rlucia@crmc.ri.gov

R

From:	Derick Hopkins <derick.hopkins@wright-pierce.com></derick.hopkins@wright-pierce.com>
Sent:	Monday, January 8, 2024 12:19 PM
То:	rlucia@crmc.ri.gov; Rhiannon Ketchem; ehall@crmc.ri.gov
Cc:	Louis Ragozzino
Subject:	RE: Public Notice City East Providence
Attachments:	13981-SlopeStabilization-01032024.pdf

Rich,

Please see my response to comments below and a revised set of plans

Derick,

we are still reviewing the application....Before we can finish our review and bring to the coastal council for a decision, please address the following:

• The project will require a Special Exception. Please address in writing the criteria(s) for the granting of a special exception §1.1.8.A.

The project is required to safe guard public infrastructure. The slope between Booth Avenue and Bullocks cove is actively eroding. This erosion threatens Booth Avenue, the water and gas mains contained within Booth Avenue and the overhead electric located between Booth Avenue and the slope. If the slope continues to erode and damages the Booth Avenue or the associated utilities, multiple landowners could suffer the loss of water, gas, electricity, or access to their properties. Due to the nature of the area no other alternatives exists other than to repair and protect the existing slope so that erosion is no longer actively occurring. Due to the facts stated above the project serves a compelling public purpose that benefits the public as a whole and meets the requirements of 1.1.8.A.1.a

• There are little details on plans of the sill block habitat, particularly which "oyster castle" will be used. Please note that staff would like some more information as to the potential of an oyster habitat and the success of the "oyster castle". Is the water deep enough, and are oysters present elsewhere in the vicinity of the project area? Is this an area that would be better off constructed as a sill that was simply composed of appropriate sized riprap?

After further consideration the oyster castles have been removed from the project and replaced with a traditional appropriate sized rip rap sill.

There is no toe protection of the slope, and staff is concerned that water will undermine the slope. It is recommended that a row of appropriately sized riprap stone be placed at the bottom of the slope to protect from any scour. Stone should be buried (typically 2 x the size of the stone) below the substrate and extend a minimum of a foot higher than MHHW.

Plans have been revised to provide additional toe protection.

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From: rlucia@crmc.ri.gov <rlucia@crmc.ri.gov>
Sent: Friday, December 22, 2023 2:14 PM
To: Derick Hopkins <Derick.Hopkins@wright-pierce.com>; Rhiannon Ketchem <rhiannon.ketchem@wright-pierce.com>; ehall@crmc.ri.gov
Cc: Louis Ragozzino <louis.ragozzino@wright-pierce.com>
Subject: RE: Public Notice City East Providence

Derick I am making sure that you received this email. Thanks Rich

From: <u>rlucia@crmc.ri.gov</u> <<u>rlucia@crmc.ri.gov</u>> Sent: Wednesday, December 13, 2023 8:59 AM To: 'Derick Hopkins' <<u>Derick.Hopkins@wright-pierce.com</u>>; 'Rhiannon Ketchem' <<u>rhiannon.ketchem@wright-pierce.com</u>>; 'ehall@crmc.ri.gov' <<u>ehall@crmc.ri.gov</u>> Cc: 'Louis Ragozzino' <<u>louis.ragozzino@wright-pierce.com</u>> Subject: RE: Public Notice City East Providence

Derick,

we are still reviewing the application....Before we can finish our review and bring to the coastal council for a decision, please address the following:

- The project will require a Special Exception. Please address in writing the criteria(s) for the granting of a special exception §1.1.8.A.
- There are little details on plans of the sill block habitat, particularly which "oyster castle" will be used. Please note that staff would like some more information as to the potential of an oyster habitat and the success of the "oyster castle". Is the water deep enough, and are oysters present elsewhere in the vicinity of the project area? Is this an area that would be better off constructed as a sill that was simply composed of appropriate sized riprap?

There is no toe protection of the slope, and staff is concerned that water will undermine the slope. It is recommended that a row of appropriately sized riprap stone be placed at the bottom of the slope to protect from any scour. Stone should be buried (typically 2 x the size of the stone) below the substrate and extend a minimum of a foot higher than MHHW.

Please refer to the following document for further guidance re: oyster castle suitability. Of note was the salinity ever taken for this area? Salinity should be above eight ppt. <u>https://www.cbf.org/document-library/cbf-guides-fact-sheets/incorporating-oysters-into-living-shorelines.pdf</u>

Thanks Rich

Environmental Engineer IV RI Coastal Resources Management Council

From: <u>rlucia@crmc.ri.gov</u> <<u>rlucia@crmc.ri.gov</u>> Sent: Wednesday, September 20, 2023 2:37 PM To: 'Derick Hopkins' <<u>Derick.Hopkins@wright-pierce.com</u>>; 'Rhiannon Ketchem' <<u>rhiannon.ketchem@wright-pierce.com</u>>; 'Louis Ragozzino' <<u>louis.ragozzino@wright-pierce.com</u>> Subject: RE: Public Notice City East Providence

Hello Yes this is sufficient for CRMC to notice. Yes please send in hard copies along with the calc package. Thanks Rich

Richard Lucia, P.E. Environmental Engineer IV RI Coastal Resources Management Council

From: Derick Hopkins <<u>Derick.Hopkins@wright-pierce.com</u>>
Sent: Friday, September 1, 2023 4:05 PM
To: rlucia@crmc.ri.gov; Rhiannon Ketchem <<u>rhiannon.ketchem@wright-pierce.com</u>>
Cc: Louis Ragozzino <<u>louis.ragozzino@wright-pierce.com</u>>
Subject: RE: Public Notice City East Providence

Rich,

See attached revised plans with details of the MSE slope, interlocking concrete block placement and TRM facing mat for the slope.

If these are acceptable I will put together an addendum calc package, showing that the block and TRM can withstand the velocities they would be subject to.

Have a good long weekend

Derick

Derick Hopkins, PE

Wright-Pierce | Senior Project Engineer direct 401.808.8303 | office 401.383.2276

We've moved! Our new address is 40 Westminster Street, Suite 950 - Providence, RI 02903

From: rlucia@crmc.ri.gov <rlucia@crmc.ri.gov> Sent: Monday, August 7, 2023 3:01 PM To: Rhiannon Ketchem <<u>rhiannon.ketchem@wright-pierce.com</u>> Cc: Derick Hopkins <<u>Derick.Hopkins@wright-pierce.com</u>> Subject: RE: Public Notice City East Providence

If you can send a new set with new revision date...you only need to send 2 copies of full size set and please provide one set of 8 $\frac{1}{2}$ x 11 to notice

From: Rhiannon Ketchem <<u>rhiannon.ketchem@wright-pierce.com</u>> Sent: Monday, August 7, 2023 9:51 AM To: <u>rlucia@crmc.ri.gov</u> Cc: Derick Hopkins <<u>Derick.Hopkins@wright-pierce.com</u>> Subject: RE: Public Notice City East Providence

Hi Rich,

I'm Rhi, an engineer at Wright-Pierce, and have been working with Derick to complete the CRMC application for the Booth Ave stabilization project. I have read through your comments below and will work on creating some more specific answers and detail drawings to illustrate the areas in question. I was wondering if you would just like us to send you a new set of revised drawings once they are complete, or if you would like a complete resubmittal of the application.

Thanks for your time,

Rhiannon Ketchem Wright-Pierce | Engineer I, Wastewater- RI office 401.383.2276 | direct 401.808.8318



From: Derick Hopkins <<u>Derick.Hopkins@wright-pierce.com</u>> Sent: Monday, August 7, 2023 8:25 AM To: Rhiannon Ketchem <<u>rhiannon.ketchem@wright-pierce.com</u>> Subject: FW: Public Notice City East Providence

Rhi,

Take a read through this response from CRMC, see if you think we have the items we need to complete or not.

Make us a list of to do's for the project and lets get this one finished up.

Thanks, Derick

Derick Hopkins, PE Wright-Pierce | Senior Project Engineer direct 401.808.8303 | office 401.383.2276 From: rlucia@crmc.ri.gov <rlucia@crmc.ri.gov> Sent: Friday, August 4, 2023 3:21 PM To: Derick Hopkins <<u>Derick.Hopkins@wright-pierce.com</u>> Subject: Public Notice City East Providence

Derick

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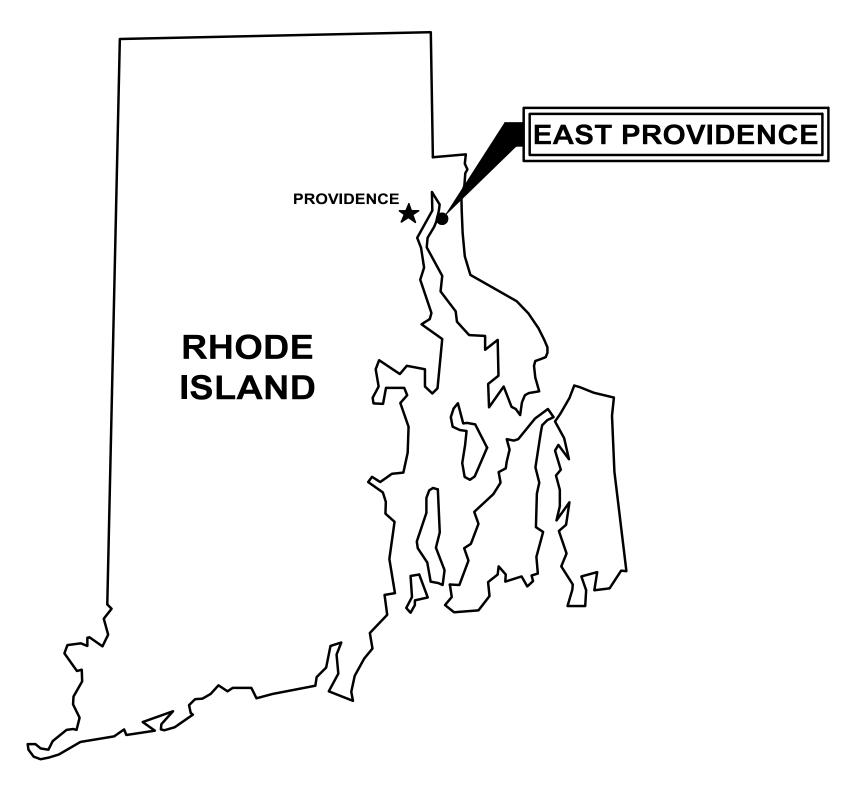
I am in the process of reviewing 0 Booth avenue shoreline protection. The narrative states that MSE will be installed on the slope and the project specification will be done by the contractor at a later date. In order to complete review of this project as it relates to CRMC regulations and assess this project (including putting project out to notice), structural and construction details need to be shown on the plans. This should show the installation of the MSE and how this will be accomplished. Also there is very little details on plans of the sill block habitat, installation methods, depth of installation, anchoring, product detail and analysis of the stability of these structures along this high flow area (this was mentioned in the PD also about the high velocity that occurs in this section). If there is any questions please let me know.

Thanks Rich

Richard Lucia, P.E. Environmental Engineer IV RI Coastal Resources Management Council

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CITY OF EAST PROVIDENCE, RHODE ISLAND CONTRACT DRAWINGS FOR BOOTH AVENUE SLOPE STABILIZATION JUNE 2023 RICRMC PERMIT SUBMISSION



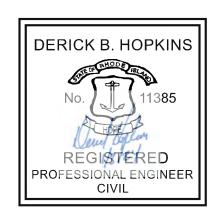


REVISED AUG. 23, 2023

DRAWING INDEX

GENERAL

	COVER SHEET
<u>CIVIL</u>	
C-1	GENERAL NOTES, LEGEND, ABBREVIATIONS
C-2	SITE PLAN AND PROFILE
C-3	SECTIONS I
C-4	SECTIONS II
C-5	DETAILS I
C-6	DETAILS II
C-7	LANDSCAPE PLAN
C-8	EROSION CONTROL NOTES AND DETAILS





888.621.8156 | www.wright-pierce.com

BID SET No.



LOCATION PLAN

FOR REVIEW

June 2023

FOR BIDDING

WP PROJECT No. 13981

GENERAL NOTES

- THE CITY OF EAST PROVIDENCE WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE CITY OF EAST PROVIDENCE. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CITY OF EAST PROVIDENCE SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE CITY OF EAST PROVIDENCE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS OF WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE CITY OF EAST PROVIDENCE.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE MUTCD AND ALL STATE AND LOCAL REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT AN APPROVED TRAFFIC CONTROL PLAN PRIOR TO COMMENCING CONSTRUCTION. THE POLICE DEPARTMENT AND FIRE DEPARTMENT ARE TO BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. REFER TO SPECIFICATION SECTION 01570.
- 4. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- 5. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.
- 6. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.
- 7. ALL EXISTING SEWER AND STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING SEWERS, STORM DRAIN LINES OR CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OF EAST PROVIDENCE. EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW WORK OR WHEN NOT SHOWN OR INDICATED.
- 8. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE EXCAVATION IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE **RESPECTIVE UTILITY.**
-). IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE OWNER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.
- 10. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE PLANS. TEST PITS ARE REQUIRED WHERE SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG AT LEAST 10 CALENDAR DAYS PRIOR TO CONNECTING PROPOSED SEWERS TO EXISTING SEWERS.

EXISTING SITE CONDITIONS

- THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL 5. COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE-YEAR OF FINAL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST. CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED.
- 11. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE OF EAST PROVIDENCE. ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. TEST PITS, MAY BE REQUIRED. UTILITY CONTACTS ARE AS 7. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH SPECIFICATION SECTION 02050. FOLLOWS:

ELECTRIC:	WATER/SEWER/DRAIN:
RI ENERGY	CITY OF EAST PROVIDENCE PUBLIC WORKS
280 MELROSE STREET	60 COMMERCIAL WAY
PROVIDENCE RI 02907	EAST PROVIDENCE, RI
(401)-784-7331	(401)-435-7701
DIG SAFE:	GAS:
DIG SAFE SYSTEM, INC.	RI ENERGY
11 UPTON DRIVE	280 MELROSE STREET
WILMINGTON, MA 0188	PROVIDENCE, RI
811 OR 1-(888)-344-7233	1-800-870-1664

TELEPHONE: VERIZON NEW ENGLAND 6 BOWDOIN SQURE **BOSTON, MA 02114** (857)-415-5161

12. THERE ARE NO KNOWN HAZARDOUS ENVIRONMENTAL CONDITIONS WITHIN THE AREA OF WORK. REFER TO SPECIFICATION SECTION 00800-SC-5.306. IF THE PRESENCE OF HAZARDOUS ENVIRONMENTAL CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE CITY OF EAST PROVIDENCE AND THE ENGINEER IMMEDIATELY. ALL ACTIVITIES, HANDLING AND DISPOSAL OF HAZARDOUS ENVIRONMENTAL CONDITIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.

SITE DEMOLITION

- 1. REFER TO THE EXISTING SITE PLAN, FOR ADDITIONAL INFORMATION REGARDING EXISTING SITE. REFER TO THE LAYOUT DRAWING FOR LIMITS OF WORK.
- 2. REFER TO SPECIFICATION SECTION 01010B, WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE CITY OF EAST PROVIDENCE RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE TOWN OF CITY OF EAST PROVIDENCE/ENGINEER. REFER TO SPECIFICATION SECTION 02050A
- 4. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND GROUNDWATER DEWATERING OPERATIONS.

SITE CLEARING, GRUBBING AND GRADING

- STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115. REFER TO THE LAYOUT AND GRADING DRAWINGS FOR LIMIT OF WORK AND STRIPPING.
- CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS OF WAY AND PROPERTY LINES. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.
- CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. PRIOR TO THE START OF ANY WORK THE CONTRACTOR SHALL INSTALL AN TURBIDITY CURTAIN , IN THE WATER, A THE BASE OF ANY DISTURBED SLOPES. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.
- BORING LOGS FOR THE PROJECT SITE ARE INCLUDED IN APPENDIX A OF THE SPECIFICATIONS. THESE ARE PROVIDED FOR INFORMATION PURPOSES ONLY. PLEASE NOTE THAT THE SOIL DESCRIPTIONS PROVIDED ON THE BORING LOGS DO NOT REPRESENT FIELD CONDITIONS OTHER THAN AT THE SPECIFIC TEST BORING LOCATION. THE CONDITIONS BETWEEN BORING LOCATIONS MAY VARY FROM THOSE SHOWN ON THE TEST BORING LOGS.
- CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562.
- 6. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.
- THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT

LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE CITY OF EAST PROVIDENCE AND ENGINEER.

- 9. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER
- 10. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4-INCHES OF SOIL SHALL BE LOAM. REFER TO SPECIFICATION SECTION 02485, LANDSCAPING/LOAM AND SEED.

CIVIL SITE LAYOUT

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
- 2. REFER TO CIVIL PLAN SHEETS FOR ADDITIONAL LAYOUT INFORMATION.
- 3. THE LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE CITY OF EAST PROVIDENCE AND ENGINEER. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO THESE AREAS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OR RHODE ISLAND AT NO ADDITIONAL COST TO THE CITY OF EAST PROVIDENCE.
- 5. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
- 6. ALL ELEVATIONS REFER TO THE NAVD88 DATUM. ORIENTATION IS GRID NORTH ON THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM. CONTRACTOR SHALL VERIFY ELEVATIONS PRIOR TO USING IN CONSTRUCTION.
- 7. EXISTING CONDITIONS SITE PLAN DEVELOPED FROM SURVEY PERFORMED BY WATERMAN ENGINEERING COMPANY, DATED 09/18/2018, AND EXISTING RECORD DRAWING INFORMATION. ELEVATIONS AND LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD

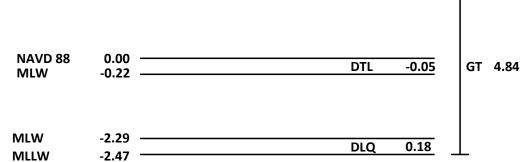
CIVIL SITE PIPING

- 1. ALL BURIED CONNECTIONS TO STRUCTURES SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4-FEET FROM THE STRUCTURES. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED (SOLID SLEEVE). REFER TO SPECIFICATION SECTION 02655.
- 2. MANHOLES ARE 4-FEET IN DIAMETER UNLESS OTHERWISE NOTED. THE TOP OF MANHOLE FRAMES SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE NOTED ON DRAWINGS. SEWER MANHOLE INVERTS SHOWN ON THE DRAWINGS ARE TO THE INSIDE FACE OF THE MANHOLE.
- 3. CONTRACTOR SHALL RE-SHAPE INVERTS AS REQUIRED WHEN CONNECTING INTO EXISTING MANHOLES.
- 4. REFER TO SPECIFICATION SECTION 02200 FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.

DHQ 0.25

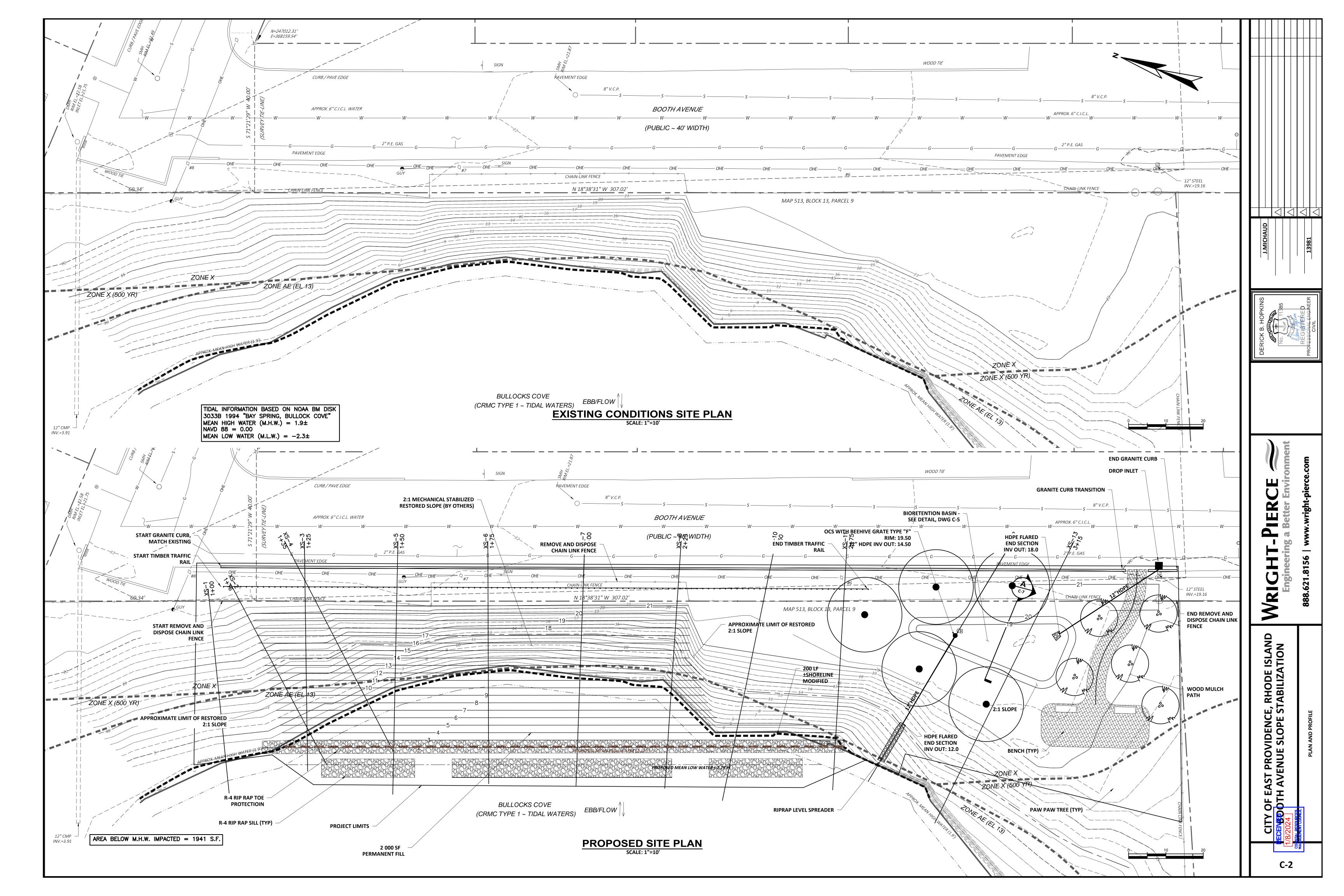
6. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE CIVIL EXISTING CONDITIONS AND DEMOLITION PLAN. ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY

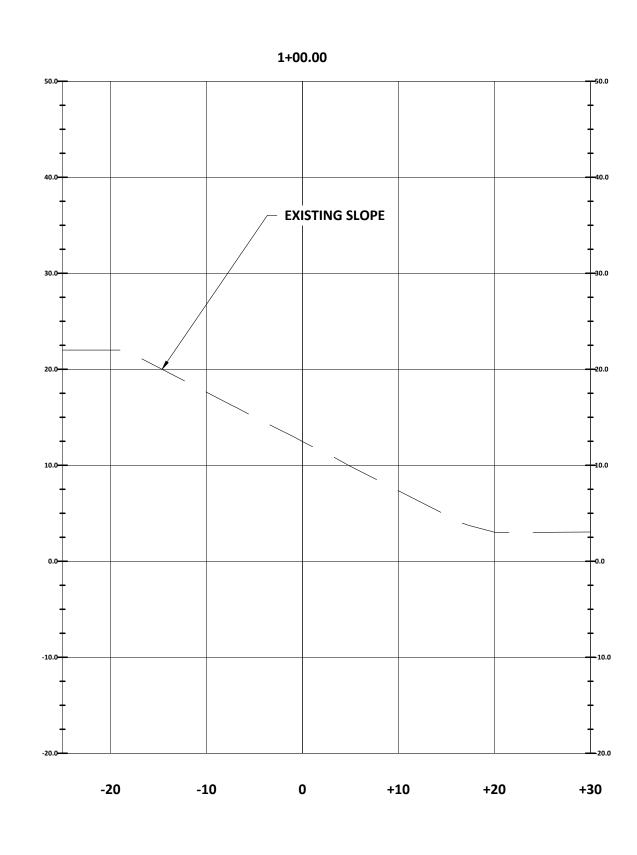
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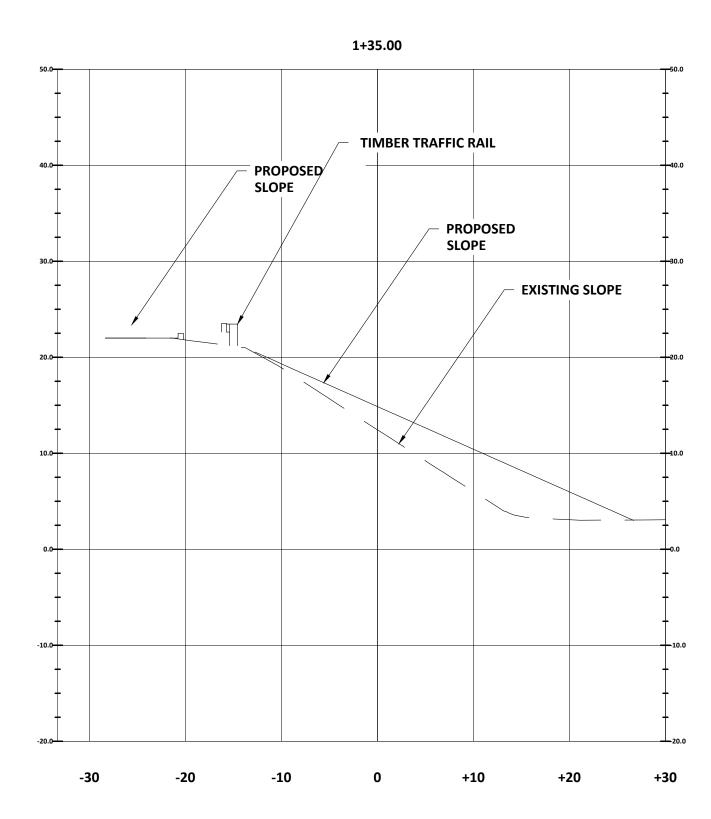


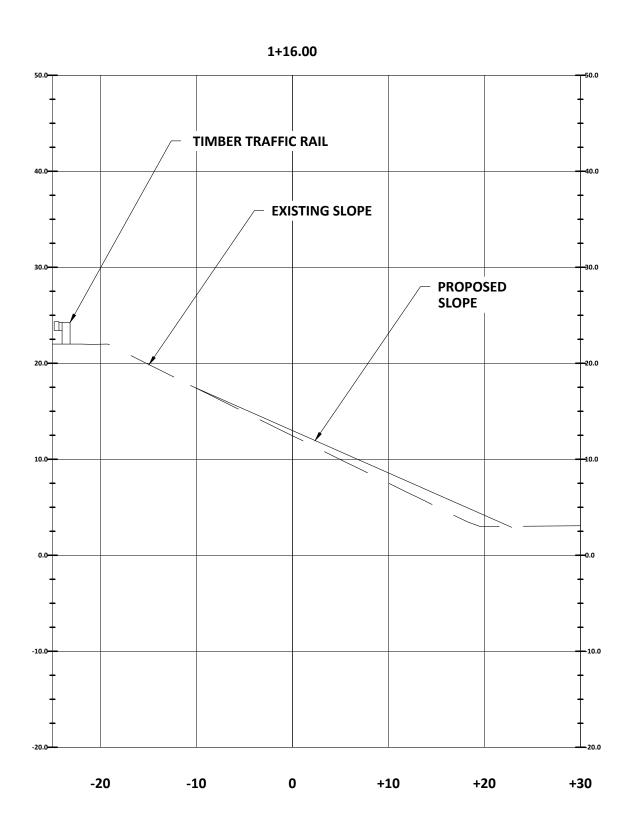
DATUMS FOR 8454000, PROVIDENCE, RI. ALL ELEVATIONS RELATIVE TO NAVD 88

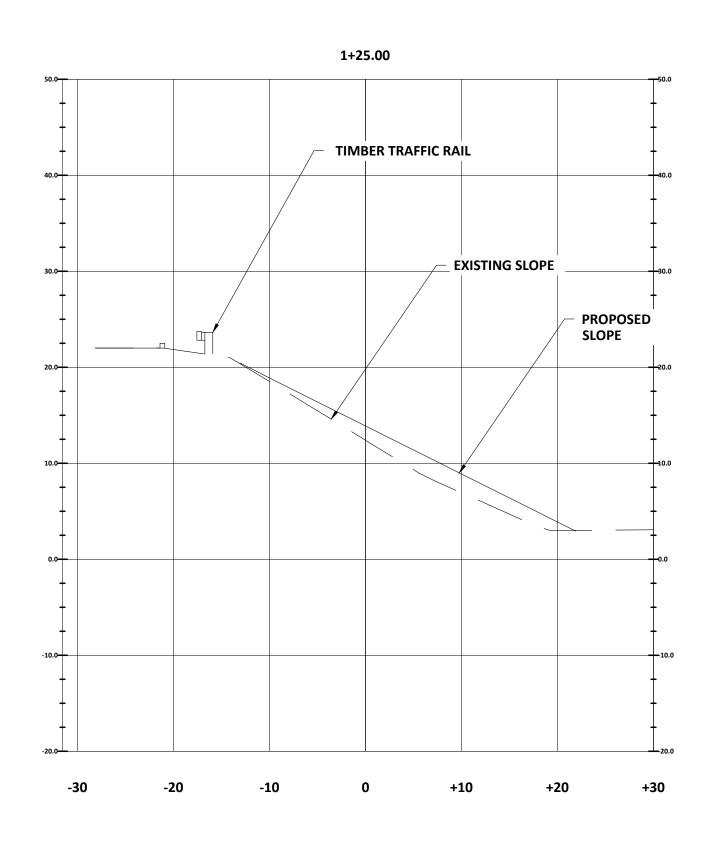
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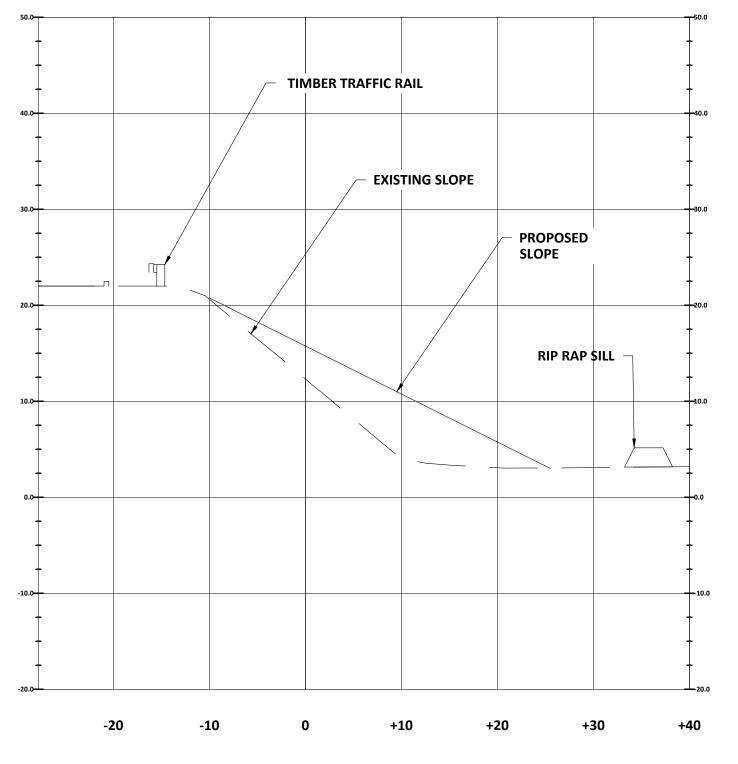


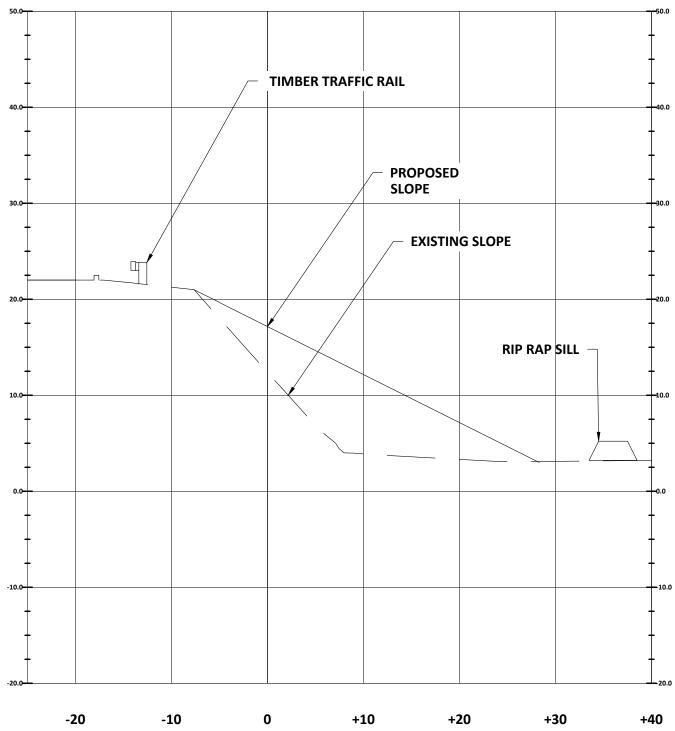




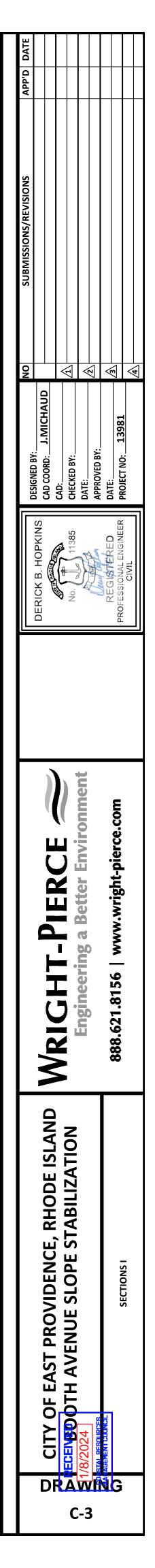


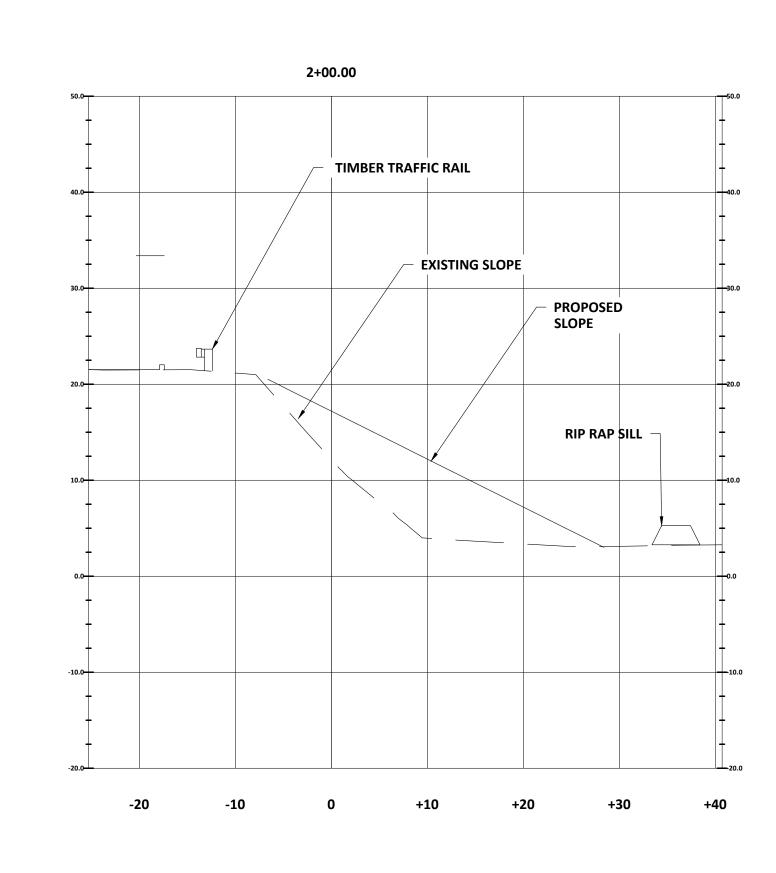
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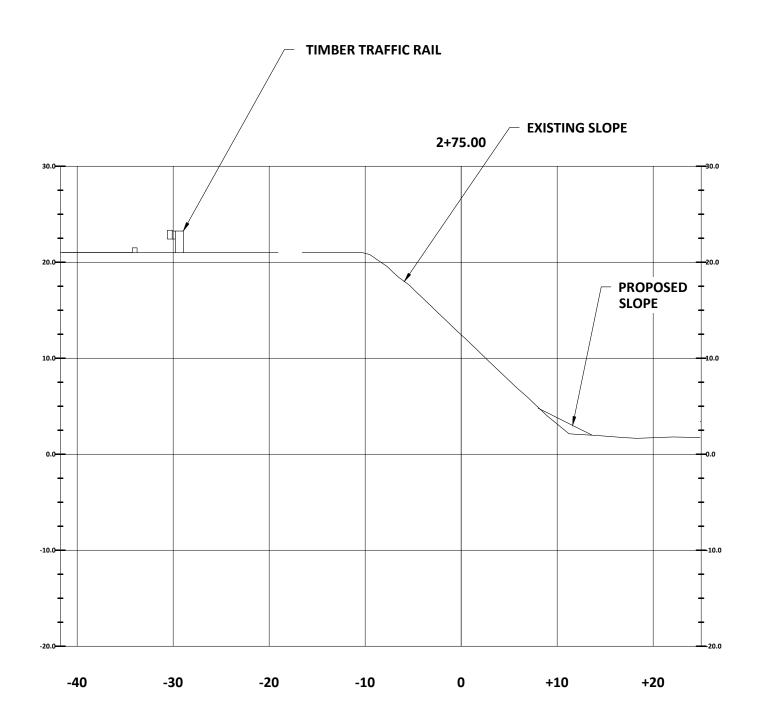


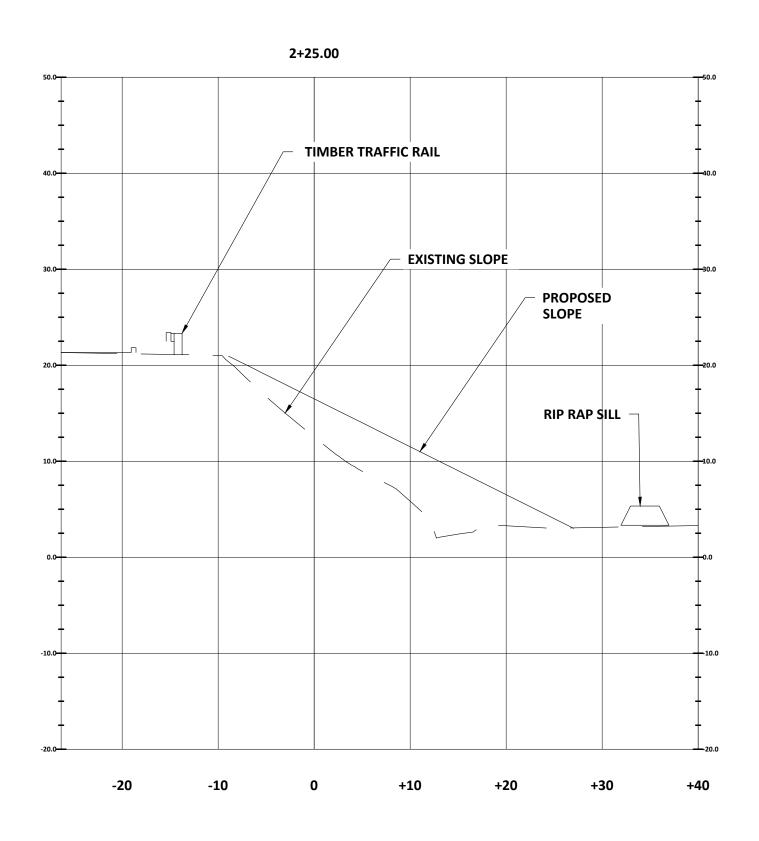


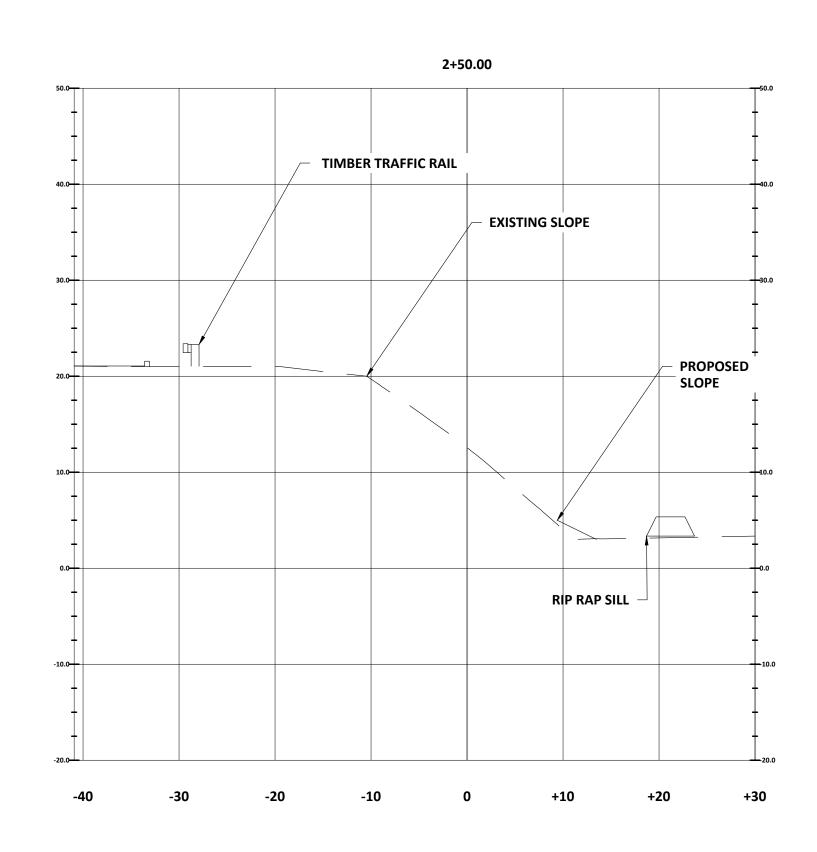




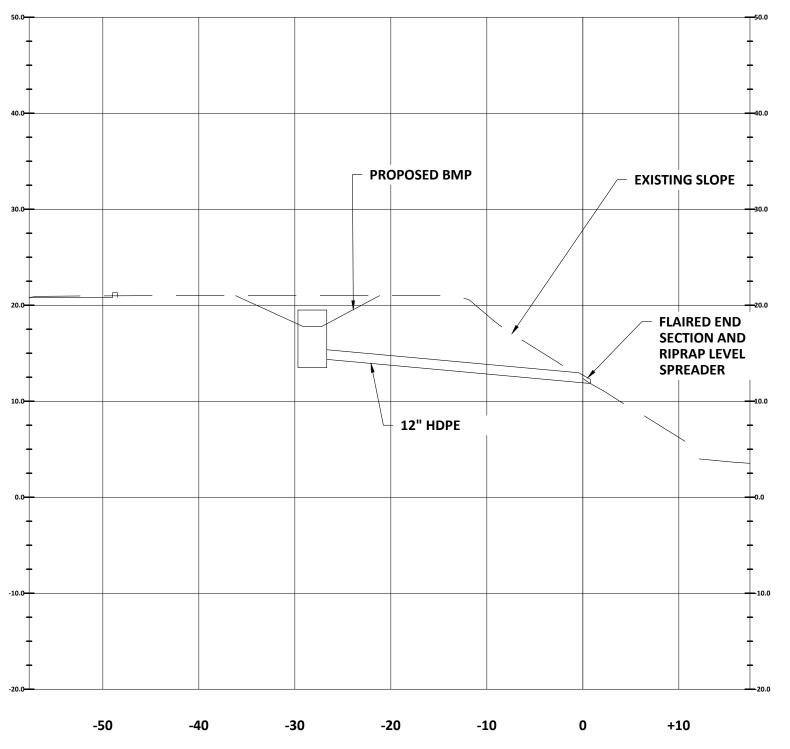


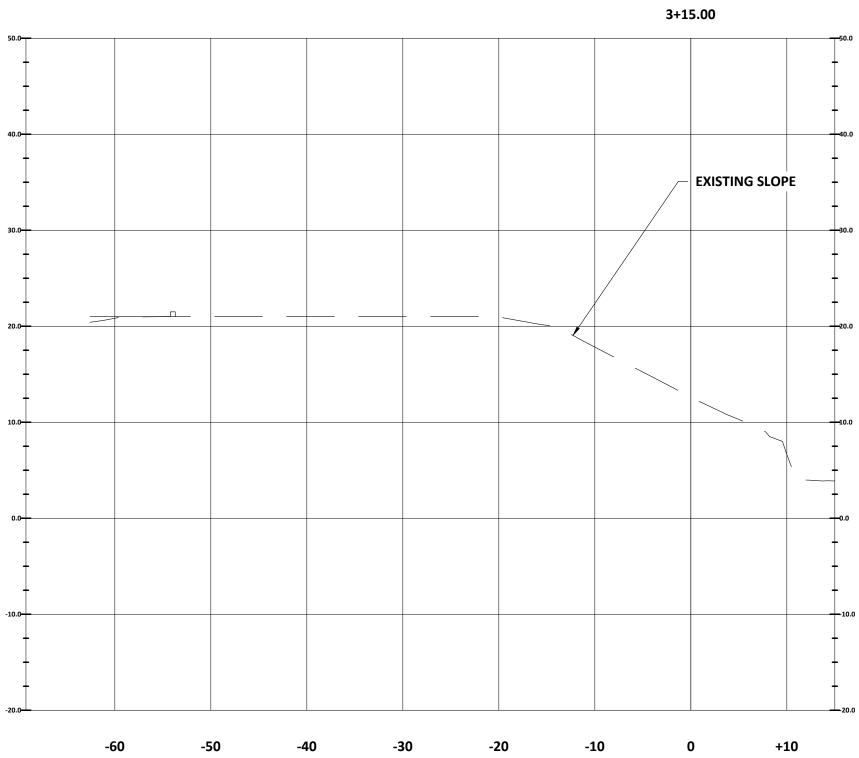




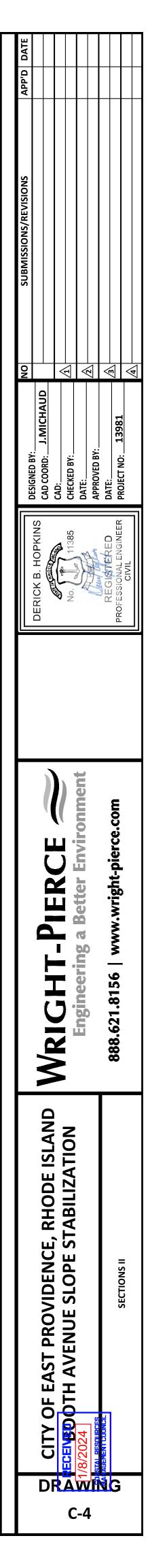


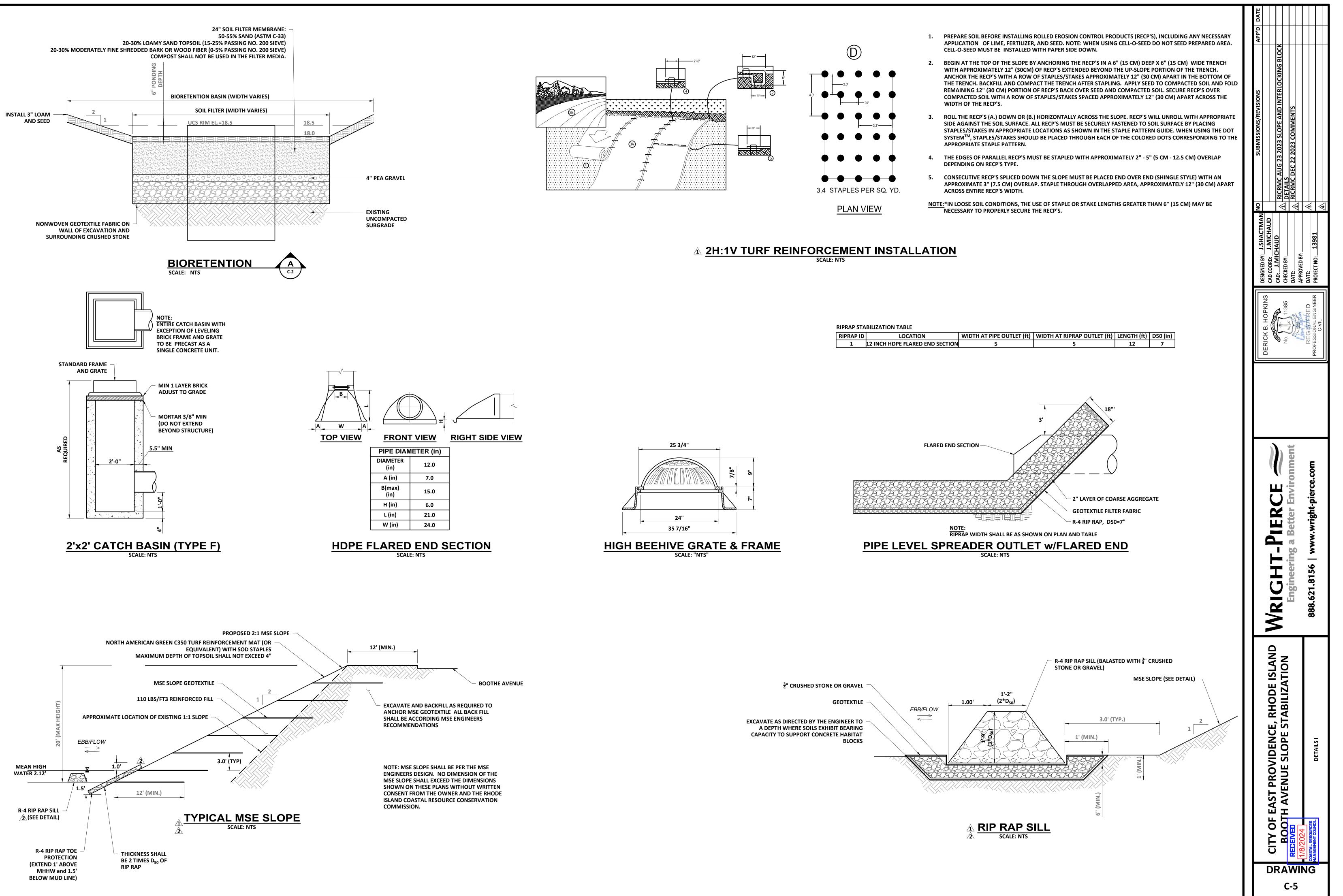


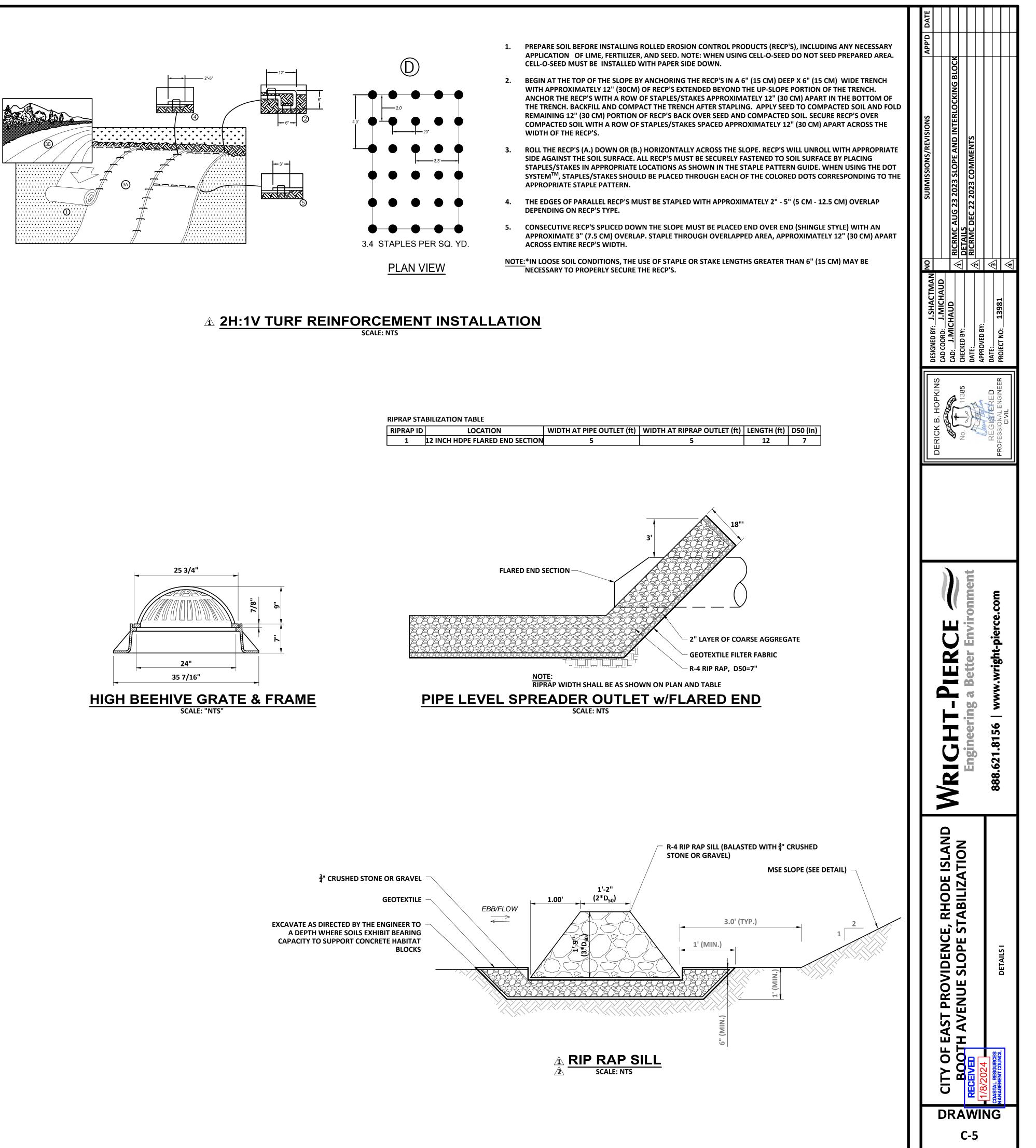


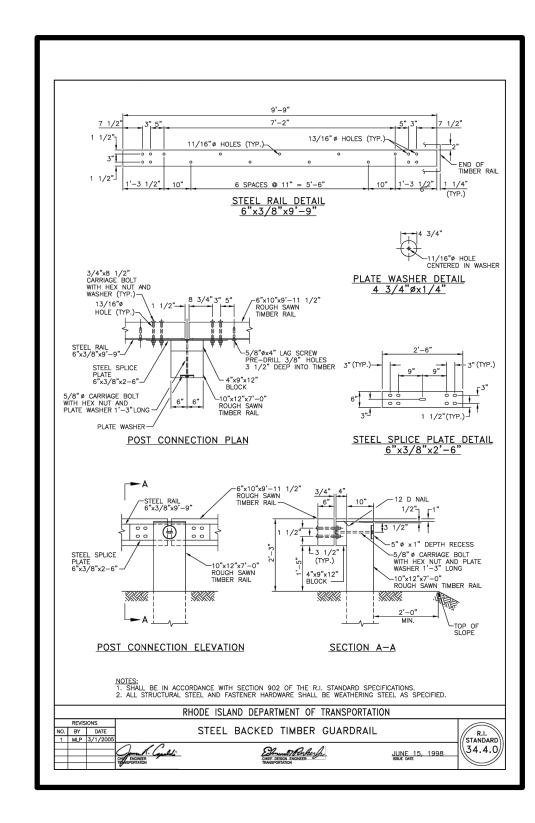


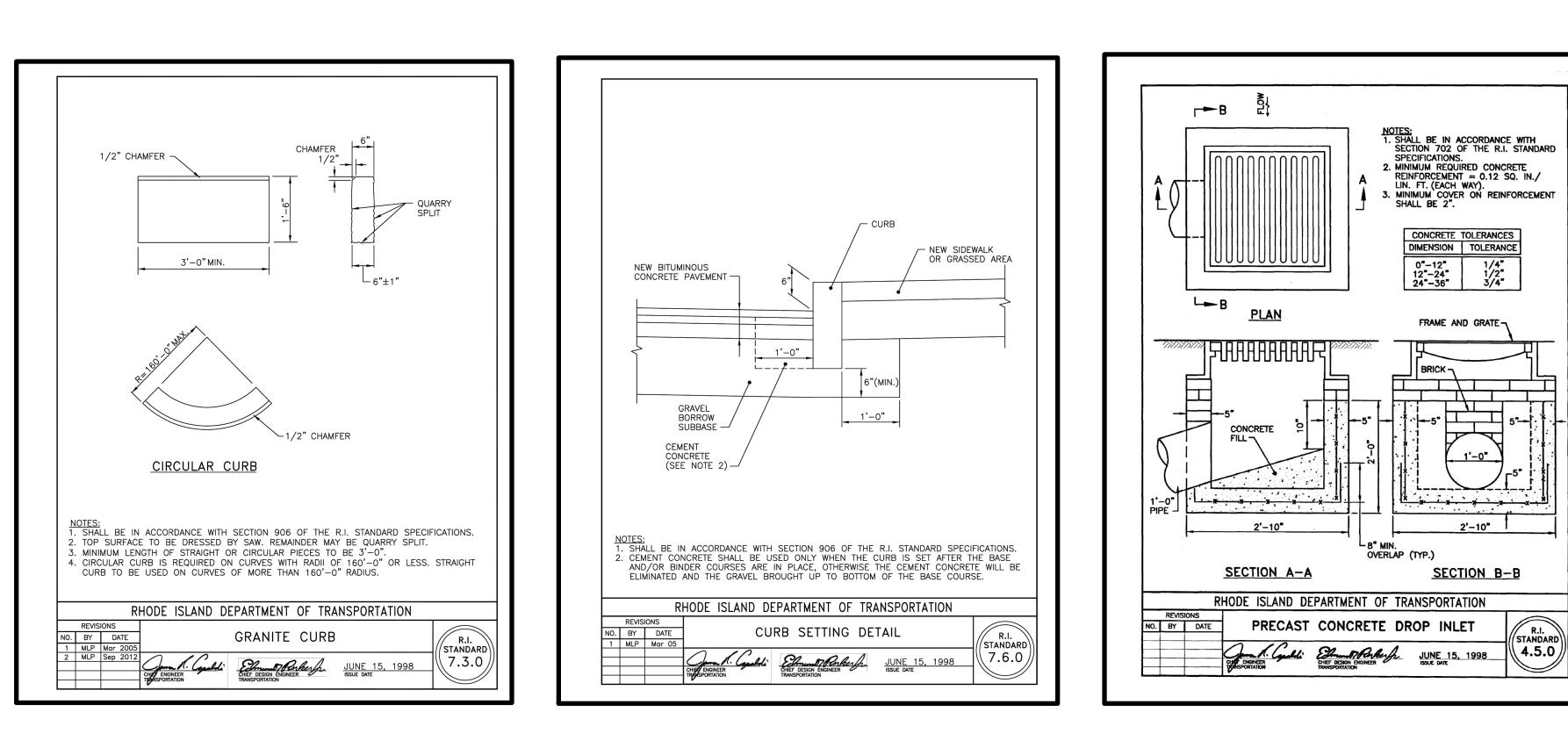
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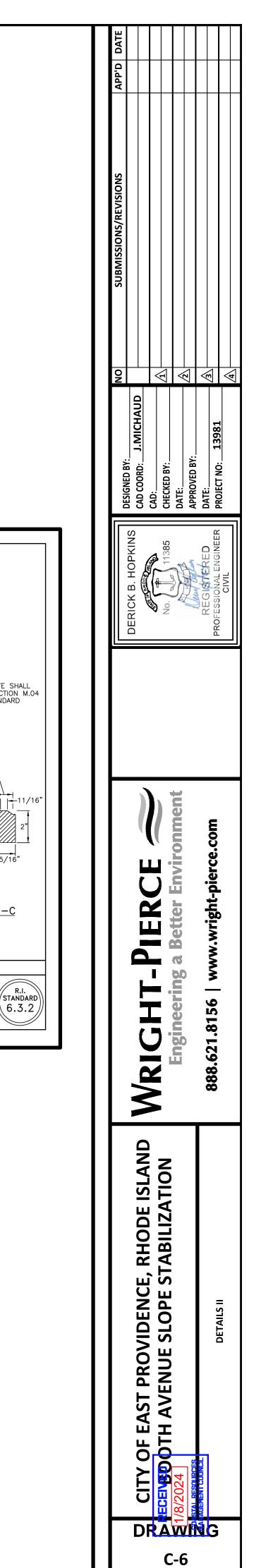


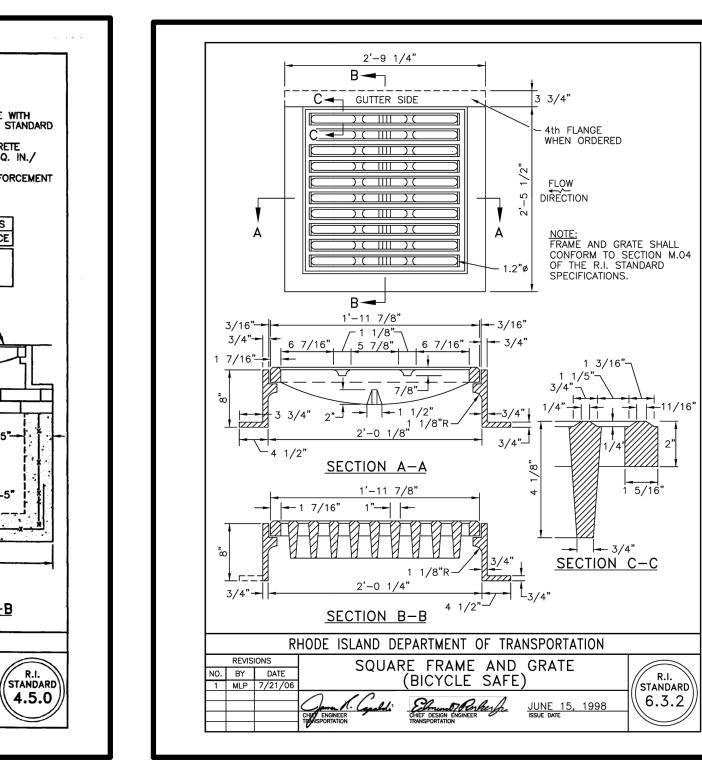




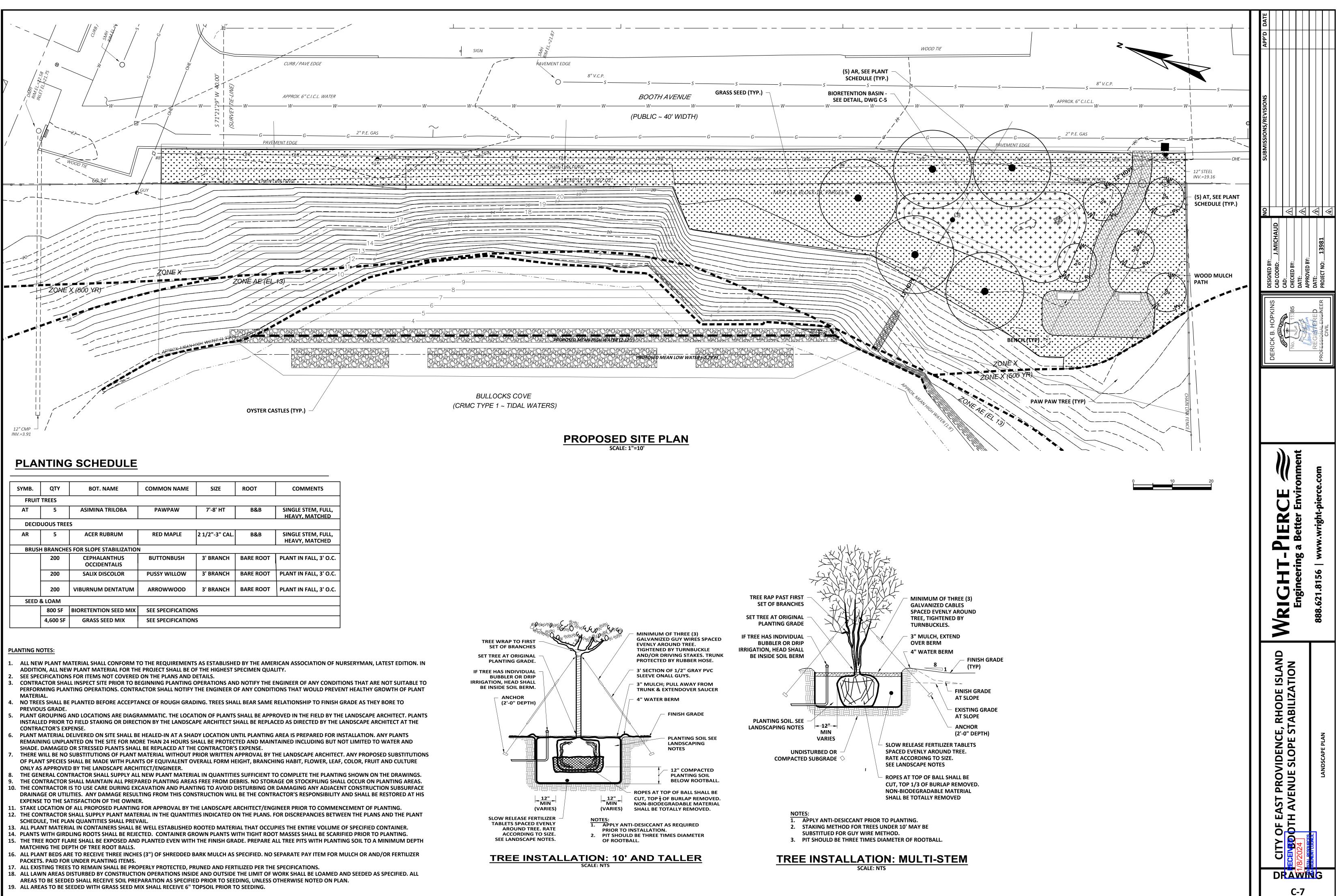












SYMB.	QTY	BOT. NAME	COMMON NAME	SIZE	ROOT	COMMENTS	
FRUIT	TREES						
AT	5	ASIMINA TRILOBA	PAWPAW	7'-8' HT	B&B	SINGLE STEM, FULL, HEAVY, MATCHED	
DECIE	DUOUS TREE	S					
AR	5	ACER RUBRUM	RED MAPLE	2 1/2"-3" CAL.	B&B	SINGLE STEM, FULL, HEAVY, MATCHED	
BRUS	H BRANCHE	S FOR SLOPE STABILIZATION	l	•		•	
	200	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	3' BRANCH	BARE ROOT	PLANT IN FALL, 3' O.C.	
	200	SALIX DISCOLOR	PUSSY WILLOW	3' BRANCH	BARE ROOT	PLANT IN FALL, 3' O.C.	
	200	VIBURNUM DENTATUM	ARROWWOOD	3' BRANCH	BARE ROOT	PLANT IN FALL, 3' O.	
SEED	& LOAM						
	800 SF	BIORETENTION SEED MIX	SEE SPECIFICATION	IS			
	4,600 SF	GRASS SEED MIX	SEE SPECIFICATIONS				

