERICANA	1 All C	10.0	(*) REMOVE AND	I LENGINILE 31 3
416	908,199.861	658,716.570	WHITE ASH	FRAXINUS AMERICANA	FAIR	12.0	REPLACE BY TWO (2) (*)	PEEKSKILL SPS
417	908,202.984	658,709.503	UID	UID	DEAD	12.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
418	908,129.770	658,782.680	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	7.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
419	908,135.089	658,785.793	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	10.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
420	908,125.294	658,778.432	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	8.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
421	908,117.322	658,778.444	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	12.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
422	908,102.895	658,789.335	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR		PREVIOUSLY REMOVED	PEEKSKILL SPS
423	908,099.009	658,779.575	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	4.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
424	908,117.086	658,778.654	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	10.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
425	908,131.982	658,780.704	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	12.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
426	908,096.235	658,776.489	BLACK CHERRY	PRUNUS SEROTINA	FAIR	5.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
427	908,107.989	658,788.321	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	7.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
428	908,091.761	658,788.131	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	8.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
429	908,091.897	658,785.147	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	9.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
430	908,096.602	658,785.523	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	13.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
431	908,145.486	658,826.750	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	8.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
432	908,130.240	658,835.155	TREE OF HEAVEN	ALLANTHUS ALTISSIMA	GOOD	7.0	BEYOND WORK AREA	PEEKSKILL SPS
433 434	908,133.611	658,846.966 658,828.523	TREE OF HEAVEN FLOWERING	AILANTHUS ALTISSIMA CORNUS FLORIDA	FAIR GOOD	7.0 5.0	BEYOND WORK AREA PREVIOUSLY REMOVED	PEEKSKILL SPS PEEKSKILL SPS
435	908,130.155	658,823.594	DOGWOOD BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD		PREVIOUSLY REMOVED	PEEKSKILL SPS
436	908,135.028	658,818.185	TULIP POPLAR	LIRIODENDRON	GOOD		PREVIOUSLY REMOVED	PEEKSKILL SPS
	908,127.168	658,823.762		TULIPIFERA	FAIR			
437 438	908,127.168	658,842.722	BLACK LOCUST TREE OF HEAVEN	ROBINIA PSEUDOACACIA AILANTHUS ALTISSIMA	GOOD		PREVIOUSLY REMOVED PREVIOUSLY REMOVED	PEEKSKILL SPS PEEKSKILL SPS
439	908,111.593	658,838.494	TREE OF HEAVEN	AILANTHUS ALTISSIMA	FAIR	6.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
440	908,118.954	658,837.006	TREE OF HEAVEN	AILANTHUS ALTISSIMA	POOR	6.0	PREVIOUSLY REMOVED	PEEKSKILL SPS
441 441	908,100.383	658,838.724 658,838.724	WHITE ASH WHITE ASH	FRAXINUS AMERICANA FRAXINUS AMERICANA	FAIR FAIR	15.0 15.0	BEYOND WORK AREA BEYOND WORK AREA	PEEKSKILL SPS PEEKSKILL SPS
442	908,117.758	658,816.423	TREE OF HEAVEN	AILANTHUS ALTISSIMA	DEAD		PREVIOUSLY REMOVED	PEEKSKILL SPS
	906,071.330	659,171.218	TREE OF HEAVEN	AILANTHUS ALTISSIMA	GOOD	16.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
443	,			'				

TAG NO.	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	DBH (INCH)	DISPOSITION	LOC
145	906,060.822	659,173.350	RED MAPLE	ACER RUBRUM	GOOD	11.0	REMOVE AND REPLACE BY TWO (2)	PEEKSKILL SPS SOUTH
	300,000.022	000,170.000	INED WIAI EE	ACEN NOBION	0000	11.0	(*) REMOVE AND	TELNOMIEL SI S SOOTII
-46	906,053.066	659,181.267	RED PINE	PINUS RESINOSA	DEAD	17.0	REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
47	906,048.847	659,168.959	RED MAPLE	ACER RUBRUM	GOOD	8.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
48	906,056.128	659,138.313	TREE OF HEAVEN	AILANTHUS ALTISSIMA	GOOD	13.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
49	906,060.383	659,137.367	TREE OF HEAVEN	AILANTHUS ALTISSIMA	DEAD	12.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
50	906,038.264	659,148.315	RED MAPLE	ACER RUBRUM	GOOD	11.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
151	906,043.821	659,148.568	NORWAY MAPLE	ACER PLATANOIDES	GOOD	13.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
52	906,024.729	659,170.566	BLACK CHERRY	PRUNUS SEROTINA	GOOD	17.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
53	906,019.647	659,162.715	RED MAPLE	ACER RUBRUM	GOOD	11.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
-54	906,002.950	659,166.279	RED MAPLE	ACER RUBRUM	GOOD	8.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
-55	906,018.354	659,160.101	RED MAPLE	ACER RUBRUM	GOOD	9.0	REMOVE AND REPLACE REMOVE AND	PEEKSKILL SPS SOUTH
-56	906,024.630	659,163.632	RED PINE	PINUS RESINOSA	DEAD	17.0	REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
¥57	906,023.241	659,161.774	BASSWOOD	TILIA AMERICANA	GOOD	6.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
58	905,995.474	659,153.878	RED MAPLE	ACER RUBRUM	GOOD	7.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
-59	906,026.236	659,159.941	RED ELM	ULMUS RUBRA	GOOD	5.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
60	906,036.599	659,174.338	NORWAY MAPLE	ACER PLATANOIDES	GOOD	4.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
161	906,021.461	659,169.111	RED MAPLE	ACER RUBRUM	GOOD	5.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
62	906,028.737	659,166.549	RED MAPLE	ACER RUBRUM	GOOD	11.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
63	906,014.376	659,163.095	RED PINE	PINUS RESINOSA	DEAD	8.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
64	906,021.124	659,166.743	RED MAPLE	ACER RUBRUM	GOOD	9.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
65	906,028.760	659,181.632	RED MAPLE	ACER RUBRUM	GOOD	16.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
66	906,058.181	659,170.441	RED MAPLE	ACER RUBRUM	GOOD	5.0	REMOVE AND REPLACE	PEEKSKILL SPS SOUTH
-67	906,050.248	659,176.982	RED PINE	PINUS RESINOSA	DEAD	14.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
.68	906,050.657	659,185.962	RED MAPLE	ACER RUBRUM	GOOD	12.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
-69	906,039.469	659,180.072	RED MAPLE	ACER RUBRUM	FAIR	5.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
70	906,049.786	659,192.254	RED MAPLE	ACER RUBRUM	FAIR	6.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
.70	906,049.786	659,192.254	RED MAPLE	ACER RUBRUM	FAIR	6.0	REMOVE AND REPLACE BY TWO (2)	PEEKSKILL SPS SOUTH
.70	906,049.786	659,192.254	RED MAPLE	ACER RUBRUM	FAIR	7.0	(*) REMOVE AND REPLACE BY TWO (2)	PEEKSKILL SPS SOUTH
ŀ71	906,054.249	659,188.809	RED MAPLE	ACER RUBRUM	GOOD	4.0	REMOVE AND REPLACE BY TWO (2)	PEEKSKILL SPS SOUTH
171	906,054.249	659,188.809	RED MAPLE	ACER RUBRUM	GOOD	4.0	REMOVE AND REPLACE BY TWO (2)	PEEKSKILL SPS SOUTH
-71	906,054.249	659,188.809	RED MAPLE	ACER RUBRUM	GOOD	12.0	(*) REMOVE AND REPLACE BY TWO (2)	PEEKSKILL SPS SOUTH
.72	906,010.263	659,201.489	RED MAPLE	ACER RUBRUM	GOOD	7.0	(*) BEYOND WORK AREA	PEEKSKILL SPS SOUTH
73	906,029.467	659,184.598	NORWAY MAPLE	ACER PLATANOIDES	GOOD	14.0	REMOVE AND REPLACE BY TWO (2) (*)	PEEKSKILL SPS SOUTH
74	906,004.669	659,219.972	NORWAY MAPLE	ACER PLATANOIDES	FAIR	18.0	BEYOND WORK AREA	PEEKSKILL SPS SOUTH
75 76	905,998.733 905,994.767	659,213.111 659,223.018	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	6.0 6.0	BEYOND WORK AREA BEYOND WORK AREA	PEEKSKILL SPS SOUTH PEEKSKILL SPS SOUTH
.77	905,997.015	659,229.957	WHITE ASH	FRAXINUS AMERICANA	GOOD	14.0	BEYOND WORK AREA	PEEKSKILL SPS SOUTH
·78	905,999.268	659,246.987	BLACK CHERRY	PRUNUS SEROTINA	GOOD	14.0	BEYOND WORK AREA	PEEKSKILL SPS SOUTH
.79 .80	891,552.849 891,537.342	674,845.244 674,833.939	NORWAY MAPLE NORWAY MAPLE	ACER PLATANOIDES ACER PLATANOIDES	GOOD GOOD	6.0 7.0	BEYOND WORK AREA BEYOND WORK AREA	HUNTERS BROOK SPS HUNTERS BROOK SPS
181	891,540.388	674,842.617	NORWAY MAPLE	ACER PLATANOIDES	POOR	4.0	BEYOND WORK AREA	HUNTERS BROOK SPS
-82	891,546.729	674,835.453	NORWAY MAPLE	ACER PLATANOIDES	FAIR	4.0	BEYOND WORK AREA	HUNTERS BROOK SPS
182 183	891,546.729 891,510.373	674,835.453 674,842.607	NORWAY MAPLE NORWAY MAPLE	ACER PLATANOIDES ACER PLATANOIDES	FAIR GOOD	5.0 6.0	BEYOND WORK AREA REMOVE	HUNTERS BROOK SPS HUNTERS BROOK SPS

1. SEE CI-601 FOR NOTES.

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD 1 1/23/18 REVISED DISPOSITION PROJECT MANAGER: APPR'D. SCOTT DAVIS REVISIONS/DESCRIPTION

Protection

Environmental Water for Future

ACCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

PROGRAM DIRECTOR OF WFF

"WARNING-IT IS A VIOLATION, OF THE NEW YORK STATE EDUCATION LAW, SECTION, 7209.2, FOR ANY PERSON, UNLESS (S)HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2."

NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

Environmental Protection BEDC/IHD **ADDENDUM 1 DATE ISSUED:** 01/23/2018

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

EAST OF HUDSON TREE LOCATION,

TYPE AND DISPOSITION SCHEDULE

SHEET 1 OF 3

SCALE: NOT TO SCALE SHEET NO: **354** OF 485

DRAWING NO. CI-605.01

DATE: 10/2/2017

				TREE SURVEY - EAST (OF HUDSON	RIVER		
TAG NO.	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	DBH (INCH)	DISPOSITION	LOC
483	891,510.373	674,842.607	NORWAY MAPLE	ACER PLATANOIDES	GOOD	7.0	REMOVE	HUNTERS BROOK SPS
483	891,510.373	674,842.607	NORWAY MAPLE	ACER PLATANOIDES	GOOD	7.0	REMOVE	HUNTERS BROOK SPS
483	891,510.373	674,842.607	NORWAY MAPLE	ACER PLATANOIDES	GOOD	9.0	REMOVE	HUNTERS BROOK SPS
484	891,499.733	674,827.081	NORWAY MAPLE	ACER PLATANOIDES	GOOD	7.0	REMOVE	HUNTERS BROOK SPS
485	891,498.412 891,488.534	674,824.604 674,827.323	NORWAY MAPLE	ACER PLATANOIDES	GOOD	13.0	REMOVE	HUNTERS BROOK SPS
486	·	,	RED MAPLE	ACER RUBRUM PLATANUS	GOOD	5.0	REMOVE	HUNTERS BROOK SPS
487	891,461.929	674,804.597	SYCAMORE	OCCIDENTALIS	GOOD	15.0	BEYOND WORK AREA	HUNTERS BROOK SPS
488	891,439.737	674,837.057	RED ELM	ULMUS RUBRA	FAIR	7.0	BEYOND WORK AREA	HUNTERS BROOK SPS
489	891,497.632	674,798.713	SYCAMORE	PLATANUS OCCIDENTALIS	GOOD	16.0	REMOVE	HUNTERS BROOK SPS
400	891,470.289	674,783.965	CYCAMODE	PLATANUS	GOOD	12.0	REMOVE	LILINITEDS DDAON SDS
490	<u> </u>	,	SYCAMORE	OCCIDENTALIS		12.0		HUNTERS BROOK SPS
491	891,464.221	674,782.137	RED ELM	ULMUS RUBRA	GOOD	4.0	REMOVE A DE A	HUNTERS BROOK SPS
492 493	891,443.825 891,479.206	674,781.487 674,773.718	RED ELM RED ELM	ULMUS RUBRA ULMUS RUBRA	GOOD GOOD	7.0	BEYOND WORK AREA REMOVE	HUNTERS BROOK SPS HUNTERS BROOK SPS
494	891,472.248	674,768.184	RED ELM	ULMUS RUBRA	GOOD	4.0	REMOVE	HUNTERS BROOK SPS
494	891,472.248	674,768.184	RED ELM	ULMUS RUBRA	GOOD	12.0	REMOVE	HUNTERS BROOK SPS
495	891,462.330	674,770.565	NORWAY MAPLE	ACER PLATANOIDES	GOOD	4.0	REMOVE	HUNTERS BROOK SPS
495	891,462.330	674,770.565	NORWAY MAPLE	ACER PLATANOIDES	GOOD	6.0	REMOVE	HUNTERS BROOK SPS
496	891,477.486	674,775.792	RED MAPLE	ACER RUBRUM	GOOD	10.0	REMOVE	HUNTERS BROOK SPS
496	891,477.486	674,775.792	RED MAPLE	ACER RUBRUM	GOOD	17.0	REMOVE	HUNTERS BROOK SPS
497	881,459.828	680,774.699	BLACK WALNUT	JUGLANS NIGRA	GOOD	12.0	REMOVE	TURKEY MTN NORTH CHAMBER
497 497	881,459.828 881,459.828	680,774.699 680,774.699	BLACK WALNUT BLACK WALNUT	JUGLANS NIGRA JUGLANS NIGRA	GOOD GOOD	12.0 18.0	REMOVE REMOVE	TURKEY MTN NORTH CHAMBER TURKEY MTN NORTH CHAMBER
497	881,459.828	680,774.699	BLACK WALNUT	JUGLANS NIGRA JUGLANS NIGRA	FAIR	12.0	BEYOND WORK AREA	TURKEY MIN NORTH CHAMBER
	<u>, </u>	,		LIRIODENDRON				
499	881,347.820	680,787.780	TULIP POPLAR	TULIPIFERA	FAIR	12.0	REMOVE	TURKEY MTN NORTH CHAMBER
499	881,347.820	680,787.780	TULIP POPLAR	LIRIODENDRON TULIPIFERA	FAIR	16.0	REMOVE	TURKEY MTN NORTH CHAMBER
500	880,204.783	681,113.100	WHITE ASH	FRAXINUS AMERICANA	FAIR	5.0	PREVIOUSLY REMOVED	TURKEY MTN SPS
501	880,208.794	681,115.882	WHITE ASH	FRAXINUS AMERICANA	FAIR		PREVIOUSLY REMOVED	TURKEY MTN SPS
502	880,208.183	681,118.761	BLACK CHERRY	PRUNUS SEROTINA	FAIR		PREVIOUSLY REMOVED	TURKEY MTN SPS
503	880,208.398	681,129.444	WHITE ASH	FRAXINUS AMERICANA	FAIR	6.0	PREVIOUSLY REMOVED	TURKEY MTN SPS
504	880,177.753	681,107.753	WHITE ASH	FRAXINUS AMERICANA	FAIR	1	PREVIOUSLY REMOVED	
504	880,177.753	681,107.753	WHITE ASH	FRAXINUS AMERICANA	FAIR	6.0	PREVIOUSLY REMOVED	
505 505	880,277.776 880,277.776	681,133.570 681,133.570	PUSSY WILLOW PUSSY WILLOW	SALIX DISCOLOR SALIX DISCOLOR	FAIR FAIR	5.0	PREVIOUSLY REMOVED PREVIOUSLY REMOVED	TURKEY MTN SPS TURKEY MTN SPS
505	880,277.776	681,133.570	PUSSY WILLOW	SALIX DISCOLOR	FAIR	7.0	PREVIOUSLY REMOVED	TURKEY MTN SPS
505	880,277.776	681,133.570	PUSSY WILLOW	SALIX DISCOLOR	FAIR	8.0	PREVIOUSLY REMOVED	
505	880,277.776	681,133.570	PUSSY WILLOW	SALIX DISCOLOR	FAIR		PREVIOUSLY REMOVED	
506	880,254.745	681,126.865	BLACK WILLOW	SALIX NIGRA	FAIR	8.0	PREVIOUSLY REMOVED	TURKEY MTN SPS
506	880,254.745	681,126.865	BLACK WILLOW	SALIX NIGRA	FAIR	12.0	PREVIOUSLY REMOVED	TURKEY MTN SPS
507	_	_	TULIP POPLAR	LIRIODENDRON TULIPIFERA	GOOD	18.0	PREVIOUSLY REMOVED	TURKEY MTN SPS
508	879,203.008	681,352.293	BLACK BIRCH	BETULA LENTA	FAIR	14.0	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
509	878,969.545	681,422.165	RED MAPLE	ACER RUBRUM	GOOD	18.0	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
510	878,960.973	681,424.729	RED MAPLE	ACER RUBRUM	GOOD	21.0	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
511	878,969.804	681,403.465	RED MAPLE	ACER RUBRUM	GOOD	10.0	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
512	878,182.142	681,633.742	NORWAY MAPLE	ACER PLATANOIDES	FAIR	27.0	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
513 514	878,211.292 877,474.030	681,633.311 683,156.482	RED MAPLE EASTERN HEMLOCK	ACER RUBRUM TSUGA CANADENSIS	FAIR DEAD	10.0 7.0	BEYOND WORK AREA BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER TURKEY MTN SOUTH CHAMBER
515	877,473.958	683,178.889	RED MAPLE	ACER RUBRUM	GOOD	9.0	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
516	877,484.492	683,254.035	WHITE OAK	QUERCUS ALBA	GOOD	40.0	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
517	874,432.189	682,561.902	EASTERN HEMLOCK	TSUGA CANADENSIS	DEAD	9.0	BEYOND WORK AREA	LEAK 7
518	874,434.121	682,547.402	EASTERN HEMLOCK	TSUGA CANADENSIS	DEAD	8.0	BEYOND WORK AREA	LEAK 7
519	874,419.780	682,546.536	EASTERN HEMLOCK	TSUGA CANADENSIS	POOR	5.0	BEYOND WORK AREA	LEAK 7
520	874,430.573	682,568.026	RED MAPLE	ACER RUBRUM	GOOD	10.0	BEYOND WORK AREA	LEAK 7
520	874,430.573	682,568.026	RED MAPLE	ACER RUBRUM	GOOD	9.0	BEYOND WORK AREA	LEAK 7
520 520	874,430.573 874,430.573	682,568.026 682,568.026	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	12.0 12.0	BEYOND WORK AREA BEYOND WORK AREA	LEAK 7 LEAK 7
521	874,437.731	682,570.087	RED MAPLE	ACER RUBRUM	GOOD	5.0	BEYOND WORK AREA	LEAK 7
521	874,437.731	682,570.087	RED MAPLE	ACER RUBRUM	GOOD	14.0	BEYOND WORK AREA	LEAK 7
522	867,556.325	686,625.442		ROBINIA PSEUDOACACIA		11.0	BEYOND WORK AREA	KITCHAWAN CCT
522	867,556.325	686,625.442	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	20.0	REMOVE	KITCHAWAN CCT
523	867,585.416	686,600.267	RED ELM	ULMUS RUBRA	GOOD	12.0	BEYOND WORK AREA	KITCHAWAN CCT
524	867,779.020	686,641.953	WEEPING WILLOW	SALIX BABYLONICA	GOOD	26.0	PROTECT IN-PLACE	KITCHAWAN CCT
525	867,880.003	686,634.810	TULIP POPLAR	LIRIODENDRON TULIPIFERA	FAIR	4.0	REMOVE	KITCHAWAN CCT
505	867,880.003	686,634.810	TIIIID DODI AD	LIRIODENDRON	EVID	60	DEMOVE	VITOLIAWANI OOT
525	·		TULIP POPLAR	TULIPIFERA	FAIR	6.0	REMOVE	KITCHAWAN CCT
526	867,923.590	686,650.285	RED ELM	ULMUS RUBRA	FAIR	9.0	BEYOND WORK AREA	KITCHAWAN CCT
527 527	868,062.325 868,062.325	686,565.578 686,565.578	BLACK CHERRY	PRUNUS SEROTINA	FAIR FAIR	8.0	BEYOND WORK AREA BEYOND WORK AREA	KITCHAWAN CCT KITCHAWAN CCT
527	868,062.325	686,565.895	BLACK CHERRY BLACK CHERRY	PRUNUS SEROTINA PRUNUS SEROTINA	DEAD	9.0	BEYOND WORK AREA BEYOND WORK AREA	KITCHAWAN CCT KITCHAWAN CCT
529	868,092.460	686,546.468	BLACK CHERRY	PRUNUS SEROTINA	POOR	5.0	BEYOND WORK AREA	KITCHAWAN CCT
530	868,192.830	686,495.677	BLACK CHERRY	PRUNUS SEROTINA	FAIR	7.0	BEYOND WORK AREA	KITCHAWAN CCT
530	868,192.830	686,495.677	BLACK CHERRY	PRUNUS SEROTINA	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT
531	868,191.689	686,498.675	BLACK CHERRY	PRUNUS SEROTINA	FAIR	12.0	BEYOND WORK AREA	KITCHAWAN CCT
532	868,208.430	686,508.287	BLACK CHERRY	PRUNUS SEROTINA	FAIR	6.0	BEYOND WORK AREA	KITCHAWAN CCT
533	868,207.570	686,491.595	BLACK CHERRY	PRUNUS SEROTINA	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT
534 535	868,213.700 868,212.843	686,484.286 686,497.575	WHITE ASH BLACK CHERRY	FRAXINUS AMERICANA PRUNUS SEROTINA	POOR POOR	4.0 12.0	BEYOND WORK AREA BEYOND WORK AREA	KITCHAWAN CCT KITCHAWAN CCT
535	868,223.841	686,470.801	CRAB APPLE	MALUS SPP.	POOR	5.0	BEYOND WORK AREA	KITCHAWAN CCT KITCHAWAN CCT
536	868,223.841	686,470.801	CRAB APPLE	MALUS SPP.	POOR	5.0	BEYOND WORK AREA	KITCHAWAN CCT
537	868,259.430	686,436.791	WHITE ASH	FRAXINUS AMERICANA	FAIR	13.0	BEYOND WORK AREA	KITCHAWAN CCT
538	868,282.836	686,452.331	BLACK CHERRY	PRUNUS SEROTINA	FAIR	14.0	BEYOND WORK AREA	KITCHAWAN CCT
539	868,292.965	686,453.655	CRAB APPLE	MALUS SPP.	FAIR	6.0	BEYOND WORK AREA	KITCHAWAN CCT
539	868,292.965	686,453.655	CRAB APPLE	MALUS SPP.	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT
539	868,292.965	686,453.655	CRAB APPLE	MALUS SPP.	FAIR	12.0	BEYOND WORK AREA	KITCHAWAN CCT
540	868,301.777	686,442.010	WHITE ASH	FRAXINUS AMERICANA	FAIR	7.0	BEYOND WORK AREA	KITCHAWAN CCT

TAG NORTHING EASTING SPECIES ID SCIENTIFIC NAME CONDITION (INCID) DISPOSITION LOC												
NO.	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	(INCH)	DISPOSITION	LOC				
541	868,329.092	686,447.401	CRAB APPLE	MALUS SPP.	FAIR	10.0	BEYOND WORK AREA	KITCHAWAN CCT				
542	868,334.159	686,443.339	BLACK CHERRY	PRUNUS SEROTINA	DEAD	7.0	BEYOND WORK AREA	KITCHAWAN CCT				
543	868,324.596	686,441.248	CRAB APPLE	MALUS SPP.	FAIR	7.0	BEYOND WORK AREA	KITCHAWAN CCT				
543	868,324.596	686,441.248	CRAB APPLE	MALUS SPP.	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
544	868,343.478	686,422.949	CRAB APPLE	MALUS SPP.	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
544	868,343.478	686,422.949	CRAB APPLE	MALUS SPP.	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
545	868,285.634	686,556.159	BLACK CHERRY	PRUNUS SEROTINA	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
546	868,320.127	686,506.295	CRAB APPLE	MALUS SPP.	FAIR	6.0	BEYOND WORK AREA	KITCHAWAN CCT				
546	868,320.127	686,506.295	CRAB APPLE	MALUS SPP.	FAIR	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
547	868,328.302	686,513.772	WHITE ASH	FRAXINUS AMERICANA	POOR	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
547	868,328.302	686,513.772	WHITE ASH	FRAXINUS AMERICANA	POOR	14.0	BEYOND WORK AREA	KITCHAWAN CCT				
548	868,371.488	686,500.673	BLACK CHERRY	PRUNUS SEROTINA	POOR	14.0	BEYOND WORK AREA	KITCHAWAN CCT				
549	869,124.973	685,471.179	GREEN ASH	FRAXINUS PENNSYLVANICA	POOR	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
550	869,083.925	685,508.415	RED ELM	ULMUS RUBRA	GOOD	5.0	BEYOND WORK AREA	KITCHAWAN CCT				
551	869,086.057	685,547.677	GREEN ASH	FRAXINUS PENNSYLVANICA	POOR	5.0	BEYOND WORK AREA	KITCHAWAN CCT				
552	869,069.908	685,581.441	RED ELM	ULMUS RUBRA	GOOD	4.0	BEYOND WORK AREA	KITCHAWAN CCT				
553	869,065.363	685,582.319	GREEN ASH	FRAXINUS PENNSYLVANICA	POOR	7.0	BEYOND WORK AREA	KITCHAWAN CCT				
554	869,024.847	685,614.163	GREEN ASH	FRAXINUS PENNSYLVANICA	POOR	7.0	BEYOND WORK AREA	KITCHAWAN CCT				
554	869,024.847	685,614.163	GREEN ASH	FRAXINUS PENNSYLVANICA	POOR	7.0	BEYOND WORK AREA	KITCHAWAN CCT				
555	868,708.779	686,079.110	RED ELM	ULMUS RUBRA	GOOD	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
556	868,674.346	686,154.924	RED MAPLE	ACER RUBRUM	GOOD	11.0	BEYOND WORK AREA	KITCHAWAN CCT				
557	868,674.336	686,169.354	RED MAPLE	ACER RUBRUM	GOOD	11.0	BEYOND WORK AREA	KITCHAWAN CCT				
558	868,681.973	686,155.848	RED MAPLE	ACER RUBRUM	GOOD	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
559	868,682.314	686,155.735	RED MAPLE	ACER RUBRUM	DEAD	8.0	BEYOND WORK AREA	KITCHAWAN CCT				
560	868,681.955	686,156.081	RED MAPLE	ACER RUBRUM	GOOD	4.0	BEYOND WORK AREA	KITCHAWAN CCT				
561	868,649.811	686,156.319	RED MAPLE	ACER RUBRUM	GOOD	14.0	BEYOND WORK AREA	KITCHAWAN CCT				
562	868,651.678	686,164.886	SASSAFRAS	LAURACEAE SP.	GOOD	13.0	BEYOND WORK AREA	KITCHAWAN CCT				
563	858,696.444	684,907.537	RED OAK	QUERCUS RUBRA	GOOD	24.0	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT				
564	858,854.034	684,975.633	WHITE ASH	FRAXINUS AMERICANA	DEAD	11.5	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT				
565	859,355.392	685,258.446	BLACK OAK	QUERCUS VELUTINA	GOOD	33.5	BEYOND WORK AREA	MILLWOOD NORTH CCT				
566	859,407.569	685,269.839	RED MAPLE	ACER RUBRUM	GOOD	12.8	BEYOND WORK AREA	MILLWOOD NORTH CCT				

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MH34 KENSICO BYPASS

MH34 KENSICO BYPASS

Yorktown Kitchawa

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QUERCUS RUBRA

SEAN MCANDREW, P.E.

599 823,859.442 694,704.900 BITTERNUT HICKORY GOOD | 5.5 | BEYOND WORK AREA CARYA CORDIFORMIS MH34 KENSICO BYPASS LIRIODENDRON 600 | 823,862.882 | 694,691.708 | TULIP POPLAR GOOD | 11.5 | BEYOND WORK AREA MH34 KENSICO BYPASS TULIPIFERA LIRIODENDRON 600 | 823,862.882 | 694,691.708 | TULIP POPLAR GOOD | 15.0 | BEYOND WORK AREA MH34 KENSICO BYPASS TULIPIFERA LIRIODENDRON 600 | 823,862.882 | 694,691.708 TULIP POPLAR GOOD | 17.5 | BEYOND WORK AREA | MH34 KENSICO BYPASS TULIPIFERA LIRIODENDRON GOOD | 21.5 | BEYOND WORK AREA 601 | 823,885.028 | 694,677.285 TULIP POPLAR MH34 KENSICO BYPASS TULIPIFERA 602 823,906.227 694,637.458 RED MAPLE ACER RUBRUM POOR 15.0 BEYOND WORK AREA MH34 KENSICO BYPASS 603 | 823,899.699 | 694,629.634 RED MAPLE ACER RUBRUM GOOD | 13.0 | BEYOND WORK AREA | MH34 KENSICO BYPASS 604 | 823,946.336 | 694,632.225 RED MAPLE ACER RUBRUM GOOD | 11.0 | BEYOND WORK AREA | MH34 KENSICO BYPASS 605 | 823,942.300 | 694,611.843 | NORWAY MAPLE ACER PLATANOIDES GOOD | 15.0 | BEYOND WORK AREA | MH34 KENSICO BYPASS 606 | 868,668.596 | 686,162.871 DEAD 8.0 BEYOND WORK AREA KITCHAWAN CCT 606 | 868,668.596 | 686,162.871 DEAD | 10.0 | BEYOND WORK AREA KITCHAWAN CCT 607 | 868,682.293 | 686,163.373 RED MAPLE ACER RUBRUM GOOD | 4.5 | BEYOND WORK AREA KITCHAWAN CCT DEAD | 13.0 | BEYOND WORK AREA 608 | 868,701.663 | 686,165.989 UID UID KITCHAWAN CCT 609 | 868,715.140 | 686,166.554 RED MAPLE ACER RUBRUM GOOD | 7.0 | BEYOND WORK AREA KITCHAWAN CCT 610 | 868,719.376 | 686,167.530 BLACK LOCUST ROBINIA PSEUDOACACIA DEAD | 5.0 | BEYOND WORK AREA KITCHAWAN CCT FRAXINUS 611 868,711.843 686,170.542 GREEN ASH KITCHAWAN CCT GOOD | 14.0 | BEYOND WORK AREA PENNSYLVANICA 612 868,723.549 686,170.703 KITCHAWAN CCT RED ELM GOOD | 12.0 | BEYOND WORK AREA ULMUS RUBRA 613 | 868,726.647 | 686,172.212 | BLACK LOCUST KITCHAWAN CCT ROBINIA PSEUDOACACIA DEAD | 8.0 | BEYOND WORK AREA 614 | 868,706.689 | 686,173.545 | GOOD | 12.0 | BEYOND WORK AREA KITCHAWAN CCT BLACK LOCUST ROBINIA PSEUDOACACIA 868,614.987 | 686,190.324 RED MAPLE GOOD | 12.5 | BEYOND WORK AREA KITCHAWAN CC1 ACER RUBRUM 616 | 868,631.654 | 686,209.860 GOOD | 13.5 | BEYOND WORK AREA RED MAPLE ACER RUBRUM KITCHAWAN CCT FRAXINUS 617 | 868,658.981 | 686,219.049 GREEN ASH GOOD | 7.5 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA 618 | 868,611.948 | 686,209.885 KITCHAWAN CCT UID DEAD | 6.0 | BEYOND WORK AREA 619 | 868,612.654 | 686,220.266 KITCHAWAN CCT RED MAPLE ACER RUBRUM GOOD | 13.5 | BEYOND WORK AREA 620 | 868,612.850 | 686,200.998 RED ELM ULMUS RUBRA KITCHAWAN CCT GOOD | 9.5 | BEYOND WORK AREA GOOD | 11.5 | BEYOND WORK AREA 621 | 868,602.271 | 686,199.984 RED MAPLE ACER RUBRUM KITCHAWAN CC1 622 | 868,602.738 | 686,214.304 RED ELM GOOD | 5.3 | BEYOND WORK AREA KITCHAWAN CCT ULMUS RUBRA 623 868,611.269 | 686,222.866 KITCHAWAN CCT RED ELM ULMUS RUBRA GOOD | 5.0 | BEYOND WORK AREA 624 | 868,594.992 | 686,212.431 RED MAPLE ACER RUBRUM GOOD | 9.3 | BEYOND WORK AREA KITCHAWAN CCT 625 | 868,597.167 | 686,229.331 RED ELM ULMUS RUBRA GOOD | 4.0 | BEYOND WORK AREA KITCHAWAN CCT 626 | 868,600.718 | 686,228.756 GOOD 4.3 BEYOND WORK AREA RED ELM KITCHAWAN CCT ULMUS RUBRA 868,603.235 | 686,212.269 RED MAPLE ACER RUBRUM GOOD | 5.5 | BEYOND WORK AREA KITCHAWAN CCT 628 | 868,618.436 | 686,240.755 CRAB APPLE MALUS SPP. FAIR | 5.5 | BEYOND WORK AREA KITCHAWAN CCT 628 | 868,618.436 | 686,240.755 FAIR | 8.3 | BEYOND WORK AREA KITCHAWAN CC1 CRAB APPLE MALUS SPP. 629 | 868,627.398 | 686,253.427 CRAB APPLE MALUS SPP. GOOD | 10.5 | BEYOND WORK AREA KITCHAWAN CCT 630 | 868,593.049 | 686,249.908 KITCHAWAN CCT RED ELM ULMUS RUBRA GOOD | 8.5 | BEYOND WORK AREA 631 | 868,581.557 | 686,234.646 RED MAPLE ACER RUBRUM GOOD | 5.5 | BEYOND WORK AREA KITCHAWAN CCT FRAXINUS 632 | 868,559.571 | 686,242.192 GREEN ASH GOOD | 5.5 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA 633 | 868,589.465 | 686,239.181 RED ELM ULMUS RUBRA GOOD | 7.8 | BEYOND WORK AREA KITCHAWAN CCT FRAXINUS 634 | 868,510.284 | 686,268.797 GREEN ASH GOOD | 12.0 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS GOOD | 8.0 | BEYOND WORK AREA 635 | 868,508.499 | 686,288.490 GREEN ASH KITCHAWAN CCT PENNSYLVANICA FRAXINUS 636 | 868,521.155 | 686,290.382 GREEN ASH GOOD | 8.5 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS 637 | 868,526.853 | 686,308.601 GOOD | 5.0 | BEYOND WORK AREA GREEN ASH KITCHAWAN CCT PENNSYLVANICA FRAXINUS | 10.5 | BEYOND WORK AREA KITCHAWAN CC1 PENNSYLVANICA FRAXINUS 639 | 868,507.221 | 686,299.467 GOOD GREEN ASH 7.5 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS 640 868,501.463 686,298.525 GREEN ASH KITCHAWAN CCT 10.0 BEYOND WORK AREA PENNSYLVANICA FRAXINUS 641 | 868,487.937 | 686,302.229 GREEN ASH 9.5 BEYOND WORK AREA KITCHAWAN CCT GOOD PENNSYLVANICA FRAXINUS 642 | 868,486.960 | 686,309.449 GREEN ASH 4.5 BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS 643 | 868,492.370 | 686,315.736 5.5 BEYOND WORK AREA GREEN ASH KITCHAWAN CCT **PENNSYLVANICA** FRAXINUS 644 868,478.595 686,312.294 GREEN ASH BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS 645 | 868,477.727 | 686,316.306 GREEN ASH 5.0 BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS 686,326.556 GREEN ASH 868,476.869 KITCHAWAN CCT 9.0 | BEYOND WORK AREA PENNSYLVANICA FRAXINUS 647 | 868,487.879 | 686,326.708 | 14.0 | BEYOND WORK AREA GREEN ASH KITCHAWAN CCT PENNSYLVANICA FRAXINUS 686,343.301 GREEN ASH 648 | 868,495.205 | 15.0 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS 686,364.224 649 | 868,492.011 | GREEN ASH 15.0 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA 686,395.529 SASSAFRAS 868,478.467 LAURACEAE SP. 7.5 BEYOND WORK AREA KITCHAWAN CC1 FRAXINUS 868,446.562 686,370.145 GREEN ASH 12.0 BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA FRAXINUS 651 | 868,446.562 | 686,370.145 GREEN ASH 14.0 | BEYOND WORK AREA KITCHAWAN CCT PENNSYLVANICA 868,411.235 686,399.167 CRAB APPLE 11.5 BEYOND WORK AREA KITCHAWAN CC1 686,415.558 868,386.950 CRAB APPLE GOOD | 6.0 | BEYOND WORK AREA KITCHAWAN CCT MALUS SPP. LIRIODENDRON 654 869,675.635 685,033.374 TULIP POPLAR REMOVE GOOD 20.0 KITCHAWAN CCT TULIPIFERA LIRIODENDRON 655 | 869,784.748 | 684,994.986 | TULIP POPLAR GOOD 10.0 REMOVE KITCHAWAN CCT TULIPIFERA

TREE SURVEY - EAST OF HUDSON RIVER

SCIENTIFIC NAME

BETULA LENTA

BETULA LENTA

BETULA LENTA

FAGUS GRANDIFOLIA

LIRIODENDRON

TULIPIFERA

SPECIES ID

BLACK BIRCH

BLACK BIRCH

BLACK BIRCH

CONDITION (INCH)

GOOD | 9.0 |

REMOVE

REMOVE

GOOD | 10.5 | PROTECT IN-PLACE

GOOD | 11.0 | PROTECT IN-PLACE

GOOD | 16.5 | BEYOND WORK AREA

GOOD

LOC

MH34 KENSICO BYPASS

NOTES:

1/23/18 REVISED DISPOSITION

10: nt.

19, 2018 00 22x34

1. SEE CI-601 FOR NOTES.

REVISIONS/DESCRIPTION



Environmental Protection Water # Future

594 | 823,873.575 | 694,771.584

595 823,873,461 694,752,946 BLACK OAK

CCOUNTABLE MANAGER "WARNING-IT IS A VIOLATION, OF THE NEW | YORK STATE EDUCATION LAW, SECTION, JONATHAN HOFFMAN, P.E. 7209.2, FOR ANY PERSON, UNLESS (S)HI S ACTING UNDER THE DIRECTION OF Á PROGRAM MANAGER OF WFF LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. IF WENDY SPERDUTO, P.E. ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW PROGRAM DIRECTOR OF WFF

GOOD

REMOVE

YORK EDUCATION, LAW, SECTION, 7209.2.

QUERCUS VELUTINA | GOOD | 4.5 |

NEW YORK CITY ENVIRONMENTAL PROTECTION

NORTHING

596 | 823,838.895 | 694.759.016

596 | 823,838.895 | 694,759.016 |

597 | 823,848.534 | 694,738.397 | AMERICAN BEECH

598 | 823,853.083 | 694,712.878 | TULIP POPLAR

NO.

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

Environmental Protection BEDC/IHD **ADDENDUM 1 DATE ISSUED:** 01/23/2018

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

EAST OF HUDSON TREE LOCATION, TYPE AND DISPOSITION SCHEDULE SHEET 2 OF 3

DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO: 355 OF 485

> DRAWING NO. CI-606.01

DESIGNED BY:

CHECKED BY:

DESIGN LEAD:

AMIR MASHHAD

APPR'D. SCOTT DAVIS

PROJECT MANAGER:

				TREE SURVEY - EAST	OF HUDSON	RIVER		
TAG NO.	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	DBH (INCH)	DISPOSITION	LOC
656	869,802.605	684,993.331	TULIP POPLAR	LIRIODENDRON TULIPIFERA	GOOD	26.0	REMOVE	KITCHAWAN CCT
657	869,857.206	684,999.131	TULIP POPLAR	LIRIODENDRON TULIPIFERA	GOOD	14.0	REMOVE	KITCHAWAN CCT
657	869,857.206	684,999.131	TULIP POPLAR	LIRIODENDRON TULIPIFERA	GOOD	16.0	REMOVE	KITCHAWAN CCT
998	914299.383	656574.549	GREEN ASH	FRAXINUS AMERICANA	GOOD	7.8	REMOVE	SPROUT BROOK SPS FOUNDRY BROOK SPS AIR VALVE
999	946644.360	645714.580	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	14.0	PREVIOUSLY REMOVED	CHAMBER
1000	946664.645	645709.731	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	5.3	PREVIOUSLY REMOVED	CHAMBER
1001	946668.832	645697.485	CHERRY SNAG	PRUNUS SPP.	DEAD	4.5	PREVIOUSLY REMOVED	FOUNDRY BROOK SPS AIR VALVE CHAMBER
1002	946656.778	645698.783	BLACK LOCUST	ROBINIA PSEUDOACACIA	DEAD	3.5	PREVIOUSLY REMOVED	CHAMBER
1003	946585.622	645737.403	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	10.8	PROTECT IN-PLACE	FOUNDRY BROOK SPS AIR VALVE CHAMBER
1004	946582.198	645716.061	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	10.3	PREVIOUSLY REMOVED	FOUNDRY BROOK SPS AIR VALVE CHAMBER
1005	946592.196	645704.859	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	8.8	PREVIOUSLY REMOVED	CHAMBER
1006	946600.225	645696.489	BLACK CHERRY	PRUNUS SEROTINA	GOOD	7.0	PREVIOUSLY REMOVED	CHAMBER
1007	946607.629	645693.220	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	10.0	PREVIOUSLY REMOVED	CHAMBER
1008	946607.066	645686.451	BLACK LOCUST	ROBINIA PSEUDOACACIA	DEAD	4.5	PREVIOUSLY REMOVED	CHAMBER
1009	946610.515	645688.870	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	7.5	PREVIOUSLY REMOVED	CHAMBER
1010	946602.984	645692.308	LOCUST SNAG	ROBINIA SPP.	DEAD	4.8	PREVIOUSLY REMOVED	CHAMBER
1011	946598.796	645690.739	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	5.5	PREVIOUSLY REMOVED	CHAMBER
1012	946593.039	645694.951	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	8.5	PREVIOUSLY REMOVED	LHAMBER
1013	946582.645	645696.005	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	7.5	PREVIOUSLY REMOVED	CHAMBER
1014	946573.078	645706.644	BLACK LOCUST	ROBINIA PSEUDOACACIA	POOR	8.3	PREVIOUSLY REMOVED	FOUNDRY BROOK SPS AIR VALVE CHAMBER
1015	946586.311	645674.315	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	8.5	PREVIOUSLY REMOVED	CHAMBER
1016	946590.125	645678.635	OAK	QUERCUS SPP.	GOOD	4.0	PREVIOUSLY REMOVED	CHAMBER
1017	946587.089	645678.518	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	10.8	REMOVE	FOUNDRY BROOK SPS AIR VALVE CHAMBER
1018	946599.434	645683.705	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	9.5	PREVIOUSLY REMOVED	CHAMBER
1019	946604.332	645685.935	LOCUST SNAG	ROBINIA SPP.	DEAD	4.0	PREVIOUSLY REMOVED	CHAMBER
1020 1021	936672.245 936676.296	650557.322 650556.738	BLACK CHERRY RED CEDAR	PRUNUS SEROTINA JUNIPERUS VIRGINIANA	GOOD GOOD	15.5 7.8	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1022	936659.167	650535.308	BLACK CHERRY	PRUNUS SEROTINA	GOOD	14.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1023 1024	936738.925 936729.136	650532.283 650522.573	BLACK CHERRY WHITE ASH	PRUNUS SEROTINA FRAXINUS AMERICANA	GOOD GOOD	15.0 17.8	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1025	936729.136	650522.573	HACKBERRY	CELTIS OCCIDENTALIS	GOOD	4.3	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1026 1027	936773.092 936787.492	650537.696 650541.278	BLACK OAK BLACK LOCUST	QUERCUS VELUTINA ROBINIA PSEUDOACACIA	POOR FAIR	8.3	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1027	936774.044	650569.027	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	14.5	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1028	936787.846	650570.661	RED MAPLE	ACER RUBRUM	GOOD	10.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1030	936788.385	650578.338	RED MAPLE	ACER RUBRUM	GOOD	7.8	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1031	936798.621 936799.963	650572.518 650562.787	RED MAPLE NORWAY MAPLE	ACER RUBRUM ACER PLATANOIDES	GOOD GOOD	5.5 5.8	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1033	936802.854	650551.882	RED MAPLE	ACER RUBRUM	GOOD	11.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1034	936805.830 936823.767	650544.251 650573.682	RED MAPLE DOGWOOD SNAG	ACER RUBRUM CORNUS SPP.	FAIR DEAD	6.0 5.8	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1036	936819.975	650575.588	RED OAK	QUERCUS SPP.	GOOD	10.8	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1037 1038	936812.348 936805.856	650551.352 650540.637	RED MAPLE BLACK CHERRY	ACER RUBRUM PRUNUS SEROTINA	POOR GOOD	5.3 8.5	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1039	936821.462	650533.550	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	19.5	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1040	936824.687	650535.711	NORWAY MAPLE	ACER PLATANOIDES	GOOD	9.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1041	936822.713 936816.975	650523.632 650518.778	UID SNAG BLACK LOCUST	UID SNAG ROBINIA PSEUDOACACIA	GOOD FAIR	7.3	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1043	936812.280	650512.789	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	12.5	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1043	936820.292	650505.757	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	7.5	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1044	936818.491	650505.880	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	12.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1043	936825.716	650508.541	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	9.3	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1040	936830.258	650514.378	BLACK LOCUST	ROBINIA PSEUDOACACIA	GOOD	9.8	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1047	936827.764	650517.546	RED MAPLE	ACER RUBRUM	GOOD	11.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1049	936833.274	650507.297	BLACK CHERRY	PRUNUS SEROTINA	FAIR	8.5	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1050 1051	936829.651 936850.809	650509.499 650489.036	RED MAPLE BLACK OAK	ACER RUBRUM QUERCUS VELUTINA	GOOD GOOD	7.0	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1051	936859.447	650524.425	BLACK LOCUST	ROBINIA PSEUDOACACIA	POOR	19.3	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1053	936859.816	650511.445	RED MAPLE	ACER RUBRUM	GOOD	4.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1054 1055	936859.761 936860.079	650520.379 650504.550	WHITE OAK NORWAY MAPLE	QUERCUS ALBA ACER PLATANOIDES	POOR GOOD	3.8 4.0	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1056	936864.230	650511.461	PIGNUT HICKORY	CARYA GLABRA	GOOD	6.8	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1057	936868.197	650502.651	BLACK LOCUST	ROBINIA PSEUDOACACIA	FAIR	12.8	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1058	936843.454	650509.951	SCARLET OAK	QUERCUS COCCINEA	POOR	8.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF

	TREE SURVEY — EAST OF HUDSON RIVER							
TAG NO.	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	DBH (INCH)	DISPOSITION	LOC
1059	936847.203	650501.451	SCARLET OAK	QUERCUS COCCINEA	FAIR	4.5	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1060 1061	936853.220 936862.469	650495.449 650483.915	SWEET BIRCH SWEET BIRCH	BETULA LENTA BETULA LENTA	GOOD GOOD	6.5 8.0	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1062	936854.916	650496.621	SWEET BIRCH	BETULA LENTA	FAIR	12.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1063 1064	936865.900 936871.869	650501.475 650503.179	SWEET BIRCH LOCUST SNAG	BETULA LENTA ROBINIA SPP.	FAIR DEAD	9.0	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1065	936880.707	650491.230	PIGNUT HICKORY	CARYA GLABRA	FAIR	6.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1066 1067	936871.907 936826.842	650488.698 650514.265	BLACK CHERRY RED MAPLE	PRUNUS SEROTINA ACER RUBRUM	POOR FAIR	4.0 5.0	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1068	936816.386	650346.116	TREE OF HEAVEN	AILANTHUS ALTISSIMA	FAIR	13.0	BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF
1069 1070	936796.504 936943.614	650333.978 650274.493	NORWAY MAPLE TREE OF HEAVEN	ACER PLATANOIDES AILANTHUS ALTISSIMA	GOOD FAIR	17.5 11.3	BEYOND WORK AREA BEYOND WORK AREA	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1071	936912.427	650257.483	TULIP POPLAR	LIRIODENDRON TULIPIFERA	GOOD	18.5	REMOVE	INDIAN BROOK SPS BLOW-OFF
1072	936908.865	650244.990	NORWAY MAPLE	ACER PLATANOIDES	FAIR	6.8	REMOVE	INDIAN BROOK SPS BLOW-OFF
1073	936894.858 936883.505	650240.075 650223.805	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	FAIR GOOD	8.8 9.5	REMOVE REMOVE	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1075	936889.570	650239.694	RED MAPLE	ACER RUBRUM	GOOD	13.0	REMOVE	INDIAN BROOK SPS BLOW-OFF
1075 1075	936889.570 936889.570	650239.694 650239.694	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD	10.0 9.5	REMOVE REMOVE	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1076	936880.789	650217.062	SUGAR MAPLE	ACER SACCHARUM	GOOD	4.5	REMOVE	INDIAN BROOK SPS BLOW-OFF
1077 1078	936897.537 936871.502	650230.872 650225.710	HEMLOCK SNAG SUGAR MAPLE	TSUGA SPP. ACER SACCHARUM	DEAD GOOD	4.8 3.5	REMOVE REMOVE	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1079	936857.894	650234.966	SUGAR MAPLE	ACER SACCHARUM	GOOD	4.5	REMOVE	INDIAN BROOK SPS BLOW-OFF
1080 1081	936880.173 936889.607	650243.393 650243.866	SUGAR MAPLE SUGAR MAPLE	ACER SACCHARUM ACER SACCHARUM	GOOD GOOD	5.0 4.5	REMOVE REMOVE	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1082	936870.599	650254.296	SUGAR MAPLE	ACER SACCHARUM	POOR	4.0	REMOVE	INDIAN BROOK SPS BLOW-OFF
1083 1084	936879.492 936876.663	650246.547 650243.828	SUGAR MAPLE PIGNUT HICKORY	ACER SACCHARUM CARYA GLABRA	GOOD GOOD	3.0 3.3	REMOVE REMOVE	INDIAN BROOK SPS BLOW-OFF INDIAN BROOK SPS BLOW-OFF
1085	874446.038	682524.107	NORWAY MAPLE	ACER PLATANOIDES	GOOD	9.5	BEYOND WORK AREA	LEAK 7
1086 1087	874408.238 874869.036	682522.282 682657.292	SWEET BIRCH RED MAPLE	BETULA LENTA ACER RUBRUM	GOOD GOOD	8.8	BEYOND WORK AREA REMOVE	LEAK 7 LEAK 7
1088	874889.461	682673.712	OAK	QUERCUS SPP.	POOR	6.0	REMOVE	LEAK 7
1089 1089	874867.184 874867.184	682638.320 682638.320	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	6.5 4.3	BEYOND WORK AREA BEYOND WORK AREA	LEAK 7 LEAK 7
1090	874872.456	682639.246	SWEET BIRCH	BETULA LENTA	GOOD	7.0	BEYOND WORK AREA	LEAK 7
1091 1092	874868.562 874857.864	682630.644 682620.891	RED MAPLE SWEET BIRCH	ACER RUBRUM BETULA LENTA	GOOD GOOD	3.3 5.5	BEYOND WORK AREA BEYOND WORK AREA	LEAK 7 LEAK 7
1093	874880.398	682618.081	SWEET BIRCH	BETULA LENTA	GOOD	4.0	BEYOND WORK AREA	LEAK 7
1094 1095	874880.946 874883.956	682618.683 682619.743	RED OAK RED OAK	QUERCUS RUBRA QUERCUS RUBRA	GOOD GOOD	3.0	BEYOND WORK AREA BEYOND WORK AREA	LEAK 7 LEAK 7
1096	874887.321	682626.733	SWEET BIRCH	BETULA LENTA	GOOD	3.3	BEYOND WORK AREA	LEAK 7
1097 1098	874877.766 874885.082	682637.098 682601.896	SWEET BIRCH RED MAPLE	BETULA LENTA ACER RUBRUM	GOOD GOOD	4.0 9.0	BEYOND WORK AREA REMOVE	LEAK 7 LEAK 7
1098	874885.082	682601.896	RED MAPLE	ACER RUBRUM	GOOD GOOD	7.5	REMOVE	LEAK 7
1098 1099	874885.082 874877.662	682601.896 682624.226	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD	3.8	REMOVE BEYOND WORK AREA	LEAK 7 LEAK 7
1100	874881.555 874873.786	682626.880 682628.488	RED MAPLE WHITE BIRCH	ACER RUBRUM BETULA POPULIFOLIA	GOOD FAIR	4.3	BEYOND WORK AREA BEYOND WORK AREA	LEAK 7 LEAK 7
1102	874892.148	682639.141	RED MAPLE	ACER RUBRUM	GOOD	6.0	BEYOND WORK AREA	LEAK 7
1103 1104	874899.380 874895.285	682645.361 682641.774	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	6.8 6.8	PROTECT IN-PLACE BEYOND WORK AREA	LEAK 7 LEAK 7
1105	874893.926	682634.485	RED MAPLE	ACER RUBRUM	GOOD	6.0	BEYOND WORK AREA	LEAK 7
1106 1106	874894.498 874894.498	682632.060 682632.060	RED MAPLE RED MAPLE	ACER RUBRUM ACER RUBRUM	GOOD GOOD	11.5 10.0	BEYOND WORK AREA BEYOND WORK AREA	LEAK 7 LEAK 7
1107	874928.724	682601.010	AMERICAN	PLATANUS	POOR	9.5	BEYOND WORK AREA	LEAK 7
1108	878980.082	681420.340	SYCAMORE BLACK OAK	OCCIDENTALIS QUERCUS VELUTINA	GOOD	17.5	BEYOND WORK AREA	TURKEY MTN SOUTH CHAMBER
1109	877788.924	681767.028	WHITE ASH	FRAXINUS AMERICANA	DEAD	18.3	REMOVE AREA	TURKEY MTN SOUTH CHAMBER
1110	840110.257 840093.577	690832.507 690832.553	BLACK WALNUT BLACK WALNUT	JUGLANS NIGRA JUGLANS NIGRA	GOOD GOOD	10.0	BEYOND WORK AREA BEYOND WORK AREA	PLEASANTVILLE CCT PLEASANTVILLE CCT
1112 1113	840083.230 843409.532	690838.330 688914.452	BLACK WALNUT TREE OF HEAVEN	JUGLANS NIGRA AILANTHUS ALTISSIMA	GOOD GOOD	9.0 3.8	BEYOND WORK AREA REMOVE	PLEASANTVILLE CCT HARLEM RR SPS BLOW-OFF
1114	843410.683	688910.593	TREE OF HEAVEN	AILANTHUS ALTISSIMA	GOOD	4.0	REMOVE	HARLEM RR SPS BLOW-OFF
1115 1116	843395.495 843375.625	689048.751 689039.232	BLACK WALNUT BLACK WALNUT	JUGLANS NIGRA JUGLANS NIGRA	POOR FAIR	5.5	REMOVE REMOVE	HARLEM RR SPS BLOW-OFF HARLEM RR SPS BLOW-OFF
1117	843351.794	689031.563	BLACK WALNUT	JUGLANS NIGRA	FAIR	10.0	REMOVE	HARLEM RR SPS BLOW-OFF
1118 1119	843343.996 843268.531	689014.131 688958.932	BLACK WALNUT UID SNAG	JUGLANS NIGRA UID SNAG	FAIR DEAD	13.5 13.0	REMOVE BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF HARLEM RR SPS BLOW-OFF
1120	843229.162	688965.605	EASTERN	POPULUS DELTOIDES	GOOD	13.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1121	843232.097	688961.373	COTTONWOOD ELM	ULMUS SPP.	GOOD	6.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1122	843218.912	688993.858	EASTERN COTTONWOOD	POPULUS DELTOIDES	GOOD	14.0	PROTECT IN-PLACE	HARLEM RR SPS BLOW-OFF
1123	843185.695	689083.570	NORWAY MAPLE	ACER PLATANOIDES	GOOD	6.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1124 1125	843191.188 843194.754	689078.810 689084.208	BLACK OAK NORWAY MAPLE	QUERCUS VELUTINA ACER PLATANOIDES	GOOD	5.5 9.0	BEYOND WORK AREA BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF HARLEM RR SPS BLOW-OFF
1126	843202.230	689069.240	NORWAY MAPLE	ACER PLATANOIDES	GOOD	7.5	REMOVE	HARLEM RR SPS BLOW-OFF
1127	843210.287	689086.674	NORWAY MAPLE	ACER PLATANOIDES	GOOD	5.5	REMOVE AND REPLACE	HARLEM RR SPS BLOW-OFF
1127	843210.287	689086.674	NORWAY MAPLE	ACER PLATANOIDES	GOOD	4.0	REMOVE	HARLEM RR SPS BLOW-OFF
1128	843221.570	689074.400	NORWAY MAPLE	ACER PLATANOIDES	FAIR	3.5	REMOVE AND REPLACE	HARLEM RR SPS BLOW-OFF
1129	843210.362	689093.944	UID SNAG	UID SNAG	DEAD	12.0	REMOVE	HARLEM RR SPS BLOW-OFF
1129	843210.362	689093.944	UID SNAG	UID SNAG	DEAD	7.5	REMOVE AND REPLACE	HARLEM RR SPS BLOW-OFF
1130	843231.421	689096.221	ELM	ULMUS SPP.	POOR	5.8	REMOVE	HARLEM RR SPS BLOW-OFF
1131	843236.805	689117.340	NORWAY MAPLE	ACER PLATANOIDES	FAIR	3.5	REMOVE	HARLEM RR SPS BLOW-OFF

	TREE SURVEY — EAST OF HUDSON RIVER							
TAG NO.	NORTHING	EASTING	SPECIES ID	SCIENTIFIC NAME	CONDITION	DBH (INCH)	DISPOSITION	LOC
1132	843247.751	689119.123	NORWAY MAPLE	ACER PLATANOIDES	FAIR	5.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1133	843264.298	689119.943	ELM	ULMUS SPP.	GOOD	7.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1134	843268.030	689121.077	ELM	ULMUS SPP.	GOOD	5.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1135	843256.349	689118.853	UID SNAG	UID SNAG	DEAD	11.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1136	843270.348	689093.852	NORWAY MAPLE	ACER PLATANOIDES	POOR	13.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1137	843264.977	689130.856	NORWAY MAPLE	ACER PLATANOIDES	GOOD	3.8	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1138	843270.049	689139.929	NORWAY MAPLE	ACER PLATANOIDES	GOOD	4.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1138	843270.049	689139.929	NORWAY MAPLE	ACER PLATANOIDES	GOOD	6.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1139	843262.221	689133.929	NORWAY MAPLE	ACER PLATANOIDES	GOOD	5.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1140	843259.750	689127.536	UID SNAG	UID SNAG	DEAD	5.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1141	843247.830	689130.856	ELM	ULMUS SPP.	POOR	10.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1142	843248.138	689134.119	NORWAY MAPLE	ACER PLATANOIDES	POOR	10.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1143	843244.988	689123.141	ELM	ULMUS SPP.	POOR	3.3	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1144	843242.115	689126.564	UID SNAG	UID SNAG	DEAD	4.3	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1145	843240.370	689123.518	NORWAY MAPLE	ACER PLATANOIDES	GOOD	12.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1146	843235.854	689119.405	NORWAY MAPLE	ACER PLATANOIDES	GOOD	8.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1147	843232.964	689121.811	NORWAY MAPLE	ACER PLATANOIDES	GOOD	8.8	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1148	843227.704	689121.327	NORWAY MAPLE	ACER PLATANOIDES	POOR	4.0	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1149	843241.641	689126.124	UID SNAG	UID SNAG	DEAD	5.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1150	843231.230	689114.034	NORWAY MAPLE	ACER PLATANOIDES	GOOD	7.5	REMOVE	HARLEM RR SPS BLOW-OFF
1151	843228.196	689114.974	NORWAY MAPLE	ACER PLATANOIDES	GOOD	3.0	REMOVE	HARLEM RR SPS BLOW-OFF
1152	843216.198	689115.546	ELM	ULMUS SPP.	FAIR	8.5	REMOVE	HARLEM RR SPS BLOW-OFF
1153	843212.559	689111.493	BLACK OAK	QUERCUS VELUTINA	GOOD	32.0	REMOVE	HARLEM RR SPS BLOW-OFF
1154	843202.362	689104.785	NORWAY MAPLE	ACER PLATANOIDES	POOR	3.5	REMOVE	HARLEM RR SPS BLOW-OFF
1155	843200.934	689097.849	NORWAY MAPLE	ACER PLATANOIDES	GOOD	10.0	REMOVE	HARLEM RR SPS BLOW-OFF
1156	843199.380	689105.084	BLACK OAK	QUERCUS VELUTINA	GOOD	23.0	REMOVE	HARLEM RR SPS BLOW-OFF
1157	843186.371	689092.004	NORWAY MAPLE	ACER PLATANOIDES	POOR	4.5	BEYOND WORK AREA	HARLEM RR SPS BLOW-OFF
1158	864614.643	686359.698	AMERICAN BEECH	FAGUS GRANDIFOLIA	GOOD	10.0	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT
1159	864622.121	686370.732	AMERICAN BEECH	FAGUS GRANDIFOLIA	GOOD	8.0	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT
1160	864639.200	686370.130	AMERICAN BEECH	FAGUS GRANDIFOLIA	GOOD	7.3	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT
1161	864647.523	686384.014	AMERICAN BEECH	FAGUS GRANDIFOLIA	GOOD	9.3	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT
1162	864636.153	686422.466	SUGAR MAPLE	ACER SACCHARUM	GOOD	10.0	BEYOND WORK AREA	MILLWOOD NORTH CCT
1163	864618.699	686425.229	SUGAR MAPLE	ACER SACCHARUM	GOOD	4.5	BEYOND WORK AREA	MILLWOOD NORTH CCT
1164	864637.459	686419.511	BLACK GUM	NYSSA SYLVATICA	GOOD	4.8	BEYOND WORK AREA	MILLWOOD NORTH CCT
1165	864605.744	686459.977	GREEN ASH	FRAXINUS PENNSYLVANICA	POOR	5.8	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT
1166	864590.684	686442.701	EASTERN HEMLOCK	TSUGA CANADENSIS	GOOD	13.8	REMOVE AND REPLACE BY FIVE (5) (*)	MILLWOOD NORTH CCT
1167	864584.323	686426.755	NORWAY MAPLE	ACER PLATANOIDES	GOOD	13.8	BEYOND WORK AREA	MILLWOOD NORTH CCT
1168	864595.438	686434.185	NORWAY MAPLE	ACER PLATANOIDES	FAIR	3.3	BEYOND WORK AREA	MILLWOOD NORTH CCT
1169	864593.796	686421.350	BLACK OAK	QUERCUS VELUTINA	FAIR	3.8	BEYOND WORK AREA	MILLWOOD NORTH CCT
1170	864581.886	686408.588	NORWAY MAPLE	ACER PLATANOIDES	POOR	5.8	BEYOND WORK AREA	MILLWOOD NORTH CCT
1171	864587.274	686409.319	BLACK OAK	QUERCUS VELUTINA	POOR	3.8	BEYOND WORK AREA	MILLWOOD NORTH CCT

Yorktov Leak 7

NOTES:

1. SEE CI-601 FOR NOTES.

REVISIONS/DESCRIPTION

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD 1 1/23/18 REVISED DISPOSITION PROJECT MANAGER:



Environmental Water for Future

ACCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF WENDY SPERDUTO, P.E.

PROGRAM DIRECTOR OF WFF

SEAN MCANDREW, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

ADDENDUM 1 DATE ISSUED: 01/23/2018

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

CATSKILL AQUEDUCT REPAIR AND REHABILITATION EAST OF HUDSON TREE LOCATION,

TYPE AND DISPOSITION SCHEDULE

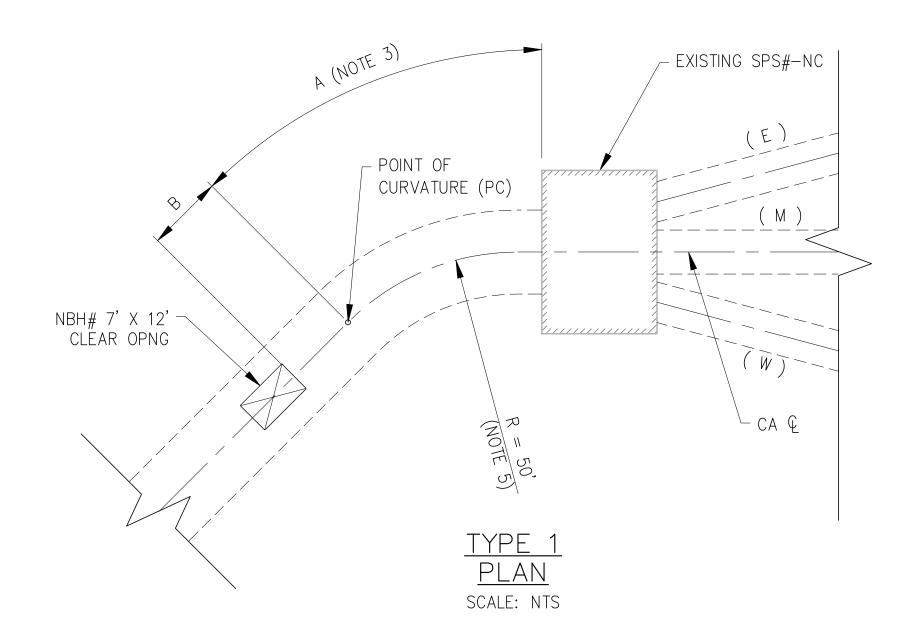
SHEET 3 OF 3

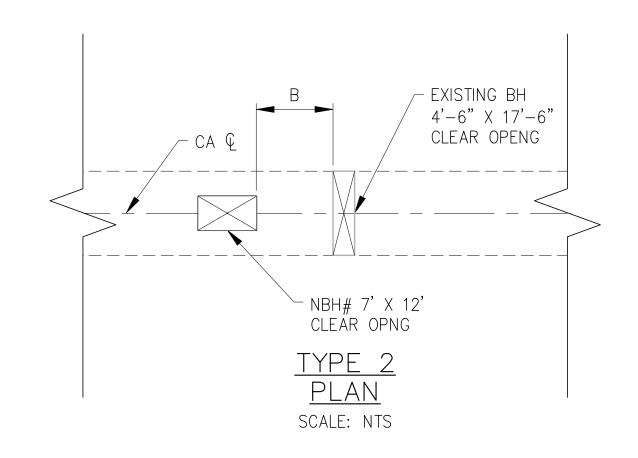
SCALE: NOT TO SCALE SHEET NO: **356** OF 485 DRAWING NO.

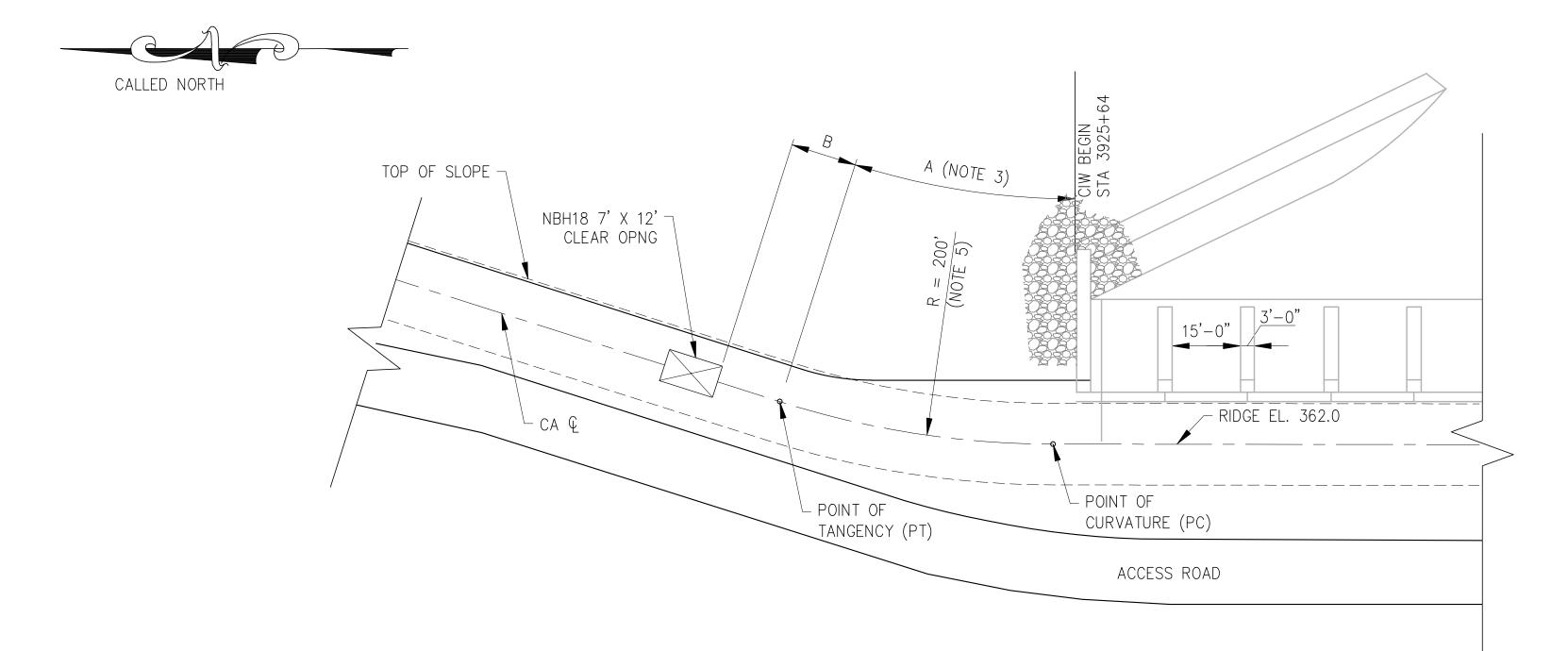
DATE: 10/2/2017

CI-607.01

APPR'D. SCOTT DAVIS







TYPE 3 <u>PLAN</u> SCALE: NTS

NEW BOATHOLE LOCATION SCHEDULE					
NBH# TYPE		OFFSET MEASURED FROM	OFFSET		
		STRUCTURE NAME ID		A (FT)	B (FT)
1	1	ESOPUS SPS NORTH CHAMBER	SPS1-NC	0	32
2	1	TONGORE SPS NORTH CHAMBER	SPS2-NC	0	32
3	_	-	_	SEE N	OTE 4
4	2	WALLKILL NORTH CCT BOATHOLE	ВНЗ	NA	19
5	2	ST ELMO CCT BOATHOLE	BH5	NA	19
6	_	-	_	SEE NOTE 4	
7	1	WASHINGTON SQUARE SPS NORTH CHAMBER	SPS3-NC	0	32
8	2	ORANGE CCT BOATHOLE	BH7	NA	19
9	1	FOUNDRY BROOK SPS NORTH CHAMBER	SPS4-NC	~12	18
10	1	INDIAN BROOK SPS NORTH CHAMBER	SPS5-NC	0	32
11	1	SPROUT BROOK SPS NORTH CHAMBER	SPS6-NC	0	32
12	_	-	_	SEE N	OTE 4
13	1	HUNTERS BROOK SPS NORTH CHAMBER	SPS8-NC	~40	16
14	1	TURKEY MOUNTAIN SPS NORTH CHAMBER	SPS9-NC	0	32
15	-	-	-	SEE N	OTE 4
16	1	HARLEM RAILROAD SPS NORTH CHAMBER	SPS10-NC	0	32
17	2	PLEASANTVILLE CCT BOATHOLE	BH12	0	16
18 3 CATSKILL INF		CATSKILL INFLUENT WEIR BEGIN STA.	CIW	~65	16

NOTES:

DATE ISSUED:

- 1. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE THE NEW BOATHOLE LOCATION. THE ENGINEER WILL FIELD VERIFY THE LOCATION.
- 2. "B" DIMENSION IS A MINIMUM AND OFFSET "A" IS APPROXIMATE. CONTRACTOR MAY SHIFT LOCATION OF BOATHOLE 2 FEET IN EITHER DIRECTION LONGITUDINALLY TO AVOID CUTTING WITHIN 12 INCHES OF AN EXISTING CONSTRUCTION JOINT OR FOR CONVENIENCE AS APPROVED BY THE ENGINEER.
- 3. OFFSET "A" SHALL BE MEASURED FROM THE EXTERIOR WALL OF THE NORTH SIPHON CHAMBER SUPERSTRUCTURE.
- 4. SEE EA-021 THRU EA-023 FOR APPROXIMATE NEW BOATHOLE STATIONING.
- 5. CURVE RADIUS IS PER CAT-RR RECORD DRAWINGS AND MAY NOT EXACTLY MATCH THE APPROXIMATE RADIUS ON EA SERIES PLANS.

Yorktown-2:

Time: 7:52 , /eight.ctb

r 27, 2017 _22x34_ByW

New Boathole - NBH13 - Jacob Road

Yorktown-5:

New Boathole - NBH14 - Underhill Avenue

DESIGNED BY: DRAWN BY: CHECKED BY: JA·UNDERGROUND·P. C. DESIGN LEAD: dba Jacobs Associates EILEEN T. TEST PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. JOHN J. MURRAY NO. DATE



ACCOUNTABLE MANAGER	"WARNING-IT IS A VIOLATION, OF THE NEW			
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PROGRAM MANAGER OF WFF	IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO			
WENDY SPERDUTO, P.E.	ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL			
PROGRAM DIRECTOR OF WFF	COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2."			
SEAN MCANDREW, P.E.	TORK EDUCATION, LAW, SECTION, 7209.2.			

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GRAPHIC SCALES CHECK BEFORE USE **BID SET**

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ACCORDINGLY

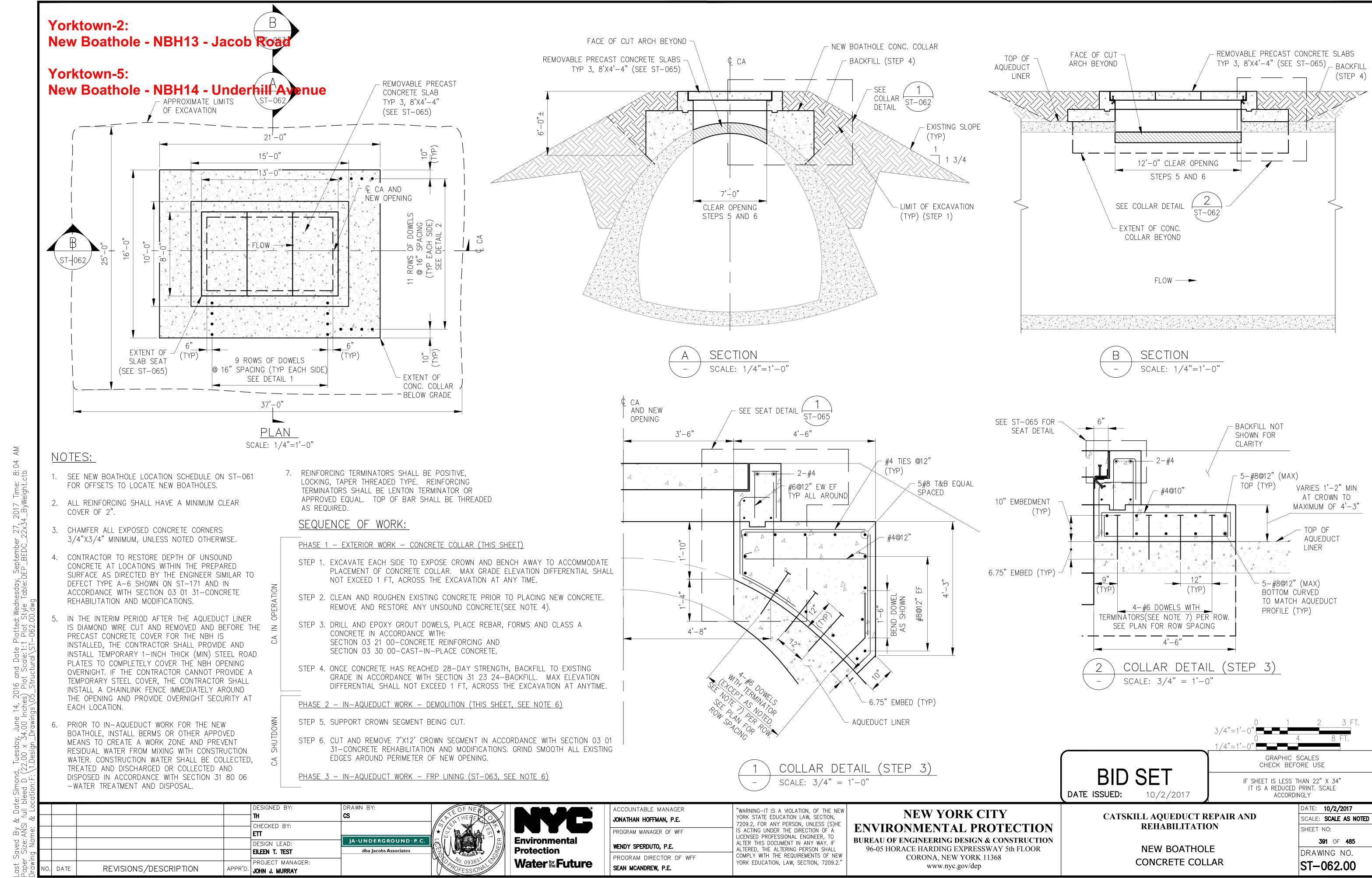
NEW BOATHOLE

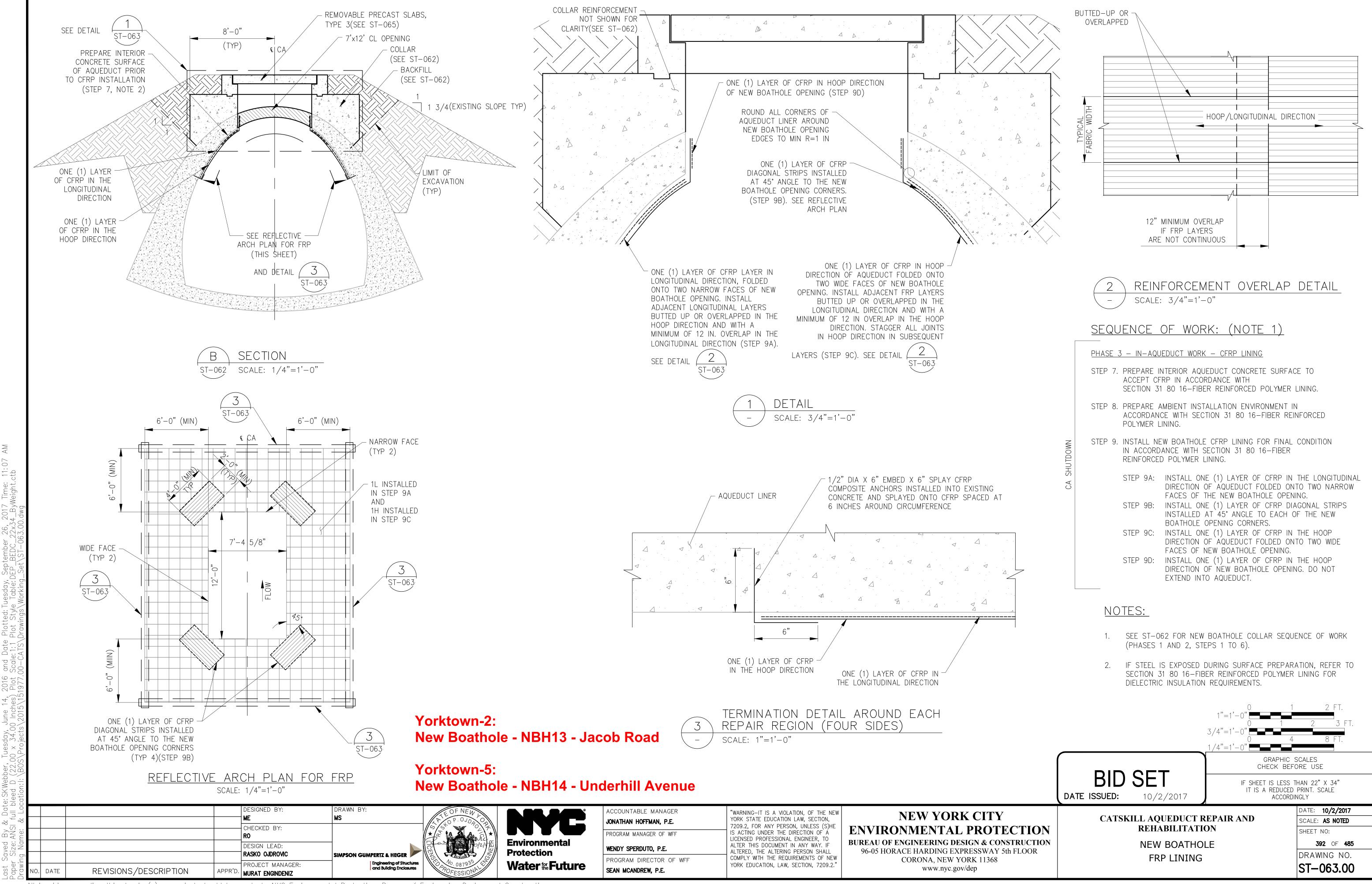
10/2/2017

DATE: **10/2/2017** SCALE: **NOT TO SCALE** SHEET NO: **390** OF **485**

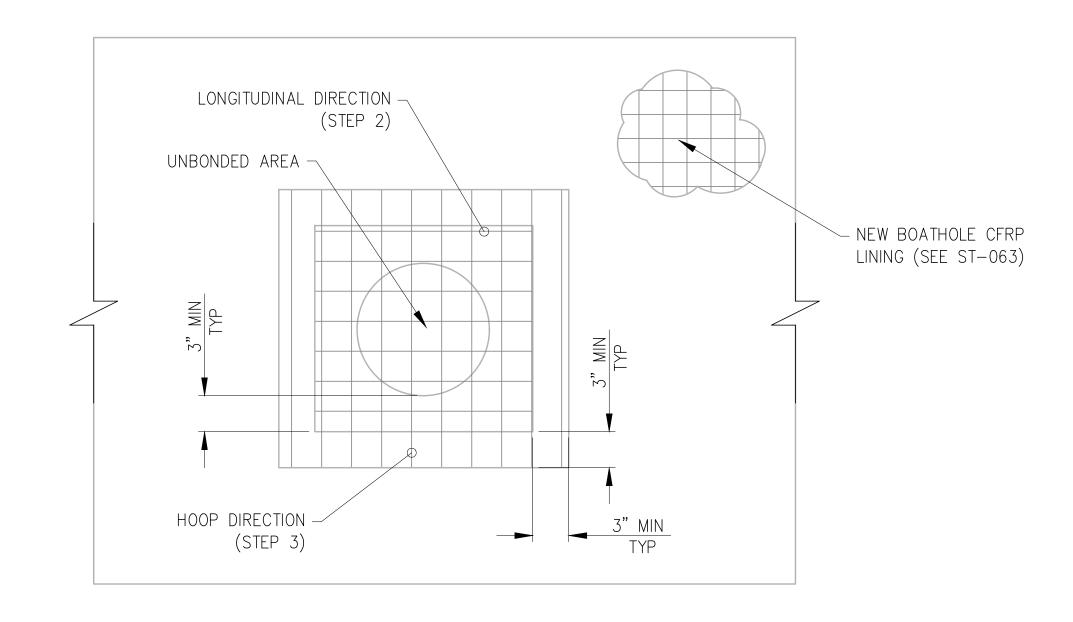
CATSKILL AQUEDUCT REPAIR AND

REHABILITATION





- 1. CONTRACTOR SHALL REPAIR VOIDS BETWEEN 2 AND 25 SQ IN IN INSTALLED CFRP BASED ON THE POST-INSTALLATION INSPECTION AND IN ACCORDANCE WITH SECTION 31 80 06-FIBER REINFORCED POLYMER LINING. SEE DETAIL 5 THIS SHEET.
- 2. VOIDS LESS THAN 2 SQUARE INCHES DO NOT REQUIRE CORRECTIVE ACTION AS LONG AS THE TOTAL VOID AREA IS LESS THAN 5% OF THE TOTAL LAMINATE AREA AND THERE ARE NO MORE THAN (10) SUCH VOIDS PER 10 SQUARE FOOT AS DETERMINED BY THE ENGINEER.
- 3. FOR VOIDS LARGER THAN 25 SQUARE INCHES CONTACT ENGINEER FOR REMEDIAL ACTION. SUCH CASES WILL BE ADDRESSED ON A CASE BY CASE BASIS.



VOIDS BETWEEN 2 AND 25 SQ.IN. (NOTE 1)

REPAIR DETAIL OF VOIDS IN CFRP

PROCEDURE:

- STEP 1: DRILL TWO MAXIMUM 1/4 IN DIAMETER HOLES IN THE CFRP LAMINATE UP TO THE DELAMINATED LAYER AND FILL THE DELAMINATION AND THE DRILLED HOLES BY LOW-PRESSURE INJECTION OF EPOXY UNTIL INJECTION FROM ONE HOLE RESULTS IN DISCHARGE FROM THE OTHER.
- STEP 2: INSTALL ONE LAYER OF CFRP IN THE LONGITUDINAL DIRECTION CENTERED OVER THE VOID AND COVERING MINIMUM 3 INCHES ON ALL SIDES OF THE VOID.
- STEP 3: INSTALL ONE LAYER OF CFRP IN THE HOOP DIRECTION CENTERED OVER THE VOID AND COVERING MINIMUM 3 IN. ON ALL SIDES OF THE FIRST CFRP LAYER.
- STEP 4: APPLY TOP COAT OF THICKENED EPOXY COVERING THE ENTIRE CFRP PATCH.

Yorktown-2:

New Boathole - NBH13 - Jacob Road

REVISIONS/DESCRIPTION

Yorktown-5:

New Boathole - NBH14 - Underhill Avenue

Engineering of Structures and Building Enclosures



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NEW YORK CITY ENVIRONMENTAL PROTECTION

96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

BID SET 10/2/2017 DATE ISSUED:

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

NEW BOATHOLE FRP LINING POST-INSTALLATION REPAIRS

DATE: **10/2/2017** SCALE: AS NOTED SHEET NO: **393** OF **485** DRAWING NO. ST-064.00

DESIGNED BY:

CHECKED BY:

DESIGN LEAD:

RASKO OJDROVIC

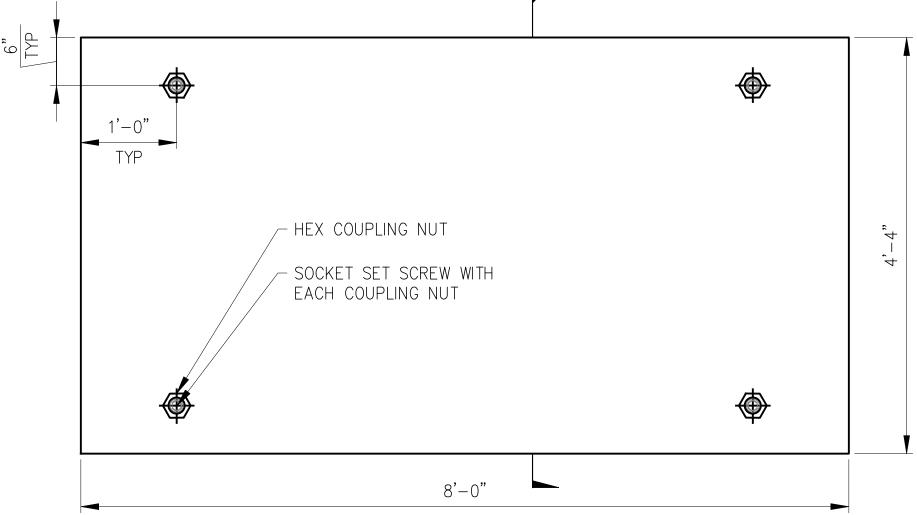
MURAT ENGINDENIZ

PROJECT MANAGER:

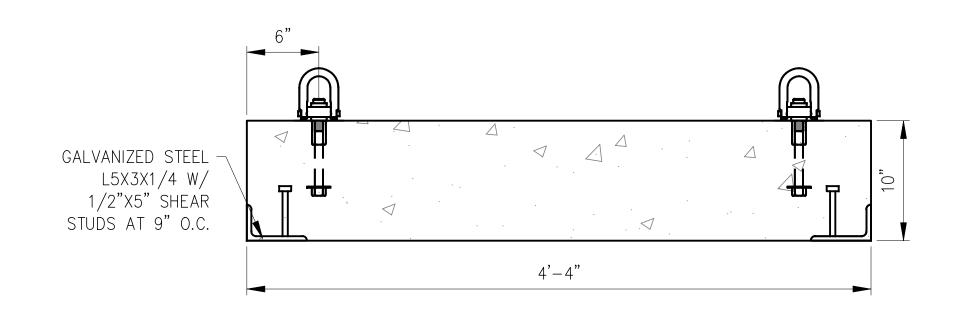
New Boathole - NBH13 - Jacob Road

Yorktown-5:

New Boathole - NBH14 - Underhill Avenue



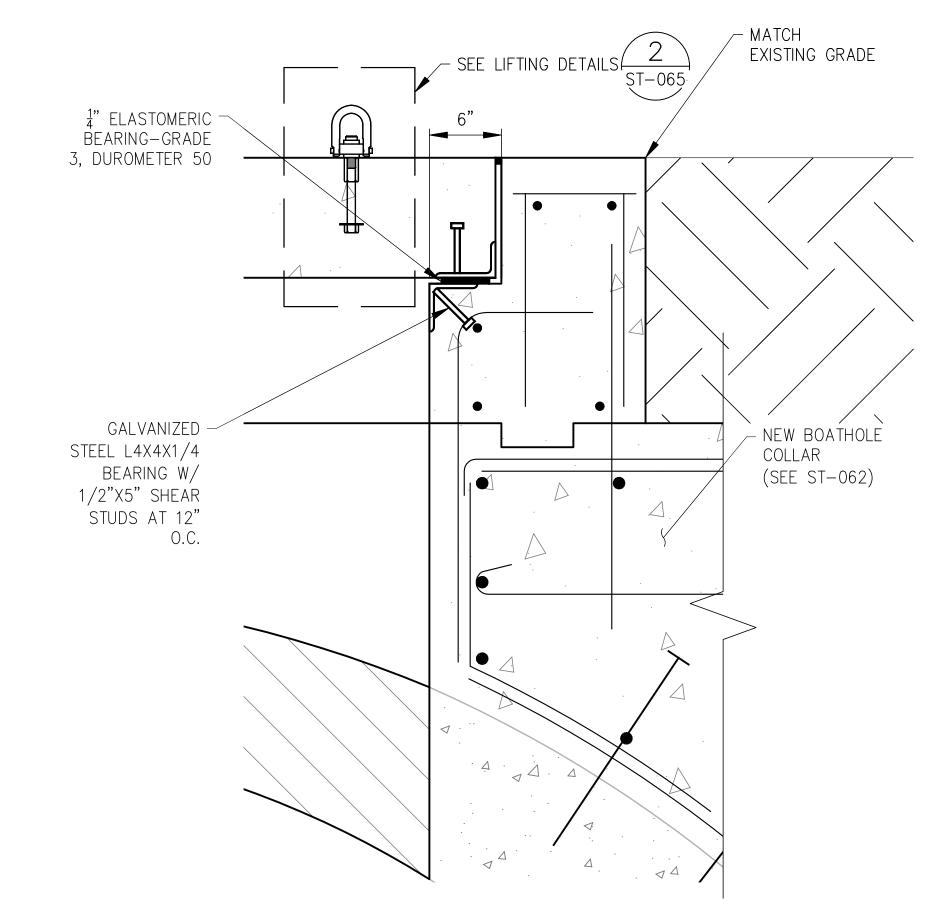
REMOVABLE PRECAST CONCRETE SLAB SCALE: 1" = 1'-0"



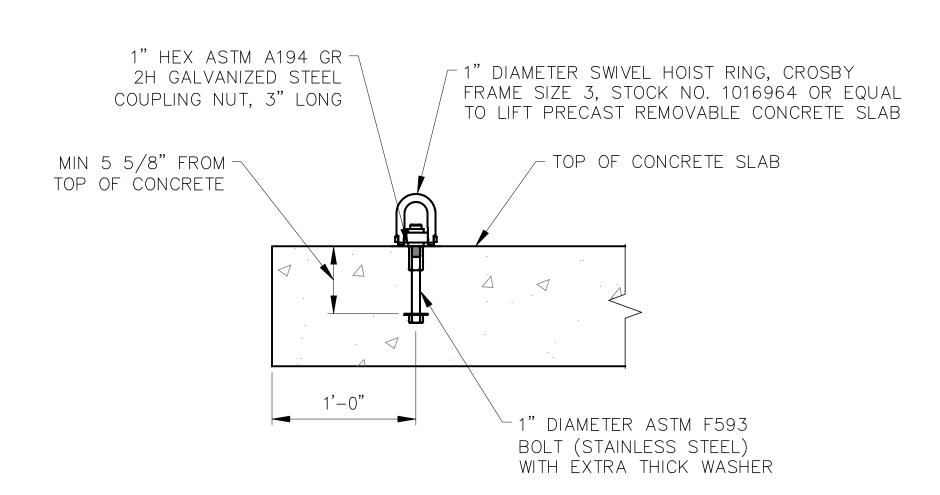


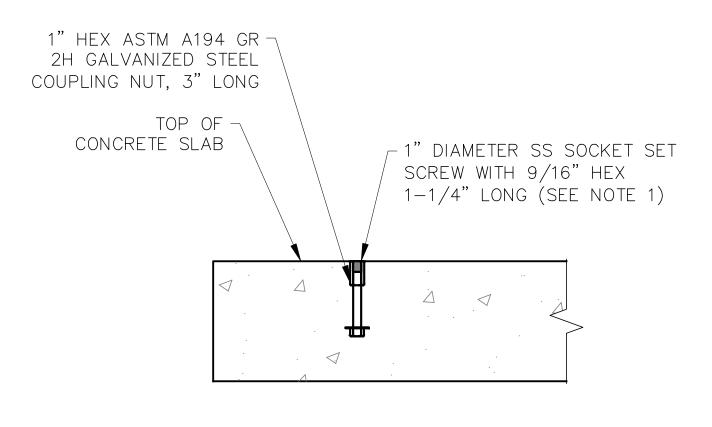
NOTE:

- 1. DURING NORMAL CONDITION WHERE HOIST RING IS NOT BEING USED AT LIFTING ANCHOR, USE 1" DIAMETER COUNTERSUNK BRASS PLUGS GRAINGER ITEM #22UL66 OR EQUAL.
- 2. ALL REMOVABLE CONCRETE SLABS SHALL HAVE A MINIMUM CLEAR COVER OF 2 INCHES.
- PRECAST CONCRETE MIX SHALL BE CLASS C IN ACCORDANCE WITH SECTION 03 30 00-CAST-IN-PLACE CONCRETE.
- REFER TO SECTION 03 40 00-PRECAST CONCRETE SLAB FOR ADDITIONAL REQUIREMENTS FOR THE REMOVABLE PRECAST CONCRETE SLABS.



REMOVABLE PRECAST CONCRETE SLAB SEAT DETAIL ST-062 SCALE: 1-1/2"=1'-0"



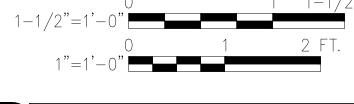


LIFTING WITH HOIST RINGS

YORK EDUCATION, LAW, SECTION, 7209.2.



NORMAL CONDITION: NO HOIST RING (SEE NOTE 1)



BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: CHECKED BY: JA·UNDERGROUND·P. C. DESIGN LEAD: dba Jacobs Associates EILEEN T. TEST PROJECT MANAGER: APPR'D. JOHN J. MURRAY REVISIONS/DESCRIPTION NO. DATE

Environmental Protection Water for Future

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

NEW BOATHOLE

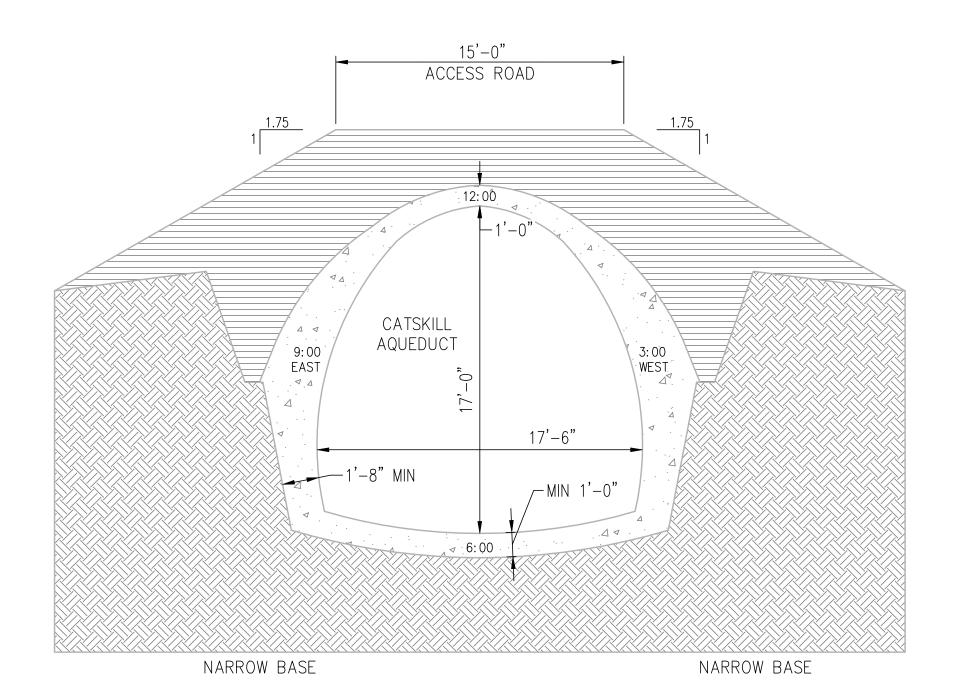
DATE: **10/2/2017** SCALE: **SCALE AS NOTED** SHEET NO: **394** OF **485**

DRAWING NO.

ST-065.00

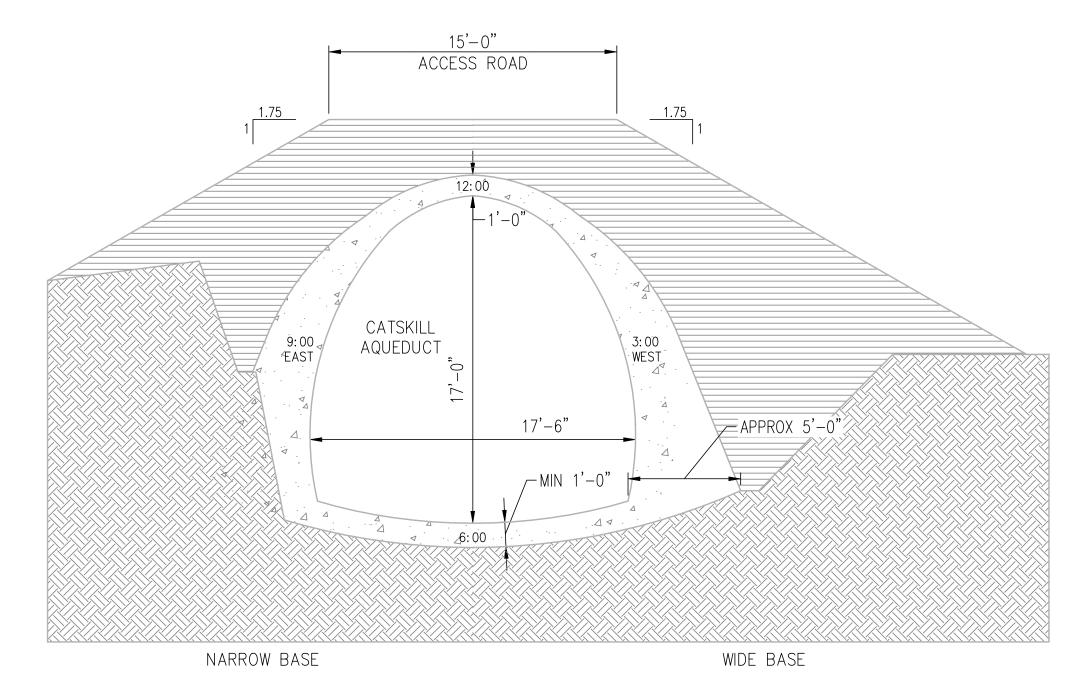
REMOVABLE PRECAST CONCRETE SLAB

Yorktown-9: Leak 7



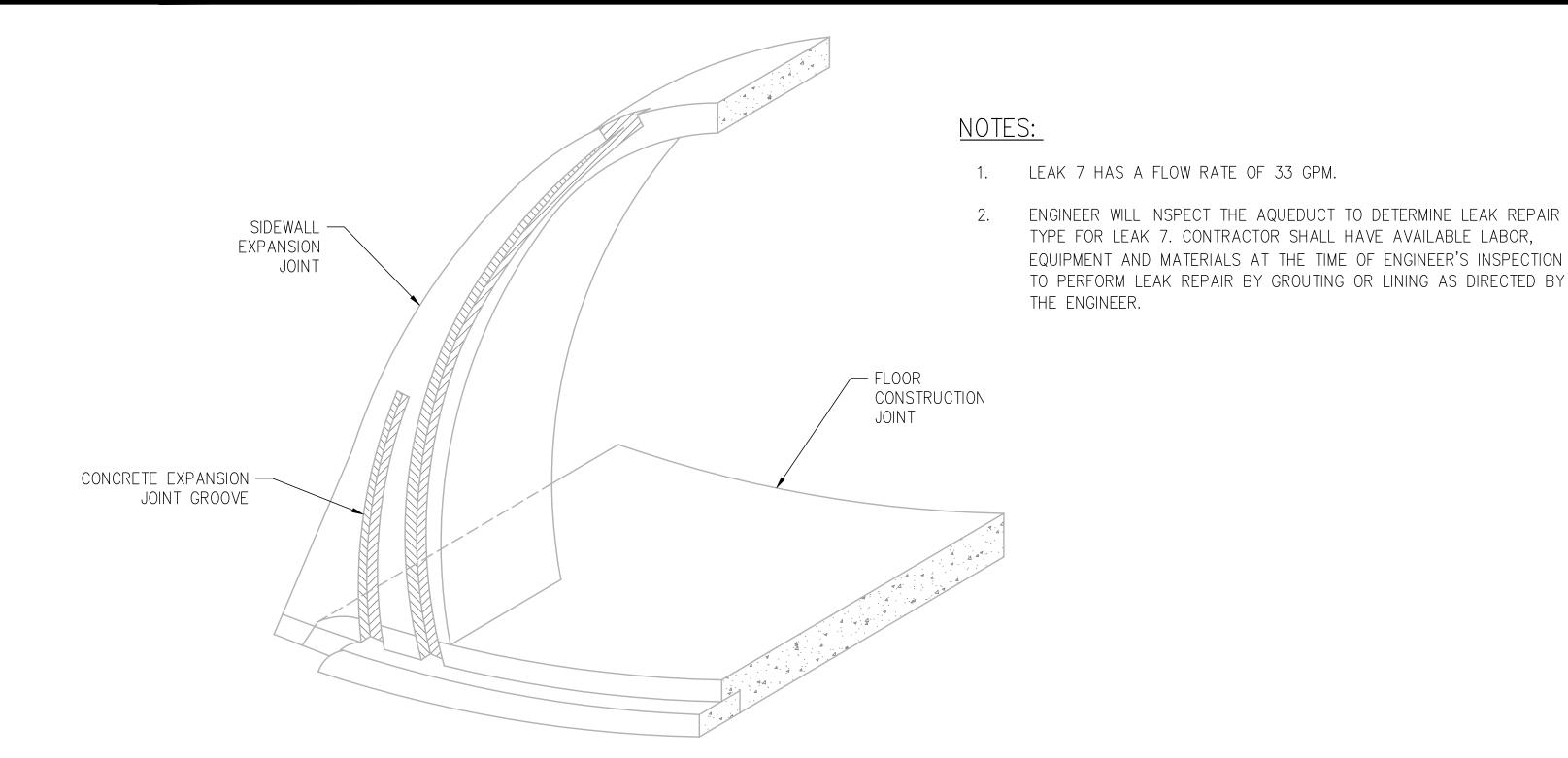
LEAK 7 APPROXIMATELY STA 3424+57 TO 3426+57 AND STA 3427+29
TO 3431+10 CROSS—SECTION OF AQUEDUCT LOOKING DOWNSTREAM

OI-269 NOT TO SCALE



LEAK 7 APPROXIMATELY STA 3426+57 TO 3427+29 AND STA 3431+10 TO 3432+98 CROSS-SECTION OF AQUEDUCT LOOKING DOWNSTREAM

CI-269 NOT TO SCALE



CONCRETE EXPANSION JOINT DETAIL

1 15-FOOT TO 45-FOOT SPACING

NOT TO SCALE

<u>LEGEND:</u>

ORDINARY EMBANKMENT

AQUEDUCT LINER

COMPACTED EARTH

BID SET

DATE ISSUED: 10/2/2017

GRAPHIC SCALES
CHECK BEFORE USE

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DESIGNED BY:

JZ

CHECKED BY:

KL

DESIGN LEAD:

AMIR MASHHAD

PROJECT MANAGER:

SCOTT DAVIS

DRAWN BY:

JG

PROJECT MANAGER:

SCOTT DAVIS



Environmental Protection
Water Future

ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

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YORK EDUCATION, LAW, SECTION, 7209.2."

NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep CATSKILL AQUEDUCT REPAIR AND REHABILITATION

LEAK REPAIR - GROUTING OR LINING

ABILITATION SHEET NO:

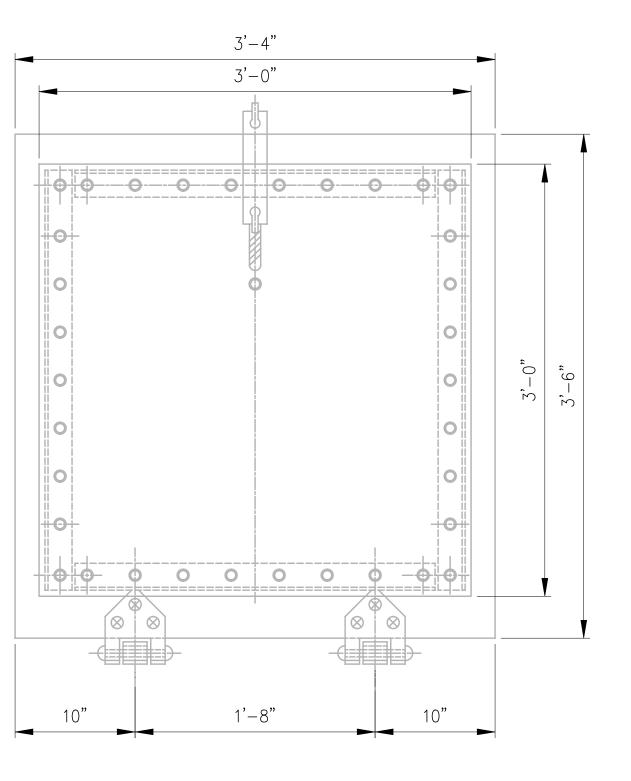
LEAK 7 407 C

407 OF 485
DRAWING NO.
ST-145.00

DATE: 10/2/2017

SCALE: NOT TO SCALE

1. THE CONTRACTOR CAN ACCESS THE AQUEDUCT FROM ACCESS MANHOLES AS INDICATED IN THE CI SERIES. ADDITIONAL ACESS LOCATIONS ARE AVAILABLE TO THE CONTRACTOR AS INDICATED ON EA-020.



TYPICAL MANHOLE ACCESS HATCH SCALE: 1-1/2"=1-0"

Yorktown-9: **Croton CCT Access Manhole** **Kitchawan CCT Access Manhole and Culvert Drain**

Yorktown-11: **Kitchawan CCT Access Manhole**

BID SET DATE ISSUED: 10/2/2017

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IT IS A REDUCED PRINT. SCALE
ACCORDINGLY

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

SCALE: AS NOTED SHEET NO: 409 OF 485 DRAWING NO.

ST-157.00

DATE: 10/2/2017

AQUEDUCT ACCESS MANHOLE DETAIL

3 I						
Ś					DESIGNED BY:	DRAWN BY:
3					JZ	JG
;					CHECKED BY:	
- - -					KL	
-					DESIGN LEAD:	
<u>۔</u> ح					AMIR MASHHAD	
	NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.	PROJECT MANAGER: SCOTT DAVIS	



Environmental Protection Water for Future

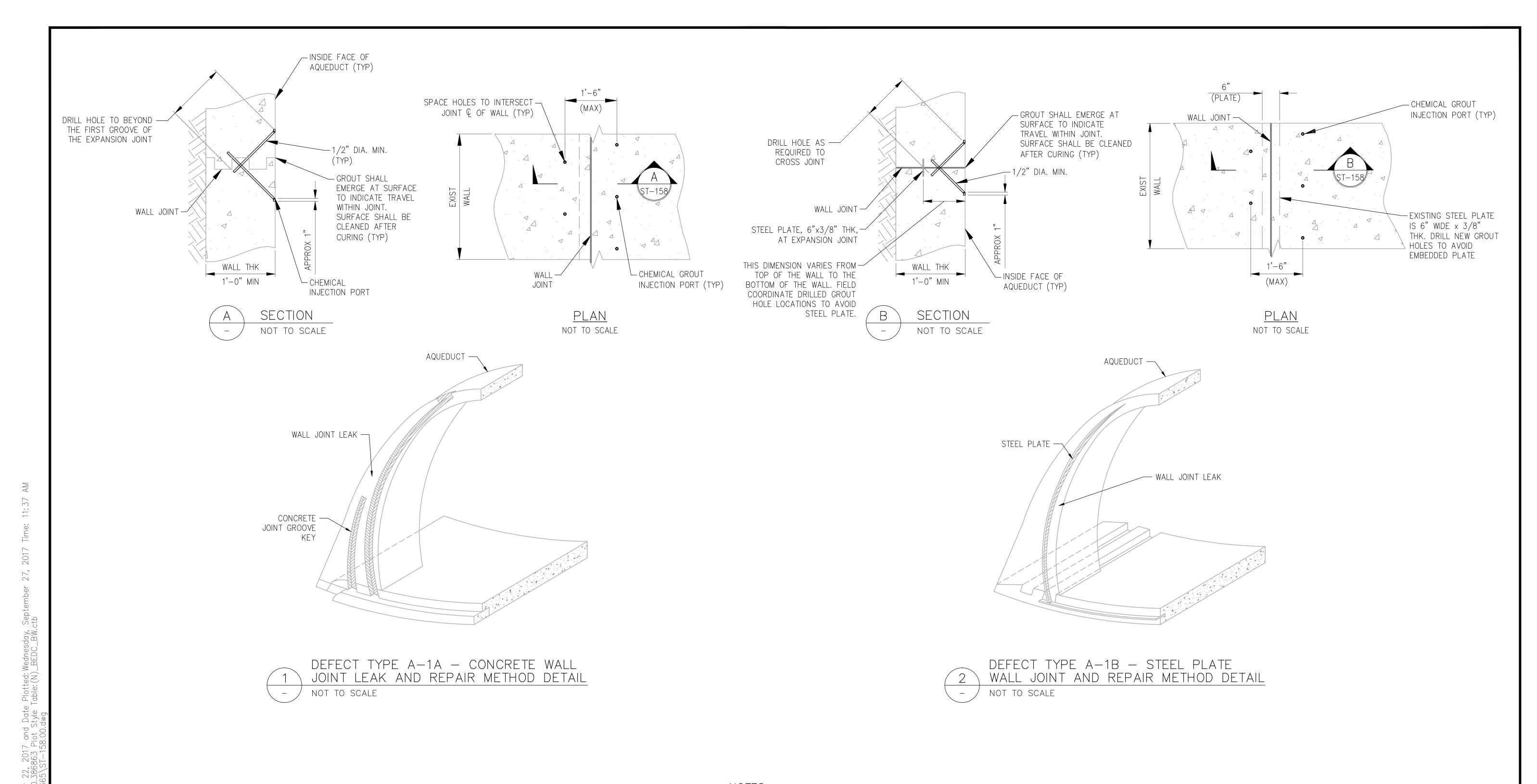
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ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

NEW YORK CITY

TYPICAL CCT AQUEDUCT SECTION

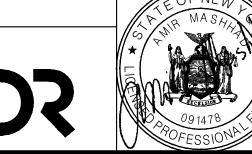
SCALE: 1/2"=1-0""



- 1. REFER TO SECTION 31 80 15 CHEMICAL GROUTING FOR LEAK REPAIR GROUTING REQUIREMENTS.
- 2. PRIOR TO LEAK REPAIR WORK, INSTALL BERMS OR OTHER APPROVED MEANS TO CREATE A WORK ZONE AND PREVENT RESIDUAL WATER FROM MIXING WITH CONSTRUCTION WATER. CONSTRUCTION WATER SHALL BE COLLECTED, TREATED, AND DISCHARGED OR COLLECTED AND DISPOSED IN ACCORDANCE WITH SECTION 31 80 06 - WATER TREATMENT AND DISPOSAL.

Yorktown-9: Leak 7

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: APPR'D. SCOTT DAVIS REVISIONS/DESCRIPTION





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NEW YORK CITY ENVIRONMENTAL PROTECTION

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BID	SET
DATE ISSUED:	10/2/2017

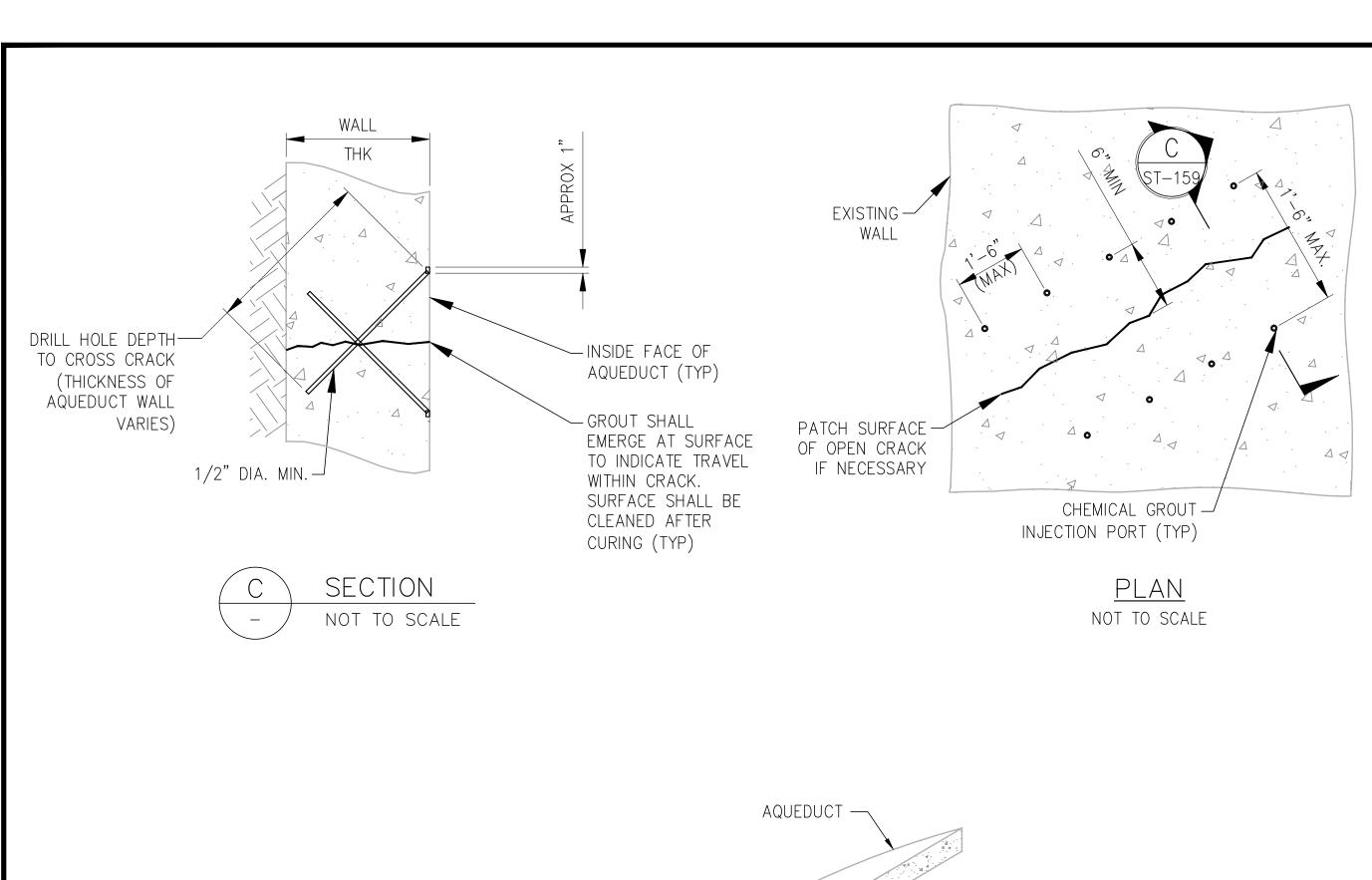
GRAPHIC SCALES CHECK BEFORE USE IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE

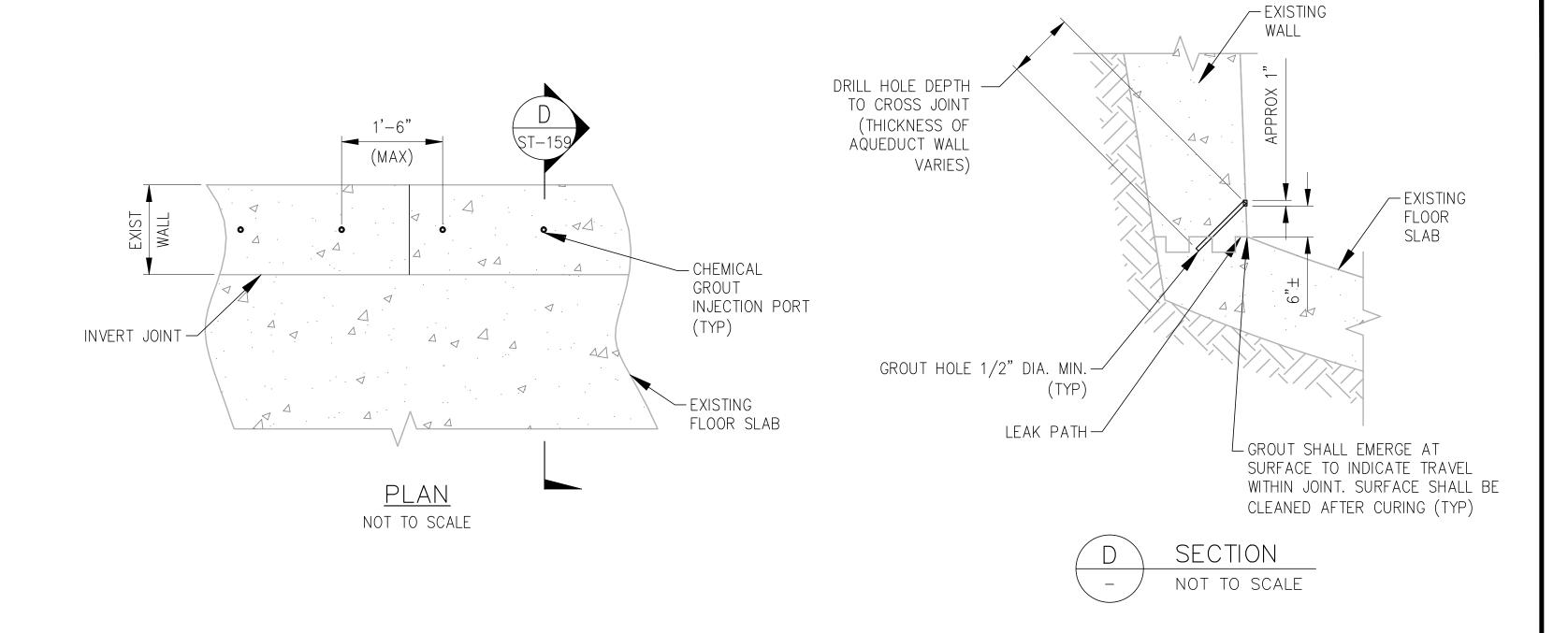
ACCORDINGLY

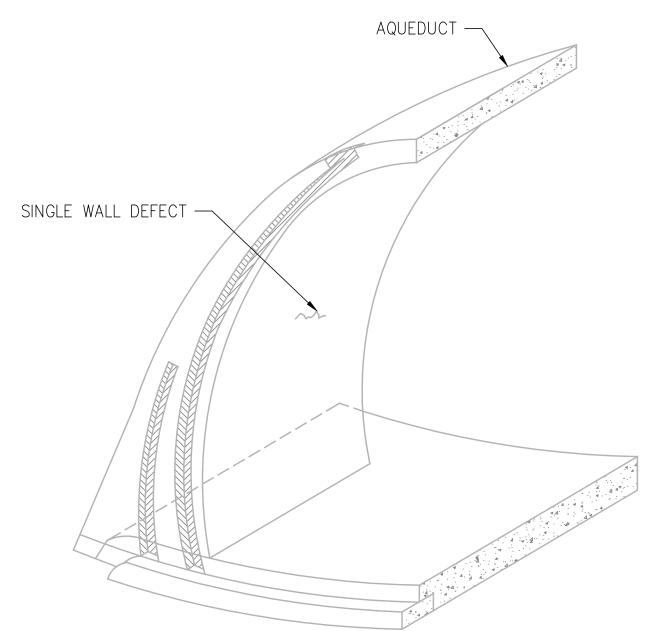
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 1 OF 3

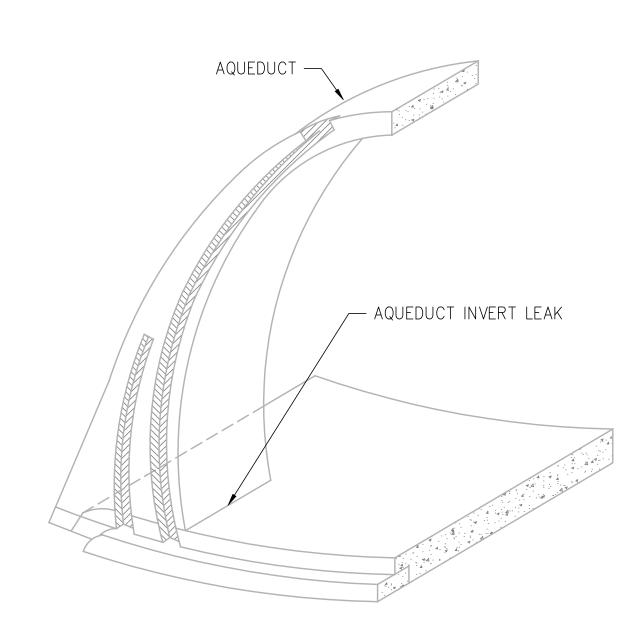
DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO: 410 OF 485 DRAWING NO. ST-158.00







DEFECT TYPE A-2 - SINGLE WALL DEFECT AND REPAIR METHOD DETAIL NOT TO SCALE



DEFECT TYPE A-3 - AQUEDUCT INVERT LEAK AND REPAIR METHOD DETAIL NOT TO SCALE

NOTE:

SEAN MCANDREW, P.E.

1. SEE ST-158 FOR NOTES.

Yorktown-9: Leak 7

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. SCOTT DAVIS



	NYC
WEER	Environmental Protection
	Water for Future

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NEW YORK CITY ENVIRONMENTAL PROTECTION

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BID SET DATE ISSUED: 10/2/2017

GRAPHIC SCALES CHECK BEFORE USE

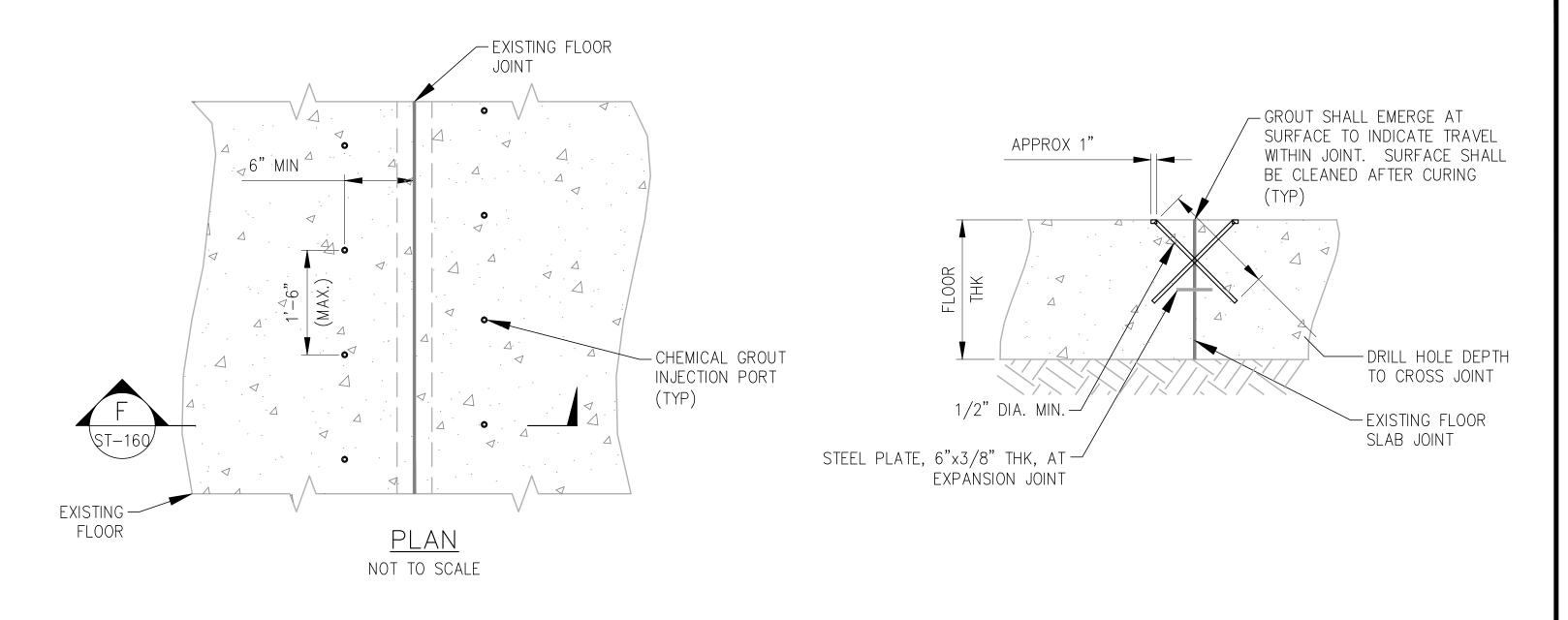
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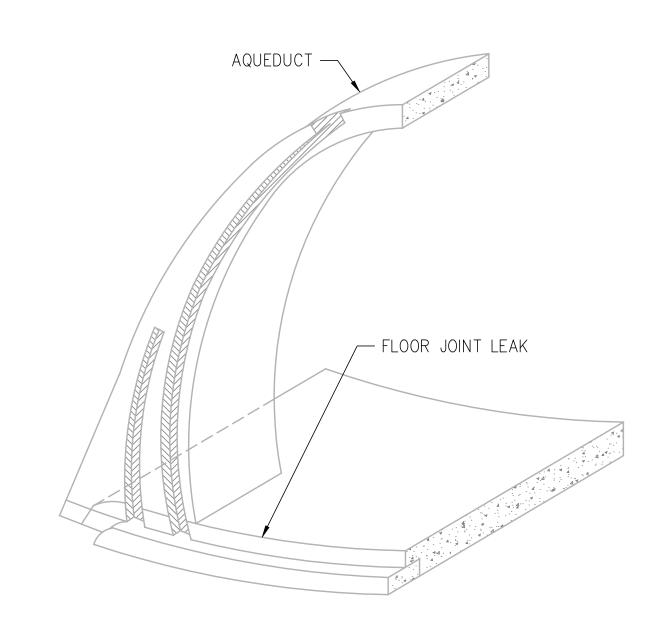
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 2 OF 3

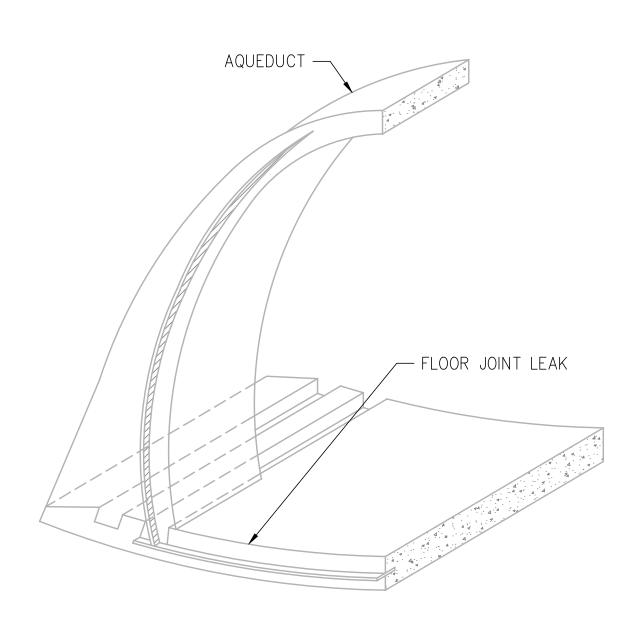
SHEET NO: 411 OF 485 DRAWING NO. ST-159.00

SCALE: NOT TO SCALE





DEFECT TYPE A-4A - CONCRETE FLOOR JOINT LEAK AND REPAIR METHOD DETAIL NOT TO SCALE



DEFECT TYPE A-4B - STEEL PLATE FLOOR JOINT LEAK AND REPAIR METHOD DETAIL NOT TO SCALE

NOTE:

1. SEE ST-158 FOR NOTES.

Yorktown-9: Leak 7

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. SCOTT DAVIS

Environmental Protection Water # Future

CCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF WENDY SPERDUTO, P.E. PROGRAM DIRECTOR OF WFF YORK EDUCATION, LAW, SECTION, 7209.2." SEAN MCANDREW, P.E.

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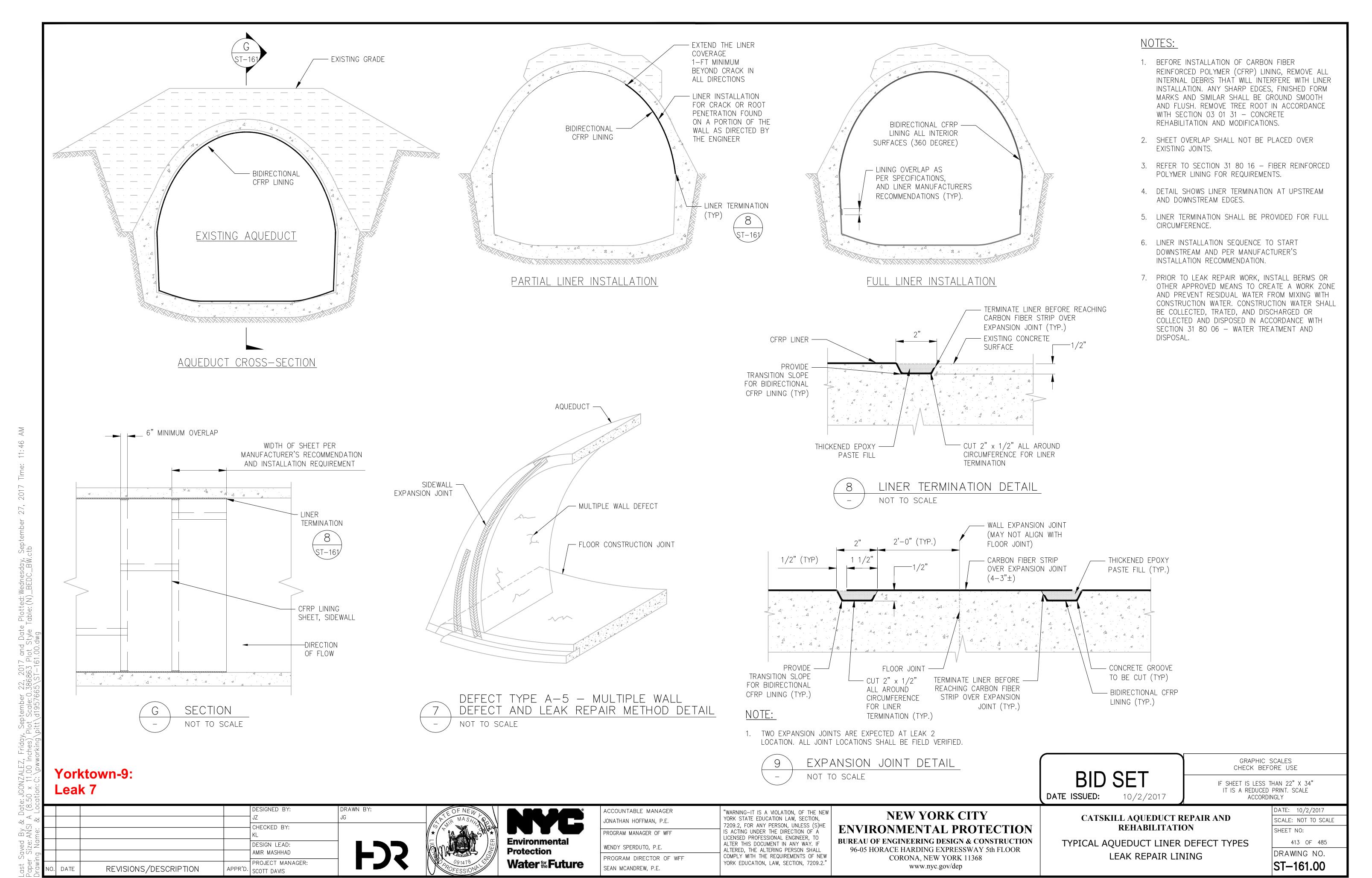
BID SET DATE ISSUED: 10/2/2017

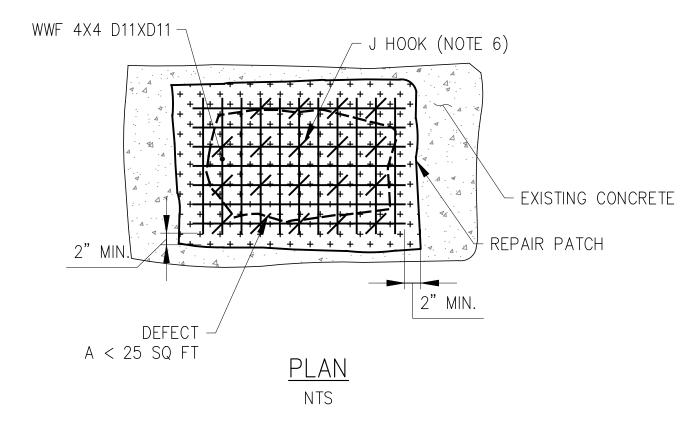
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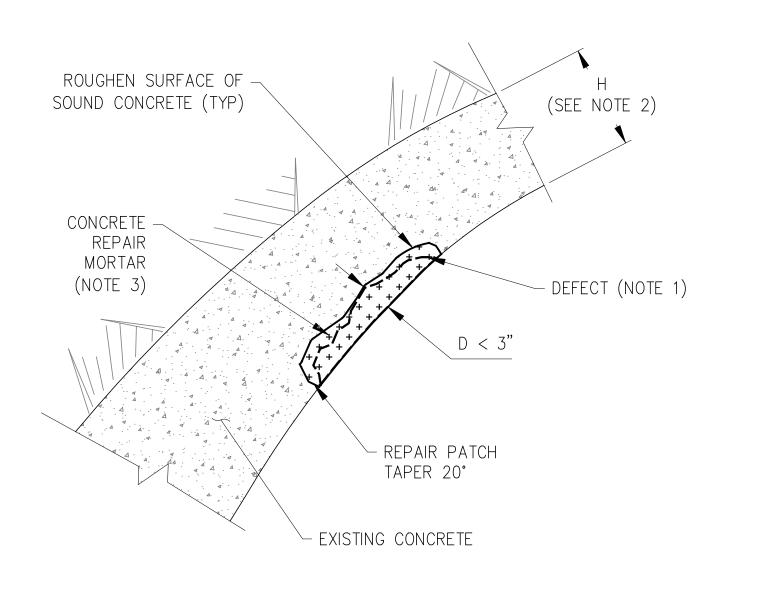
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

TYPICAL AQUEDUCT LINER DEFECT TYPES LEAK REPAIR GROUTING SHEET 3 OF 3

DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO: 412 OF 485 DRAWING NO. ST-160.00







SECTION

NTS

STEP 1: SAW-CUT 1 INCH MIN AROUND PERIMETER OF REPAIR AREA

REHABILITATION AND MODIFICATIONS.

STEP 2: PREPARE THE SURFACE IN ACCORDANCE WITH SECTION

STEP 3: FILL OPENING WITH CONCRETE REPAIR MORTAR AND TROWEL

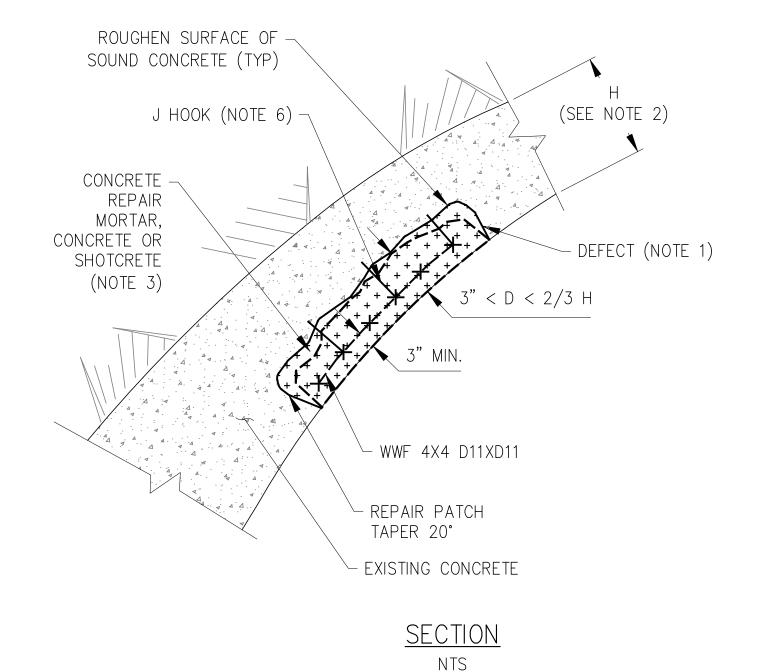
IN ACCORDANCE WITH SECTION 03 01 31-CONCRETE

DEFECT TYPE A-6: SURFICIAL FEATURE REPAIR

AS SHOWN. TAPER SLOT AS SHOWN TO KEY THE REPAIR PATCH. REMOVE EXISTING MATERIAL TO SOUND CONCRETE

03 01 31-CONCRETE REHABILITATION AND MODIFICATIONS.

THE SURFACE TO MATCH THE INSIDE LINING SURFACE.



STEP 1: SAW-CUT 1 INCH MIN AROUND PERIMETER OF REPAIR AREA AS SHOWN. TAPER SLOT AS SHOWN TO KEY THE REPAIR PATCH. WITH SECTION 03 01 31-CONCRETE REHABILITATION AND MODIFICATIONS.

PREPARE THE SURFACE IN ACCORDANCE WITH SECTION 03 01 31-CONCRETE REHABILITATION AND MODIFICATIONS.

FACE AND MAXIMUM 2 INCHES FROM EDGE OF REPAIR PATCH. UNLESS EXISTING REINFORCEMENT IS ENCOUNTERED (NOTE 4).

EITHER FORM REPAIR AND CAST CONCRETE OR APPLY CONCRETE REPAIR MORTAR OR SHOTCRETE AND TROWEL THE SURFACE TO MATCH THE INSIDE LINING SURFACE.

NOTES

- DOWELS (NOTE 6)

— EXISTING CONCRETE

(SEE NOTE 2)

DOWEL (NOTE 6)

REPAIR PATCH

CONCRETE OR SHOTCRETE

- 1. D = DEPTH OF DEFECTA = SURFACE AREA OF DEFECT
- 2. LINING THICKNESS, H, VARIES ALONG THE AQUEDUCT CROSS SECTION. SEE REFERENCE DRAWINGS PROVIDED IN THE BID EXHIBIT.
- 3. FOR CONCRETE REPAIR MORTAR AND CONCRETE REQUIREMENTS, REFER TO SECTION 03 30 00-CAST-IN-PLACE CONCRETE. FOR SHOTCRETE REQUIREMENTS, REFER TO SECTION 03 37 13-SHOTCRETE
- WHERE REINFORCEMENT EXISTS, CLEAN REINFORCEMENT OR REPLACE WITH NEW REINFORCEMENT IN ACCORDANCE WITH SECTION 03 01 31-CONCERETE REHABILITATION AND MODIFICATIONS.
- 5. FOR WIRE MESH AND REINFORCING STEEL REQUIREMENTS, REFER TO SECTION 03 21 00-CONCRETE REINFORCING.
- BOLTS AND DOWELS SHOWN ARE CONCEPTUAL ONLY. CONTRACTOR TO FINALIZE METHOD TO ANCHOR WIRE MESH IN ACCORDANCE WITH SECTION 03 01 31-CONCRETE REHABILITATION AND MODIFICATIONS.
- 7. FOR NON-SHRINK GROUT REQUIREMENTS, REFER TO SECTION 03 60 00-GROUT.
- CONTACT GROUT HOLE SPACING AND ARRANGEMENT SHALL BE IN ACCORDANCE WITH SECTION 31 80 19-CONTACT GROUTING.
- CONTRACTOR TO PROVIDE TEMPORARY SUPPORT AND PROTECT EXPOSED EARTH USING APPROVED METHODS FOR FULL DEPTH LINER REPAIRS IN ACCORDANCE WITH SECTION 03 01 31-CONCRETE REHABILITATION AND MODIFICATIONS
- DEFECT (NOTE 1) 10. PRIOR TO CONCRETE REHABILITATION, INSTALL BERMS OR OTHER APPROVED MEANS TO CREATE A WORK ZONE AND PREVENT RESIDUAL WATER FROM MIXING WITH CONSTRUCTION WATER. CONSTRUCTION WATER SHALL BE COLLECTED, TREATED AND DISCHARGED OR COLLECTED AND DISPOSED IN ACCORDANCE WITH SECTION 31 80 06 -WATER TREATMENT AND DISPOSAL.

DEFECT TYPE A-7: STRUCTURAL FEATURE REPAIR

- REMOVE EXISTING MATERIAL TO SOUND CONCRETE IN ACCORDANCE
- STEP 3: PLACE WIRE MESH A MINIMUM OF 3 INCHES FROM THE

DEFECT TYPE A-8: FULL DEPTH LINER REPAIR

<u>PLAN</u>

NTS

- WWF 4X4 D11XD11

- DOWEL (NOTE 6)

SECTION

NTS

ROUGHEN SURFACE OF

SOUND CONCRETE (TYP)

- SAW-CUT 1 INCH MIN AROUND PERIMETER OF REPAIR AREA AS SHOWN. TAPER SLOT AS SHOWN TO KEY THE REPAIR PATCH. REMOVE EXISTING MATERIAL BACK TO EARTH IN ACCORDANCE WITH SECTION 03 01 31-CONCRETE REHABILITATION AND MODIFICATIONS.
- STEP 2: SUPPORT AND PROTECT THE EXPOSED GROUND IN ACCORDANCE WITH SECTION 03 01 31-CONCRETE REHABILITATION AND MODIFICATIONS.

WWF 4X4 D11XD11

(NOTE 8)

A < 25 SQ FT

CONTACT GROUT HOLES (NOTE 8)

CONCRETE -

(NOTE 3)

OR SHOTCRETE

REPAIR PATCH

TAPER 20°

CONTACT GROUT HOLES

- STEP 3: PLACE WIRE MESH A MINIMUM OF 3 INCHES FROM THE FACE UNLESS EXISTING REINFORCEMENT IS ENCOUNTERED (NOTE 4).
- STEP 4: EITHER FORM REPAIR AND CAST CONCRETE OR APPLY SHOTCRETE AND TROWEL THE SURFACE TO MATCH THE INSIDE LINING SURFACE.
- PERFORM CONTACT GROUTING FOR THE REPAIR PATCH IN ACCORDANCE WITH SECTION 31 80 19-CONTACT GROUTING.
- AFTER GROUT HAS SET, FILL HOLES WITH NON-SHRINK GROUT TO WITHIN 2 INCHES OF THE FACE AND DRY PACK THE REMAINING 2 INCHES FLUSH WITH THE SURFACE OF THE AQUEDUCT LINING.

BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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Yorktown-9: Leak 7

AM

8:16 ctb

DESIGNED BY: CHECKED BY: JA·UNDERGROUND·P.C. DESIGN LEAD: dba Jacobs Associates EILEEN T. TEST PROJECT MANAGER: REVISIONS/DESCRIPTION NO. DATE JOHN J. MURRAY





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SEAN MCANDREW, P.E.

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CATSKILL AQUEDUCT REPAIR AND **REHABILITATION**

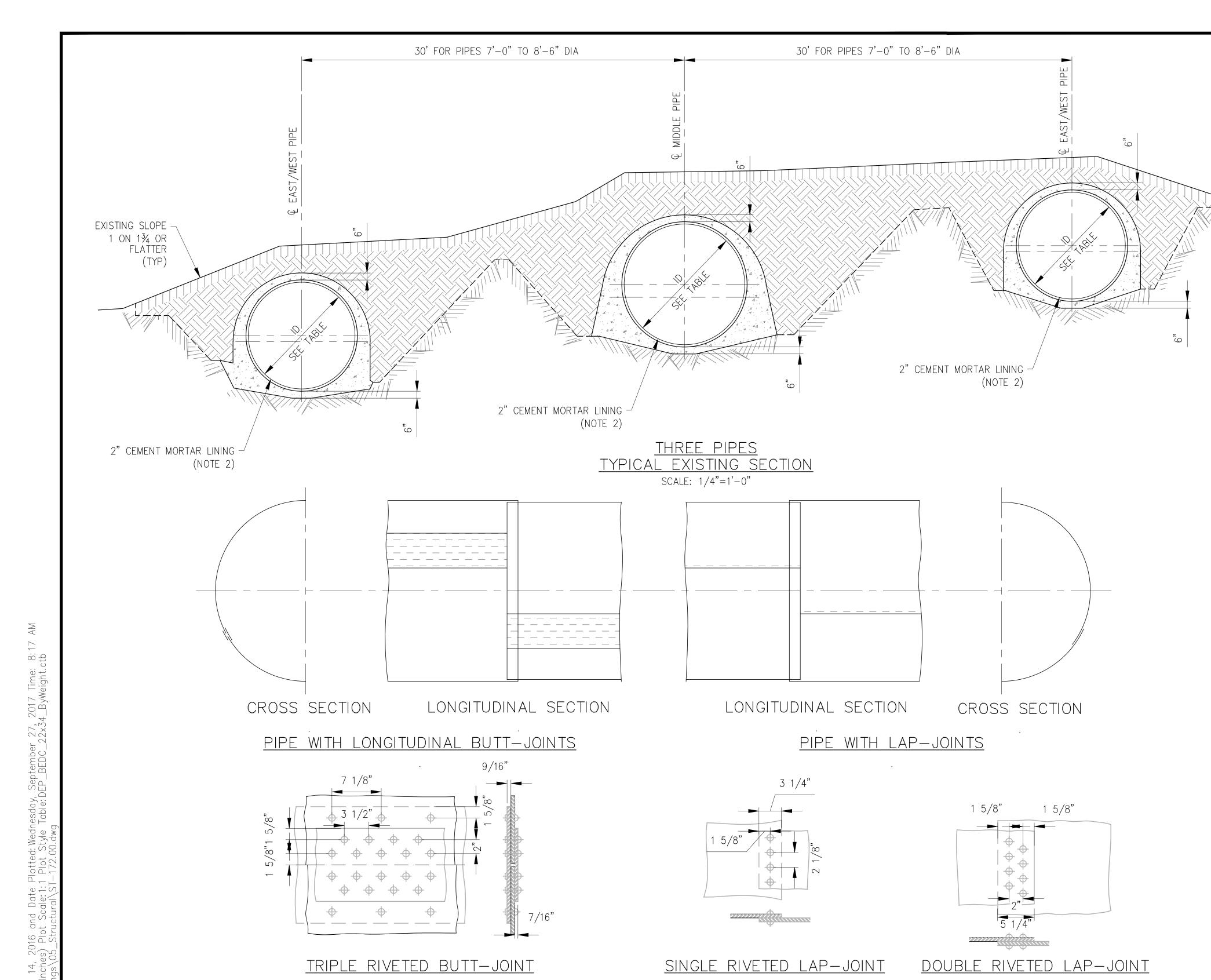
TYPICAL AQUEDUCT LINER DEFECT TYPES **CONCRETE REHABILITATION**

414 OF **485** DRAWING NO. ST-171.00

DATE: 10/2/2017

SHEET NO:

SCALE: NOT TO SCALE



- 1. CML DEFECTS AT SPS'S SHALL BE REPAIRED IN ACCORDANCE WITH SECTION 31 80 18 -CEMENT MORTAR LINING REPAIR AS DIRECTED BY THE ENGINEER.
- 2. THICKNESS OF CML AT JOINT LOCATIONS MAY BE LESS THAN 2 INCHES. SEE DETAIL 1 THIS SHEET FOR JOINT DETAILS. SEE CAT-RR REFERENCE DRAWINGS IN BID EXHIBIT FOR LOCATIONS OF BUTT OR LAP JOINTS.
- 3. PRIOR TO SPS REHABILITATION CONTRACTOR SHALL COMPLETE SPS ISOLATION AS SHOWN ON PE-142 TO CREATE A WORK
- 4. COLLECT, TREAT AND DISCHARGE OR COLLECT AND DISPOSE ALL CONSTRUCTION WATER WITHIN THE WORK ZONE IN ACCORDANCE WITH SECTION 31 80 06-WATER TREATMENT AND DISPOSAL.

SPS	SPS ID	INSIDE DIAMETER, ID (FT)			
31 3	עו כ וכ	MIDDLE PIPE	EAST AND WEST PIPES		
ESOPUS	SPS1	9'2"	8'0"		
TONGORE	SPS2	9'2"	8' 0"		
WASHINGTON SQUARE	SPS3	9'2"	8' 6"		
FOUNDRY BROOK	SPS4	9'2"	8' 2"		
INDIAN BROOK	SPS5	9'2"	7'0"		
SPROUT BROOK	SPS6	9'2"	8'2"		
PEEKSKILL	SPS7	9'2"	8' 2"		
HUNTERS BROOK	SPS8	9' 5"	8' 0"		
TURKEY MOUNTAIN	SPS9	9' 5"	8'0"		
HARLEM RAILROAD	SPS10	9' 5"	7' 6"		



REVISIONS/DESCRIPTION

DETAIL

Environmental

Water for Future

Protection

SEAN MCANDREW, P.E.

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BID	SET
DATE ISSUED:	10/2/2017

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

SPS REHABILITATION CML REPAIRS

DATE: **10/2/2017** SCALE: SCALE AS NOTED SHEET NO: **415** OF **485** DRAWING NO. ST-172.00

JA·UNDERGROUND·P. C.

dba Jacobs Associates

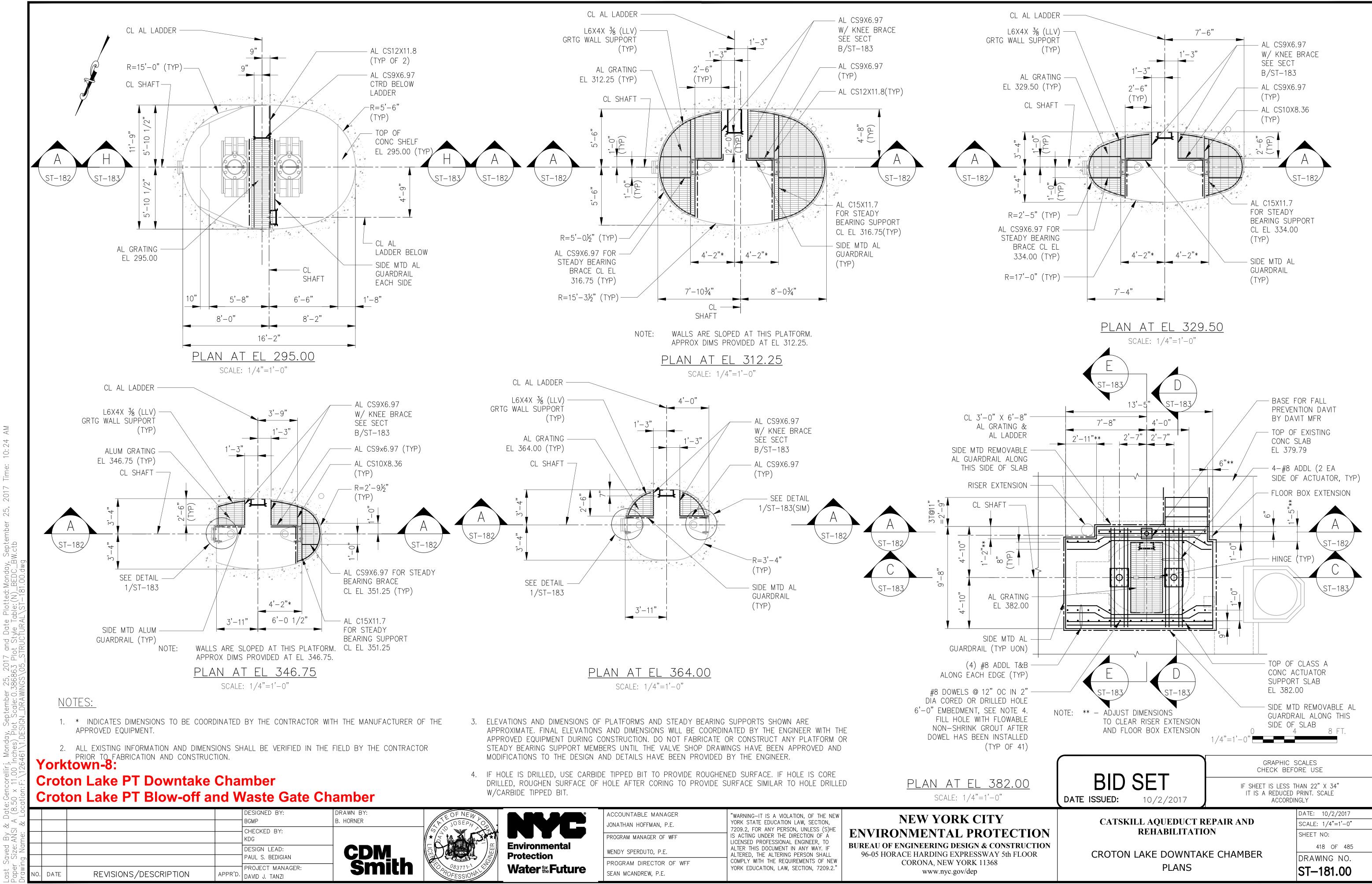
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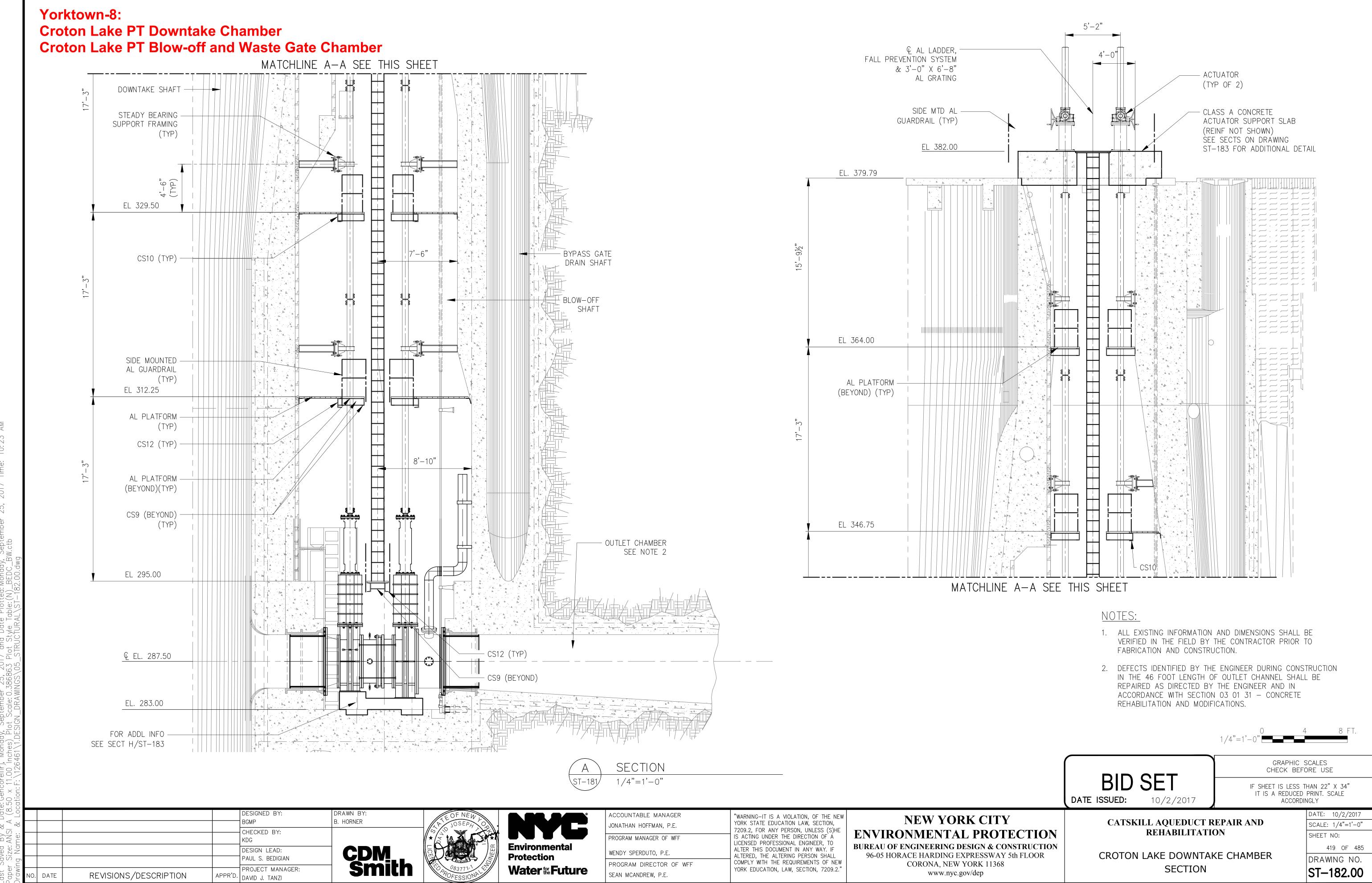
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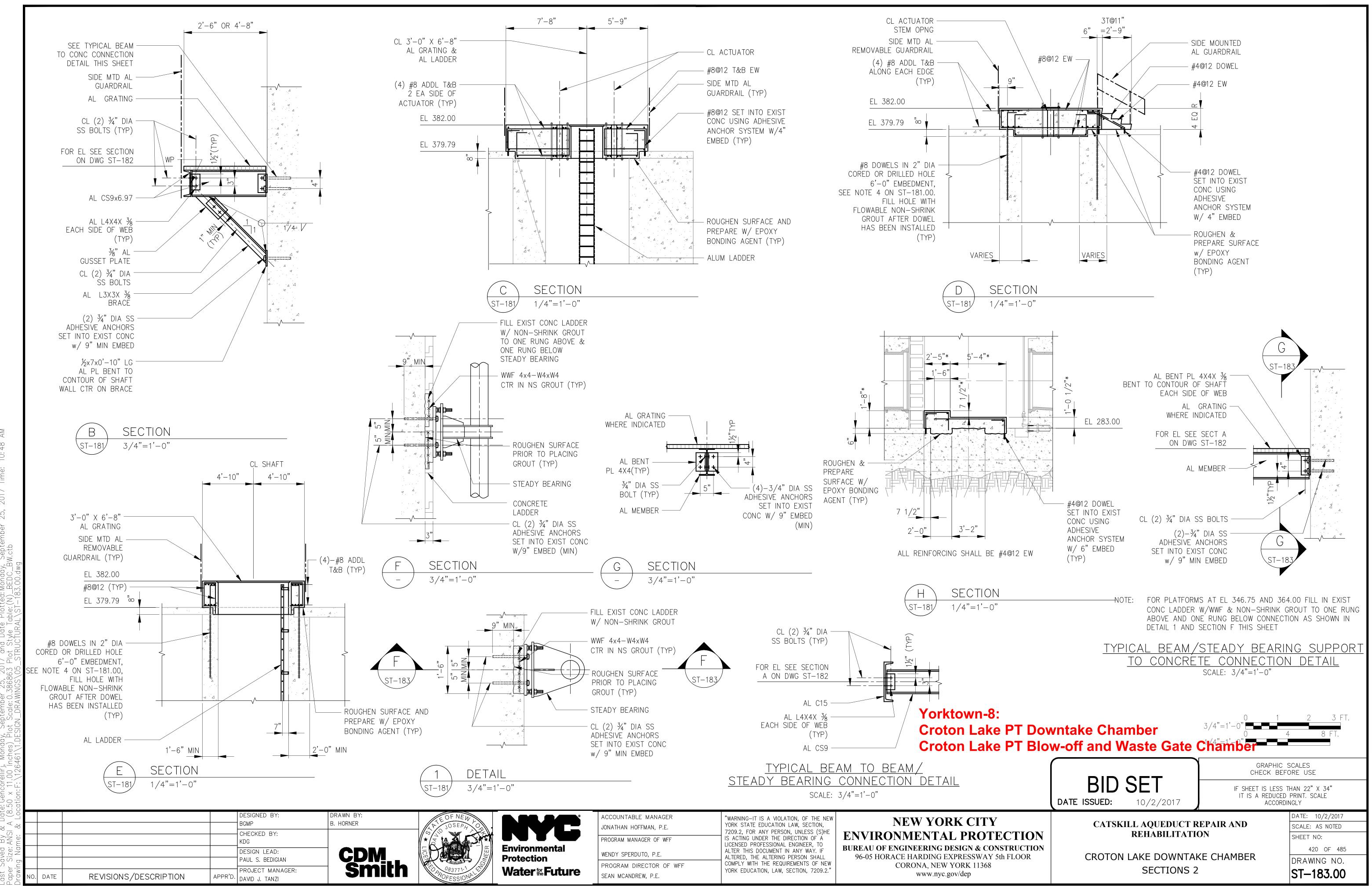
APPR'D. JOHN J. MURRAY

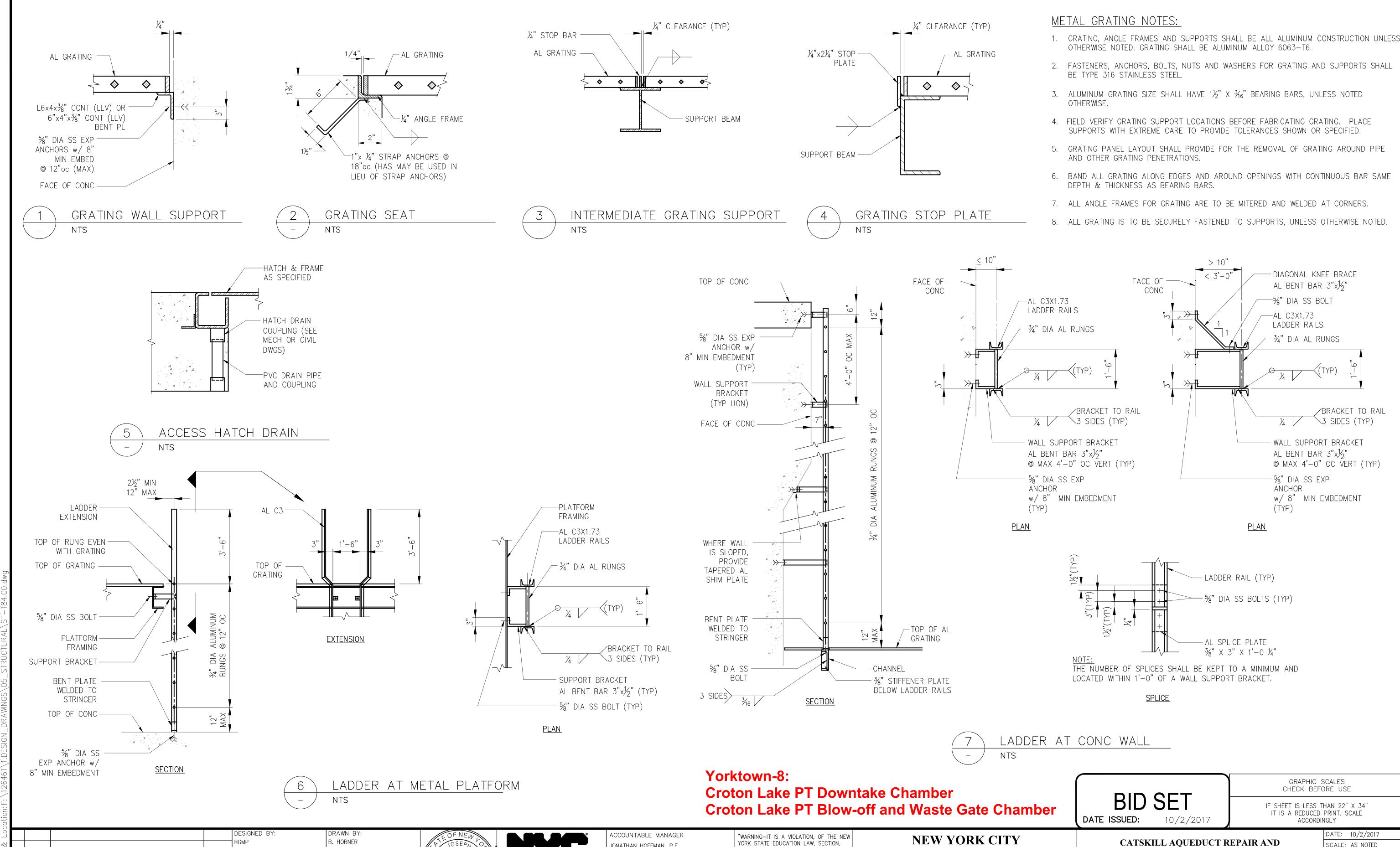
EILEEN T. TEST

PROJECT MANAGER:









JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

PROGRAM DIRECTOR OF WFF

WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

Environmental

Water fig Future

Protection

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

CHECKED BY:

DESIGN LEAD:

APPR'D. DAVID J. TANZI

REVISIONS/DESCRIPTION

PAUL S. BEDIGIAN

PROJECT MANAGER:

CDM Smith

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GRAPHIC SCALES CHECK BEFORE USE

- DIAGONAL KNEE BRACE

AL BENT BAR 3"x1/2"

-%" DIA SS BOLT

—AL C3X1.73

LADDER RAILS

 $-\frac{3}{4}$ " DIA AL RUNGS

BRACKET TO RAIL

3 SIDES (TYP)

WALL SUPPORT BRACKET

w/ 8" MIN EMBEDMENT

@ MAX 4'-0" OC VERT (TYP)

AL BENT BAR 3"x1/2"

- %" DIA SS EXP

ANCHOR

(TYP)

<u>PLAN</u>

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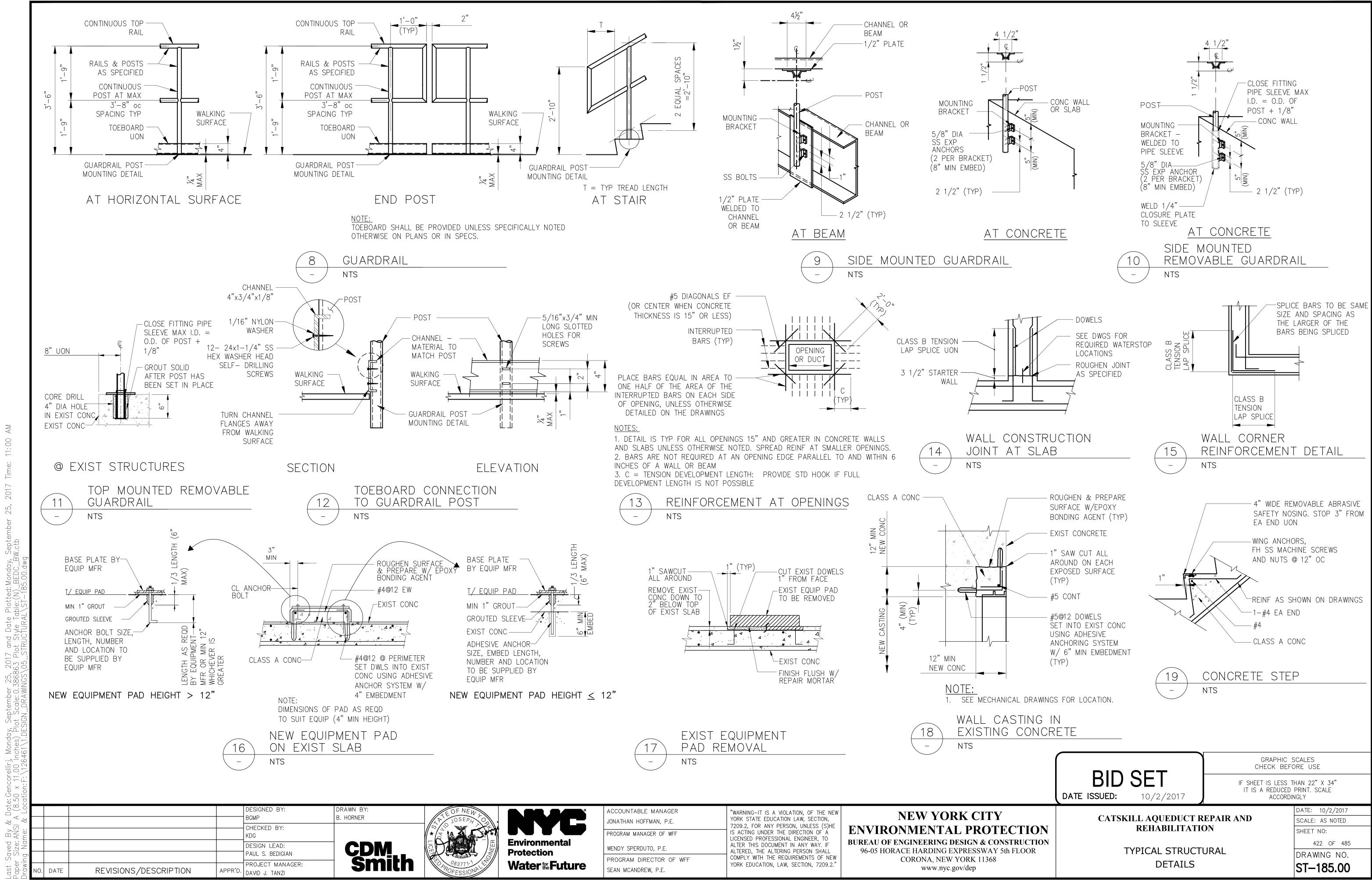
CATSKILL AQUEDUCT REPAIR AND REHABILITATION

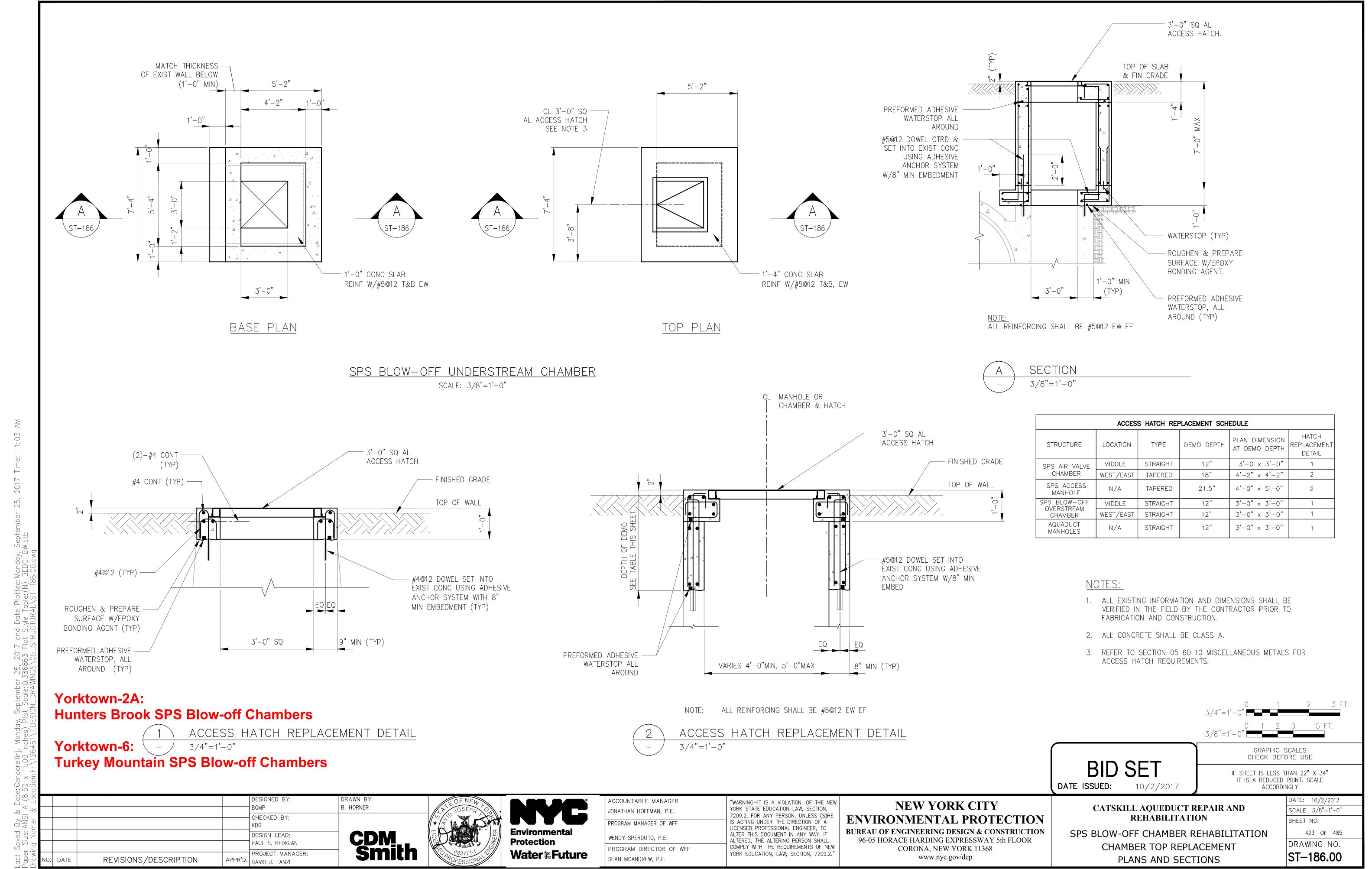
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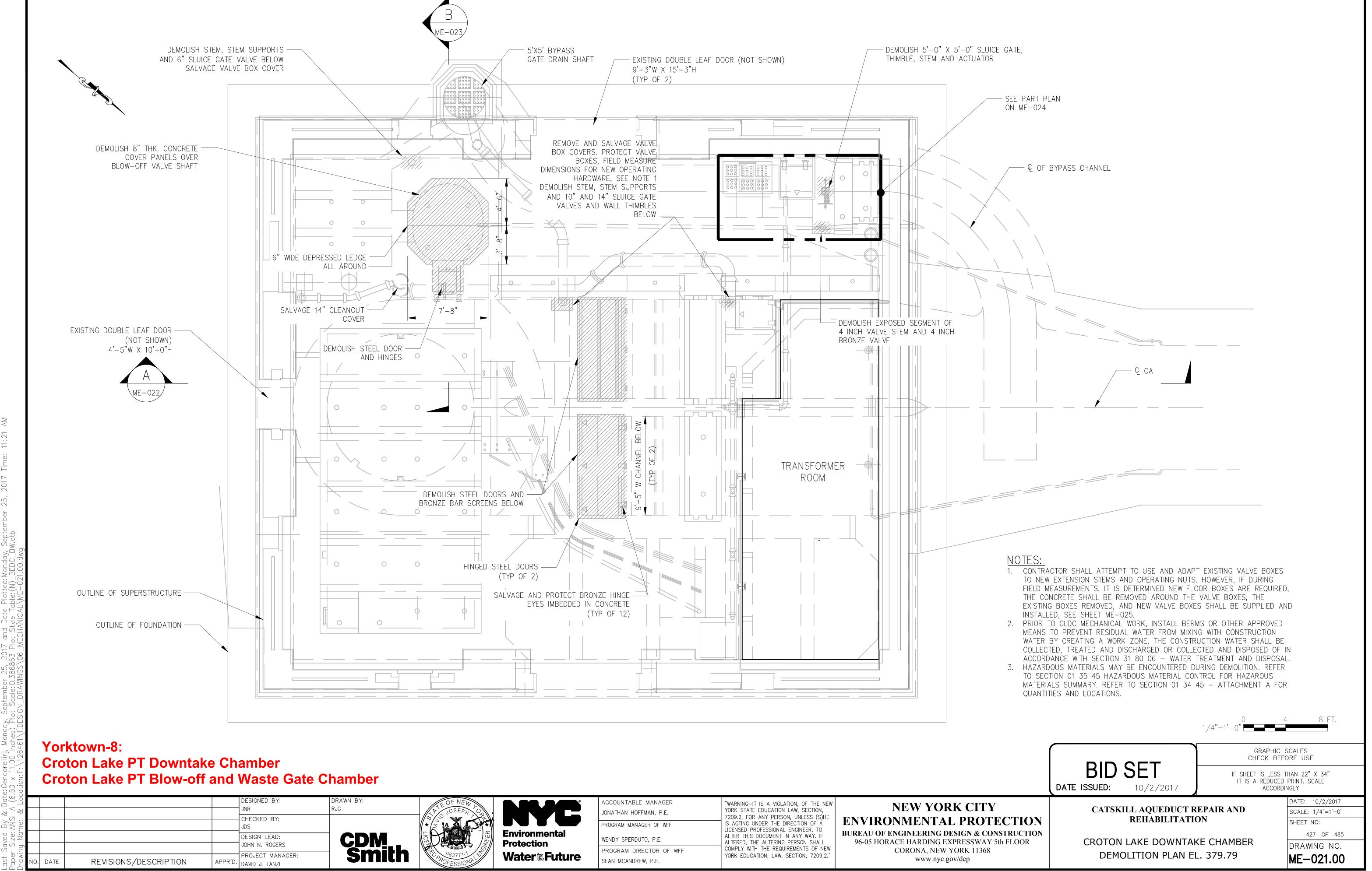
CROTON LAKE DOWNTAKE CHAMBER **DETAILS**

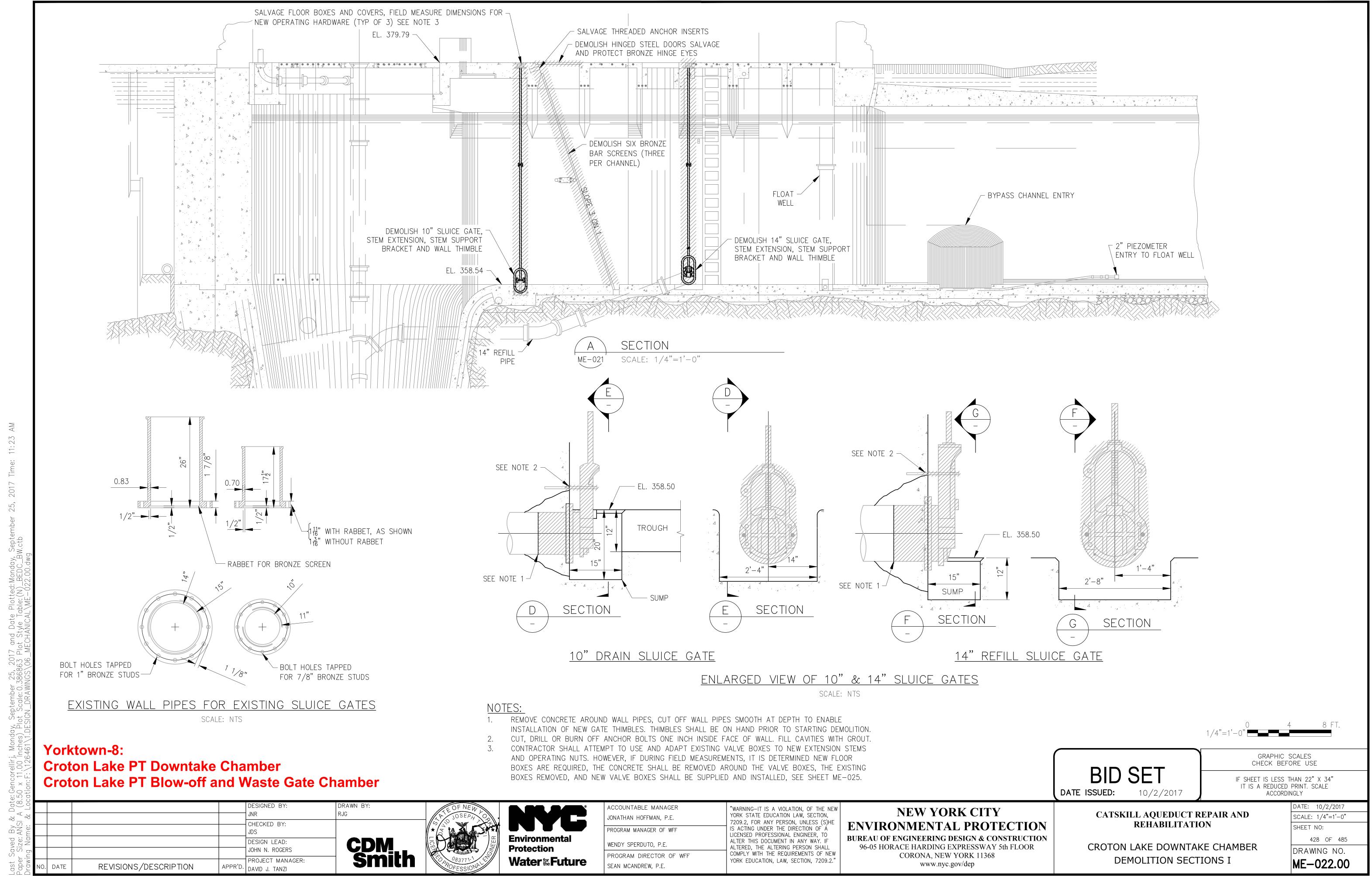
421 OF 485 DRAWING NO. ST-184.00

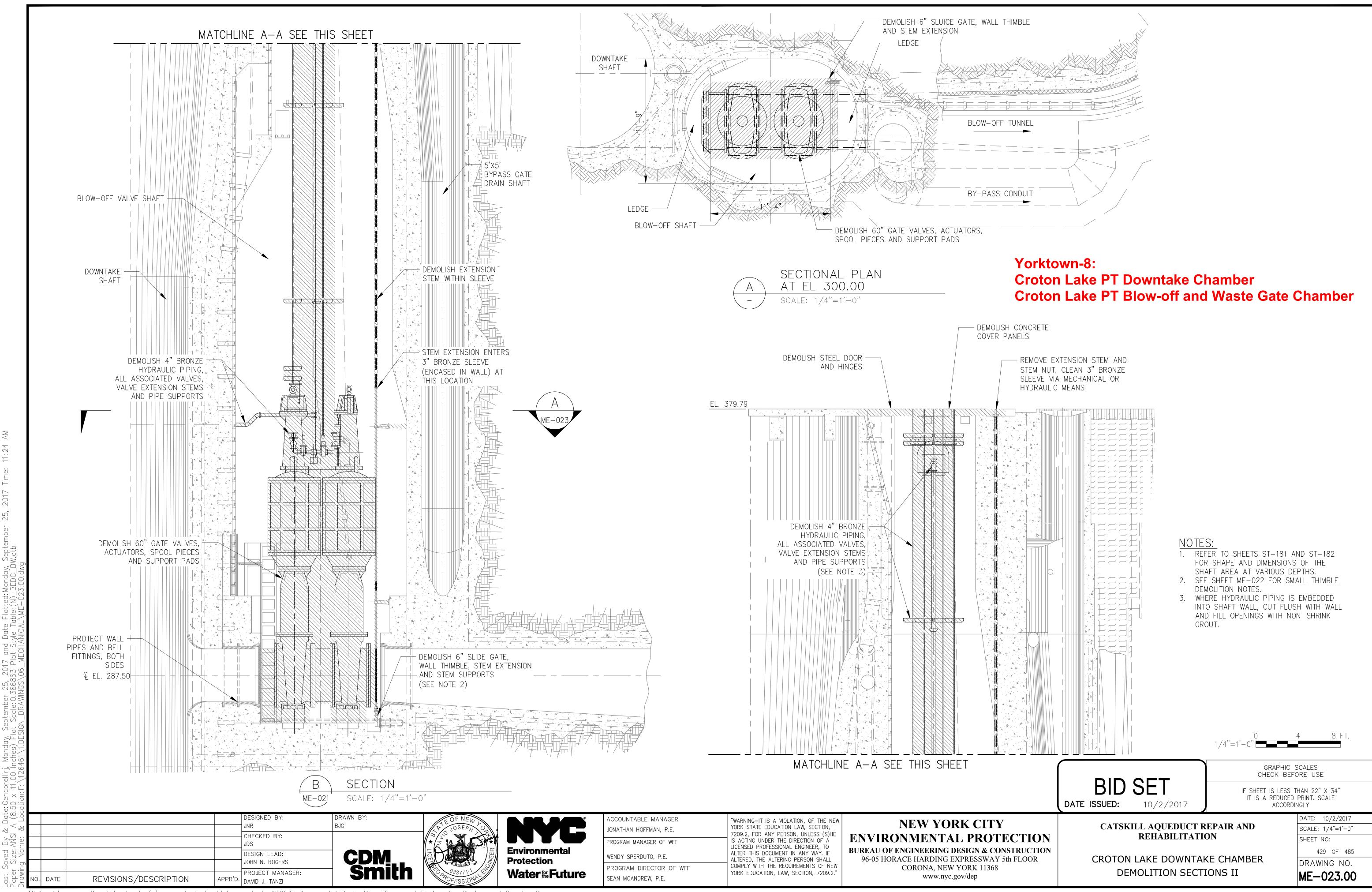
DATE: 10/2/2017

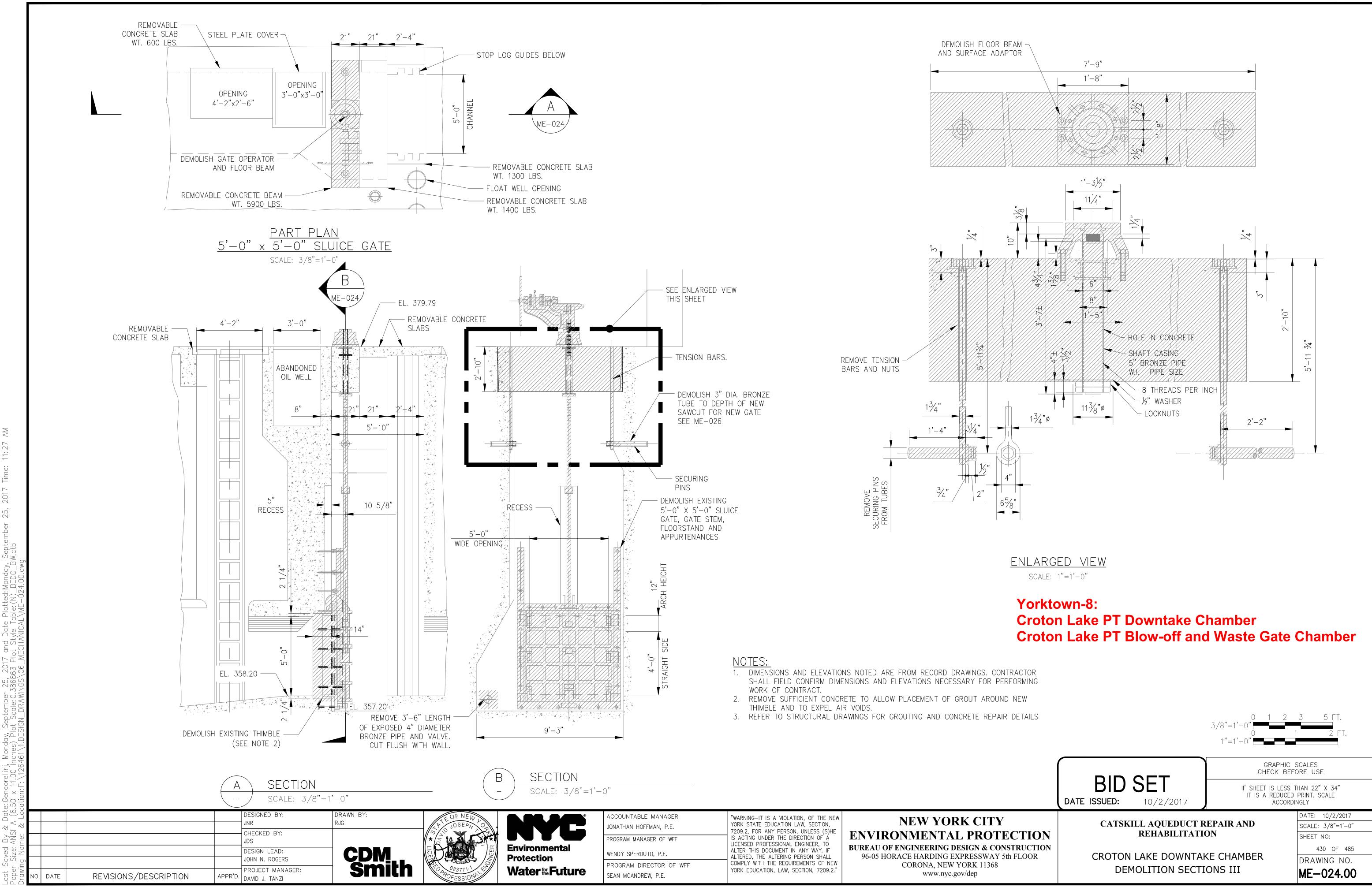


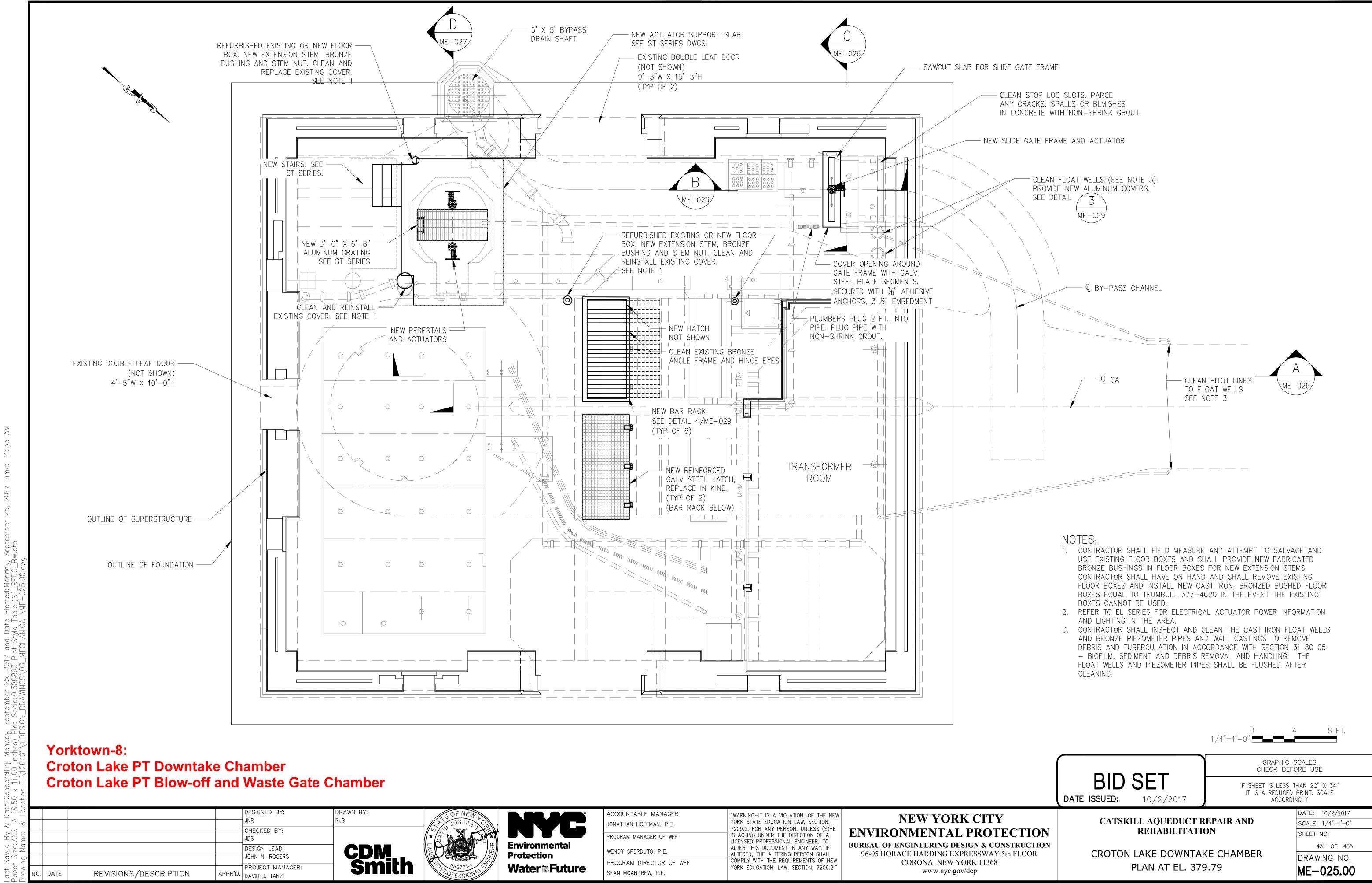


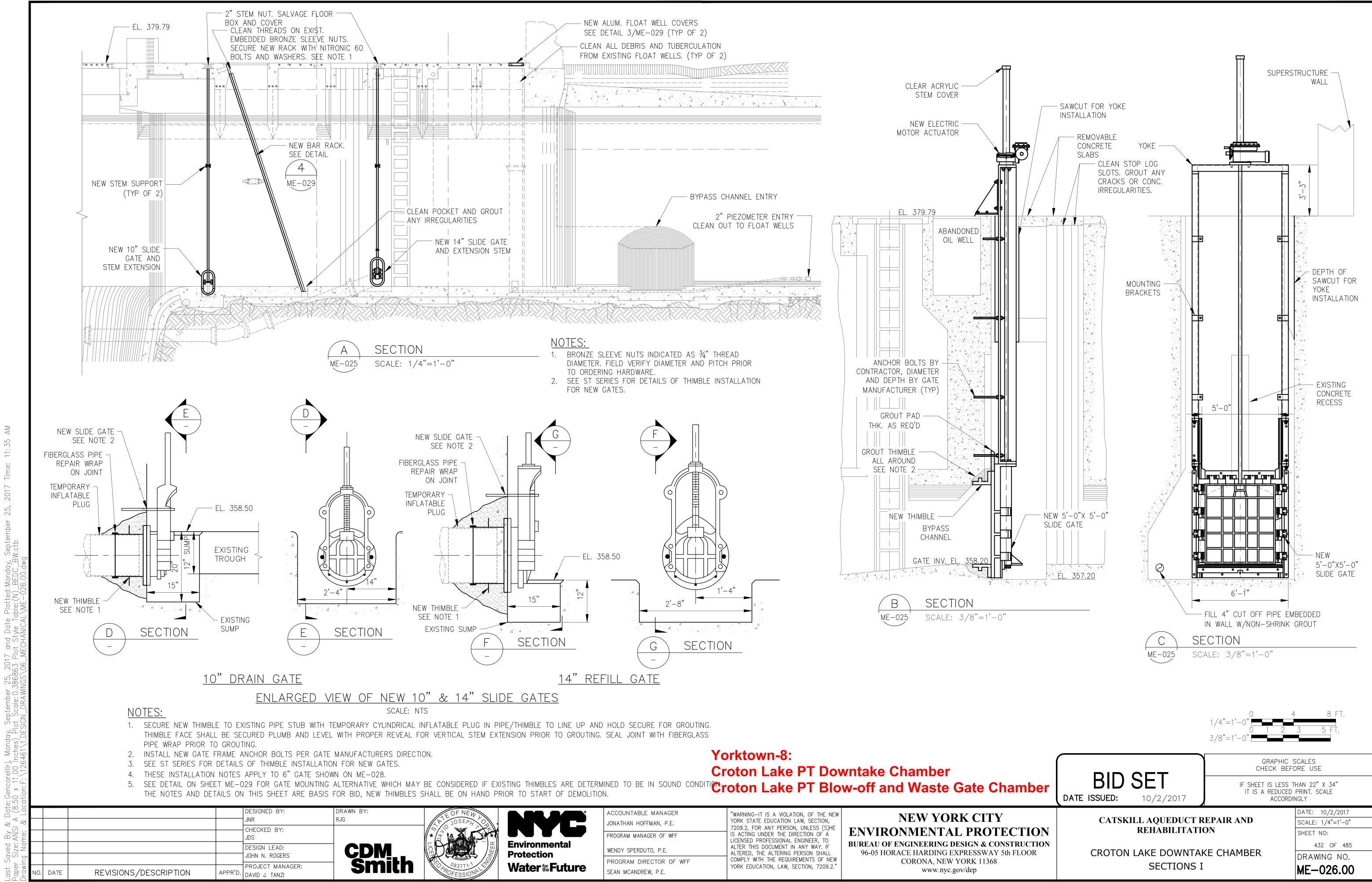


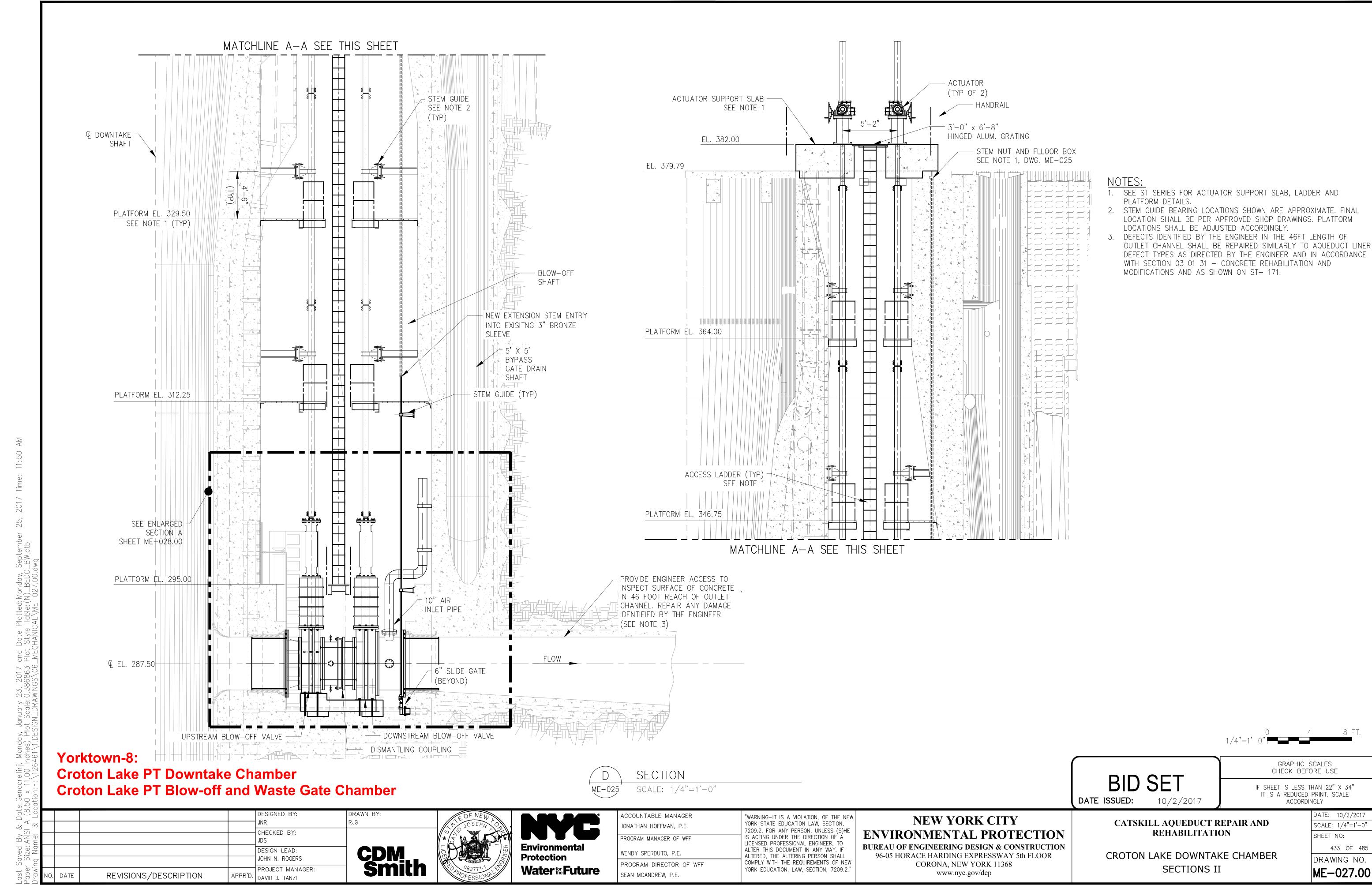












DATE: 10/2/2017

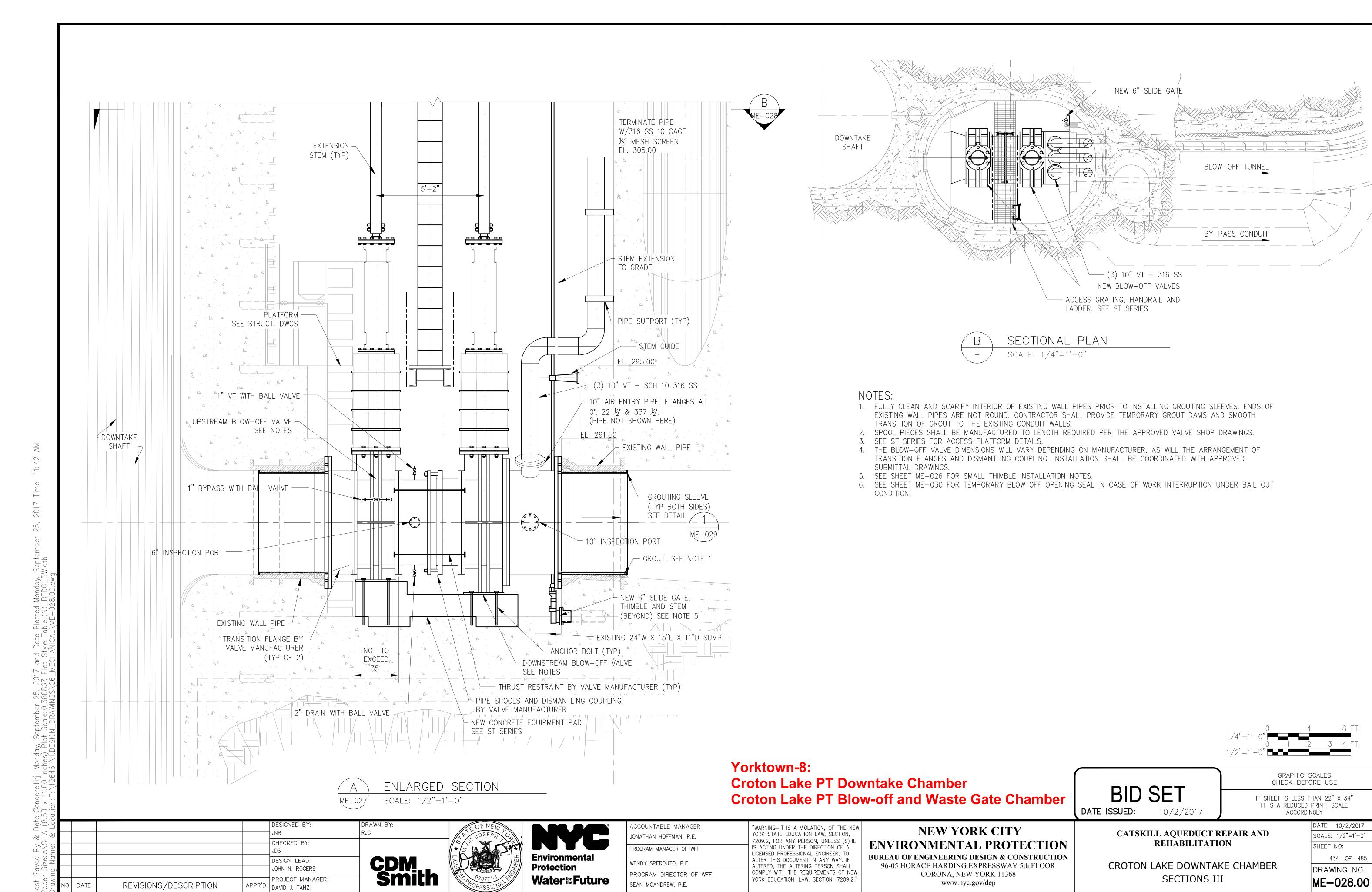
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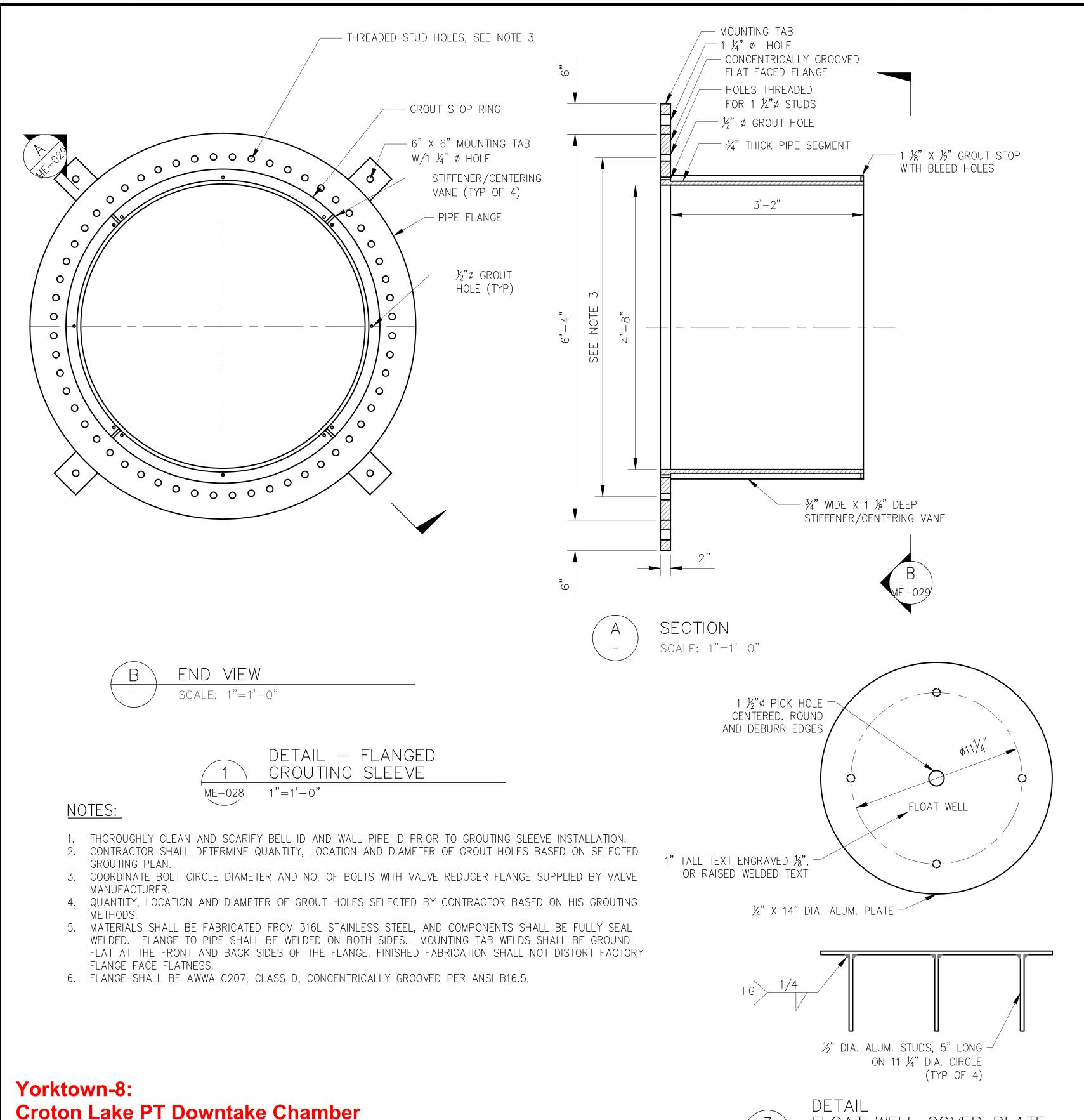
DRAWING NO.

ME-027.00

433 OF 485

SHEET NO:





FLOAT WELL COVER PLATE **Croton Lake PT Blow-off and Waste Gate Chamber** NTS

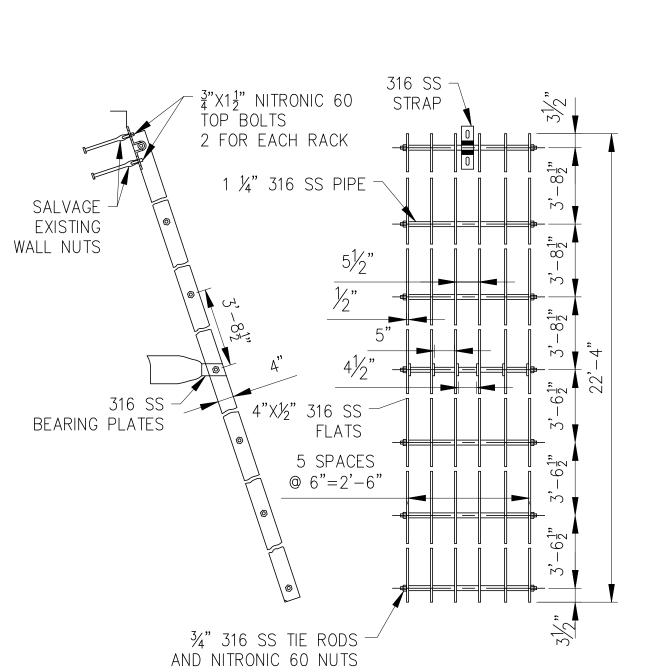
— EXISTING WALL FLANGE FACE OF WALL -- CUT EXISTING STUDS FLUSH, DRILL NEW HOLES BETWEEN EXISTING STUD LOCATIONS BODY FLANGE OF -EPOXY ADHESIVE NEW GATE ANCHOR, 6" MIN EMBED NEW STUD NUT DIA PER GATE MANUF AND WASHER HOLE — FLANGE SAVER GASKET

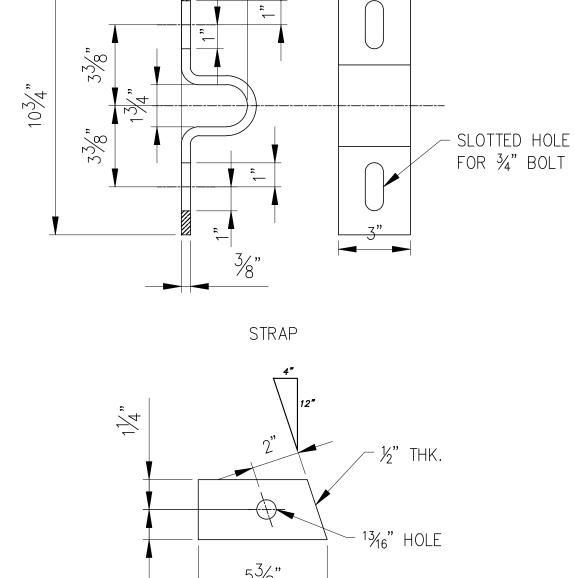
DETAIL SMALL DIAMETER SLIDE GATE MOUNTING ALTERNATIVES `ME-026 NTS

NOTES:

1. INSPECT FACE OF EXISTING WALL FLANGE FOR PITTING.

2. REPAIR PITTED FLANGES WITH BELZONA 1111 SUPERMETAL. FABRICATE CIRCUMFERENTIALLY SERRATED TEMPLATE FLANGE FOR FORMING THE FACE OF THE REPAIRED FLANGE. USE BELZONA 9411 RELEASE AGENT ON THE TEMPLATE.





BEARING PLATE

DETAIL BAR RACKS ME-026 NTS

NOTES:

- 1. CONTRACTOR MAY SUPPLY BAR RACKS IN ALL WELDED CONSTRUCTION AS AN ALTERNATE TO FABRICATED CONSTRUCTION SHOWN.
- 2. SUBMIT PROPOSED FABRICATION DRAWINGS IN ACCORDANCE WITH SPECIFICATION SECTION 05 60 10.



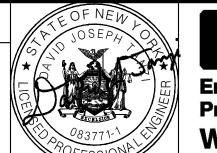
DATE ISSUED:

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DESIGNED BY: CHECKED BY: DESIGN LEAD: JOHN N. ROGERS

REVISIONS/DESCRIPTION

CDM Smith





ACCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF WENDY SPERDUTO, P.E.

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

10/2/2017

17,

CROTON LAKE DOWNTAKE CHAMBER DETAILS I

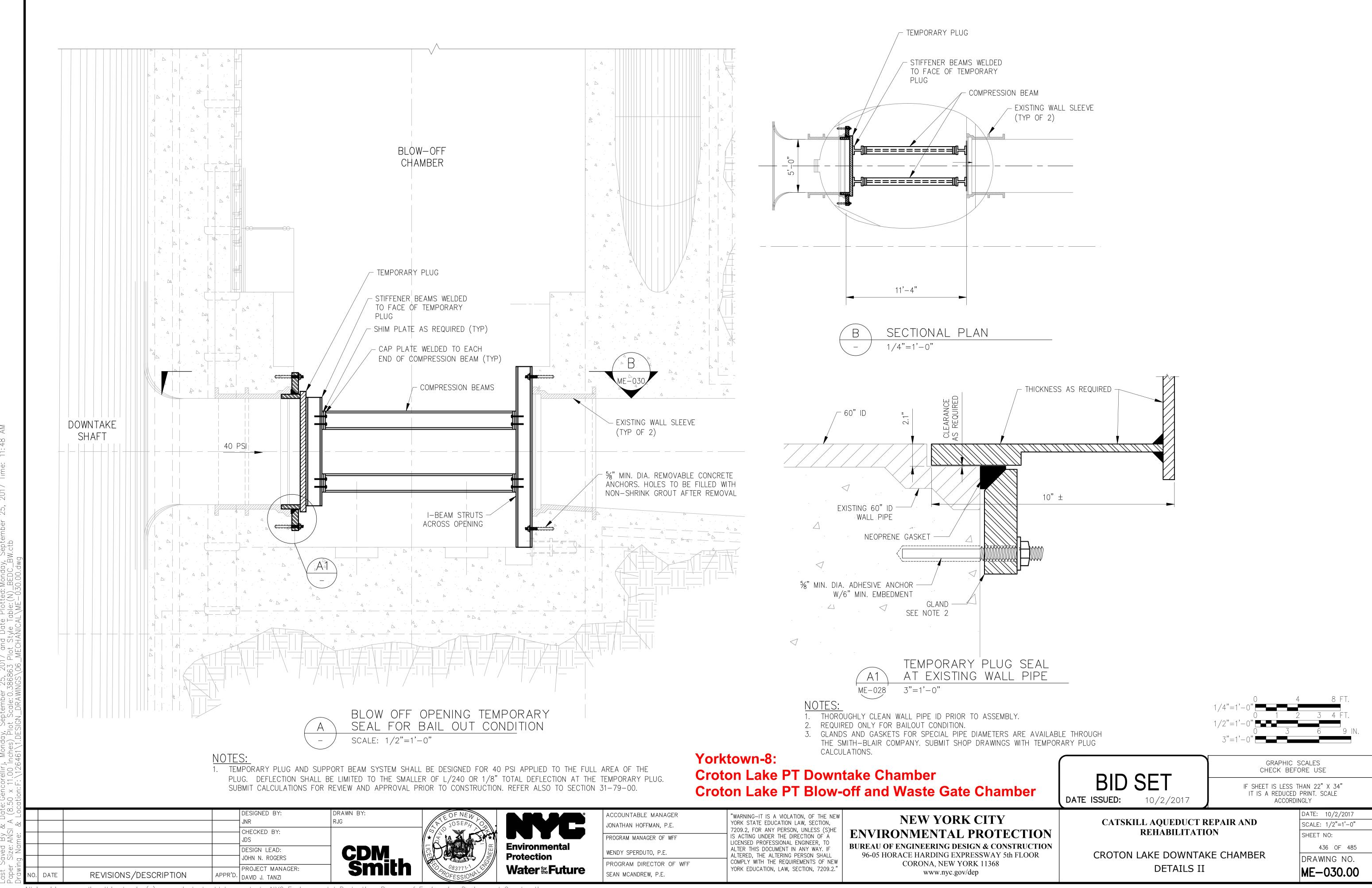
DATE: 10/2/2017 SCALE: AS NOTED SHEET NO: 435 OF 485 DRAWING NO.

ME-029.00

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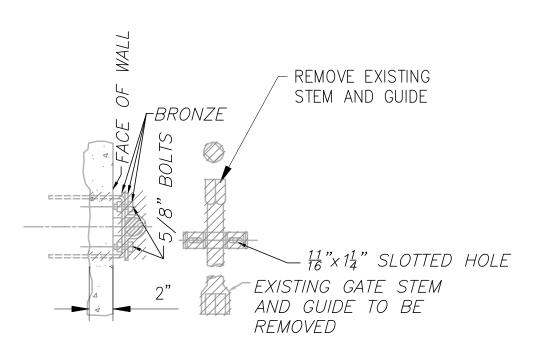
PROJECT MANAGER:

NO. DATE

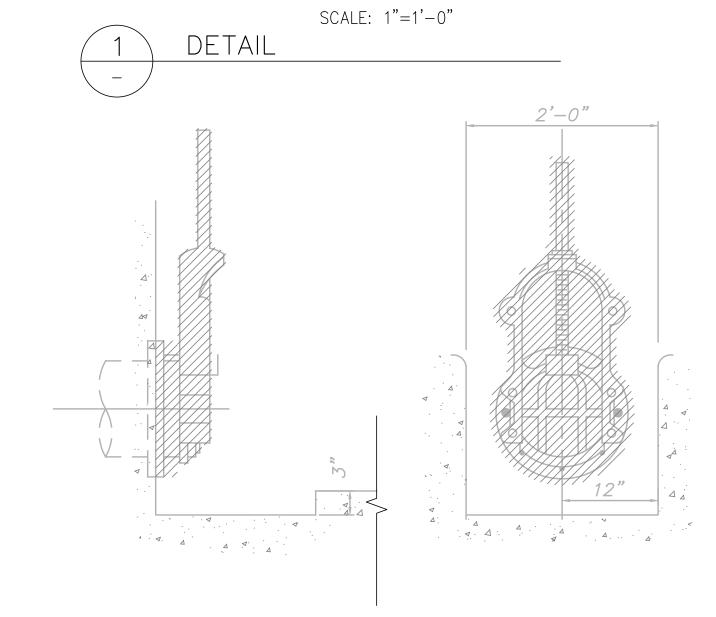


CULVERT DRAIN SLUICE GATES-DEMOLITION

SCALE: 1/4"=1'-0"
SEE CI-333 FOR LOCATIONS



EXISTING GATE STEM AND GUIDE DEMOLITION



NOTE:

1. ALL FITTINGS, BOLTS, GASKETS AND ACCESSORIES ASSOCIATED WITH EXISTING SLUICE GATE WITH THE EXCEPTION OF THE THIMBLE SHALL BE REMOVED.

EXISTING SLUICE GATE (TO BE SEALED) — DEMOLITION SCALE: 1"=1'-0"

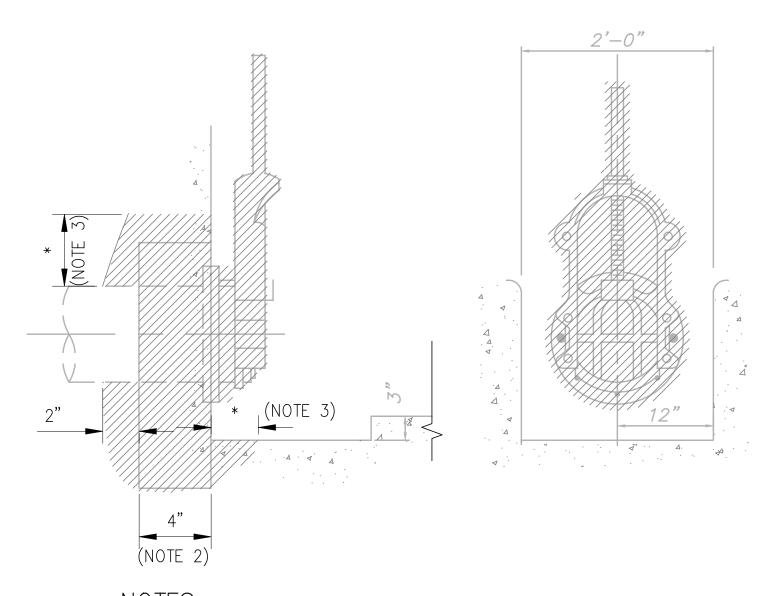
2

DETAIL

GENERAL NOTES:

1. SEE CI-333 FOR CULVERT DRAIN SLUICE GATE REPAIR OR SEAL LOCATIONS SCHEDULE.

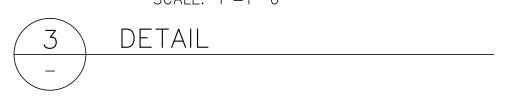
- 2. CONTRACTOR SHALL REMOVE AND HANDLE INCIDENTAL BIOFILM SEDIMENT AND DEBRIS FROM THE AREA AROUND MHS1 THROUGH MHS33 INCLUDING THE CROSS COLLECTOR AND SUMP AREA. EXPECTED QUANTITY OF SEDIMENT AND DEBRIS AND REQUIREMENTS FOR CLEANUP CAN BE FOUND IN SECTION 31 80 05 BIOFILM, SEDIMENT AND DEBRIS REMOVAL AND HANDLING.
- 3. THE CONTRACTOR SHALL REMOVE AND HANDLE SEDIMENT AND DEBRIS FROM THE CULVERT AT THE FOLLOWING LOCATIONS PER CI-333: MHS28, MHS29, MHS31, MHS32, MHS33. EXPECTED QUANTITY OF SEDIMENT AND DEBRIS AND REQUIREMENTS FOR CLEANUP CAN BE FOUND IN SECTION 31 80 05 BIOFILM, SEDIMENT AND DEBRIS REMOVAL AND HANDLING.
- 4. HAZARDOUS MATERIALS MAY BE ENCOUNTERED DURING DEMOLITION. SEE SECTION 01 35 45 HAZARDOUS MATERIAL CONTROL FOR HAZARDOUS MATERIALS SUMMARY. REFER TO SECTION 01 34 45 ATTACHMENT A FOR QUANTITIES AND LOCATIONS.
- 5. PRIOR TO CDSG MECHANICAL WORK, THE CONTRACTOR SHALL INSTALL BERMS OR APPROVED METHODS TO PREVENT RESIDUAL WATER FROM MIXING IN WITH CONSTRUCTION WATER. CONTRACTOR SHALL SUBMIT DETAILS FOR WATER MANAGEMENT PRIOR TO ANY WORK. THE CONSTRUCTION WATER SHALL BE COLLECTED, TREATED, DISCHARGED OR DISPOSED OFF IN ACCORDANCE WITH SECTION 31 80 06 WATER TREATMENT AND DISPOSAL.



<u>NOTES:</u>

- 1. ALL FITTINGS, BOLTS, GASKETS, THIMBLE, AND ACCESSORIES ASSOCIATED WITH EXISTING GATE SHALL BE REMOVED TO APPROXIMATE LIMITS SHOWN.
- 2. THIS DRAWING IS TYPICAL ONLY. REFER TO CI-334 FOR SPECIFIC LOCATION OF 10" ELBOW.
- 3. AS REQUIRED TO ALLOW FOR NEW FLANGE INSTALLATION.

EXISTING SLUICE GATE (TO BE REPLACED) — DEMOLITION SCALE: 1"=1'-0"



Yorktown-10: Kitchawan CCT Access Manhole and Culvert Drain

DESIGNED BY:
BEK
CHECKED BY:
JDS
DESIGN LEAD:
BRIAN E. KEARNEY

NO. DATE
REVISIONS/DESCRIPTION
APPR'D. DAVIDJ. TANZI

CDM Smith





ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

WENDY SPERDUTO, P.E.

PROGRAM DIRECTOR OF WFF

SEAN MCANDREW, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep BID SET
DATE ISSUED: 10/2/2017

GRAPHIC SCALES
CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34"

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CATSKILL AQUEDUCT REPAIR AND
REHABILITATION

ACCORDINGLY

DATE
SCAL

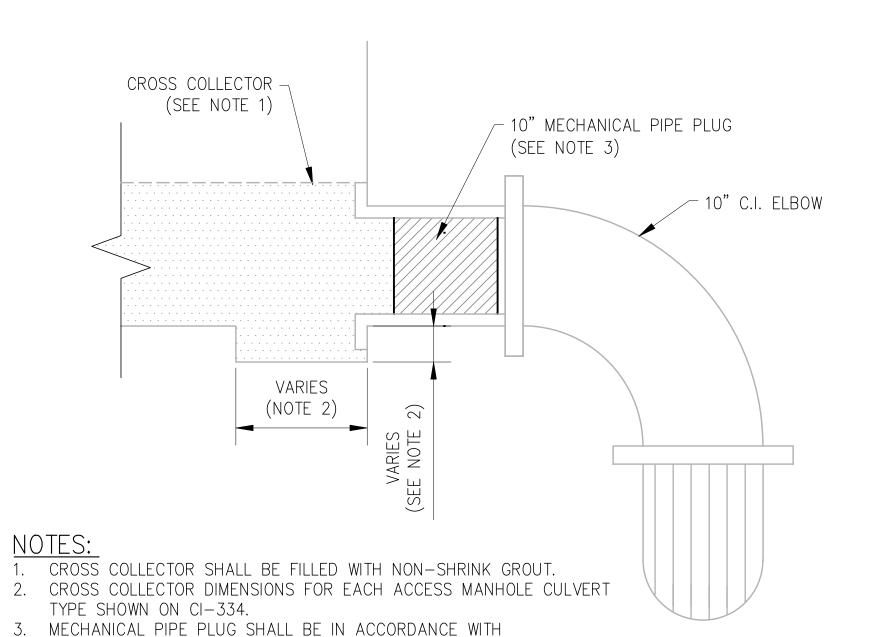
ACCESS MANHOLE CULVERT
DRAIN SLUICE GATES
DEMOLITION SECTIONS

DATE: 10/2/2017
SCALE: AS NOTED
SHEET NO:
437 OF 485

DRAWING NO. **ME-031.00**

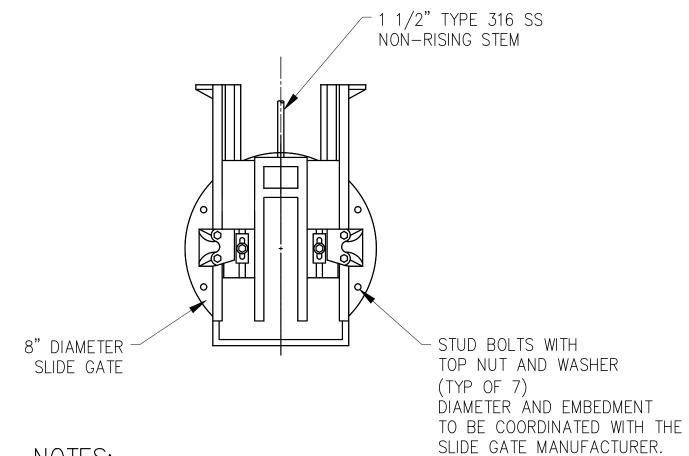
NO. DATE

Yorktown-10: **Kitchawan CCT Access Manhole and Culvert Drain**



SECTION 33 11 14 - DUCTILE AND CAST IRON PIPE.

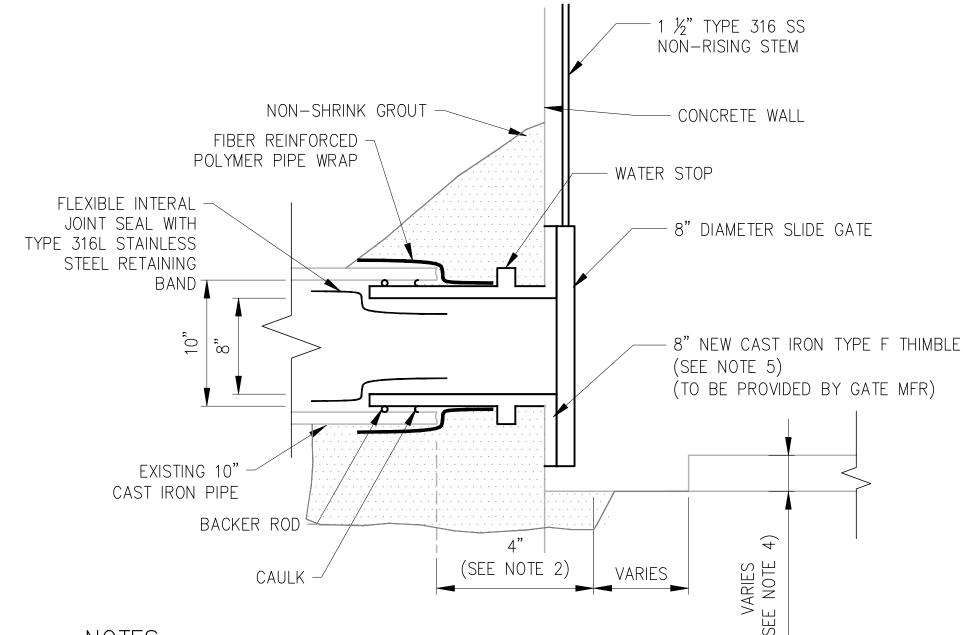




NOTES:

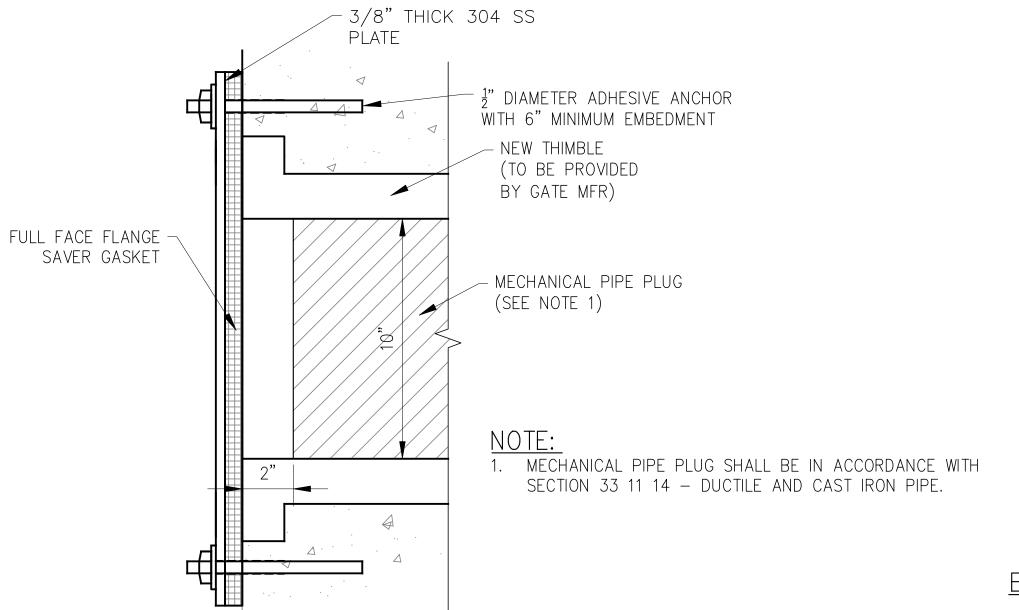
- ALL BOLTS SHALL BE 316 SS.
- 2. BOLT PATTERN SHALL BE PROVIDED BY GATE MFR AND SHALL NOT INTERFERE WITH EXISTING BOLTS.
- 3. CROSS COLLECTOR DIMENSIONS FOR EACH ACCESS MANHOLE CULVERT
- TYPE SHOWN ON CI-334.





- 1. THIMBLES TO BE REPLACED AT ALL SLUICE GATE REPLACEMENT LOCATIONS AS SHOWN ON CI-333.
- 2. CONTRACTOR SHALL NOT DISTURB 10" ELBOW. THE ELBOWS ARE LOCATED BETWEEN 10" AND 15" FROM CONCRETE FACE AS SHOWN IN CI-334.
- 3. APPROX 1" OF TOTAL WIDTH BETWEEN 10" AND 8" CAST IRON PIPE.
- 4. CROSS COLLECTOR DIMENSIONS FOR EACH MANHOLE CULVERT TYPE SHOWN ON
- CI 334.5. REINFORCING FOR NEW THIMBLE IS NOT SHOWN FOR CLARITY. REFER TO ST-185 FOR REINFORCING REQUIREMENTS.

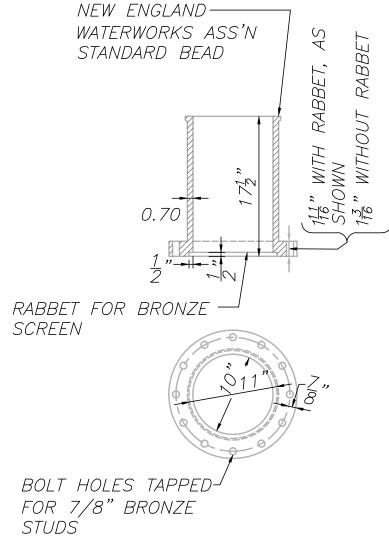




DETAIL - TEMPORARY BLIND

FLANGE MOUNTING

SEAN MCANDREW, P.E.



EXISTING WALL PIPE FOR SLUICE GATES SCALE: 1"=1'-0"

DETAIL

BID SET 10/2/2017 DATE ISSUED:

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE
ACCORDINGLY DATE: 10/2/2017

1. SEE CI-333 FOR CULVERT DRAIN SLUICE GATE SEAL OR REPLACE

LOCATIONS SCHEDULE.

DESIGNED BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER: APPR'D. DAVID J. TANZI REVISIONS/DESCRIPTION

CDM Smith





NTS

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NEW YORK CITY ENVIRONMENTAL PROTECTION

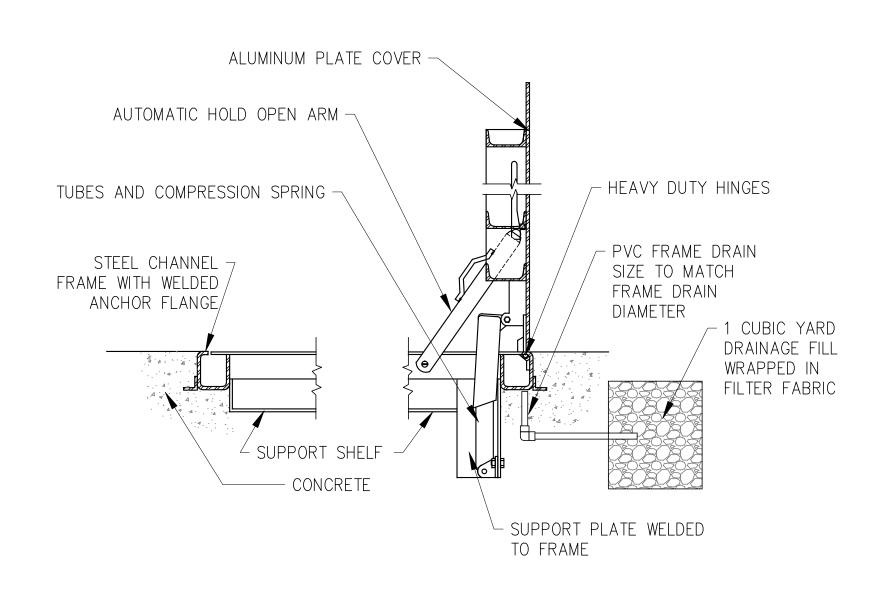
BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

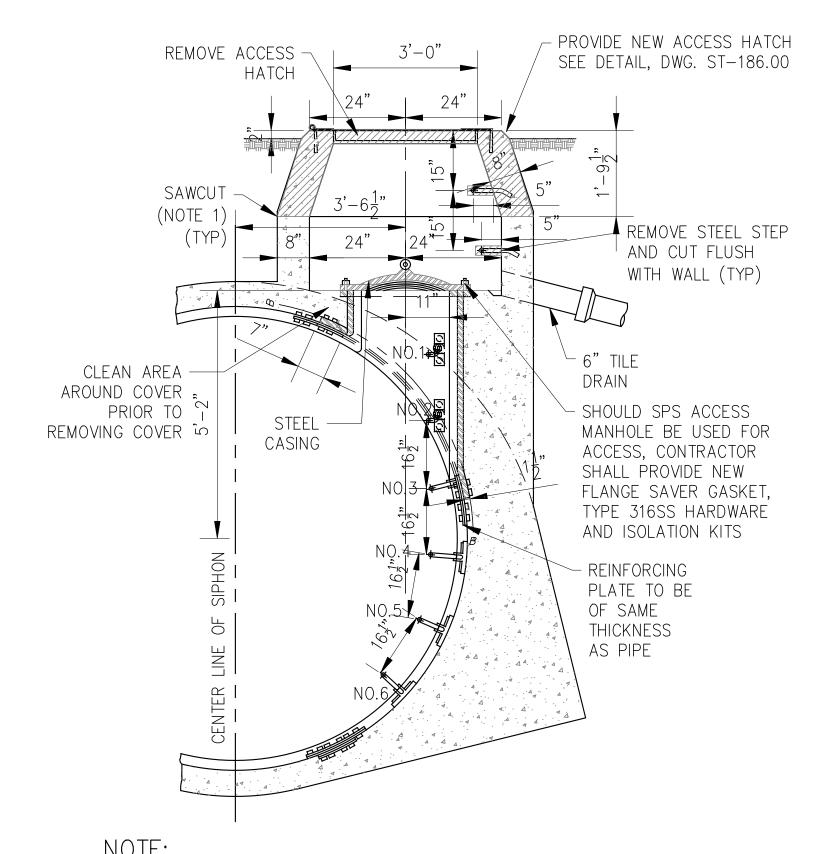
CDSG MECHANICAL WORK SEAL AND REPLACE DETAILS

SCALE: AS NOTED SHEET NO: 439 OF 485 DRAWING NO.

ME-033.00







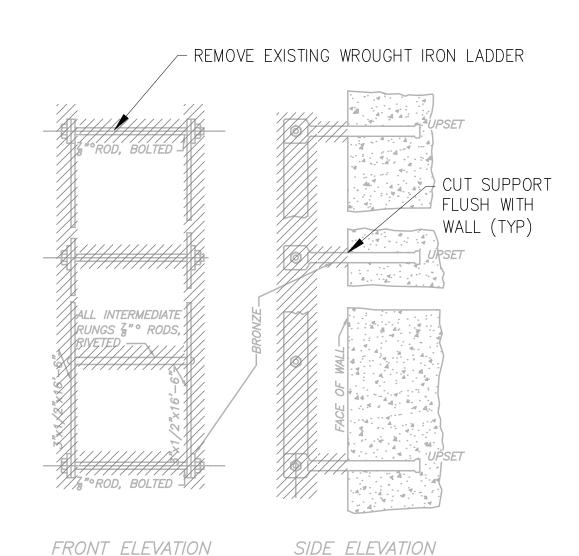
APPROXIMATE DEPTH OF CUT. CUT TO BE FIELD VERIFIED AND COORDINATED BY THE CONTRACTOR TO SET NEW ACCESS HATCH ELEVATION 2" ABOVE FINISHED GRADE.

DESIGNED BY:

CHECKED BY:

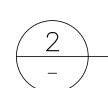
DESIGN LEAD:

STEEL PIPE SIPHON ACCESS MANHOLE REHABILITATION 1/2"=1'-0"

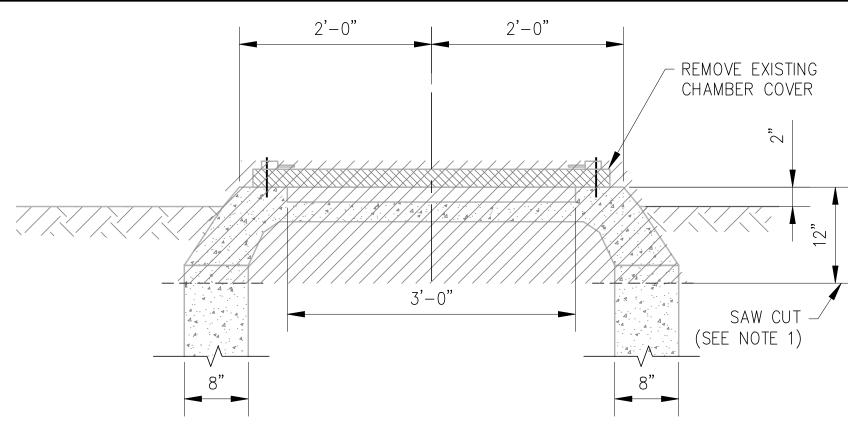


EXISTING WROUGHT IRON LADDER DEMOLITION

SCALE: 1"=1'-0"



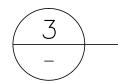
DETAIL 1"=1'-0"



NOTES:

- 1. APPROXIMATE DEPTH OF CUT. CUT TO BE FIELD VERIFIED AND COORDINATED BY THE CONTRACTOR TO SET NEW COVER ELEVATION 2" ABOVE FINISHED GRADE.
- 2. TYPICAL ACCESS CONFIGURATION AT ACCESS MANHOLE WITH CDSG SHOWN FOR REFERENCE ONLY. CONFIGURATION AT ACCESS MANHOLES AND SPS BLOW-OFF CHAMBERS ARE SIMILAR. REFER TO THE CAT-RR REFERENCE DRAWINGS IN THE BID EXHIBIT FOR TYPICAL DETAILS OF THE ACCESS MANHOLES, AND ACCESS MANHOLES WITH CDSGS AND SPS BLOW-OFF CHAMBERS.

EXISTING ACCESS HATCH DEMOLITION SCALE: 1"=1'-0"



DETAIL 1"=1'-0"

Yorktown-5:

Yorktown CCT Access Manhole

Yorktown-6:

3. HAZARDOUS MATERIALS MAY BE ENCOUNTERED DURING DEMOLITION.
SEE SECTION 01 35 45 — HAZARDOUS MATERIAL CONTROL FOR
HAZARDOUS MATERIALS SUMMARY. REFER TO SECTION 01 34 45 — **Turkey Mountain SPS Access Manholes**

Yorktown-9:

Croton CCT Access Manhole

Yorktown-10: Kitchawan CCT Access Manhole and Culvert Drain

REFER TO ME-043 FOR SPS ACCESS HATCH REPLACEMENT LOCATIONS.

INSTALL BERMS OR APPROVED METHODS TO PREVENT RESIDUAL WATER

SUBMIT DETAILS FOR WATER MANAGEMENT PRIOR TO ANY WORK. THE

CONSTRUCTION WATER SHALL BE COLLECTED, TREATED, DISCHARGED OR

2. PRIOR TO MANHOLE REHABILITATION WORK, THE CONTRACTOR SHALL

FROM MIXING IN WITH CONSTRUCTION WATER. CONTRACTOR SHALL

DISPOSED OFF IN ACCORDANCE WITH SECTION 31 80 06 - WATER

Yorktown-11: **Kitchawan CCT Access Manhole**

BID SET DATE ISSUED: 10/2/2017

TREATMENT AND DISPOSAL.

GRAPHIC SCALES CHECK BEFORE USE IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE

ACCORDINGLY

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

ATTACHMENT A FOR QUANTITIES AND LOCATIONS.

MANHOLE

DATE: 10/2/2017 SCALE: AS NOTED SHEET NO: 440 OF 485

CDM Smith Protection BRIAN E. KEARNEY **Water fin Future** PROJECT MANAGER: APPR'D. DAVID J. TANZI REVISIONS/DESCRIPTION All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

CCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E.

SEAN MCANDREW, P.E.

PROGRAM MANAGER OF WFF WENDY SPERDUTO, P.E. PROGRAM DIRECTOR OF WFF

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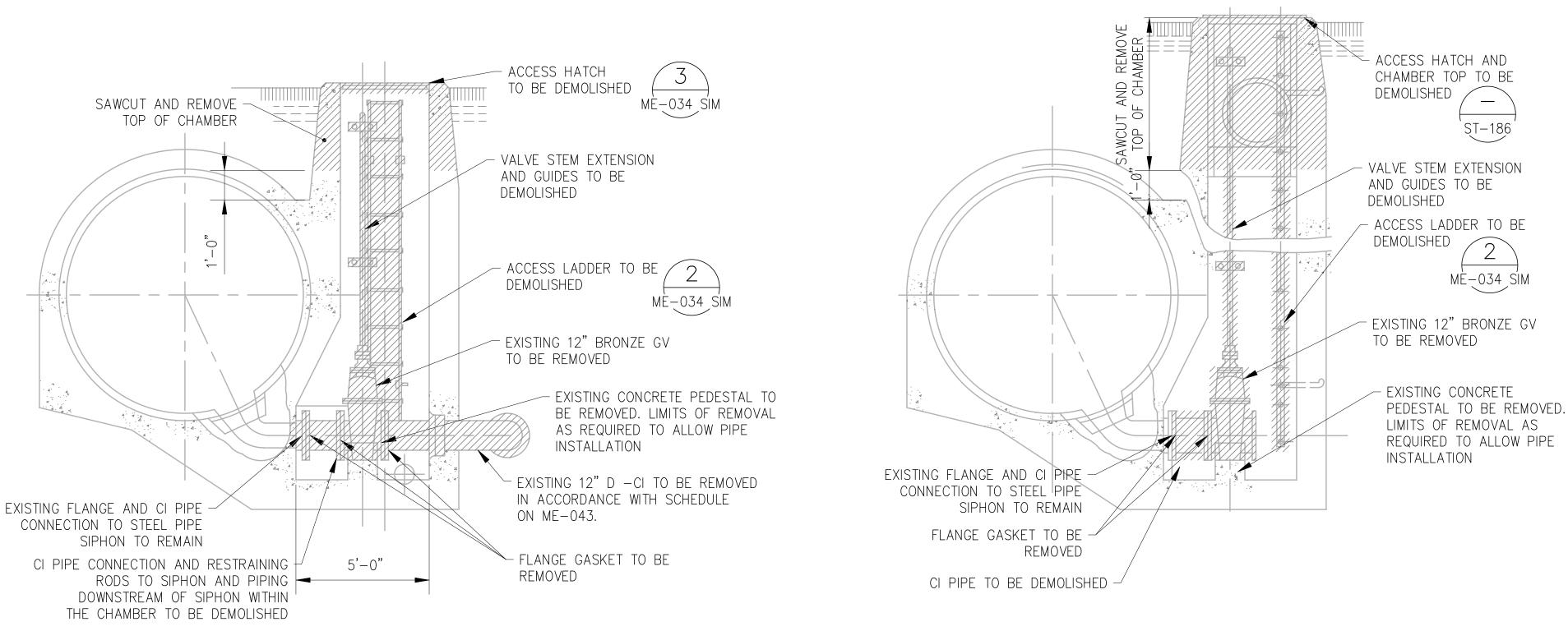
NEW YORK CITY ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

REHABILITATION

DRAWING NO. ME-034.00

Environmental

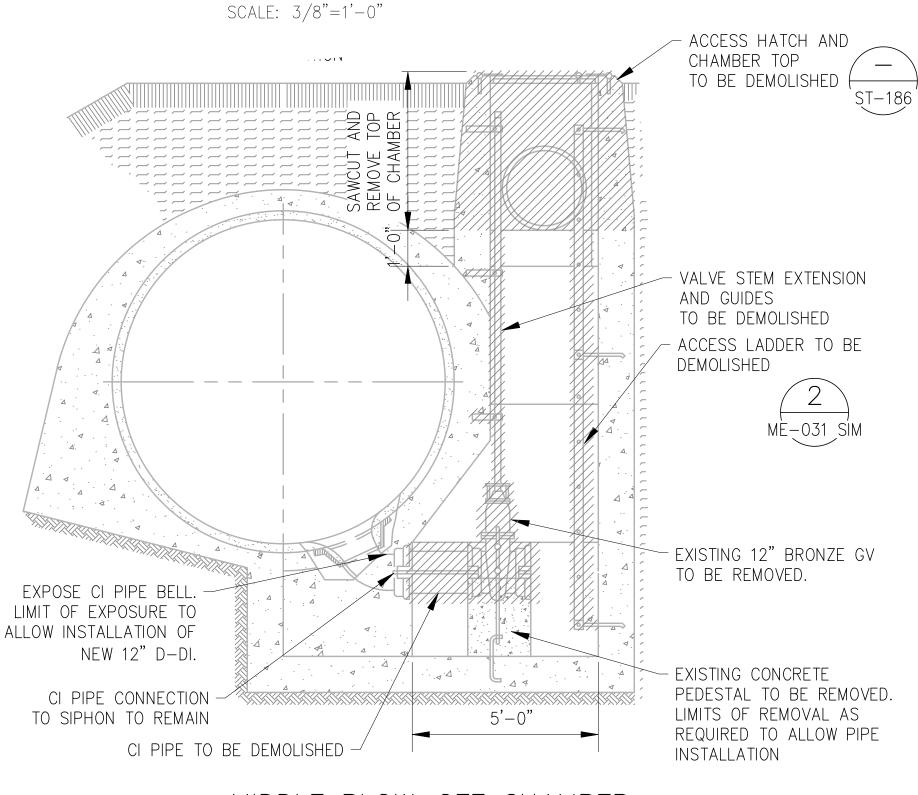


ME-034 SIM

NOTES:

- 1. THE DRAWING SHOWS ONLY GENERAL ARRANGEMENTS OF SIPHON DRAINAGE CHAMBERS, CONTRACTOR SHALL CONFIRM THE ARRANGEMENT FOR EACH SIPHON DRAINAGE CHAMBER PRIOR TO START OF WORK.
- 2. CONTRACTOR SHALL REMOVE ANY SEDIMENT AND DEBRIS BEFORE BEGINNING WORK WHICH MAY BE PRESENT IN THE CHAMBER IN ACCORDANCE WITH SECTION 31 80 05 - BIOFILM, SEDIMENT AND DEBRIS REMOVAL AND HANDLING.
- 3. SEE ME-043 FOR SCHEDULE OF WORK ASSOCIATED WITH SIPHON BLOWOFF CHAMBERS.
- 4. HAZARDOUS MATERIALS MAY BE ENCOUNTERED DURING DEMOLITION. SEE SECTION 01 35 45 HAZARDOUS MATERIAL CONTROL FOR HAZARDOUS MATERIALS SUMMARY. REFER TO SECTION 01 34 45 - ATTACHMENT A FOR QUANTITIES AND LOCATIONS.
- 5. CONTRACTOR SHALL PROTECT ALL EXISTING EQUIPMENT AND PIPE NOT SPECIFICALLY REQUIRED TO BE DEMOLISHED UNDER THIS CONTRACT
- 6. CONTRACTOR SHALL REMOVE ALL PIPING, FITTINGS, VALVES, AND APPURTENANCES ASSOCIATED WITH THE REMOVAL OF THE EXISTING EQUIPMENT. BOLTS SHALL BE CUT FLUSH TO THE EXISTING CONCRETE.

EAST & WEST BLOW-OFF CHAMBER AT CROSSINGS UNDER STREAMS

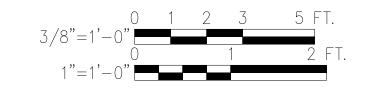


MIDDLE BLOW-OFF CHAMBER AT CROSSINGS UNDER STREAMS

SCALE: 3/8"=1'-0"

Yorktown-2A: **Hunters Brook SPS Blow-off Chambers**

Yorktown-6: **Turkey Mountain SPS Blow-off Chambers**



BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: CHECKED BY: DESIGN LEAD: CDM BRIAN E. KEARNEY PROJECT MANAGER: APPR'D. DAVID J. TANZI REVISIONS/DESCRIPTION

EAST & WEST BLOW-OFF CHAMBER

AT CROSSINGS OVER STREAMS

SCALE: 3/8"=1'-0"

SAWCUT AND REMOVE TOP OF CHAMBER F

WACCESS HATCH

AND GUIDES

ACCESS

TO BE DEMOLISHED

VALVE STEM EXTENSION

TO BE DEMOLISHED

LADDER TO BE / DEMOLISHED

TO BE REMOVED.

ON ME-043.

INSTALLATION

EXISTING 12" BRONZE GV

EXISTING 12" D -CI TO BE REMOVED

IN ACCORDANCE WITH SCHEDULE

EXISTING CONCRETE PEDESTAL TO

BE REMOVED. LIMITS OF REMOVAL

AS REQUIRED TO ALLOW PIPE

Environmental Protection Water fin Future

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PROGRAM DIRECTOR OF WFF

SEAN MCANDREW, P.E.

COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2.

NEW YORK CITY ENVIRONMENTAL PROTECTION

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION

STEEL PIPE SIPHON BLOW-OFF CHAMBER DEMOLITION SECTIONS

SHEET NO: 441 OF 485 DRAWING NO.

ME-041.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

MIDDLE BLOW-OFF CHAMBER

AT CROSSINGS OVER STREAMS

SCALE: 3/8"=1'-0"

EXPOSE CI PIPE BELL. LIMIT OF EXPOSURE TO ALLOW INSTALLATION

OF NEW 12" D-DI

CI PIPE CONNECTION

CI PIPE CONNECTION AND RESTRAINING

RODS TO SIPHON AND PIPING

DOWNSTREAM OF SIPHON WITHIN

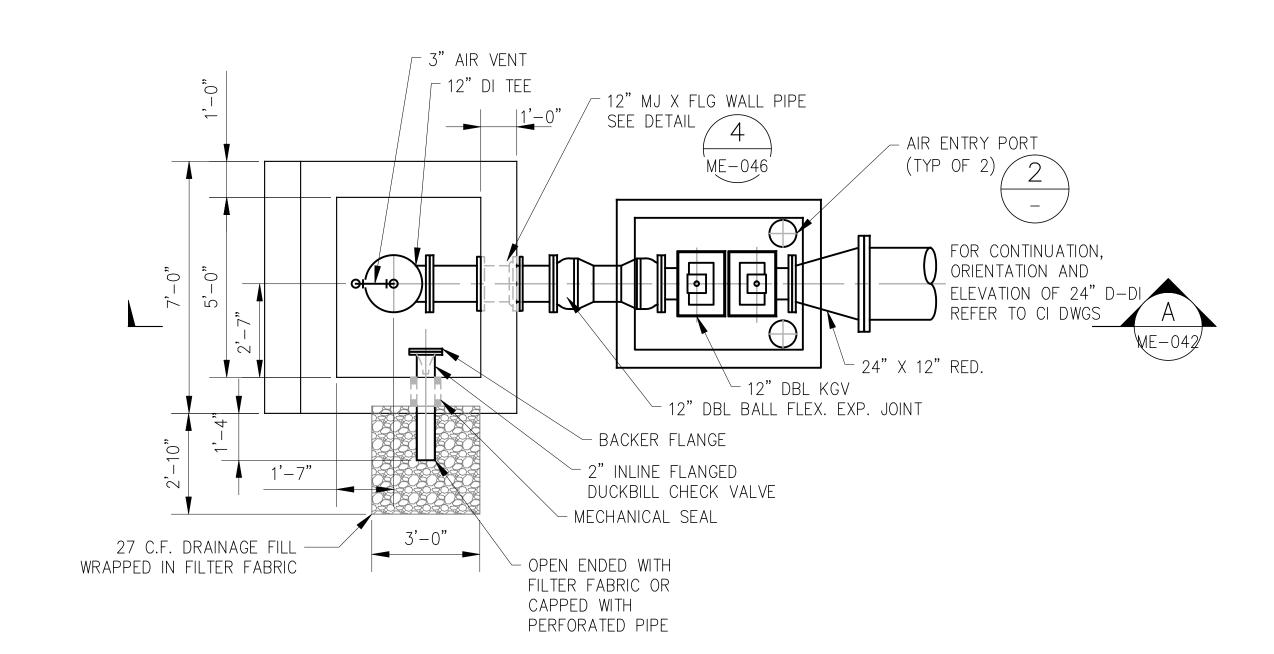
THE CHAMBER TO BE DEMOLISHED

TO SIPHON TO REMAIN

Smith

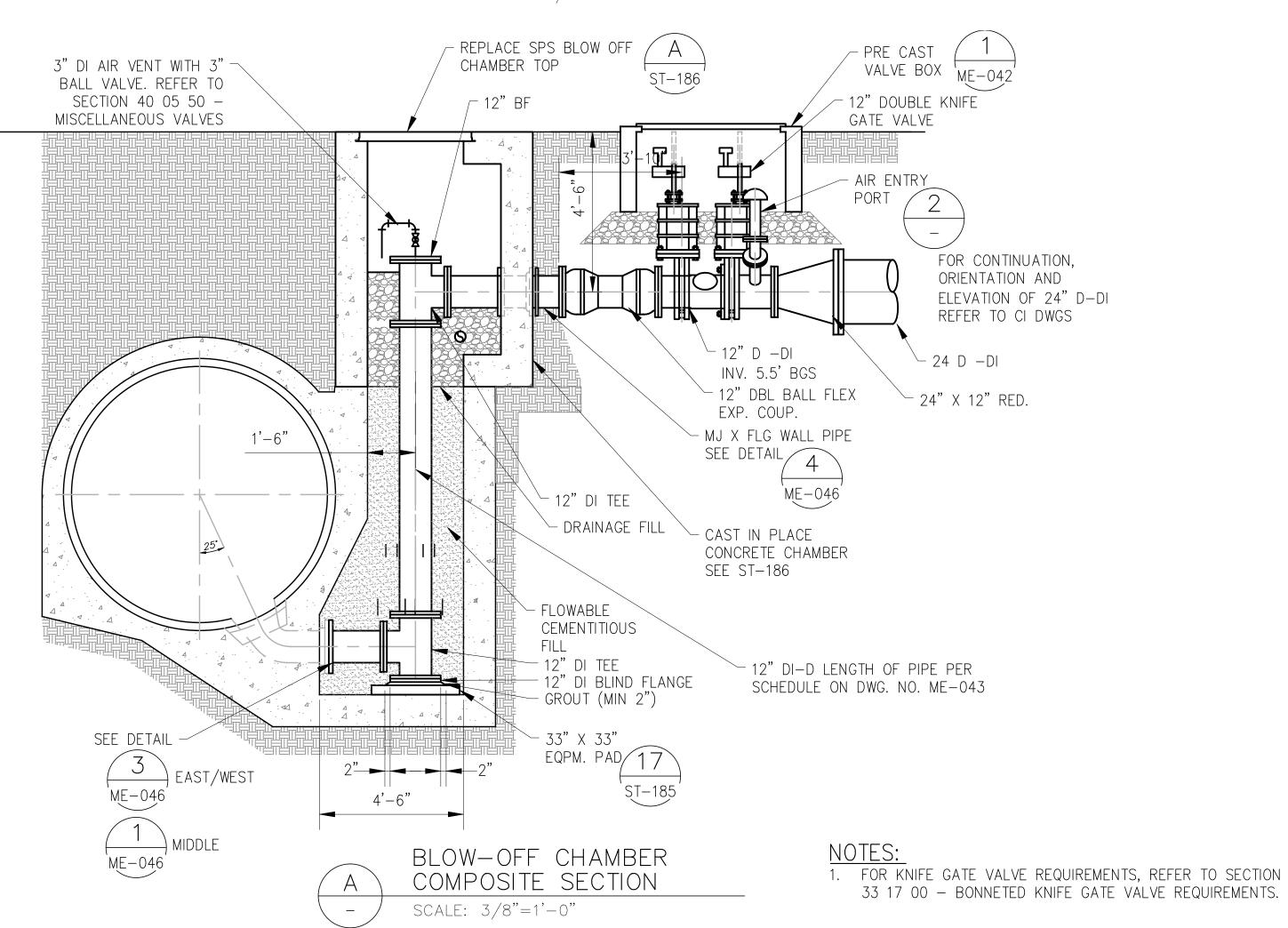
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DATE: 10/2/2017 SCALE: 3/8"=1'-0"



EAST, MIDDLE & WEST BLOW-OFF CHAMBER BASE PLAN

SCALE: 3/8"=1'-0"



DRAWN BY:

CDM Smith

Environmental

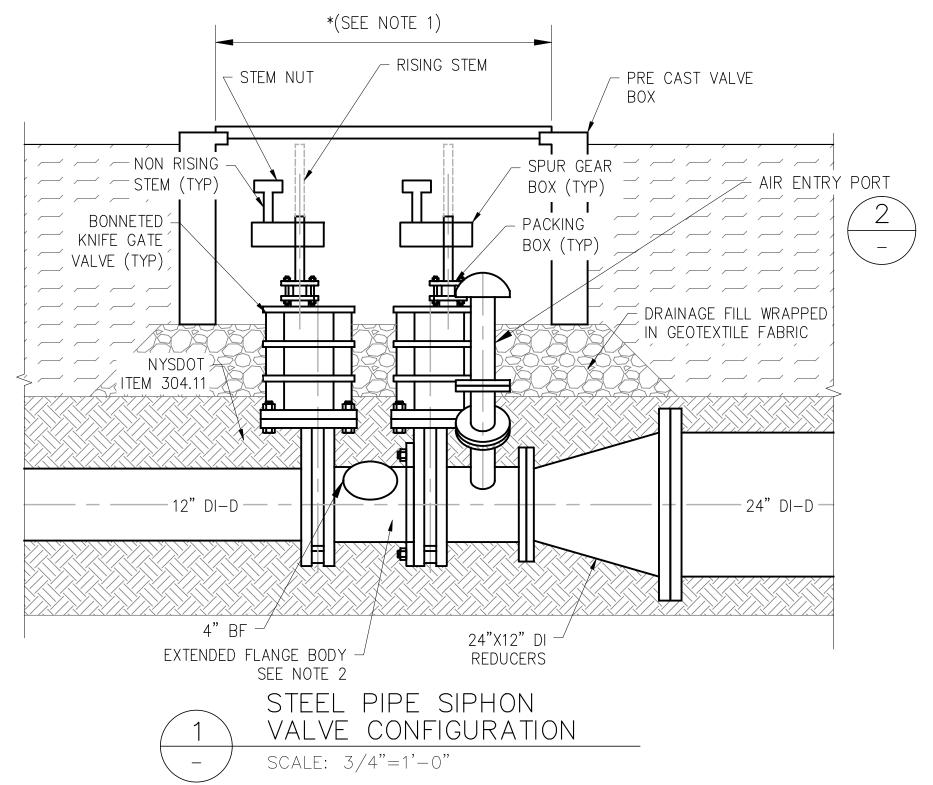
Water for Future

Protection

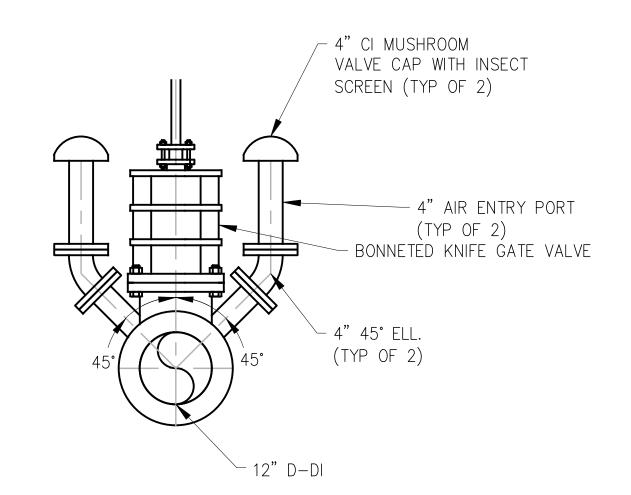
WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

PROGRAM DIRECTOR OF WFF



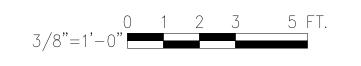
- 1. VALVE BOX SHALL BE SIZED AS TO ALLOW 12" MINIMUM CLEARANCE AROUND THE VALVES. CONTRACTOR SHALL COORDINATE ACTUAL INSIDE DIMENSIONS WITH VALVE BOX MANUFACTURER.
- 2. LENGTH AS REQUIRED BY VALVE MANUFACTURER TO ALLOW DOUBLE KNIFE GATE ARRANGEMENT.
- 3. PACKING BOX, SPUR GEAR BOX, NON-RISING STEM AS DESIGNED BY VALVE MANUFACTURER. SUPPORTS ARE NOT SHOWN FOR CLARITY. VALVE MANUFACTURER TO PROVIDE VALVE SUPPORTS.
- 4. FOR PRECAST CONCRETE CHAMBER REQUIREMENTS REFER TO SECTION 03 48 00 -PRECAST VAULT.
- 5. FOR KNIFE GATE VALVE REQUIREMENTS, REFER TO SECTION 33 17 00 BONNETED KNIFE GATE VALVES.
- 6. AT EAST/WEST OVERSTREAM SPS CROSSINGS THE 12" DRAIN PIPE WILL PENETRATE THE EXISTING SIPHON BLOW-OFF CHAMBER WITH A MECHANICAL SEAL PER DETAIL 9A ON SHEET CI-013. AIR VENT TO BE MINIMUM ELEVATION WITH BOTTOM OF NEW CHAMBER TOP.



AIR ENTRY PORT ORIENTATION

Yorktown-2A: **Hunters Brook SPS Blow-off Chambers**

Yorktown-6: **Turkey Mountain SPS Blow-off Chambers**



BID SET DATE ISSUED: 10/2/2017

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SCALE: 3/4"=1'-0"

NEW YORK CITY ENVIRONMENTAL PROTECTION

DATE: 10/2/2017 CATSKILL AQUEDUCT REPAIR AND SCALE: 3/8"=1'-0"REHABILITATION SHEET NO:

STEEL PIPE SIPHON BLOW-OFF CHAMBER DOUBLE KNIFE GATE VALVE DETAILS

442 OF 485 DRAWING NO. ME-042.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

DESIGNED BY:

CHECKED BY:

DESIGN LEAD:

APPR'D. DAVID J. TANZI

REVISIONS/DESCRIPTION

BRIAN E. KEARNEY

PROJECT MANAGER:

								MECH	ANICAL	CI.	VIL								
STRUCTURE ID	STATION	LOCATION	SPS STREAM CONFIGURATION	REPLACE CHAMBER TOP SECTION	ABANDON CHAMBER	REMOVE LADDER	REMOVE AND REPLACE ACCESS HATCH	DEMO EXISTING VALVE	INSTALL 2 NEW KGV VALVE	STREAM BANK RESOTRATION	RIP RAP APRON	INTERIOR PIPE REPLACEMENT	DISCHARGE PIPE REMOVAL	LENGTH OF DEMO INTERIOR (ft)	LENGTH OF EXTERIOR DEMO (ft)	SPS INVERT ELEV	TOTAL LENGTH OF NEW 12" DRAIN PIPE (FT)	TOTAL LENGTH OF NEW 24" DRAIN PIPE (FT)	TOTAL LENGTH OF NEW INTERIOR PIPING
SPS1-B (W)	54+73	ESOPUS SPS BLOW-OFF (W)	UNDER	X		Х	X	Х	X	Χ	X	Х	X	5	0	371.00	0		20
SPS1-B (M)	55+13	ESOPUS SPS BLOW-OFF (M)	UNDER	X		X	X	X	X	Χ	X	X	X	5	0	372.00	0	175	20
SPS1-B (E)	55+29	ESOPUS SPS BLOW-OFF (E)	UNDER	X		X	X	X	X	Χ	X	X	X	5	0	371.00	0		20
SPS2-B (W)	105+39	TONGORE SPS BLOW-OFF (W)	OVER	X		Х	X	X	X			X	X	5	40	416.00	10	55	10
SPS2-B(M)	105+54	TONGORE SPS BLOW-OFF (M)	OVER	X		X	X	X	X			X	X	5	40	415.00	10	45	10
SPS2-B (E)	105+51	TONGORE SPS BLOW-OFF (E)	OVER	X		X	X	X	X			X	X	5	20	416.00	10	25	10
SPS3-B (W)/CC6	2026+07	WASHINGTON SQUARE SPS BLOW-OFF (W)	UNDER				X							0	0	0.00	0	0	0
SPS3-B (M)	2025+71	WASHINGTON SQUARE SPS BLOW-OFF (M)	UNDER	X		Х	X	X	X	X	X	X	X	5	10	330.00	10	60	25
SPS3-B (E)	2025+96	WASHINGTON SQUARE SPS BLOW-OFF (E)	UNDER	X		X	X	X	X	X	X	X	X	5	15	330.00	10	30	25
SPS4-NB (W)	2512+09	FOUNDRY BROOK SPS NORTHERN BLOW-OFF (W)	OVER CONVERTED TO UNDER	X		Х	X	X	X		X	X	X	5	55	253.00	10		20
SPS4-NB (M)	2511+89	FOUNDRY BROOK SPS NORTHERN BLOW-OFF (M)	OVER CONVERTED TO UNDER	X		X	X	X	X		X	X	X	5	40	253.00	10	125	20
SPS4-NB (E)	2511+79	FOUNDRY BROOK SPS NORTHERN BLOW-OFF (E)	OVER CONVERTED TO UNDER	X		X	X	X	X		X	X	X	5	35	253.00	10		20
SPS4-SB (W)	2519+15	FOUNDRY BROOK SPS SOUTHERN BLOW-OFF (W)	OVER	X		X	X	X	X			X	X	5	20	201.00	10	20	10
SPS4-SB (M)	2519+12	FOUNDRY BROOK SPS SOUTHERN BLOW-OFF (M)	OVER	X		Х	X	X	X			X	X	5	25	200.00	10	25	10
SPS4-SB(E)	2519+12	FOUNDRY BROOK SPS SOUTHERN BLOW-OFF (E)	OVER	X		X	X	X	X			X	X	5	20	201.00	10	30	10
SPS5-B (W)	2637+07	INDIAN BROOK SPS BLOW-OFF (W)	OVER	X		X	X	X	X			^	X	5	35	318.00	10	30	10
SPS5-B (M)	2637+42	INDIAN BROOK SPS BLOW-OFF (M)	OVER	X		X	X	X	X			X	X	5	85	315.00	10	75	10
SPS5-B (E)	2636+93	INDIAN BROOK SPS BLOW-OFF (E)	OVER	X		X	X	X	X	V	V	X	X	5	55	318.00	10	40	10
SPS6-B (W)	2881+64	SPROUT BROOK SPS BLOW-OFF (W)	UNDER	X		X	X	X	X	X Y	X	X	X	5	20	140.00	10	200	20
SPS6-B (M)	2880+96	SPROUT BROOK SPS BLOW-OFF (M)	UNDER	X		X	X	X	X		X	X	X	5		141.00	10	200	20
SPS6-B (E) SPS7-NB (W)	2880+51 2954+36	SPROUT BROOK SPS BLOW-OFF (E) PEEKSKILL SPS NORTHERN BLOW-OFF (W)	UNDER	X		X	X	X	X	X	X	X	X	5	15	38.00	10		20
SPS7-NB (M)	2954+36	PEEKSKILL SPS NORTHERN BLOW-OFF (W) PEEKSKILL SPS NORTHERN BLOW-OFF (M)1	UNDER	Χ		X	Χ	X V	X V			X V	X V	10	15	37.33	10	200	25
SPS7-NB (E)	2954+42	PEEKSKILL SPS NORTHERN BLOW-OFF (E)2	UNDER	^	V	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X	^			X X	^	10	15	38.00	10		20
SPS7-SB (W)	2976+12	PEEKSKILL SPS SOUTHERN BLOW-OFF (W)	UNDER	Y	^	X	^ 	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Y		Y	^ 	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	5	75	103.00	10		20
SPS7-SB (M)	2976+01	PEEKSKILL SPS SOUTHERN BLOW-OFF (M)	UNDER	X		X	X	X Y	X Y		X	X	X Y	5	75	102.70	10	150	20
SPS7-SB (E)	2975+95	PEEKSKILL SPS SOUTHERN BLOW-OFF (E)	UNDER	Y		X	X	Y Y	Y		X	X X	Y Y	5	75	103.00	10		20
SPS8-B (W)	3235+80	HUNTERS BROOK SPS BLOW-OFF (W)	UNDER	X		X	X	X	X	X	X	X	X	5	15	254.00	15		25
SPS8-B (M)	3235+72	HUNTERS BROOK SPS BLOW-OFF (M)	UNDER	X		X	X	X	X	X	X	X	X	5	20	254.00	10	150	25
SPS8-B (E)	3235+85	HUNTERS BROOK SPS BLOW-OFF (E)	UNDER	X		X	X	X	X	X	X	X	X	5	15	256.00	25	-	25
SPS9-B (W)	3369+17	TURKEY MOUNTAIN SPS BLOW-OFF (W)	UNDER	X		X	X	X	X	X		X	X	5	20	270.00	10		20
SPS9-B (M)	3368+44	TURKEY MOUNTAIN SPS BLOW-OFF (M)	UNDER	X		X	X	X	X	X		X	X	5	15	267.00	10	150	25
SPS9-B (E)	3368+33	TURKEY MOUNTAIN SPS BLOW-OFF (E)	UNDER	X		X	X	X	X	X		X	X	5	10	270.00	10	_	20
SPS10-B (W)	3773+67	HARLEM RIVER RAILROAD SPS BLOW-OFF (W)	UNDER	X		Х	X	X	X	Χ	X	X	X	5	21	285.00	10		20
SPS10-B (M)	3773+67	HARLEM RIVER RAILROAD SPS BLOW-OFF (M)	UNDER	X		Х	X	X	X	Χ	X	X	X	5	23	283.00	10	150	25
SPS10-B (E)	3773+79	HARLEM RIVER RAILROAD SPS BLOW-OFF (E)	UNDER	X		Х	X	X	X	Χ	X	X	X	5	12	286.00	10	_	20

NOTES:

- 1. PEESKILL SPS NORTHERN BLOW-OFF (M) CONTAINS ADDITIONAL VALVES AND PIPING IN EXISTING BLOW OFF CHAMBER, EXISTING VALVE
- AND PIPING TO BE DEMOLISHED.
- 2. 1NSTALLATION OF THE KNIFE GATE VALVES WILL BE COMPLETED AT THE RETROFITTED SPS ACCESS MANHOLE SPS7-M1 (E). REFER TO ME-045 FOR THE RETROFIT OF THE EXISTING SPS ACCESS MANHOLE TO REPLACE AND FUNCTION AS NEW PEEKSKILL SPS NORTH BLOW OFF-OFF CHAMBER EAST PIPE. ALL NOTES TO INSTALL NEW PIPING REFER TO THE INSTALLATION IN THE CONVERTED ACCESS MANHOLE.

Yorktown-2A:

Hunters Brook SPS Blow-off Chambers

Yorktown-6:

Turkey Mountain SPS Blow-off Chambers

DESIGNED BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. DAVID J. TANZI

CDM Smith



Environmental Water for Future

SEAN MCANDREW, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

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BID SET DATE ISSUED: 10/2/2017

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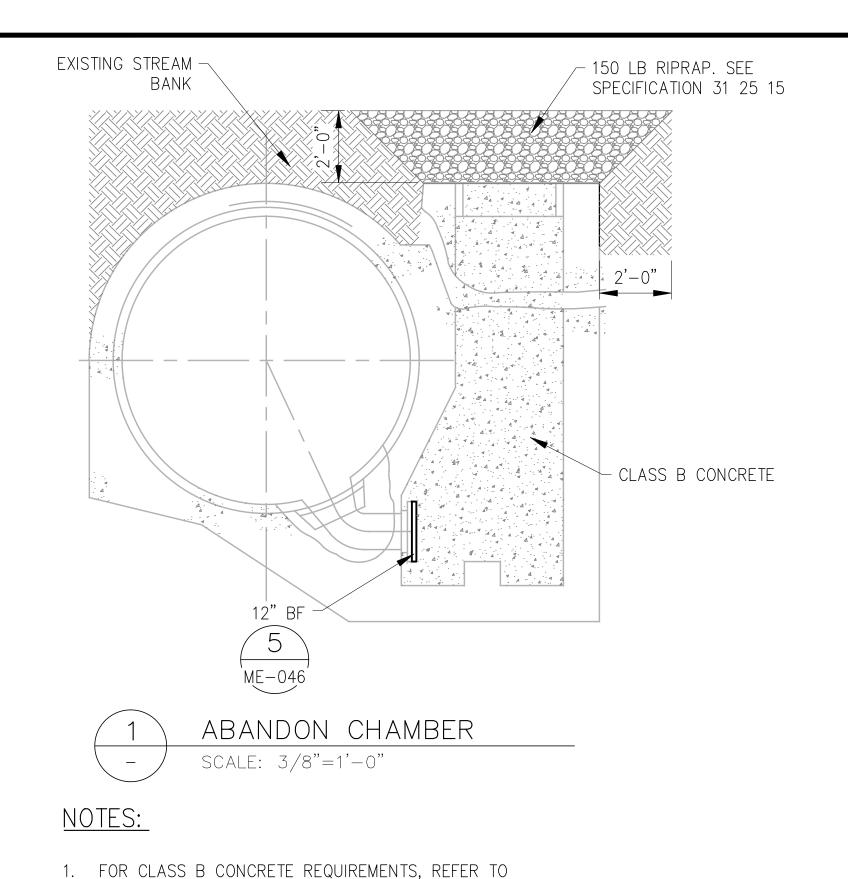
SHEET NO: 443 OF 485 DRAWING NO.

DATE: 10/2/2017

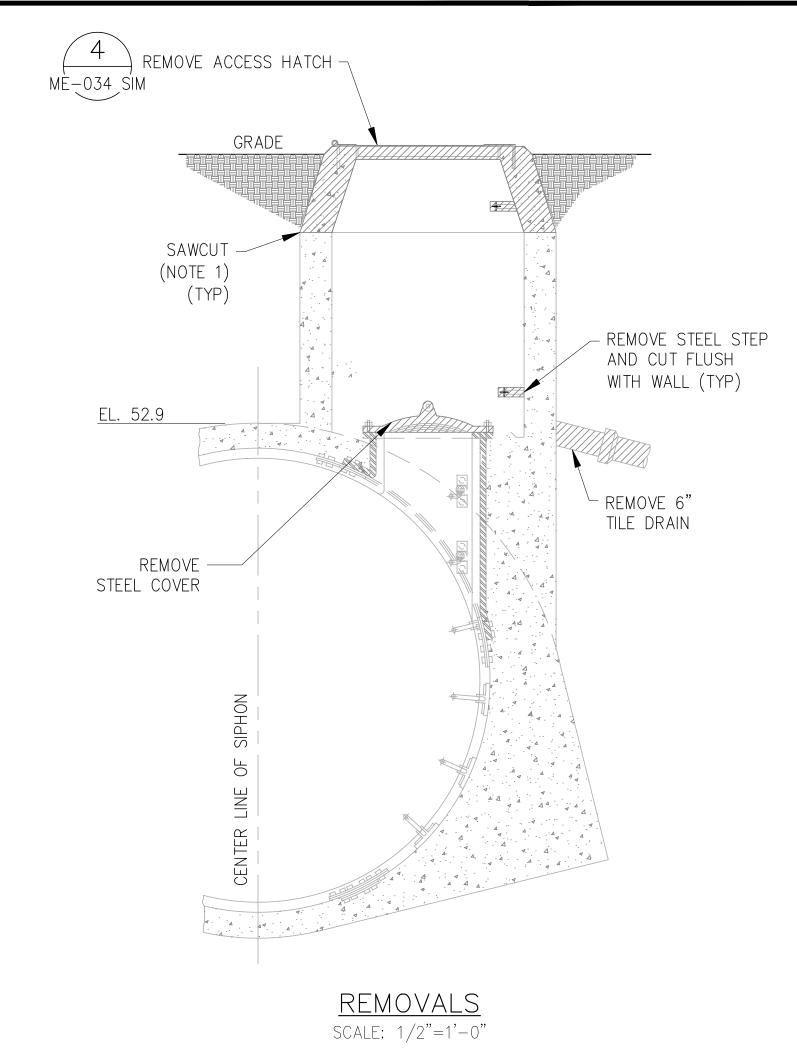
ME-043.00

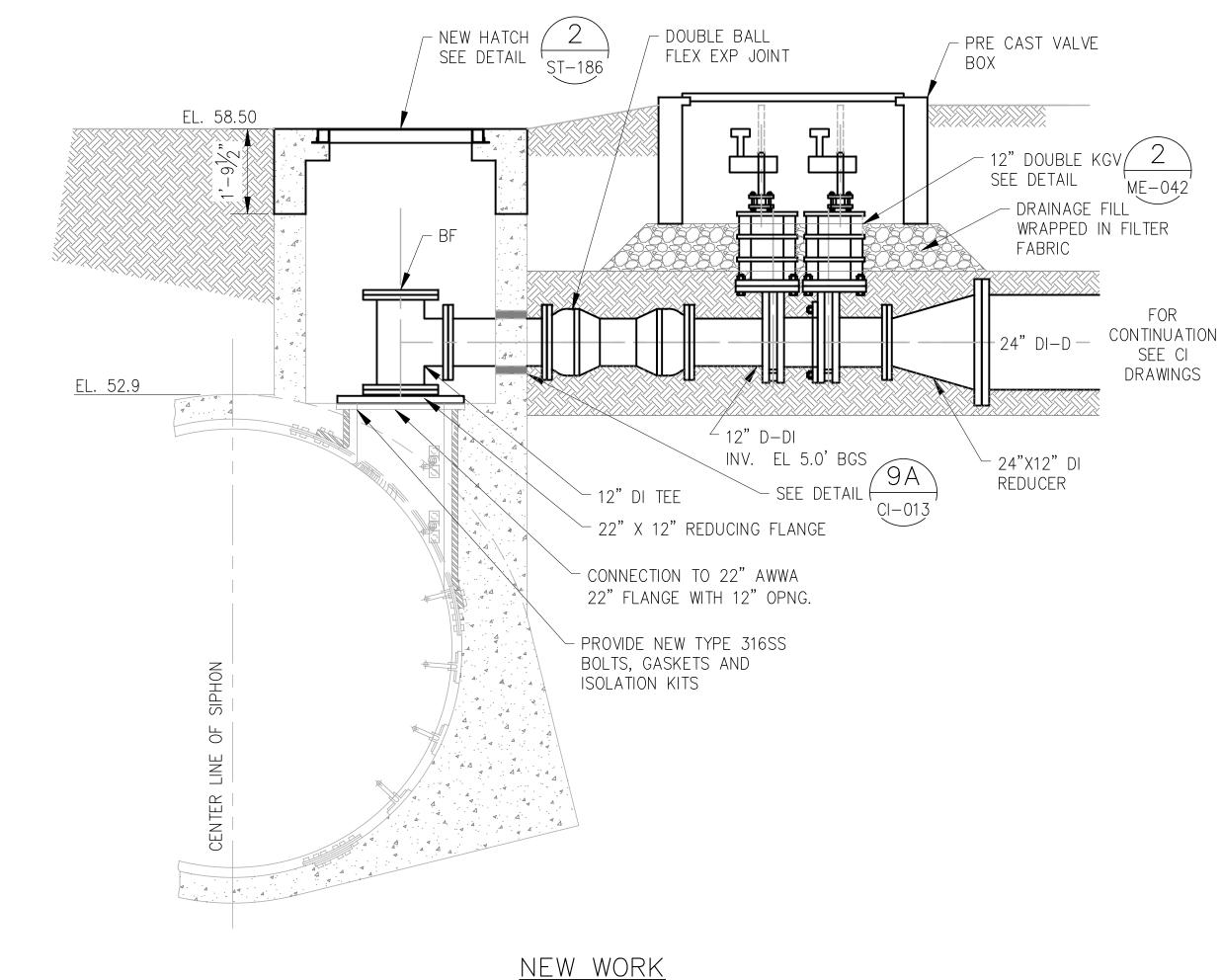
SCALE: NTS

STEEL PIPE SIPHON BLOW-OFF CHAMBER SCHEDULE



SECTION 03 30 00 - CAST-IN-PLACE CONCRETE.





ACCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

PROGRAM DIRECTOR OF WFF

WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

PEEKSKILL SPS NORTHERN BLOW OFF (E) ACCESS MANHOLE CONVERSION DETAIL SCALE: 1/2"=1'-0"

NOTES:

SCALE: 1/2"=1'-0"

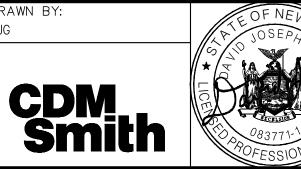
- 1. APPROXIMATE DEPTH OF CUT. CUT TO BE FIELD VERIFIED AND COORDINATED BY THE CONTRACTOR TO SET NEW COVER ELEVATION 2" ABOVE FINISHED GRADE. ALL CONCRETE MODIFICATION SHALL BE IN ACCORDANCE WITH 03 01 31 - CONCRETE REHABILITATION AND MODIFICATIONS.
- 2. PRIOR TO DEMO WORK, THE CONTRACTOR SHALL INSTALL BERMS OR APPROVED METHODS TO PREVENT RESIDUAL WATER FROM MIXING IN WITH CONSTRUCTION WATER. CONTRACTOR SHALL SUBMIT DETAILS FOR WATER MANAGEMENT PRIOR TO ANY WORK. THE CONSTRUCTION WATER SHALL BE COLLECTED, TREATED, DISCHARGED OR DISPOSED OFF IN ACCORDANCE WITH SECTION 31 80 06 - WATER TREATMENT AND DISPOSAL.

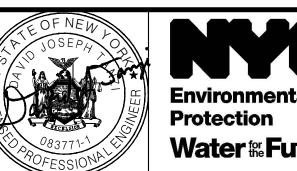
Yorktown-2A: **Hunters Brook SPS Blow-off Chambers**

Yorktown-6:

Turkey Mountain SPS Blow-off Chambers

DESIGNED BY: DRAWN BY: CHECKED BY: DESIGN LEAD: BRIAN E. KEARNEY PROJECT MANAGER: APPR'D. DAVID J. TANZI REVISIONS/DESCRIPTION NO. DATE





Environmental
Protection Water Future

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SHEET NO: 445 OF 485 DRAWING NO.

DATE: 10/2/2017

SCALE: 3/8"=1'-0"

ME-045.00

STEEL PIPE SIPHON BLOW-OFF CHAMBER **DETAILS**

- 1. CONTRACTOR TO INSPECT THE CONDITION OF ALL THREE REMOVABLE CONCRETE PLATES AND COORDINATE WITH THE ENGINEER. THE ENGINEER SHALL DECIDE TO REMOVE AND REPLACE THE CONCRETE PLATE WHICH IS IN THE WORST CONDITION TO ALLOW FOR INSTALLATION OF NEW PRECAST CONCRETE SLAB AND NEW AIR VENT PIPE WITH SUPPORT.
- 2. PRIOR TO NEW AIR VENT WORK, INSTALL BERMS OR OTHER APPROVED MEANS TO PREVENT RESIDUAL WATER FROM MIXING WITH CONSTRUCTION WATER BY CREATING A WORK ZONE. THE CONSTRUCTION WATER SHALL BE COLLECTED, TREATED AND DISCHARGED OR COLLECTED AND DISPOSED OF IN ACCORDANCE WITH SECTION 31 80 06 - WATER TREATMENT AND DISPOSAL.

CROTON LAKE PT UPTAKE CHAMBER NV7 DEMOLITION PLAN SCALE: 1/4"=1'-0"

Yorktown-9: **Croton Lake PT Uptake Chamber**

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BID SET DATE ISSUED: 10/2/2017 GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: CHECKED BY: DESIGN LEAD: JOHN N. ROGERS PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. DAVID J. TANZI

CDM Smith



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SEAN MCANDREW, P.E.

BUREAU OF ENGINEERING DESIGN & CONSTRUCTION

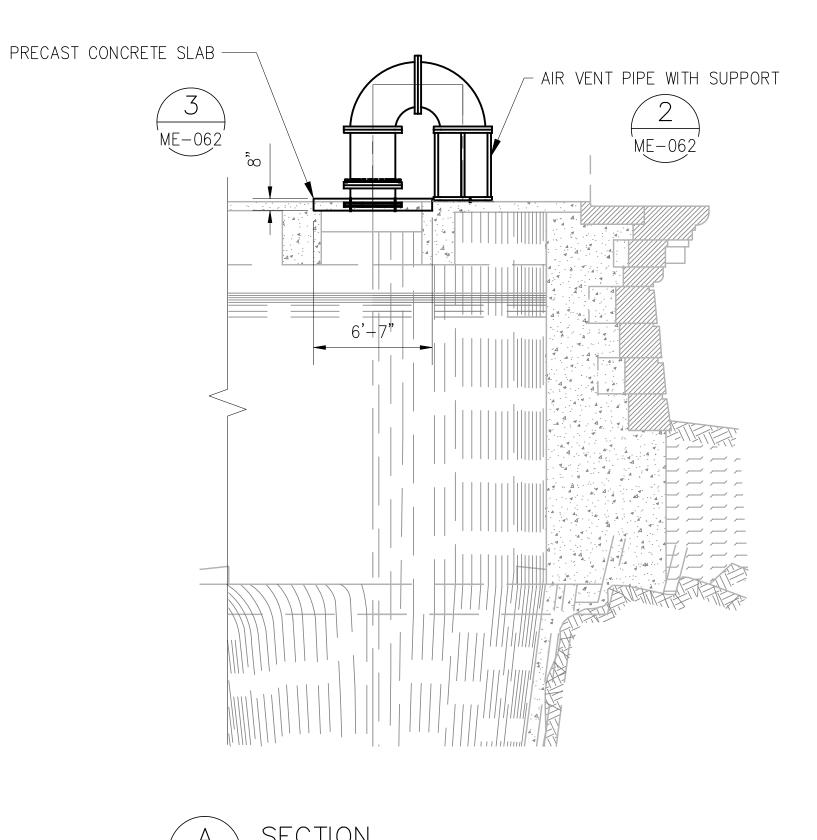
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CROTON LAKE PT UPTAKE CHAMBER **DEMOLITION PLAN**

DATE: 10/2/2017 SCALE: 1/4"=1'-0" SHEET NO: 455 OF 485

DRAWING NO. ME-059.00

SCALE: 3/16"=1'-0"



NOTES:

- 1. CONTRACTOR SHALL INSTALL AIR VENTS AFTER BIOFILM REMOVAL. IF CONTRACTOR NEEDS TO INSTALL AIR VENT PRIOR TO BIOFILM REMOVAL, HE SHALL OBTAIN THE ENGINEER'S APPROVAL AND REMOVE AIR VENT IMMEDIATELY BEFORE BIOFILM REMOVAL AND RE-INSTALL IMMEDIATELY AFTER BIOFILM REMOVAL.
- 2. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO FABRICATION. APPROXIMATELY $\frac{1}{4}$ " OF SPACING SHALL BE PROVIDED ALL AROUND THE CONCRETE SLAB BASED ON FIELD MEASUREMENTS.

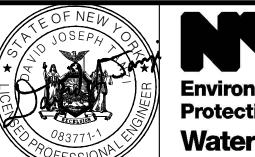
SCALE: 3/16"=1'-0"

- 3. INSTALL DEBRIS NETTING AS SPECIFIED IN DRAWING SHEET EA-020.00
- 4. CONTRACTOR SHALL INSPECT AND CLEAN THE CAST IRON FLOAT WELLS AND BRONZE PIEZOMETER PIPES AND WALL CASTINGS TO REMOVE DEBRIS AND TUBERCULATION IN ACCORDANCE WITH SECTION 31 80 05 - BIOFILM, SEDIMENT AND DEBRIS REMOVAL AND HANDLING. THE FLOAT WELLS AND PIEZOMETER PIPES SHALL BE FLUSHED AFTER CLEANING. REPLACE ALL FLOAT WELL COVERS WITH NEW ALUMINUM COVERS TO MATCH EXISTING OPENING AND SIT FLUSH WITH SURROUNDING FLOOR. SEE DETAIL 3 ON ME-029 FOR FLOAT WELL COVER.

Yorktown-9: **Croton Lake PT Uptake Chamber**

DESIGNED BY: CHECKED BY: DESIGN LEAD: JOHN N. ROGERS PROJECT MANAGER: APPR'D. DAVID J. TANZI REVISIONS/DESCRIPTION

CDM Smith



Environmental Protection Water for Future

CCOUNTABLE MANAGER

JONATHAN HOFFMAN, P.E.

PROGRAM MANAGER OF WFF

PROGRAM DIRECTOR OF WFF

WENDY SPERDUTO, P.E.

SEAN MCANDREW, P.E.

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BID SET DATE ISSUED: 10/2/2017

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CROTON LAKE PT UPTAKE CHAMBER

IT IS A REDUCED PRINT. SCALE
ACCORDINGLY DATE: 10/2/2017 SCALE: 3/16"=1'-0" SHEET NO: 456 OF 485

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34"

DRAWING NO. NEW AIR VENT PLAN AND SECTIONS ME-060.00

COMMUNITY	PLANT FORM	INDICATOR STATUS	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	SUM OF # PLANTS			
			FAC	VIBURNUM DENTATUM	SOUTHERN ARROW-WOOD		52OC	6		
	SHRUBS	OBL	SALIX SERICEA	SILKY WILLOW	#2 CAN	52OC	4			
		EAC\\\	CORNUS AMOMUM	SILKY DOGWOOD		52OC	6			
		FACW	SAMBUCUS NIGRA	BLACK ELDER		52OC	4			
					SHR	UBS TOTAL=	20			
RIPARIAN	HERBACEOUS	ACEOUS	GLYCERIA CANADENSIS	RATTLESNAKE MANNA GRASS	PLUGS	22OC	25			
SHRUB COMMUNITY			GLYCERIA GRANDIS	AMERICAN MANNA GRASS	PLUGS	2?OC	13			
			LEERSIA ORYZOIDES	RICE CUT GRASS	PLUGS	22OC	25			
			CALAMAGROSTIS CANADENSIS	BLUEJOINT	PLUGS	22OC	25			
		FACW	ELYMUS VIRGINICUS	VIRGINIA WILD RYE	PLUGS	2?OC	38			
			HERBACE	126						
				RIPARIAN SHRUE	3 COMMUN	146				
			 OVERSEED WITH RIPARIAN BUFFEF	 R MIX (BASIN BOTTOM) AT 20 LBS	/ACRE.					
RIPARIAN	SEED MIX	STREAM BANK SEED MIX TOTAL (.056 ACRES)= 1.1-1.7 LBS SEED MIX.								
SEEDING AREA		SOURCE: PINELANDS NURSERY, INC.; ERNST SEED CO. OR VERMONT WETLAND PLANT SUPPLY; OR EQUIVALENT.								
		RIPARIAN SEEDING AREA TOTAL=								

PLANT SCHEDULE

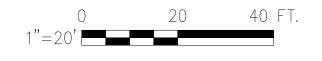


RIPARIAN SHRUB COMMUNITY

RIPARIAN SEEDING AREA

NOTES:

- SEE CI-348 FOR SITE PREPARATION, DEMOLITION, AND RESTORATION WORK.
- 2. SEE LP-005 FOR PLANTING DETAILS.



BID SET

DATE ISSUED: 10/2/2017

GRAPHIC SCALES
CHECK BEFORE USE

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ACCORDINGLY

DESIGNED BY:
JR
CHECKED BY:
KL
DESIGN LEAD:
AMIR MASHHAD
PROJECT MANAGER:
SCOTT DAVIS

Hunters Brook SPS Blow-off Chambers

Yorktown-2A:





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PROGRAM DIRECTOR OF WFF	COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION, LAW, SECTION, 7209.2."
SEAN MCANDREW, P.E.	TORK EDUCATION, LAW, SECTION, 7209.2.

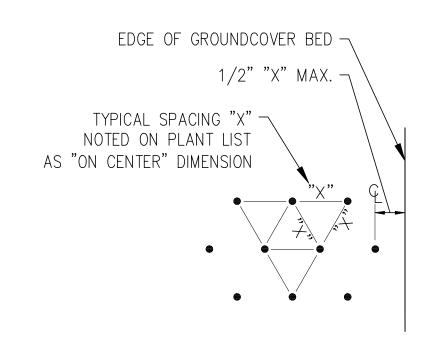
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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION 96-05 HORACE HARDING EXPRESSWAY 5th FLOOR CORONA, NEW YORK 11368 www.nyc.gov/dep

CATSKILL AQUEDUCT REPAIR AND REHABILITATION

HUNTERS BROOK SPS BLOW-OFF CHAMBER PLANTING PLAN AND SCHEDULE DATE: 10/2/2017
SCALE: 1"=20'
SHEET NO:
483 OF 485
DRAWING NO.
LP-003.00

TYPICAL SHRUB PLANTING DETAIL



TYPICAL GROUNDCOVER PLANTING DETAIL

NOTES:

TREE STAKING OPTIONAL, BUT IF -

REMOVED AS SOON AS ROOTS ARE

ESTABLISHED. SEE NOTES BELOW

ROPES AT TOP OF BALL SHALL BE -

CUT. REMOVE 1/3 OF BURLAP.

SHALL BE TOTALLY REMOVED,

INCLUDING METAL BASKET

PREPARED SUBSOIL TO FORM

PEDESTAL TO PREVENT

NON-BIODEGRADABLE MATERIAL

USED, STAKES SHOULD BE

1. TREE STAKING TO BE UTILIZED WHERE TREES WILL BE SUBJECT TO HIGH WINDS OR FLOWING WATER AS WELL AS STEEP SLOPES.

→ 2X BALL DIA., MIN. →

2. STAKES SHALL BE REMOVED WITHIN ONE YEAR OF PLANTING BY THE LANDSCAPE CONTRACTOR.

DECIDUOUS/EVERGREEN TREE PLANTING DETAIL NOT TO SCALE

BID SET

DATE ISSUED:

NOTES:

- RUBBER HOSE AT BARK

WIRE TIE OR 3/4" THICK

- EYE SCREW

POLYPROPYLENE WOVEN TREE TIE

SET TREE AT ORIGINAL GRADE

MULCH: STRAW, PLACED 4"

FROM TRUNK TO PREVENT ROTTING

1. REFER TO PER SPECIFICATION 32 90 00- PLANTING FOR REQUIREMENTS.

Yorktown-2A: **Hunters Brook SPS Blow-off Chambers**

DESIGNED BY: CHECKED BY: DESIGN LEAD: AMIR MASHHAD PROJECT MANAGER: REVISIONS/DESCRIPTION APPR'D. SCOTT DAVIS NO. DATE



ACCOUNTABLE MANAGER JONATHAN HOFFMAN, P.E. PROGRAM MANAGER OF WFF WENDY SPERDUTO, P.E. PROGRAM DIRECTOR OF WFF SEAN MCANDREW, P.E.

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CATSKILL AQUEDUCT REPAIR AND REHABILITATION PLANTING DETAILS

10/2/2017

DATE: 10/2/2017 SCALE: NOT TO SCALE SHEET NO:

GRAPHIC SCALES CHECK BEFORE USE

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485 OF 485 DRAWING NO. LP-005.00

Attachment D SEQR EAS FORM



NOTICE OF CORRECTION FOR THE RECENTLY RELEASED DRAFT SCOPE OF WORK FOR THE WATER FOR THE FÜTURE: UPSTATE WATER SUPPLY RESILIENCY PROJECT

Emily Lloyd Commissioner

Angela Licata
Deputy Commissioner of
Sustainability
alicata@dep.nyc.gov

59-17 Junction Blvd. Flushing, New York 11373

Tel. (718) 595-4398 Fax (718) 595-4479 CEQR No. 15DEP006U October 22, 2014

A Draft Scope of Work was issued on October 10, 2014 for the Water for the Future: Upstate Water Supply Resiliency Project. Please note that Part 3 of the Environmental Assessment Form incorrectly indicated that a conditional negative declaration would be prepared. DEP acknowledges this project may result in one or more significant adverse impacts on the environment and issued a Positive Declaration reflecting that an environmental impact statement will be prepared accordingly.

The corrected Part 3 is enclosed. We apologize for any inconvenience this may have caused you. Please note Parts 1, 2, and 3 of the Environmental Assessment Form as well as the Draft Scope of Work is available on the NYCDEP website: http://www.nyc.gov/dep.

Mark N. Page, Jr. Managing Director

Enclosure

Full Environmental Assessment Form Part 1 - Project and Setting

Instructions for Completing Part 1

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

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

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

A. Project and Sponsor Information.

Name of Action or Project:

Water for the Future (WFF): Upstate Water Supply Resiliency			
Project Location (describe, and attach a general location map):			
Counties of Westchester, Putnam, Dutchess, Orange, Sullivan, Ulster, Greene, Delaw	are, Broome and Schoharie.		
Brief Description of Proposed Action (include purpose or need):			
Rehabilitation of the Catskill Aqueduct, WFF Shutdown System Operations, and Rond	out-West Branch Tunnel (RWB)	Γ) Inspection and Repair.	
The Water for the Future program (WFF) was developed to respond to the need to recthe City's overall water supply system. WFF addresses significant leakage in the Dela construction. Once the tunnel is completed in 2022, the RWBT would be temporarily sthe Delaware System west of the Hudson River would be unavailable. To ensure the developed projects and plans comprised of three main components: (1) supply augme repair or treatment of minor leaks and replacement of aging mechanical components); rely more heavily on the Catskill and Croton Systems during the temporary shutdown; bypass tunnel (drain, inspect, and repair), including decommissioning the bypassed s	ware Aqueduct. To address the hut down. During this temporary continued supply of clean drinkin ntation consisting of rehabilitation (2) WFF Shutdown System Operand (3) RWBT Inspection and F	se leaks, a bypass tunnel in under y shutdown of the RWBT, water from g water during this time, DEP has on of the Catskill Aqueduct (including erations, which would allow DEP to	
Name of Applicant/Sponsor:	Telephone:		
YC DEP Bureau of Engineering Design and Construction E-Mail:			
Address: 59-17 Junction Boulevard, 11th Floor	-		
City/PO: Flushing	State: NY	Zip Code: 11373	
Project Contact (if not same as sponsor; give name and title/role):	Telephone:	<u> </u>	
Sean McAndrew, WFF Program Director	E-Mail:		
Address:			
City/PO:	State:	Zip Code:	
Property Owner (if not same as sponsor):	Telephone:		
	E-Mail:		
Address:	ı		
City/PO:	State:	Zip Code:	

B. Government Approvals

B. Government Approvals, Fundi assistance.)	ing, or Spon	sorship. ("Funding" includes grants, loans, ta	x relief, and any othe	r forms of financial	
Government Entity		If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)		
a. City Council, Town Board, or Village Board of Trustees	Yes⊡No	Various			
b. City, Town or Village Planning Board or Commission	Yes□No	Various			
	Yes∏No s	Various			
	Yes□No	NYC Public Design Commission			
e. County agencies	Yes☑No				
f. Regional agencies	Yes☑No				
g. State agencies	Yes□No	DEC, DOT, DOH, DOS, OPRHP, NYCDEP			
_	Yes⊡No	USFWS, USACE			
i. Coastal Resources.i. Is the project site within a Co	aterway?	∠ Yes □No			
ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program?iii. Is the project site within a Coastal Erosion Hazard Area?					
C. Planning and Zoning					
C.1. Planning and zoning actions.					
only approval(s) which must be gra • If Yes, complete sections (anted to enab C, F and G.	nendment of a plan, local law, ordinance, rule of the proposed action to proceed? plete all remaining sections and questions in P	Ü	∠ Yes□No	
C.2. Adopted land use plans.					
a. Do any municipally- adopted (ci- where the proposed action would	ty, town, villa	age or county) comprehensive land use plan(s)	include the site	∠ Yes□No	
* *		cific recommendations for the site where the pr	roposed action	∠ Yes□No	
	OA); designa	ocal or regional special planning district (for ex ated State or Federal heritage area; watershed n	nanagement plan;	∠ Yes□No	
or an adopted municipal farmlan If Yes, identify the plan(s):	d protection	ally within an area listed in an adopted municipplan?		Z Yes□No	

C.3. Zoning	
a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. If Yes, what is the zoning classification(s) including any applicable overlay district? Various	✓ Y es □ No
b. Is the use permitted or allowed by a special or conditional use permit?	∠ Yes N o
c. Is a zoning change requested as part of the proposed action? If Yes,	□Yes☑No
i. What is the proposed new zoning for the site?	
C.4. Existing community services.	
a. In what school district is the project site located? Various	
b. What police or other public protection forces serve the project site? Various	
c. Which fire protection and emergency medical services serve the project site? Various	
d. What parks serve the project site? Various	
D. Project Details	
D.1. Proposed and Potential Development	
a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed components)? public utility repair of water supply system for up to nine million customers.	ed, include all
b. a. Total acreage of the site of the proposed action? b. Total acreage to be physically disturbed? Varies acres Varies acres	
c. Total acreage (project site and any contiguous properties) owned	
or controlled by the applicant or project sponsor?	
c. Is the proposed action an expansion of an existing project or use? i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, mile square feet)? % 0 Units: 0	✓ Yes No es, housing units,
d. Is the proposed action a subdivision, or does it include a subdivision?	□Yes Z No
If Yes, i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)	
ii. Is a cluster/conservation layout proposed?	□Yes ∠ No
iii. Number of lots proposed?iv. Minimum and maximum proposed lot sizes? Minimum Maximum	
e. Will proposed action be constructed in multiple phases?	∠ Yes □ No
i. If No, anticipated period of construction: monthsii. If Yes:	
Total number of phases anticipated	
Anticipated commencement date of phase 1 (including demolition) month year	
Anticipated completion date of final phase monthyear	
 Generally describe connections or relationships among phases, including any contingencies where progradetermine timing or duration of future phases: 	ress of one phase may
The Proposed Action is intended to be in place prior to the anticipated 8 mon shutdown of the RWBT in 2022. The Proposed Action implemented throughout the shutdown. Work for Catskill will occur prior to the shutdown, Operations and Inspection/Repair will occur	on will continue to be

f Does the proje	ct include new resid	ential uses?			□Yes☑No
	nbers of units propos				
ii i es, show han	One Family	Two Family	Three Family	Multiple Family (four or more)	
	<u> </u>	<u> </u>	<u> </u>	more rammy (1000 or more)	
Initial Phase					
At completion					
of all phases					
g. Does the prope	osed action include i	new non-residentia	al construction (incl	uding expansions)?	✓ Yes No
If Yes,				vanig onpanions).	2 1 95 1 10
	of structures	Varies			
ii. Dimensions ((in feet) of largest pr	oposed structure:	Varies height;	Varies width; and Varies length	
iii. Approximate	extent of building s	space to be heated	or cooled:	n/a square feet	
h. Does the prope	osed action include	construction or oth	er activities that wi	ll result in the impoundment of any	☐ Yes Z No
				lagoon or other storage?	
If Yes,		11 27	,1 , ,		
i. Purpose of the	e impoundment:				
ii. If a water imp	oundment, the princ	cipal source of the	water:	Ground water Surface water stream	ns Other specify:
iii If other then	water, identify the ty	ma of impounded/	antained liquids ar	nd their source	
iii. II other than v	water, identify the ty	pe of impounded/	comamed nquids an	id then source.	
iv. Approximate	size of the proposed	d impoundment.	Volume:	million gallons; surface area:	acres
v. Dimensions of	of the proposed dam	or impounding str	ucture:	height; length	
vi. Construction	method/materials f	or the proposed da	m or impounding st	tructure (e.g., earth fill, rock, wood, cond	erete):
D.1 Project On	ovations				
D.2. Project Op					
				during construction, operations, or both?	☐Yes ✓No
		ition, grading or in	stallation of utilities	s or foundations where all excavated	
materials will a If Yes:	remain onsite)				
	urpose of the excava	tion or dradging?			
				to be removed from the site?	
	nat duration of time?				
			e excavated or dred	lged, and plans to use, manage or dispos	e of them.
					
: W:11 (1, 1, -			1: -1-9		
	e onsite dewatering of				☐Yes ☐No
ii yes, descri	be				
v What is the to	otal area to be dredu	ed or excavated?		acres	
vi What is the m	navimum area to be	worked at any one	time?	acres	
vii What would	he the maximum de	oth of excavation	or dredging?	feet	
viii. Will the exc	avation require blast	ing?			□Yes□No
b. Would the pro	posed action cause of	or result in alterati	on of, increase or de	ecrease in size of, or encroachment	✓ Yes No
	ing wetland, waterbo	ody, shoreline, bea	ich or adjacent area?	?	
If Yes:					
				water index number, wetland map numb	er or geographic
description):	v <u>arious wetlands/water</u>	bodies along the aqu	ueducts and receiving	waterbodies.	

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square fe	et or acres:
Proposed Action may require placement of small structures in or near wetlands or waterbodies. Proposed action wo	uld reduce the leak
water in Roseton, NY.	
iii. Will proposed action cause or result in disturbance to bottom sediments? If Yes, describe: Potential disturbance due to increase in releases, primarily associated with Rondout Reservoir	✓ Yes No
iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation?	✓ Yes No
If Yes:	105_140
 acres of aquatic vegetation proposed to be removed: Yet to be determined 	
 expected acreage of aquatic vegetation remaining after project completion: Yet to be determined 	
 purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): 	7
Removal/disturbance a result of reservoir releases, primarily associated with Rondout Reservoir	
proposed method of plant removal:	
if chemical/herbicide treatment will be used, specify product(s):	
v. Describe any proposed reclamation/mitigation following disturbance:	
c. Will the proposed action use, or create a new demand for water?	Yes ZNo
If Yes:	
i. Total anticipated water usage/demand per day: gallons/day	
ii. Will the proposed action obtain water from an existing public water supply?	☐Yes ☐No
If Yes:	
Name of district or service area:	
 Does the existing public water supply have capacity to serve the proposal? 	☐ Yes☐ No
Is the project site in the existing district?	☐ Yes☐ No
Is expansion of the district needed?	☐ Yes☐ No
Do existing lines serve the project site?	☐ Yes☐ No
iii. Will line extension within an existing district be necessary to supply the project? If Yes:	□Yes □No
Describe extensions or capacity expansions proposed to serve this project:	
Source(s) of supply for the district:	
iv. Is a new water supply district or service area proposed to be formed to serve the project site? If, Yes:	☐ Yes☐No
Applicant/sponsor for new district:	
Date application submitted or anticipated:	
Proposed source(s) of supply for new district:	
v. If a public water supply will not be used, describe plans to provide water supply for the project:	
vi. If water supply will be from wells (public or private), maximum pumping capacity: gallons/minute.	
d. Will the proposed action generate liquid wastes?	✓ Yes No
If Yes:	
i. Total anticipated liquid waste generation per day:	
ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all comp	onents and
approximate volumes or proportions of each): Proposed Action would include liquid waste associated with biofilm removal within the Catskill Aqueduct	
Proposed Action would include liquid waste associated with biblish removal within the Catskill Aqueduct	
iii. Will the proposed action use any existing public wastewater treatment facilities? If Yes:	☐ Yes Z No
Name of wastewater treatment plant to be used:	
Name of district:	
Does the existing wastewater treatment plant have capacity to serve the project?	□Yes□No
Is the project site in the existing district?	☐ Yes ☐No
Is expansion of the district needed?	☐ Yes ☐ No

	• Do existing sewer lines serve the project site?	□Yes □No
	• Will line extension within an existing district be necessary to serve the project?	□Yes□No
	If Yes:	
	Describe extensions or capacity expansions proposed to serve this project:	
iv.	. Will a new wastewater (sewage) treatment district be formed to serve the project site?	□Yes ☑ No
	If Yes: • Applicant/sponsor for new district:	
	The state of the s	
	 Date application submitted or anticipated: What is the receiving water for the wastewater discharge? 	
ν.	If public facilities will not be used, describe plans to provide wastewater treatment for the project, including spec	cifying proposed
	receiving water (name and classification if surface discharge, or describe subsurface disposal plans):	
	. Describe any plans or designs to capture, recycle or reuse liquid waste:	
No.		
	Will the second action died the second secon	
e.	Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point	□Yes ∠ No
	source (i.e. sheet flow) during construction or post construction?	
If	Yes:	
i.	. How much impervious surface will the project create in relation to total size of project parcel?	
	Square feet or acres (impervious surface) Square feet or acres (parcel size)	
;;	Square feet or acres (parcel size)	
ιι.	. Describe types of new point sources	
iii	Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent p	properties,
	groundwater, on-site surface water or off-site surface waters)?	
	If to surface waters, identify receiving water bodies or wetlands:	
	Will stormwater runoff flow to adjacent properties?	☐Yes☐ No
iv.	Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater?	□Yes□No
	Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel	 ✓Yes □No
	combustion, waste incineration, or other processes or operations?	
	Yes, identify:	
	i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)	
	The Proposed Action may include temporary mobile sources during construction.	
	i. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers) he Proposed Action may include temporary stationary sources during construction.	
ii	i. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)	
	None.	
g.	Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit,	□Yes Z No
_	or Federal Clean Air Act Title IV or Title V Permit?	
	Yes:	
i.	Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet	□Yes□No
ii	ambient air quality standards for all or some parts of the year) In addition to emissions as calculated in the application, the project will generate:	
ιι.	• Tons/year (short tons) of Carbon Dioxide (CO ₂)	
	• Tons/year (short tons) of Carbon Blokde (CC ₂) • Tons/year (short tons) of Nitrous Oxide (N ₂ O)	
	• Tons/year (short tons) of Perfluorocarbons (PFCs)	
	•Tons/year (short tons) of Sulfur Hexafluoride (SF ₆)	
	•Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)	
	• Tons/year (short tons) of Hazardous Air Pollutants (HAPs)	

landfills, composting facilities)? If Yes:	□Yes ☑ No
 i. Estimate methane generation in tons/year (metric): ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generative, flaring): 	erate heat or
i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):	_Yes .∕ INo
j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? If Yes:	∐Yes ☑ No
 i. When is the peak traffic expected (Check all that apply): Morning Evening Weekend Randomly between hours of to ii. For commercial activities only, projected number of semi-trailer truck trips/day: iii. Parking spaces: Existing Proposed Net increase/decrease iv. Does the proposed action include any shared use parking?	□Yes□No cess, describe:
vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles?	□Yes□No □Yes□No □Yes□No
k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? If Yes: i. Estimate annual electricity demand during operation of the proposed action:	□Yes ☑ No
ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/loc other):	al utility, or
iii. Will the proposed action require a new, or an upgrade to, an existing substation?	∏Yes ☐ No
1. Hours of operation. Answer all items which apply. ii. During Operations: i. During Construction: ii. During Operations: • Monday - Friday: varies • Saturday: varies • Sunday: varies • Sunday: varies	
 Sunday: varies Holidays: varies Sunday: varies Holidays: varies 	

 m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? If yes: i. Provide details including sources, time of day and duration: Varies: The Proposed Action may generate temporary short term noise during construction and repair activities. 	✓ Yes □No
ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? Describe:	☐ Yes ☑ No
n Will the proposed action have outdoor lighting? If yes: i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures: Varies: The Proposed Action may require temporary short term lighting during construction and repair activities.	Z Yes □No
ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? Describe:	☐ Yes ☑ No
o. Does the proposed action have the potential to produce odors for more than one hour per day? If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:	☐ Yes ☑ No
p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? If Yes: i. Product(s) to be stored Liquid aluminum sulfate may be stored in a day tank. ii. Volume(s) per unit time (e.g., month, year) iii. Generally describe proposed storage facilities: The Proposed Action includes the storage of liquid aluminum sulfate in a day tank at Pleasantville Treatment Facility	✓ Yes □No
q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? If Yes: i. Describe proposed treatment(s):	☐ Yes ☐No
 ii. Will the proposed action use Integrated Pest Management Practices? r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? If Yes: i. Describe any solid waste(s) to be generated during construction or operation of the facility: • Construction:	
Operation: iii. Proposed disposal methods/facilities for solid waste generated on-site: Construction:	
• Operation:	

s. Does the proposed action include construction or modi	fication of a solid waste mana	gement facility?	∐ Yes 🕢 No
If Yes:i. Type of management or handling of waste proposed other disposal activities):	for the site (e.g., recycling or	transfer station, composting	g, landfill, or
ii. Anticipated rate of disposal/processing:			
• Tons/month, if transfer or other non-o		or	
• Tons/hour, if combustion or thermal			
	years		
t. Will proposed action at the site involve the commercial waste?	generation, treatment, storage	e, or disposal of hazardous	✓ Yes □No
If Yes:	. 1 1 11 1	1 4 6 114	
 i. Name(s) of all hazardous wastes or constituents to be The Proposed Action includes the usage of additional alumin 			
The Froposed Action includes the dsage of additional admin	idili sullate and includes the usay	e of Chiofination Chemicals.	
ii. Generally describe processes or activities involving h	nazardous wastes or constituen	ts:	
The Proposed Action includes additional aluminum sulfate a	nd chlorination chemicals to be us	ed for water treatment.	
iii. Specify amount to be handled or generated Varies to			
iv. Describe any proposals for on-site minimization, rec	ycling or reuse of hazardous c	onstituents:	
v. Will any hazardous wastes be disposed at an existing	affaita hazardana waata faaili		Z Yes□No
If Yes: provide name and location of facility:	onsite nazardous waste facin	ty!	
Varies, as applicable			
If No: describe proposed management of any hazardous	wastes which will not be sent to	o a hazardous waste facilit	y:
E. Site and Setting of Proposed Action			
E.1. Land uses on and surrounding the project site			
a. Existing land uses.			
<i>i</i> . Check all uses that occur on, adjoining and near the	project site.		
☐ Urban ☐ Industrial ☐ Commercial ☑ Resid		(non-farm)	
Forest Agriculture Aquatic Other	(specify): Water s	upply system	
ii. If mix of uses, generally describe:Land Uses vary along the water supply system and within the	watershed for the Dropped Action		
Land Oses vary along the water supply system and within the	watershed for the Proposed Action	l	
b. Land uses and covertypes on the project site.			
	0	A A C I	C1
Land use or Covertype	Current	Acreage After Project Completion	Change (Acres +/-)
Roads, buildings, and other paved or impervious	Acreage	Project Completion	(Acres +/-)
surfaces	Varies	Varies	Minor
• Forested	Varies	Varies	Minor
Meadows, grasslands or brushlands (non-		vanos	WIIIIOI
agricultural, including abandoned agricultural)	Varies	Varies	Minor
Agricultural	Varies	Varies	Minor
(includes active orchards, field, greenhouse etc.)			
Surface water features (lakes pends strongs rivers etc.)	Varies	Varies	Minor
(lakes, ponds, streams, rivers, etc.)			
Wetlands (freshwater or tidal)	Varies	Varies	Minor
Non-vegetated (bare rock, earth or fill)	Varies	Varies	Minor
• Other			
Describe:			

c. Is the project site presently used by members of the community for public recreation? i. If Yes: explain: Use of watershed lands for various recreational uses. Proposed action will not affect this use	✓ Yes□No
d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? If Yes,	☐ Yes Z No
i. Identify Facilities:	
e. Does the project site contain an existing dam?	✓ Yes No
If Yes:	L 1 C S110
i. Dimensions of the dam and impoundment:	
 Dam height: Varies feet Dam length: Varies feet 	
• Surface area: Varies acres	
Volume impounded:	
ii. Dam's existing hazard classification: Varies	
iii. Provide date and summarize results of last inspection:	
valies	
f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility as	☐Yes Z No lity?
If Yes: i. Has the facility been formally closed?	□Yes□ No
If yes, cite sources/documentation:	
ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:	
iii. Describe any development constraints due to the prior solid waste activities:	
g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? If Yes:	□Yes Z No
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred	ed:
h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? If Yes:	☐Yes Z No
<i>i.</i> Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply:	□Yes□No
☐ Yes – Spills Incidents database Provide DEC ID number(s): ☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): ☐ Neither database Provide DEC ID number(s):	
ii. If site has been subject of RCRA corrective activities, describe control measures: Awaiting completion of Phase I ESA	
iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? If yes, provide DEC ID number(s):	□Yes□No
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):	

v. Is the project site subject to an institutional control limiting property uses?	☐ Yes Z No
 If yes, DEC site ID number: Describe the type of institutional control (e.g., deed restriction or easement): 	
Describe the type of institutional control (e.g., deed restriction or easement): Describe any use limitations:	
• Describe any engineering controls:	
 Will the project affect the institutional or engineering controls in place? 	□Yes□No
Explain:	
E.2. Natural Resources On or Near Project Site	
a. What is the average depth to bedrock on the project site? Varies	feet
b. Are there bedrock outcroppings on the project site?	✓ Yes N o
If Yes, what proportion of the site is comprised of bedrock outcroppings?	aries %
c. Predominant soil type(s) present on project site: Varies	
	
	%
d. What is the average depth to the water table on the project site? Average:Varies_ feet	
e. Drainage status of project site soils: Well Drained: N/A % of site	
Moderately Well Drained: N/A % of site	
Poorly Drained N/A % of site	
	N/A % of site
	N/A % of site N/A % of site
g. Are there any unique geologic features on the project site?	Yes ✓No
If Yes, describe:	I CSW_INO
h. Surface water features.	
i. Does any portion of the project site contain wetlands or other waterbodies (including stream)	ıms, rivers,
ponds or lakes)?	
ii. Do any wetlands or other waterbodies adjoin the project site?	✓ Yes No
If Yes to either <i>i</i> or <i>ii</i> , continue. If No, skip to E.2.i. <i>iii</i> . Are any of the wetlands or waterbodies within or adjoining the project site regulated by a	ny federal, ✓Yes □No
state or local agency?	iny rederar,
iv. For each identified regulated wetland and waterbody on the project site, provide the follo	•
	lassification Various
	lassification Various pproximate Size Various
v. Are any of the above water bodies listed in the most recent compilation of NYS water qua	lity-impaired ✓ Yes □No
waterbodies? If yes, name of impaired water body/bodies and basis for listing as impaired:	
Lower Hudson River Basin and Delaware River Basin	
i. Is the project site in a designated Floodway?	✓ Yes □No
j. Is the project site in the 100 year Floodplain?	✓ Yes □No
k. Is the project site in the 500 year Floodplain?	✓ Yes □No
1. Is the project site located over, or immediately adjoining, a primary, principal or sole sourc If Yes:	e aquifer?
i. Name of aquifer: Woodburne Primary Aquifer near Rondout Reservoir.	

m. Identify the predominant wildlife species that occupy or use the p	project site:	
Various		
n. Does the project site contain a designated significant natural comm. If Yes: i. Describe the habitat/community (composition, function, and basis)	•	□Yes Z No
 ii. Source(s) of description or evaluation: iii. Extent of community/habitat: Currently: Following completion of project as proposed: Gain or loss (indicate + or -): o. Does project site contain any species of plant or animal that is listed endangered or threatened, or does it contain any areas identified as 	acres acres acres acres ded by the federal government or NYS as shabitat for an endangered or threatened spec	☑ Yes□No cies?
Various, awaiting NYS Natural Heritage Program and US Fish and Wildlife Sen released to the public without permission from the NYS Natural Heritage Program. p. Does the project site contain any species of plant or animal that is special concern?	am.	Sitive and may not be ✓Yes No
Various, awaiting NYS Natural Heritage Program responses. q. Is the project site or adjoining area currently used for hunting, trap If yes, give a brief description of how the proposed action may affect Use of lands for recreational hunting, trapping and fishing by permit. Proposed	t that use:	Z Yes □No
E.3. Designated Public Resources On or Near Project Site		
a. Is the project site, or any portion of it, located in a designated agriculture and Markets Law, Article 25-AA, Section 303 and 30 If Yes, provide county plus district name/number: Various		Z Yes N o
b. Are agricultural lands consisting of highly productive soils presen <i>i</i> . If Yes: acreage(s) on project site? <i>ii</i> . Source(s) of soil rating(s):		∐Yes √ No
 c. Does the project site contain all or part of, or is it substantially co Natural Landmark? If Yes: i. Nature of the natural landmark: ☐ Biological Community ii. Provide brief description of landmark, including values behind of the provide brief description of landmark. 	Geological Feature	∐Yes []No
d. Is the project site located in or does it adjoin a state listed Critical If Yes: i. CEA name: Various ii. Basis for designation: Protection of Water Supply Resources iii. Designating agency and date: Various	Environmental Area?	Z Yes□No

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district	✓ Yes No
which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? If Yes:	105
i. Nature of historic/archaeological resource: ☐Archaeological Site ii. Name: Various ☐ Historic Building or District	
iii. Brief description of attributes on which listing is based: Awaiting SHPO responses.	
f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	Z Yes □No
g. Have additional archaeological or historic site(s) or resources been identified on the project site? If Yes: i. Describe possible resource(s): ii. Basis for identification: Awaiting SHPO responses.	☐ Yes ☑ No
h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? If Yes:	Z Yes □No
 i. Identify resource: Various - Note: Proposed Action is not anticipated to be visible from any scenic or aesthetic resources. ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or etc.): Various 	r scenic byway,
iii. Distance between project and resource: Varies miles.	
 i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? If Yes: i. Identify the name of the river and its designation: Upper Delaware River, Scenic and Recreational 	☑ Yes No
ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666?	□Yes□No
F. Additional Information Attach any additional information which may be needed to clarify your project. If you have identified any adverse impacts which could be associated with your proposal, please describe those in measures which you propose to avoid or minimize them.	npacts plus any
G. Verification I certify that the information provided is true to the best of my knowledge. Applicant/Sponsor Name Sean McAndrew Date Title WFF Program Director	

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

	Agency Use Only [If applicable]
Project:	
Date:	

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

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

Tips for completing Part 2:

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

Answer the question in a reasonable manner considering the scale and context of the project.			
1. Impact on Land Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) If "Yes", answer questions a - j. If "No", move on to Section 2.	□NC		YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	Ø	
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	Ø	
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a		
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a		
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	Ø	
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q		
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	Bli		
h. Other impacts:			

2. Impact on Geological Features The proposed action may result in the modification or destruction of, or inhib access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) If "Yes", answer questions a - c. If "No", move on to Section 3.	it ☑ NO) 🗆	YES
2, 120 , and not questions at 2, 110 , more entre 2201101101	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached:	E2g		
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature:	E3c		
c. Other impacts:			
3. Impacts on Surface Water The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) If "Yes", answer questions a - l. If "No", move on to Section 4.	□nc) 🗸	YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	Ø	
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	Ø	
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	Ø	
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h		Ø
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h		Ø
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	Ø	
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	Ø	
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	Ø	
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	Ø	
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	Ø	
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	Ø	

1. (Other impacts:			
4.	Impact on groundwater The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquife (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) If "Yes", answer questions a - h. If "No", move on to Section 5.	√ NO er.		YES
		Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
	The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c		
	Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source:	D2c		
	The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c		
d.	The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l		
	The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h		
	The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l		
	The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c		
h.	Other impacts:			
5.	Impact on Flooding The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) If "Yes", answer questions a - g. If "No", move on to Section 6.	□NO		YES
		Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a.	The proposed action may result in development in a designated floodway.	E2i	Ø	
b.	The proposed action may result in development within a 100 year floodplain.	E2j	Ø	
c.	The proposed action may result in development within a 500 year floodplain.	E2k	Ø	
	The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	Ø	
e. '	The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k		Ø
	f there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	Ø	

g.	Other impacts:			
6.	Impacts on Air The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D,2,h, D.2.g) If "Yes", answer questions a - f. If "No", move on to Section 7.	✓NO		YES
		Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a.	If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels: i. More than 1000 tons/year of carbon dioxide (CO ₂) ii. More than 3.5 tons/year of nitrous oxide (N ₂ O) iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) iv. More than .045 tons/year of sulfur hexafluoride (SF ₆) v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions vi. 43 tons/year or more of methane	D2g D2g D2g D2g D2g D2g		
b.	The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g		
c.	The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g		
d.	The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g		
e.	The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s		
f.	Other impacts:			
7.	Impact on Plants and Animals The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. r If "Yes", answer questions a - j. If "No", move on to Section 8.	mq.)	□NO	✓ YES
		Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a.	The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	Ø	
b.	The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	Ø	
c.	The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	Ø	
d.	The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	Ø	

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	Ø	
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source:	E2n	Ø	
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	Ø	
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source:	E1b	Ø	
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	Ø	
j. Other impacts:			
8. Impact on Agricultural Resources The proposed action may impact agricultural resources. (See Part 1. E.3.a. a If "Yes", answer questions a - h. If "No", move on to Section 9.	and b.)	✓NO	YES
	Relevant	No, or	Moderate
	Part I Question(s)	small impact may occur	to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	Part I	small impact	to large impact may
	Part I Question(s)	small impact may occur	to large impact may occur
NYS Land Classification System. b. The proposed action may sever, cross or otherwise limit access to agricultural land	Part I Question(s)	small impact may occur	to large impact may occur
NYS Land Classification System. b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc). c. The proposed action may result in the excavation or compaction of the soil profile of	Part I Question(s) E2c, E3b E1a, Elb	small impact may occur	to large impact may occur
 NYS Land Classification System. b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc). c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land. d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 	Part I Question(s) E2c, E3b E1a, Elb E3b	small impact may occur	to large impact may occur
 NYS Land Classification System. b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc). c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land. d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District. e. The proposed action may disrupt or prevent installation of an agricultural land 	Part I Question(s) E2c, E3b E1a, Elb E3b E1b, E3a	small impact may occur	to large impact may occur
 b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc). c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land. d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District. e. The proposed action may disrupt or prevent installation of an agricultural land management system. f. The proposed action may result, directly or indirectly, in increased development 	Part I Question(s) E2c, E3b E1a, E1b E3b E1b, E3a E1 a, E1b C2c, C3,	small impact may occur	to large impact may occur
 b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc). c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land. d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District. e. The proposed action may disrupt or prevent installation of an agricultural land management system. f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland. g. The proposed project is not consistent with the adopted municipal Farmland 	Part I Question(s) E2c, E3b E1a, E1b E3b E1b, E3a E1 a, E1b C2c, C3, D2c, D2d	small impact may occur	to large impact may occur

9. Impact on Aesthetic Resources The land use of the proposed action are obviously different from, or are in	V NO) [YES
sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) If "Yes", answer questions a - g. If "No", go to Section 10.		_	I Lo
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h		
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b		
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h		
d. The situation or activity in which viewers are engaged while viewing the proposed	E3h		
action is:	E2q,		
i. Routine travel by residents, including travel to and from workii. Recreational or tourism based activities	E1c		
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h		
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½-3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g		
g. Other impacts:			
10. Impact on Historic and Archeological Resources The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) If "Yes", answer questions a - e. If "No", go to Section 11.) [YES
-,, man , quantum man et e,	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	Ø	
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f		
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory.	E3g	Ø	

d. Other impacts:			
e. If any of the above (a-d) are answered "Yes", continue with the following questions to help support conclusions in Part 3:			
 The proposed action may result in the destruction or alteration of all or part of the site or property. 	E3e, E3g, E3f	Ø	
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	Ø	
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	Ø	
11. Impact on Open Space and Recreation The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. (See Part 1. C.2.c, E.1.c., E.2.q.) If "Yes", answer questions a - e. If "No", go to Section 12.) <u>/</u>	YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	Ø	
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q		Z
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	Ø	
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	Ø	
e. Other impacts:			
12. Impact on Critical Environmental Areas The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d) If "Yes", answer questions a - c. If "No", go to Section 13.	□ NO) [YES
If Tes, unswer questions a - c. If No, go to section 15.	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	Ø	
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	Ø	
c. Other impacts:			

13. Impact on Transportation The proposed action may result in a change to existing transportation systems (See Part 1. D.2.j) If "Yes", answer questions a - g. If "No", go to Section 14.	s. 🔽 No	o 🗌	YES
If Tes, unswer questions a - g. If No., go to Section 14.	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j		
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j		
c. The proposed action will degrade existing transit access.	D2j		
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j		
e. The proposed action may alter the present pattern of movement of people or goods.	D2j		
f. Other impacts:			
14. Impact on Energy The proposed action may cause an increase in the use of any form of energy. (See Part 1. D.2.k) If "Yes", answer questions a - e. If "No", go to Section 15.		O 🔽	YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	Ø	
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	Ø	
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	Z	
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	Ø	
e. Other Impacts:			
15. Impact on Noise, Odor, and Light The proposed action may result in an increase in noise, odors, or outdoor ligh (See Part 1. D.2.m., n., and o.) If "Ves" appropriate the first of the "No" go to Section 16	ting. NC) /	YES
If "Yes", answer questions a - f. If "No", go to Section 16.	Relevant	No, or	Moderate
	Part I Question(s)	small impact may occur	to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m		Ø
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	Ø	
c. The proposed action may result in routine odors for more than one hour per day.	D2o	V	

d. The proposed action may result in light shining onto adjoining properties.	D2n		Ø
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.		Ø	
f. Other impacts:			
	•	•	•
16. Impact on Human Health The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. at If "Yes", answer questions a - m. If "No", go to Section 17.	√Nond h.)	0 🗌	YES
	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d		
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h		
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h		
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	Elg, Elh		
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h		
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t		
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f		
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f		
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s		
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h		
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g		
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r		
m. Other impacts:			

17. Consistency with Community Plans The proposed action is not consistent with adopted land use plans.	✓NO		YES
(See Part 1. C.1, C.2. and C.3.) If "Yes", answer questions a - h. If "No", go to Section 18.			
zy 100 y mineric quiencia ii ii zy 110 y go io 200101120.	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b		
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2		
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3		
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2		
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb		
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j		
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a		
h. Other:			
			<u> </u>
18. Consistency with Community Character The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) If "Yes", answer questions a - g. If "No", proceed to Part 3.	✓NO		/ES
ij ies , answer questions a g. ij ivo , proceed to l'art 3.	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g		
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4		
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a		
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3		
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3		
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h		
g. Other impacts:			

100	Agency Use Only [IfApplicable]
Project :	
Date:	

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

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

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

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact
 occurring, number of people affected by the impact and any additional environmental consequences if the impact were to
 occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where
 there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse
 environmental impact.

 For Condition no significant 	reason(s) why the impact	s identify the specific			l impact he proposed action so that		
An Environmental Impa	act Statement will be prepare	d.					
			,				
Determination of Significance - Type 1 and Unlisted Actions							
SEQR Status:	✓ Type 1	Unlisted			4).		
Identify portions of E	AF completed for this Pro	oject: 🔽 Part 1	✓ Part 2	✓ Part 3			

Upon review of the information recorded on this EAF, as noted, plus this additional support information An Environmental Impact Statement will be prepared.							
and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the NYCDEP Bureau of Environmental Planning and Analysis as lead agency that:							
A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.							
B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:							
There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).							
C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.							
Name of Action: Water for the Future: Upstate Water Supply Resiliency							
Name of Lead Agency: NYCDEP Bureau of Environmental Planning and Analysis							
Name of Responsible Officer in Lead Agency: Mark N. Page, Jr.							
Title of Responsible Officer: Managing Director							
Signature of Responsible Officer in Lead Agency:	Date:	10/22/2014					
Signature of Preparer (if different from Responsible Officer)	Date:	10/22/2014					
For Further Information:		10.00					
Contact Person: Jennifer Farmwald							
Address: 59-17 Junction Boulevard, 11th Floor							
Telephone Number:							
E-mail: WFFComments@dep.nyc.gov							
For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:							
Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., To Other involved agencies (if any) Applicant (if any) Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html	own / City /	Village of)					