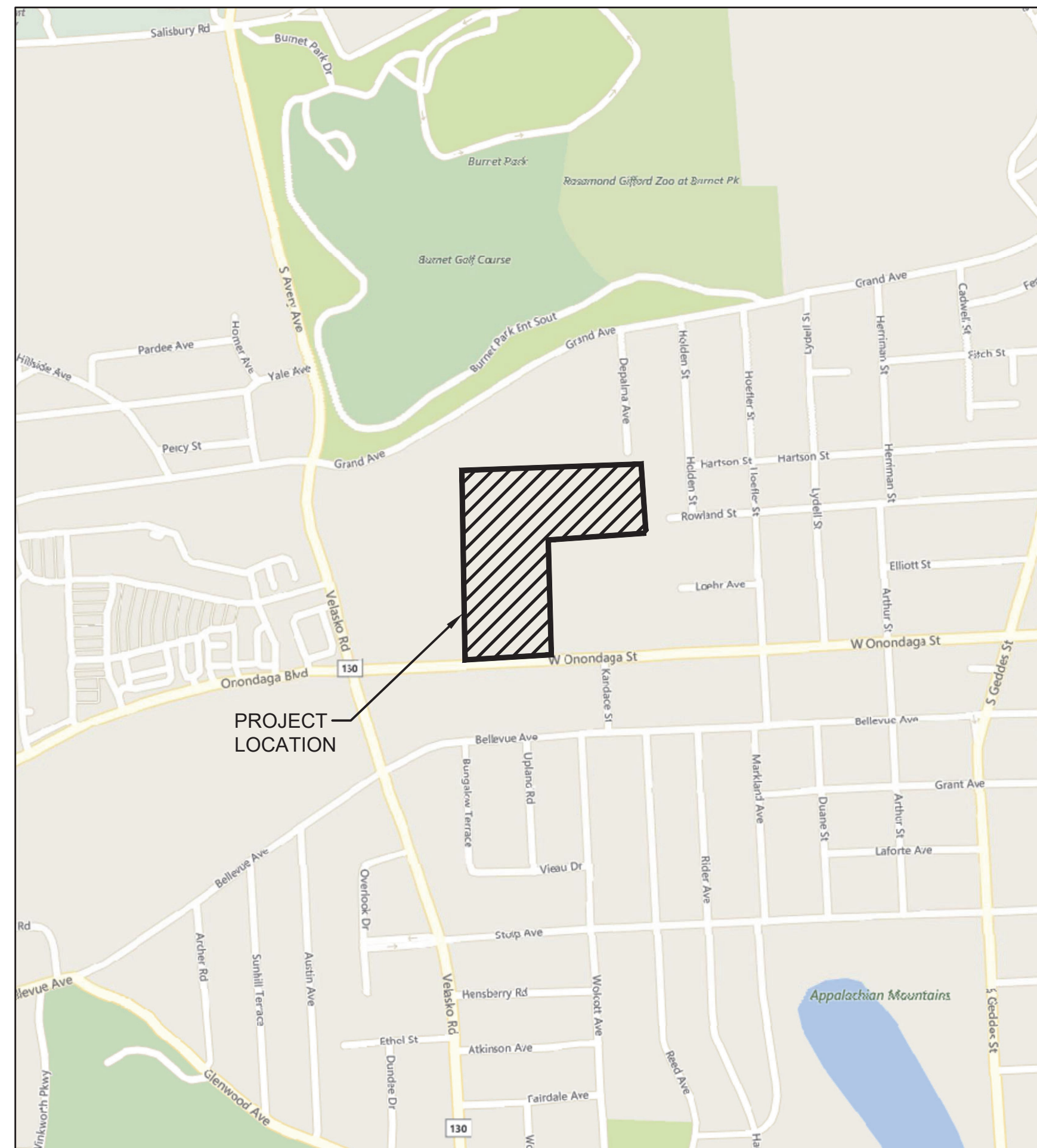


CONTRACT DRAWINGS

HARBOR BROOK TREATMENT WETLANDS CSO STORAGE



SITE LOCATION PLAN
NOT TO SCALE



CONTRACT NO. 1 - GENERAL

OCDWEP PROJECT NO. 587642-001
BID REFERENCE NO. ONGOV-099-20

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION SYRACUSE, NEW YORK

MAY 2020

RAMBOLL

O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY
333 WEST WASHINGTON STREET
SYRACUSE, NEW YORK 13202



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C-104	EROSION & SEDIMENT CONTROL PLAN
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C-503	EROSION & SEDIMENT CONTROL DETAILS
S-001	GENERAL NOTES, ABBREVIATIONS & SYMBOLS
S-101	FOUNDATION PLANS & SECTIONS
S-101A	OVERFLOW STRUCTURE FOUNDATION PLAN & SECTION
S-102	GRIT CHAMBER PLAN
S-301	GRIT CHAMBER SECTIONS
S-501	MISCELLANEOUS DETAILS
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FILE AND STRUCTURE AS-BUILT SURVEY DRAWINGS (BY CONTRACTOR)

RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.






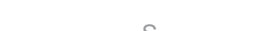




RAMBOLL

By: 
Date: 10/29/2021

SURVEY NOTES:

- DESIGN IS BASED OFF AN AS-BUILT SURVEY PREPARED BY IANUZI & ROMANS LAND SURVEYING, P.C. DATED DECEMBER 5, 2013, LAST REVISED DECEMBER 22, 2014, PROVIDED BY ONONDAGA COUNTY.
- ELEVATIONS ARE REFERRED TO NAVD 88 USGS DATUM.

LEGEND

-  EXISTING TREE OR SHRUB
-  EXISTING CONTOUR
-  EXISTING SIGN
-  EXISTING FLOW DIVERSION STRUCTURE
-  EXISTING SANITARY MANHOLE
-  EXISTING SANITARY SEWER
-  EXISTING CHAIN LINK FENCE
-  PROPOSED SOLID HDPE DRAIN PIPE
-  WETLANDS
-  RIP-RAP

ABBREVIATIONS

- CB CATCH BASIN
- CIP CAST IRON PIPE
- COMM COMMUNICATION
- CONC CONCRETE
- OPP CORRUGATED HIGH DENSITY POLYETHYLENE PIPE
- DA DRAINAGE AREA
- DIA DIAMETER
- DWG DRAWING
- EL ELEVATION
- ELEC ELECTRIC
- EXIST. EXISTING
- FDS FLOW DIVERSION STRUCTURE
- FT FOOT, FEET
- FH FIRE HYDRANT
- G NATURAL GAS
- HBIS HARBOR BROOK INTERCEPTING SEWER
- HDPE HIGH-DENSITY POLYETHYLENE
- HORIZ HORIZONTAL
- INVT INVERT
- LF LINEAR FOOT, LINEAR FEET
- MAX MAXIMUM
- MH MANHOLE
- MIN MINIMUM
- MON CITY OF SYRACUSE MONUMENT
- No. NUMBER
- NTS NOT TO SCALE
- NYS/DOOT NEW YORK STATE DEPARTMENT OF TRANSPORTATION
- OHE OVERHEAD ELECTRIC
- OHT OVERHEAD TELEPHONE
- O/C ON CENTER
- PC POINT OF CURVATURE
- PERF PERFORATED
- PT POINT OF TANGENCY
- PVC POLYVINYL CHLORIDE
- ROW RIGHT-OF-WAY
- ROP REINFORCED CONCRETE PIPE
- ROC RUN-OF-CRUSHER
- SAN SANITARY
- SS STAINLESS STEEL
- ST STORM
- TOC TOP OF CURB, OR TOP OF CASTING
- TYP TYPICAL
- UNK UNKNOWN
- UG UNDERGROUND
- VCP VITRIFIED CLAY PIPE
- VERT VERTICAL
- W POTABLE WATER
- WSE WATER SURFACE ELEVATION

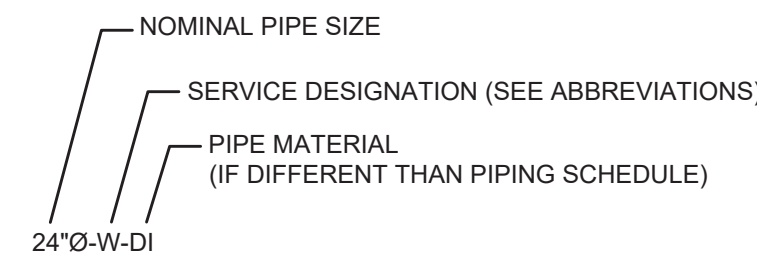
GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE CODES AND GOVERNING AUTHORITIES AND SHALL BE PERFORMED TO THE HIGHEST STANDARDS OF PRACTICE FOR EACH.
- SECURE ALL PERMITS AND PROVIDE ALL BONDS REQUIRED FOR THIS WORK INCLUDING, BUT NOT LIMITED TO, UTILITY CONNECTIONS, GRADING, DRAINAGE AND ROAD REPAIRS AND IMPROVEMENTS.
- FIELD VERIFY ALL DIMENSIONS, GRADES, AND LOCATIONS PRIOR TO PERFORMING WORK. ALL FIELD VERIFIED DIMENSIONS SHALL HAVE PREFERENCE OVER SCALED DIMENSIONS.
- PLANS SHOW APPROXIMATE LOCATIONS OF KNOWN UTILITIES ONLY. VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTACT DIG SAFELY, AT 1-800-962-7962, 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- REFRAIN FROM USE OF HEAVY CONSTRUCTION EQUIPMENT ON EXISTING PAVEMENTS TO REMAIN. ALL DAMAGE TO EXISTING PAVEMENT CAUSED BY THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
- MAINTAIN VEHICLE AND PEDESTRIAN TRAFFIC CONTROL DURING CONSTRUCTION.
- FULL CONVEYANCE CAPACITY OF THE HARBOR BROOK INTERCEPTING SEWER SHALL BE MAINTAINED THROUGHOUT THE PROJECT. SUBMIT A BYPASS PUMPING PLAN IN ACCORDANCE WITH TECHNICAL SPECIFICATION 33 29 60 WASTEWATER BYPASS PUMPING.
- SUBMIT SUPPORT OF EXCAVATION (SHEETING & BRACING) DESIGNS AND WELL POINT DEWATERING METHODS, WHERE REQUIRED, PER TECHNICAL SPECIFICATION 31 01 01 EARTHWORK.
- PROVIDE TEMPORARY FENCING AS NECESSARY TO MAINTAIN SAFETY AND SECURITY AT ALL TIMES. SEE THE GENERAL SPECIFICATIONS SECTION S-041.
- SECURE PORTIONS OF THE SITE THAT ARE UNDER CONSTRUCTION AS NECESSARY TO PROTECT THE PUBLIC AND TO PROTECT THE WORK IN PROGRESS. OPEN EXCAVATIONS SHALL BE PROPERLY PROTECTED AT ALL HOURS.
- UNLESS SHOWN, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE RESTORED WITH GRASS AS SPECIFIED.
- CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE CAUSED BY CONSTRUCTION TO EXISTING UTILITIES AND FACILITIES WHICH ARE NOT INCLUDED AS PART OF THE INTENDED WORK. THE CONTRACTOR SHALL REPAIR, RESTORE AND/OR REPLACE ALL DAMAGE TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- MAINTAIN ALL SYSTEM OPERATIONS DURING CONSTRUCTION AS REQUIRED BY OWNER.
- AT PROJECT COMPLETION, RECORD DRAWINGS VERIFYING ALL STRUCTURE ELEVATIONS SHALL BE COMPLETED BY A NYS LICENSED SURVEYOR.

WETLAND AND STREAMBANK NOTES:

- RESTORE DISTURBED AREAS IN-KIND VIA REPLACEMENT OF EXISTING TOPSOIL AND INSTALLATION OF WETLAND SEED.
- SEE TECHNICAL SPECIFICATION 32 72 00 WETLAND RESTORATION FOR SEEDING SPECIFICATIONS.
- PERFORM IMPROVEMENT AND RESTORATION WITHIN WETLANDS AND WATERCOURSES IN ACCORDANCE WITH SECTIONS 401 AND 404 OF THE CLEAN WATER ACT, 6 NYCRR PART 608, AND OTHER PERMIT CONDITIONS OF THE USACE AND NYSDEC.
- PERFORM ALL CONSTRUCTION OPERATIONS AS REQUIRED TO LIMIT THE MIGRATION OF SILT AND SEDIMENT DOWNSTREAM OF THE CONSTRUCTION ZONE.
- DO NOT STORE CHEMICALS, FUELS OR LUBRICATING OILS WITHIN 100 FEET OF WETLAND. EQUIPMENT SHALL NOT BE REFUELED WITHIN 100 FEET OF WETLAND.
- DO NOT WASH EQUIPMENT AND/OR MACHINERY IN THE WETLAND NOR PERMIT WATER FROM SUCH ACTIVITIES TO ENTER THE WETLAND. EQUIPMENT CONTACTING INVASIVE SPECIES SHALL BE CLEANED PRIOR TO LEAVING THE SITE.
- THE CONTRACTOR'S STAGING AREA SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM THE STREAM BANK.
- RESTORE STREAM BED AS SOON AS PRACTICABLE AFTER CONSTRUCTION IS COMPLETE. STABILIZE STREAM SECTIONS (BED AND BANK) UPON PROJECT COMPLETION.

TYPICAL PIPING IDENTIFICATION



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IN CHARGE OF	J. OLIVO				
DESIGNED BY	J. BOHNERT				
CHECKED BY	C. FIORELLO	2	10/29/2021	RECORD DRAWING	SDD
		1	05/22/2020	ISSUED FOR BID	JLO
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW	CCF
DRAWN BY	S. JOHNSON	NO.	DATE	REVISION	INT.

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A RAMBOLL COMPANY
333 WEST WASHINGTON ST. SYRACUSE, NY 13202



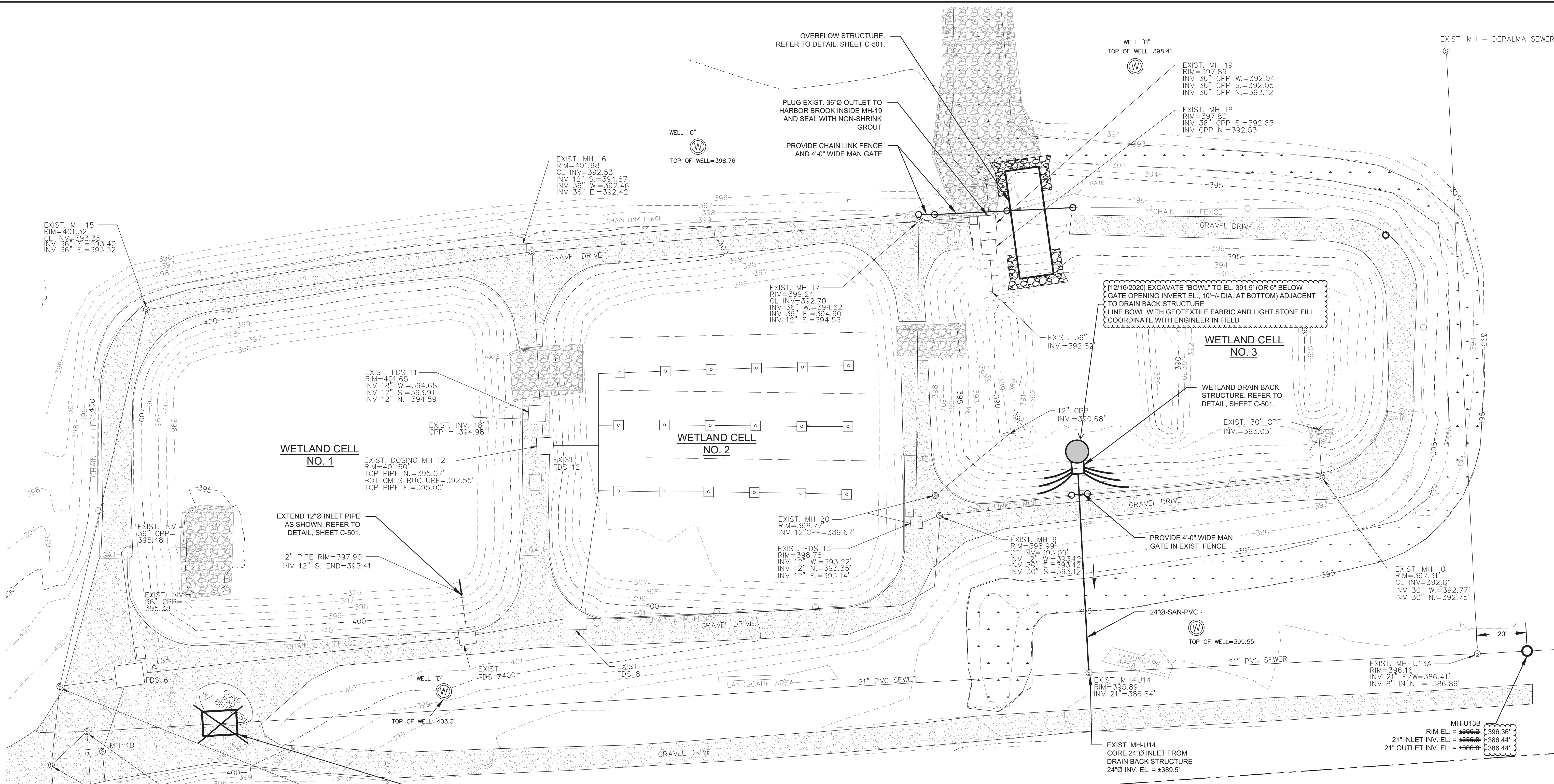
ONONDAGA COUNTY DEPARTMENT OF
WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

CIVIL
GENERAL NOTES & LEGEND

RECORD DRAWINGS
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

By: 
Date: 10/29/2021

FILE NO.	115.67266	C-001
DATE	NOV. 20, 2019	



(12/16/2020) EXCAVATE "BOWL" TO EL. 391.5' (OR 6" BELOW GATE OPENING INVERT EL., 10'+/- DIA. AT BOTTOM) ADJACENT TO DRAIN BACK STRUCTURE. LINE BOWL WITH GEOTEXTILE FABRIC AND LIGHT STONE FILL. COORDINATE WITH ENGINEER IN FIELD.

[ADDENDUM NO. 1, 7/2/2020]

- On Sheet C-101, ADD the following Drawing Note:
 "1. MAINTAIN, SUPPORT AND PROTECT EXISTING 21" PVC SEWER PIPE DURING INSTALLATION OF PILES AND CONCRETE PILE CAP FOUNDATION. CUT AND REMOVE EXISTING PIPE AS REQUIRED TO INSTALL MH-U13B. PROVIDE NEW PVC PIPE AS REQUIRED TO CONNECT EXISTING PIPING TO STRUCTURE. PROVIDE TEMPORARY BYPASS PUMPING AS SPECIFIED."

GRIT CHAMBER CENTER ON EXIST. SEWER PIPE. REFER TO STRUCTURAL DRAWINGS.
 GRIT CHAMBER ELIMINATED BY MODIFICATION NO. 1, 6/10/2021

RECORD DRAWINGS
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 RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



OVERALL PLAN
 SCALE: 1" = 20'



STRUCTURE COORDINATES		
STRUCTURE	NORTHING	EASTING
GRIT CHAMBER (CENTER ON EXISTING SEWER PIPE)		
NORTHWEST CORNER	1106256.9023	928916.1931
SOUTHEAST CORNER	1106245.8832	928932.8706
DRAINBACK STRUCTURE		
NORTHWEST CORNER	1106359.4027	927271.9209
SOUTHEAST CORNER	1106352.9464	927279.4253
OVERFLOW STRUCTURE		
NORTHWEST CORNER	1106477.4710	927245.8877
SOUTHEAST CORNER	1106434.7833	927265.8567

(COORDINATES REVISED PER RFI-07 RESPONSE, 11/4/2020)



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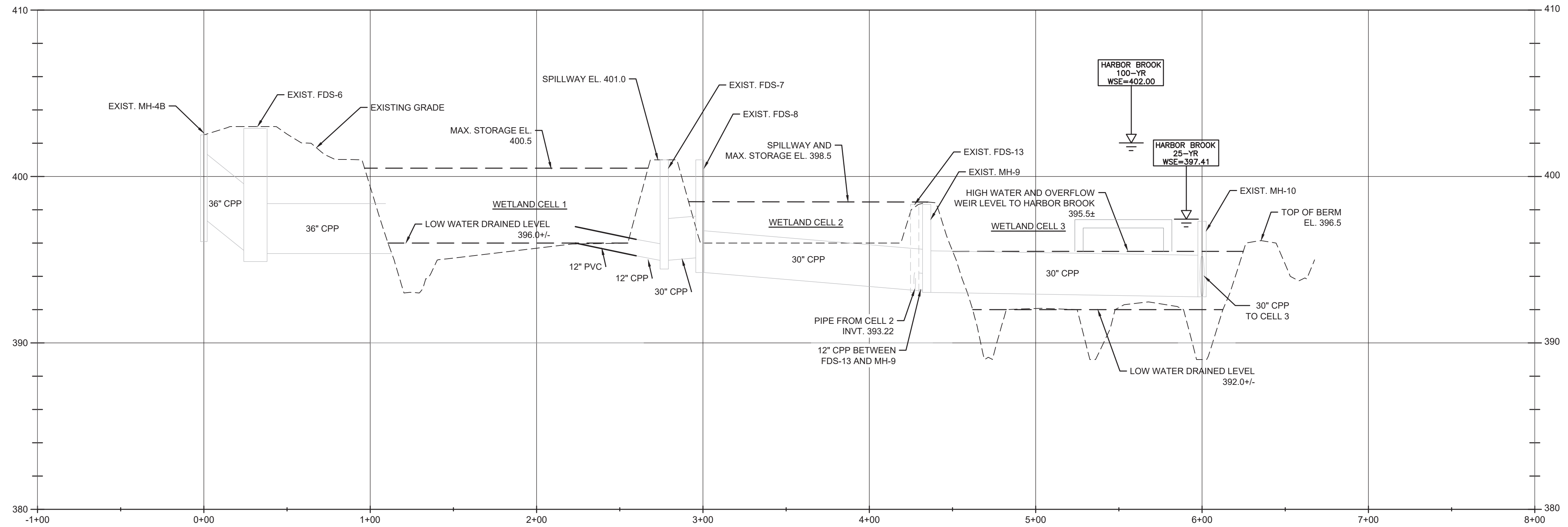
IN CHARGE OF	J. OLIVO			
DESIGNED BY	J. BOHNERT			
CHECKED BY	C. FIORELLO	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. JOHNSON	1	05/22/2020	ISSUED FOR BID
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW
		NO.	DATE	REVISION
				INT.

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 333 WEST WASHINGTON ST. SYRACUSE, NY 13202
 RAMBOLL

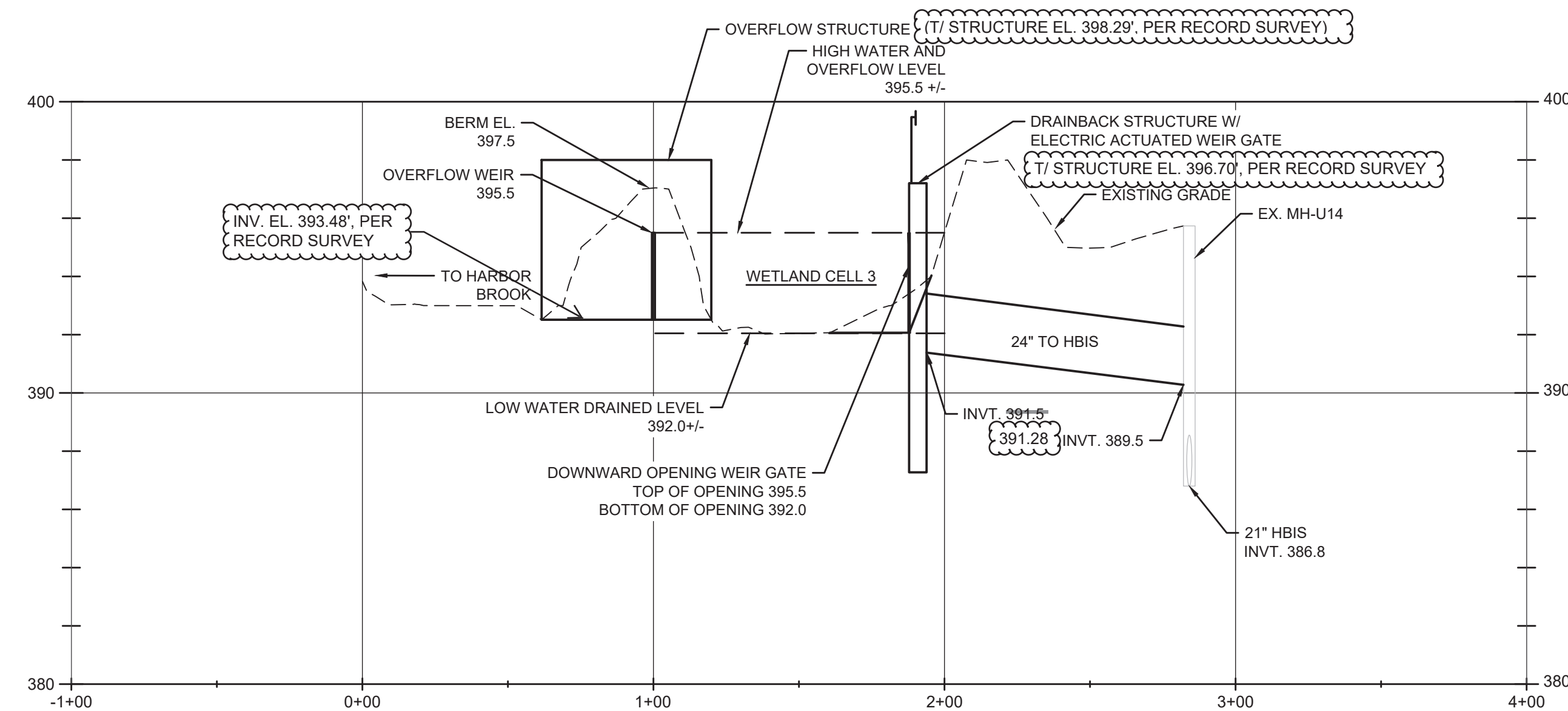
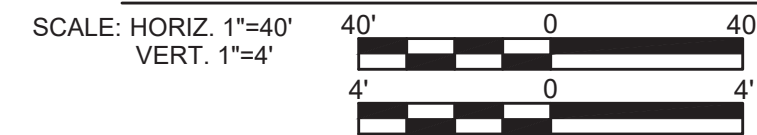
ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 HARBOR BROOK TREATMENT WETLANDS
 SYRACUSE, NEW YORK

CIVIL
 OVERALL PLAN

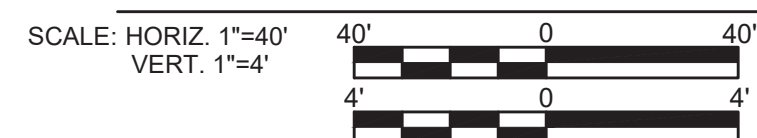
FILE NO.
 115.67266
 DATE
 NOV. 20, 2019
 C-101



WETLAND SYSTEM PROFILE



CELL 3 OVERFLOW & DRAINBACK PROFILE



NOTES:

- 1. FOR CLARITY, ONLY THOSE STRUCTURES RELEVANT TO USING THE WETLANDS AS STORAGE ARE SHOWN.

RECORD DRAWINGS

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RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: *[Signature]*
Date: 10/29/2021

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IN CHARGE OF	J. OLIVO			
DESIGNED BY	J. BOHNERT			
CHECKED BY	C. FIORELLO	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. JOHNSON	1	05/22/2020	ISSUE FOR BID
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW
		NO.	DATE	REVISION

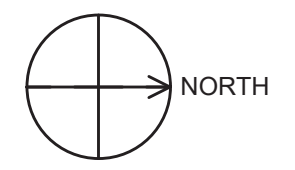
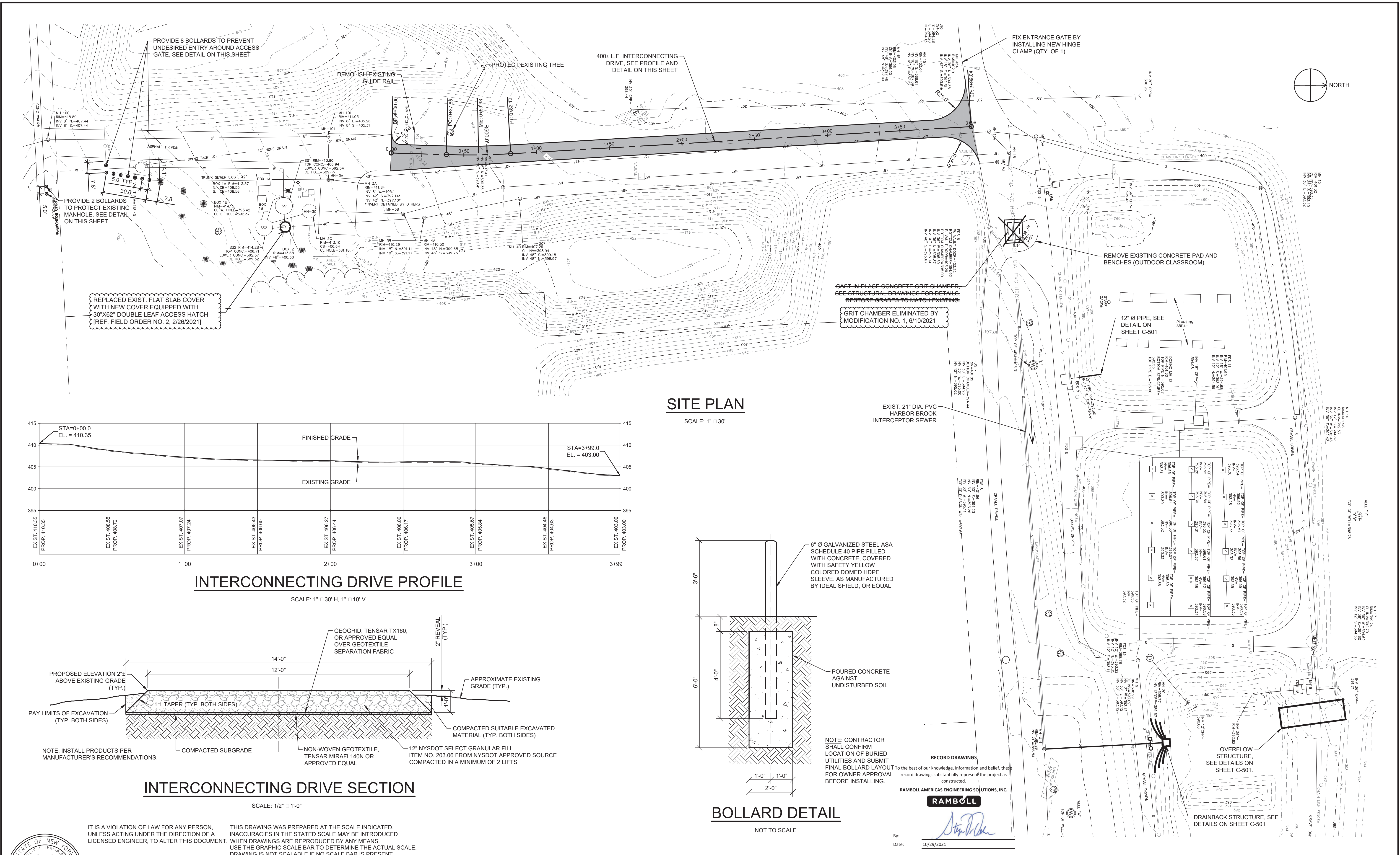
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HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

CIVIL
WETLAND CELL PROFILES

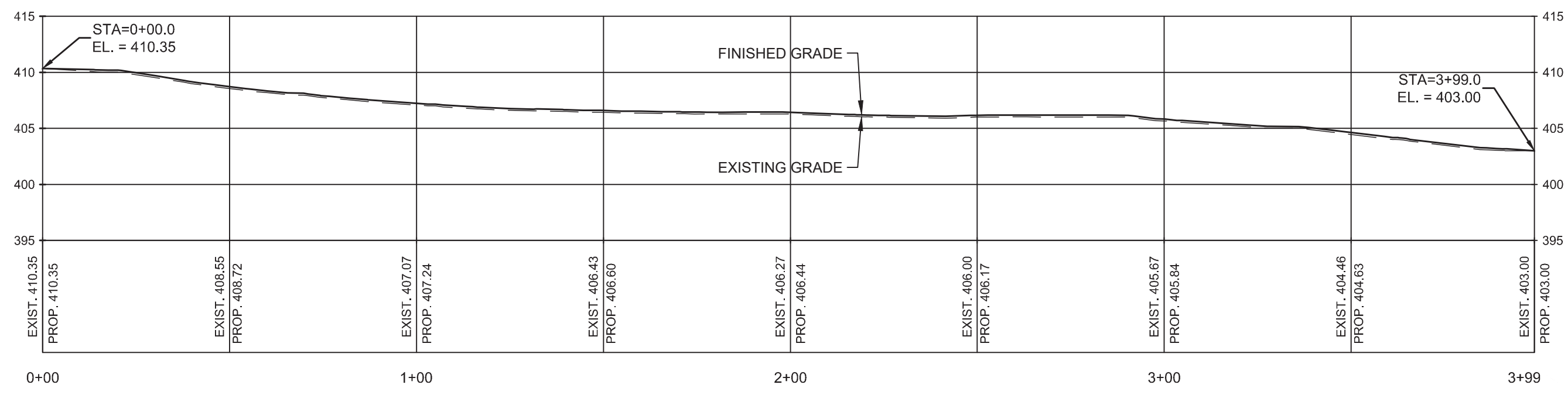
FILE NO.	115.67266
DATE	NOV. 20, 2019

C-102



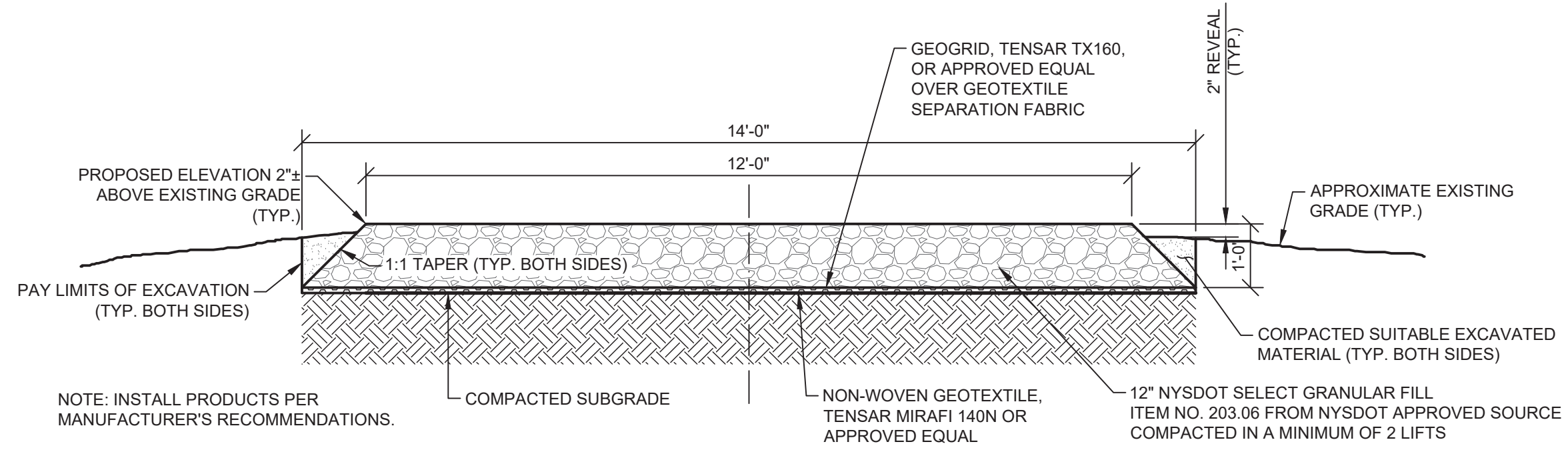
SITE PLAN

SCALE: 1" = 30'



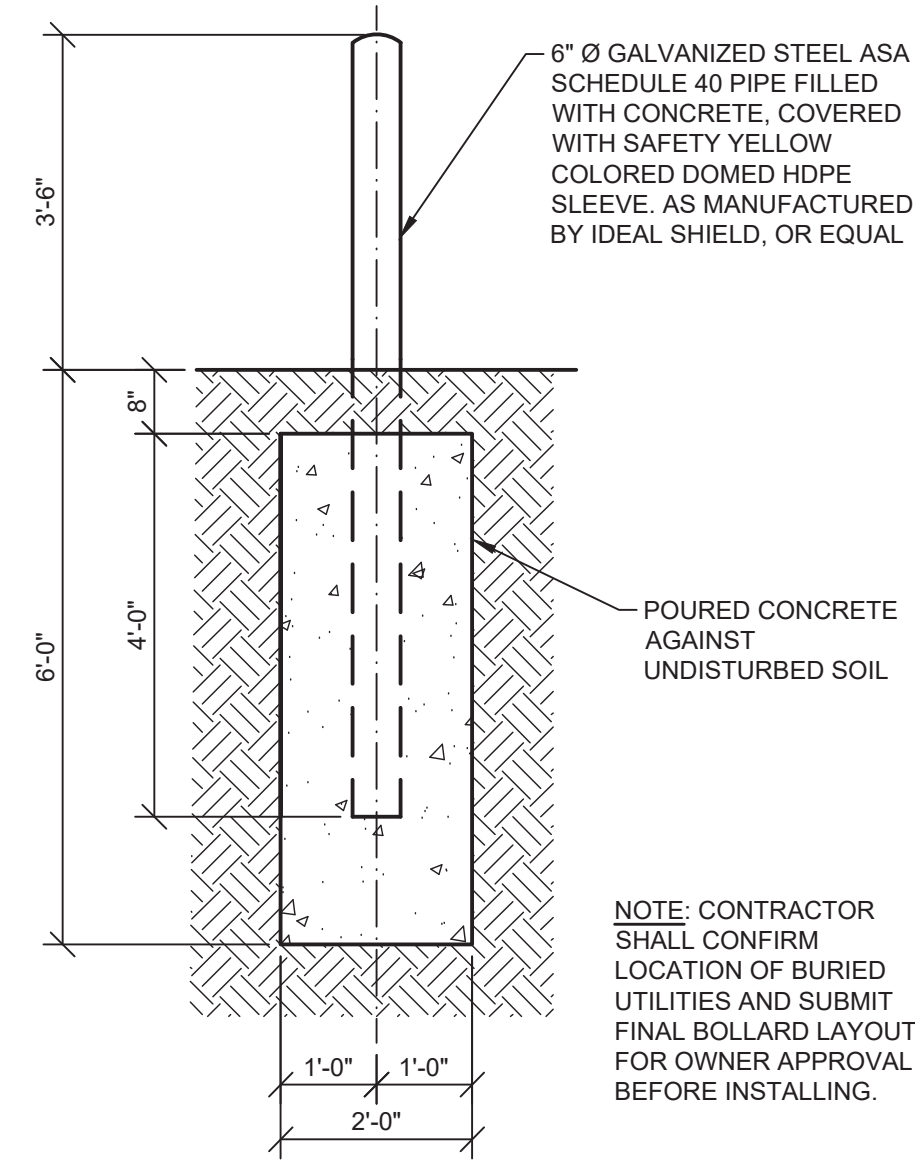
INTERCONNECTING DRIVE PROFILE

SCALE: 1" = 30' H, 1" = 10' V



INTERCONNECTING DRIVE SECTION

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

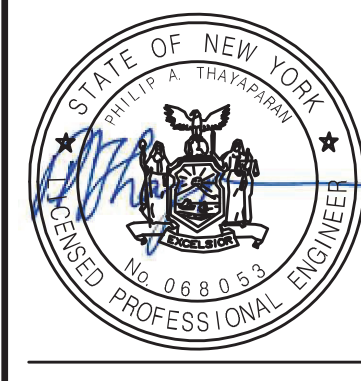


BOLLARD DETAIL

NOT TO SCALE

RECORD DRAWINGS
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 RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
RAMBOLL

By: *[Signature]*
 Date: 10/29/2021



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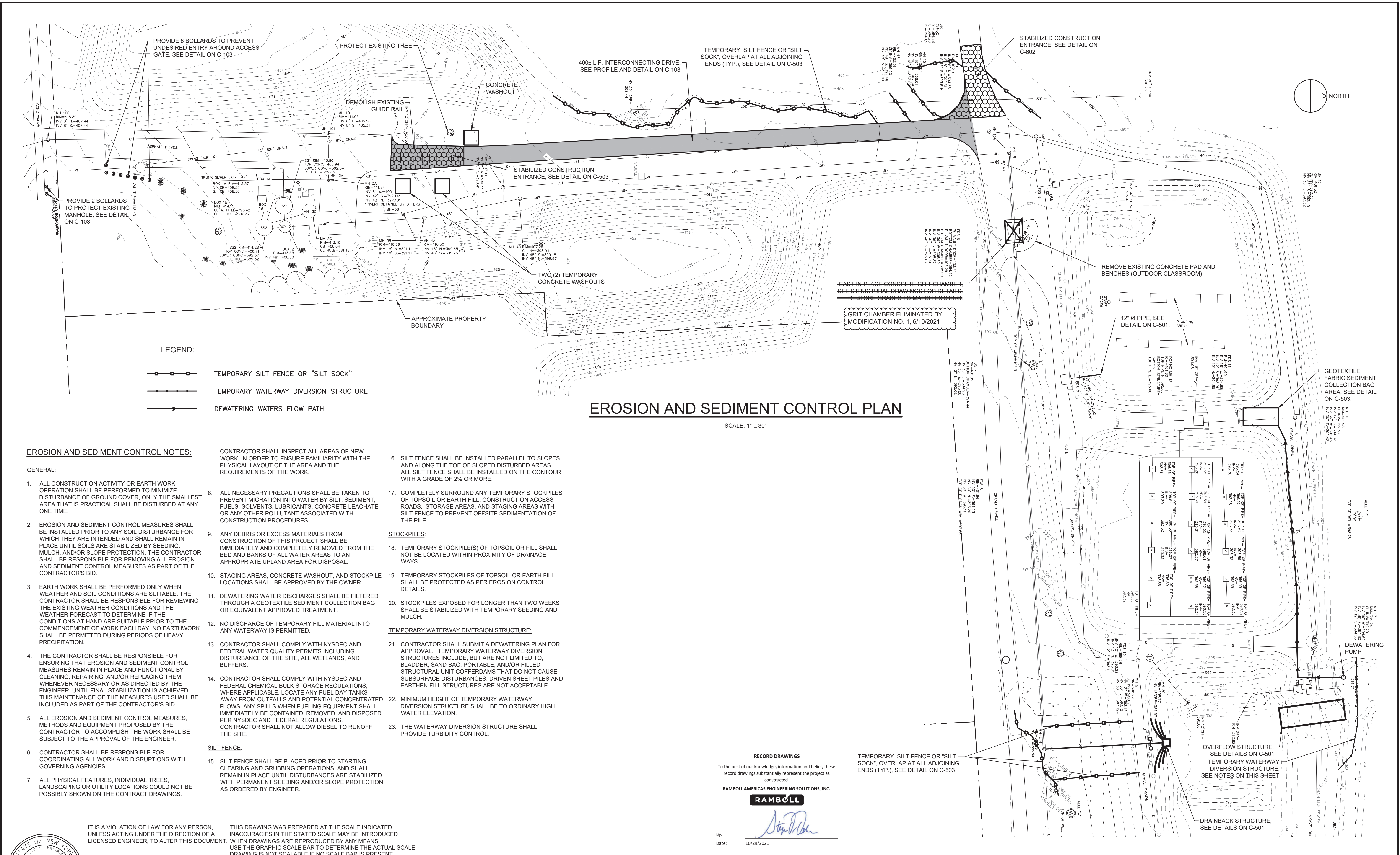
IN CHARGE OF	D. HUFFAKER			
DESIGNED BY	K. MIERZWA, S. WANG			
CHECKED BY	J. DEBARBIERI	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. WANG	1	05/22/2020	ISSUED FOR BID
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW
		NO.	DATE	REVISION
				INT.

PRUDENT ENGINEERING
 6390 F Rd. Syracuse, NY 13057
 Phone: (315) 748-7700
 Fax: (315) 748-7780

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 HARBOR BROOK TREATMENT WETLANDS
 SYRACUSE, NEW YORK

CIVIL
INTERCONNECTING DRIVE & GRIT CHAMBER SITE PLAN

FILE NO.	202.072.03	C-103
DATE	NOVEMBER 2019	



EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 30'

EROSION AND SEDIMENT CONTROL NOTES:

GENERAL:

- ALL CONSTRUCTION ACTIVITY OR EARTH WORK OPERATION SHALL BE PERFORMED TO MINIMIZE DISTURBANCE OF GROUND COVER. ONLY THE SMALLEST AREA THAT IS PRACTICAL SHALL BE DISTURBED AT ANY ONE TIME.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE FOR WHICH THEY ARE INTENDED AND SHALL REMAIN IN PLACE UNTIL SOILS ARE STABILIZED BY SEEDING, MULCH, AND/OR SLOPE PROTECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION AND SEDIMENT CONTROL MEASURES AS PART OF THE CONTRACTOR'S BID.
- EARTH WORK SHALL BE PERFORMED ONLY WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE EXISTING WEATHER CONDITIONS AND THE WEATHER FORECAST TO DETERMINE IF THE CONDITIONS AT HAND ARE SUITABLE PRIOR TO THE COMMENCEMENT OF WORK EACH DAY. NO EARTHWORK SHALL BE PERMITTED DURING PERIODS OF HEAVY PRECIPITATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EROSION AND SEDIMENT CONTROL MEASURES REMAIN IN PLACE AND FUNCTIONAL BY CLEANING, REPAIRING, AND/OR REPLACING THEM WHENEVER NECESSARY OR AS DIRECTED BY THE ENGINEER, UNTIL FINAL STABILIZATION IS ACHIEVED. THIS MAINTENANCE OF THE MEASURES USED SHALL BE INCLUDED AS PART OF THE CONTRACTOR'S BID.
- ALL EROSION AND SEDIMENT CONTROL MEASURES, METHODS AND EQUIPMENT PROPOSED BY THE CONTRACTOR TO ACCOMPLISH THE WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK AND DISRUPTIONS WITH GOVERNING AGENCIES.
- ALL PHYSICAL FEATURES, INDIVIDUAL TREES, LANDSCAPING OR UTILITY LOCATIONS COULD NOT BE POSSIBLY SHOWN ON THE CONTRACT DRAWINGS.

CONTRACTOR SHALL INSPECT ALL AREAS OF NEW WORK, IN ORDER TO ENSURE FAMILIARITY WITH THE PHYSICAL LAYOUT OF THE AREA AND THE REQUIREMENTS OF THE WORK.

- ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT MIGRATION INTO WATER BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS, CONCRETE LEACHATE OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION PROCEDURES.
- ANY DEBRIS OR EXCESS MATERIALS FROM CONSTRUCTION OF THIS PROJECT SHALL BE IMMEDIATELY AND COMPLETELY REMOVED FROM THE BED AND BANKS OF ALL WATER AREAS TO AN APPROPRIATE UPLAND AREA FOR DISPOSAL.
- STAGING AREAS, CONCRETE WASHOUT, AND STOCKPILE LOCATIONS SHALL BE APPROVED BY THE OWNER.
- DEWATERING WATER DISCHARGES SHALL BE FILTERED THROUGH A GEOTEXTILE SEDIMENT COLLECTION BAG OR EQUIVALENT APPROVED TREATMENT.
- NO DISCHARGE OF TEMPORARY FILL MATERIAL INTO ANY WATERWAY IS PERMITTED.
- CONTRACTOR SHALL COMPLY WITH NYSDEC AND FEDERAL WATER QUALITY PERMITS INCLUDING DISTURBANCE OF THE SITE, ALL WETLANDS, AND BUFFERS.
- CONTRACTOR SHALL COMPLY WITH NYSDEC AND FEDERAL CHEMICAL BULK STORAGE REGULATIONS, WHERE APPLICABLE. LOCATE ANY FUEL DAY TANKS AWAY FROM OUTFALLS AND POTENTIAL CONCENTRATED FLOWS. ANY SPILLS WHEN FUELING EQUIPMENT SHALL IMMEDIATELY BE CONTAINED, REMOVED, AND DISPOSED PER NYSDEC AND FEDERAL REGULATIONS. CONTRACTOR SHALL NOT ALLOW DIESEL TO RUNOFF THE SITE.

SILT FENCE:

- SILT FENCE SHALL BE PLACED PRIOR TO STARTING CLEARING AND GRUBBING OPERATIONS, AND SHALL REMAIN IN PLACE UNTIL DISTURBANCES ARE STABILIZED WITH PERMANENT SEEDING AND/OR SLOPE PROTECTION AS ORDERED BY ENGINEER.

- SILT FENCE SHALL BE INSTALLED PARALLEL TO SLOPES AND ALONG THE TOE OF SLOPED DISTURBED AREAS. ALL SILT FENCE SHALL BE INSTALLED ON THE CONTOUR WITH A GRADE OF 2% OR MORE.

- COMPLETELY SURROUND ANY TEMPORARY STOCKPILES OF TOPSOIL OR EARTH FILL, CONSTRUCTION ACCESS ROADS, STORAGE AREAS, AND STAGING AREAS WITH SILT FENCE TO PREVENT OFFSITE SEDIMENTATION OF THE PILE.

STOCKPILES:

- TEMPORARY STOCKPILE(S) OF TOPSOIL OR FILL SHALL NOT BE LOCATED WITHIN PROXIMITY OF DRAINAGE WAYS.
- TEMPORARY STOCKPILES OF TOPSOIL OR EARTH FILL SHALL BE PROTECTED AS PER EROSION CONTROL DETAILS.
- STOCKPILES EXPOSED FOR LONGER THAN TWO WEEKS SHALL BE STABILIZED WITH TEMPORARY SEEDING AND MULCH.

TEMPORARY WATERWAY DIVERSION STRUCTURE:

- CONTRACTOR SHALL SUBMIT A DEWATERING PLAN FOR APPROVAL. TEMPORARY WATERWAY DIVERSION STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO, BLADDER, SAND BAG, PORTABLE, AND/OR FILLED STRUCTURAL UNIT COFFERDAMS THAT DO NOT CAUSE SUBSURFACE DISTURBANCES. DRIVEN SHEET PILES AND EARTHEN FILL STRUCTURES ARE NOT ACCEPTABLE.
- MINIMUM HEIGHT OF TEMPORARY WATERWAY DIVERSION STRUCTURE SHALL BE TO ORDINARY HIGH WATER ELEVATION.
- THE WATERWAY DIVERSION STRUCTURE SHALL PROVIDE TURBIDITY CONTROL.

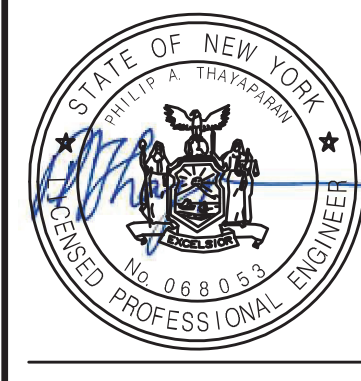
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RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: *[Signature]*
Date: 10/29/2021



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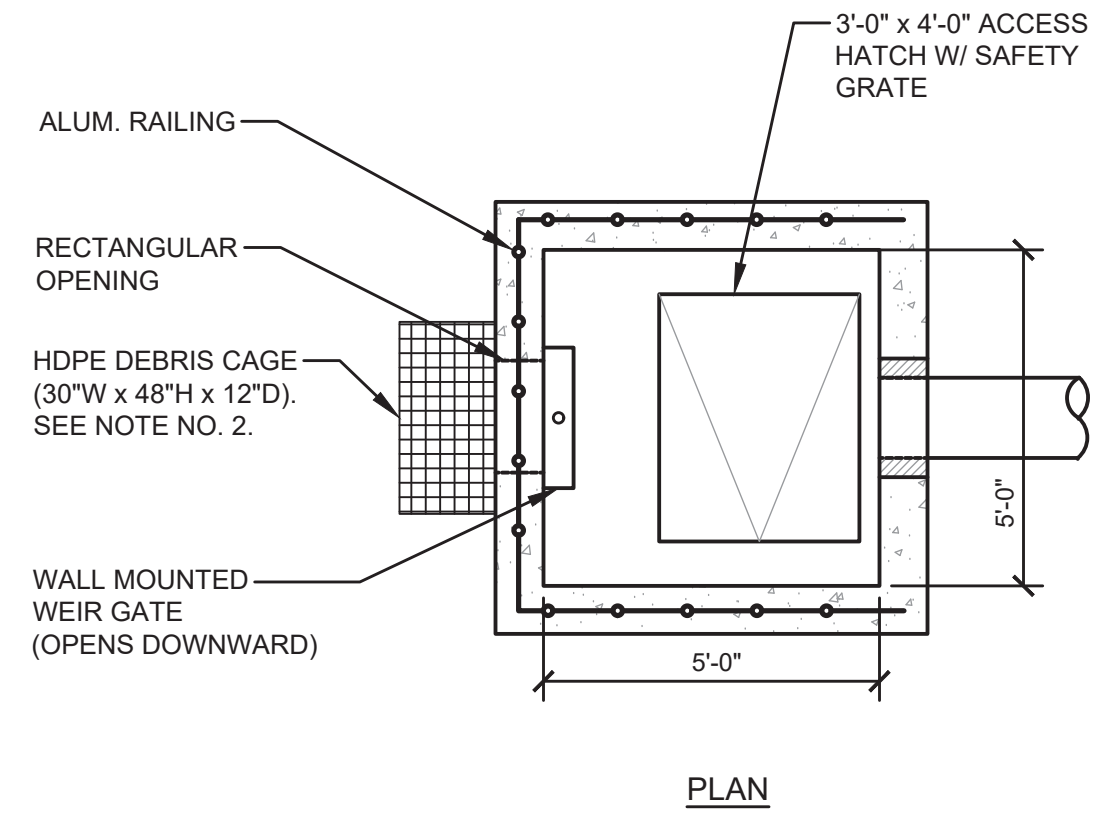
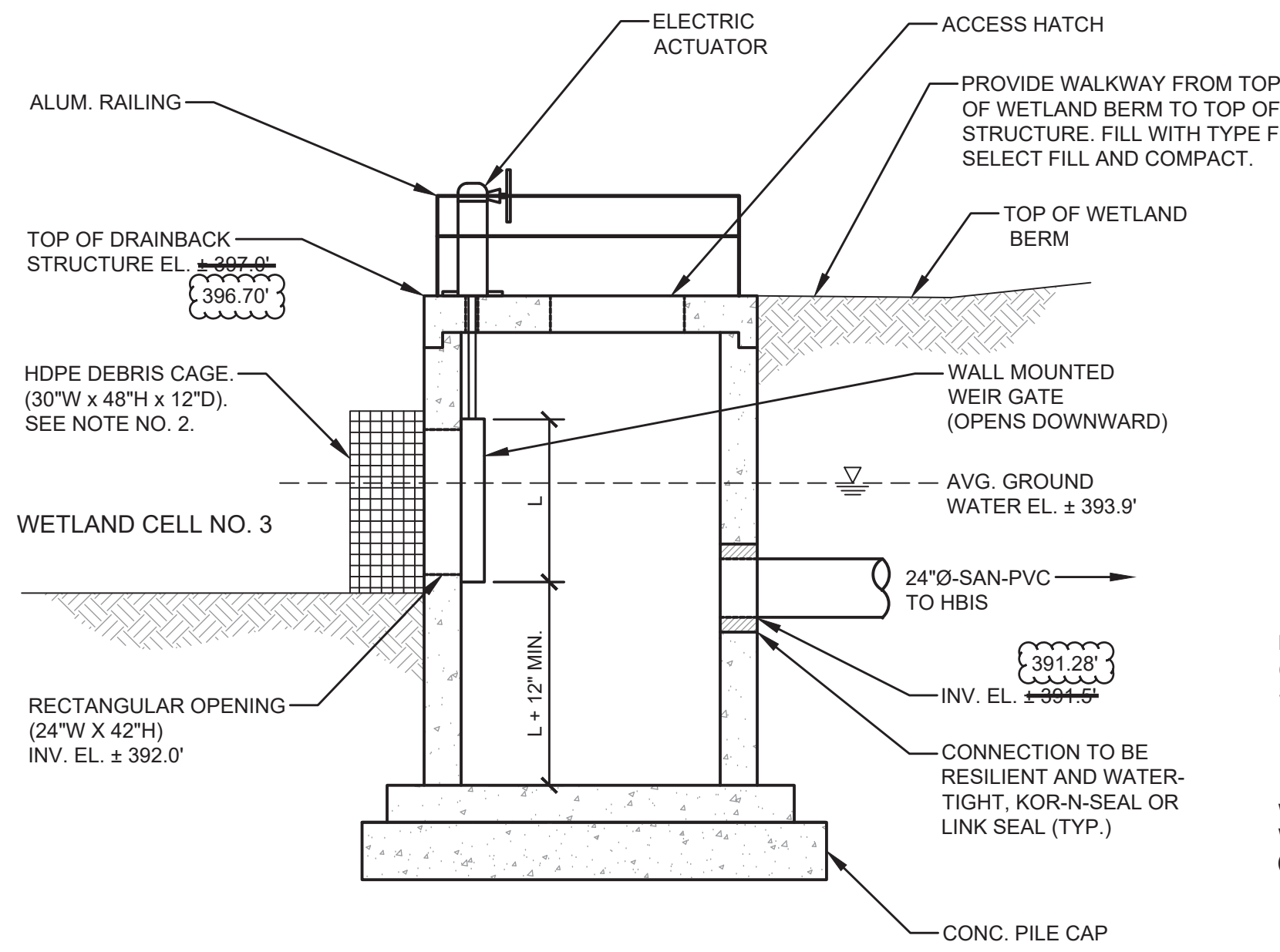
IN CHARGE OF	D. HUFFAKER			
DESIGNED BY	K. MIERZWA, S. WANG			
CHECKED BY	J. DEBARBIERI	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. WANG	1	05/22/2020	ISSUED FOR BID
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW
		NO.	DATE	REVISION
				INT.

PRUDENT ENGINEERING
6390 F Rd. Syracuse, NY 13057
(315) 748-7700
Fax: (315) 748-7780

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

CIVIL
EROSION & SEDIMENT CONTROL PLAN

FILE NO.	202.072.03
DATE	NOVEMBER 2019
C-104	



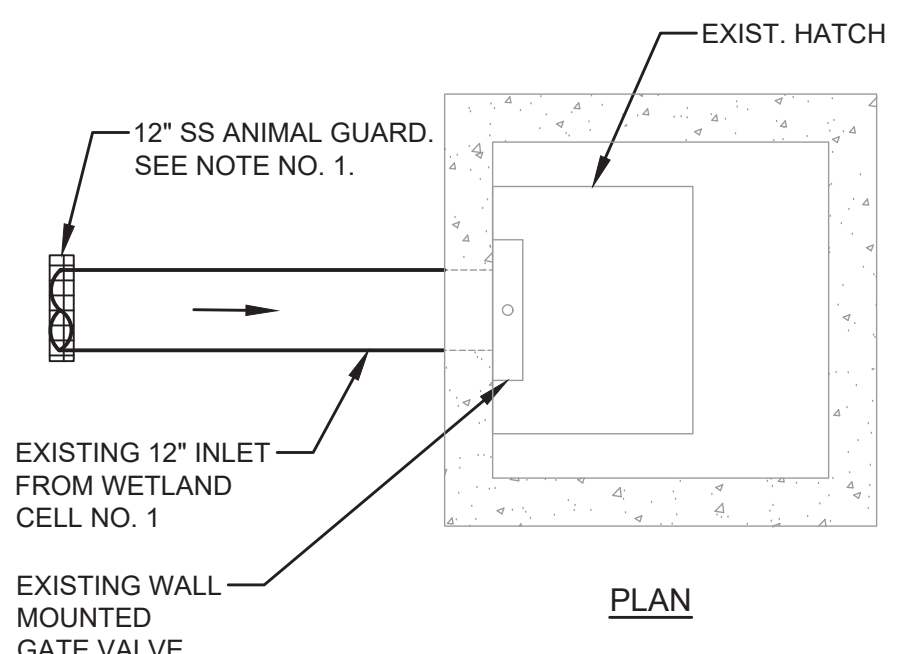
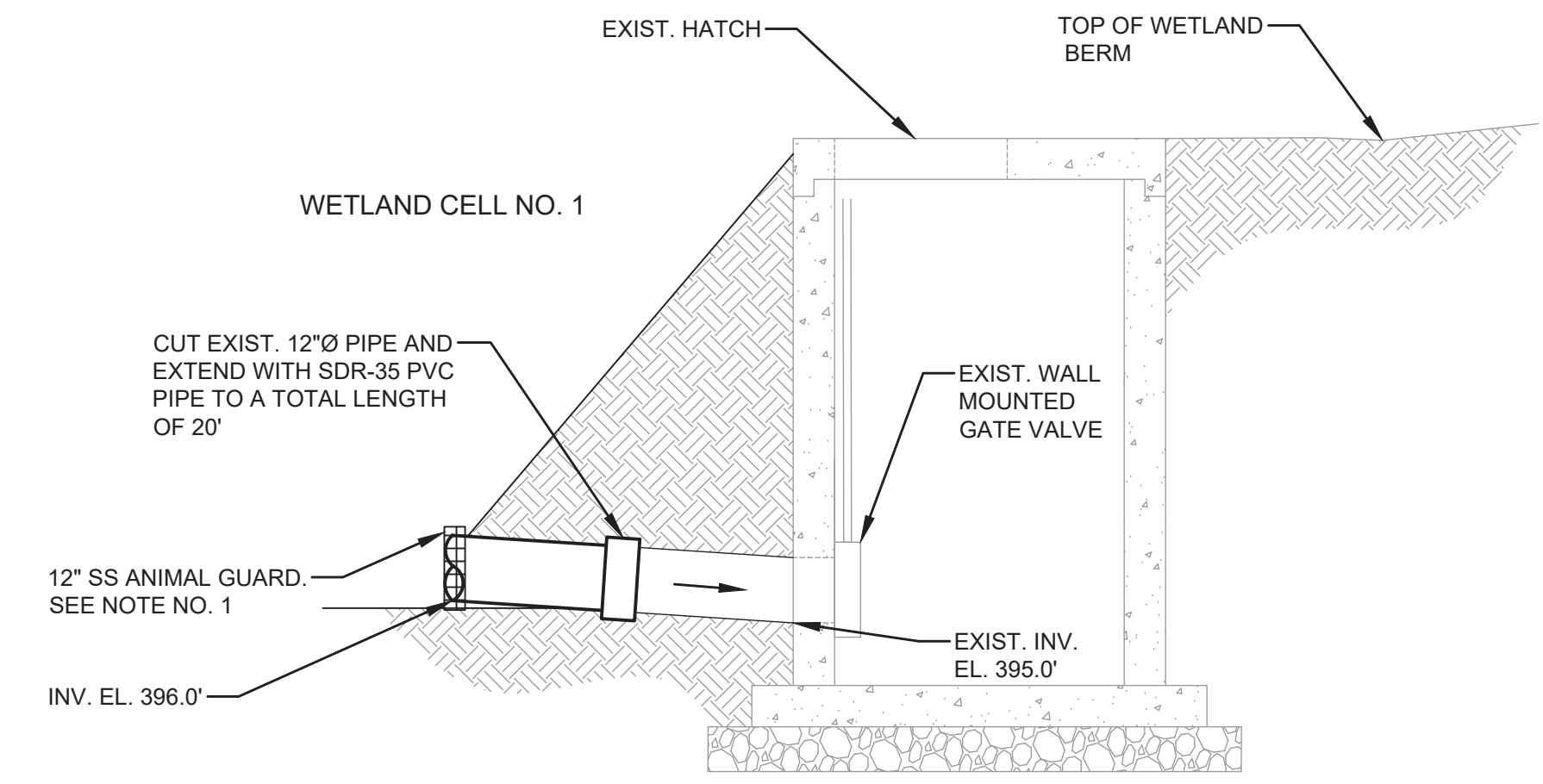
SECTION

DETAIL NOTES:

- CENTER DEBRIS CAGE OVER OPENING.
- DEBRIS CAGE SHALL UV RESISTANT, FLAT SERIES MODEL STORMRAX AS MANUFACTURED BY CONTECH ENGINEERED SOLUTIONS, OR APPROVED EQUIVALENT. ~~PROVIDE CAGE WITH 4" MAX CLEAR SQUARE OPENINGS.~~ PER SUBMITTAL 00 00 00-4.0, OPENINGS ARE 4.25"x4.5"
- GATE OPERATOR NOT SHOWN FOR CLARITY ON PLAN VIEW.

DRAINBACK STRUCTURE

NOT TO SCALE



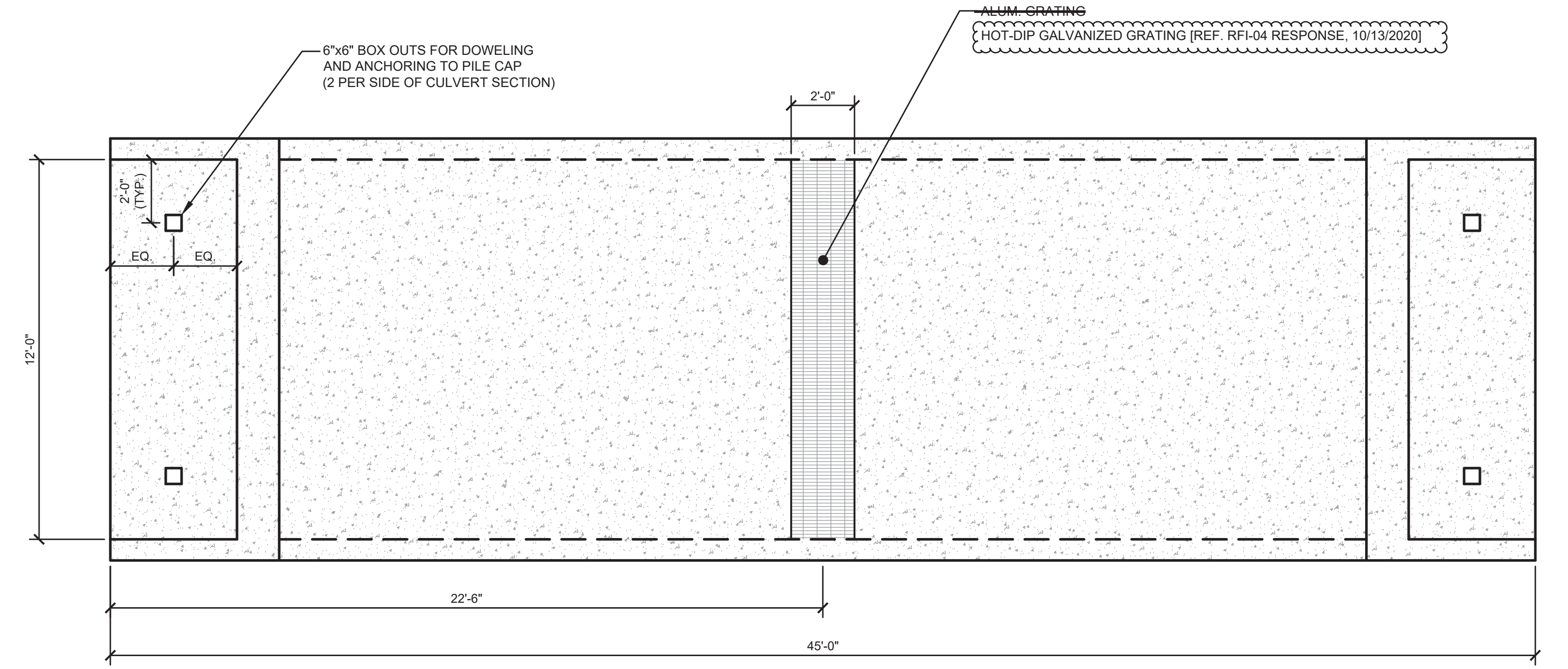
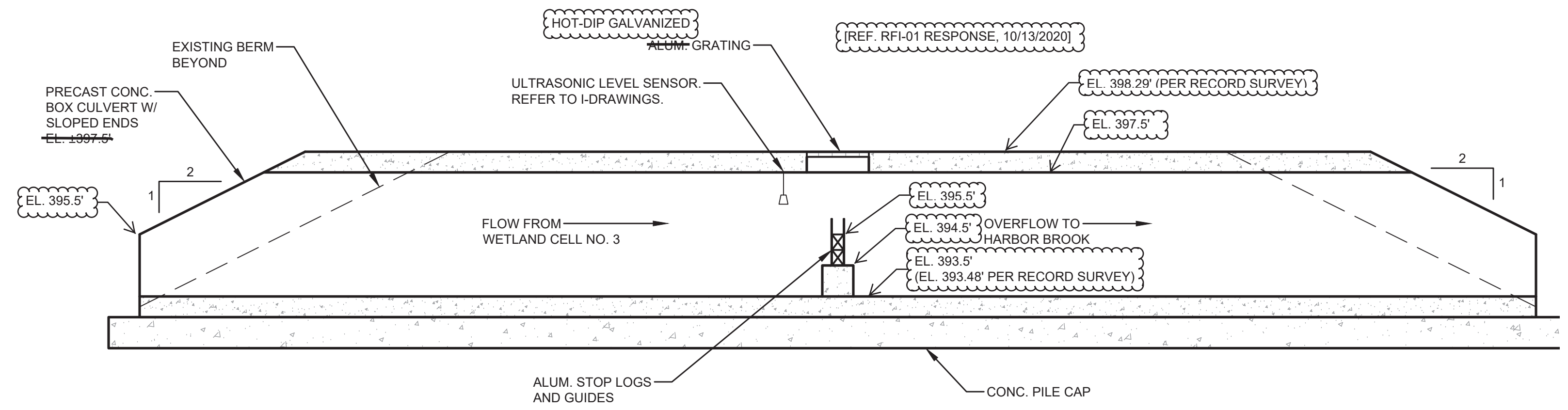
SECTION

DETAIL NOTES:

- ANIMAL GUARD SHALL BE STAINLESS STEEL, BAND TYPE W/ 1.25" MAX BAND SPACING AS MANUFACTURED BY AGRI-DRAIN CORP., OR APPROVED EQUIVALENT.

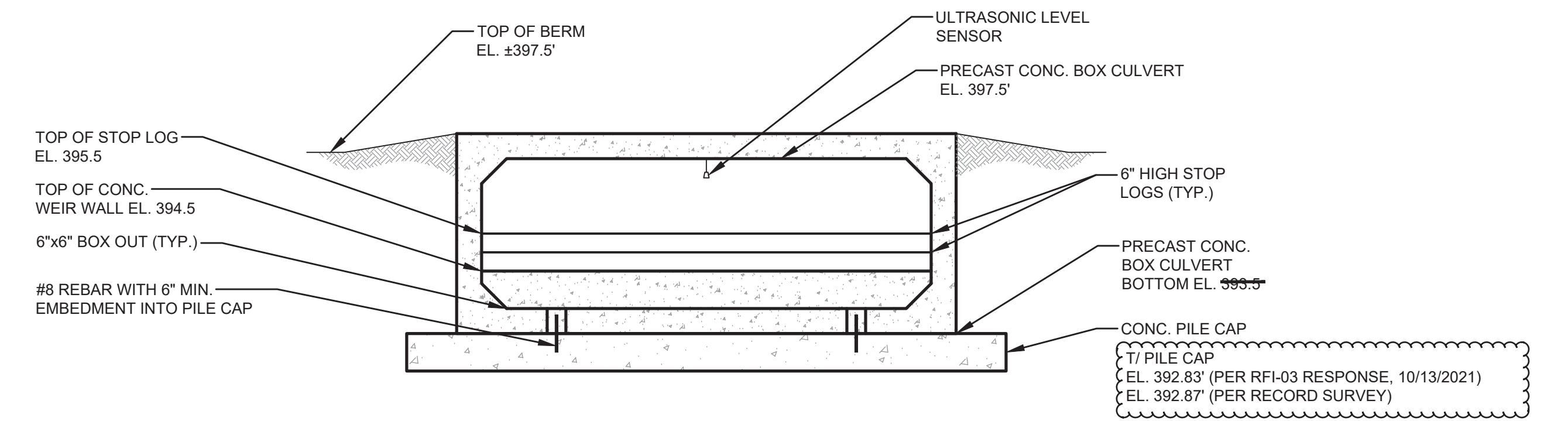
FDS 7 INLET PIPE MODIFICATION

NOT TO SCALE



SECTION

PLAN



SECTION

DETAIL NOTES:

- BOTH PRECAST CONCRETE BOX CULVERT SLOPED END SECTIONS SHALL HAVE TWO 6" x 6" BOX OUTS IN THE BASE FOR ANCHORING AND GROUTING TO CONCRETE PILE CAP. DOWEL AND EPOXY #8 REBAR WITH MIN. 6" EMBEDMENT INTO PILE CAP. GROUT WITH NON-SHRINK GROUT.

PRECAST CONCRETE BOX CULVERT OVERFLOW STRUCTURE

NOT TO SCALE

RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: *Steph P. Cohen*
Date: 10/29/2021



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IN CHARGE OF	J. OLIVO			
DESIGNED BY	J. BOHNERT			
CHECKED BY	C. FIORELLO	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. JOHNSON	1	05/22/2020	ISSUED FOR BID
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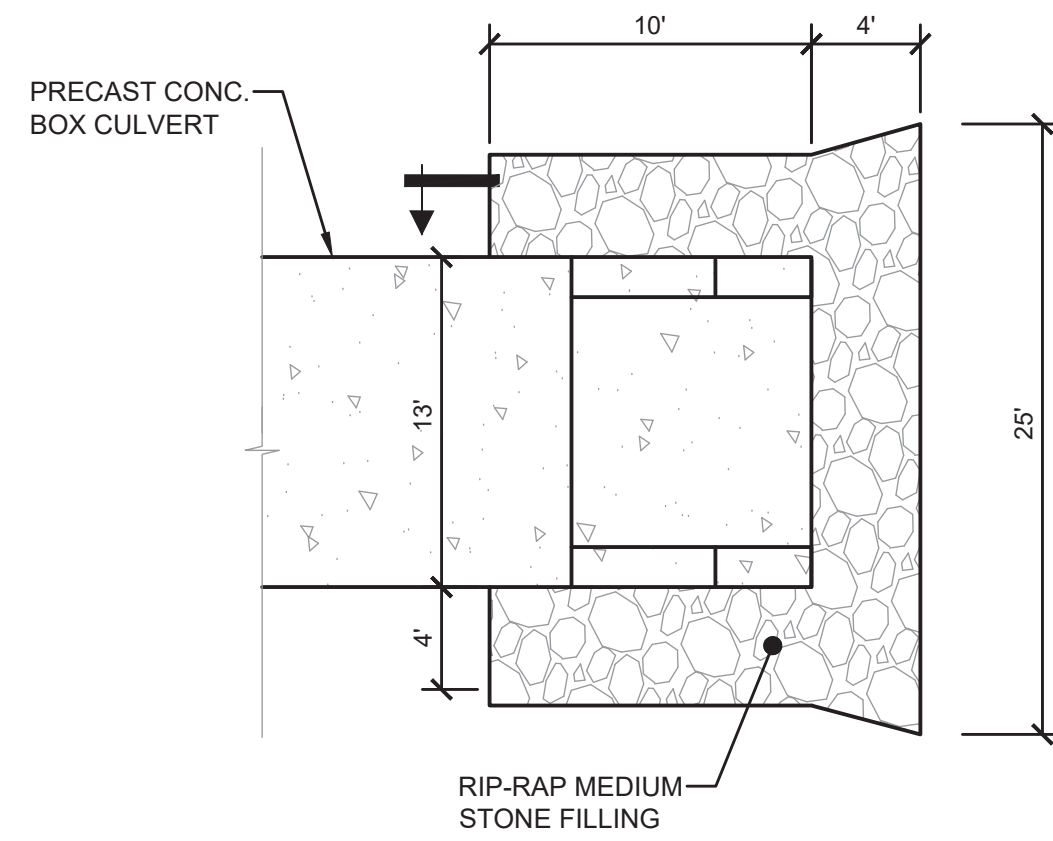
O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY
333 WEST WASHINGTON ST. SYRACUSE, NY 13202
RAMBOLL

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

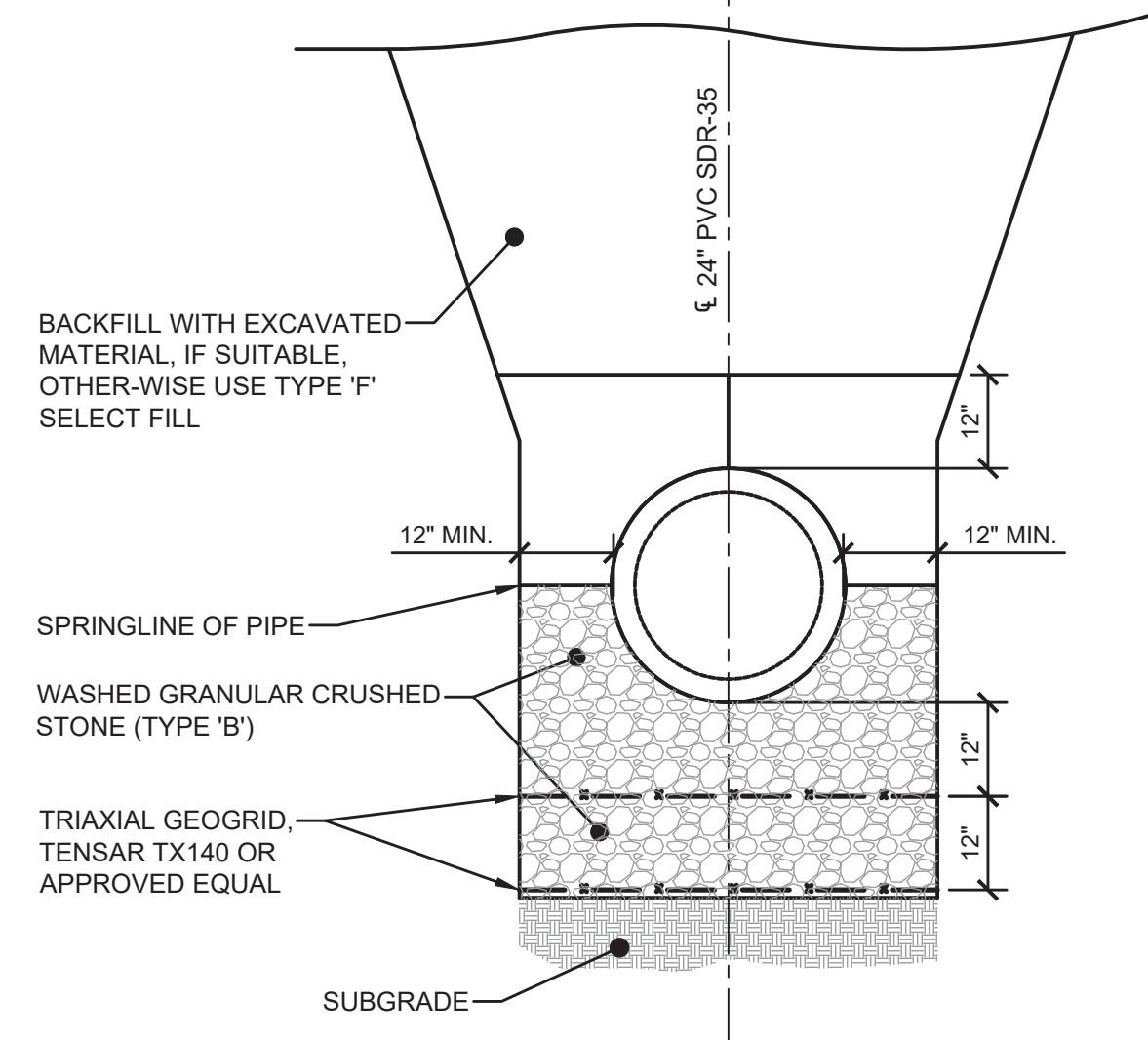
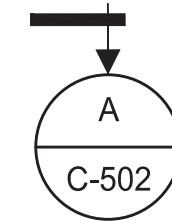
CIVIL
FILE NO. 115.67266
DATE NOV. 20, 2019

C-501

DETAILS



PLAN

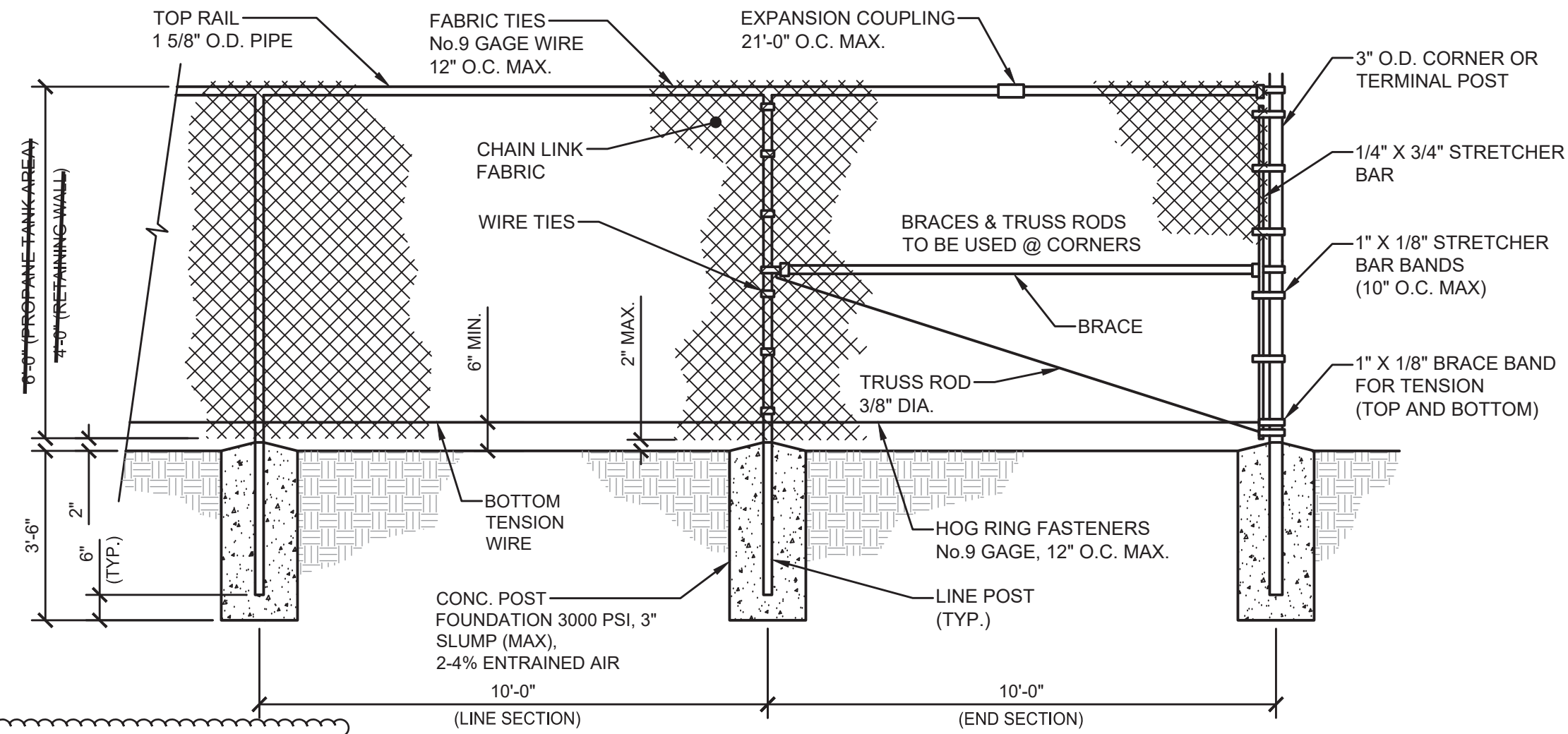


DETAIL NOTES:

1. DETAIL APPLIES TO 24" PVC SDR-35 DRAIN BACK PIPE.

TYPICAL TRENCH SECTION REINFORCED SUBBASE

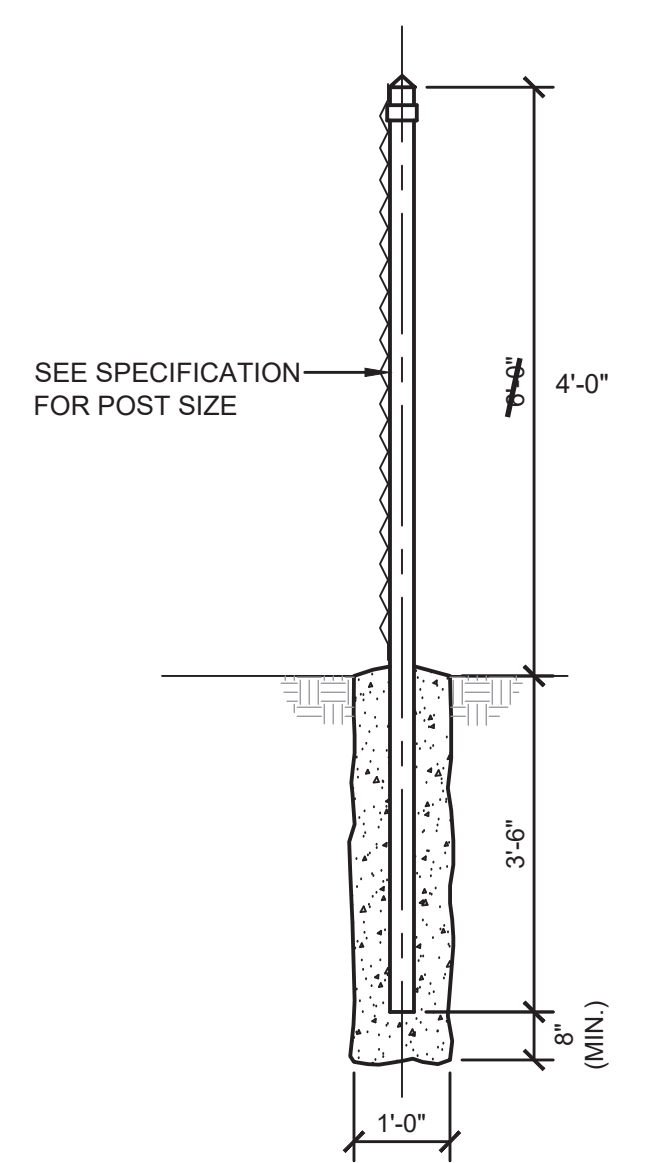
NOT TO SCALE



CHAIN LINK FENCE DETAIL

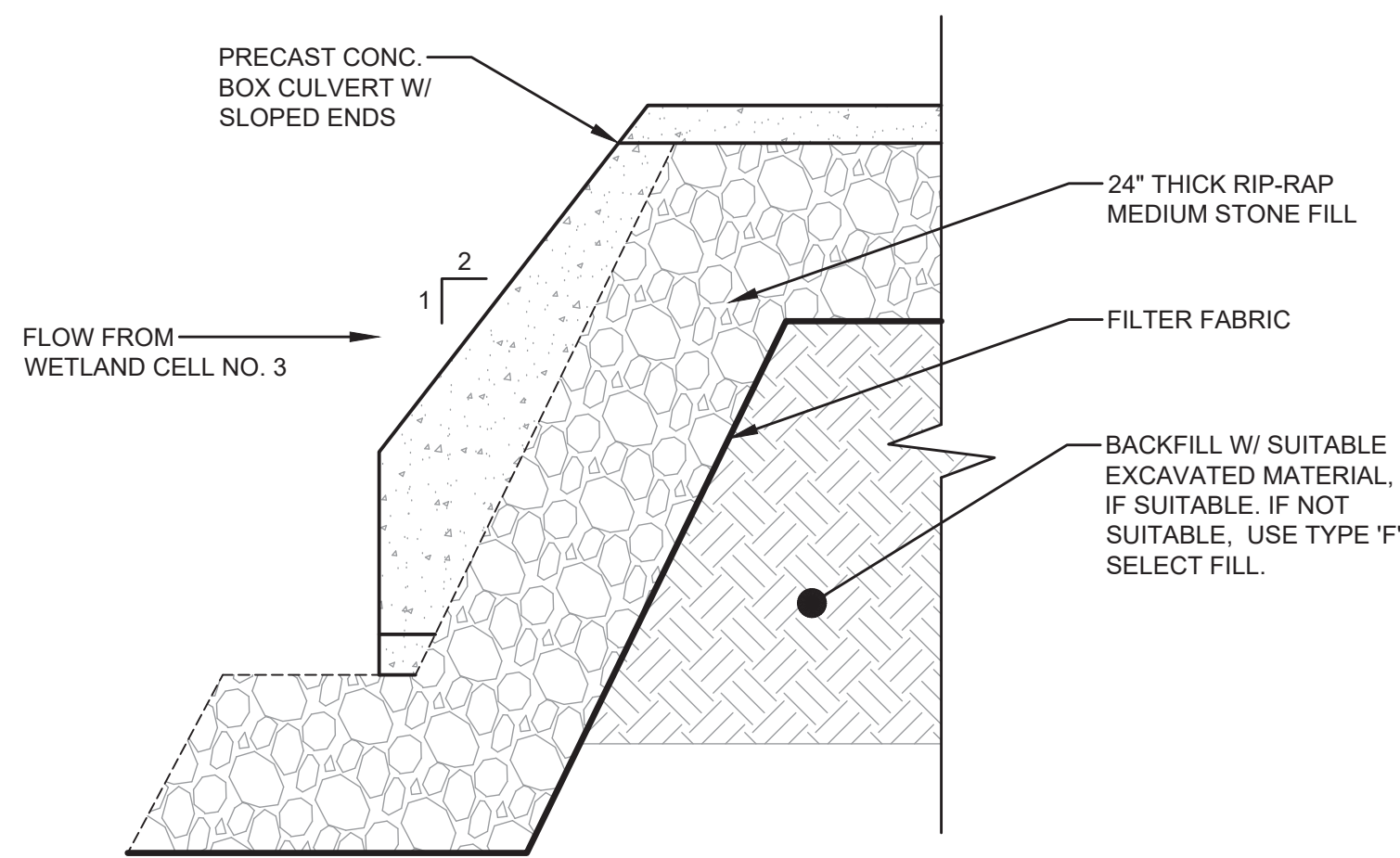
NOT TO SCALE

- NOTE:
- PROVIDE BRACE & TRUSS RODS AT ALL CORNERS AND FENCE SECTIONS ADJACENT TO GATES.
 - PROVIDE 4'-0" HIGH, GREEN PVC-COATED POSTS AND FABRIC TO MATCH EXISTING FENCING.



FENCE POST DETAIL

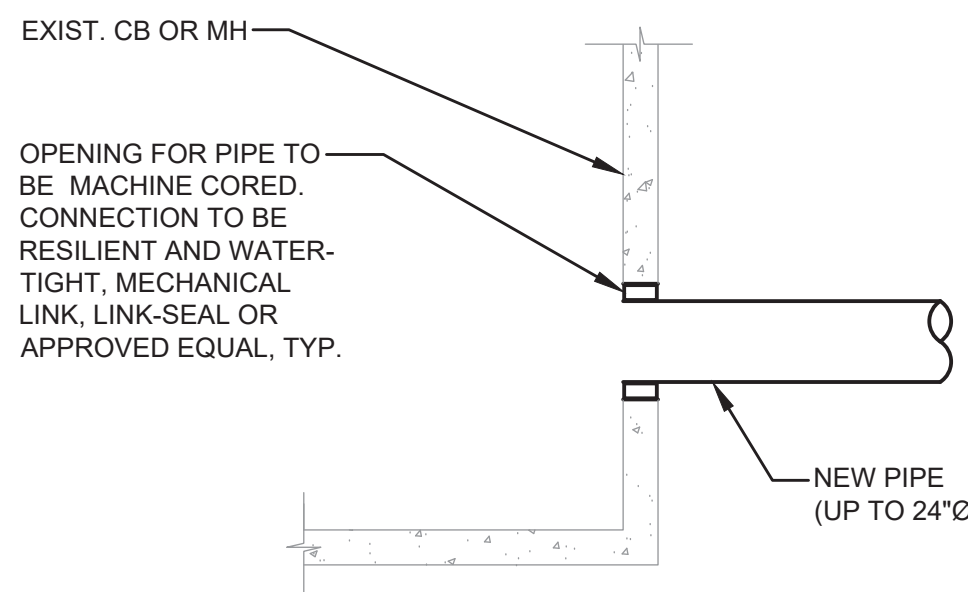
NOT TO SCALE



SECTION 'A'

RIP-RAP APRON DETAIL

NOT TO SCALE

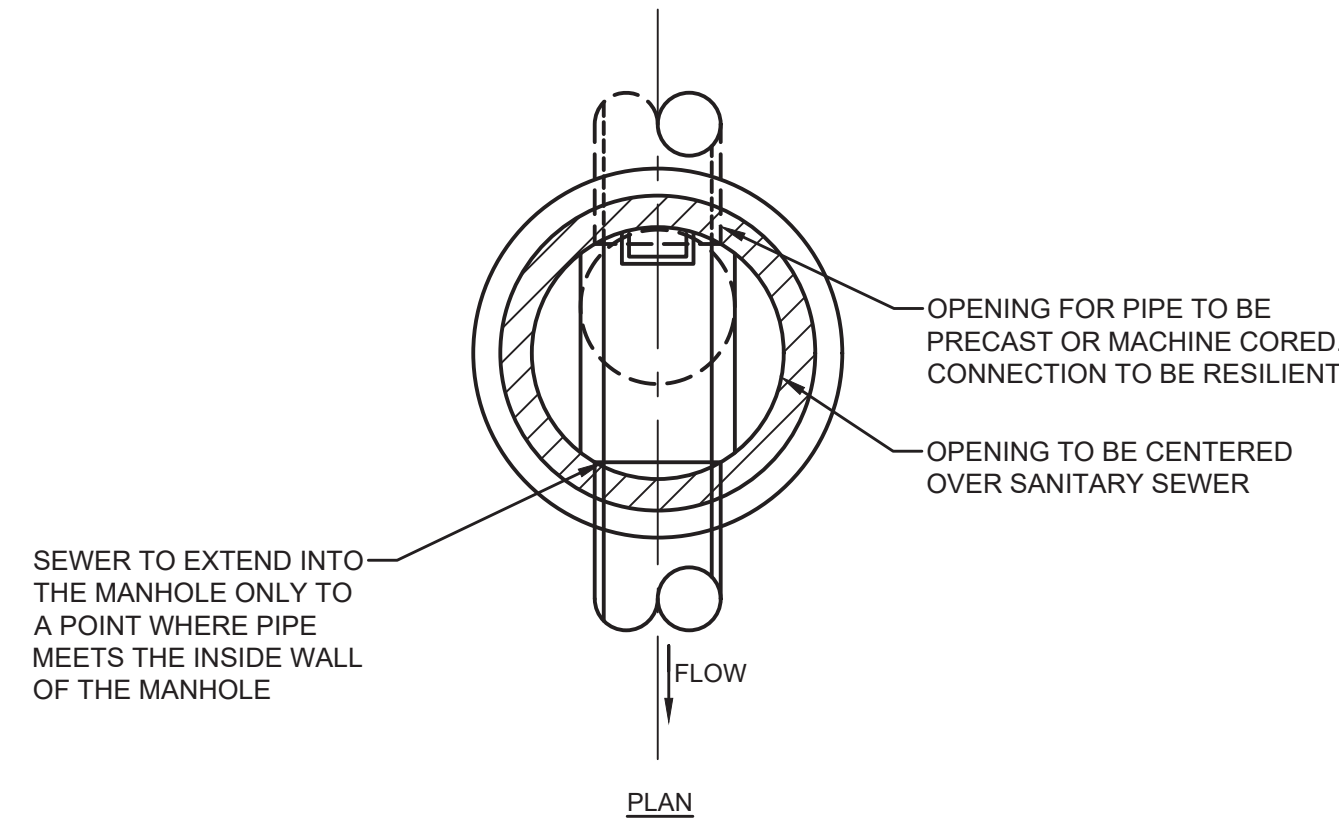


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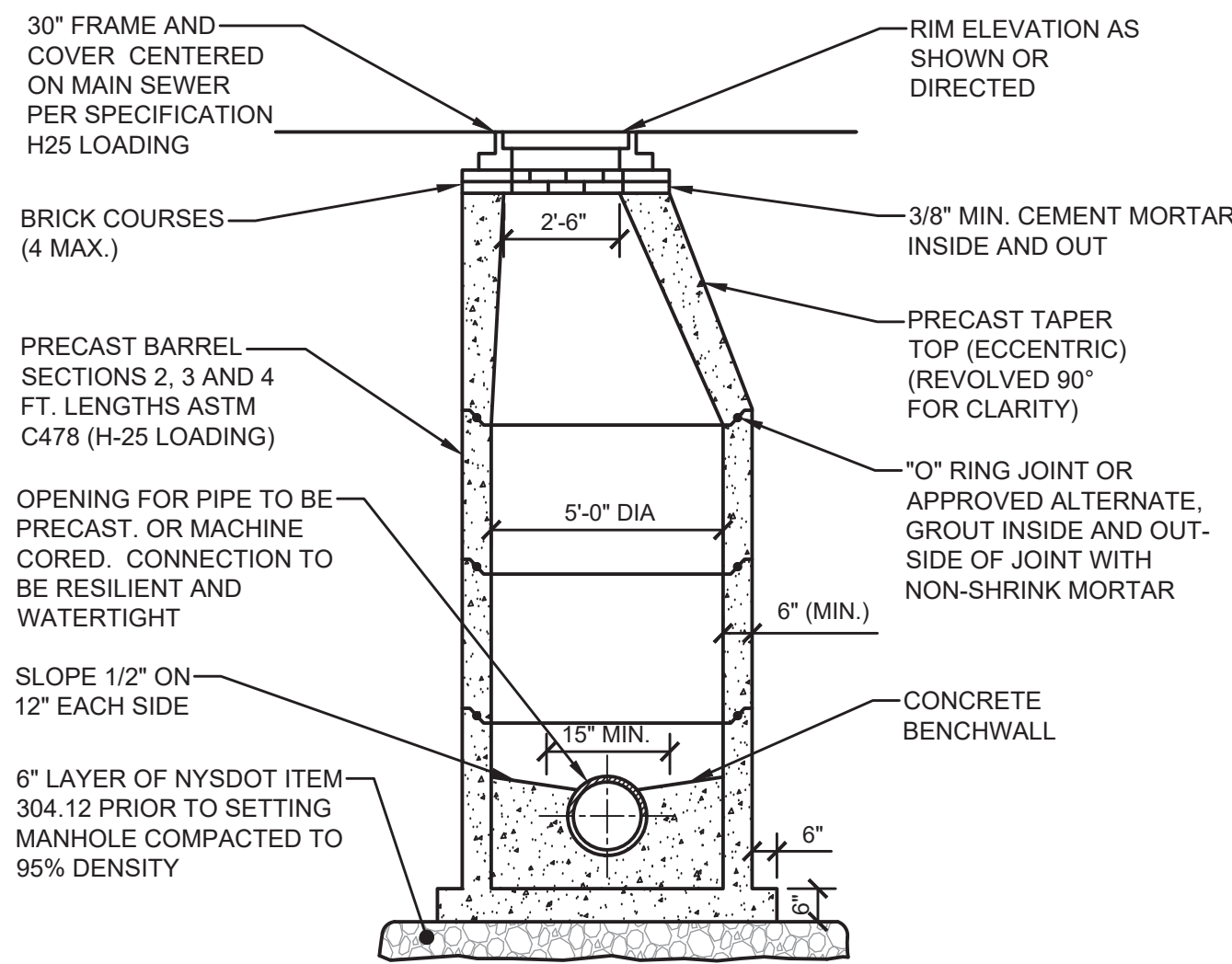
1. CONNECTIONS SHALL BE PERMANENTLY WATER TIGHT.

PIPE CONNECTION TO EXISTING STRUCTURE

NOT TO SCALE



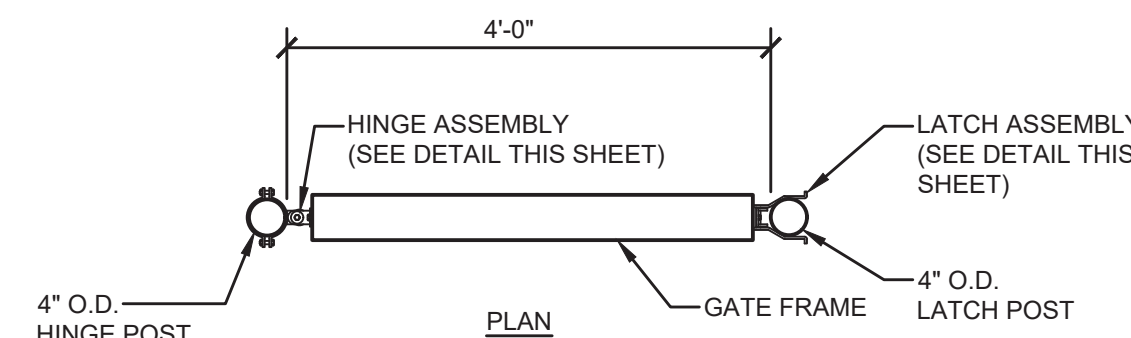
PLAN



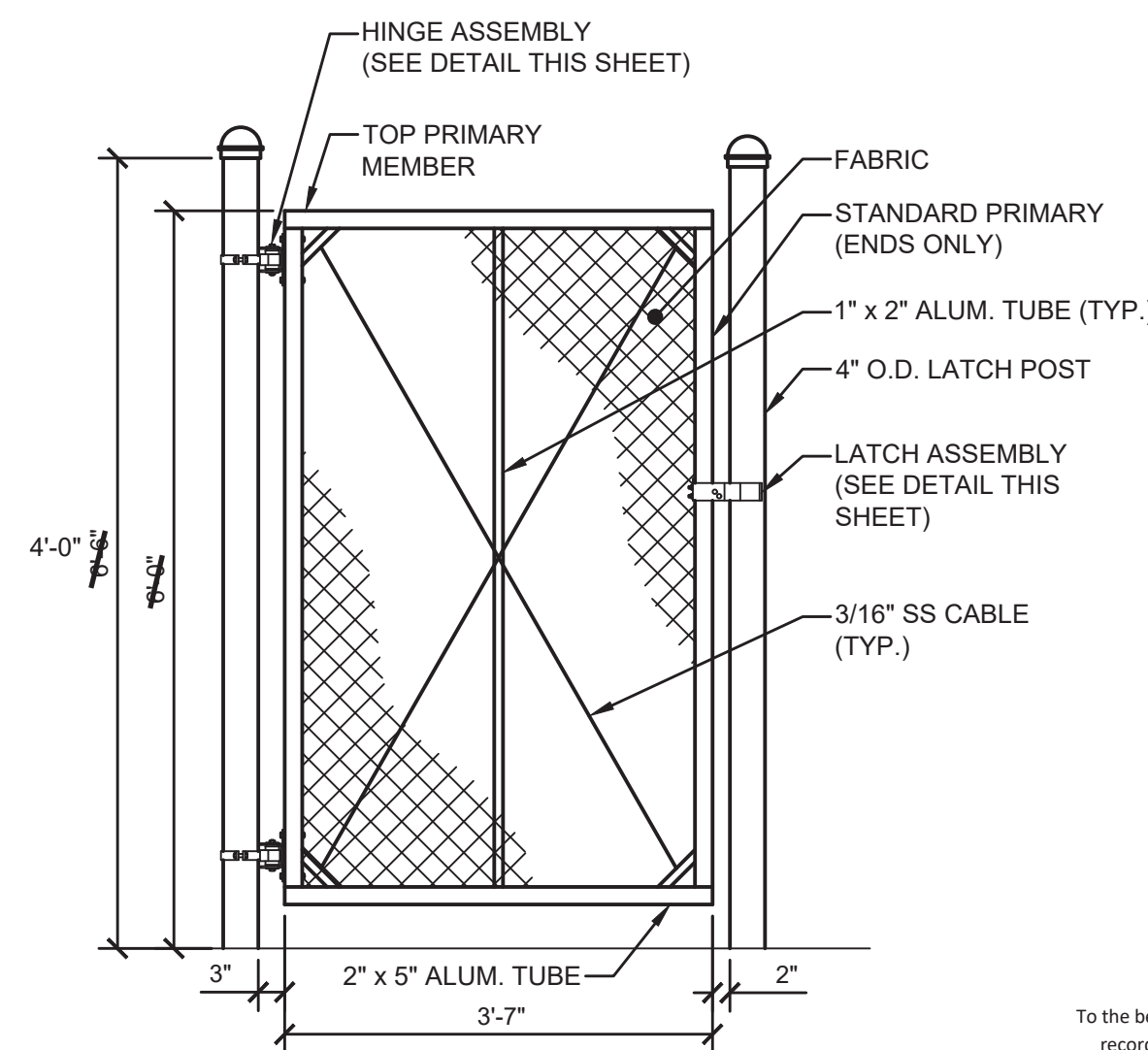
SECTION

PRECAST MANHOLE DETAIL

NOT TO SCALE



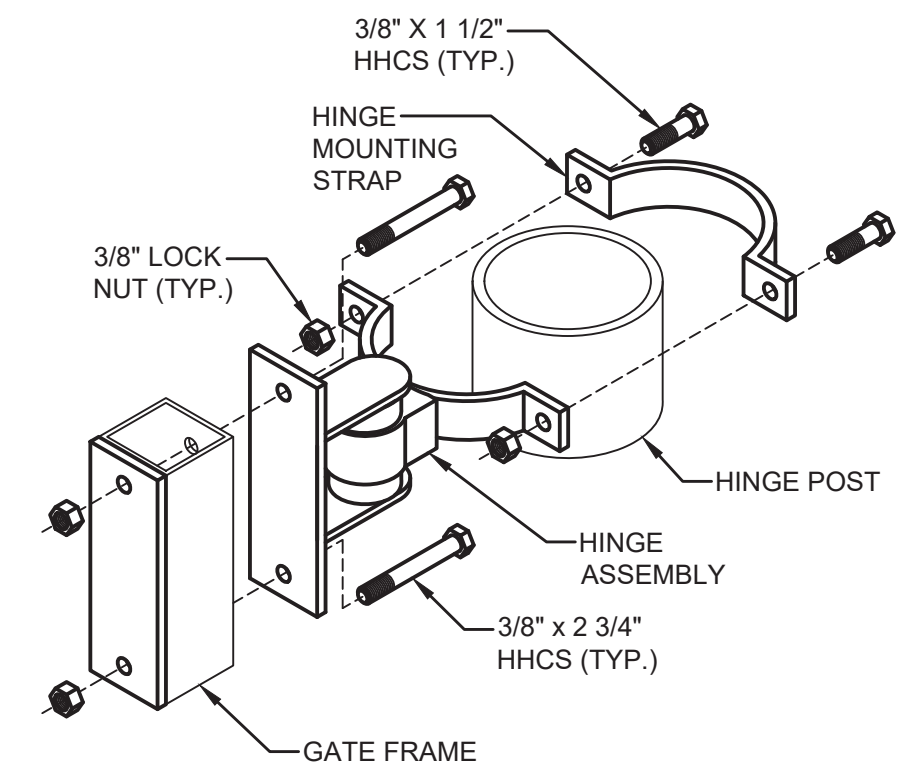
PLAN



ELEVATION

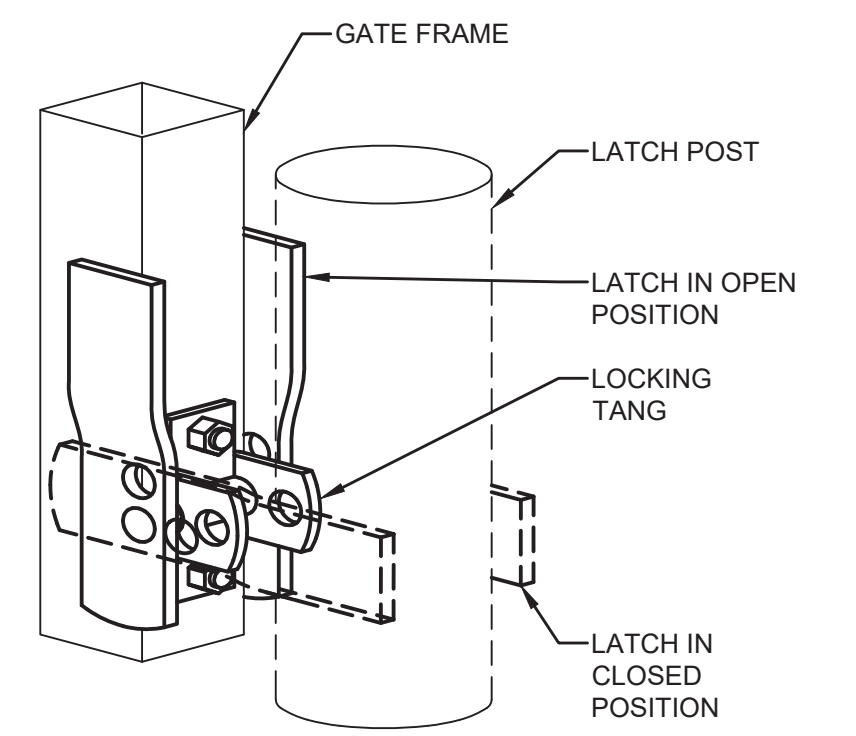
MAN GATE DETAIL

NOT TO SCALE



MAN GATE HINGE ASSEMBLY DETAIL

NOT TO SCALE



MAN GATE LATCH ASSEMBLY DETAIL

NOT TO SCALE

RECORD DRAWINGS
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
RAMBOLL
By: *Stephane*
Date: 10/29/2021



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DESIGNED BY	J. BOHNERT			
CHECKED BY	C. FIORELLO	2	10/29/2021	RECORD DRAWING
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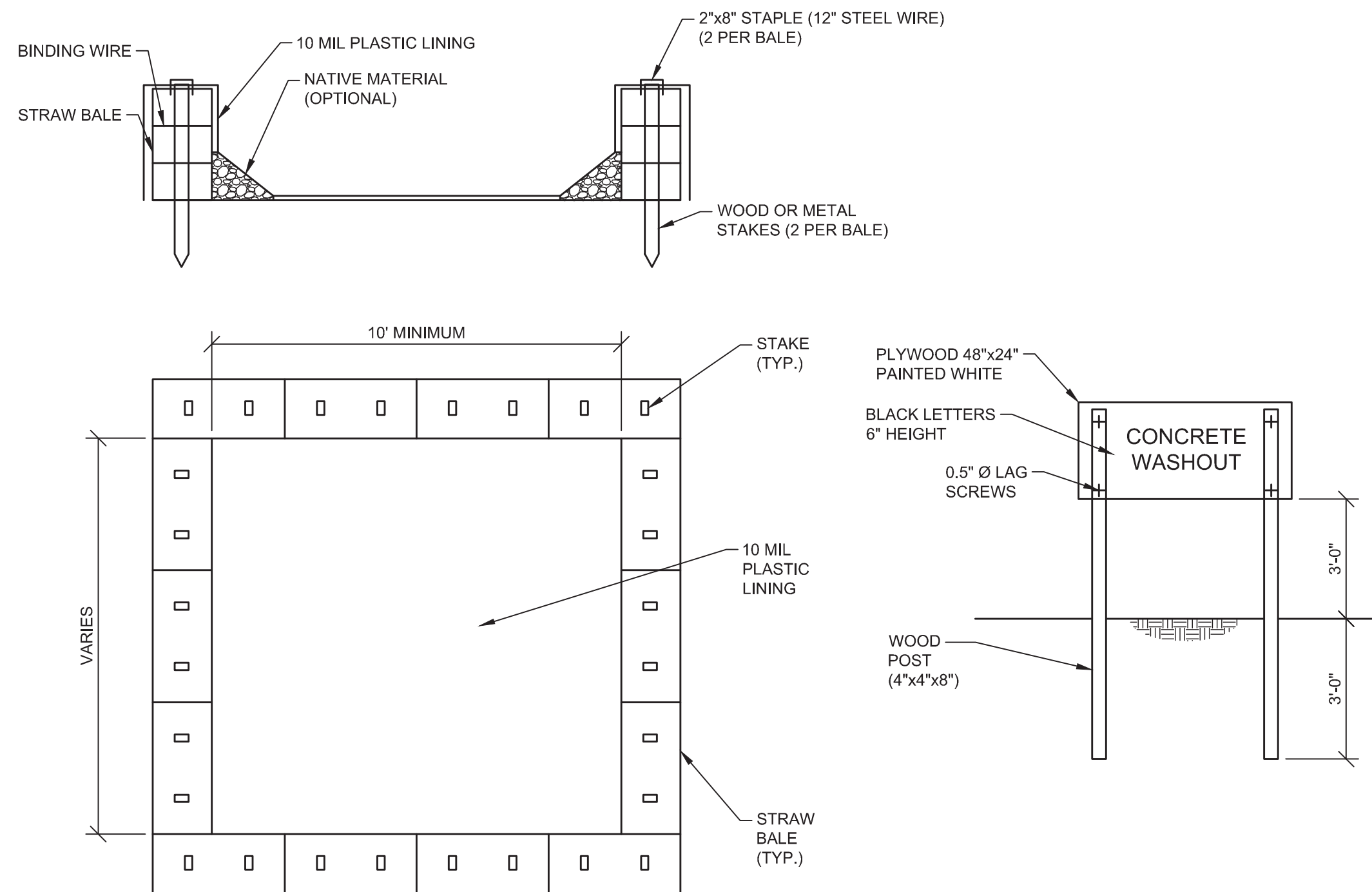
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HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

CIVIL
DETAILS

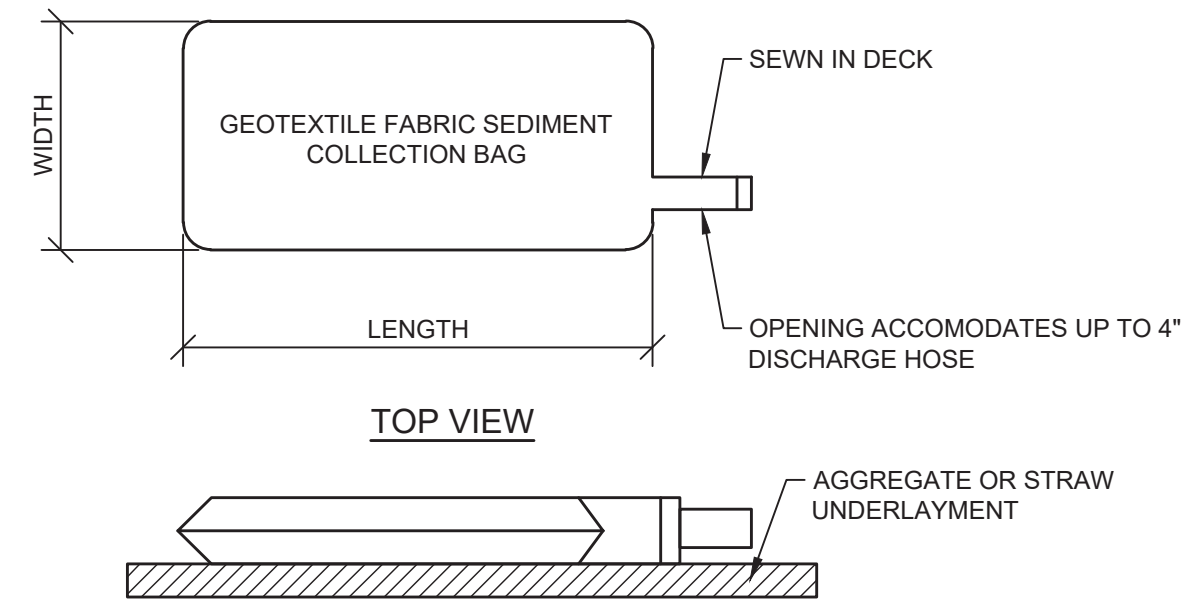
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115.67266
DATE
NOV. 20, 2019

C-502



CONCRETE WASHOUT DETAIL

NOT TO SCALE



GEOTEXTILE FABRIC PROPERTIES		
PROPERTY	TEST METHOD	MARV
TENSILE STRENGTH	ASTM D-4632	205 LBS
ELONGATION	ASTM D-6241	50%
CBR PUNCTURE	ASTM D-6241	525 LBS
UV RESISTANCE	ASTM D-4355	70%
AOS	ASTM D-4751	80 US SIEVE
PERMITTIVITY	ASTM D-4491	1.4 SEC-1
FLOW RATE	ASTM D-4491	90 GPM/SF

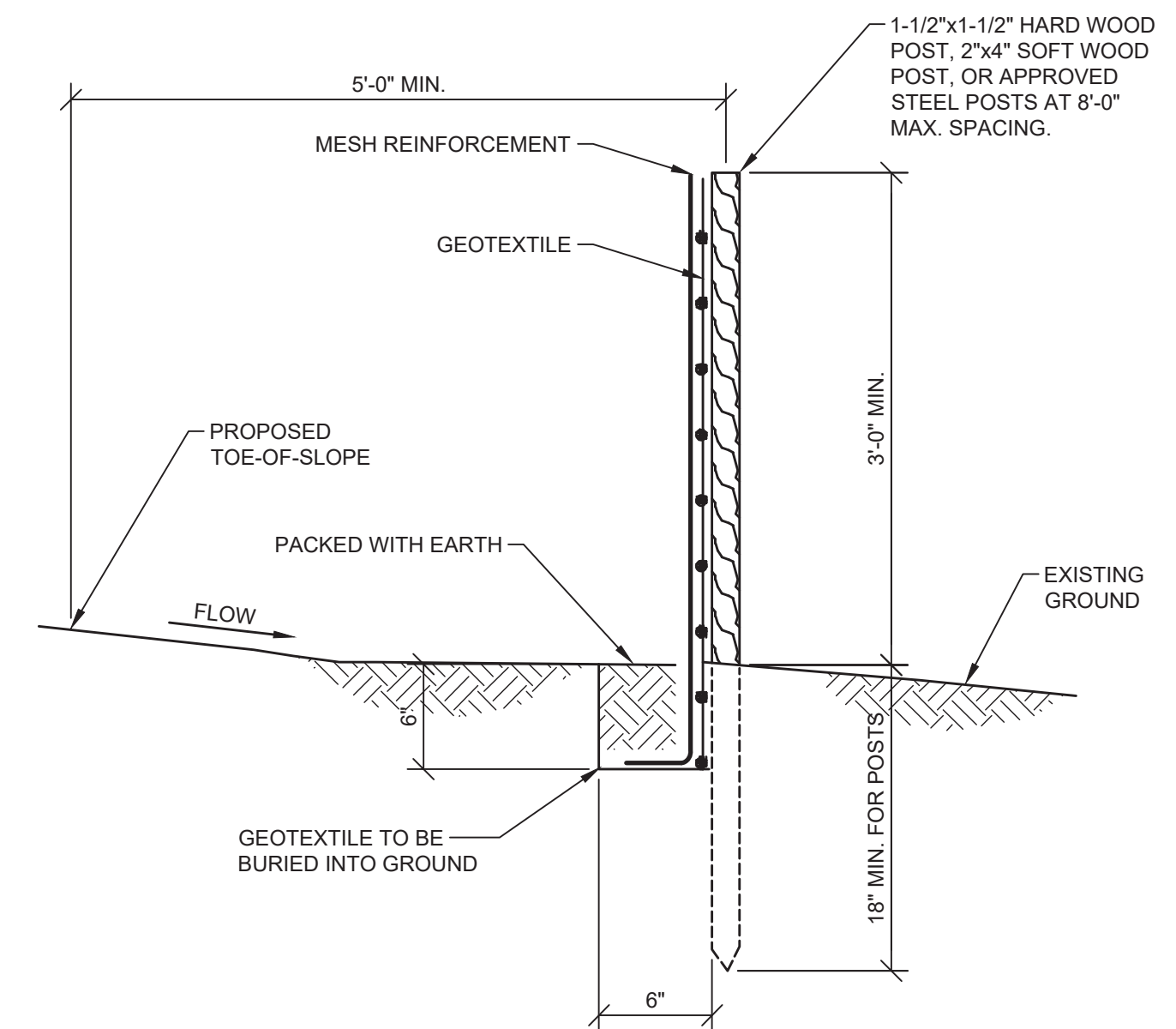
(MINIMUM AVG. ROLL VALUE)

NOTES:

1. GEOTEXTILE FABRIC SEDIMENT COLLECTION BAG TO BE PLACED ON AGGREGATE OR STRAW.
2. SEAMS SHALL BE HIGH STRENGTH DOUBLE STITCHED "J" SEAMS.
3. SEAM SHALL BE TESTED UNDER ASTM D-4884. MANUFACTURER'S TEST RESULTS SHALL BE MADE AVAILABLE UPON REQUEST.

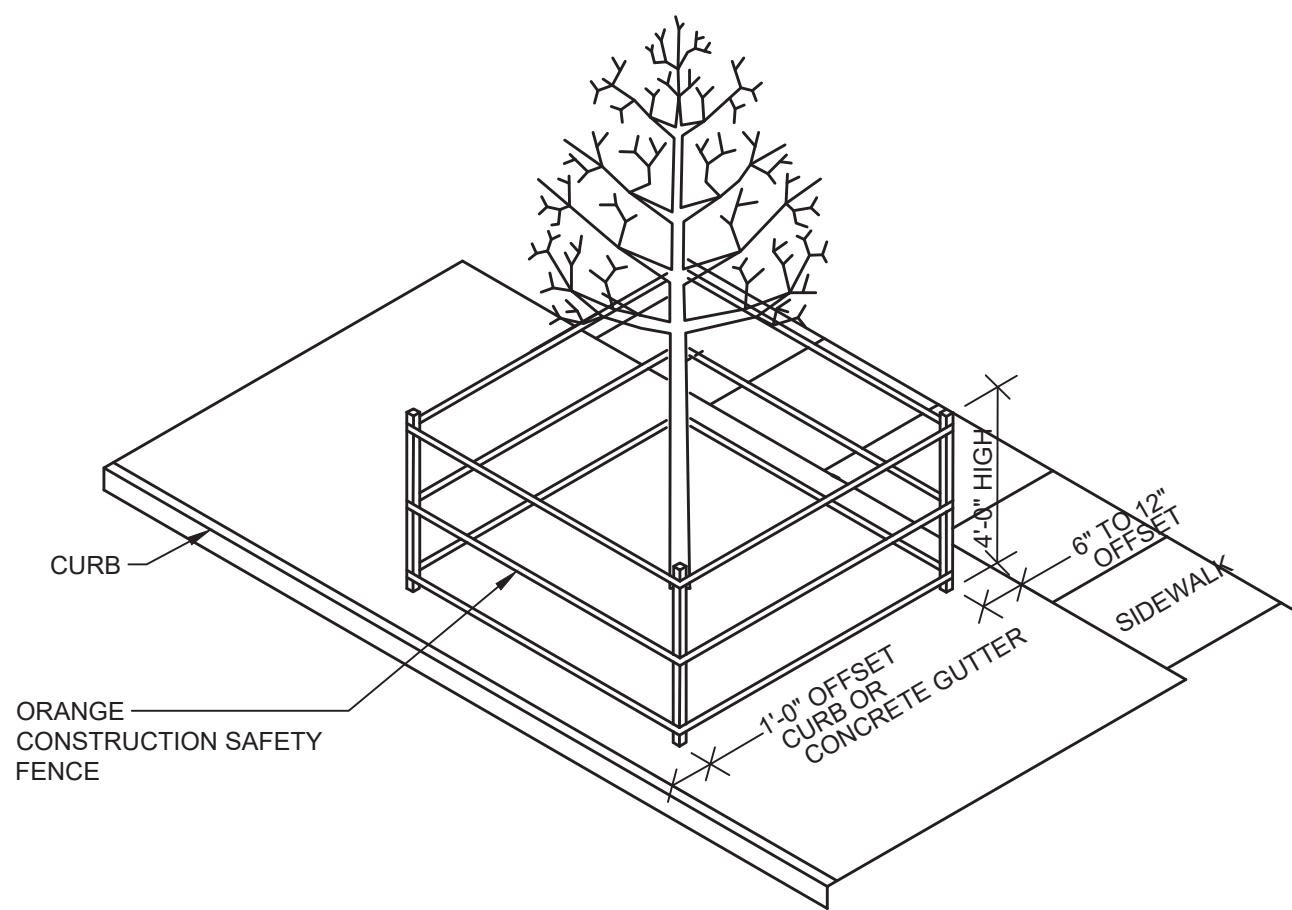
GEOTEXTILE SEDIMENT COLLECTION BAG DETAIL

NOT TO SCALE



TEMPORARY SILT FENCE DETAIL

NOT TO SCALE



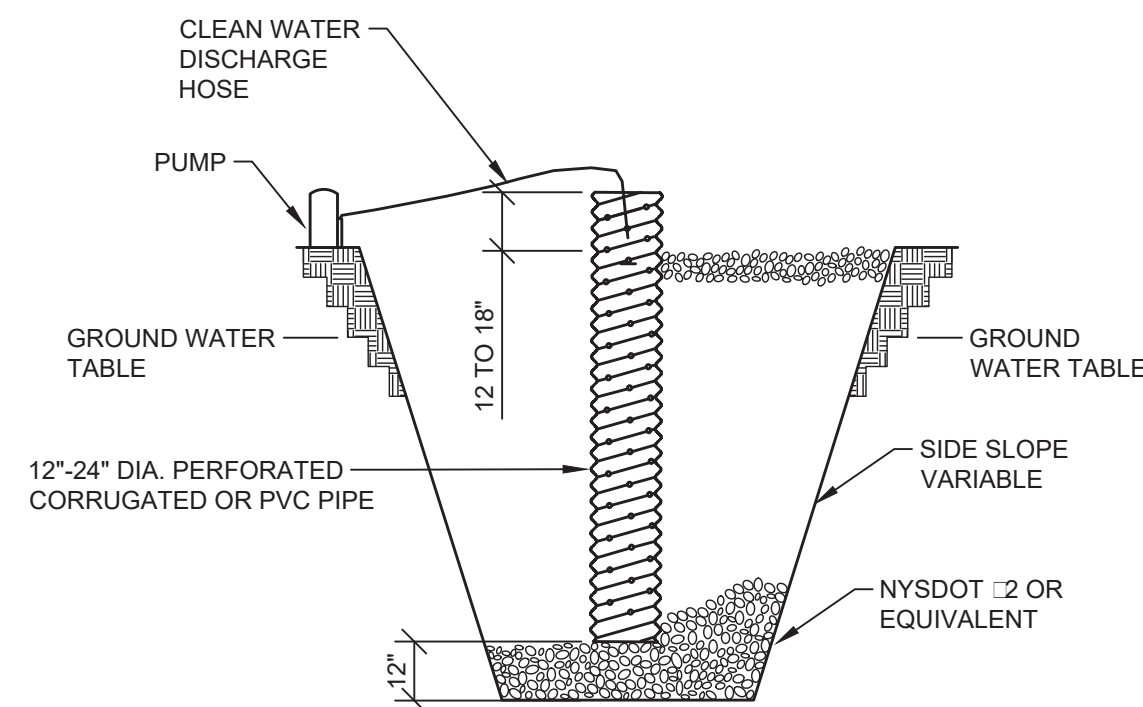
TREE DIAMETER (DBH)	DISTANCE OF FENCING FROM FACE OF TREE TRUNK
LESS THAN 10"	6'-0"
10" - 14"	10'-0"
15" - 19"	12'-0"
20" OR MORE	15'-0"

NOTES:

1. ALL TREES WITHIN THE PROJECT LIMITS THAT ARE TO REMAIN SHALL RECEIVE THIS TREATMENT.
2. CONSTRUCTION EQUIPMENT SHALL NOT BE LEFT RUNNING (IDLING) UNDER TREE CANOPY.

EXISTING TREE PROTECTION DETAIL

NOT TO SCALE

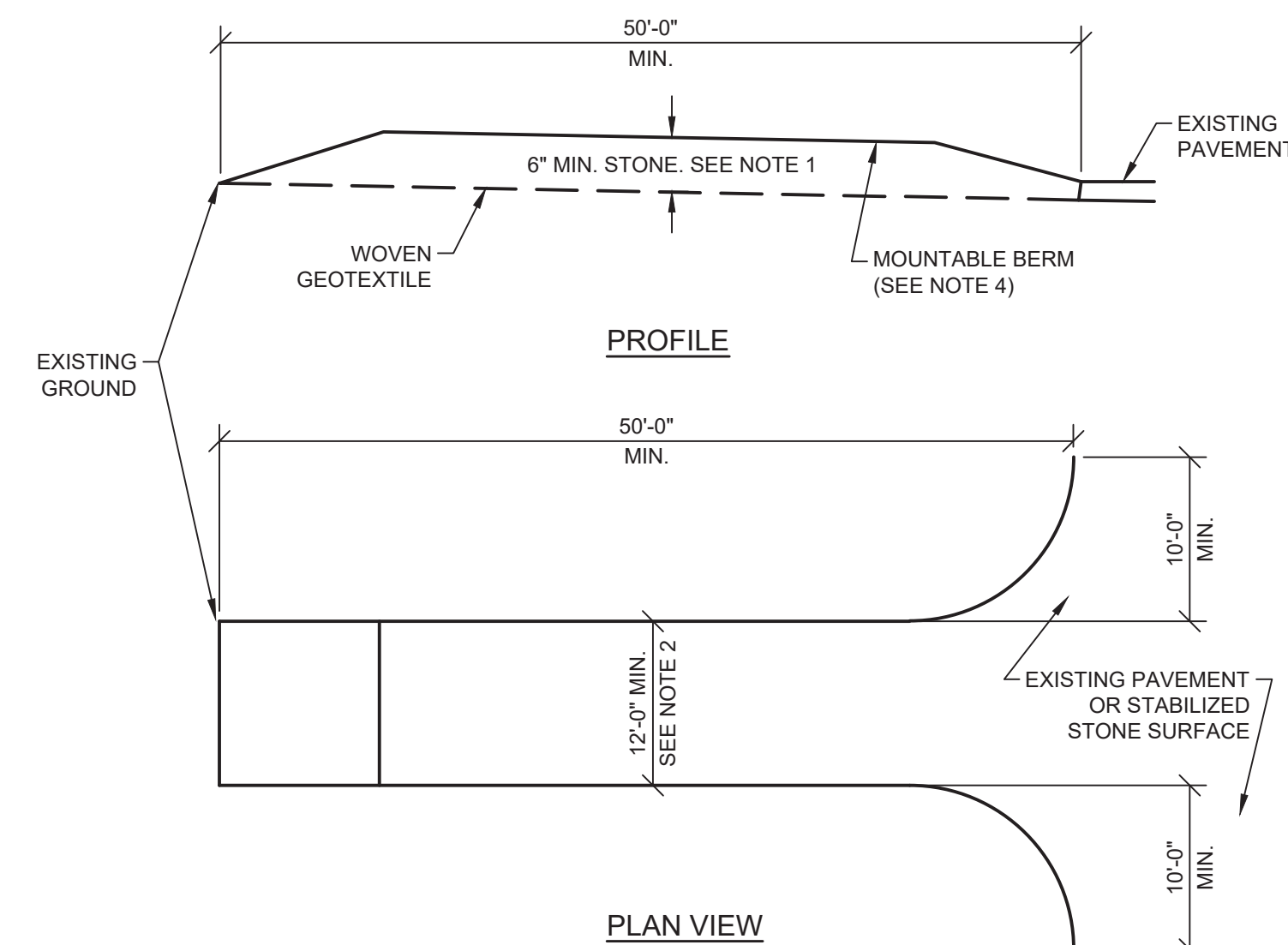


NOTES:

1. PIT DIMENSIONS ARE VARIABLE.
2. THE STANDPIPE SHALL BE CONSTRUCTED BY PERFORATING A 12-24" DIAMETER CORRUGATED OR PVC PIPE.
3. A BASE OF NYS DOT #2 OR EQUIVALENT AGGREGATE SHALL BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHALL BE BACKFILLED WITH NYS DOT #2 OR EQUIVALENT AGGREGATE.
4. THE STANDPIPE SHALL EXTEND 12-18" ABOVE THE LIP OF THE PIT.
5. IF DISCHARGE WILL BE PUMPED DIRECTLY TO A STORM DRAINAGE SYSTEM, THE STANDPIPE SHALL BE WRAPPED WITH FILTERCLOTH BEFORE INSTALLATION. IT IS RECOMMENDED THAT 1/4"-1/2" HARDWARE CLOTH MAY BE PLACED AROUND THE STANDPIPE, PRIOR TO ATTACHING THE FILTERCLOTH.

DEWATERING SUMP PIT DETAIL

NOT TO SCALE



STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

NOTES:

1. STONE SIZE SHALL BE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THE WIDTH SHALL BE TWELVE (12) FT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FT IF SINGLE ENTRANCE TO SITE.
3. WOVEN GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR EXISTING ON SITE PAVEMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.

RECORD DRAWINGS

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RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By:
Date: 10/29/2021



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2	10/29/2021	RECORD DRAWING	SDD
1	05/22/2020	ISSUED FOR BID	PAT
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PRUDENT ENGINEERING
6390 F Rd. Syracuse, NY 13057
P: (315) 748-7700
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ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

CIVIL
EROSION & SEDIMENT CONTROL DETAILS

FILE NO. 202.072.03	C-503
DATE NOVEMBER 2019	

GENERAL NOTES:

- 1. ALL ELEVATIONS ARE IN FEET.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PERTINENT TO THE WORK OF THIS CONTRACT IN THE FIELD.
3. THE CONTRACTOR SHALL MAINTAIN THE FLOW IN THE EXISTING SEWERS AT ALL TIME.
4. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS.
5. THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, SIGNS, AND OTHER PRIVATE OR PUBLIC PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISTURBED AS DETERMINED BY THE OWNER'S REPRESENTATIVE.
6. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT FOR WORK LIMITS AND NEW WORK. AS-BUILT PLANS SHALL BE PROVIDED BY THE CONTRACTOR AND REVIEWED BY THE OWNER AND ENGINEER.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK AND DISRUPTIONS WITH GOVERNING AGENCIES.
10. ALL PHYSICAL FEATURES, INDIVIDUAL TREES, LANDSCAPING OR UTILITY LOCATIONS COULD NOT BE POSSIBLY SHOWN ON THE CONTRACT DRAWINGS. EACH BIDDER IS ENCOURAGED TO PERSONALLY INSPECT ALL AREAS OF NEW WORK, IN ORDER TO ENSURE FAMILIARITY WITH THE PHYSICAL LAYOUT OF THE AREA AND THE REQUIREMENTS OF THE WORK.

CONTROL OF WATER NOTES:

- 1. CONTRACTOR SHALL SUBMIT FOR APPROVAL A DEWATERING PLAN AT LEAST 10 DAYS PRIOR TO COMMENCEMENT OF WORK.

STRUCTURAL NOTES:

- 1. THE INTENT OF THE NOTES IS TO DEFINE THE GENERAL STRUCTURAL DESIGN CRITERIA USED FOR THIS PROJECT AND PROVIDE FURTHER SPECIFIED DETAILS TO THE CONTRACTOR. FURTHER DESCRIPTION, RELATED MATTERS AND DETAILED SPECIFICATIONS ARE INCLUDE ELSEWHERE.
2. REFERENCE CODES:
A. INTERNATIONAL BUILDING CODE (IBC), 2015, AS ADOPTED BY NEW YORK STATE.
B. ACI 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
C. ACI 350-06, CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES.
D. MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, ASCE 7-10.
3. THESE DRAWINGS DO NOT INCLUDE MEANS AND METHODS FOR CONSTRUCTION SAFETY OR TEMPORARY CONSTRUCTION SUPPORTS. BRACE STRUCTURES AND PIPE INFRASTRUCTURE UNTIL ALL PERMANENT STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED.
4. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING OR FIELD DIMENSIONS AND EXISTING CONDITIONS PRIOR TO COMMENCING WITH THE CONSTRUCTION WORK. ALL INFORMATION THAT DIFFERS FROM THE CONTRACT DOCUMENTS SHALL BE DENOTED ON ALL APPROPRIATE SHOP DRAWING SUBMITTALS BEFORE SUBMISSION TO ENGINEER FOR APPROVAL.
5. CONCRETE MIXES REQUIRED FOR THIS PROJECT INCLUDE THE FOLLOWING (NORMAL WEIGHT CONCRETE UNLESS NOTED-SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR EACH MIX):
6. THE MINIMUM CONCRETE COVER AND TYPE OF REINFORCING FOR THIS PROJECT:
7. IF REQUIRED, ALL REINFORCING SPLICES SHALL BE STAGGERED. SPLICES AND EMBEDMENT FOR REINFORCING BARS SHALL CONFORM WITH CLASS "B" TENSION LAP SPLICE PER ACI 318-14R.
8. MINIMUM REINFORCING LAP LENGTH SHALL BE 47 BAR DIAMETERS UNLESS SPECIFIED OTHERWISE ON THE PLANS.
9. THE CONTRACTOR SHALL SUBMIT, FOR APPROVAL, CONCRETE PLACEMENT SEQUENCE FOR ALL CONCRETE WORK AND LOCATIONS OF ALL CONCRETE CONSTRUCTION JOINTS NOT SHOWN ON THESE DRAWINGS. THIS INFORMATION SHALL BE APPROVED BEFORE CONCRETE PLACEMENT CAN PROCEED. THE CONSTRUCTION OF CONCRETE JOINTS SHALL CONFORM TO THE CONTRACT DOCUMENTS.
10. AN APPROVED CORROSION INHIBITOR ADDITIVE AND WATERPROOFING ADMIXTURE IS REQUIRED FOR GRIT CHAMBER CONCRETE MIX.
11. ALL CONCRETE MATERIAL SOURCES SHALL BE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYS DOT) APPROVED. SUBMIT LATEST RECORD COPIES OF NYS DOT CERTIFICATION LETTERS.

Table with 3 columns: DESCRIPTION, MINIMUM 14 DAYS STRENGTH (PSI), MINIMUM 28 DAYS STRENGTH (PSI). Rows include GRIT CHAMBER BOTTOM SLAB, GRIT CAMBER WALLS, GRIT CHAMBER TOP SLAB.

Table with 3 columns: DESCRIPTION, CONCRETE COVER, REINFORCING TYPE. Rows include GRIT CHAMBER BOTTOM SLAB, GRIT CHAMBER WALLS, GRIT CHAMBER TOP SLAB.

- 12. THE CONCRETE MIX SHALL BE TESTED PER POUR PER DAY. THE TESTS SHALL CHECK AIR ENTRAINMENT, SLUMP, AND COMPRESSIVE STRENGTH. FOR COMPRESSIVE STRENGTH TWO (2) CYLINDERS SHALL BE TAKEN AND TESTED AT FOURTEEN (14) DAYS AND TWO (2) CYLINDERS SHALL BE TAKEN AND TESTED AT TWENTY-EIGHT (28) DAYS.
13. CONTRACTOR SHALL NOT BACKFILL AGAINST EXTERIOR WALLS OF GRIT CHAMBER UNTIL A MINIMUM 3,000 PSI CONCRETE COMPRESSIVE STRENGTH IS ACHIEVED FOR BACKFILLED WALLS.
14. CONTRACTOR SHALL REFER TO SPECIFICATION FOR TIGHTNESS TESTING OF ENVIRONMENTAL ENGINEERING CONCRETE CONTAINMENT STRUCTURES (ACI 350.1-10) FOR THE WATER TIGHTNESS PERFORMANCE REQUIREMENTS. PERFORMANCE SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER AND ENGINEER. ANY REPAIRS SHALL BE TO THE SATISFACTION OF THE OWNER AND ENGINEER. ADDITIONAL TESTING IN ACCORDANCE WITH ACI 350.1-10 MAY BE REQUIRED AFTER ANY REPAIRS. THESE SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
15. CONTRACTOR SHALL PROVIDE TEMPORARY EXCAVATION, STRUCTURE, AND UTILITY / PIPE INFRASTRUCTURE SUPPORT PLAN SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER FOR OWNER AND ENGINEER APPROVAL PRIOR TO EXCAVATION WORK.

LEGEND:

- UNDISTURBED SOIL
ROCK
SELECT FILL
GENERAL FILL
BAR GRATING
CONCRETE

ABBREVIATIONS:

- A.B. ANCHOR BOLT
ADJ. ADJUSTABLE
ADD'L ADDITIONAL
AFF ABOVE FINISHED FLOOR
AL ALUMINUM
ALT ALTERNATE
ALUM ALUMINUM
APPROX APPROXIMATE
ARCH ARCHITECTURAL
B/ BOTTOM OF, BACK OF
B / B BACK TO BACK
BAL BALANCE
BETW BETWEEN
BITUM. BITUMINOUS
B.L. BUILDING LINE
BLDG BUILDING
BLK BLOCK
BM BEAM
BOT BOTTOM
B-PL BASE PLATE
BRG BEARING
BUR BUILT UP ROOF
BSMT. BASEMENT
C CHANNEL STRUCTURAL SHAPE
CANT'L CANTILEVER
C.J. CONSTRUCTION JOINT
CLR CLEAR
& CENTERLINE
C.I.P. CAST-IN-PLACE
C.M.U. CONCRETE MASONRY UNIT
COL COLUMN
COMP COMPRESSIBLE
CONC CONCRETE
CONN CONNECTION
CONST CONSTRUCTION
CONT CONTINUOUS
CSTG CASTING
C/C CENTER TO CENTER
CTR CENTER
DET DETAIL
DFT DRY FILM THICKNESS
DIA DIAMETER
DIAG DIAGONAL
DIM DIMENSION
DIST. DISTANCE
DL DEAD LOAD
DN DOWN
do DITTO
DP DEEP
DWG DRAWING
DWL DOWEL
E EAST
EA EACH
E.F. EACH FACE
E.J. EXPANSION JOINT
EL ELEVATION
ELEC ELECTRICAL
EMB EMBEDMENT, EMBEDDED
ENCL ENCLOSURE
EQ EQUAL
EQP EQUIPMENT
E.S. EACH SIDE
E.W. T&B EACH WAY TOP & BOTTOM
EXIST EXISTING
EXP EXPANSION
EXT EXTERIOR
F.B. FLOOR BEAM
F.D. FLOOR DRAIN
FDN FOUNDATION
FE FIRE EXTINGUISHER
F.F. FAR FACE
FIN FINISH
FL FLOOR
FRP FIBERGLASS REINFORCED PLASTIC
FT FOOT
FTG FOOTING
GA GAGE
GALV GALVANIZE
G.B. GRADE BEAM
GR GRADE
GRD. GROUND
GRG GRATING
GYP BD GYPSUM BOARD
H HIGH
HGT HEIGHT
HOR HORIZONTAL
H.P. HIGH POINT
HR. HANDRAIL
H.S. HIGH STRENGTH
HSS HOLLOW STRUCTURAL SECTION
HT. HEIGHT
HVAC HEATING, VENTILATING & AIR CONDITIONING
INSUL. INSULATION
INT. INTERIOR
I.D. INSIDE DIAMETER
I.F. INSIDE FACE
INV INVERT
JT JOINT
K. KIP (1000 POUNDS)
K.O. KNOCK OUT
L ANGLE (STRUCTURAL SHAPE)
LB POUND
LG. LONG
L.L. LIVE LOAD
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LLBB LONG LEGS BACK TO BACK
LLO LONG LEGS OUTSTANDING
LOC LOCATION
LONG. LONGITUDINAL
LP. LOW POINT
L.W. LONG WAY, LIGHT WEIGHT
MAS MASONRY
MAX MAXIMUM
MECH MECHANICAL
MFR MANUFACTURE, MANUFACTURER
M.H. MANHOLE
MID MIDDLE
MIN MINIMUM
MK MARK
MO MASONRY OPENING
N NORTH
NA NOT APPLICABLE
N.F. NEAR FACE
NO. NUMBER
N.T.S. NOT TO SCALE
O.C. ON CENTER
O.D. OUTSIDE DIAMETER
O.F. OUTSIDE FACE
OH. OVERHEAD
OPNG OPENING
OPP OPPOSITE
P.C.O. PILE CUT OFF
PL PLATE
P.S.F. POUNDS PER SQUARE FOOT
PVC POLYVINYL CHLORIDE
R RADIUS, RISER
R.D. ROOF DRAIN
REINF REINFORCEMENT
REQD REQUIRED
RM ROOM
R.O. ROUGH OPENING
S SCHEDULE
SECT SECTION
SF SQUARE FEET
SHT SHEET
SIM SIMILAR
SL SLAB
SLV SHORT LEG VERTICAL
SLBB SHORT LEGS BACK TO BACK
SLO SHORT LEGS OUTSTANDING
SP SPIRAL
SPA SPACES OR SPACING
SPEC SPECIFICATION
SQ SQUARE
SUP SUPPORT
S.STL. STAINLESS STEEL
STD STANDARD
STIR STIRRUP
STL STEEL
STR STRUCTURAL
S.W. SHORT WAY
SYM SYMMETRICAL
T&B TOP AND BOTTOM
TEMP. TEMPORARY
THK THICK
TOC TOP OF CONCRETE
TOM TOP OF MASONRY
TOS TOP OF STEEL
THK THICK
TOP OF TOP OF
TR TREAD
TYP TYPICAL
U.O.N. UNLESS OTHERWISE NOTED
VERT VERTICAL
W WIDE FLANGE STRUCTURAL SHAPE, WIDTH, WEST
W/O WITHOUT
WP WORK POINT
WT. WEIGHT
WSE WATER SURFACE ELEVATION

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Table with columns: IN CHARGE OF, DESIGNED BY, CHECKED BY, DRAWN BY, NO., DATE, REVISION, INT.

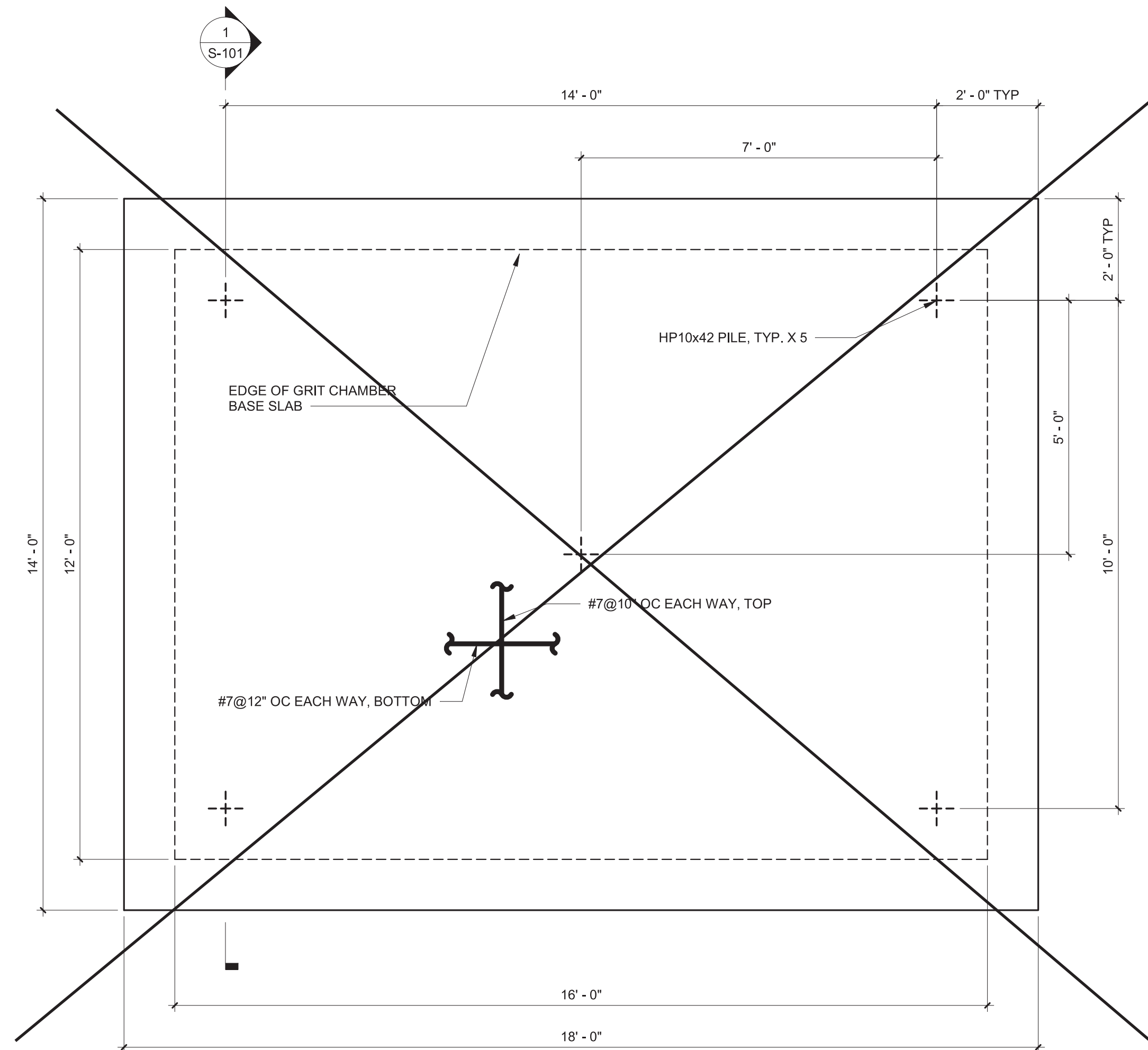
PRUDENT ENGINEERING logo and contact information: 6390 F Rd., Syracuse, NY, 13057, Phone: (315) 748-7700, Fax: (315) 748-7780.

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

STRUCTURAL
GENERAL NOTES, ABBREVIATIONS & SYMBOLS

Table with columns: FILE NO., DATE, S-001, NOVEMBER 2019.

RECORD DRAWINGS
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
By: [Signature]
Date: 10/29/2021

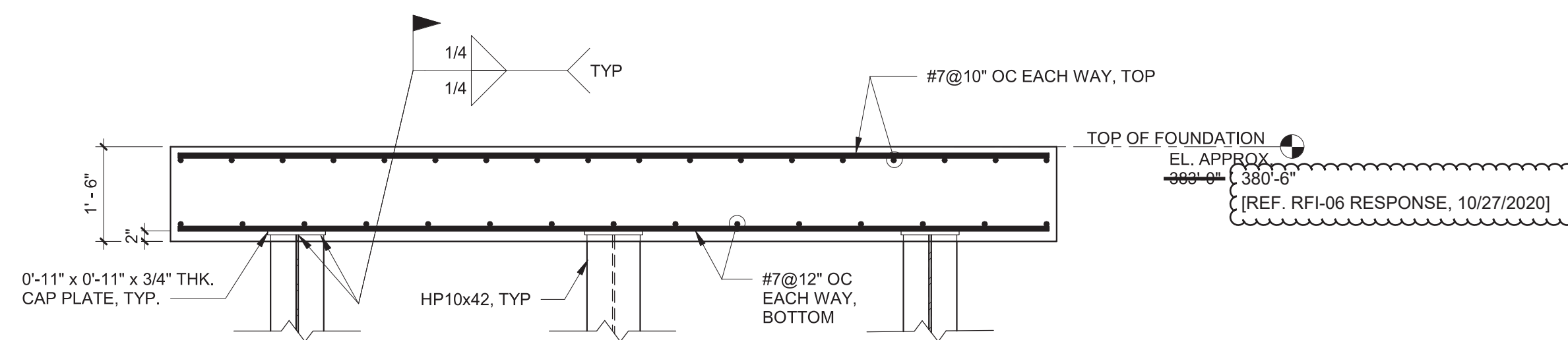
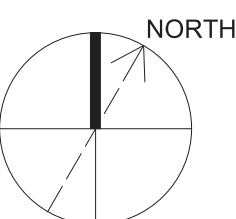


GRIT CHAMBER ELIMINATED BY
MODIFICATION NO. 1, 6/10/2021

GRIT CHAMBER FOUNDATION PLAN

1/2" = 1'-0"

2' 1' 0' 1' 2'



1 SECTION

1/2" = 1'-0"

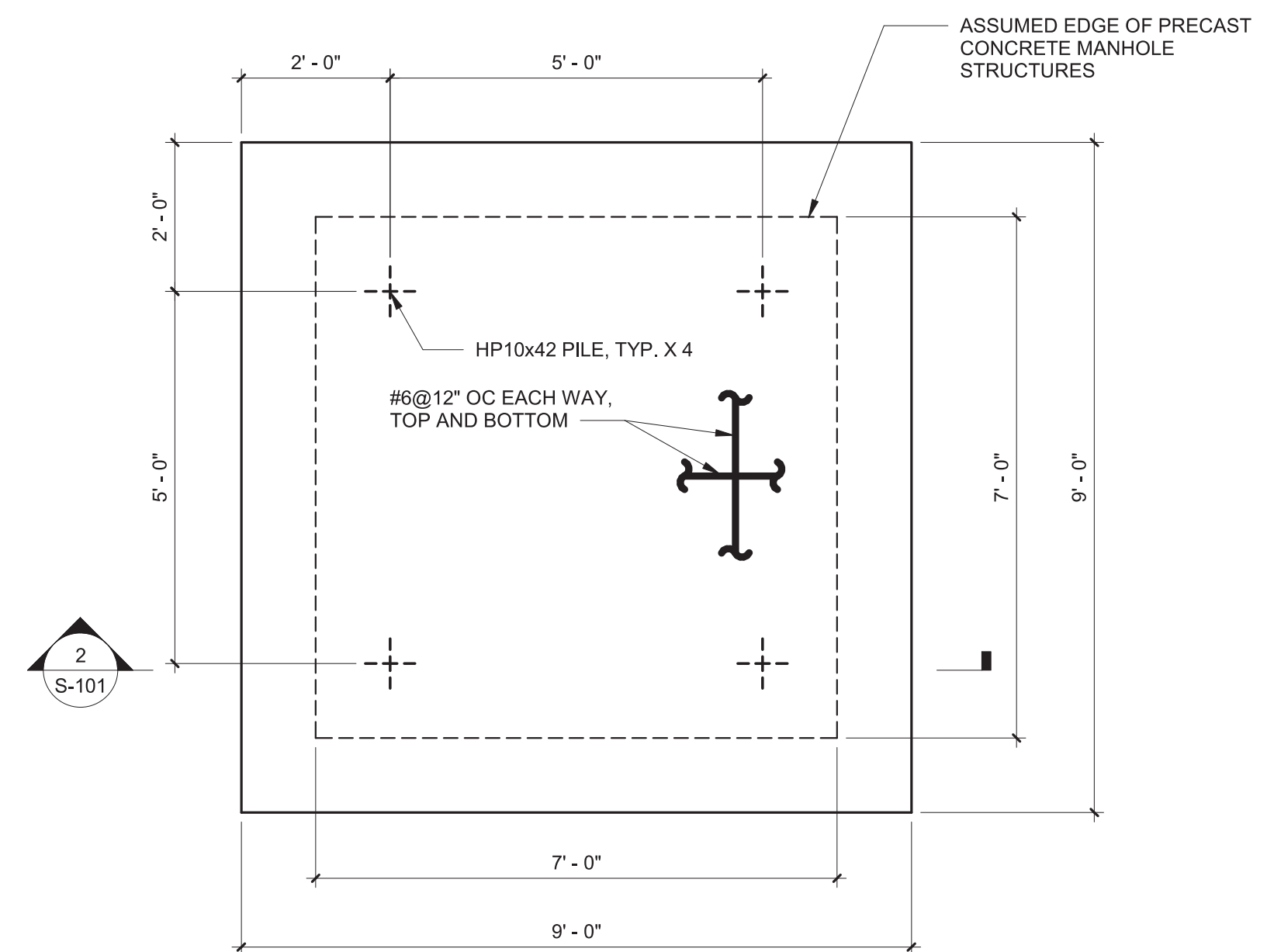
2' 1' 0' 1' 2'

STRUCTURAL PILE NOTES:

1. VERIFY IN FIELD EXISTING CONDITIONS AND COORDINATE WITH APPROVED PRECAST STRUCTURE DIMENSIONS AND ESTABLISHED ELEVATIONS PRIOR TO PLACEMENT OF CONCRETE.
2. FURNISH ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, AND TESTING PILES AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
3. THE PILES SHALL BE INSTALLED IN ACCORDANCE WITH TECHNICAL SPECIFICATION 31 62 16.16 - H-PILE END BEARING, AND DRIVEN CONTINUOUSLY UNTIL BEDROCK REFUSAL IS ENCOUNTERED, ESTIMATED TO BE AT A DEPTH BELOW EXISTING GRADE OF 90'-0".
4. EXAMINE THE AREAS AND CONDITIONS UNDER WHICH PILES ARE TO BE INSTALLED AND NOTIFY THE ENGINEER IN WRITING OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK.

STRUCTURAL CONCRETE NOTES:

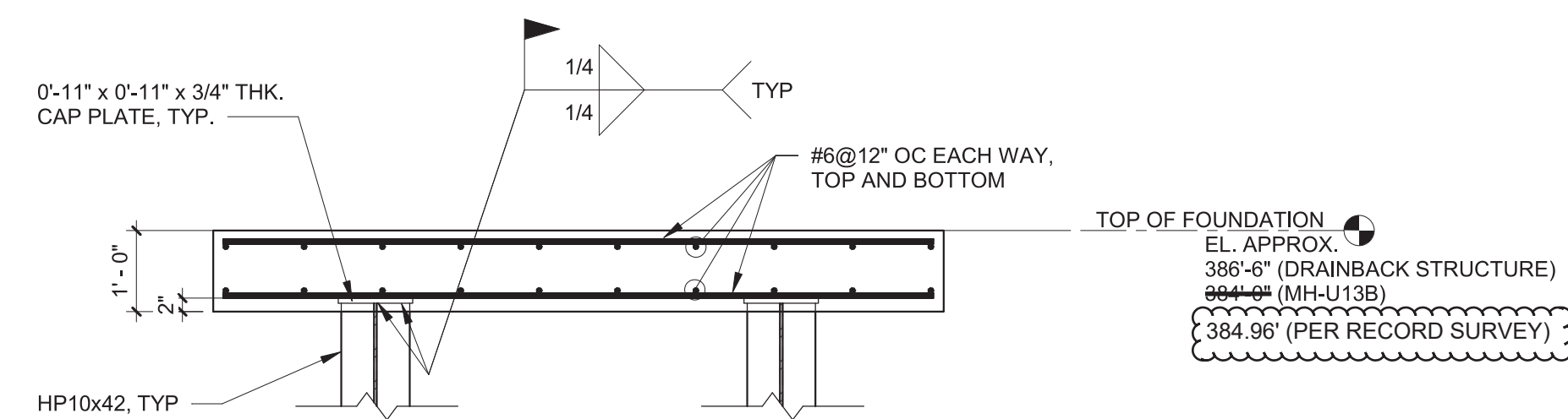
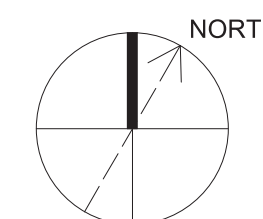
1. PROVIDE CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (f_c) OF 4,000 PSI AND A MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO OF 0.45.
2. PROVIDE AIR ENTRAINMENT IN CONCRETE EXPOSED TO FREEZING & THAWING CONDITIONS, INCLUDING DURING CONSTRUCTION, AT A DOSAGE OF 6% +/- 1.5%.



DRAINBACK STRUCTURE & MH-U13B FOUNDATION PLAN

1/2" = 1'-0"

2' 1' 0' 1' 2'



2 SECTION

1/2" = 1'-0"

2' 1' 0' 1' 2'



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IN CHARGE OF	T. KIVISTO			
DESIGNED BY	B. LITTLE			
CHECKED BY	T. KIVISTO	2	10/29/2021	RECORD DRAWING
DRAWN BY	T. HOLLIS	1	05/22/2020	ISSUED FOR BID
		0	11/26/2019	ISSUED FOR REGULATORY REVIEW
		NO.	DATE	REVISION
				INT.

O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY
333 WEST WASHINGTON STREET SYRACUSE, NY 13202



ONONDAGA COUNTY DEPARTMENT OF
WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

STRUCTURAL
FOUNDATION PLANS & SECTIONS

RECORD DRAWINGS
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

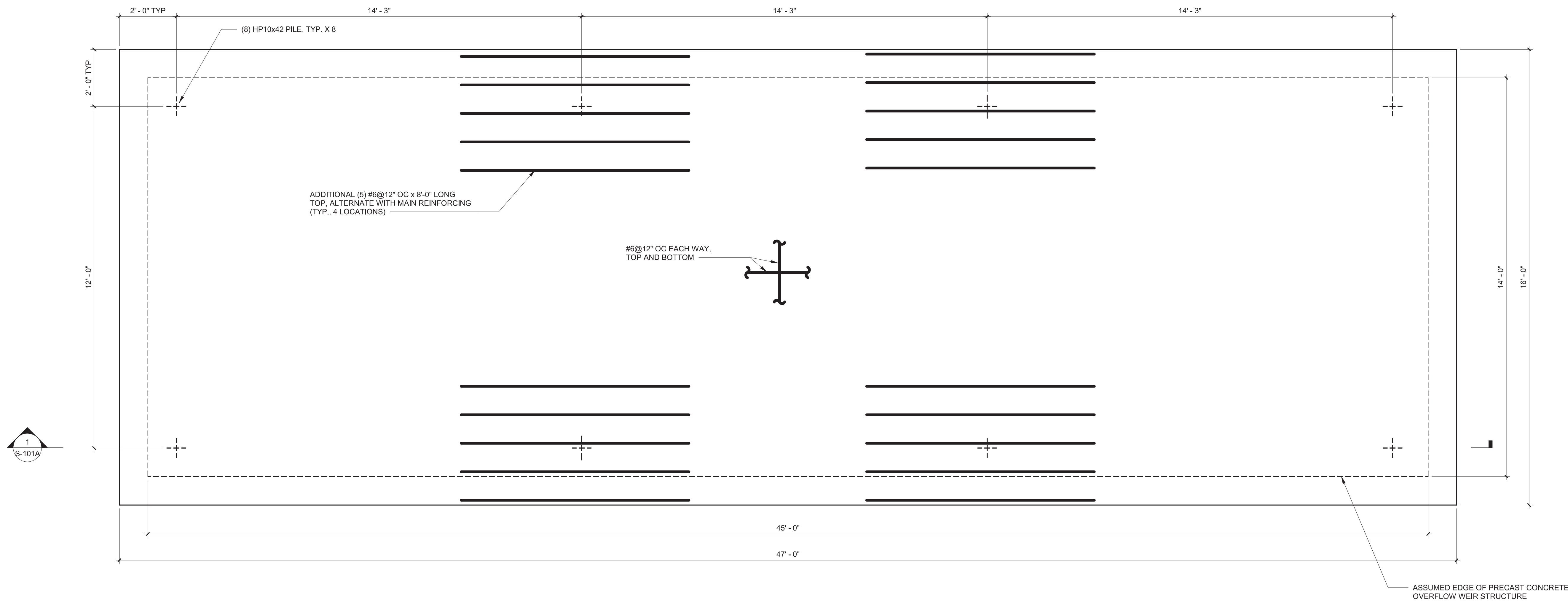
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



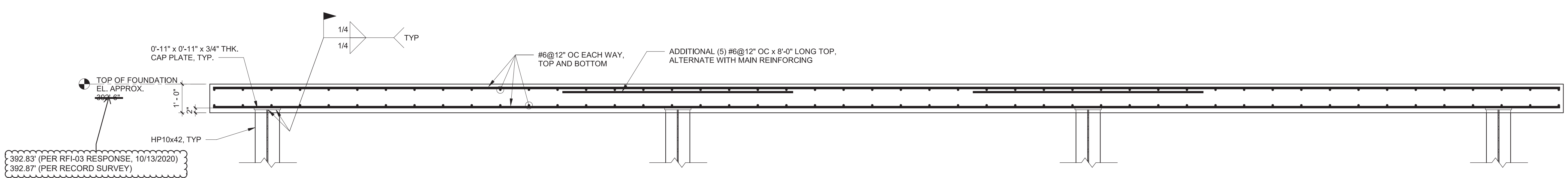
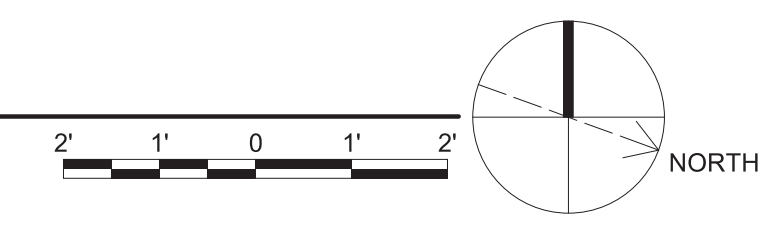
By: *[Signature]*
Date: 10/29/2021

FILE NO.
115.67266
DATE
11/26/2019

S-101



OVERFLOW STRUCTURE FOUNDATION PLAN
1/2" = 1'-0"



1 SECTION
1/2" = 1'-0"

STRUCTURAL PILE NOTES:

1. VERIFY IN FIELD EXISTING CONDITIONS AND COORDINATE WITH APPROVED PRECAST STRUCTURE DIMENSIONS AND ESTABLISHED ELEVATIONS PRIOR TO PLACEMENT OF CONCRETE.
2. FURNISH ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, AND TESTING PILES AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
3. THE PILES SHALL BE INSTALLED IN ACCORDANCE WITH TECHNICAL SPECIFICATION 31 62 16.16 - H-PILE END BEARING, AND DRIVEN CONTINUOUSLY UNTIL BEDROCK REFUSAL IS ENCOUNTERED ESTIMATED TO BE AT A DEPTH BELOW EXISTING GRADE OF 90'-0".
4. EXAMINE THE AREAS AND CONDITIONS UNDER WHICH PILES ARE TO BE INSTALLED AND NOTIFY THE ENGINEER IN WRITING OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK.

STRUCTURAL CONCRETE NOTES:

1. PROVIDE CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (f_c) OF 4,000 PSI AND A MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO OF 0.45.
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IN CHARGE OF	T. KIVISTO				
DESIGNED BY	B. LITTLE				
CHECKED BY	T. KIVISTO	2	10/29/2021	RECORD DRAWING	SDD
DRAWN BY	T. HOLLIS	1	05/22/2020	ISSUED FOR BID	TVK
		0	11/26/2019	ISSUED FOR REGULATORY REVIEW	TVK
		NO.	DATE	REVISION	INT.

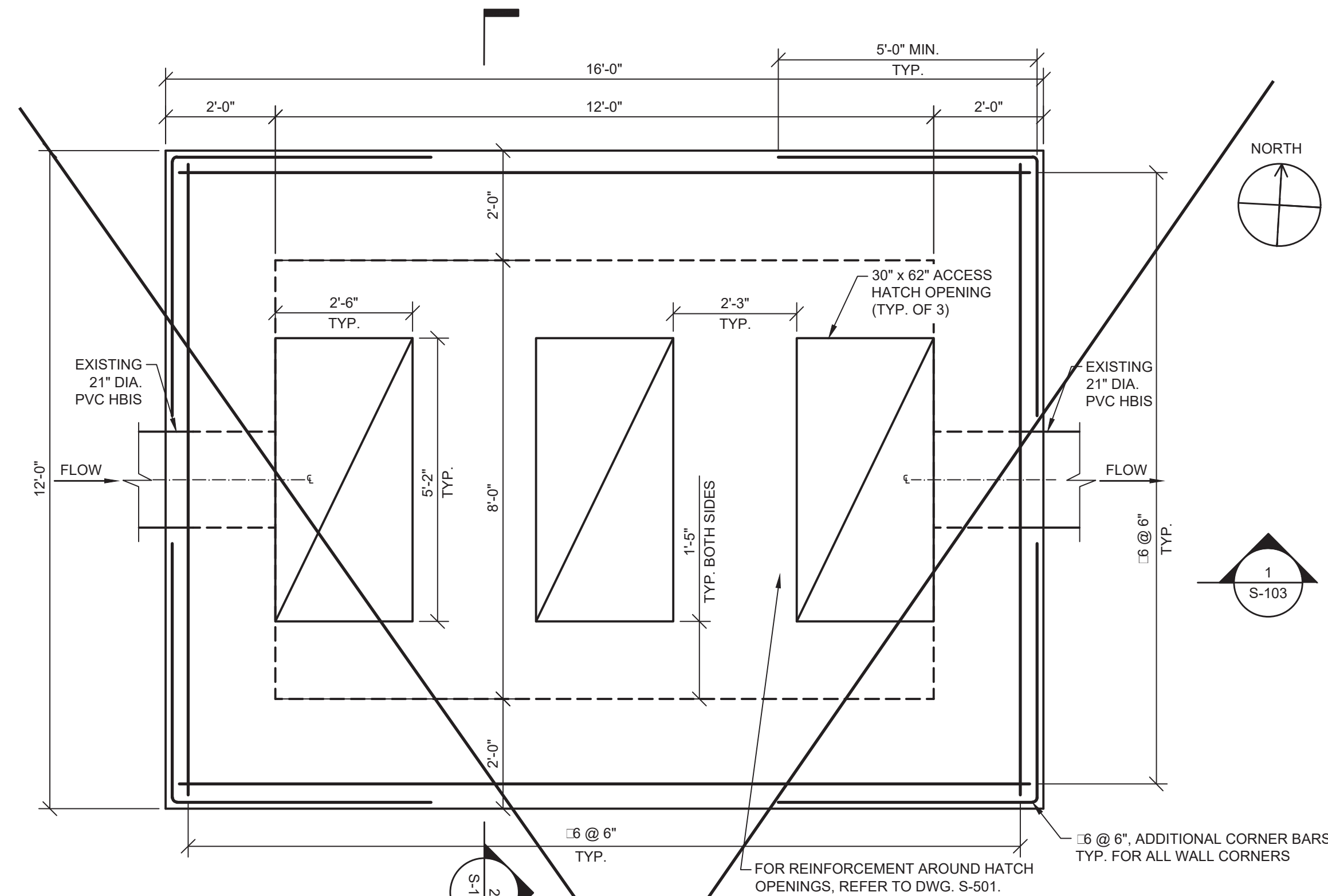
O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY
333 WEST WASHINGTON STREET SYRACUSE, NY 13202
RAMBOLL

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

STRUCTURAL
OVERFLOW STRUCTURE FOUNDATION PLAN & SECTION

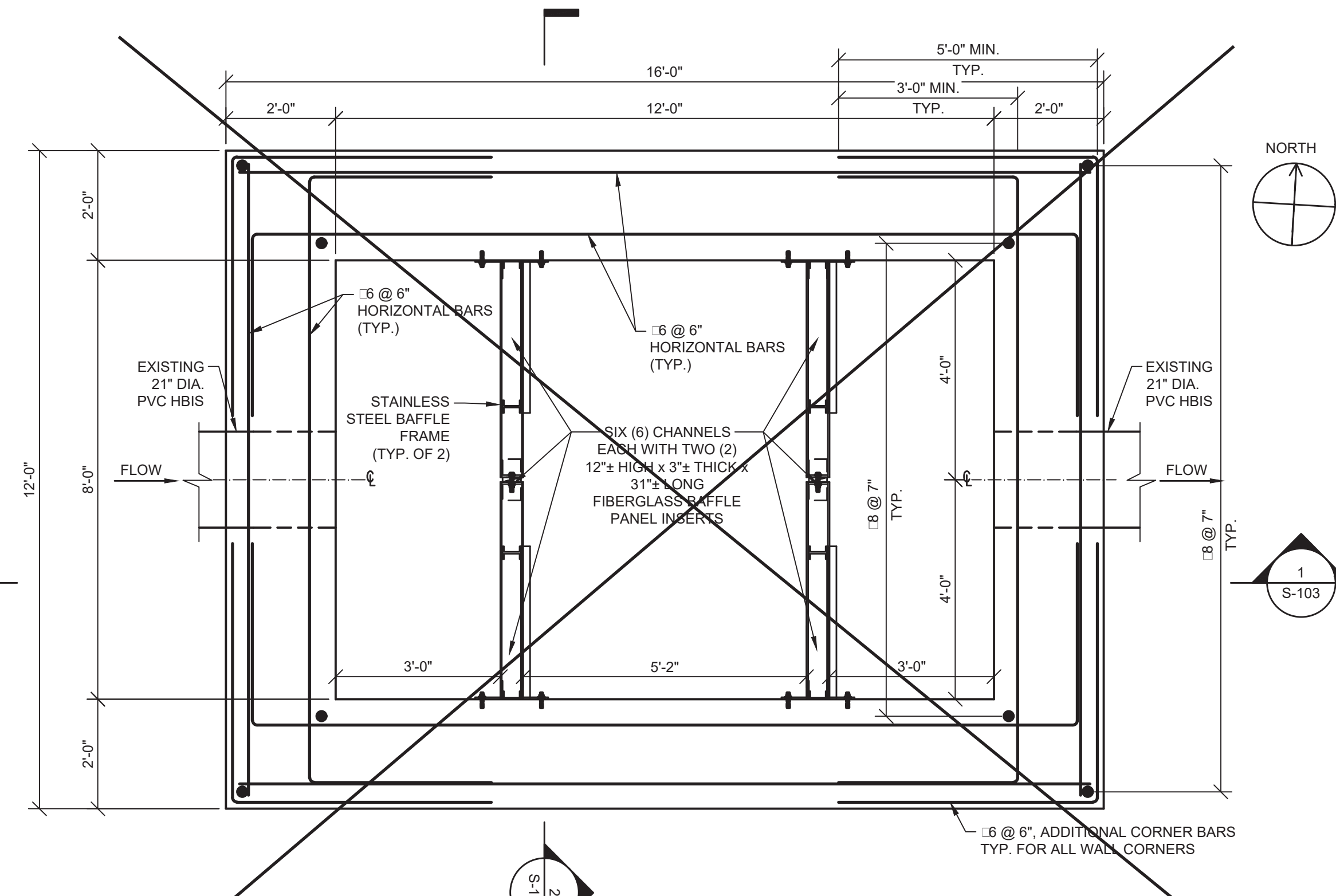
RECORD DRAWINGS
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
RAMBOLL
By: *[Signature]*
Date: 10/29/2021

FILE NO.	115.67266	S-101A
DATE	11/26/2019	



TOP SLAB PLAN AT EL. 401.50'

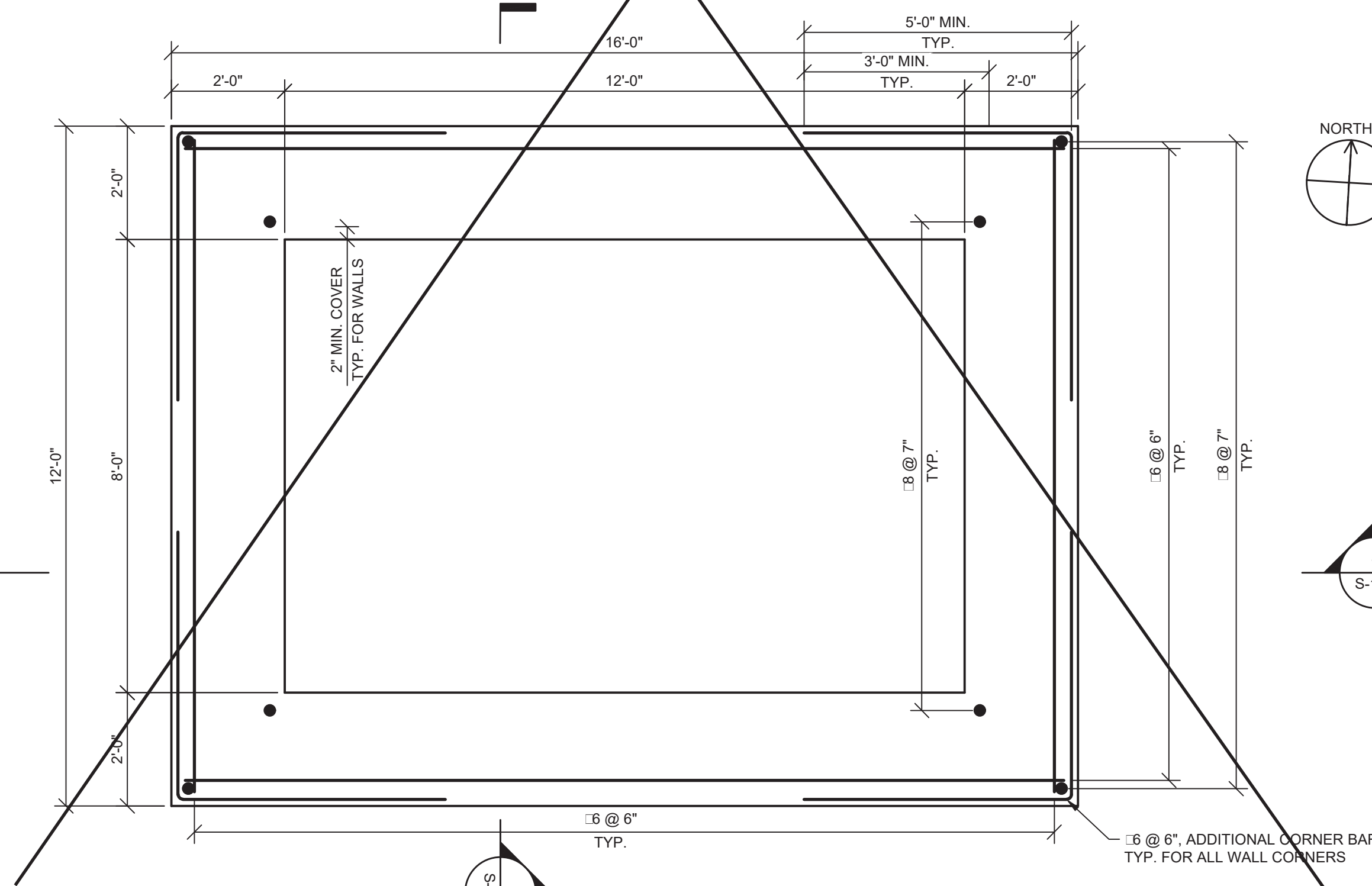
SCALE: 1/2" = 1'-0"



WALL PLAN AT EL. 387.50'

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

GRIT CHAMBER ELIMINATED BY MODIFICATION NO. 1, 6/10/2021



BOTTOM SLAB PLAN AT EL. 383.00'

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

NOTES:

- SEE DRAWING NO. S-301 FOR GRIT CHAMBER SECTION VIEWS AND ASSUMED ELEVATIONS / DATUM.

RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: *Signature*
Date: 10/29/2021



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IN CHARGE OF	D. HUFFAKER			
DESIGNED BY	K. MIERZWA, S. WANG			
CHECKED BY	J. DEBARBIERI	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. WANG	1	05/22/2020	ISSUED FOR BID
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW
		NO.	DATE	REVISION
				SDD PAT PAT INT.

PRUDENT ENGINEERING
6390 F Rd. Syracuse, NY 13057
(315) 748-7700
Fax: (315) 748-7780

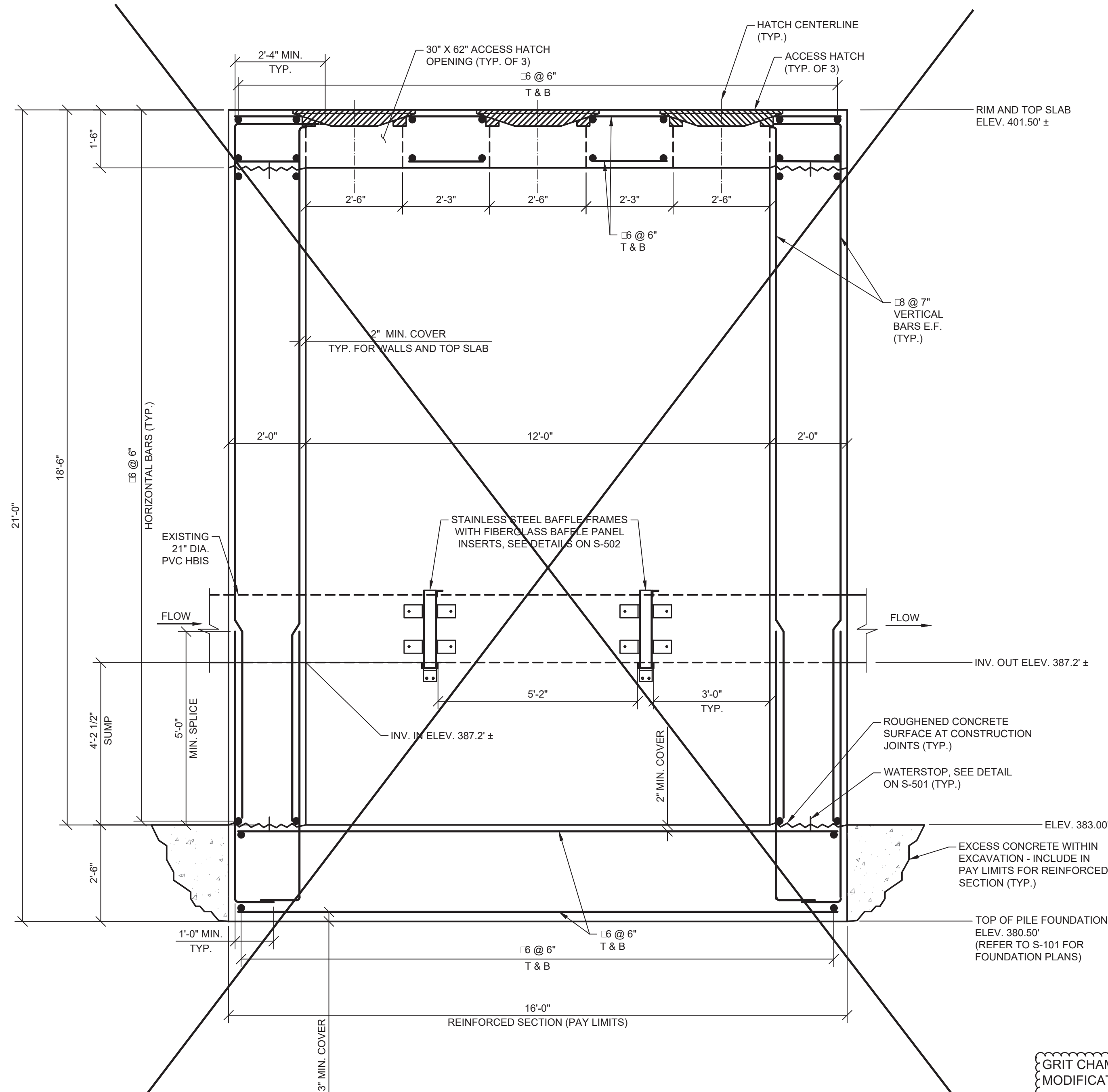
ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

STRUCTURAL

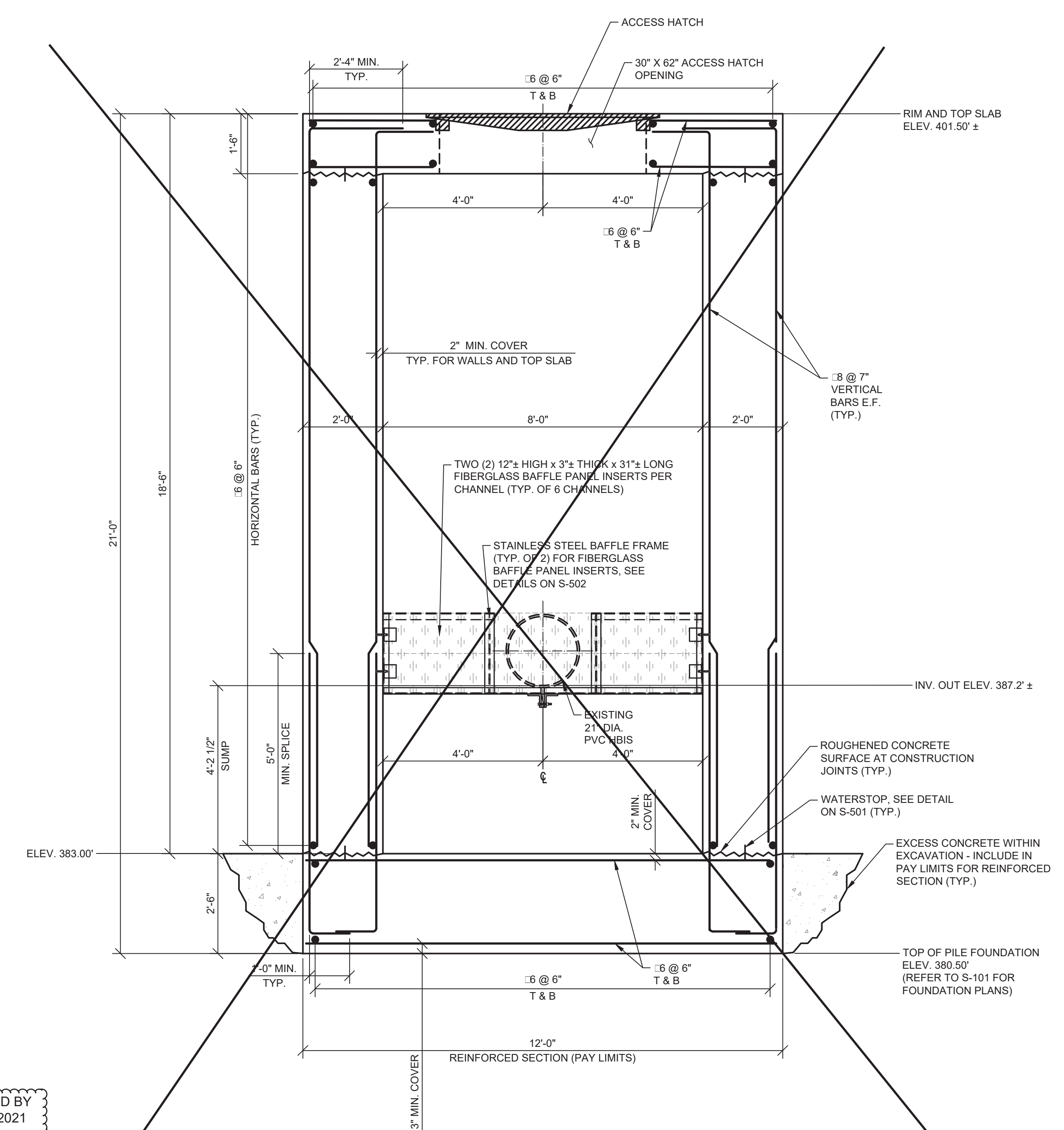
GRIT CHAMBER PLAN

FILE NO.
202.072.03
DATE
NOVEMBER 2019

S-102



GRIT CHAMBER SECTION 1
SCALE: 1/2" = 1'-0"



GRIT CHAMBER SECTION 2
SCALE: 1/2" = 1'-0"

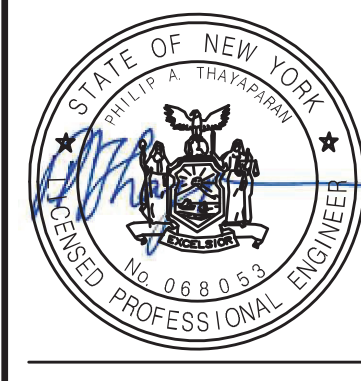
NOTES:

- SEE DRAWING NO. S-102 FOR GRIT CHAMBER PLAN VIEWS.
- ACCESS HATCHES SHALL BE DOUBLE LEAF HEAVY DUTY DUCTILE IRON, EJ COMPANY PRODUCT NO. 00821641B03 OR APPROVED EQUAL. HATCHES SHALL BE EQUIPPED WITH MANUFACTURER-INSTALLED SAFETY GRATE, "EON LOCK" AND LIFT ASSIST. EXISTING SEWER SHALL BE SUPPORTED IN PLACE WITH STRAPS OR CHAINS AND KEPT IN SERVICE DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE A PIPE SUPPORT AND EXCAVATION / STRUCTURE SUPPORT PLAN SIGNED AND SEALED BY A NYS LICENSED PROFESSIONAL ENGINEER FOR ENGINEER'S AND OWNER'S APPROVAL.
- A CONTRACTOR DEVELOPED BYPASS AND GRIT CHAMBER COMMISSIONING PLAN SHALL BE APPROVED BY OWNER AND ENGINEER PRIOR TO CUTTING EXISTING PIPE AT INSIDE FACE OF GRIT CHAMBER TO BRING IT INTO SERVICE.

RECORD DRAWINGS
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
RAMBOLL

By: *[Signature]*
Date: 10/29/2021



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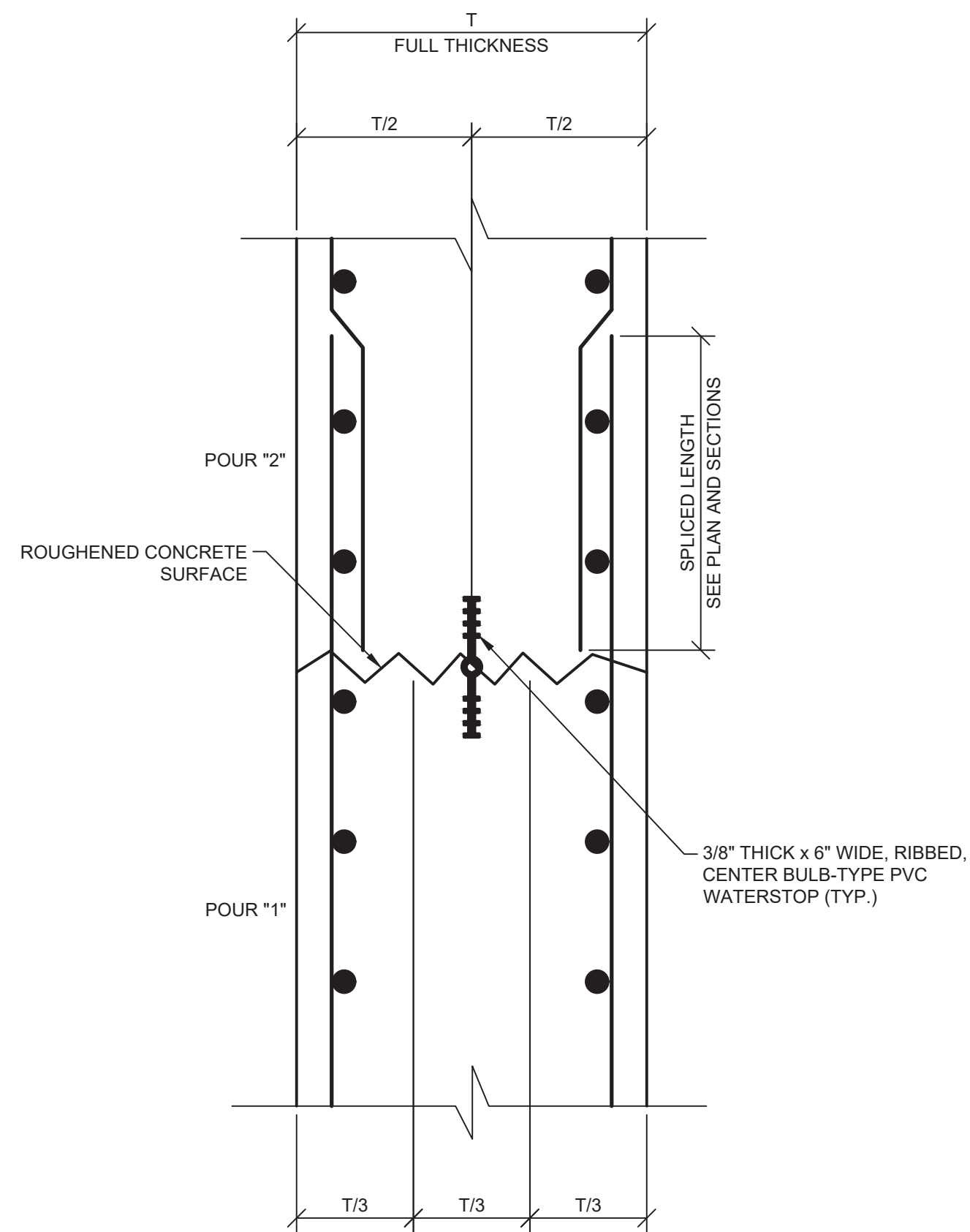
IN CHARGE OF	D. HUFFAKER			
DESIGNED BY	K. MIERZWA, S. WANG			
CHECKED BY	J. DEBARBIERI	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. WANG	1	05/22/2020	ISSUED FOR BID
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW
		NO.	DATE	REVISION
				INT.

PRUDENT ENGINEERING
6390 F Rd. P O Box (315) 748-7700
Syracuse, NY, 13057 Fax: (315) 748-7780
www.prudenteng.com

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

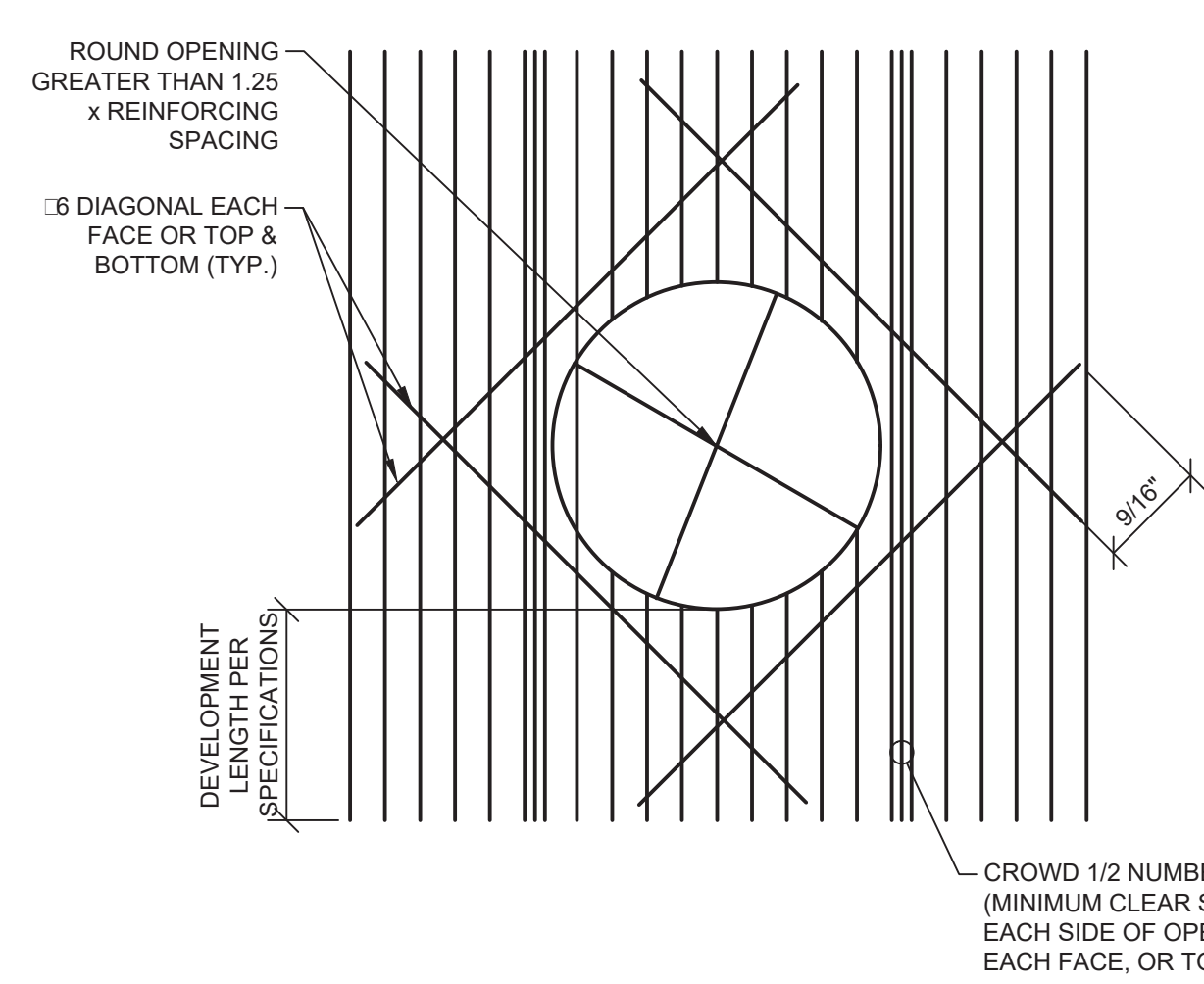
STRUCTURAL
GRIT CHAMBER SECTIONS

FILE NO.	202.072.03
DATE	NOVEMBER 2019
S-301	

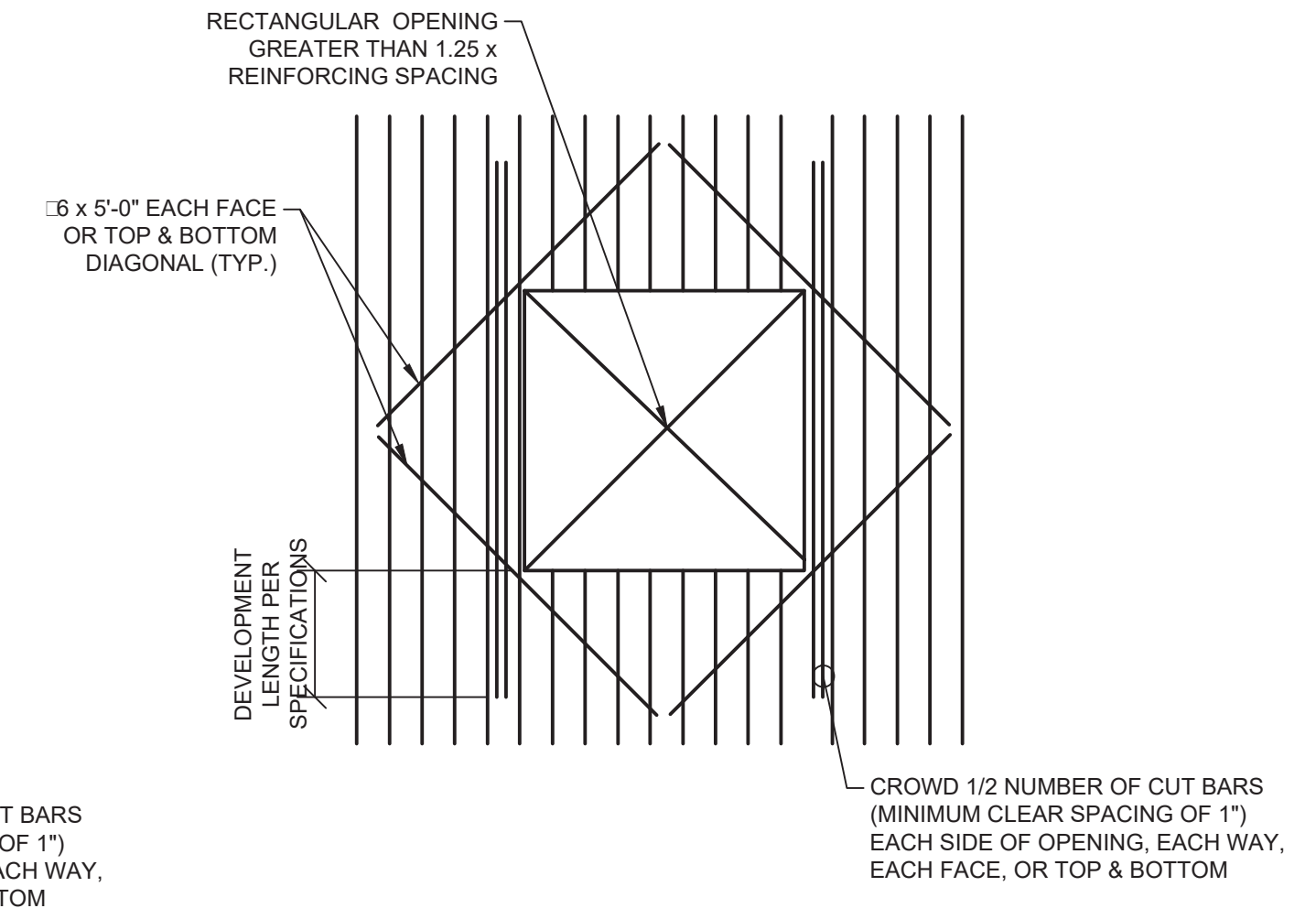


CONSTRUCTION JOINT DETAIL

SCALE: 1" = 1'-0"



CIRCULAR OPENING IN WALL SLAB DETAIL



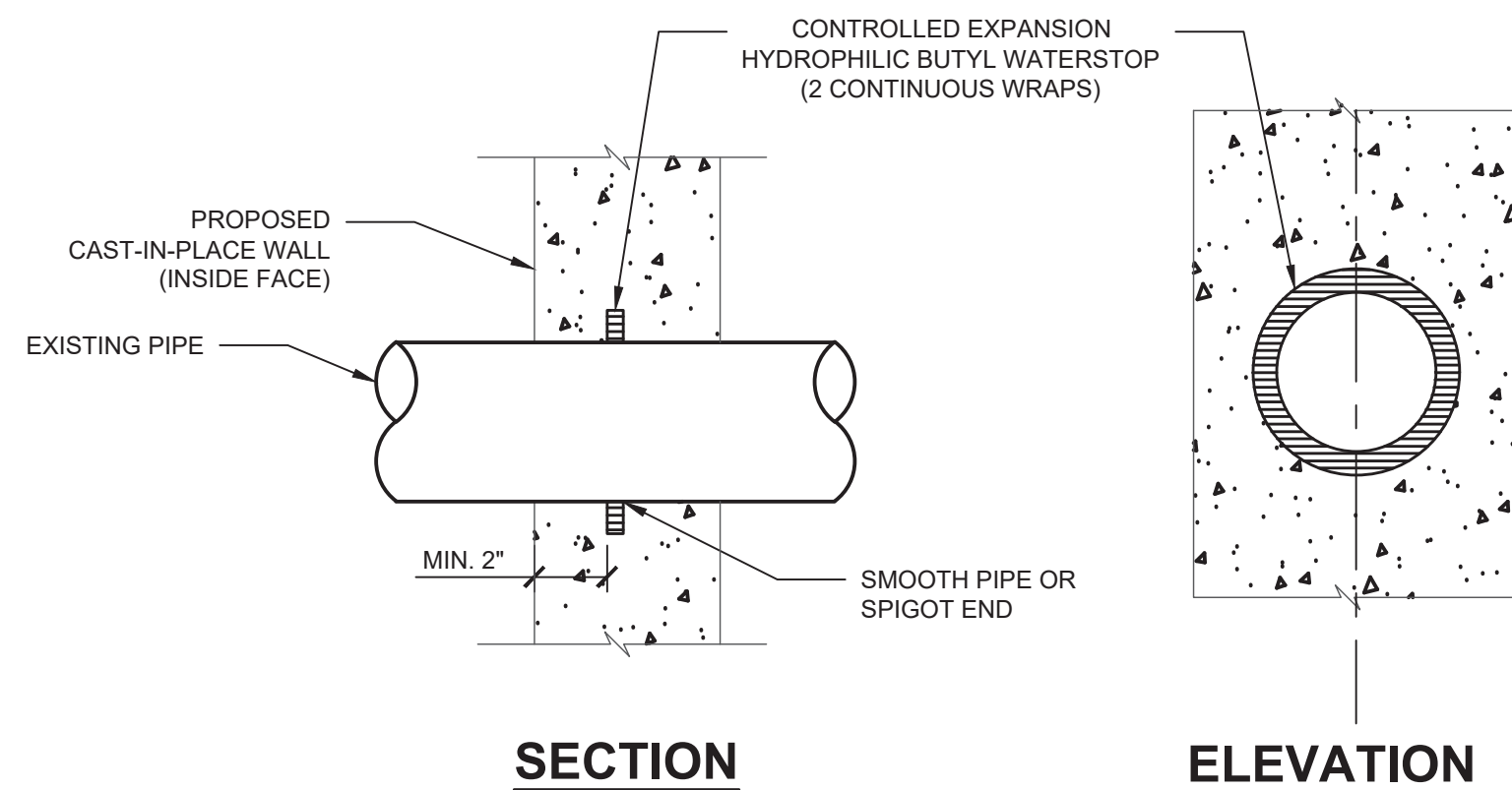
RECTANGULAR OPENING IN WALL SLAB DETAIL

NOTES:

1. BARS SHOWN IN ONE DIRECTION FOR CLARITY. INSTALL BARS IN ANOTHER DIRECTION IN SAME MANNER.
2. DETAIL TO BE USED AT ALL WALL / SLAB PENETRATIONS MEETING OPENING CRITERIA ABOVE. AT SMALLER OPENINGS, SPREAD REINFORCING AROUND OPENING.
3. CROWDED BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.
4. PROVIDE STANDARD HOOK IF FULL DEVELOPMENT LENGTH IS NOT POSSIBLE.
5. REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.

TANK WALL BLOCKOUT DETAILS

NOT TO SCALE



SECTION

ELEVATION

NOTES:

1. CLEAN PIPE SURFACE PER MANUFACTURER'S INSTRUCTIONS.
2. APPLY PRIMER TO PLASTIC AND METAL PIPE PER MANUFACTURER'S INSTRUCTIONS.
3. REBAR SHALL BE AT LEAST 3.5" ±0.5" FROM WATERSTOP.

PIPE PENETRATION WATERSTOP DETAIL

SCALE: 1" = 1'-0"

RECORD DRAWINGS

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RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By:
Date: 10/29/2021



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IN CHARGE OF	D. HUFFAKER			
DESIGNED BY	K. MIERZWA, S. WANG			
CHECKED BY	J. DEBARBIERI	2	10/29/2021	RECORD DRAWING
DRAWN BY	S. WANG	1	05/22/2020	ISSUED FOR BID
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		NO.	DATE	REVISION
				INT.

PRUDENT ENGINEERING
6390 F Rd. P (315) 748-7700
S NY, 13057 F (315) 748-7780
o o o o o o o o o o o o

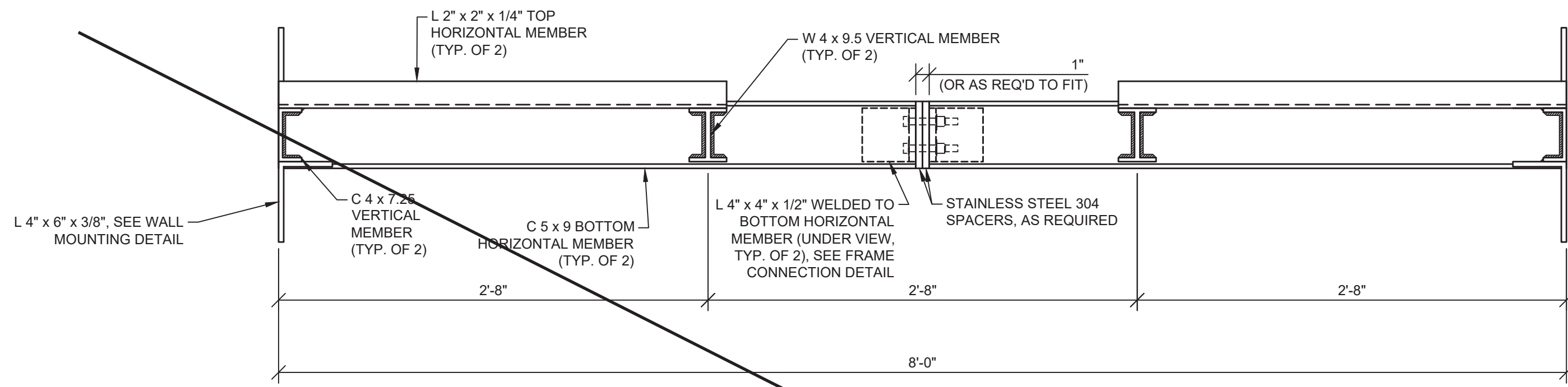
ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

STRUCTURAL

MISCELLANEOUS DETAILS

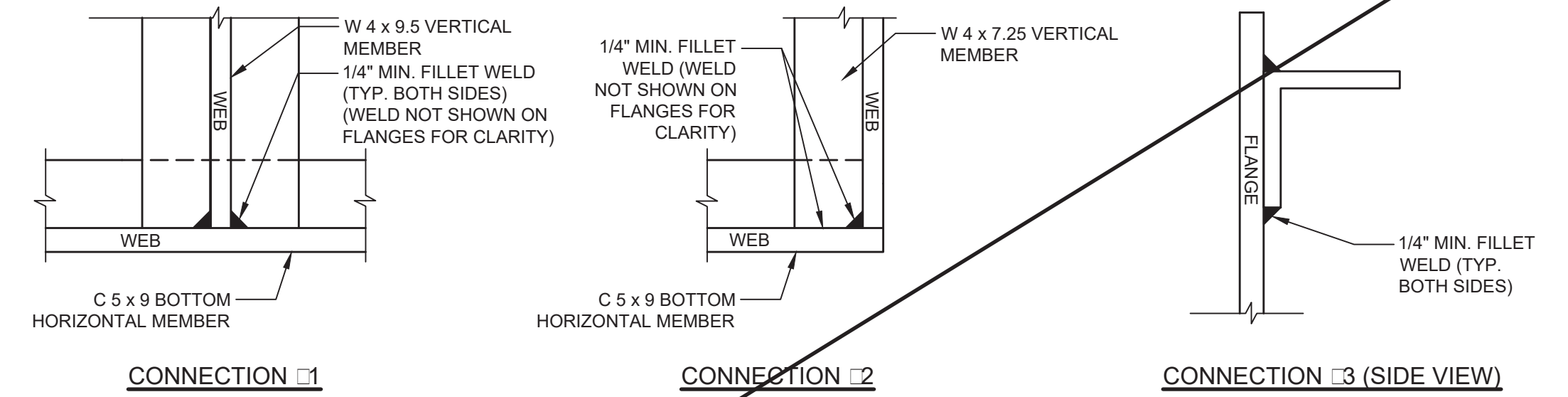
FILE NO.	202.072.03
DATE	NOVEMBER 2019

S-501



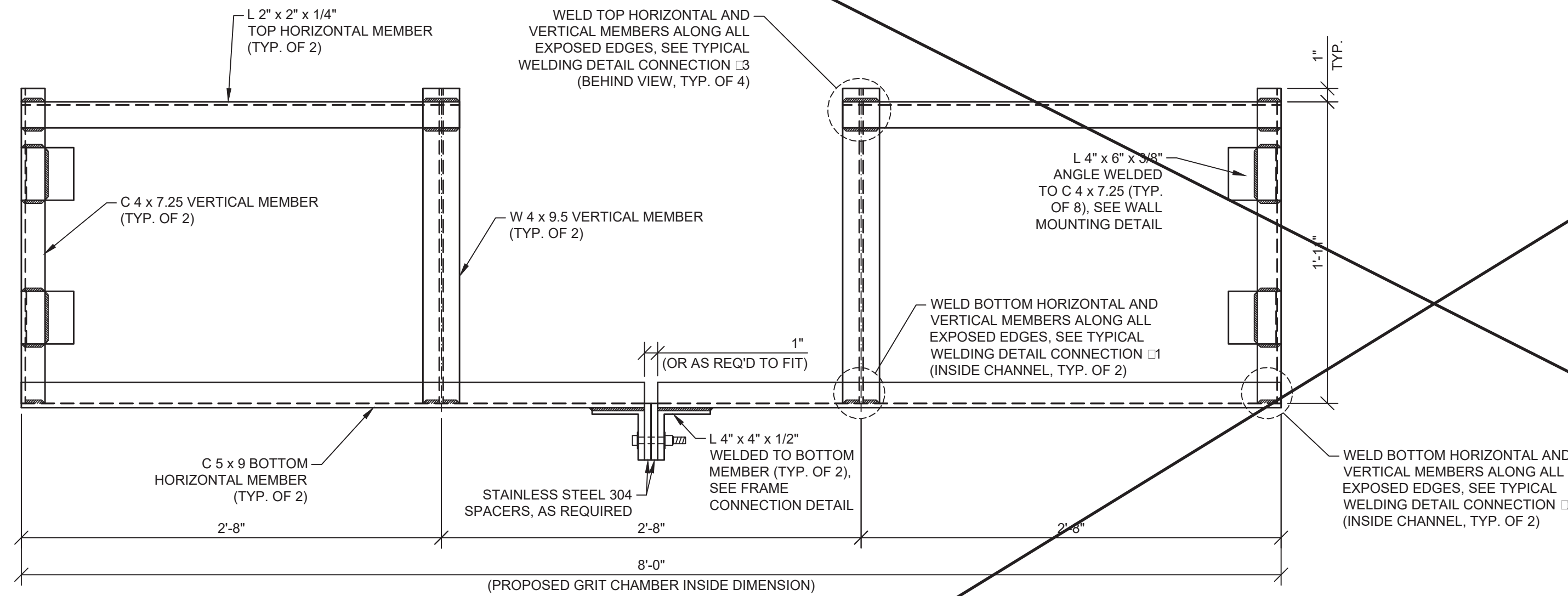
STAINLESS STEEL FRAME PLAN (LOOKING DOWN)

SCALE: NOT TO SCALE



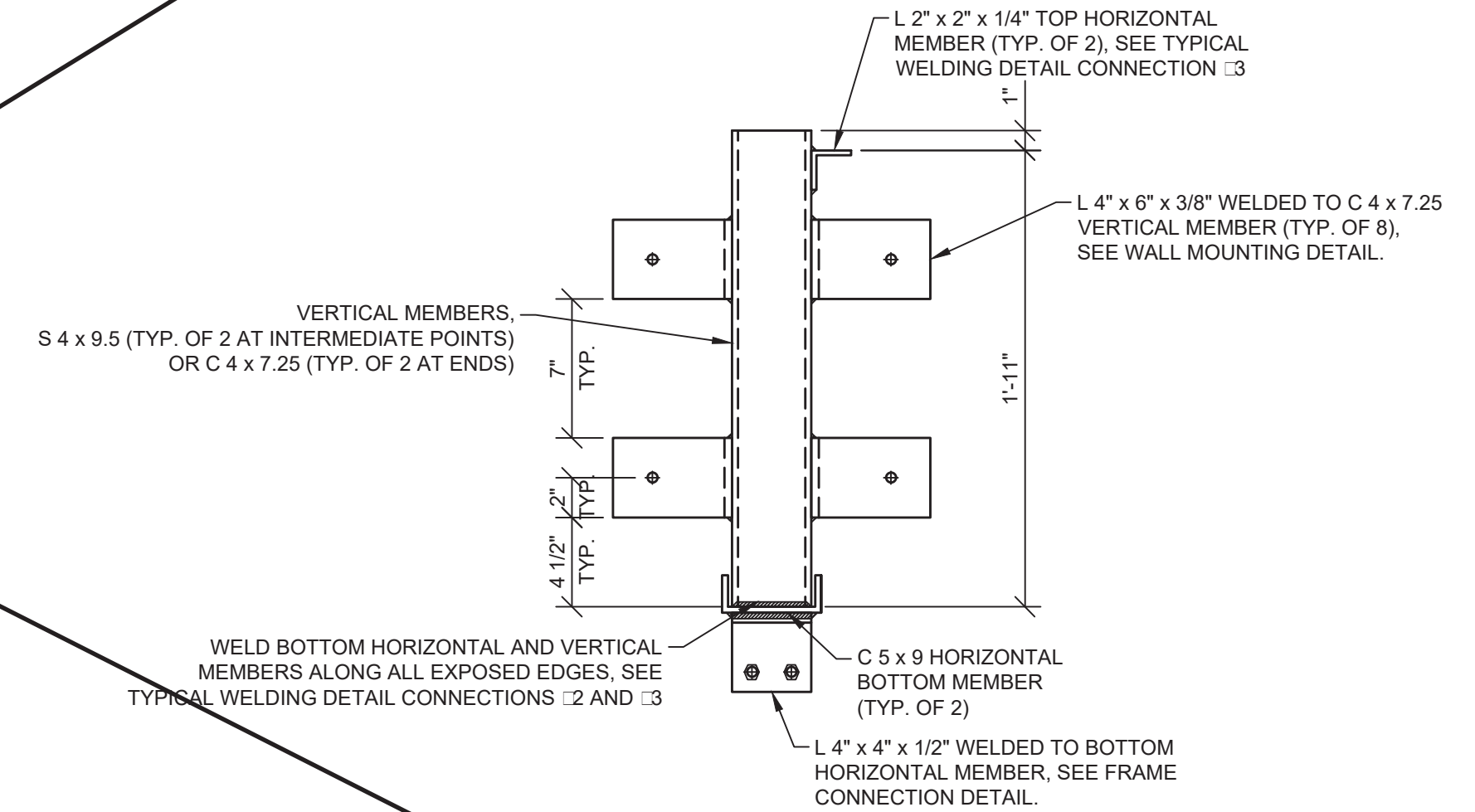
TYPICAL WELDING CONNECTION DETAILS

SCALE: NOT TO SCALE



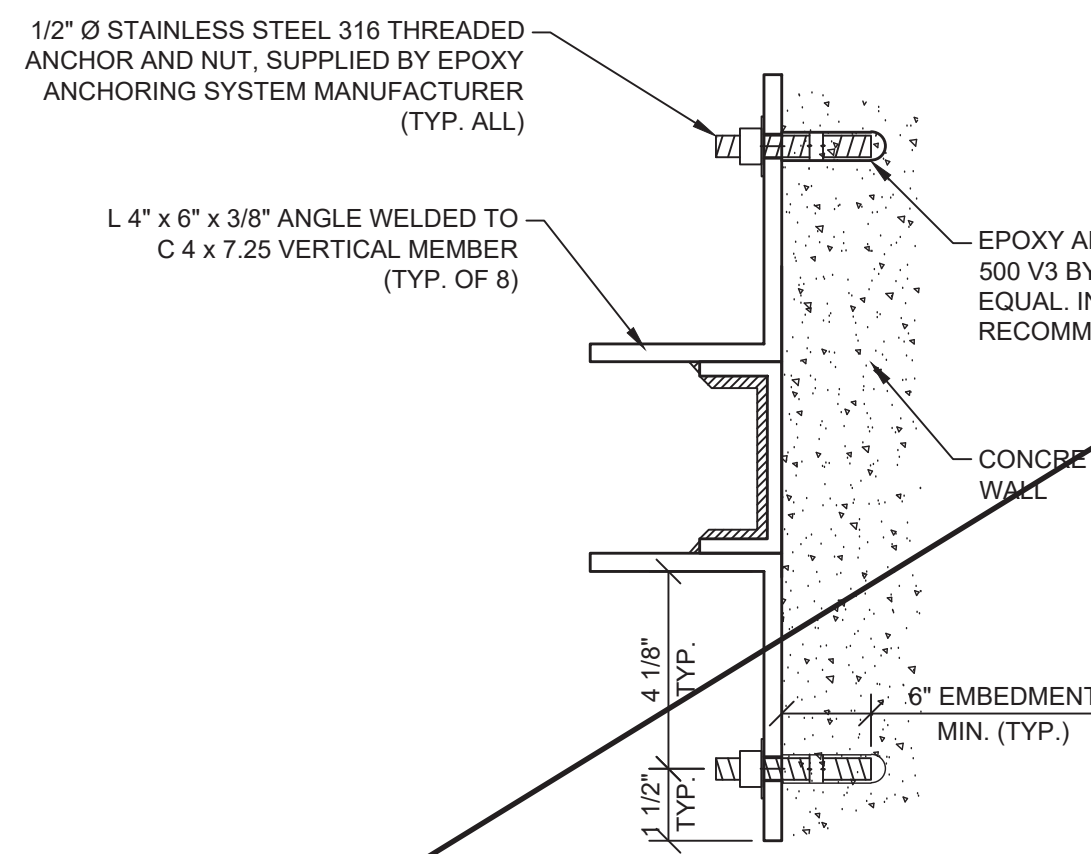
STAINLESS STEEL FRAME ELEVATION

SCALE: NOT TO SCALE



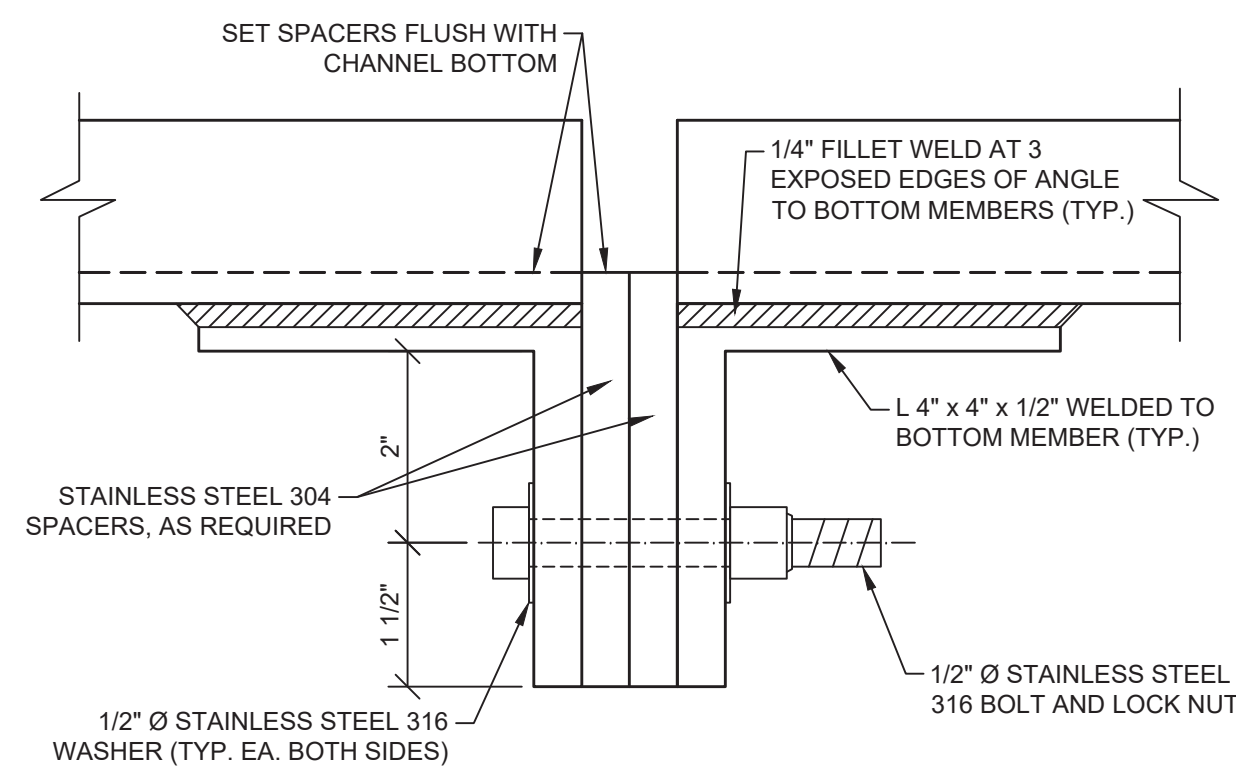
STAINLESS STEEL FRAME SECTION

SCALE: NOT TO SCALE



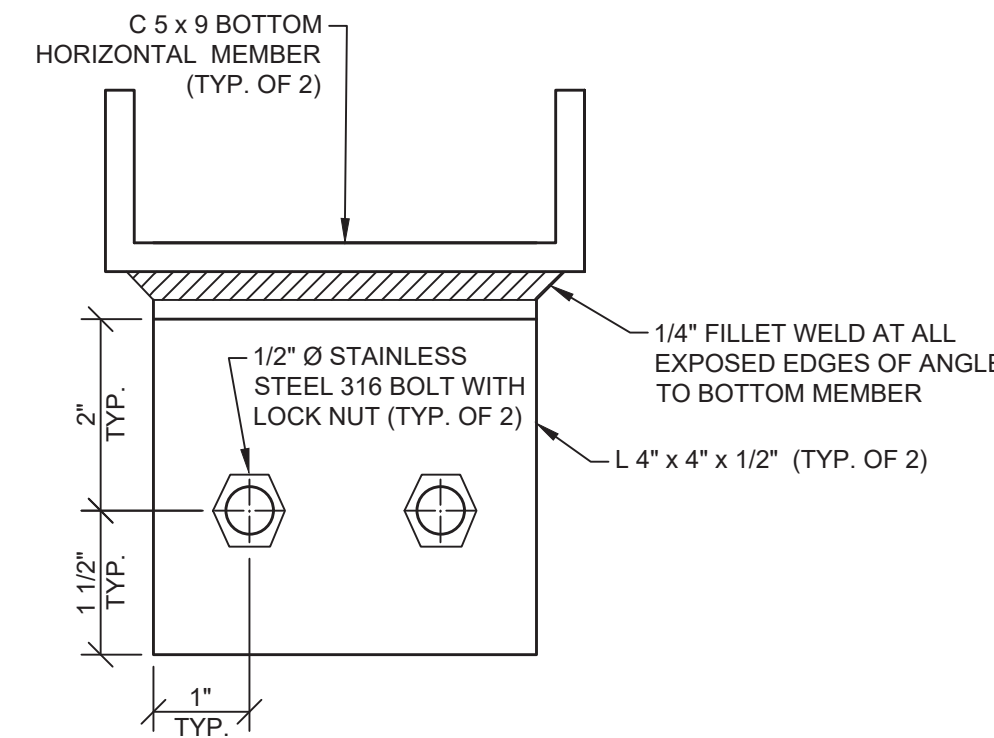
WALL MOUNTING DETAIL

SCALE: NOT TO SCALE



STAINLESS STEEL FRAME CONNECTION DETAIL

SCALE: NOT TO SCALE



SIDE VIEW

GENERAL FRAMING NOTES:

1. STEEL SHALL BE STAINLESS 304 UNLESS OTHERWISE NOTED.
2. CONTINUOUS WELDS ARE REQUIRED.
3. ALL WELDS SHALL BE COMPATIBLE WITH STAINLESS STEEL.
4. WELDER CERTIFICATIONS SHALL BE SUBMITTED FOR THE WELD TYPES AND SIZES.
5. SHOP DRAWINGS ARE REQUIRED FROM THE FABRICATOR FOR OWNER AND ENGINEER APPROVAL PRIOR TO FABRICATION.
6. THE BAFFLE FRAMING SHALL BE WITHIN TOLERANCE SO AS TO ALLOW EQUAL SIZED FIBERGLASS BAFFLE PANELS TO BE MANUALLY INSERTED AND REMOVED WITHIN THE CHANNELS WHILE PROVIDING A SNUG FIT.

GRIT CHAMBER ELIMINATED BY MODIFICATION NO. 1, 6/10/2021

RECORD DRAWINGS

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RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: [Signature] 10/29/2021



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IN CHARGE OF	D. HUFFAKER				
DESIGNED BY	K. MIERZWA, S. WANG				
CHECKED BY	J. DEBARBIERI	2	10/29/2021	RECORD DRAWING	SDD
DRAWN BY	S. WANG	1	05/22/2020	ISSUED FOR BID	PAT
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW	PAT
		NO.	DATE	REVISION	INT.

PRUDENT ENGINEERING
6390 F Rd. P (315) 748-7700
S NY, 13057 F (315) 748-7780

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

STRUCTURAL
GRIT CHAMBER BAFFLE FRAMING DETAILS

FILE NO.	202.072.03
DATE	NOVEMBER 2019
S-502	

SYMBOL DEFINITIONS & FUNCTIONS TABLE

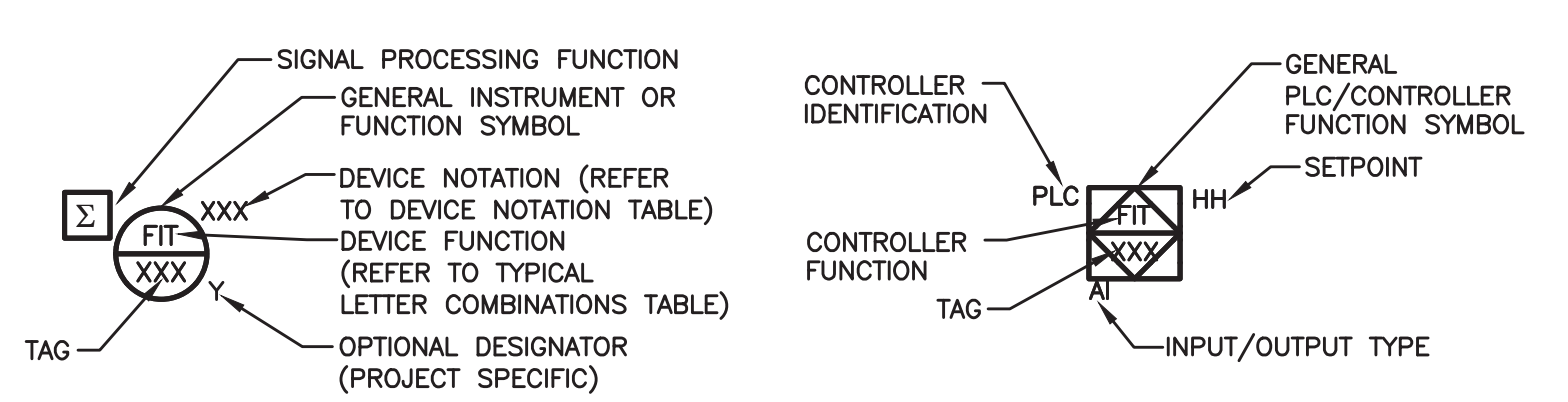
Table with columns: CONTROLLER, DISCRETE, PILOT LIGHT, LOCATION & ACCESSIBILITY. Includes various function symbols and their corresponding locations (e.g., located in field, located in rear of central or main panel).

DEVICE NOTATION TABLE

Table listing various device notations categorized by ANALYSIS, FLOW, LEVEL, PRESSURE, TEMPERATURE, MISCELLANEOUS, and MOTOR CONTROL. Includes symbols for air, water, flow, level, pressure, temperature, and motor control.

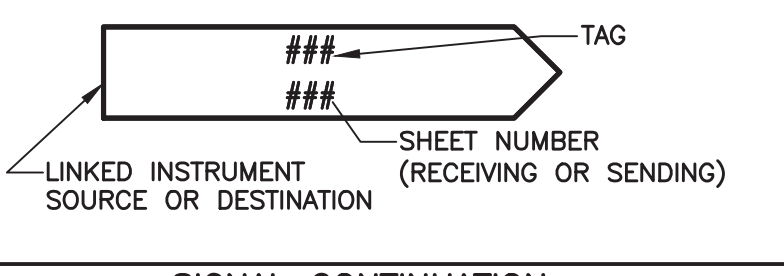
NOTE: NOTATIONS MAY BE USED IF A GRAPHIC SYMBOL DOES NOT EXIST.

INSTRUMENT SYMBOL IDENTIFICATION

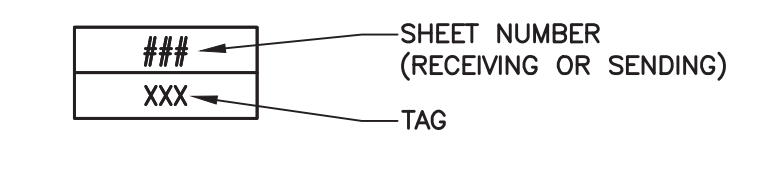


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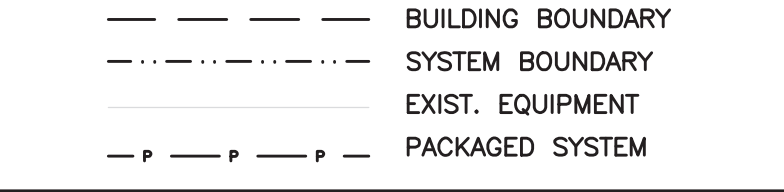
P&ID DIRECTION



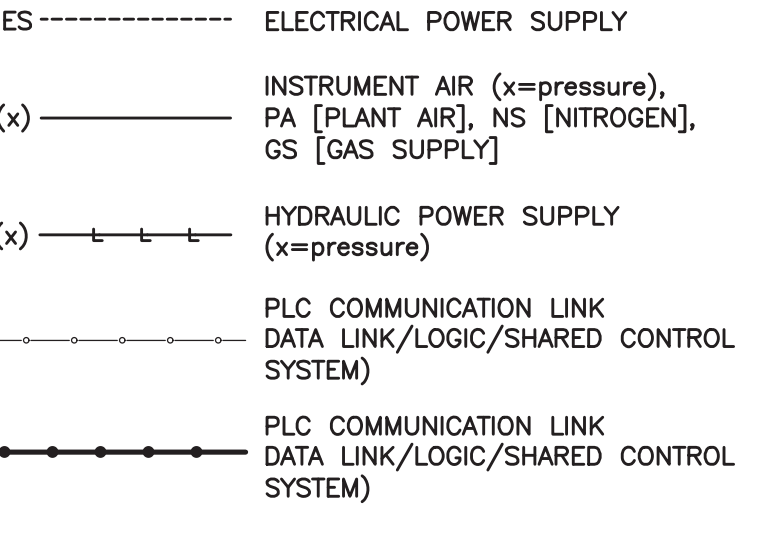
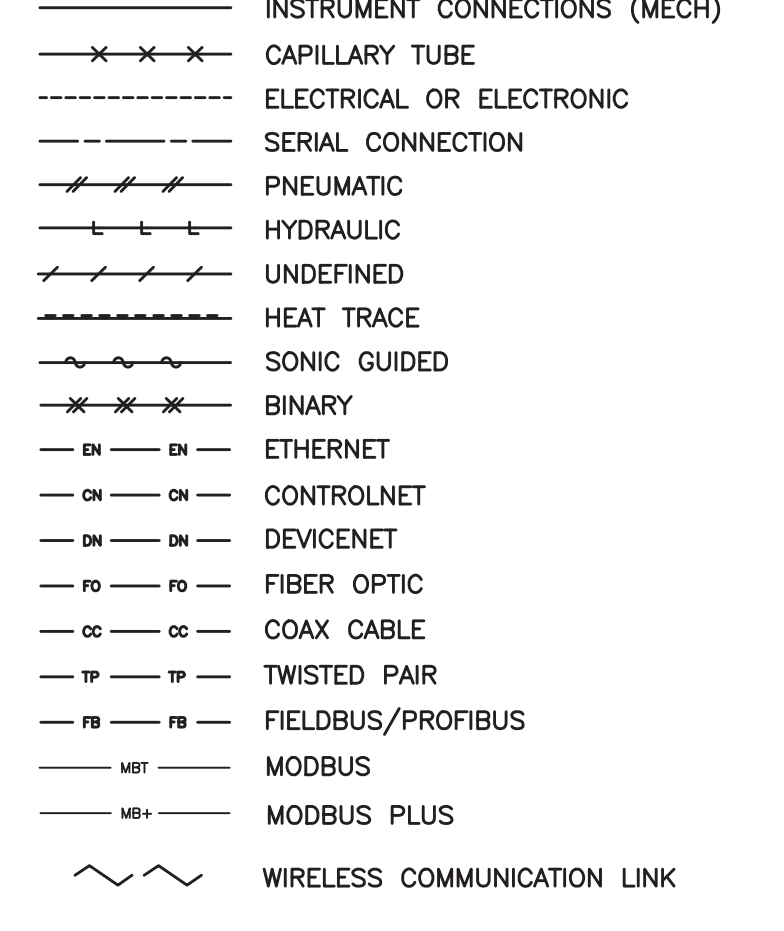
SIGNAL CONTINUATION



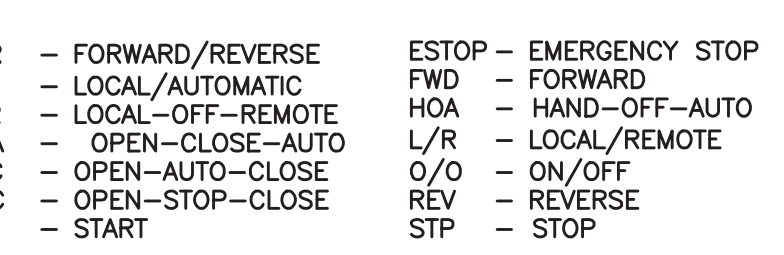
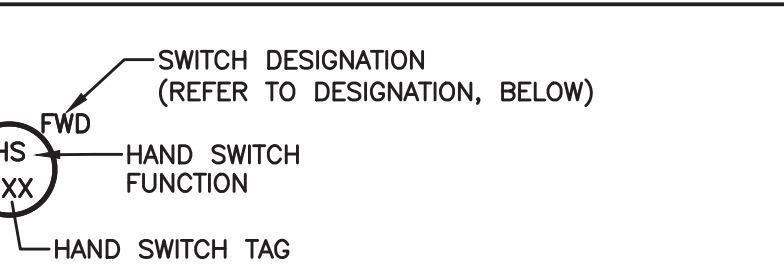
BOUNDARY LINES



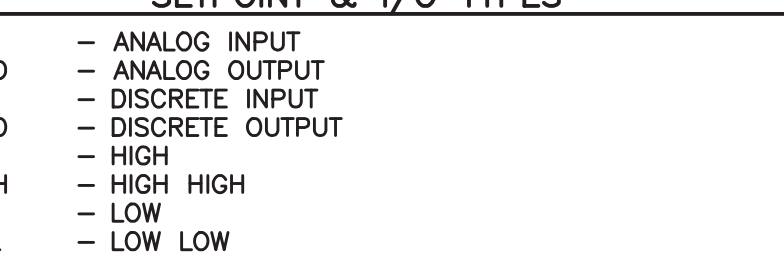
SIGNAL LINES SYMBOLS



HAND SWITCH DESIGNATION



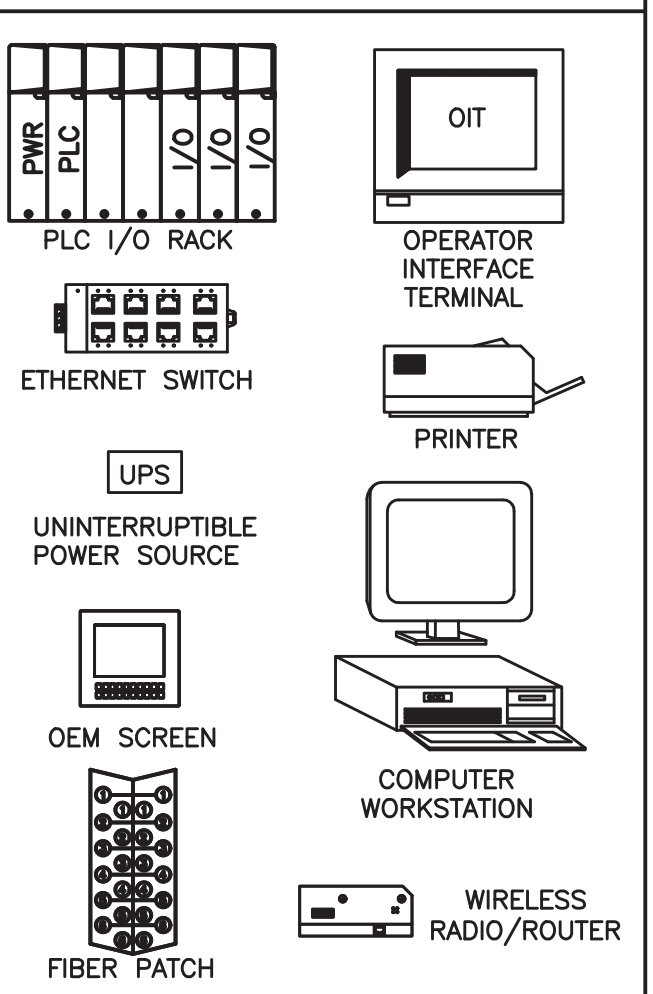
SETPOINT & I/O TYPES



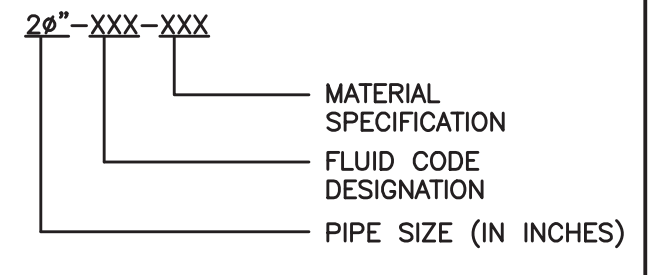
NOTE

INFORMATION ON THIS DRAWING IS BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS "ANSI/ISA-5.1-2009 INSTRUMENTATION SYMBOLS AND IDENTIFICATION" AND "ANSI/ISA-5.3-1983 GRAPHIC SYMBOLS FOR DISTRIBUTED CONTROL/SHARED DISPLAY INSTRUMENTATION, LOGIC AND COMPUTER SYSTEMS". REFER TO ANSI/ISA FOR FURTHER INFORMATION.

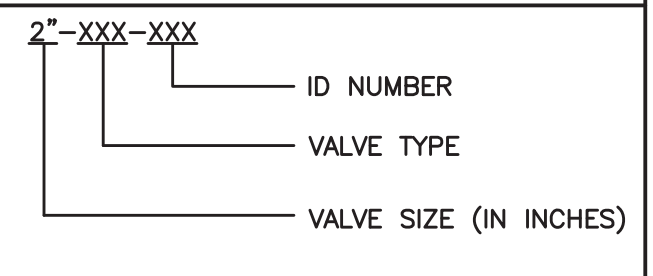
SCADA NETWORK OR SYSTEM ARCHITECTURE SYMBOLS AND ABBREVIATIONS



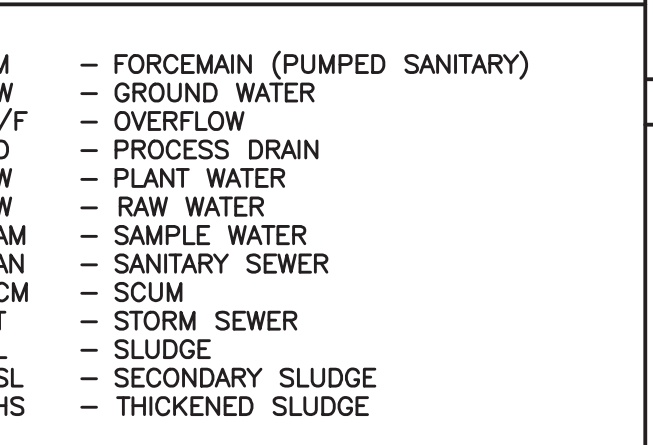
PIPE IDENTIFICATION



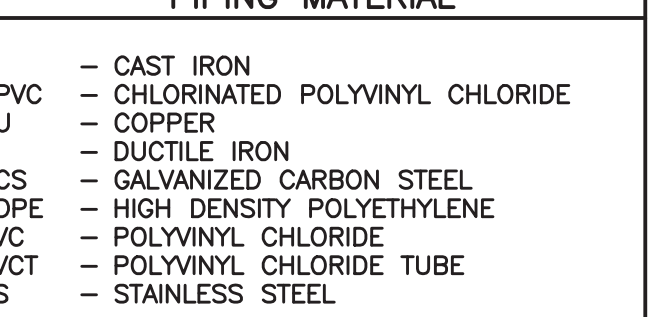
VALVE IDENTIFICATION



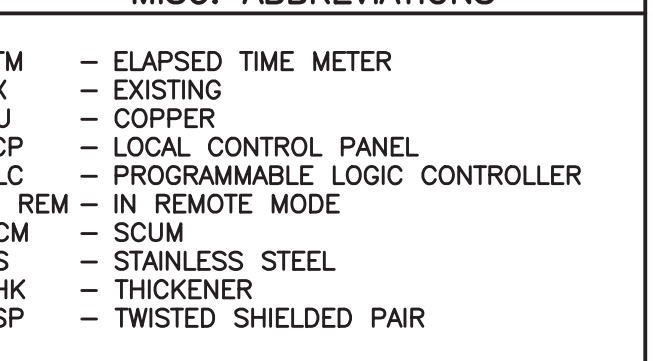
FLUID CODE



PIPING MATERIAL



MISC. ABBREVIATIONS

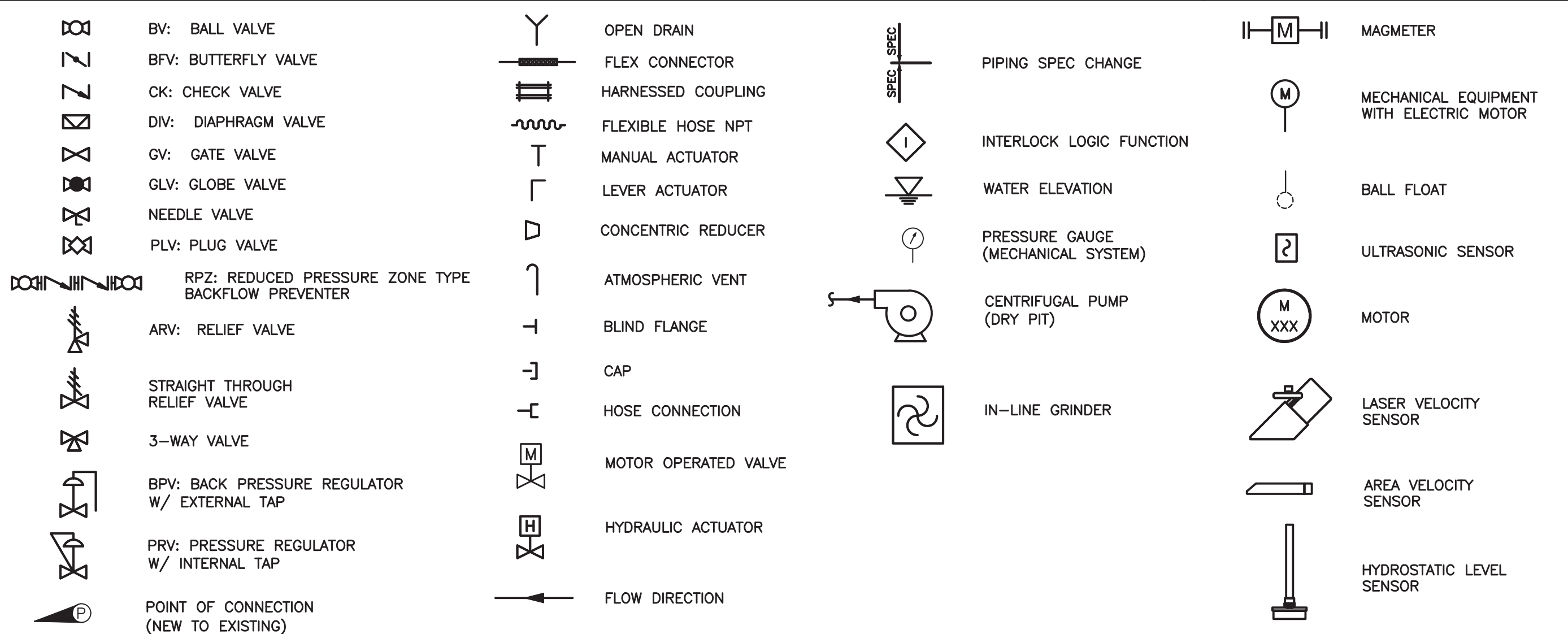


TYPICAL LETTER COMBINATIONS

Large table listing typical letter combinations for various categories: CONTROLLERS, READOUT DEVICES, SWITCHES AND ALARM DEVICES*, TRANSMITTERS, SOLENOIDS, RELAYS, COMPUTING DEVICES, PRIMARY ELEMENT, TEST POINT, WELL OR PROBE, VIEWING DEVICES GLASS, SAFETY DEVICE, and FINAL ELEMENT. Includes combinations like ARC, AIC, AC, etc.

NOTE: THIS TABLE IS NOT ALL-INCLUSIVE. **OTHER POSSIBLE COMBINATIONS: (RUNNING TIME INDICATOR), (HAND SAFETY SWITCH), (POSITION INDICATION - CLOSED), (POSITION INDICATION - OPEN), (POSITION SWITCH - CLOSED), (POSITION SWITCH - OPEN).

VALVES, FITTINGS, PRESSURE RELIEF DEVICES, PUMPS & MISCELLANEOUS EQUIPMENT



PROJECT SPECIFIC NOTES

- 1. NEW EQUIPMENT IS SHOWN IN HEAVY-LINE WEIGHT. EXISTING EQUIPMENT AND STRUCTURES ARE SHOWN LIGHT-LINE WEIGHT.
- 2. CONTROLS FOR EXISTING EQUIPMENT ARE NOT SHOWN FOR CLARITY.

RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: [Signature] Date: 10/29/2021



Table with columns: IN CHARGE OF, DESIGNED BY, CHECKED BY, DRAWN BY, NO., DATE, REVISION, and SDD.

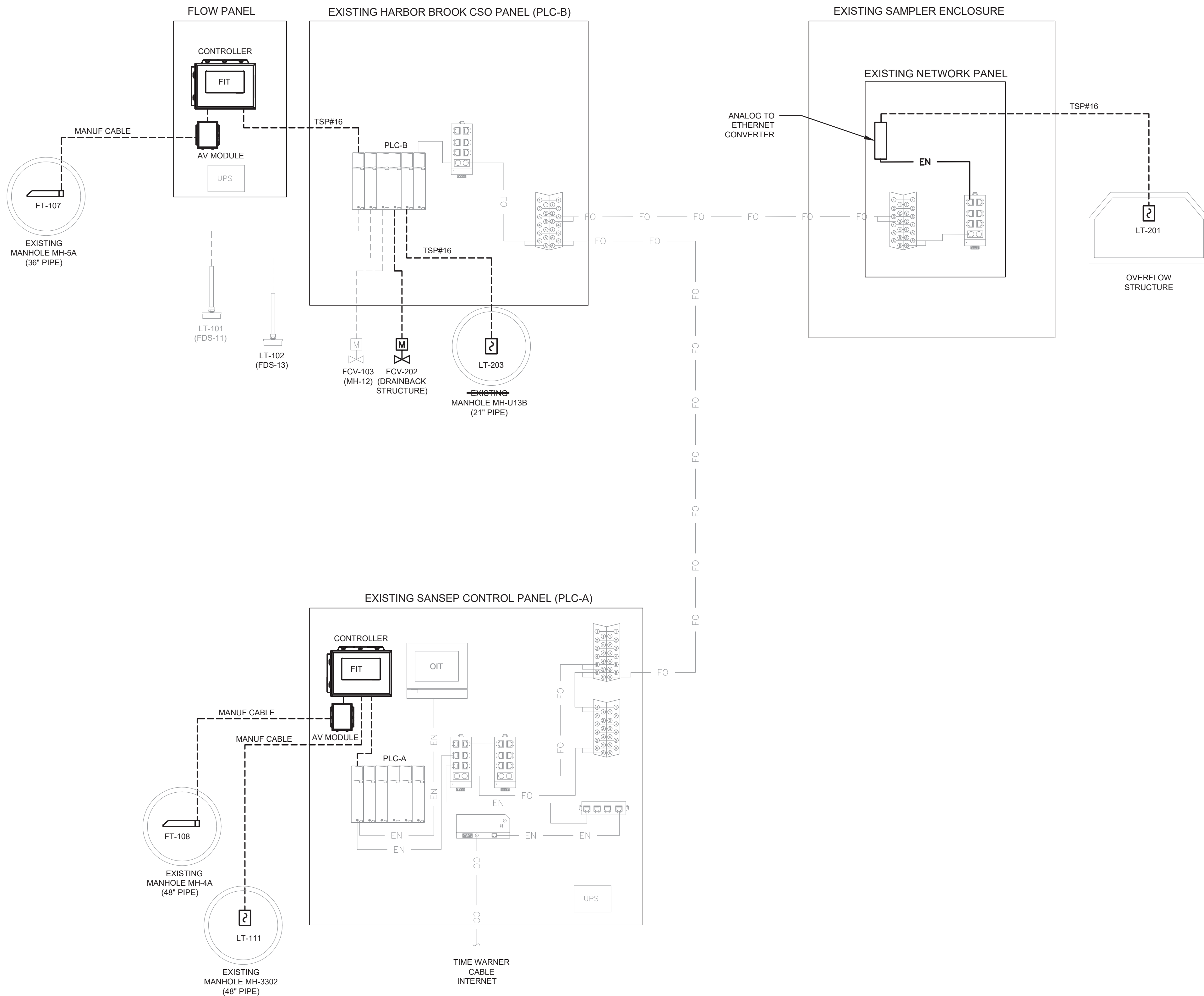
O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY
333 WEST WASHINGTON ST. SYRACUSE, NY 13202

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

INSTRUMENTATION
ABBREVIATION & SYMBOLS

Table with columns: FILE NO. (115.67266), DATE (NOV. 20, 2019), and I-001.

1:\OC\DWG\115167266-HARBOR-BROOK-TR\DCS\DWG\SHEETS\67266.I601.DWG
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GENERAL NOTES:

1. ALL INSTRUMENTATION AND ELECTRICAL WORK IS NEW UNLESS OTHERWISE INDICATED.
2. HACH INSTRUMENTS AND ACCESSORIES ARE FURNISHED BY OWNER, TO BE INSTALLED BY THE CONTRACTOR.
3. PROVIDE THE INSTALLATION, FIELD WIRING, MISCELLANEOUS COMPONENTS, CONTROLS AND SYSTEM INTEGRATION ASSOCIATED WITH REPLACEMENT OF EXISTING ISCO INSTRUMENTS.
4. PROVIDE LEVEL SENSORS, INSTALLATION, FIELD WIRING, MOUNTING HARDWARE AND ACCESSORIES FOR OVERFLOW STRUCTURE AND MANHOLE MH-U13B INSTRUMENTS.
5. CONTRACTOR SHALL PROVIDE PLC, OIT AND SCADA PROGRAMMING IN ASSOCIATION WITH INSTRUMENT REPLACEMENTS AND ADDITIONS. REFER TO DIVISION 40 FOR ADDITIONAL REQUIREMENTS.

PANEL PLC-A NOTES:

1. REPLACE EXISTING ISCO SIGNATURE FLOW METER WITHIN PANEL WITH HACH FL1500 SERIES CONTROLLER & DATA LOGGER. INSTALL AV MODULE WITHIN PANEL FOR SUBMERGED AV SENSOR.
2. ENLARGE DEADFRONT CUT-OUT TO ACCOMMODATE FLOW CONTROLLER. VERIFY SIZE OF EQUIPMENT PRIOR TO INSTALLATION.
3. PROVIDE ANALOG WIRING FROM FLOW CONTROLLER TO PLC-A. TERMINATE FLOW OUTPUT FT-108 IN THE EXISTING PLC, SLOT 4 ANALOG INPUT IN4 AND TERMINATE LEVEL OUTPUT LT-111 TO PLC SLOT 5, ANALOG INPUT IN2.
4. REMOVE EXISTING WIRING ASSOCIATED WITH ISCO LASER FLOW, AND CONNECTED TO PLC SLOT 4 INPUT IN5.
5. MODIFY EXISTING PLC-A PROGRAM TO REMOVE UNUSED CODE AND CONFIGURE LEVEL AND FLOW DEVICES.

PANEL PLC-B NOTES:

1. DISCONNECT AND REMOVE EXISTING ISCO 2108 ANALOG OUTPUT MODULE WITHIN EXISTING ENCLOSURE AND ALL ASSOCIATED ANALOG WIRING TO PLC.
2. FURNISH AND INSTALL INTRINSIC BARRIER IN EXISTING PLC-B, FOR CONNECTION TO LT-203. BARRIER SHALL BE PHOENIX CONTACT MODEL MACX MCR-EX-SL-RPSSI-I. PROVIDE ANCILLARY TERMINAL BLOCKS AS NECESSARY FOR CONNECTIONS. INTRINSIC WIRING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE REQUIREMENTS.
3. PROVIDE NEMA 4X STAINLESS STEEL ENCLOSURE, MINIMUM SIZE 24"X30"X10"D. INSTALL HACH FL1500 SERIES CONTROLLER, AV MODULE AND RELOCATE UPS IN ENCLOSURE. EXTEND POWER CIRCUIT AND BACKUP CIRCUITS TO EXISTING PANEL IN NEW CONDUITS. PROVIDE DIN RAIL, TERMINAL BLOCKS AND OTHER COMPONENTS AS NECESSARY.
4. PROVIDE ANALOG OUTPUT WIRING FROM FLOW CONTROLLER TO EXISTING PLC-B. TERMINATE FLOW OUTPUT FT-107 IN EXISTING PLC SLOT 4, ANALOG INPUT IN0. PROVIDE ANALOG WIRING FROM LEVEL TRANSMITTER LT-203 TO PLC SLOT 4 ANALOG INPUT IN1.
5. PROVIDE LEVEL TRANSMITTER AT EXISTING MANHOLE MH-U13B AND WIRE TO EXISTING PLC-B PANEL. PROVIDE UNDERGROUND CONDUITS FROM MANHOLE TO EXISTING PLC-B PANEL.
6. PROVIDE DIN RAIL, INPUT & OUTPUT TERMINAL BLOCKS, LABELS, AND OTHER COMPONENTS AS NECESSARY FOR FUTURE INTEGRATION OF MOTORIZED VALVE (FCV-202) AT DRAINBACK STRUCTURE.
7. MODIFY EXISTING PLC-B PROGRAM TO REMOVE UNUSED CODE AND CONFIGURE LEVEL AND FLOW DEVICES.

NETWORK PANEL NOTES:

1. OWNER WILL DISCONNECT AND REMOVE EXISTING ISCO SIGNATURE FLOW METER WITHIN SAMPLER ENCLOSURE SHED AND ALL ASSOCIATED MEASURING DEVICES (FT-105 AND FT-106).
2. PROVIDE LEVEL TRANSMITTER AT OVERFLOW STRUCTURE AND WIRE TO EXISTING NETWORK PANEL. PROVIDE UNDERGROUND CONDUIT FROM EXISTING MANHOLE MH-19 TO OVERFLOW STRUCTURE AND UTILIZE ONE OF EXISTING 2" PVC CONDUIT TO COMPLETE RACEWAY.
3. PROVIDE AN ETHERNET I/O MODULE IN EXISTING NETWORK PANEL TO PATCH SIGNAL TO EXISTING PLC-B. SIGNAL CONVERTER SHALL BE ACROMAG XT1210 SERIES, OR APPROVED EQUAL. PROVIDE RAILS, TERMINAL BLOCKS, CONNECTORS, POWER SUPPLY, WIRING, ETC. TO COMPLETE INSTALLATION.

RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: *[Signature]*
Date: 10/29/2021



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IN CHARGE OF	D. LETKIEWICZ				
DESIGNED BY	M. EUCEDA				
CHECKED BY	S. THOMPSON	2	10/29/2021	RECORD DRAWING	SDD
DRAWN BY	M. EUCEDA	1	05/22/2020	ISSUED FOR BID	DL
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW	DL
					INT.

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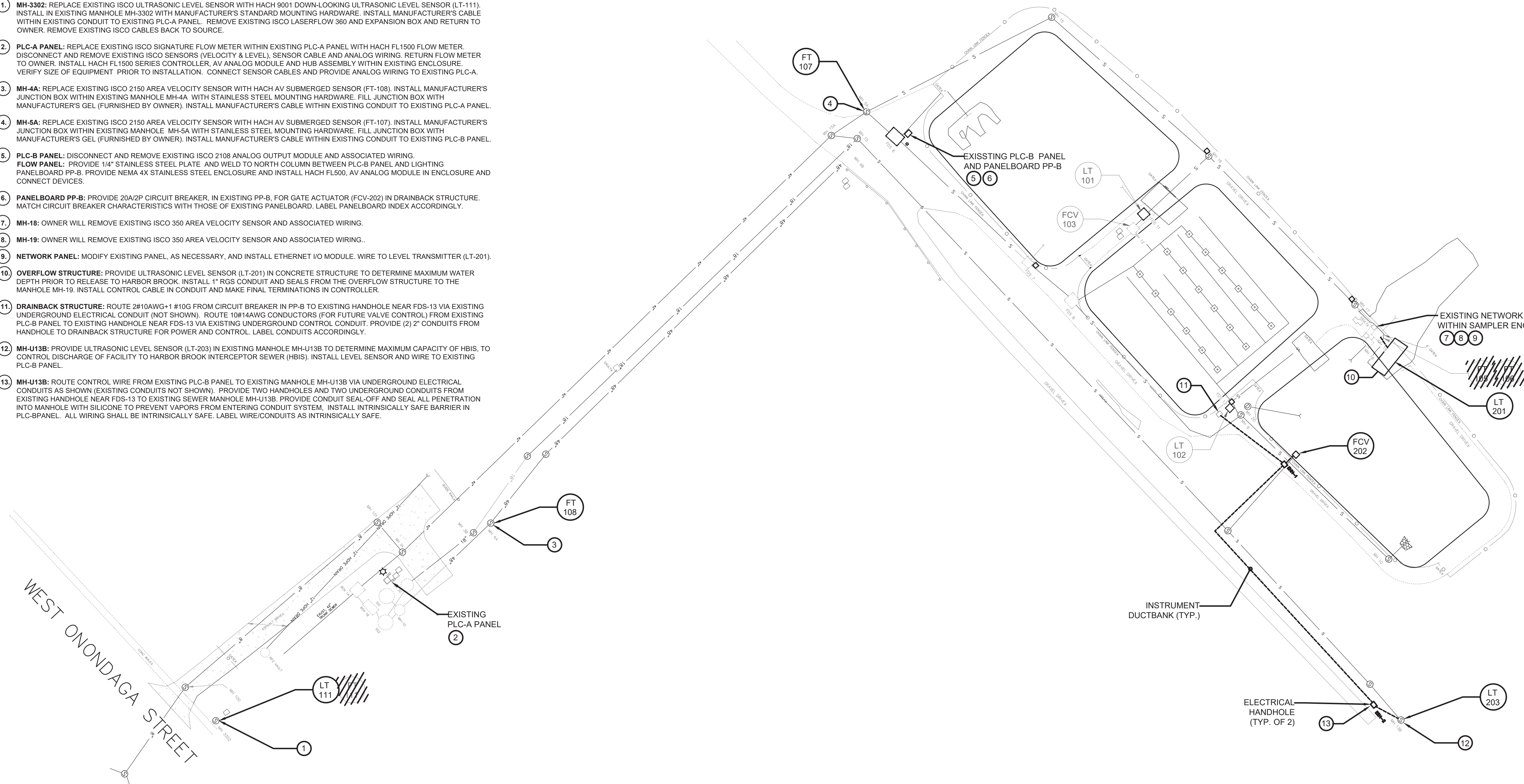
ONONDAGA COUNTY DEPARTMENT OF
 WATER ENVIRONMENT PROTECTION
 HARBOR BROOK TREATMENT WETLANDS
 SYRACUSE, NEW YORK

INSTRUMENTATION
NETWORK ARCHITECTURE

FILE NO.	115.67266	I-601
DATE	NOV. 20, 2019	

KEYED NOTES:

- MH-3302:** REPLACE EXISTING ISCO ULTRASONIC LEVEL SENSOR WITH HACH 9001 DOWN-LOOKING ULTRASONIC LEVEL SENSOR (LT-111). INSTALL IN EXISTING MANHOLE MH-3302 WITH MANUFACTURER'S STANDARD MOUNTING HARDWARE. INSTALL MANUFACTURER'S CABLE WITHIN EXISTING CONDUIT TO EXISTING PLC-A PANEL. REMOVE EXISTING ISCO LASERFLOW 360 AND EXPANSION BOX AND RETURN TO OWNER. REMOVE EXISTING ISCO CABLES BACK TO SOURCE.
- PLC-A PANEL:** REPLACE EXISTING ISCO SIGNATURE FLOW METER WITHIN EXISTING PLC-A PANEL WITH HACH FL1500 FLOW METER. DISCONNECT AND REMOVE EXISTING ISCO SENSORS (VELOCITY & LEVEL), SENSOR CABLE AND ANALOG WIRING. RETURN FLOW METER TO OWNER. INSTALL HACH FL1500 SERIES CONTROLLER, AV ANALOG MODULE AND HUB ASSEMBLY WITHIN EXISTING ENCLOSURE. VERIFY SIZE OF EQUIPMENT PRIOR TO INSTALLATION. CONNECT SENSOR CABLES AND PROVIDE ANALOG WIRING TO EXISTING PLC-A.
- MH-4A:** REPLACE EXISTING ISCO 2150 AREA VELOCITY SENSOR WITH HACH AV SUBMERGED SENSOR (FT-108). INSTALL MANUFACTURER'S JUNCTION BOX WITHIN EXISTING MANHOLE MH-4A WITH STAINLESS STEEL MOUNTING HARDWARE. FILL JUNCTION BOX WITH MANUFACTURER'S GEL (FURNISHED BY OWNER). INSTALL MANUFACTURER'S CABLE WITHIN EXISTING CONDUIT TO EXISTING PLC-A PANEL.
- MH-5A:** REPLACE EXISTING ISCO 2150 AREA VELOCITY SENSOR WITH HACH AV SUBMERGED SENSOR (FT-107). INSTALL MANUFACTURER'S JUNCTION BOX WITHIN EXISTING MANHOLE MH-5A WITH STAINLESS STEEL MOUNTING HARDWARE. FILL JUNCTION BOX WITH MANUFACTURER'S GEL (FURNISHED BY OWNER). INSTALL MANUFACTURER'S CABLE WITHIN EXISTING CONDUIT TO EXISTING PLC-B PANEL.
- PLC-B PANEL:** DISCONNECT AND REMOVE EXISTING ISCO 2108 ANALOG OUTPUT MODULE AND ASSOCIATED WIRING.
FLOW PANEL: PROVIDE 1/4" STAINLESS STEEL PLATE AND WELD TO NORTH COLUMN BETWEEN PLC-B PANEL AND LIGHTING PANELBOARD PP-B. PROVIDE NEMA 4X STAINLESS STEEL ENCLOSURE AND INSTALL HACH FL500, AV ANALOG MODULE IN ENCLOSURE AND CONNECT DEVICES.
- PANELBOARD PP-B:** PROVIDE 20A/2P CIRCUIT BREAKER, IN EXISTING PP-B, FOR GATE ACTUATOR (FCV-202) IN DRAINBACK STRUCTURE. MATCH CIRCUIT BREAKER CHARACTERISTICS WITH THOSE OF EXISTING PANELBOARD. LABEL PANELBOARD INDEX ACCORDINGLY.
- MH-18:** OWNER WILL REMOVE EXISTING ISCO 350 AREA VELOCITY SENSOR AND ASSOCIATED WIRING.
- MH-19:** OWNER WILL REMOVE EXISTING ISCO 350 AREA VELOCITY SENSOR AND ASSOCIATED WIRING.
- NETWORK PANEL:** MODIFY EXISTING PANEL, AS NECESSARY, AND INSTALL ETHERNET I/O MODULE. WIRE TO LEVEL TRANSMITTER (LT-201).
- OVERFLOW STRUCTURE:** PROVIDE ULTRASONIC LEVEL SENSOR (LT-201) IN CONCRETE STRUCTURE TO DETERMINE MAXIMUM WATER DEPTH PRIOR TO RELEASE TO HARBOR BROOK. INSTALL 1" RGS CONDUIT AND SEALS FROM THE OVERFLOW STRUCTURE TO THE MANHOLE MH-19. INSTALL CONTROL CABLE IN CONDUIT AND MAKE FINAL TERMINATIONS IN CONTROLLER.
- DRAINBACK STRUCTURE:** ROUTE 2#10AWG-1 #10G FROM CIRCUIT BREAKER IN PP-B TO EXISTING HANDHOLE NEAR FDS-13 VIA EXISTING UNDERGROUND ELECTRICAL CONDUIT (NOT SHOWN). ROUTE 10#14AWG CONDUCTORS (FOR FUTURE VALVE CONTROL) FROM EXISTING PLC-B PANEL TO EXISTING HANDHOLE NEAR FDS-13 VIA EXISTING UNDERGROUND CONTROL CONDUIT. PROVIDE (2) 2" CONDUITS FROM HANDHOLE TO DRAINBACK STRUCTURE FOR POWER AND CONTROL. LABEL CONDUITS ACCORDINGLY.
- MH-U13B:** PROVIDE ULTRASONIC LEVEL SENSOR (LT-203) IN EXISTING MANHOLE MH-U13B TO DETERMINE MAXIMUM CAPACITY OF HBIS, TO CONTROL DISCHARGE OF FACILITY TO HARBOR BROOK INTERCEPTOR SEWER (HBIS). INSTALL LEVEL SENSOR AND WIRE TO EXISTING PLC-B PANEL.
- MH-U13B:** ROUTE CONTROL WIRE FROM EXISTING PLC-B PANEL TO EXISTING MANHOLE MH-U13B VIA UNDERGROUND ELECTRICAL CONDUITS AS SHOWN (EXISTING CONDUITS NOT SHOWN). PROVIDE TWO HANDHOLES AND TWO UNDERGROUND CONDUITS FROM EXISTING HANDHOLE NEAR FDS-13 TO EXISTING SEWER MANHOLE MH-U13B. PROVIDE CONDUIT SEAL-OFF AND SEAL ALL PENETRATION INTO MANHOLE WITH SILICONE TO PREVENT VAPORS FROM ENTERING CONDUIT SYSTEM. INSTALL INTRINSICALLY SAFE BARRIER IN PLC-B PANEL. ALL WIRING SHALL BE INTRINSICALLY SAFE. LABEL WIRE/CONDUITS AS INTRINSICALLY SAFE.



DRAWING NOTES:

- ALL INSTRUMENTATION AND ELECTRICAL WORK IS NEW UNLESS OTHERWISE INDICATED.
- TAKE PRECAUTIONS AND BE RESPONSIBLE FOR ACCURATE QUANTITIES OF MATERIALS AND DEVICES.
- TO COORDINATE AND SCHEDULE ALL WORK WITH THE OWNER, CONSTRUCTION MANAGER, ENGINEER, UTILITIES AND OTHER CONTRACTORS.
- CONDUIT ROUTINGS SHOWN ARE SCHEMATIC ONLY, ROUTE CONDUIT BASED ON ACTUAL FIELD CONDITIONS AND IN COORDINATION WITH ALL OTHER EQUIPMENT BEING INSTALLED UNDER THIS CONTRACT.
- WHERE TRENCHING FOR ELECTRICAL IS REQUIRED, VERIFY EXISTENCE OF UNDERGROUND OBSTRUCTIONS PRIOR TO EXCAVATION.
- PROVIDE ONE #12AWG GROUNDING CONDUCTOR IN EACH CONDUIT INCLUDING CONTROL AND I/O RACEWAYS. PROVIDE ALL REQUIRED GROUNDING IN ACCORDANCE WITH NEC.
- UNLESS OTHERWISE NOTED, ALL BELOW GRADE CONDUIT SHALL BE SCHEDULE 80 PVC. ALL EXPOSED CONDUIT SHALL BE PVC COATED RGS.

SITE PLAN

1"=40'-0" 40' 0 40'



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IN CHARGE OF	D. LETKIEWICZ			
DESIGNED BY	M. EUCEDA			
CHECKED BY	S. THOMPSON	2	10/29/2021	RECORD DRAWING
		1	05/22/2020	ISSUED FOR BID
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DRAWN BY	M. EUCEDA			
		NO.	DATE	REVISION
				INT.

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333 WEST WASHINGTON ST. SYRACUSE, NY 13202



ONONDAGA COUNTY DEPARTMENT OF
WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

INSTRUMENTATION

SITE PLAN

FILE NO.
115.67266
DATE
NOV. 20, 2019

I-602

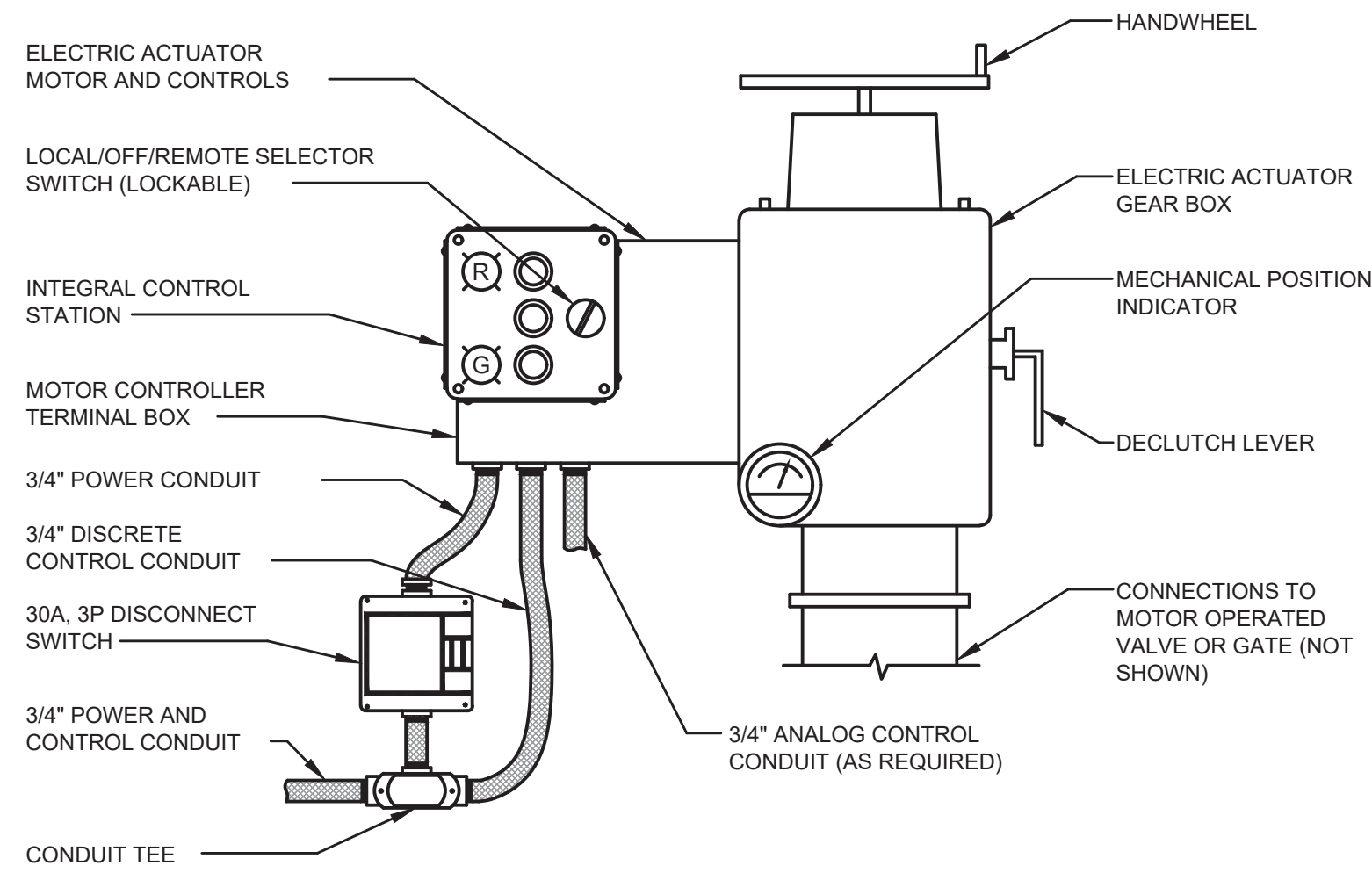
RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: *[Signature]*
Date: 10/29/2021

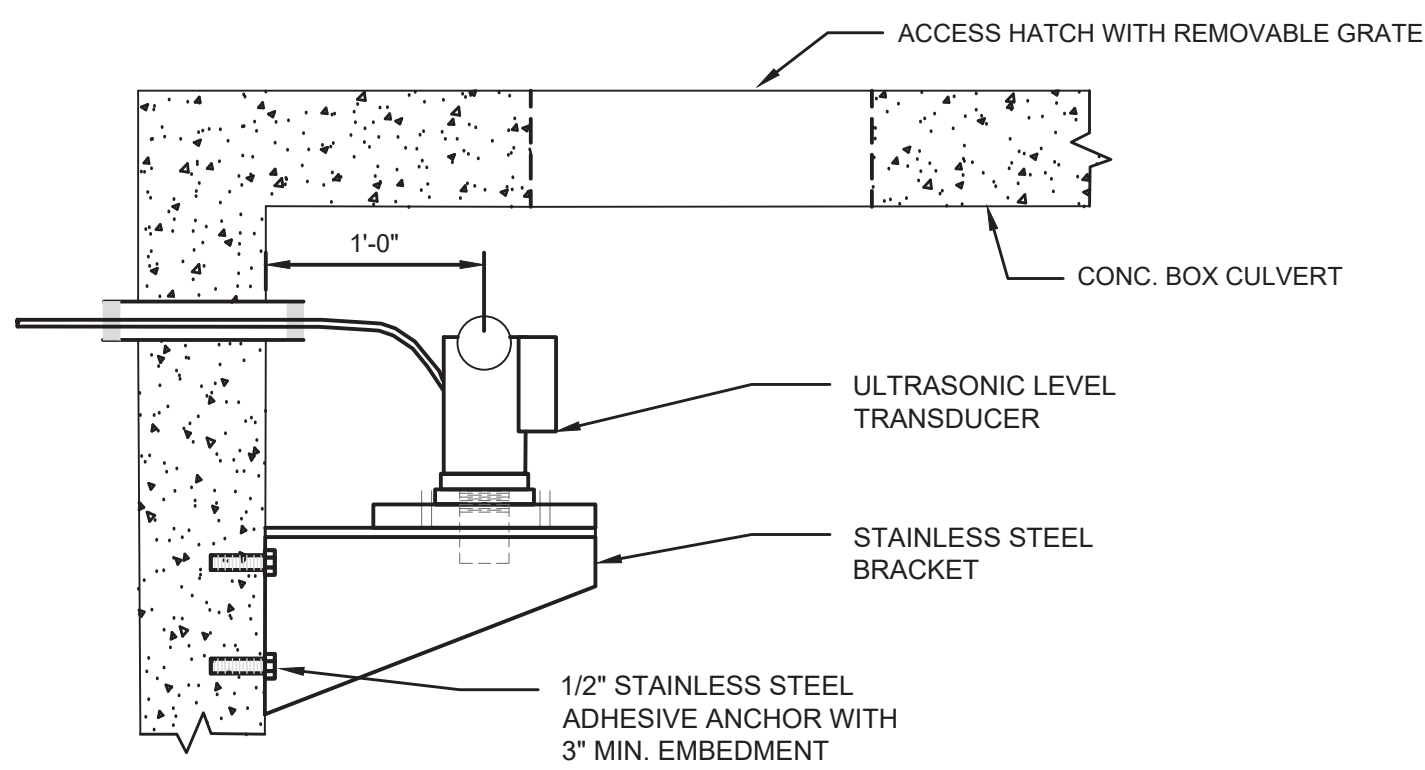


TYPICAL MOTOR OPERATED VALVE OR GATE ELECTRIC ACTUATOR DETAIL

NOT TO SCALE

NOTES:

- CONTROL CONDUCTOR QUANTITIES AND CONNECTIONS SHALL BE COORDINATED WITH THE VALVE OR GATE MANUFACTURER.
- ELECTRIC ACTUATORS SHALL BE PROVIDED WITH DISCONNECT SWITCHES LOCATED ADJACENT TO EACH ACTUATOR REGARDLESS IF SHOWN ON THE PLANS. POWER AND CONTROL CONDUITS SHALL BE PROVIDED AS SHOWN ON THE DETAIL AND MAY NOT BE SCHEDULED OR SHOWN ON THE PLANS FOR CLARITY.
- ELECTRIC ACTUATOR SHALL BE PROVIDED WITH A TAMPER PROOF COVER TO PROTECT LOCAL CONTROL STATION CONTROLS. THE ENCLOSURE SHALL FIT OVER THE CONTROL STATION AND BE SECURED VIA THE JACKING BOLTS ON THE ACTUATOR HOUSING.



OVERFLOW STRUCTURE LEVEL SENSOR INSTALLATION

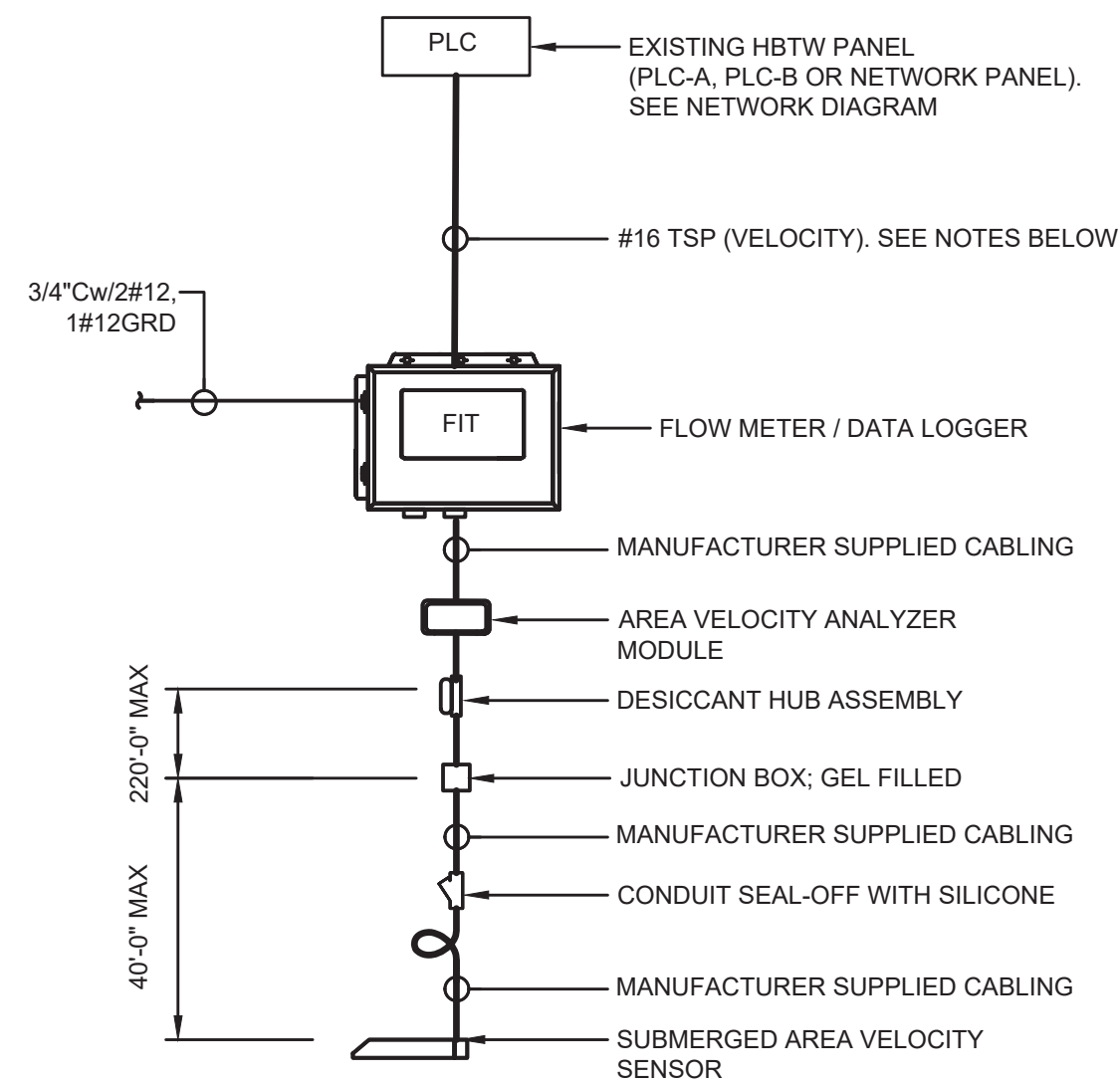
NOT TO SCALE

NOTE:

- MOUNT ULTRASONIC LEVEL SENSOR IN OVERFLOW STRUCTURE USING STAINLESS STEEL MOUNTING HARDWARE AND IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- TERMINATE CONTROL CABLE IN THE NETWORK PANEL WITHOUT ANY SPLICES.
- PROVIDE CONDUIT SEALING REQUIREMENTS WHEN PENETRATING CONCRETE OVERFLOW STRUCTURE.
- COORDINATE EXACT MOUNTING LOCATION AND ELEVATION WITH ENGINEER/OWNER IN FIELD, TO PROVIDE MAXIMUM ACCESSIBILITY FROM ACCESS HATCH.

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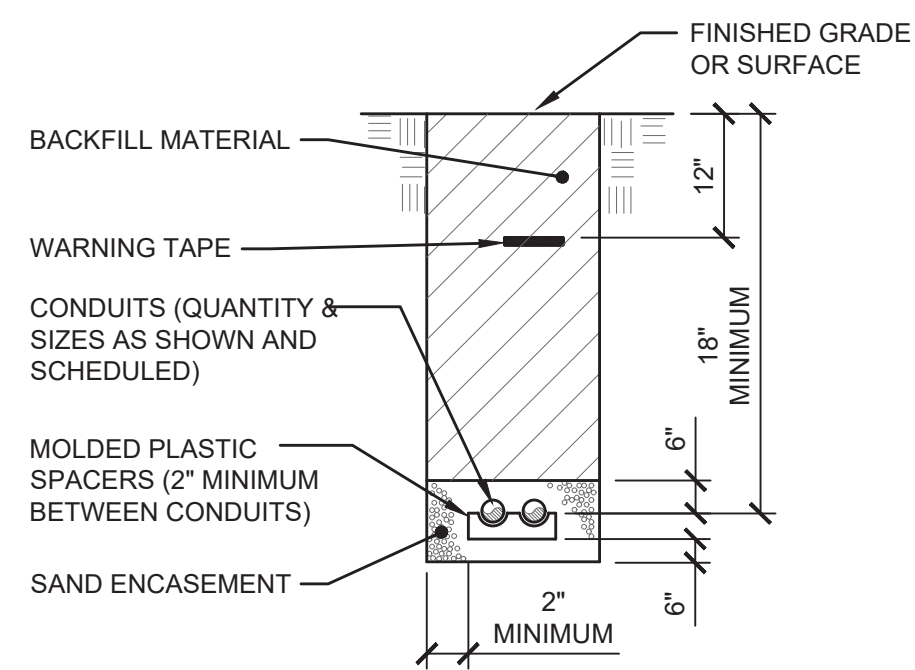


AREA VELOCITY SENSOR & METER SCHEMATIC

NOT TO SCALE

NOTE:

- MOUNT AREA VELOCITY SENSOR IN MANHOLE USING MANUFACTURER'S MOUNTING HARDWARE AND IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. IN AREAS WHERE THERE IS A HANDHOLE NEXT TO MANHOLE, INSTALL MANUFACTURER'S JUNCTION BOX (FURNISHED BY OWNER) AND INSTALL MANUFACTURER'S CABLE FROM JUNCTION BOX TO CONTROL PANEL.
- REMOVE EXISTING SEALING MATERIAL WITHIN FITTING IN MANHOLE AND INSTALL MANUFACTURER'S CONTROL CABLE (FURNISHED BY OWNER) AND RE-SEAL WITH SILICONE.
- CONNECT DESICCANT HUB ASSEMBLY CONNECTOR TO AV MODULE WITHIN PANEL AND INSTALL AV CONNECTOR CABLE TO FLOW METER. PROVIDE ANALOG OUTPUTS FROM FLOW METER TO EXISTING PLC, IN QUANTITIES AS SHOWN. REFER TO NETWORK ARCHITECTURE DIAGRAM FOR NUMBER OF REQUIRED ANALOG SIGNALS FROM FLOW METER TO PLC.

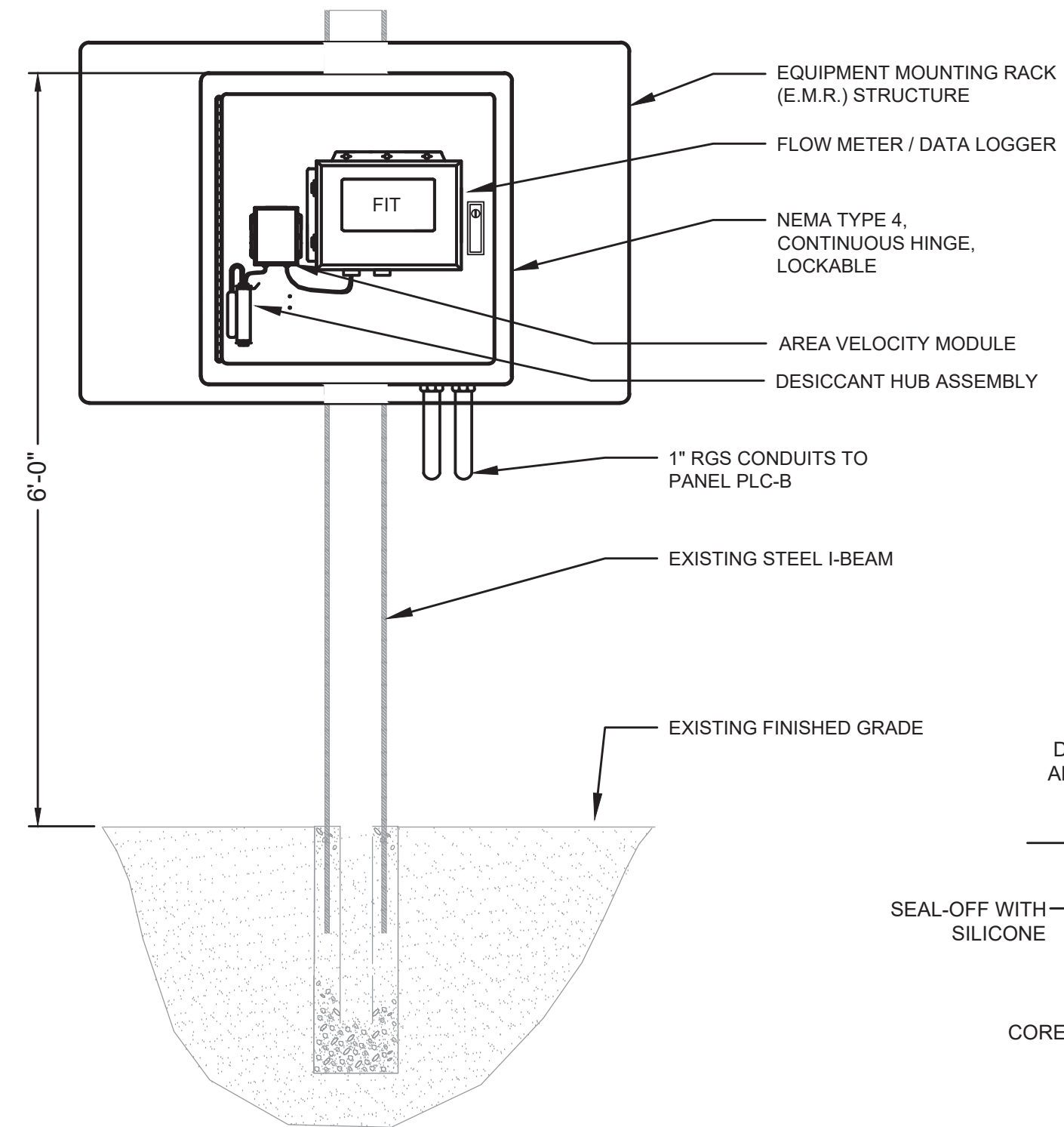


DIRECT BURIED CONDUIT DETAIL

NOT TO SCALE

NOTE:

- ELECTRICAL MANHOLES (EMH), HANDHOLE (EHH) AND PULLBOXES (EPB) SHALL BE UTILIZED FOR 120VAC CIRCUITS AS SHOWN ON THE DRAWINGS.
- COMMUNICATION/SIGNAL PULLBOXES SHALL BE UTILIZED FOR ANALOG, TELECOMMUNICATIONS AND ETHERNET (INCLUDING FIBER OPTIC) CIRCUITS AS SHOWN ON THE DRAWINGS.
- PROVIDE BASE SPACERS AND INTERMEDIATE SPACERS AT 5'-0" ON CENTER.
- PROVIDE WIRING IN CONDUITS AS SPECIFIED IN PLANS AND PROVIDE PULL WIRE IN EACH SPARE CONDUIT.
- SLOPE DUCTBANK TOWARDS HANDHOLE FOR DRAINAGE.

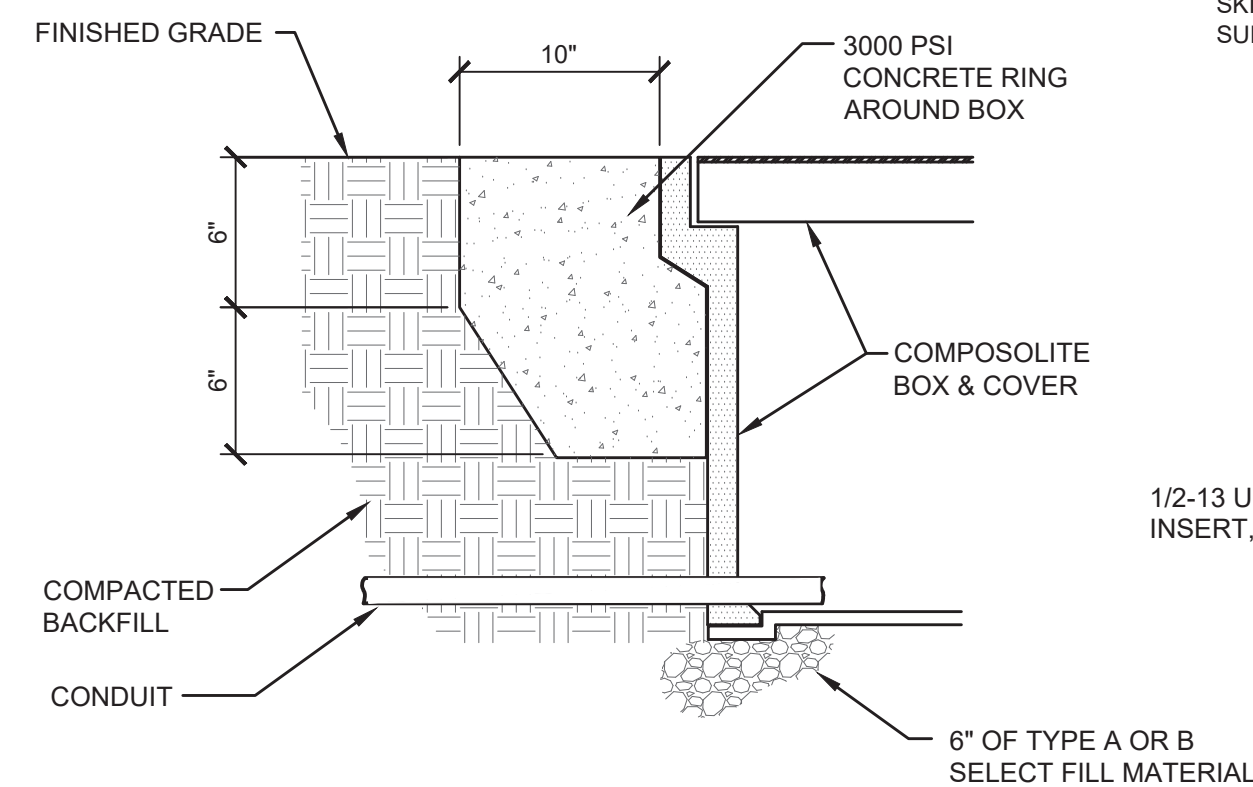


EQUIPMENT MOUNTING RACK DETAIL

NOT TO SCALE

NOTES:

- REFER TO PLAN DRAWINGS FOR LOCATION.
- PROVIDE POWER AND CONTROL CONDUITS AS INDICATED WITH CONDUCTORS OF SUFFICIENT LENGTH TO REACH TERMINALS WITHOUT SPLICES.
- PROVIDE STAINLESS STEEL PLATE AND **WELD** TO EXISTING STEEL I-BEAM. GRIND ALL EDGES SMOOTH. PROVIDE SUPPORT BRACKETS AS NECESSARY TO PROVIDE A RIGID STRUCTURE.

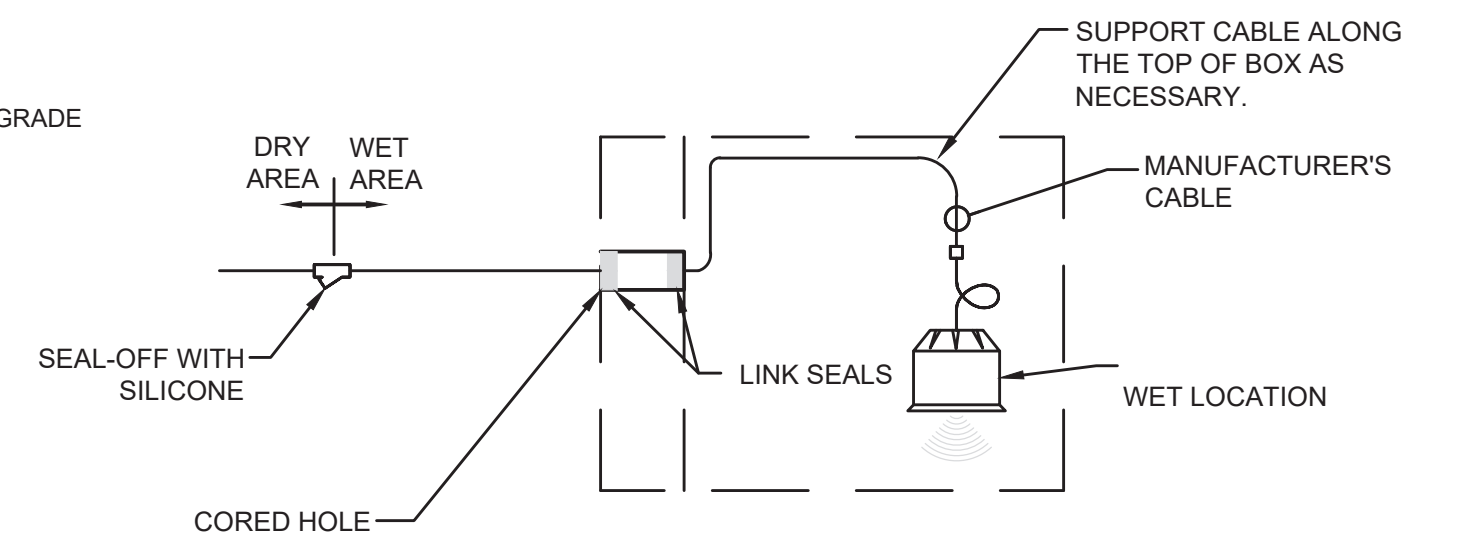


POLYMER-CONCRETE HANDHOLE DETAIL

NOT TO SCALE

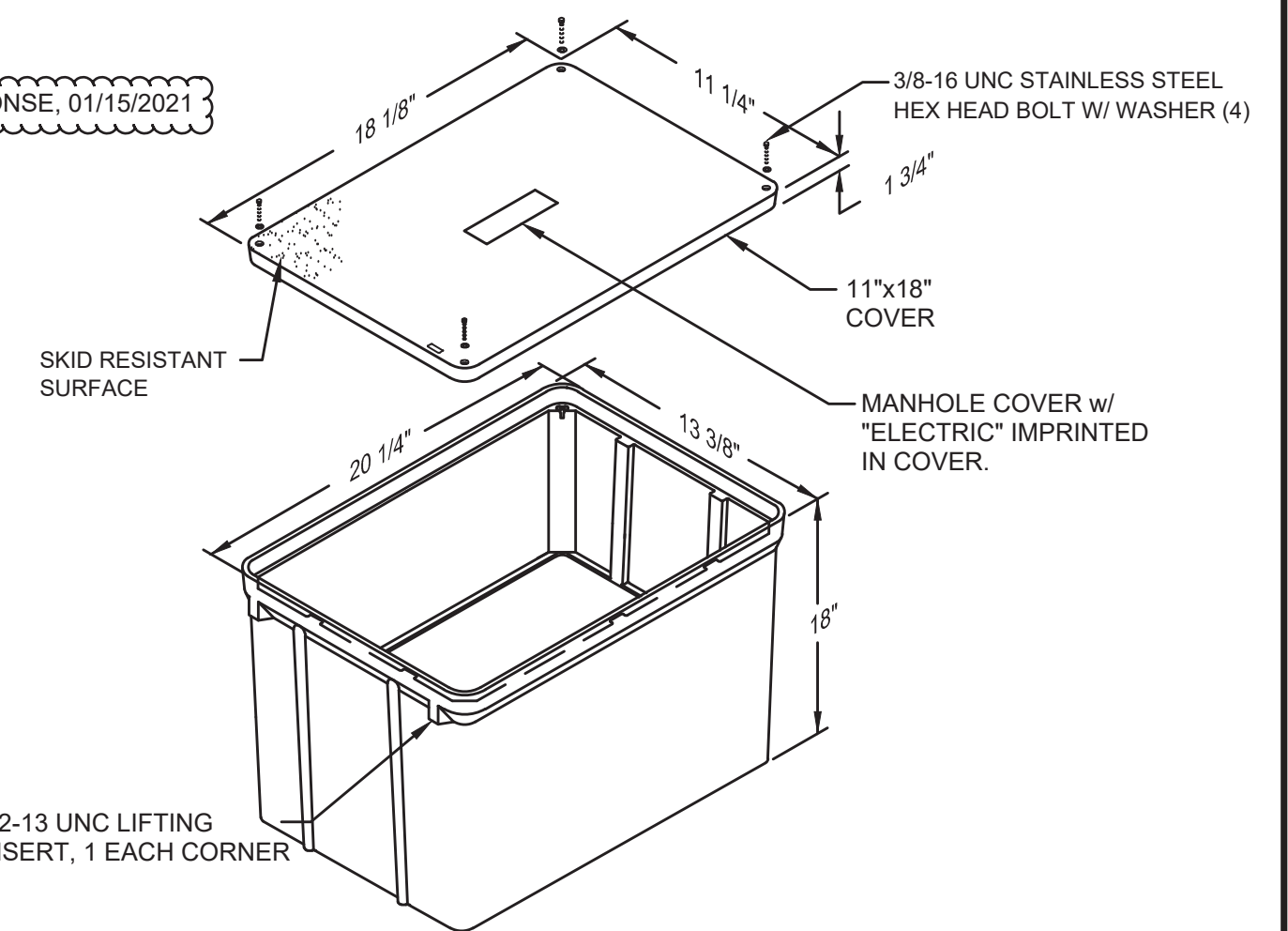
NOTE:

- SIZE EACH HANDHOLE AT EACH LOCATION PER NEC REQUIREMENTS. MINIMUM SIZE SHALL BE 11" X 18" X 18" OPEN BOTTOM. BOX SHALL BE MANUFACTURED BY QUAZITE MODEL PG1118BA18 WITH COVER PG1118CA00, OR APPROVED EQUAL.
- RESTORE EXISTING SURFACE CONDITIONS IN KIND TO INCLUDE, BUT NOT LIMITED TO: CRUSHED STONE, SELECT GRAVEL, TOPSOIL AND GRASS.



ULTRASONIC LEVEL SENSOR WIRING SCHEMATIC

NOT TO SCALE



RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



By: *[Signature]*
Date: 10/29/2021



IN CHARGE OF	D. LETKIEWICZ			
DESIGNED BY	M. EUCEDA			
CHECKED BY	S. THOMPSON	2	10/29/2021	RECORD DRAWING
		1	05/22/2020	ISSUED FOR BID
		0	11/20/2019	ISSUED FOR REGULATORY REVIEW
DRAWN BY	M. EUCEDA	NO.	DATE	REVISION

O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY
333 WEST WASHINGTON ST. SYRACUSE, NY 13202

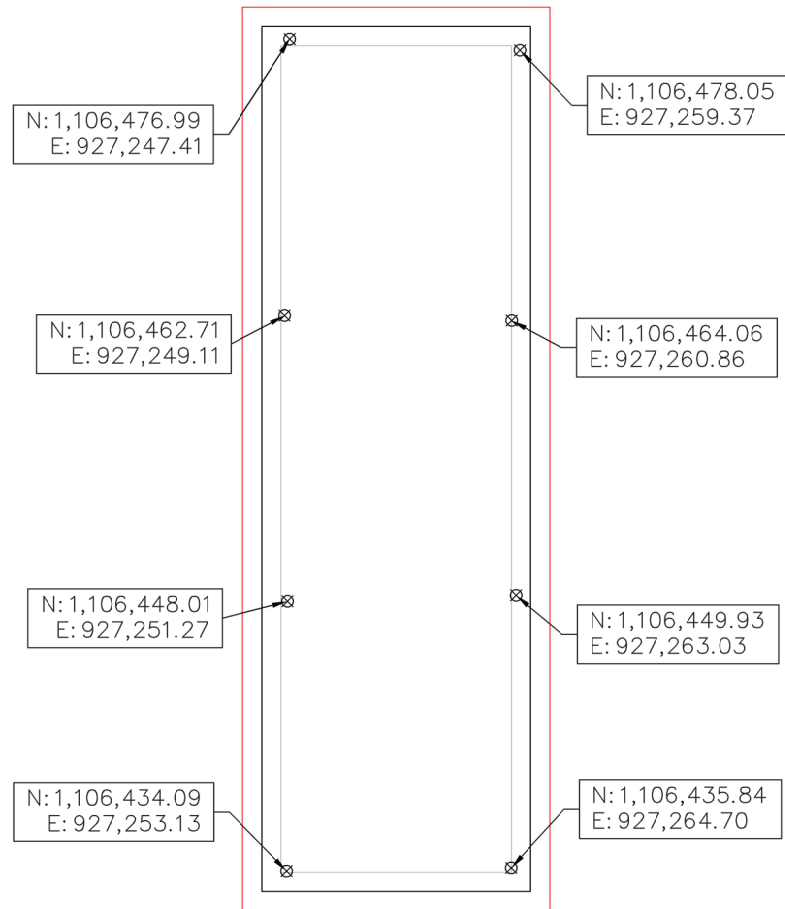


ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
HARBOR BROOK TREATMENT WETLANDS
SYRACUSE, NEW YORK

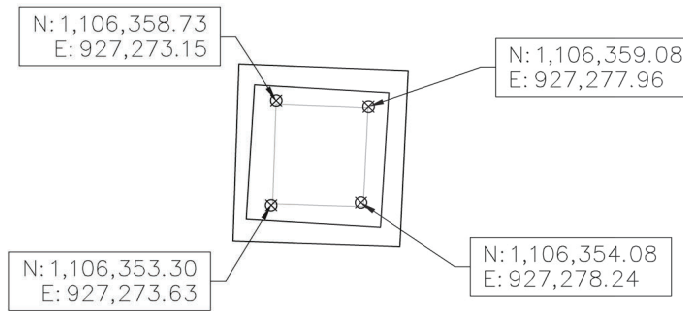
INSTRUMENTATION
MOUNTING DETAILS

FILE NO.	115.67266	I-603
DATE	NOV. 20, 2019	

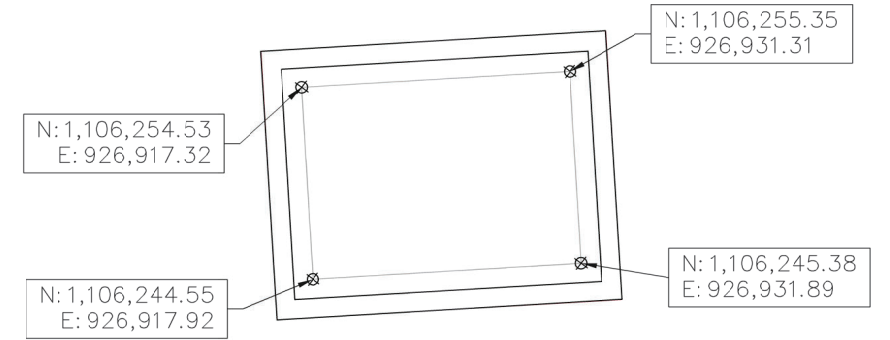
OVERFLOW CONTROL STRUCTURE



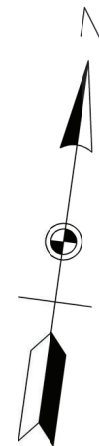
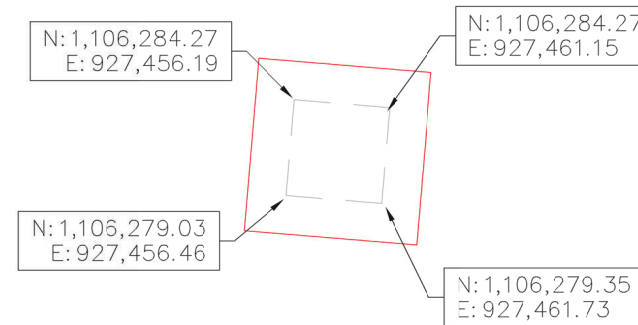
DRAINBACK STRUCTURE



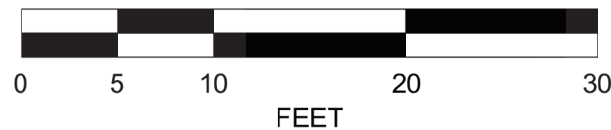
GRIT CHAMBER



MH-U13B



SCALE: 1" = 10'



Unauthorized alteration or addition to this survey is a violation of section 7209 of the New York State Education Law. Copies of this survey map not bearing the land surveyor's inked seal or embossed seal shall not be considered valid true copies. Certifications indicated herein shall run only to the person for whom the survey map is prepared, and on his behalf to the title company, governmental agency and lending institution. Certifications are not transferable to additional institutions or subsequent owners.

Survey Exhibit
Harbor Brook
Pile As-Built

CITY OF SYRACUSE, COUNTY OF ONANDAGA, N.Y.

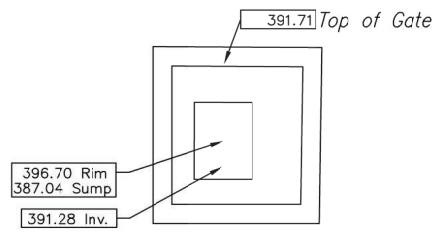
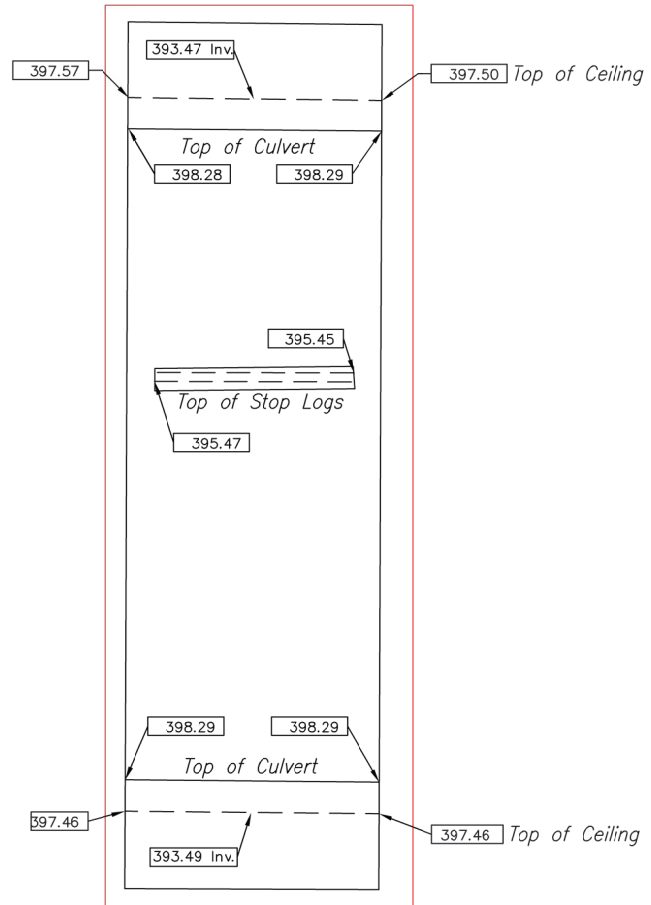
Job No. 10436
Drawing Date 06/10/2021
Field Work Date 12/14/2020

GdB Geospatial
GdBGeospatial.com
88 Duryea Road | Melville, NY 11747 | 516.579.3111

Drawing No. AB-2 Rev-2
Drawn By RDK
Checked By JMR

OVERFLOW CONTROL STRUCTURE

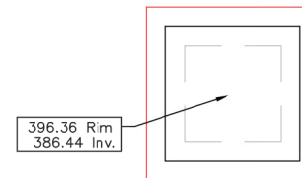
DRAINBACK STRUCTURE



SCALE: 1" = 10'



MH-U13B



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Survey Exhibit
Harbor Brook
Structure As-Built

CITY OF SYRACUSE, COUNTY OF ONANDAGA, N.Y.

Job No.
10436
Drawing Date
07/06/2021
Field Work Date
06/24/2021

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GdBGeospatial.com
88 Duryea Road | Melville, NY 11747 | 516.579.3111

Drawing No.
AB-3
Drawn By
JMR
Checked By
JMR