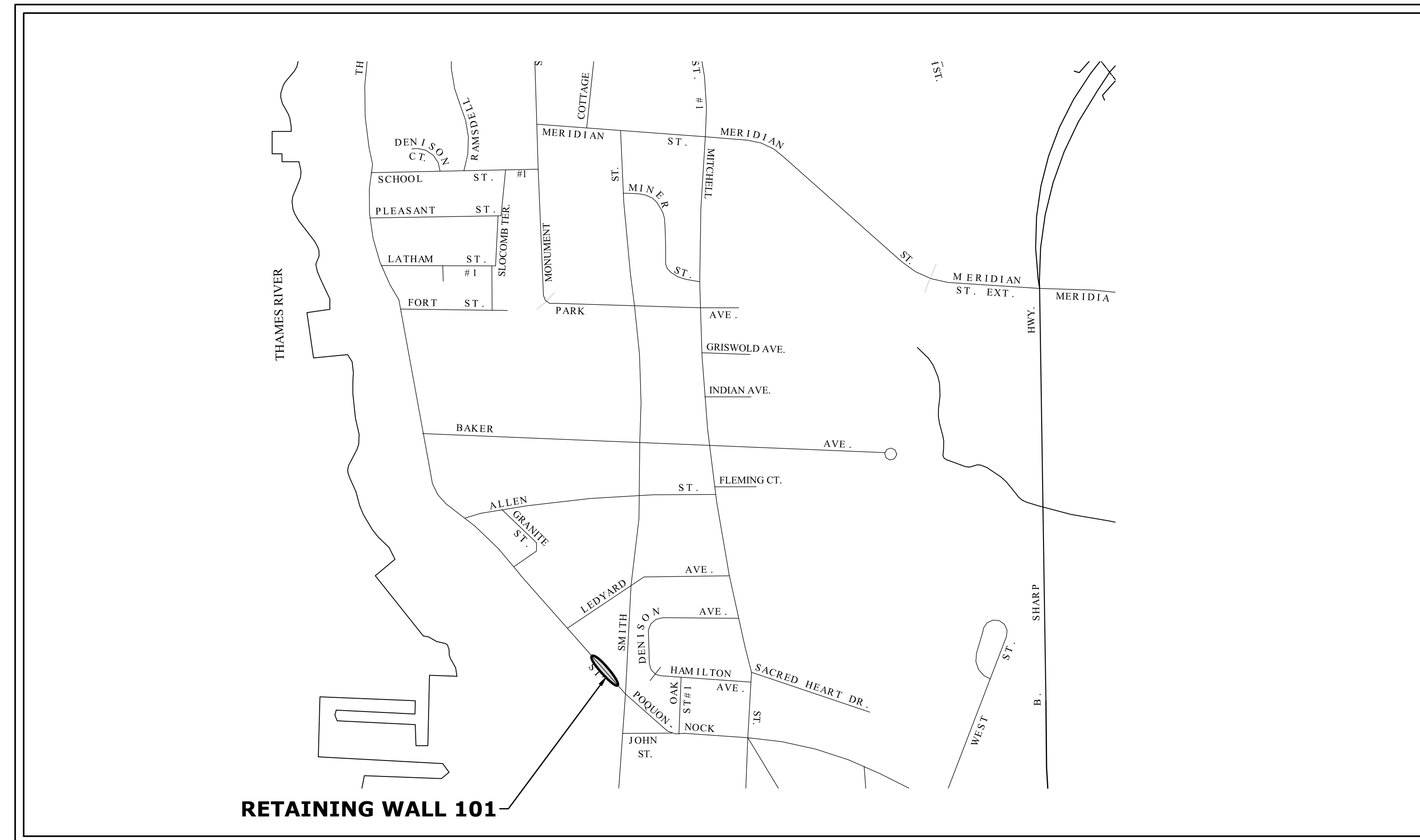


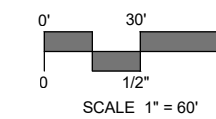
# RECONSTRUCTION OF THAMES STREET WALL AT ELECTRIC BOAT

## THAMES STREET GROTON, CONNECTICUT

NOVEMBER 22, 2019  
MMI PROJECT No. 2536-13



PROJECT SITE VICINITY MAP:



PREPARED BY:

**MILONE & MACBROOM**  
99 REALTY DRIVE  
CHESHIRE, CT 06410  
203.271.1773  
WWW.MMINC.COM

**PREPARED FOR:**

MR. TIM UMRYSZ, DIRECTOR OF PUBLIC WORKS  
CITY OF GROTON  
295 MERIDIAN STREET  
GROTON, CONNECTICUT 06340

**LIST OF DRAWINGS**

NO.	TITLE	DESCRIPTION
01	TITLE	TITLE
02	N-01	GENERAL NOTES, BORING LOGS & TYPICAL ROADWAY SECTION
03	MPT-01	DETOUR PLAN
04	SE-01	SEDIMENT & EROSION CONTROLS
05	STR-01	PROPOSED PLAN
06 - 07	STR-02 - STR-03	STRUCTURAL DETAILS
08 - 11	XSC-01 - XSC-04	CROSS SECTIONS



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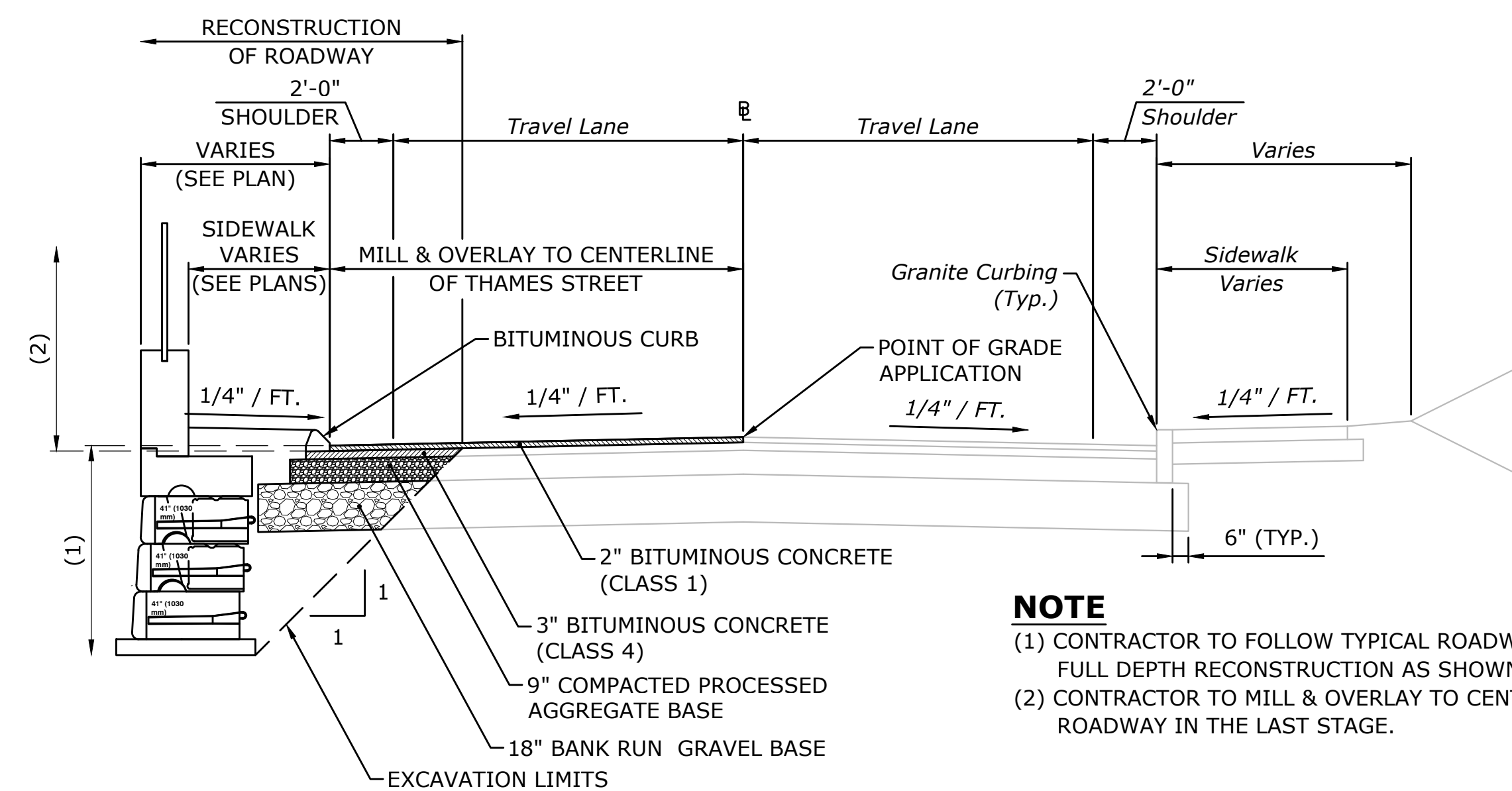


P.E. CT# 23980

**GENERAL NOTES:**

- THAMES STREET SHALL BE CLOSED WHILE PERFORMING THE WORK, BUT CLOSURE SHALL NOT EXCEED ONE CITY BLOCK UNLESS APPROVED IN ADVANCE BY CHIEF OF POLICE. SEE ROADWAY CLOSURE PLAN ON SHEET MPT-01.
- CONTRACTOR SHALL MAINTAIN EXISTING NORTH SIDEWALK AND UNOBSTRUCTED PEDESTRIAN ACCESS THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL WORK WITH THE CITY TO COORDINATE WITH RESIDENTS, PROPERTY AND BUSINESS OWNERS AFFECTED BY THE WORK.
- RESPECTIVE UTILITIES MUST BE NOTIFIED IN ADVANCE OF ANY EXCAVATION IN THE VICINITY OF EXISTING UTILITIES.
- CONTRACTOR SHALL MAINTAIN CLOSE COORDINATION WITH ELECTRIC BOAT REGARDING ANY WORK IMPACTING OR IMMEDIATELY ADJACENT TO THEIR SECURED PERIMETER. THE CONTRACTOR MUST PROVIDE ADVANCE NOTICE FOR TEMPORARY OUTAGES. ELECTRIC BOAT CONTACT IS BRIAN BOGAR: 860-389-8490.
- THE CONTRACTOR SHALL SUBMIT A WORK PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER.

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850		CLIENT: Milone & MacBroom Inc. PROJECT NO. G105-9733-14 PROJECT NAME Thames Street Rehabilitation		SHEET 1 OF 1 HOLE NO. B-1, B-2			
FOREMAN - DRILLER MD/jt		LOCATION Groton, CT		BORING LOCATIONS per Plan			
INSPECTOR		TYPE HSA SS NVD4		DATE START 6/17/14			
GROUND WATER OBSERVATIONS AT NONE FT AFTER 0 HOURS		SIZE I.D. 4 1/2" 1 3/8" 2 3/4"		DATE FINISH 6/17/14			
AT FT AFTER HOURS		HAMMER WT. 140#		SURFACE ELEV.			
		HAMMER FALL		GROUND WATER ELEV.			
DEPTH	SAMPLE				DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
	CASING BLOWS PER FOOT	NO	Type	REC			
B-1							5' BLACKTOP
							brn FMC SAND, sm C sand, M FC gravel, silt, some cobbles 30'-50'
5	1	C	36"	0'	80'		AUGER REFUSAL
							highly fractured BEDROCK or BOULDERS
10	2	C	60"	23"	130'	ROD = 6%	BEDROCK
15							
							E.O.B. 130'
GROUND WATER OBSERVATIONS							
AT NONE FT AFTER 0 HOURS							
AT FT AFTER HOURS							
B-2							5' BLACKTOP
							brn FM SAND, sm C sand, M FC gravel, silt, r C gravel, cobbles
5	1	ss	24"	6"	70'	8 11	dry compact
							some cobbles from 80' to top of rock @ 80'
10							AUGER REFUSAL
							poor BEDROCK
15							
							E.O.B. 80'
20							
<p>NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.</p> <p>GROUND SURFACE TO FT. USED CASING THEN CASING TO FT. HOLE NO. B-1, B-2</p> <p>A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST          WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER &amp; RODS C = COARSE          SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM          PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE</p>							



**NOTE**  
 (1) CONTRACTOR TO FOLLOW TYPICAL ROADWAY SECTION TO FULL DEPTH RECONSTRUCTION AS SHOWN IN STAGE 1.  
 (2) CONTRACTOR TO MILL & OVERLAY TO CENTERLINE OF ROADWAY IN THE LAST STAGE.

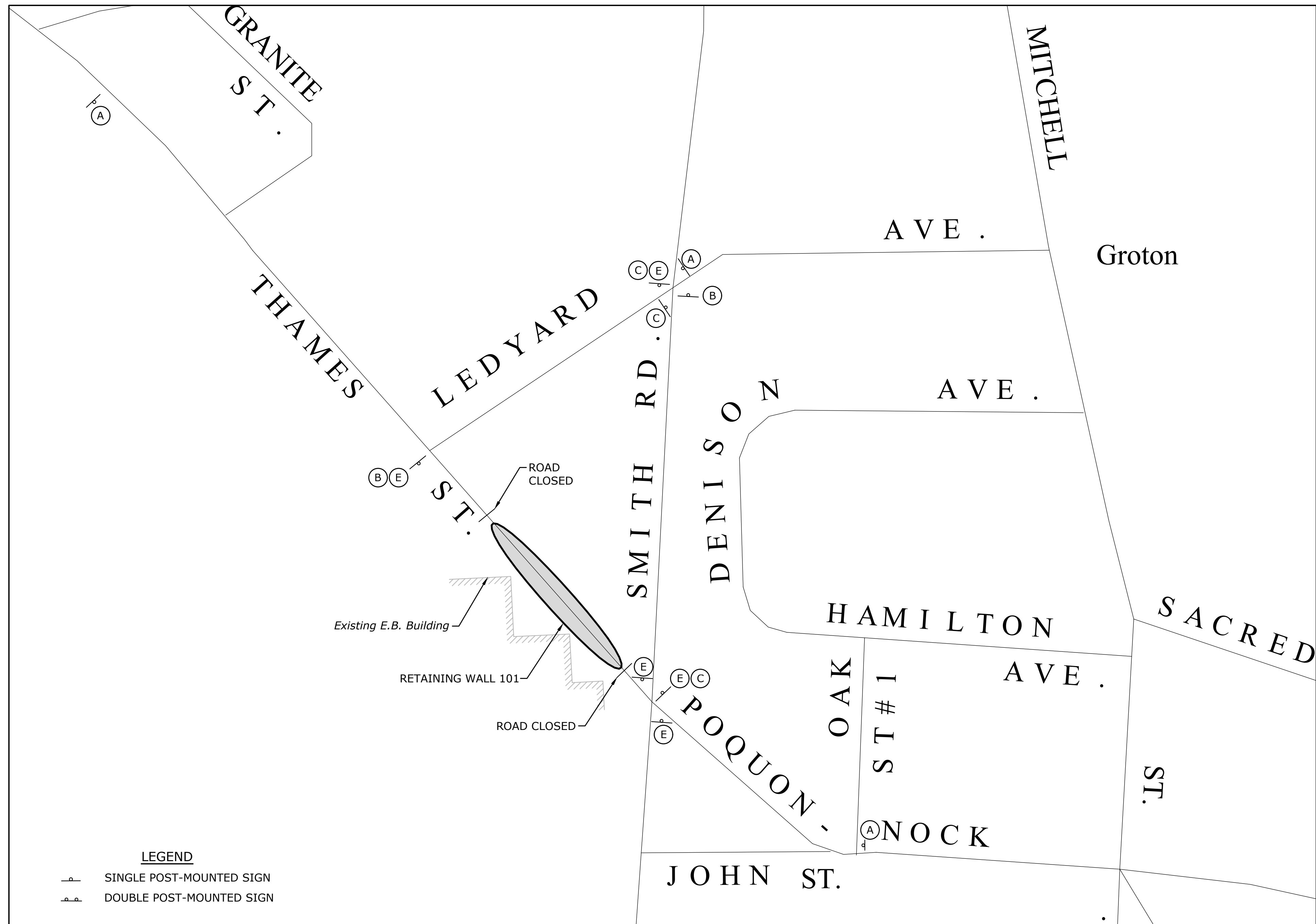
**TYPICAL ROADWAY RECONSTRUCTION SECTION**  
 NOT TO SCALE



DESCRIPTION	DATE	BY

GENERAL NOTES, BORING LOGS & TYPICAL ROADWAY SECTION  
 RECONSTRUCTION OF THAMES STREET WALL  
 AT ELECTRIC BOAT  
 THAMES STREET  
 GROTON, CONNECTICUT

DESIGNED	NP	KP
DRAWN		
CHECKED		
SCALE		
N.T.S.		
DATE		
NOVEMBER 22, 2019		
PROJECT NO.		
2536-13		
DRAWING NO.		
N-01		
SHEET NO.		
02		



**DETOUR PLAN**  
SCALE: 1"=100'

- LEGEND**
- SINGLE POST-MOUNTED SIGN
  - DOUBLE POST-MOUNTED SIGN

**GENERAL NOTES - MAINTENANCE & PROTECTION OF TRAFFIC**

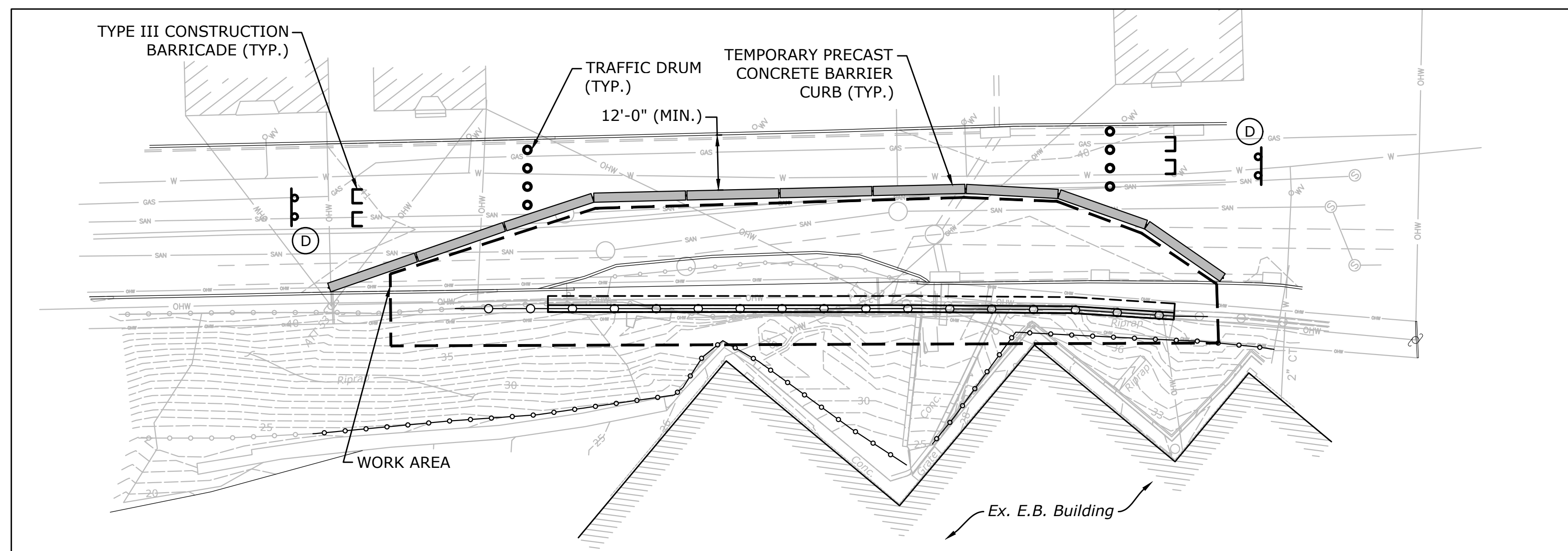
- INSTALL TYPE DE-7 DELINEATORS ON THE RIGHT AND TYPE DE-7A DELINEATORS ON THE LEFT OF TEMPORARY PRECAST CONCRETE BARRIER CURB IN ACCORDANCE WITH TRAFFIC STANDARD SHEET "DELINEATION, DELINEATOR AND OBJECT MARKER DETAILS".
- EXISTING SIGNS ARE TO BE RELOCATED AS NEEDED AND AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION SO THAT THEY ARE IN THE APPROPRIATE LOCATION AND VISIBLE TO MOTORISTS. SOME SIGNS MAY HAVE TO BE TEMPORARILY LOCATED WITHIN THE WORK AREA.
- SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
- WHEN CONSTRUCTING FINAL PAVEMENT, THE FINAL LIFT OF BITUMINOUS CONCRETE AND FINAL PAVEMENT MARKINGS SHALL NOT BE PLACED UNTIL ALL CONSTRUCTION HAS BEEN COMPLETED.
- EXISTING SIGNS THAT CONFLICT WITH TEMPORARY CONSTRUCTION SIGNS SHALL BE REMOVED OR COVERED AS DIRECTED BY THE ENGINEER.
- BARRICADE WARNING LIGHTS - HIGH INTENSITY SHALL BE INSTALLED ON ALL POST-MOUNTED CONSTRUCTION SIGNS.
- THE LOCATIONS OF TEMPORARY SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET FIELD CONDITIONS.
- THE LOCATIONS OF TRAFFIC DRUMS AND TYPE III CONSTRUCTION BARRICADES SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET FIELD CONDITIONS AND TO CLEARLY DEFINE ACCESS TO AND EGRESS FROM ALL ROADWAYS AND DRIVEWAYS.

**NOTE**

- ALL WORK FOR DETOUR SIGNAGE AND ROADWAY CLOSURE SHALL BE PAID UNDER THE ITEM "MAINTENANCE AND PROTECTION OF TRAFFIC".
- RELOCATION OF EXISTING SIGNS & REPLACEMENT OF DAMAGED EXISTING SIGNS TO BE PAID FOR UNDER ITEM "MAINTENANCE AND PROTECTION OF TRAFFIC".
- SEPARATE PAYMENT FOR TEMPORARY PRECAST CONCRETE BARRIER CURB.

CONSTRUCTION SIGN LEGEND			
PLAN DESIGNATION	MESSAGE	SIZE	CONNDOT DESIGNATION
(A)		48"	80-9604
(B)		30" X 24"	80-9710 (L)
(C)		30" X 24"	80-9710 (R)
(D)		48" X 30"	80-9080 INSTALL W/ BWL-HI
(E)		48" X 10" / 60" X 30"	80-9916 / 80-9081

- LEGEND**
- SINGLE POST MOUNTED SIGN
  - DOUBLE POST MOUNTED SIGN W/ BARRICADE WARNING LIGHT - HIGH INTENSITY
  - TYPE III CONSTRUCTION BARRICADE W/ BARRICADE WARNING LIGHT - HIGH INTENSITY
  - TRAFFIC DRUM



**ROADWAY CLOSURE PLAN**  
SCALE: 1"=20'-0"

DESCRIPTION	DATE	BY

DETOUR PLAN  
 RECONSTRUCTION OF THAMES STREET WALL AT ELECTRIC BOAT  
 THAMES STREET  
 GROTON, CONNECTICUT

NP DESIGNED	NP DRAWN	KP CHECKED
AS NOTED		
NOVEMBER 22, 2019		
DATE		
PROJECT NO. 2536-13		
DRAWING NO. MPT-01		
03		
SHEET NO.		



**SEDIMENT & EROSION CONTROL SPECIFICATIONS**

**GENERAL**

THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.

IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATERBODIES, AND TO PREVENT, INSOFAR AS POSSIBLE, EROSION ON THE SITE

**LAND GRADING**

**GENERAL**

- THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
  - THE CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO ONE VERTICAL (1:1).
  - THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN EXISTING FACES.
  - THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO FOUR VERTICAL (1:4).
  - PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
  - EXCAVATIONS SHOULD NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT PROTECTING SUCH PROPERTY FROM EROSION, SLIDING, SETTLING, OR CRACKING.
  - NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS, WATERCOURSES, OR WATERBODIES.

**EROSION CHECKS**

**GENERAL**

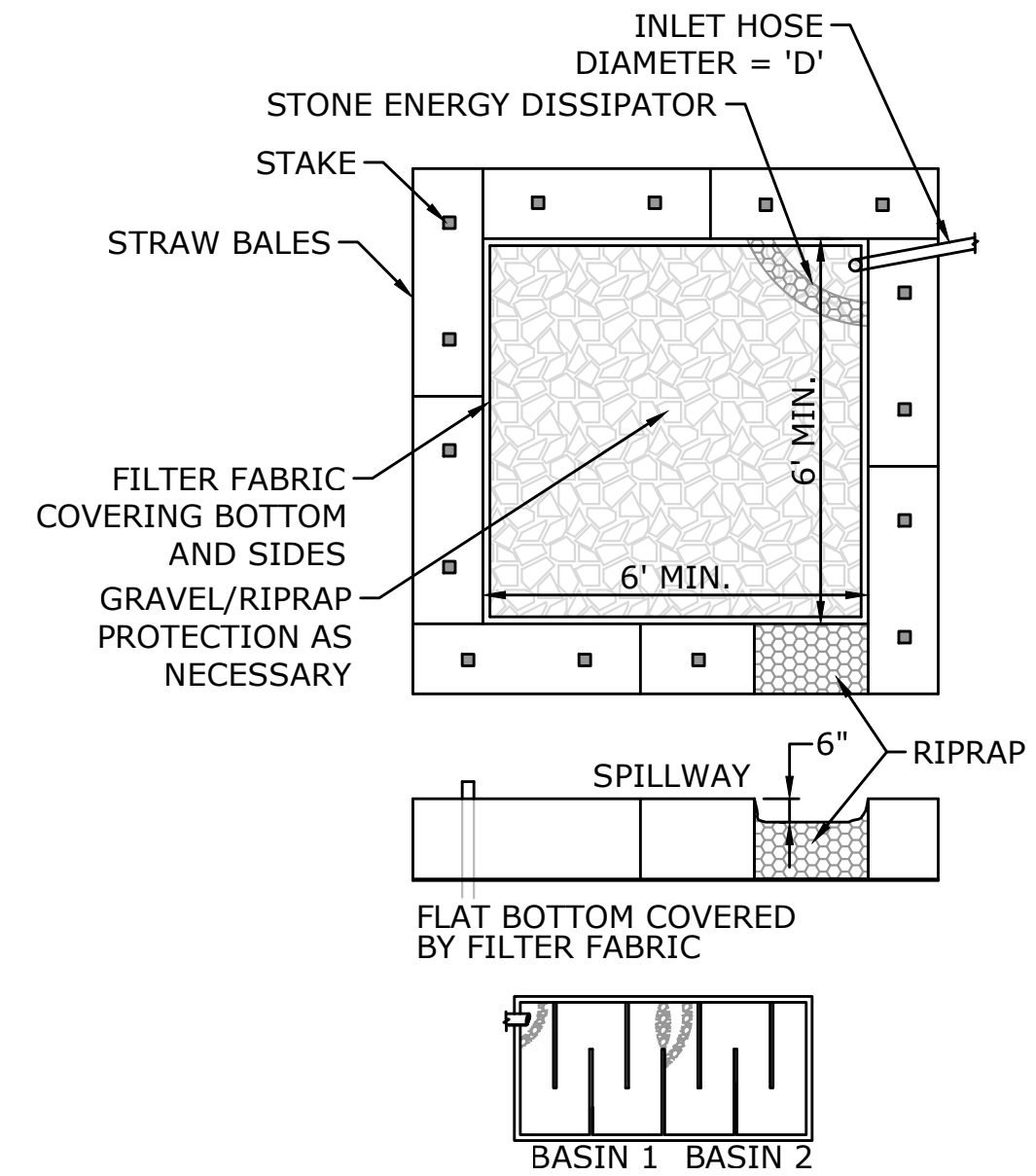
- TEMPORARY PERVIOUS BARRIERS USING BALES OF HAY OR STRAW, HELD IN PLACE WITH STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND OR GEOTEXTILE FABRIC FASTENED TO A FENCE POST AND BURIED INTO THE GROUND, SHALL BE INSTALLED AND MAINTAINED AS REQUIRED TO CHECK EROSION AND REDUCE SEDIMENTATION.

**CONSTRUCTION**

- BALES SHOULD BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED INTO THE SOIL A MINIMUM OF FOUR INCHES (4").
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY WOOD STAKES OR REINFORCEMENT BARS DRIVEN THROUGH THE BALES AND INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD THE PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
- GEOTEXTILE FABRIC SHALL BE SECURELY ANCHORED AT THE TOP OF A THREE FOOT (3') HIGH FENCE AND BURIED A MINIMUM OF FOUR INCHES (4") TO THE SOIL. SEAMS BETWEEN SECTIONS OF FILTER FABRIC SHALL OVERLAP A MINIMUM OF TWO FEET (2').

**INSTALLATION AND MAINTENANCE**

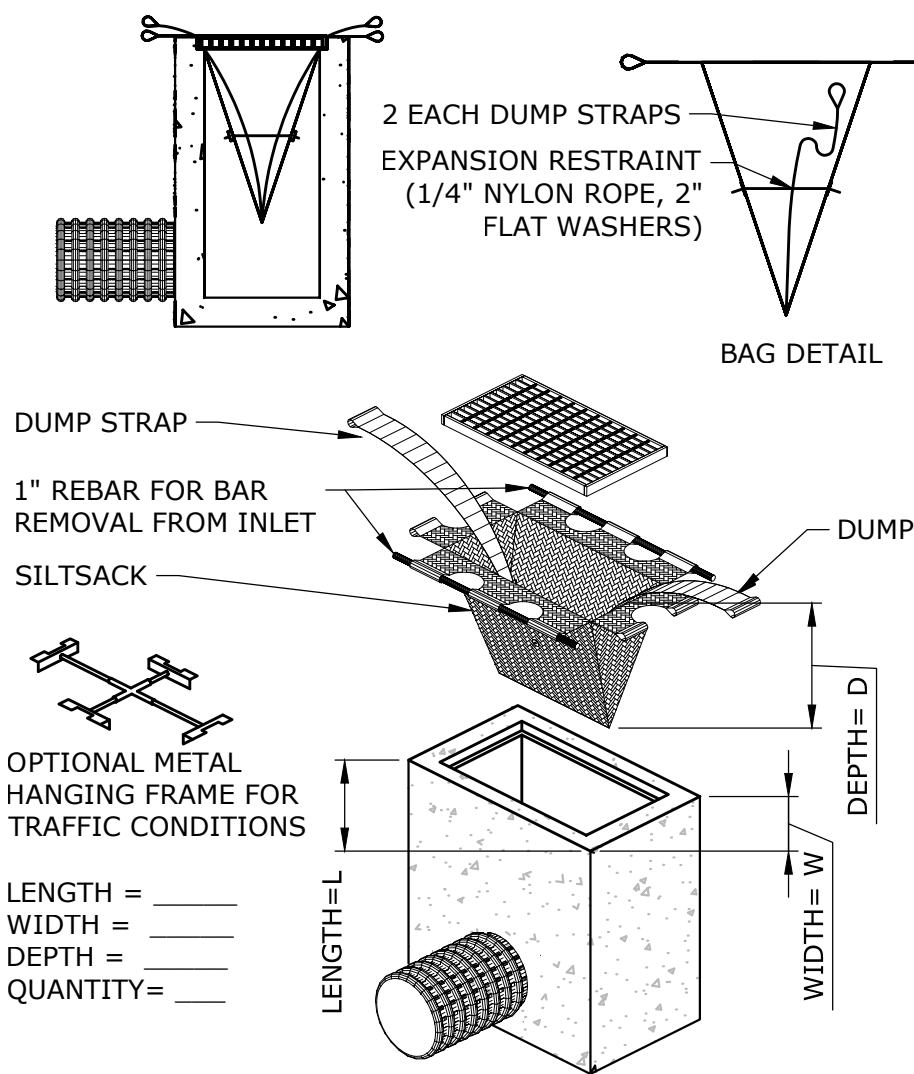
- BALED HAY EROSION BARRIERS SHALL BE INSTALLED AT ALL STORM SEWER INLETS.
- BALED HAY EROSION BARRIERS AND GEOTEXTILE FENCE SHALL BE INSTALLED AT THE LOCATION INDICATED ON THE PLAN AND IN ADDITIONAL AREAS AS MAY BE DEEMED APPROPRIATE DURING CONSTRUCTION.
- ALL EROSION CHECKS SHALL BE MAINTAINED UNTIL ADJACENT AREAS ARE STABILIZED.
- CONTRACTOR SHALL INSPECT AT MINIMUM MONTHLY AND BEFORE AND AFTER HEAVY RAIN AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED AT BOTH CITY & ELECTRIC BOAT PROPERTY.
- EROSION CHECKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.



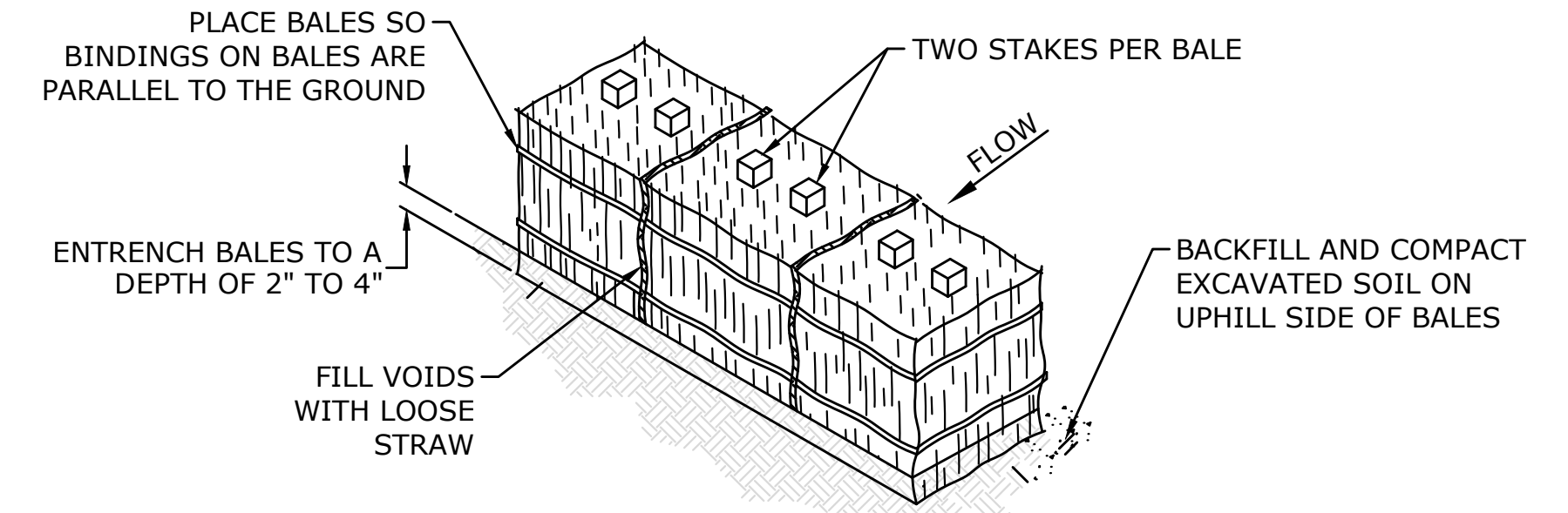
**TEMPORARY DEWATERING BASIN**  
NOT TO SCALE

**NOTE**

- IF PUMPING VOLUME EXCEEDS BASIN CAPACITY, BASIN MAY BE USED IN TANDEM OR TIERS.
- INCREASE RIPRAP SIZE ON BASIN BOTTOM AS NECESSARY TO MAINTAIN SEDIMENT-FREE DISCHARGE WATERS.
- TEMPORARY DEWATERING BASIN SHALL BE PAID FOR UNDER "COFFERDAM AND DEWATERING".

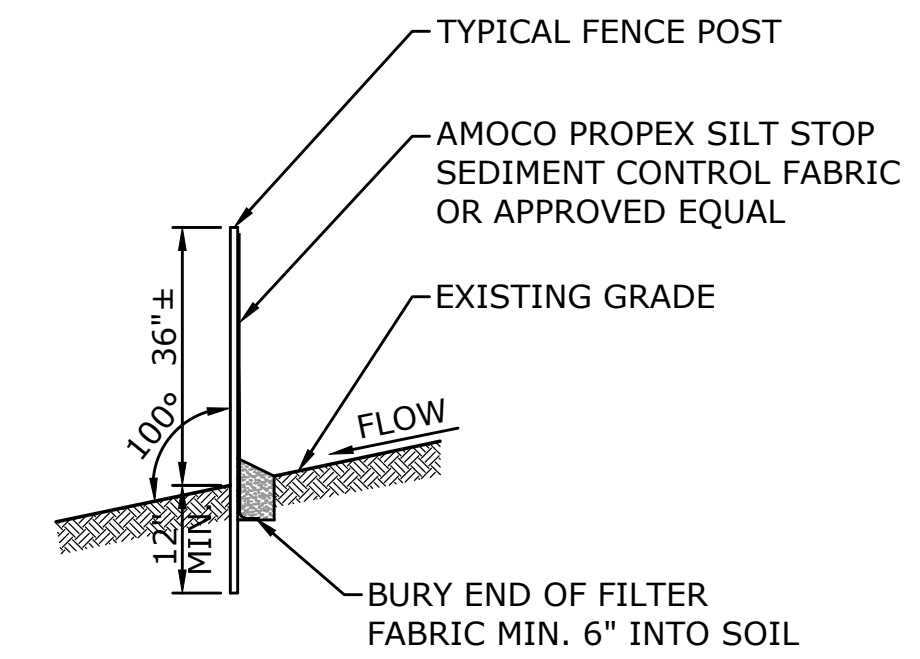


**INLET SEDIMENT CONTROL DEVICE**  
NOT TO SCALE



- IDEALLY, BALES SHOULD BE ENTRENCHED 2 TO 4 INCHES AND TIGHTLY BUTTED TOGETHER. BALES CAN BE SUCCESSFULLY PLACED WITHOUT A TRENCH IF GOOD GROUND CONTACT IS MADE. REMOVE HEAVY BRUSH AND FILL ALL VOIDS WITH LOOSE STRAW.
- BALES SHALL BE ONLY USED AS A TEMPORARY BARRIER AND FOR NO LONGER THAN 60 DAYS.
- WHEN SEDIMENTATION DEPOSITS REACH WITHIN 3" OF THE TOP OF BALES, REMOVE SEDIMENTATION OR ADD ADDITIONAL BALES ON SEDIMENTATION DIRECTION BEHIND FIRST ROW OF BALES AS DIRECTED BY THE ENGINEER.
- UPON ESTABLISHMENT OF GROUND COVER ON DISTURBED AREAS AND WHEN DIRECTED BY THE ENGINEER, HAY BALES WILL BE REMOVED AND USED AS MULCH. ANY SEDIMENTATION WILL BE THINLY SPREAD UPON ESTABLISHED GROUND COVER.

**HAYBALE BARRIER PROTECTION**  
NOT TO SCALE



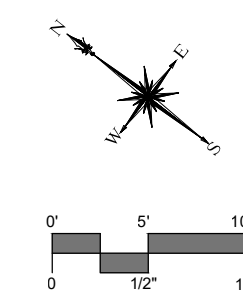
**SEDIMENTATION CONTROL SYSTEM**  
NOT TO SCALE

DESCRIPTION	DATE	BY

SEDIMENT & EROSION CONTROLS  
RECONSTRUCTION OF THAMES STREET WALL  
AT ELECTRIC BOAT  
THAMES STREET  
GROTON, CONNECTICUT

DESIGNED	NP	KP
DRAWN		CHECKED
SCALE		
AS NOTED		
DATE		
NOVEMBER 22, 2019		
PROJECT NO.		
2536-13		
DRAWING NO.		
SE-01		

04



DESCRIPTION	DATE	BY

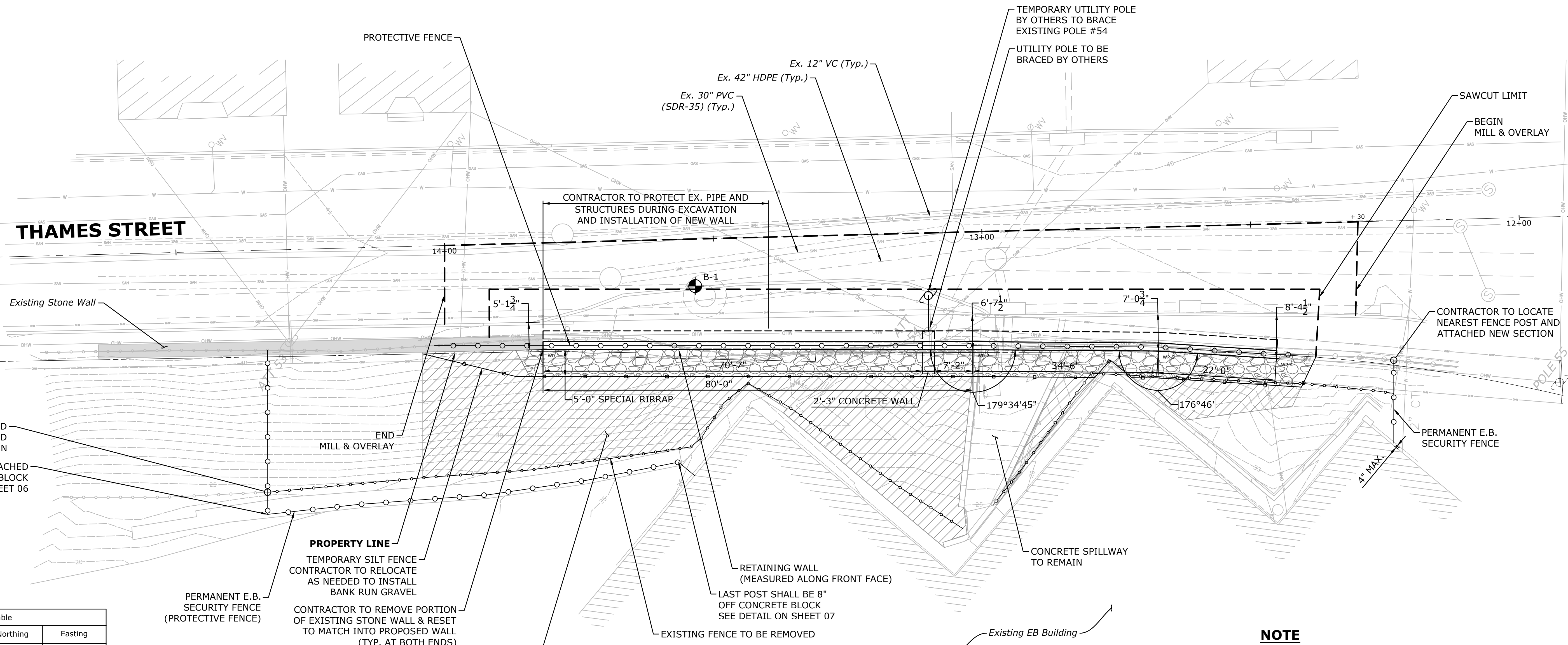
**PROPOSED PLAN**  
**RECONSTRUCTION OF THAMES STREET WALL**  
**AT ELECTRIC BOAT**  
 THAMES STREET  
 GROTON, CONNECTICUT

KP	NP	KP
DESIGNED	DRAWN	CHECKED
SCALE: 1"=10'		
DATE: NOVEMBER 22, 2019		
PROJECT NO.: 2536-13		
DRAWING NO.: STR-01		

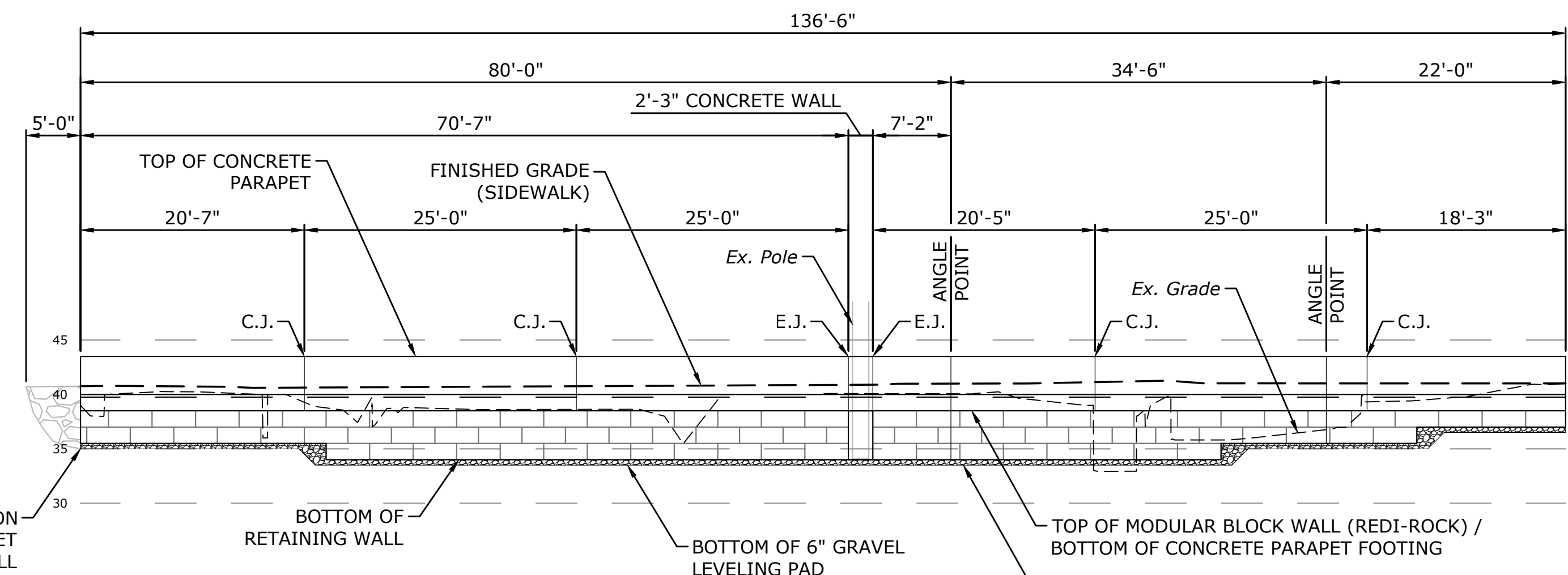
05

SHEET NO.

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**RETAINING WALL - PLAN**  
SCALE: 1"=10'-0"



**RETAINING WALL - ELEVATION**  
SCALE: 1"=10'-0"

Point Table			
Point #	Raw Description	Northing	Easting
1	WP-1	688478.3958	1184158.8808
2	WP-2	688414.8270	1184207.4504
3	WP-3	688387.2599	1184228.1941
4	WP-4	688368.9633	1184240.4104

\* REMOVAL OF DEBRIS & REMNANTS OF EXISTING STONE WALL ON CITY OF GROTON'S RIGHT OF WAY TO BE PAID UNDER "CLEARING AND GRUBBING - SITE NO. 1"

\*\* REMOVAL OF DEBRIS ON ELECTRIC BOAT'S PROPERTY TO BE PAID UNDER "CLEARING AND GRUBBING - SITE NO. 2"

\*\*\* DEBRIS WILL CONSIST OF ASPHALT, ROCK, UN-PAINTED CONCRETE AND SOIL. EB WILL SUPPLY CONTAINERS TO DISPOSE OF ROCK > 6", ROCK < 6", CONCRETE, SOIL AND WILL BURDEN THE COST OF DISPOSAL. PLACE DEBRIS INTO CONTAINERS UP TO HALF THE HEIGHT OF CONTAINERS. NOTIFY EB WHEN CONTAINERS ARE TO BE REMOVED AND OR RETURNED.

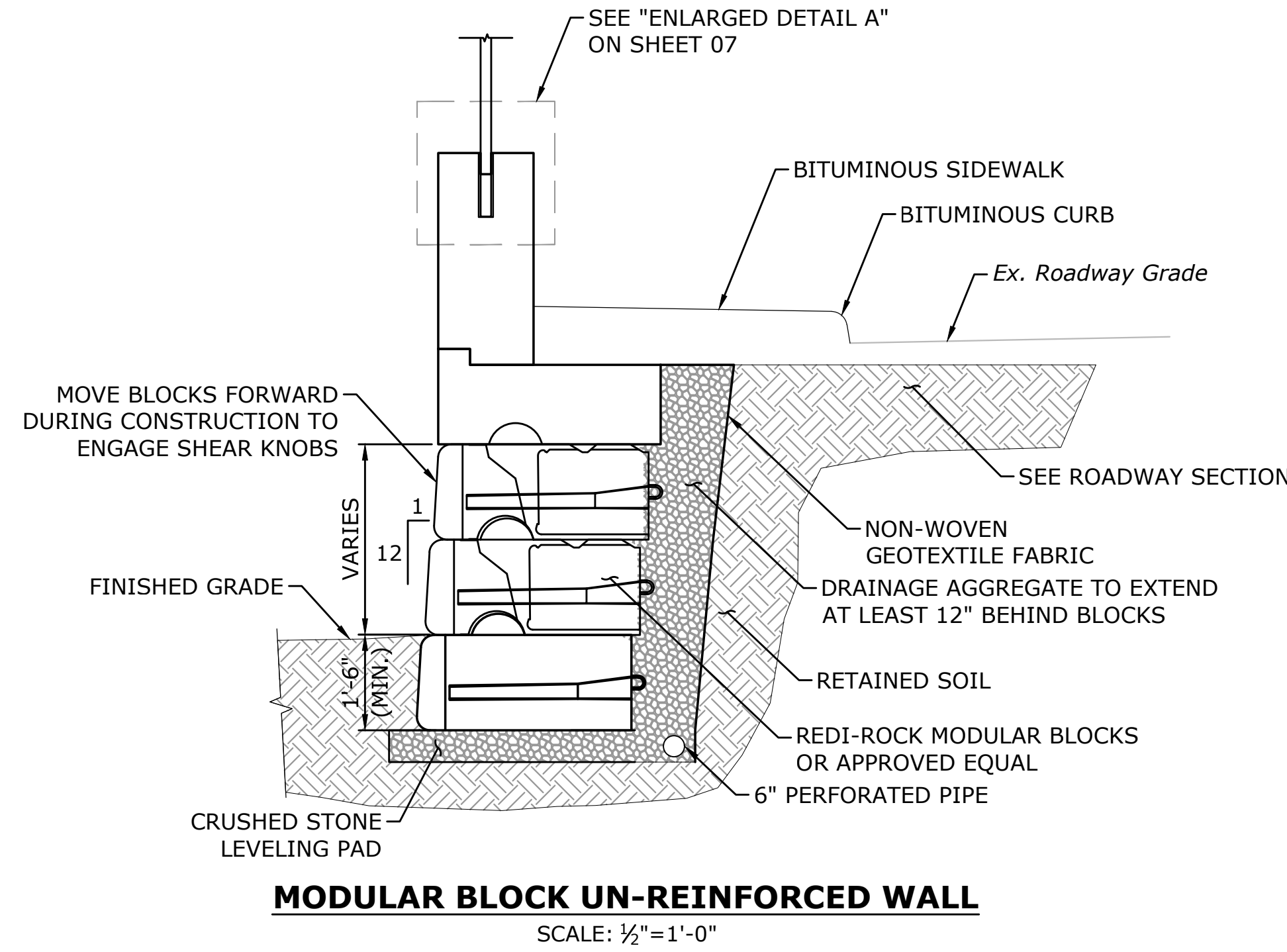
LEGEND	
+ WP #1	WORKING POINT
E.J.	EXPANSION JOINT
C.J.	CONTRACTION JOINT
	REMOVAL OF DEBRIS & PROPOSED 6" LAYER OF 3" CRUSHED STONE

**NOTE**

- UTILITY POLE #54 SHALL BE HELD IN PLACE BY OTHERS DURING EXCAVATION IN CLOSE PROXIMITY CONTRACTOR TO COORDINATE.
- THE OVERHEAD UTILITIES SHALL BE SHIELDED BY OTHERS PRIOR TO CONSTRUCTION.

**MODULAR BLOCK RETAINING WALL NOTES**

- RETAINING WALL BLOCKS SHALL BE BY:  
REDI-ROCK Walls of New England  
Carroll Concrete Co.  
8 Reeds Mill Road  
P.O. BOX 1000  
Newport, NH 03773-1000  
(617) 620-1667
- LEVELING PAD SHALL CONSIST OF WELL GRADED ROAD BASE AGGREGATE, 3/4" CRUSHED, ANGULAR GRAVEL WITH SOME FINES. CONTRACTOR MAY OPT FOR A LEAN CONCRETE LEVELING PAD. PAD SHALL BE UNREINFORCED LEAN CONCRETE, 200-300 PSI, 3" THICK MAXIMUM. DRAINAGE AGGREGATE SHALL CONSIST OF CLEAN ANGULAR GRAVEL, 3/4" DIAMETER WITH LESS THAN 5% FINES.
- DRAINAGE PIPE SHALL BE PERFORATED HDPE PIPE. REINFORCED BACKFILL SHALL BE FREE OF DEBRIS, ORGANIC SOIL, AND EXPANSIVE SOILS. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
- COMPACTION SHALL BE 95% OF MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698). COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE CONTRACTOR'S DESIGN ENGINEER.
- COMPACTION WITHIN 3 FT OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT. CONTRACTOR SHALL SLOPE SITE GRADES TO DIRECT SURFACE RUNOFF AWAY FROM WALL AT END OF EACH DAY TO AVOID WATER DAMAGING THE WALL WHILE UNDER CONSTRUCTION. ANY SURFACE DRAINAGE FEATURES, FINISHED GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.



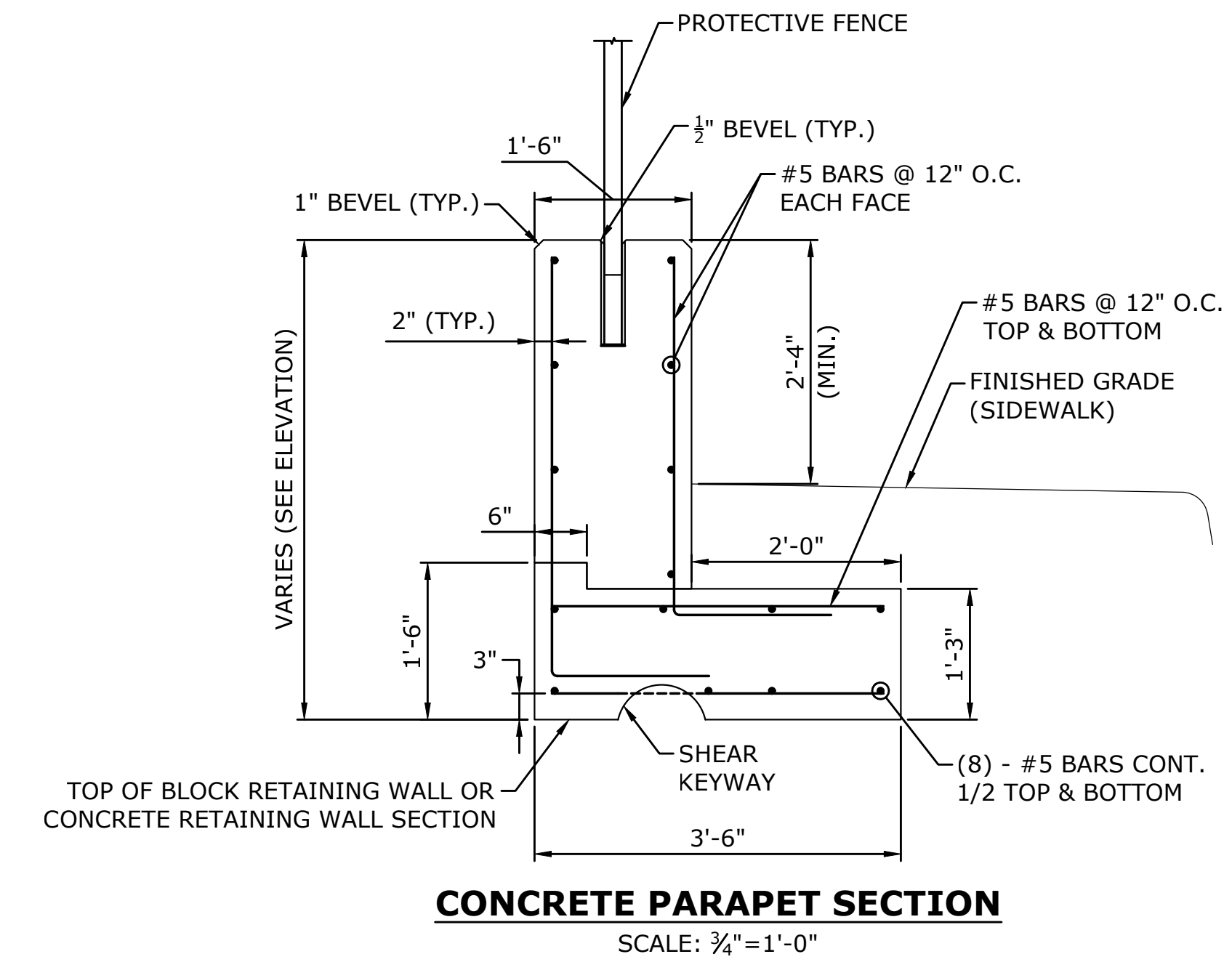
**MODULAR BLOCK UN-REINFORCED WALL**  
SCALE: 1/2"=1'-0"

**GENERAL NOTES**

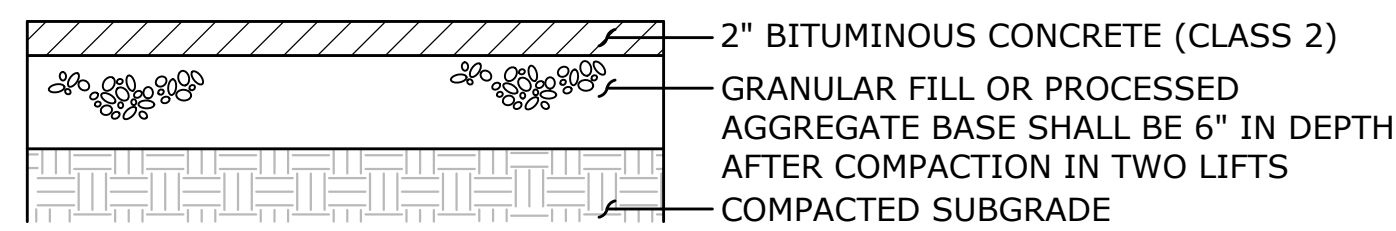
- SPECIFICATIONS:** CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016), SUPPLEMENTAL SPECIFICATIONS JANUARY 2019, AND SPECIAL PROVISIONS.
- DESIGN SPECIFICATIONS:** AASHTO LRFD DESIGN SPECIFICATIONS, 8<sup>TH</sup> EDITION, 2017, AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003) WITH INTERIM REVISIONS UP TO AND INCLUDING 2011.
- ALLOWABLE DESIGN STRESSES:**  
CLASS "F"  
FLOWABLE FILL  
BASED ON  $f_c = 4,400$  psi  
BASED ON  $f_c = 2,000$  psi
- EXISTING DIMENSIONS:** DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISH WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

**CONCRETE NOTES**

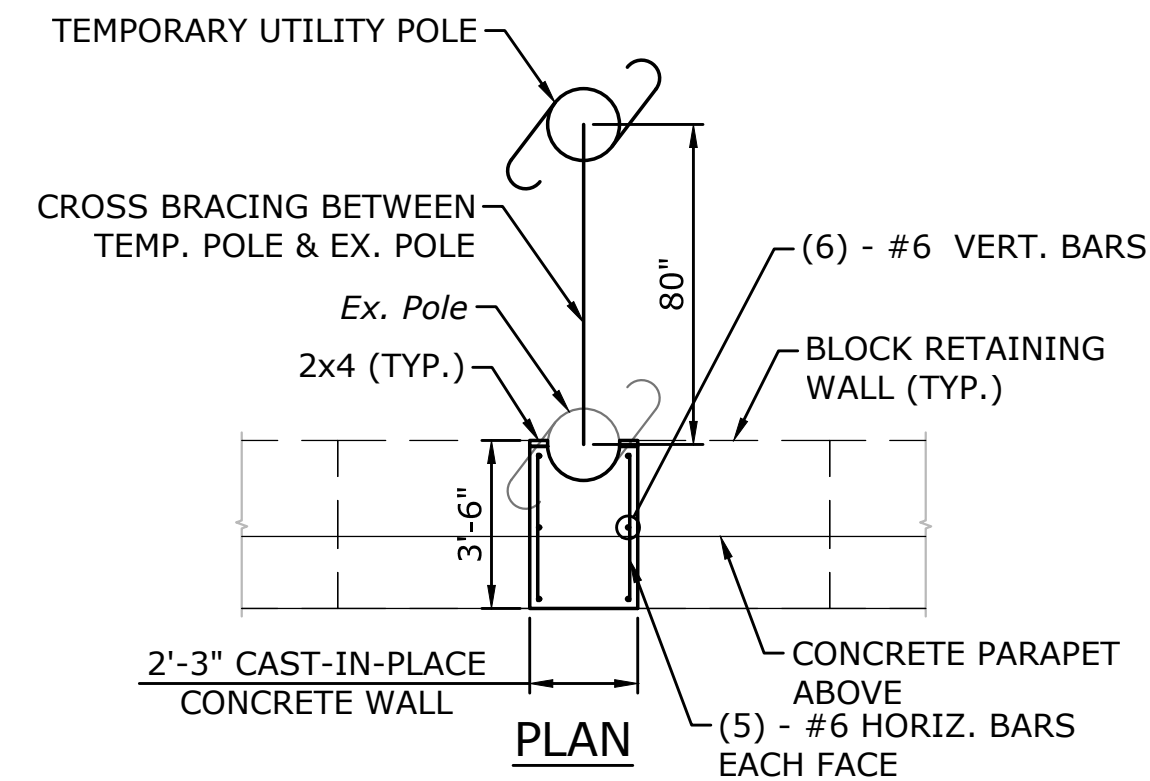
- CLASS "F" CONCRETE:** CLASS "F" CONCRETE SHALL BE USED FOR RETAINING WALL SECTION & PARAPET.
- FLOWABLE FILL:** SHALL BE USED TO FILL BETWEEN RETAINING WALL & EXISTING SPILLWAY SLAB AND WINGWALL.
- EXPOSED EDGES:** EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1"x1" UNLESS DIMENSIONED OTHERWISE.
- CONCRETE COVER:** ALL REINFORCEMENT SHALL HAVE TWO INCHES COVER UNLESS DIMENSIONED OTHERWISE.
- REINFORCEMENT:** ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60 - EPOXY COATED.
- CONSTRUCTION JOINTS:** CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.



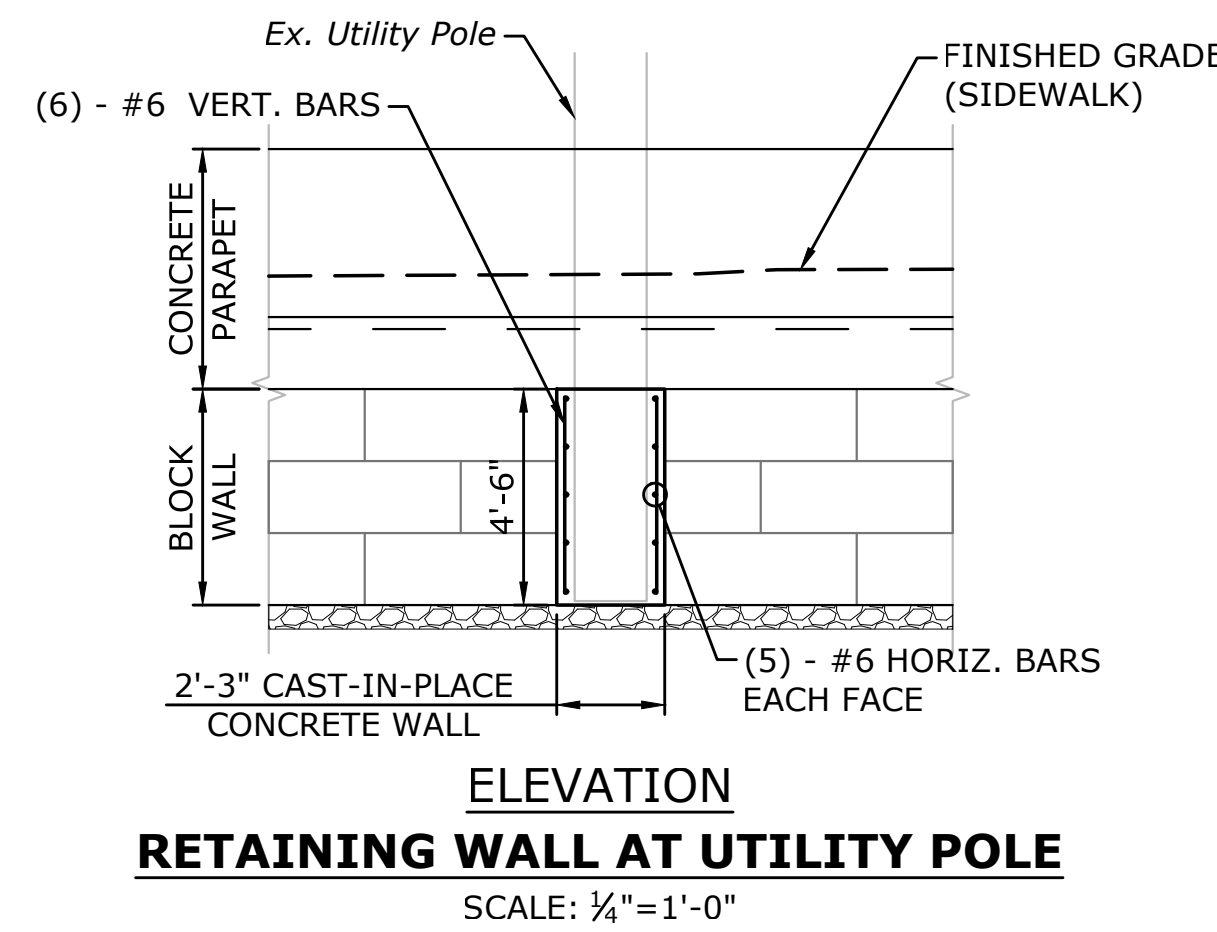
**CONCRETE PARAPET SECTION**  
SCALE: 3/4"=1'-0"



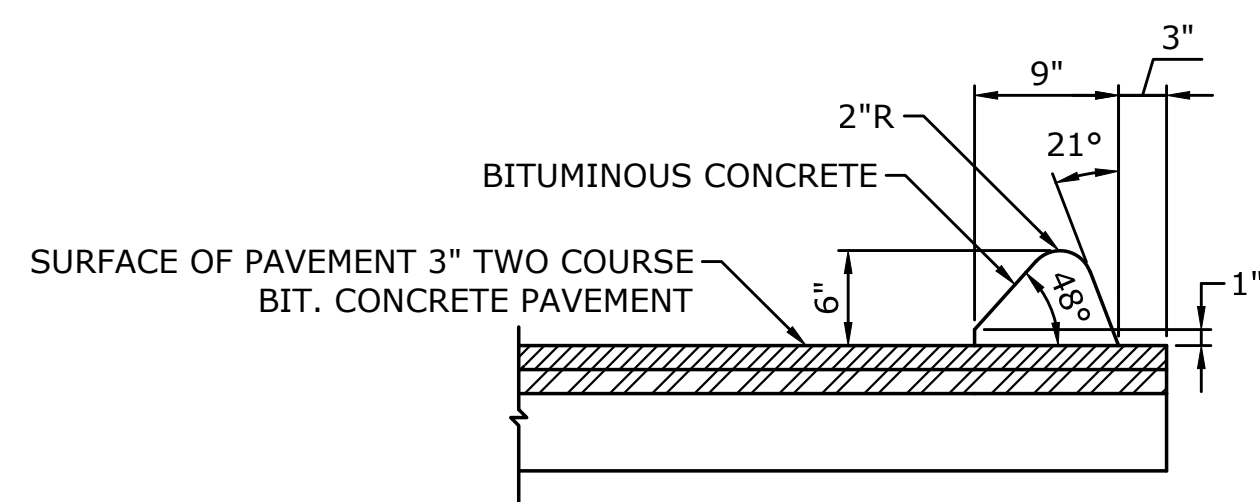
**BITUMINOUS CONCRETE SIDEWALK**  
N.T.S.



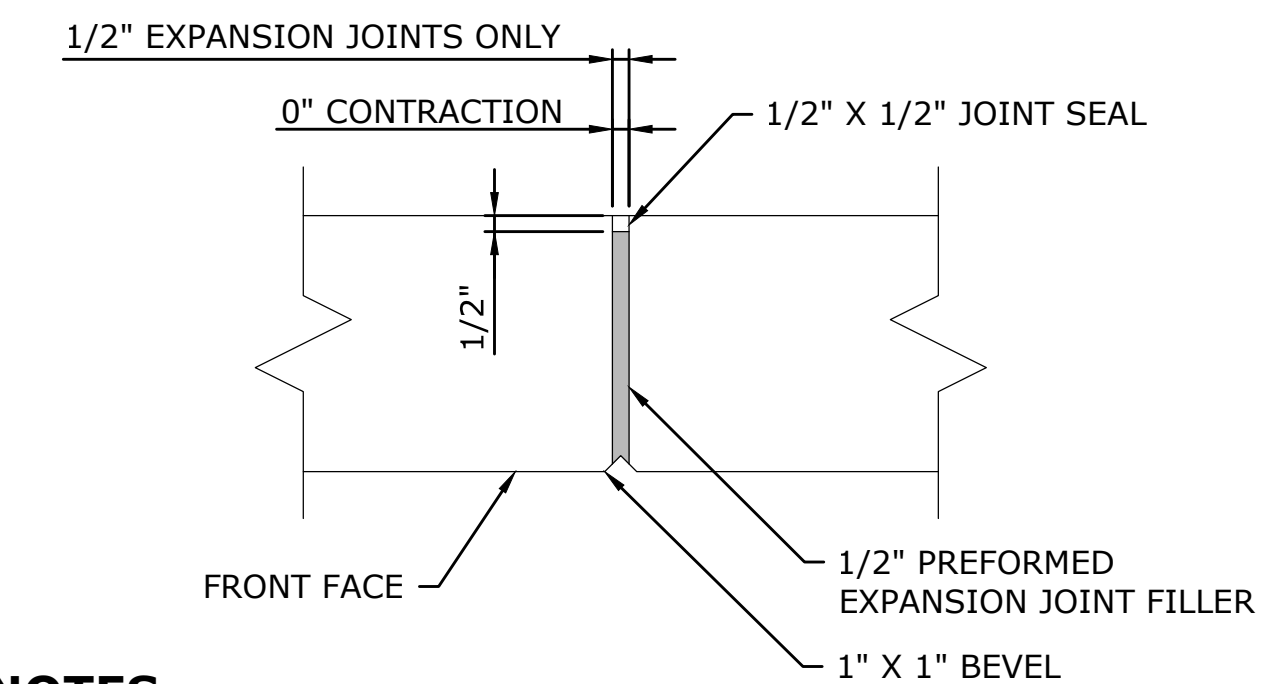
**PLAN**  
SCALE: 1/4"=1'-0"



**ELEVATION**  
**RETAINING WALL AT UTILITY POLE**  
SCALE: 1/4"=1'-0"



**BITUMINOUS CONCRETE LIP CURBING**  
SCALE: 1"=1'-0"



**NOTES**

- JOINT SEAL TO EXTEND FROM TOP OF FOOTING TO TOP OF WALL.
- NO REINFORCEMENT SHALL PASS THROUGH EXPANSION OR CONTRACTION JOINT.
- REINFORCEMENT SHALL PASS THROUGH CONSTRUCTION JOINTS.

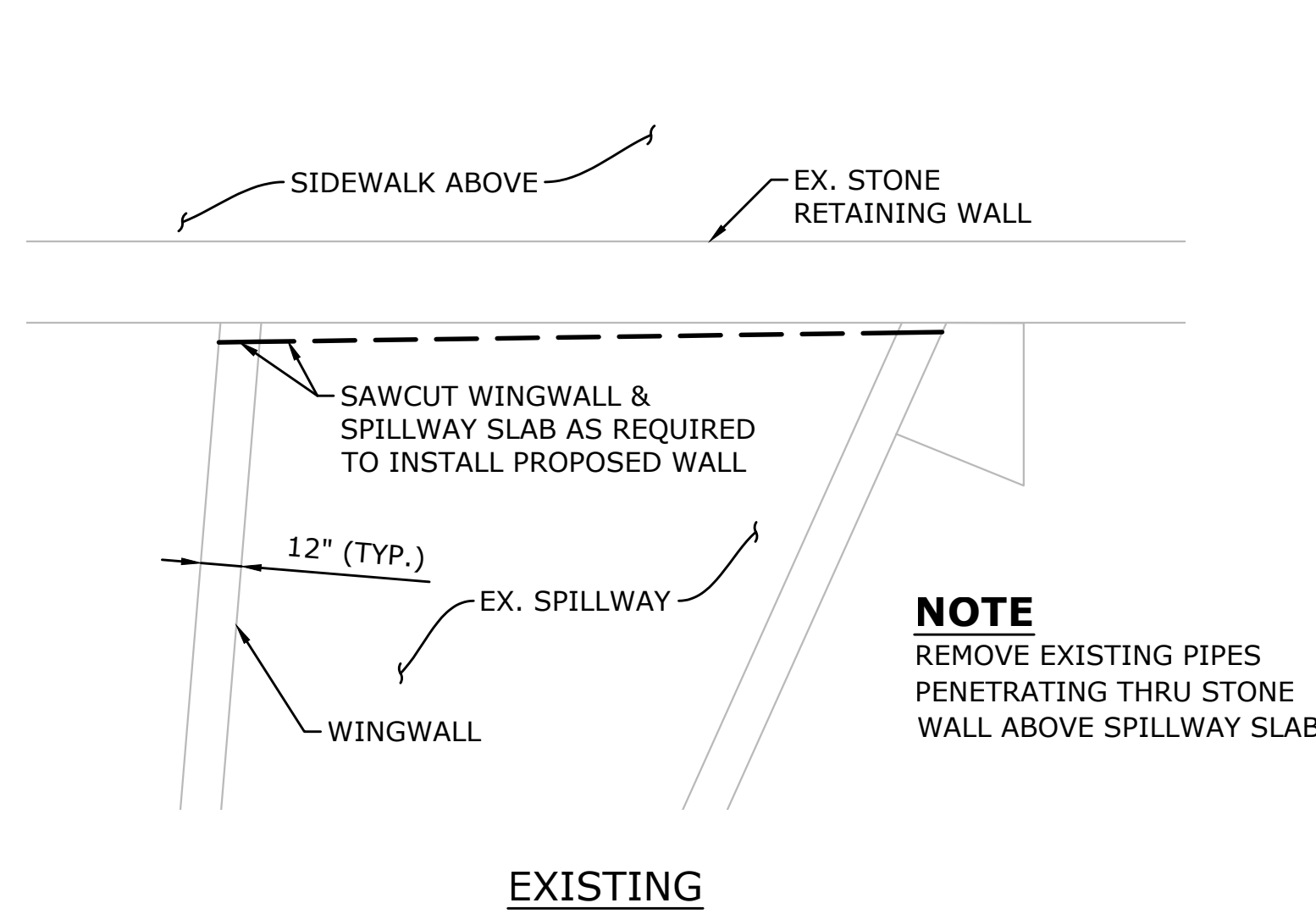
**CONTRACTION & EXPANSION JOINT DETAIL**  
NOT TO SCALE

DESCRIPTION	DATE	BY

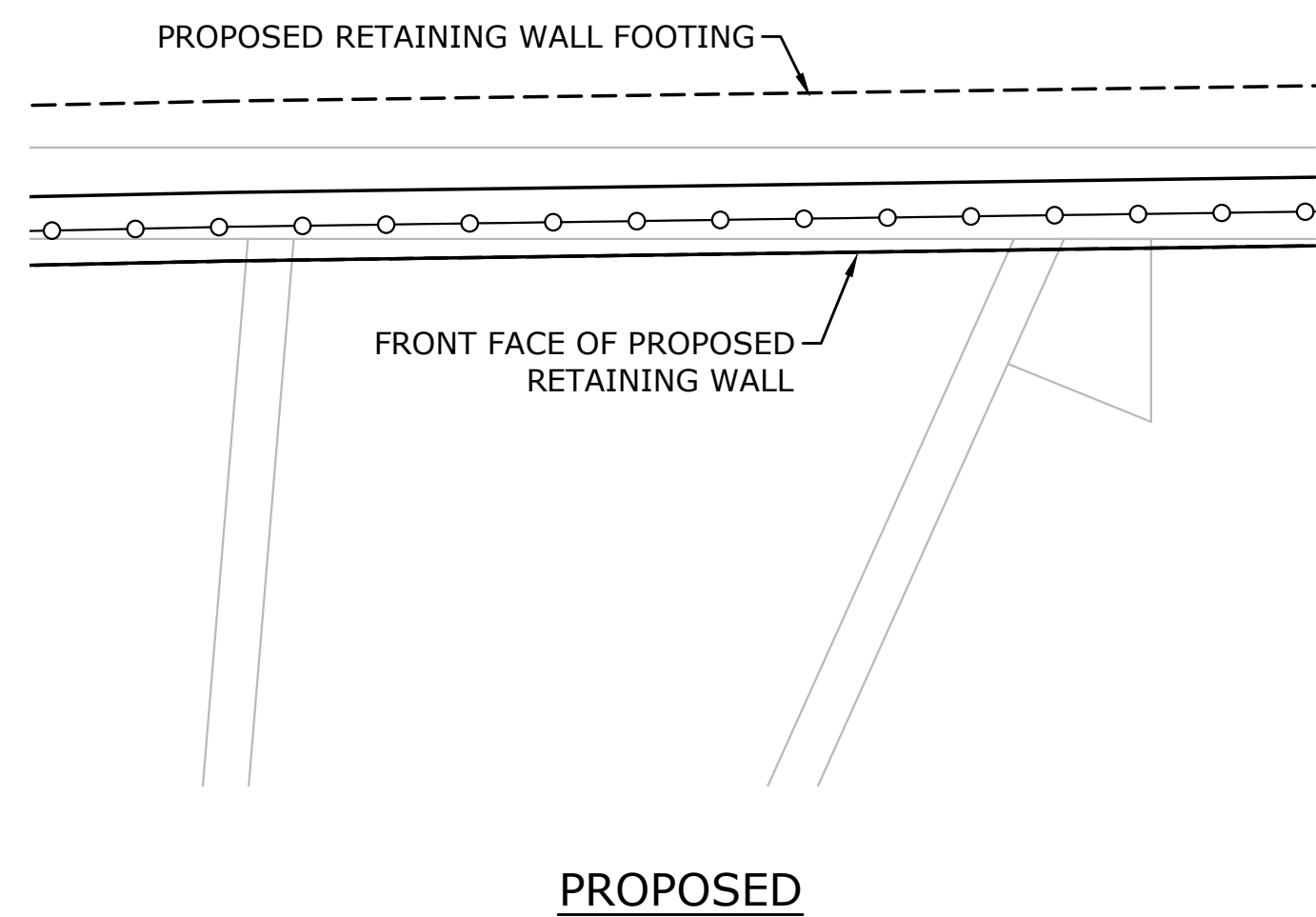


**STRUCTURAL DETAILS**  
RECONSTRUCTION OF THAMES STREET WALL  
AT ELECTRIC BOAT  
THAMES STREET  
GROTON, CONNECTICUT

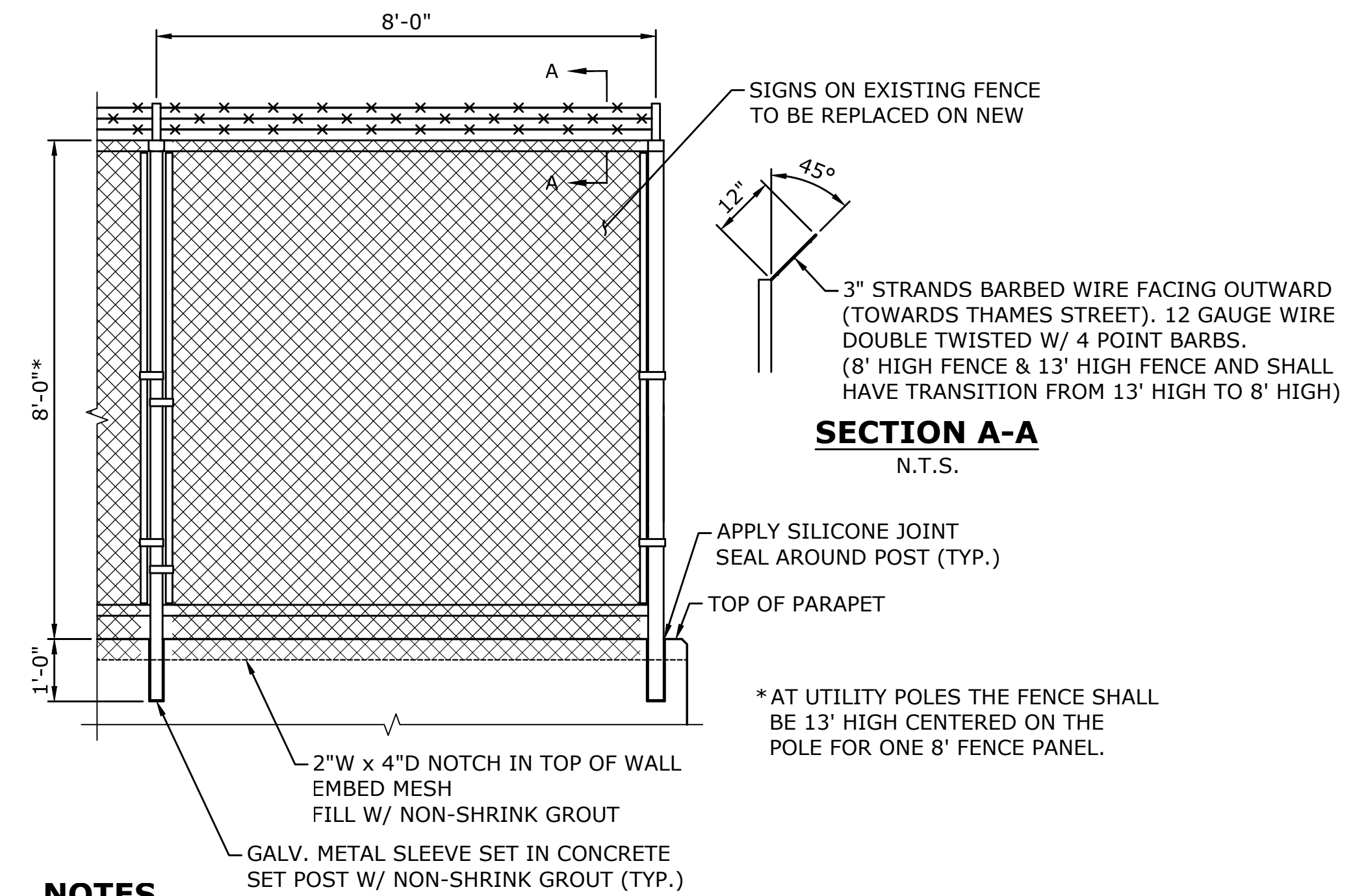
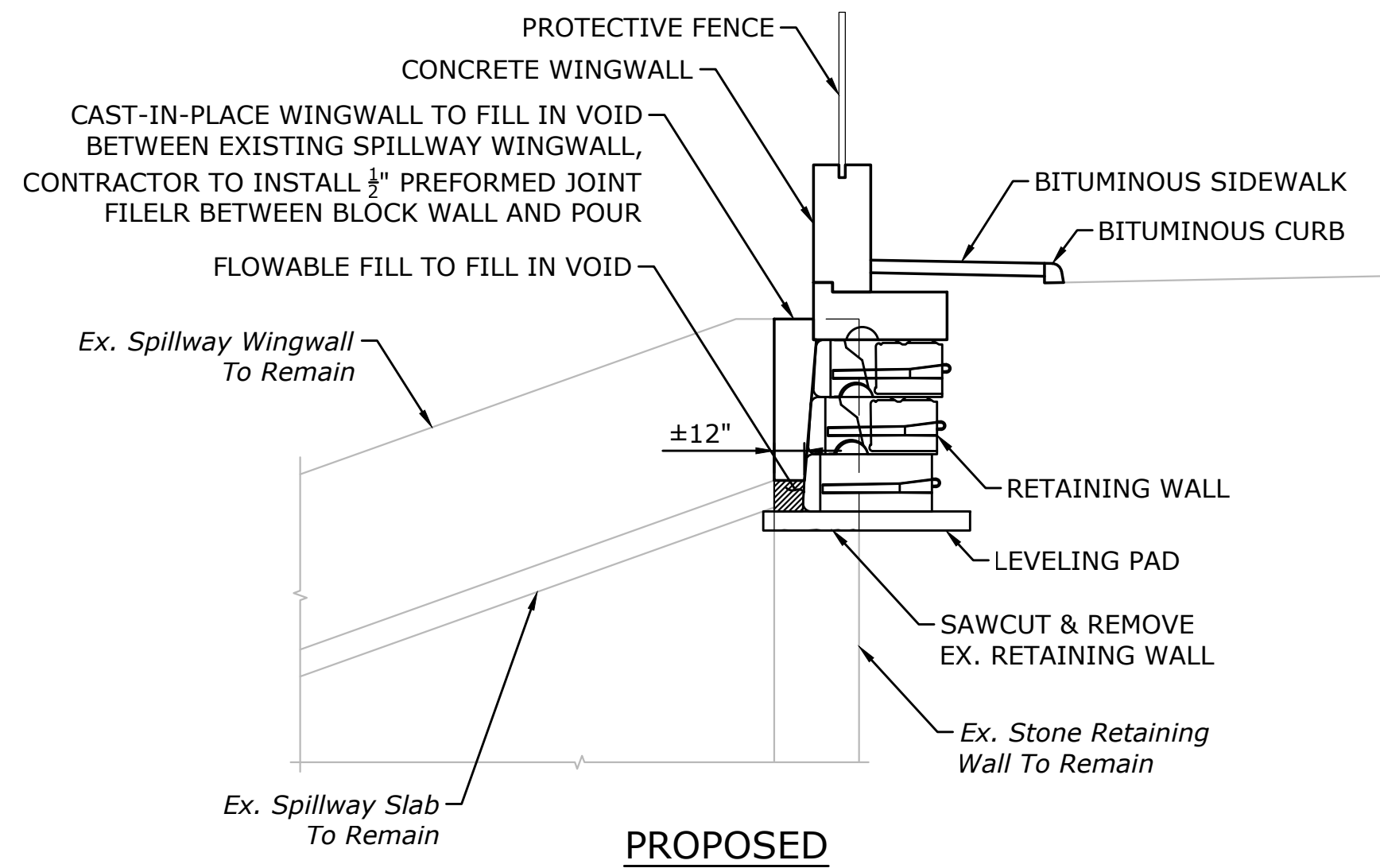
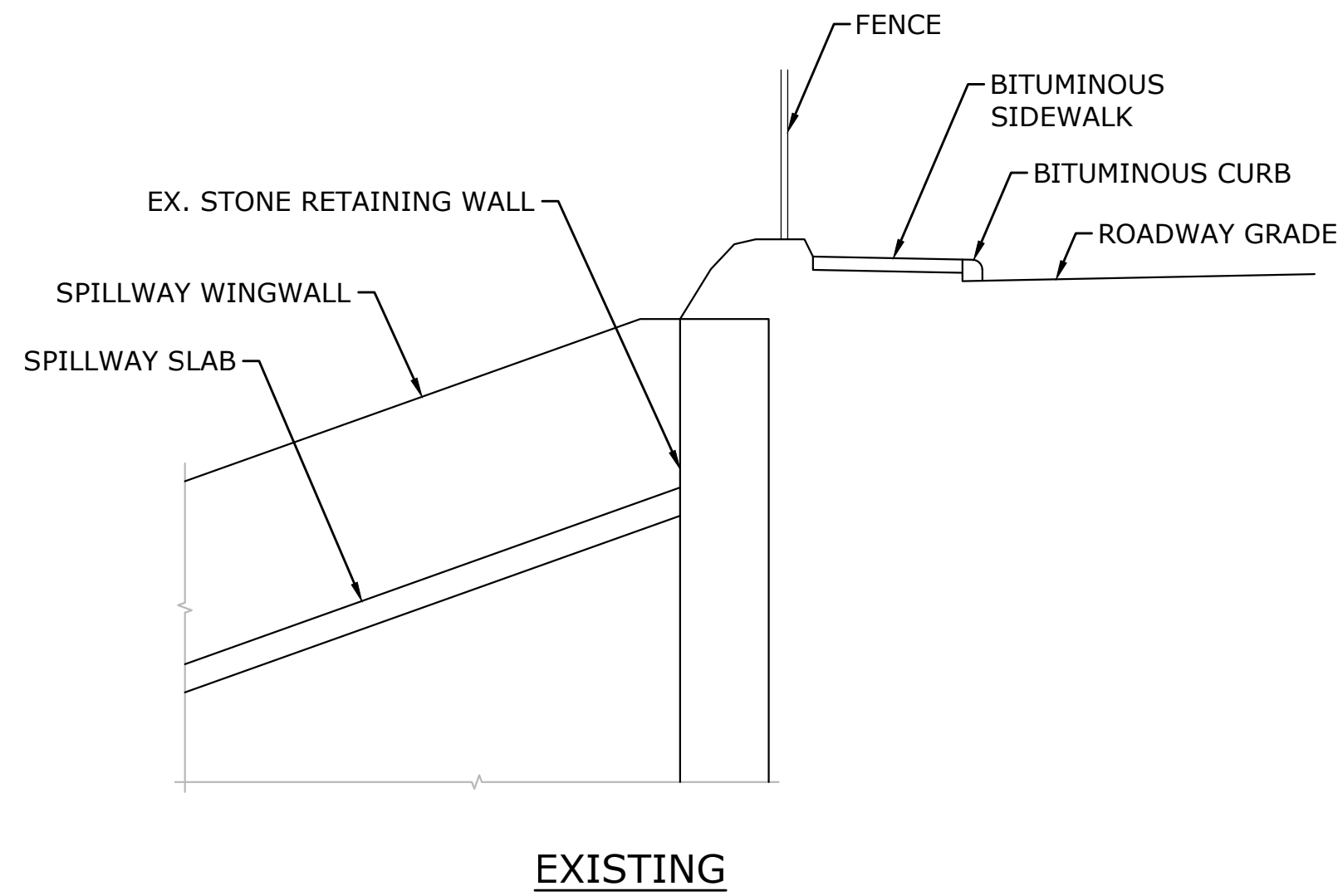
KP	NP	KP
DESIGNED	DRAWN	CHECKED
AS NOTED		
NOVEMBER 22, 2019		
DATE		
PROJECT NO. 2536-13		
DRAWING NO. STR-02		



**NOTE**  
REMOVE EXISTING PIPES  
PENETRATING THRU STONE  
WALL ABOVE SPILLWAY SLAB

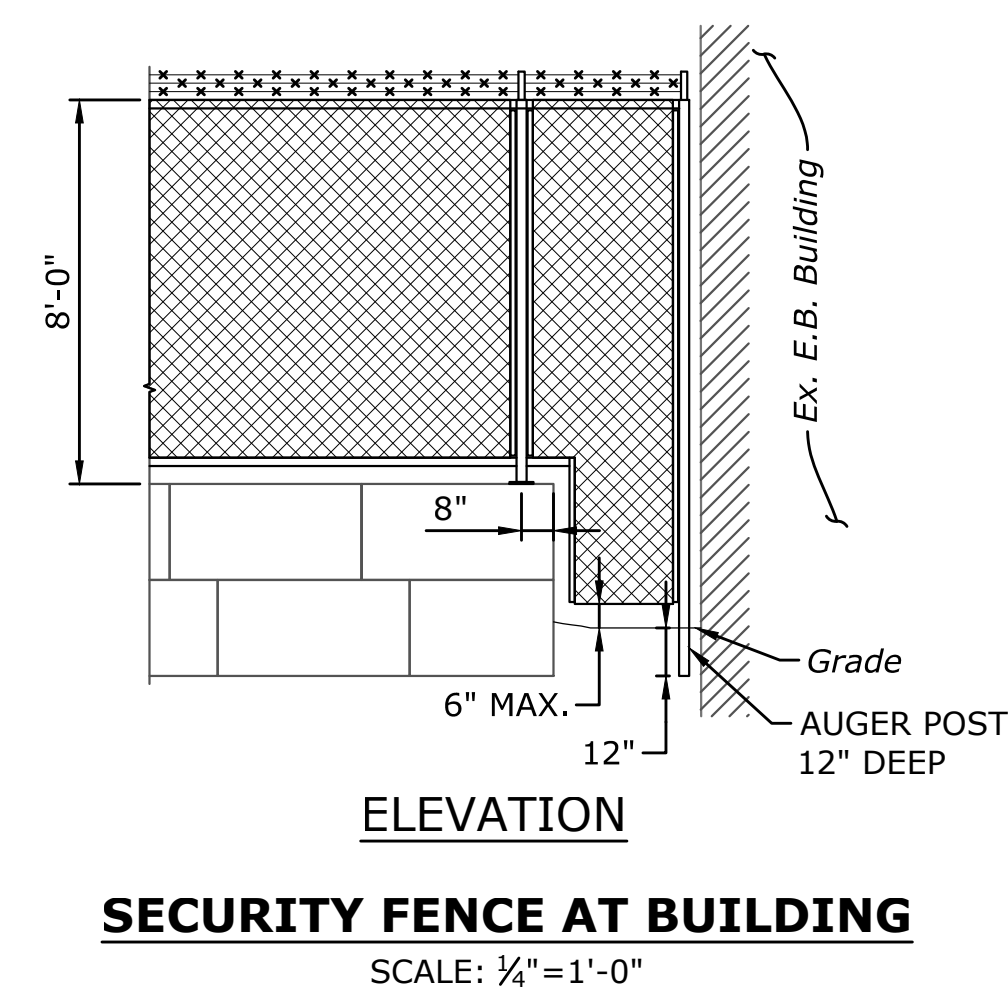
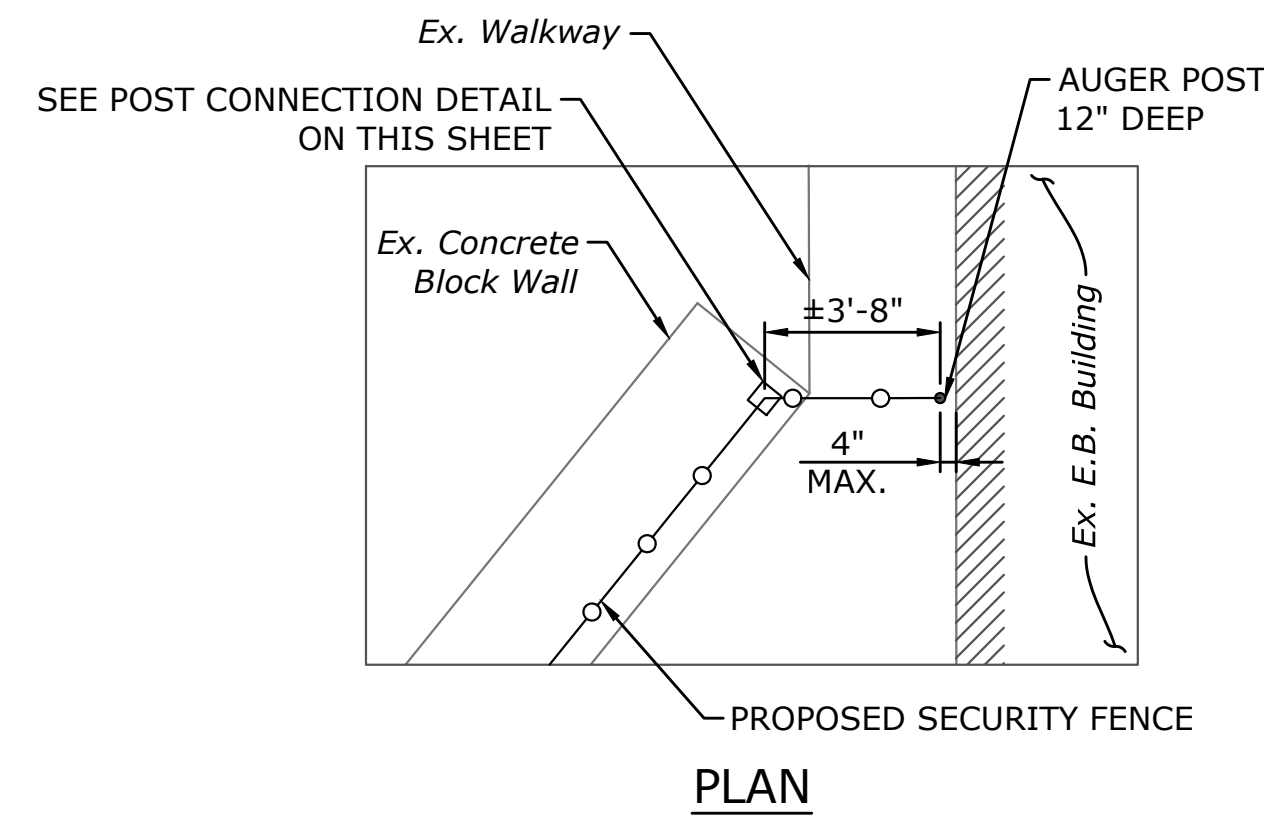
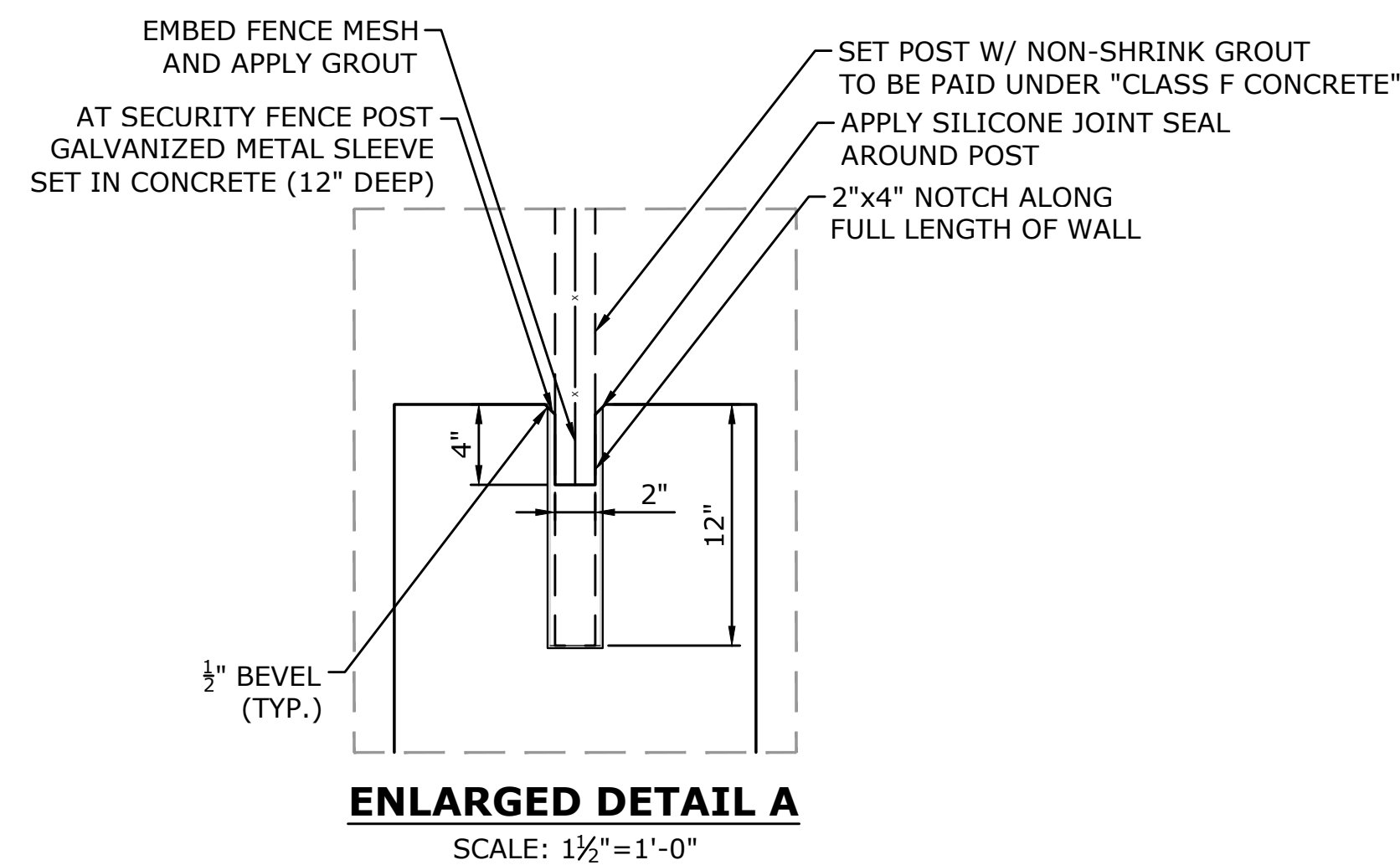


**RETAINING WALL @ SPILLWAY**  
SCALE: 1/4" = 1'-0"

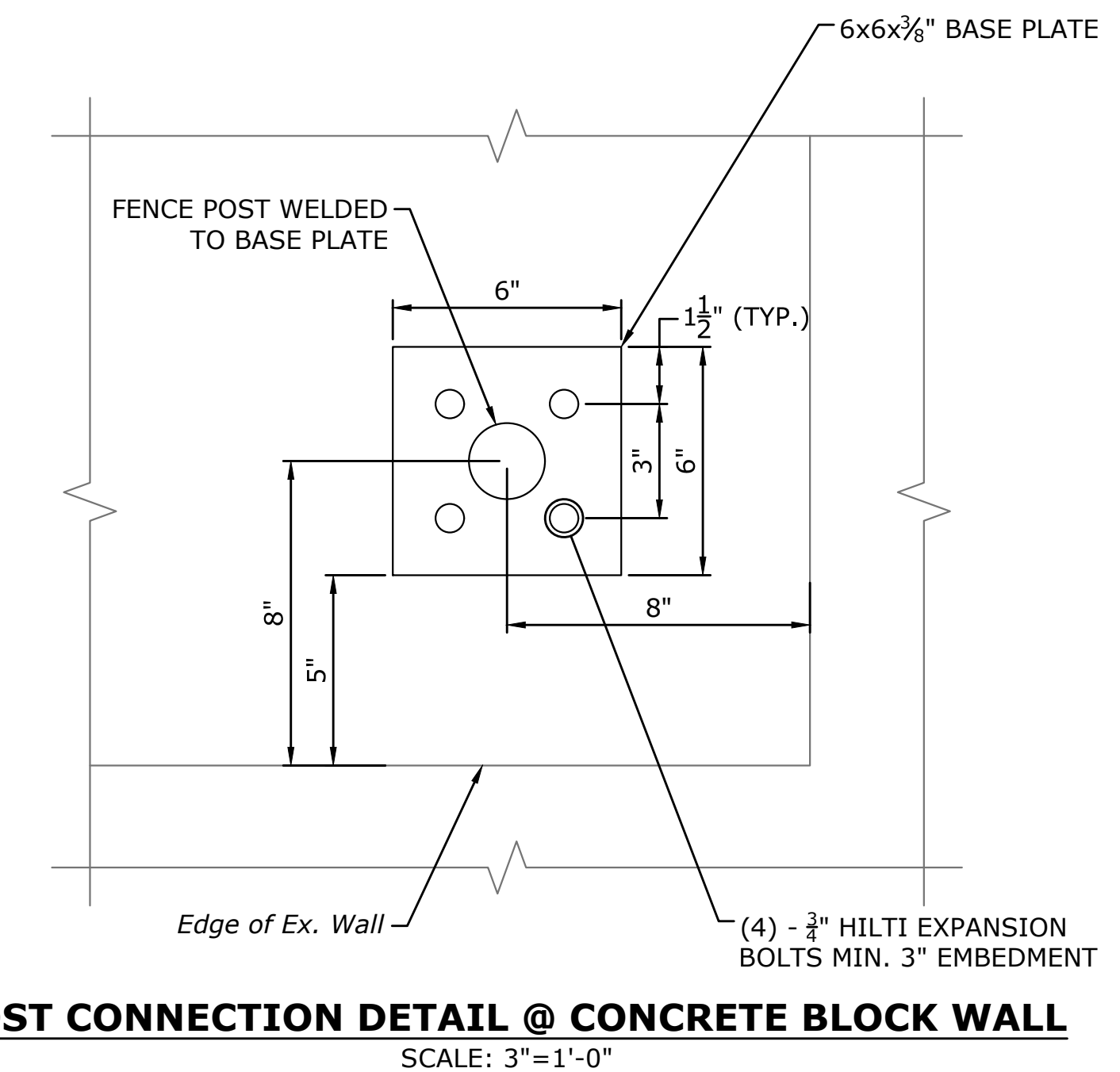


**NOTES**  
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.  
2. SEE SPECIAL PROVISIONS.  
3. COLOR: BLACK  
4. FENCE IS TO MATCH EXISTING.

**PROTECTIVE FENCE (8'-0" HIGH)**  
SCALE: 1/2" = 1'-0"



**SECURITY FENCE AT BUILDING**  
SCALE: 1/4" = 1'-0"

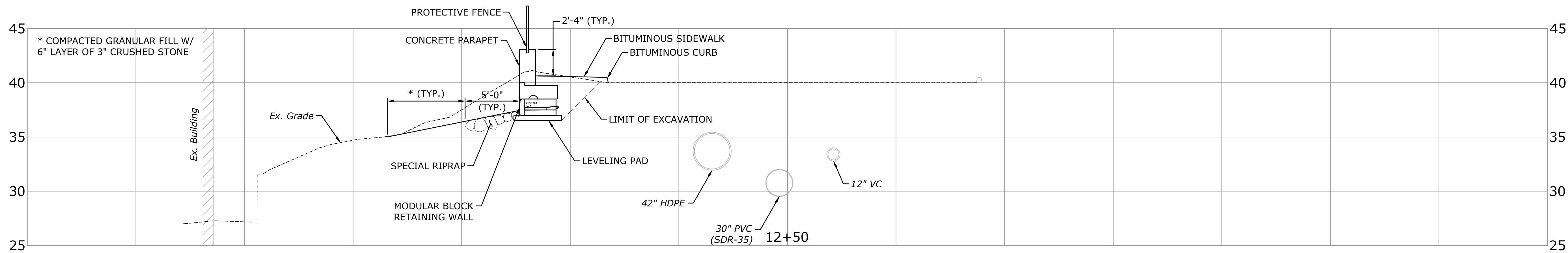
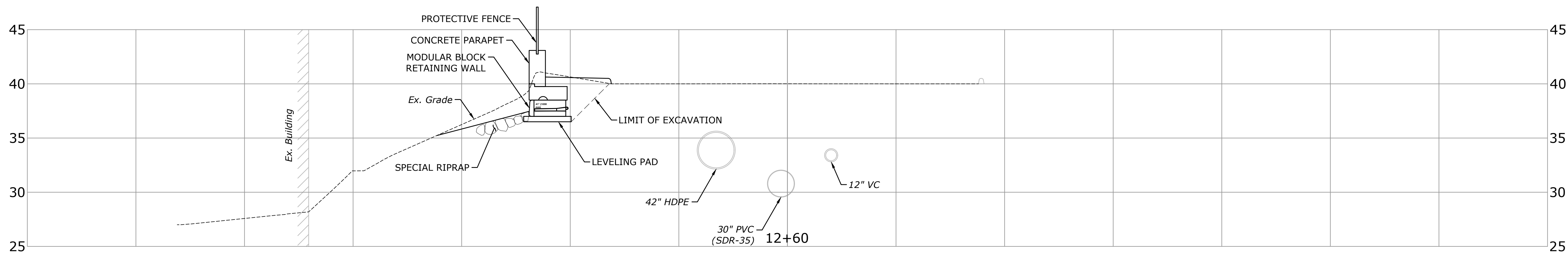
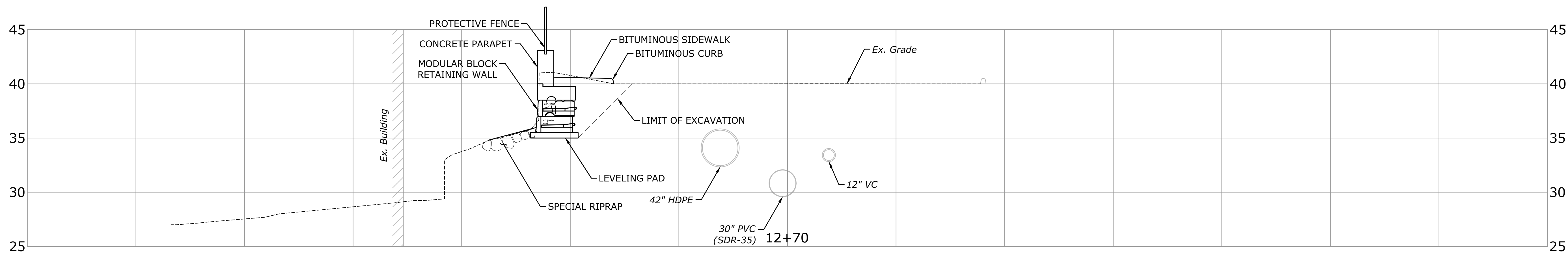
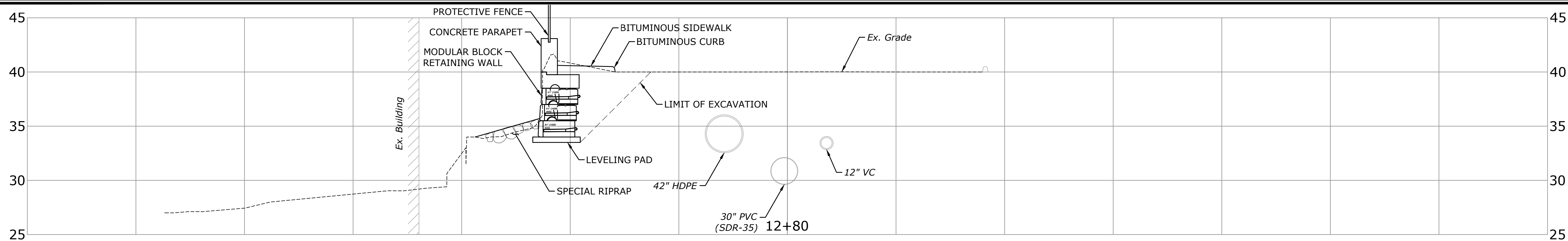


**NOTE**  
PLATE SHALL BE PAINTED BLACK TO MATCH POSTS.

DESCRIPTION	DATE	BY

DESIGNED	NP	KP
DRAWN		
CHECKED		
AS NOTED		
NOVEMBER 22, 2019		
DATE		
PROJECT NO. 2536-13		
DRAWING NO. STR-03		

DATE PLOTTED: 11/22/2019 10:45:38 AM  
PLOT SCALE: 1"=5'  
DRAWING NO: XSC-01



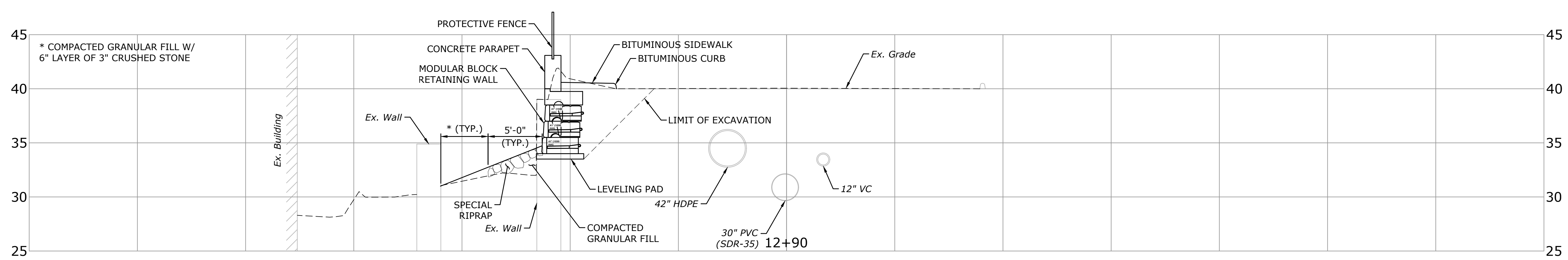
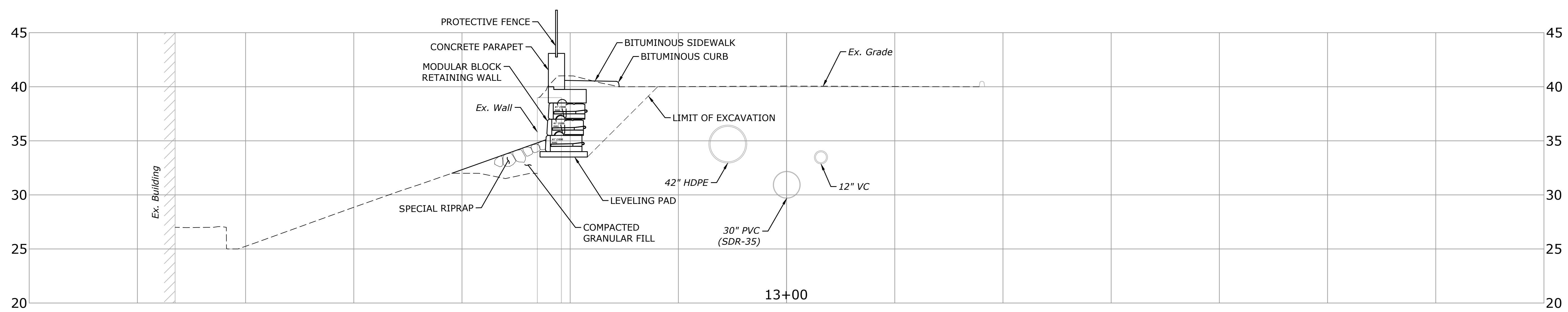
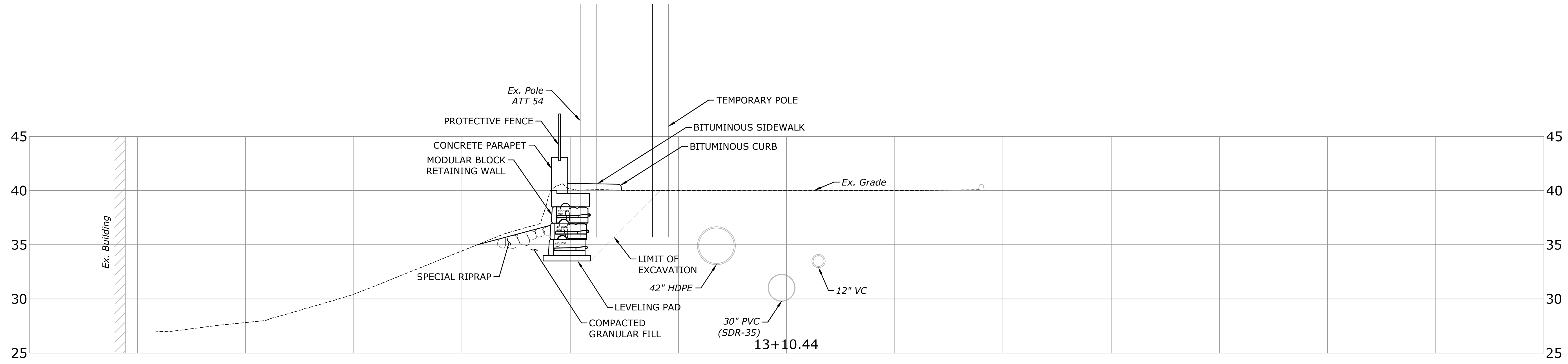
DESCRIPTION	DATE	BY

CROSS SECTIONS  
RECONSTRUCTION OF THAMES STREET WALL  
AT ELECTRIC BOAT  
THAMES STREET  
GROTON, CONNECTICUT

KP	NP	KP
DESIGNED	DRAWN	CHECKED
SCALE 1"=5'		
DATE NOVEMBER 22, 2019		
PROJECT NO. 2536-13		
DRAWING NO. XSC-01		



11/22/19 11:42 AM 11/22/19 11:42 AM 11/22/19 11:42 AM 11/22/19 11:42 AM 11/22/19 11:42 AM 11/22/19 11:42 AM 11/22/19 11:42 AM 11/22/19 11:42 AM 11/22/19 11:42 AM

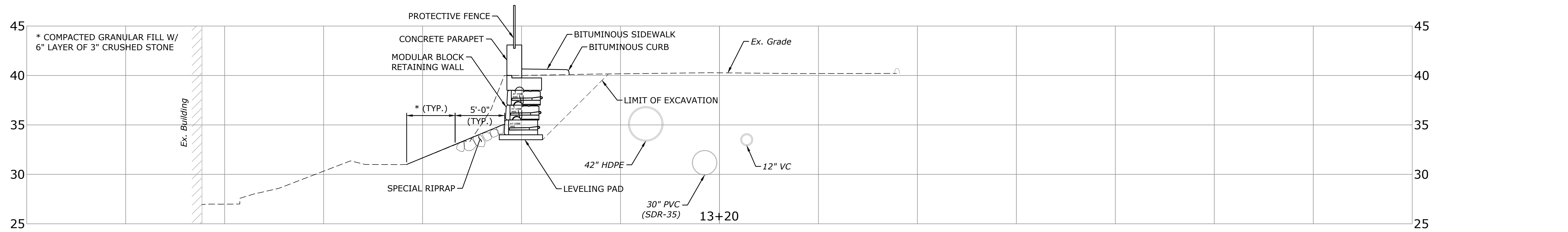
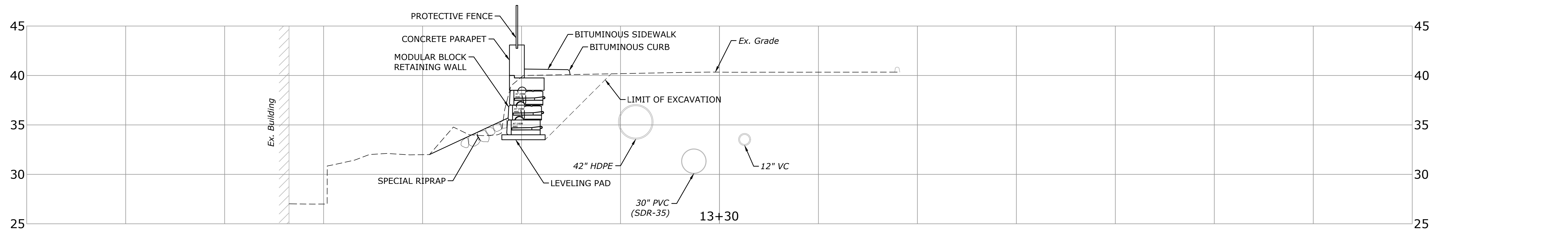
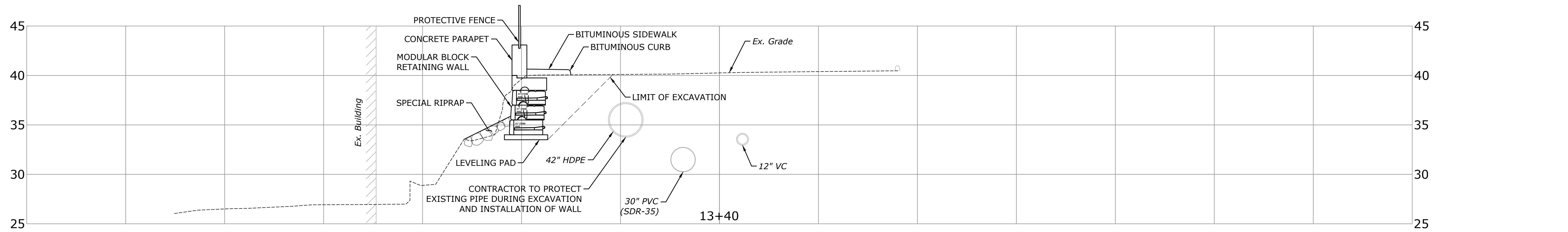
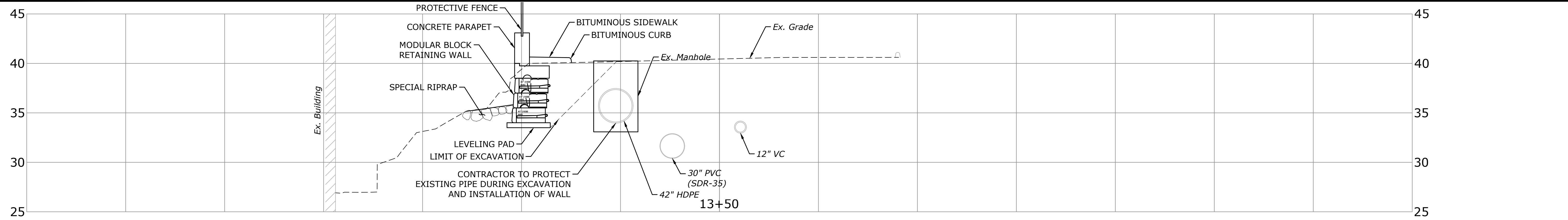


DESCRIPTION	DATE	BY

**CROSS SECTIONS**  
**RECONSTRUCTION OF THAMES STREET WALL**  
**AT ELECTRIC BOAT**  
**THAMES STREET**  
**GROTON, CONNECTICUT**

KP	NP	KP
DESIGNED	DRAWN	CHECKED
SCALE 1"=5'		
DATE NOVEMBER 22, 2019		
PROJECT NO. 2536-13		
DRAWING NO. XSC-02		

MILENE & MACBROOM, INC. 100 WASHINGTON STREET, SUITE 200, GROTON, CT 06340  
 TEL: 860-339-0333 FAX: 860-339-0334 WWW.MILONEANDMACBROOM.COM

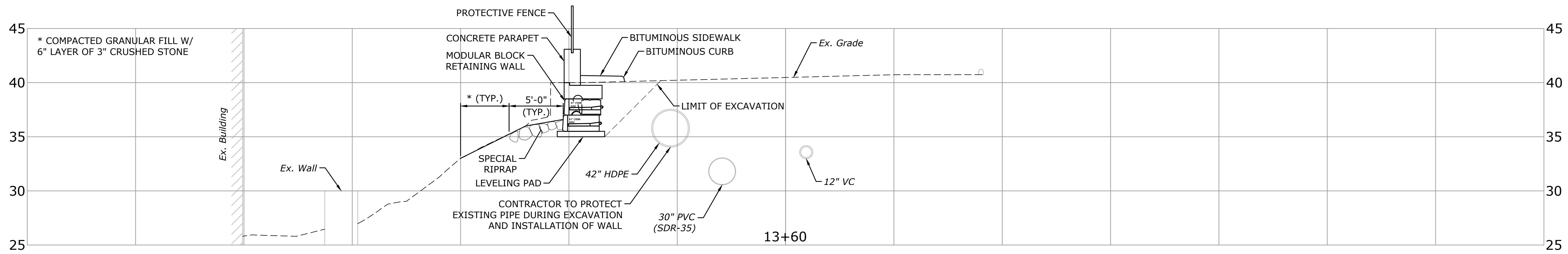
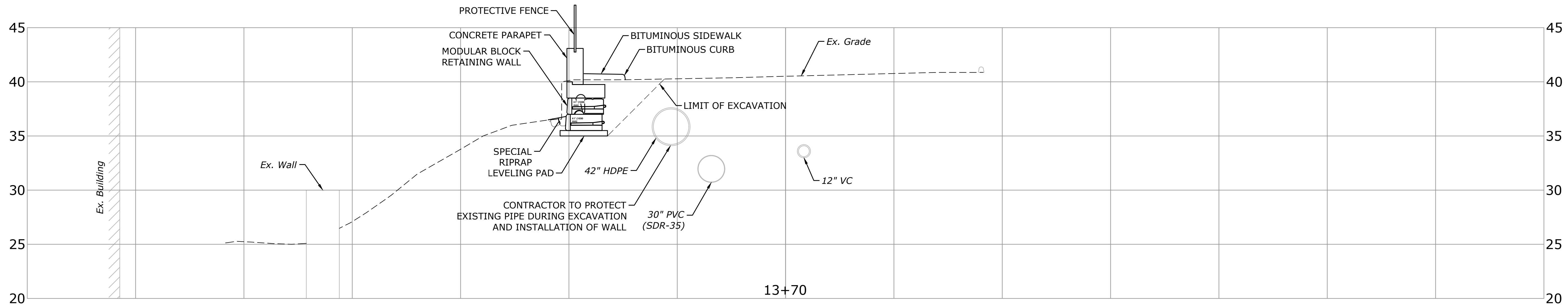
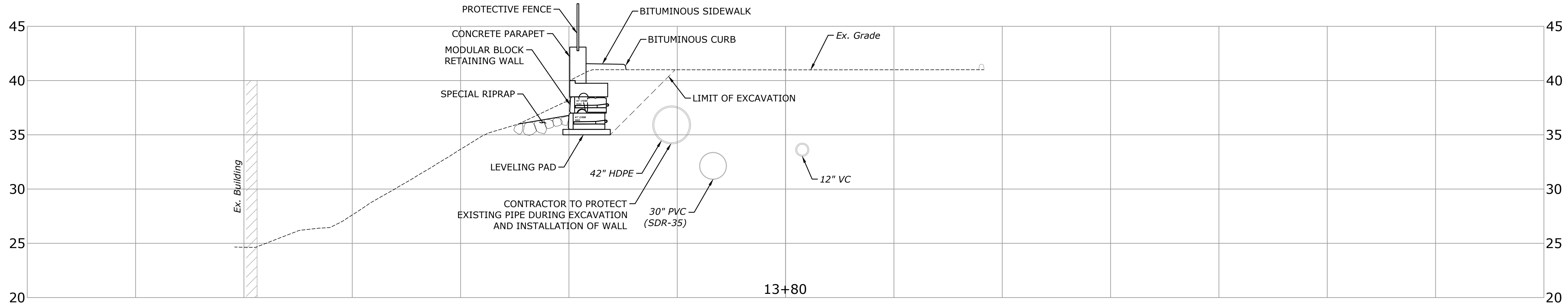


DESCRIPTION	DATE	BY

**CROSS SECTIONS**  
**RECONSTRUCTION OF THAMES STREET WALL**  
**AT ELECTRIC BOAT**  
 THAMES STREET  
 GROTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
KP	NP	KP
1"=5'		
NOVEMBER 22, 2019		
2536-13		
XSC-03		

**10**



DESCRIPTION	DATE	BY

**CROSS SECTIONS**  
**RECONSTRUCTION OF THAMES STREET WALL**  
**AT ELECTRIC BOAT**  
 THAMES STREET  
 GROTON, CONNECTICUT

KP	NP	KP
DESIGNED	DRAWN	CHECKED
SCALE 1"=5'		
DATE NOVEMBER 22, 2019		
PROJECT NO. 2536-13		
DRAWING NO. XSC-04		
<b>11</b>		
SHEET NO.		