

PRELIMINARY PLAN SUBMISSION for a PROPOSED

14-LOT MAJOR SUBDIVISION - BRIARWOOD ESTATES

CRANSTON, RHODE ISLAND
AP 18-3, LOTS 1023 & 1026

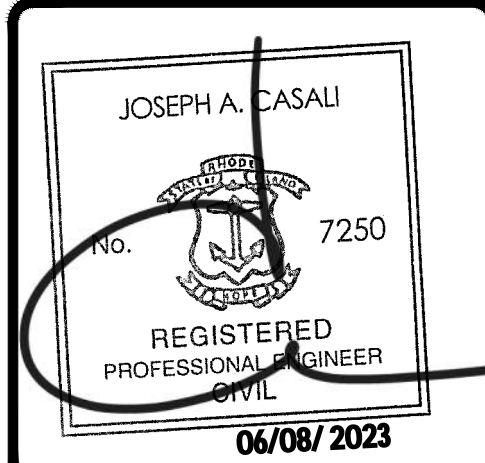
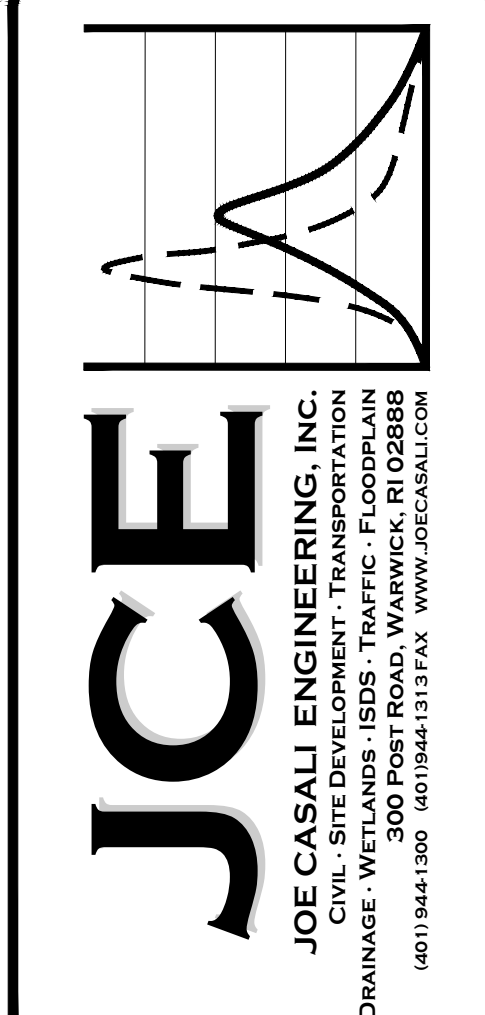
ZONING DISTRICT: RESIDENTIAL A-8

APPROVALS:

- KENT COUNTY WATER AUTHORITY (MAY 17, 2023)
- RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - RIPDES CONSTRUCTION GENERAL PERMIT (APRIL 21, 2023)
- CITY PLAN COMMISSION - MASTER PLAN APPROVAL (JUNE 7, 2022; RECORDED NOVEMBER 15, 2022)
- CITY PLAN COMMISSION - PRE-APPLICATION (APRIL 5, 2022)

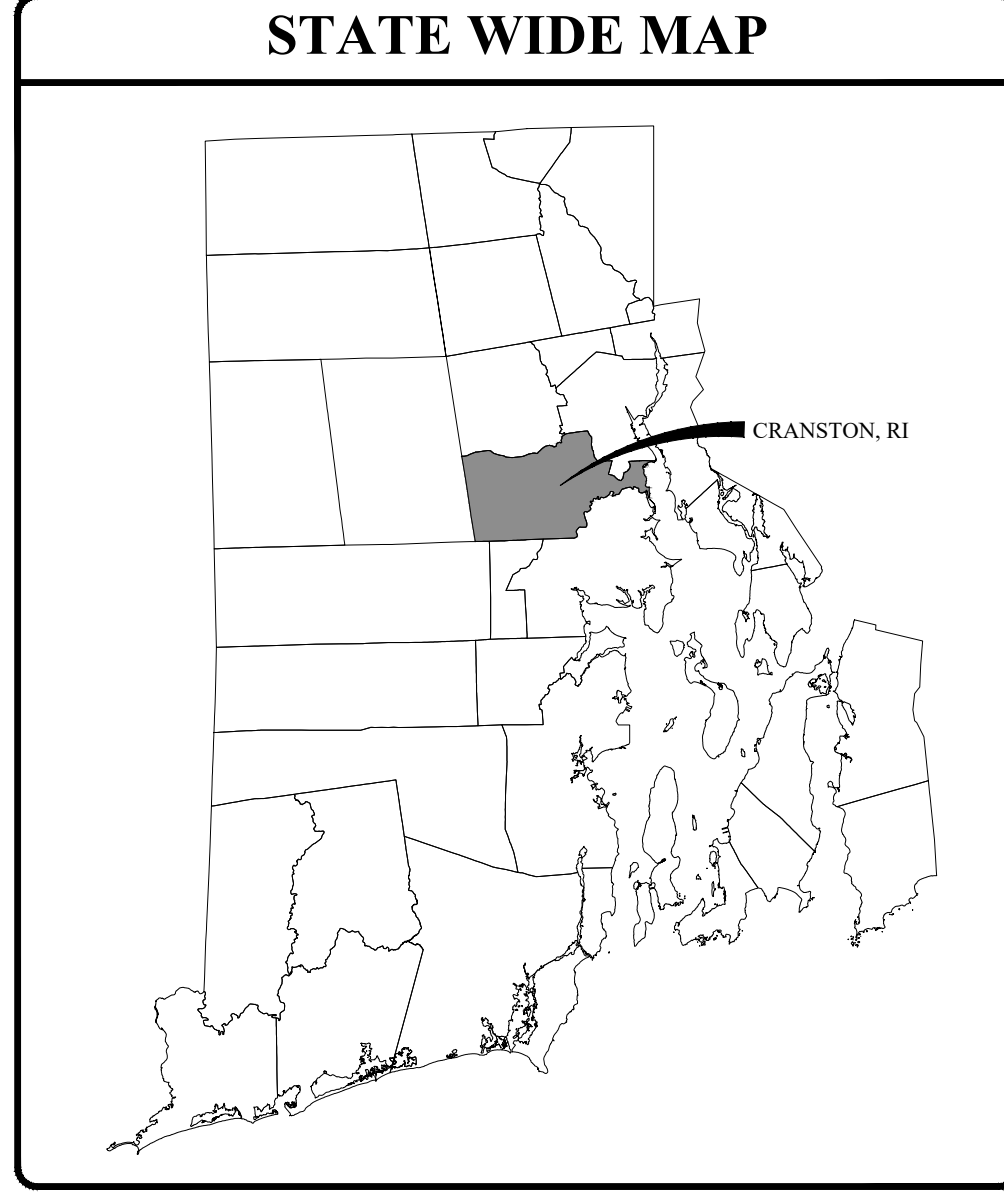
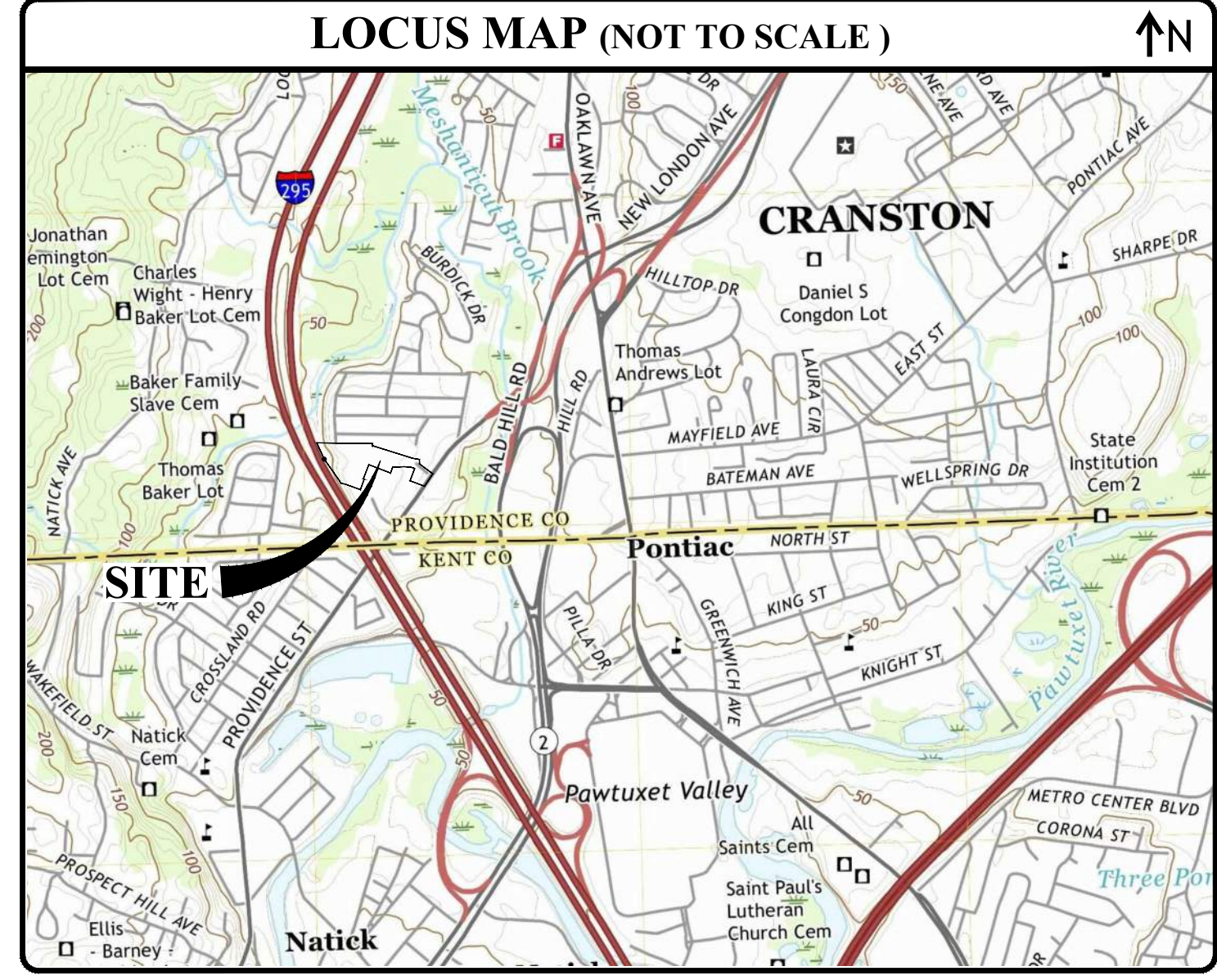
FILINGS:

- CITY PLAN COMMISSION - PRELIMINARY PLAN AND TWO (2) WAIVERS REQUESTED
 - WAIVER REQUESTED TO ALLOW A RIGHT-OF-WAY WIDTH OF 32-FEET AND WAIVER REQUESTED TO OMIT SIDEWALKS
- CITY OF CRANSTON DEPARTMENT OF PUBLIC WORKS & VEOLIA WATER (RESPONSE TO REVIEW COMMENTS)
- RHODE ISLAND DEPARTMENT OF TRANSPORTATION - PHYSICAL ALTERATION PERMIT APPLICATION (PAPA) (RESPONSE TO REVIEW COMMENTS)



BRIARWOOD ESTATES
A 14-LOT MAJOR SUBDIVISION
CRANSTON, RHODE ISLAND
AP 18/3, LOTS 1023 & 1026

PROJECT TEAM			
APPLICANT:	UNIVERSAL REALTY, LLC 728 VALLEY STREET PROVIDENCE, RI 02908	CIVIL ENGINEER:	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313
OWNER:	EDWARD PELLI (AP 18-3, LOT 1026) 1365 NEW LONDON AVENUE CRANSTON, RI 02920	LAND SURVEYOR:	E. GREENWICH SURVEYORS, LLC 1050 MAIN STREET, SUITE 31 EAST GREENWICH, RI 02818 PHONE: 401-339-2681
OWNER:	LEONARD A REALI & CAROL REALI (AP 18-3, LOT 1023) 1375 NEW LONDON AVENUE CRANSTON, RI 02920		



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REFERENCE PLAN	
R1	ADMINISTRATIVE SUBDIVISION PLAN PREPARED BY E. GREENWICH SURVEYORS, LLC, DATED FEB. 2022

REVISIONS:		
NO.	DATE	DESCRIPTION
R1	4/19/2022	REMOVED LOT 2006
R2	5/24/2022	REDUCED ROW
R3	4/6/2023	RIDEM RTC
R4	4/26/2023	RIDOT RTC
R5	5/15/2023	KCWA RTC
R6	6/8/2023	RIDOT/SEWER RTC

DESIGNED BY:	WMLR
DRAWN BY:	SEP/SD
CHECKED BY:	JAC
DATE:	MARCH 2022
PROJECT NO.:	21-71

PRELIMINARY, NOT FOR CONSTRUCTION

COVER SHEET

SHEET 1 OF 17

02/21/21 Rudy Proccacciano/MCAD/NEW LONDON AVE [PERMIT SET - PRELIMINARY].dwg, Jun. 13, 2023, 11:20pm

GENERAL NOTES:

- 1. THESE PLANS ARE BASED ON A CLASS I COMPREHENSIVE BOUNDARY SURVEY, PERFORMED BY E. GREENWICH SURVEYORS, LLC., EAST GREENWICH, RI IN FEBRUARY 2022.
2. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION.
3. THE SITE IS LOCATED ON THE FLOOD INSURANCE RATE MAP FOR THE CITY OF CRANSTON, RHODE ISLAND, MAP NUMBER 44007C0426H, EFFECTIVE DATE OCTOBER 2, 2015.
4. SOILS EXISTING ON THE SITE CONSISTS OF HINCKLEY LOAMY SAND, 0 TO 3% SLOPES (HKA) AND HINCKLEY LOAMY SAND, 8-15% SLOPES (HKC).
5. THERE ARE NO WETLANDS ON OR ADJACENT TO THE SITE.
6. THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE PAWTUXET RIVER MAINSTEM WATERSHED.
7. THERE IS AN EXISTING 25-FOOT-WIDE SEWER EASEMENT WITHIN THE SITE.
8. THERE ARE NO CEMETERIES WITHIN OR ADJACENT TO THE SUBJECT PARCEL.
9. ELECTRIC/COMMUNICATIONS, SEWER AND WATER ARE AVAILABLE FROM WITHIN NEW LONDON AVENUE (ROUTE 33).

SITE NOTES:

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT AND WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, WHICHEVER IS MORE STRINGENT.
3. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
4. ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
5. THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES.
6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
7. ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE.
8. WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE ENGINEER AND THE CITY AT NO ADDITIONAL COST TO THE OWNER.
9. ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
10. THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
11. THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
12. ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
13. WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
14. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
15. ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2004 EDITION (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).
16. ALL EXCAVATED BOULDERS WHICH ARE TO BE USED AS COMMON BORROW ON SITE MUST BE CRUSHED/SPLIT TO LESS THAN 9" IN SIZE.
17. ALL STUMPS SHALL BE REMOVED AND DISPOSED OF OFFSITE.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- 1. THE SILT FENCE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
2. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION.
3. NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE IN THE AREA OF THE STORMWATER MITIGATION AREAS ONCE THE SUBGRADE IS EXPOSED.
4. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR.
5. ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
6. STOCKPILES OF SOIL MATERIAL SHALL NOT BE LOCATED NEAR WATERWAYS AND STORMWATER BASINS.
7. THE SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD.
9. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993, AMENDED 2016.

DRAINAGE SYSTEM NOTES:

- 1. THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HDPE PIPE OR AN APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE SITE PLANS.
2. CONTRACTOR TO SET ALL STORMWATER STRUCTURE RIMS INITIALLY AT BINDER GRADE.
3. PRIOR TO THE START OF CONSTRUCTION, THE SITE CONTRACTOR SHALL STAKE OUT AND PROTECT ALL SURFICIAL STORMWATER INFILTRATION AREAS, INCLUDING THE SEDIMENT FOREBAY, INFILTRATION BASIN AND UNDERGROUND INFILTRATION CHAMBER SYSTEM.
4. ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
A. MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS
B. INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY.
5. UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
6. ALL INSTALLATION, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708.
7. STORMWATER BMPs SHALL BE INSPECTED AND MAINTAINED BY THE OWNER AS FOLLOWS:

PRE-TREATMENT SEDIMENT FOREBAYS

- AFTER CONSTRUCTION, THE SEDIMENT FOREBAY SHALL BE INSPECTED AND CLEANED WHEN SEDIMENT BUILD UP IS IN EXCESS OF 6" OR 25% OF THE SEDIMENT STORAGE VOLUME.

INFILTRATION BASINS

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE INFILTRATION BASIN SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY.
SILT AND SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE ACCUMULATION EXCEEDS SIX INCHES, OR WHEN WATER PONDS ON THE SURFACE OF THE THE DETENTION BASIN FOR MORE THAN 48 HOURS.
SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
THE OUTLET DEVICES SHALL BE CLEANED/REPAIRED WHEN NECESSARY.
TRASH AND DEBRIS SHALL BE REMOVED WHEN NECESSARY.
THE LOW FLOW ORIFICE GRATE SHALL BE INSPECTED AFTER MAJOR STORM EVENTS EXCEEDING 2 INCHES OF RAIN.
THE OUTFLOW WEIR SHOULD BE INSPECTED ANNUALLY TO ENSURE THAT IT IS FUNCTIONING PROPERLY.

STORMTECH INFILTRATION SYSTEM

- INFILTRATION PRACTICES SHALL BE INSPECTED ANNUALLY AND AFTER STORMS EQUAL TO OR GREATER THAN THE 1-YEAR, 24-HOUR TYPE III SOTRM EVENT
IF SEDIMENT OR DEBRIS BUILD UP HAS LIMITED THE INFILTRATION CAPABILITIES OF THE SYSTEM, THE ISOLATOR ROWS SHALL BE CLEANED OUT WIHT A VACUUM TRUCK
SILT AND SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE ACCUMULATION EXCEEDS SIX INCHES, OR WHEN WATER PONDS ON THE SURFACE OF THE THE DETENTION BASIN FOR MORE THAN 48 HOURS.

- ALL REMOVED SEDIMENT IS TO BE TESTED TO DETERMINE POLLUTANT CONTENT. THE SEDIMENT IS TO BE PROPERLY DISPOSED OF BASED UPON THE TEST RESULTS AND LOCAL, STATE, AND FEDERAL REGULATIONS.

LOAMING & SEEDING

SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:

- AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE.
THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
PRIOR TO SEEDING OR SODDING, FERTILIZER WITH 10-10-10 OR EQUIVALENT ANALYSIS, AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM.
APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
SEEDING AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL.
RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15.
40% CREEPING RED FESCUE
20% IMPROVED PERENNIAL RYEGRASS
20% IMPROVED KENTUCKY BLUEGRASS
20% KENTUCKY BLUEGRASS

URI #2 IMPROVED SEED MIX, % BY WEIGHT:

- 40% CREEPING RED FESCUE
20% IMPROVED PERENNIAL RYEGRASS
20% IMPROVED KENTUCKY BLUEGRASS
20% KENTUCKY BLUEGRASS

RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION.
TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR TOWN RIGHT-OF-WAY.
ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC, SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

MISCELLANEOUS UTILITY NOTES:

- PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR.
OVERHEAD AND/OR UNDERGROUND ELECTRIC, GAS AND COMMUNICATIONS SERVICES ARE TO BE COORDINATED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANY.
THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.
THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT HIS OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF CRANSTON.
EXISTING UTILITY FRAMES AND COVERS FOR SANITARY SEWER, WATER, GAS, STORM DRAINAGE AND OTHER UTILITIES SHALL BE ADJUSTED TO GRADE AS REQUIRED IN NEW PAVING AND PAVEMENT OVERLAY AREAS.
A BACKFLOW PREVENTION DEVICE MUST BE INSTALLED AT EACH SEWER SERVICE BUILDING CONNECTION THAT IS BELOW THE RIM ELEVATION OF THE NEAREST SEWER MANHOLE, AS REQUIRED BY THE INTERNATIONAL PLUMBING CODE.
APPLICANT IS REQUIRED TO PROVIDE TWO SETS OF FINAL AS-BUILT PLANS UPON COMPLETION OF CONSTRUCTION, PRIOR TO FINAL ACCEPTANCE.
APPLICANT IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM LOCAL, STATE, AND/OR FEDERAL AGENCIES WITH REGULATORY JURISDICTION OVER THE PROPOSED WORK.
NO FLOW WILL BE ACCEPTED UNTIL A COMPLETION CERTIFICATE IS ISSUED.
THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS AND ACTIVITIES TO WITHIN THE STREET LINES, EASEMENT AND/OR RIGHT-OF-WAY, AS SHOWN ON THE DRAWINGS.
ALL CONSTRUCTION MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHEETS SHALL BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER, OR HIS/HER REPRESENTATIVE PRIOR TO FABRICATION AND INSTALLATION.
CONTRACTOR TO SET ALL UTILITY STRUCTURE RIMS INITIALLY AT BINDER GRADE. ALL RIMS SHALL BE RESET TO FINAL GRADE BEFORE INSTALLATION OF THE PAVEMENT SURFACE COURSE.

JCE logo and contact information for JOE CASALI ENGINEERING, INC. including address and phone number.

Professional Engineer seal for JOSEPH A. CASALI, No. 7250, Registered Professional Engineer, dated 06/08/2023.

BRIARWOOD ESTATES A 14-LOT MAJOR SUBDIVISION CRANSTON, RHODE ISLAND AP 18/3, LOTS 1023 & 1026

Table with 2 columns: NO., DATE, DESCRIPTION. Lists revisions R1 through R6.

DESIGNED BY: WM/LR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: MARCH 2022
PROJECT NO: 21-71

PRELIMINARY, NOT FOR CONSTRUCTION

GENERAL NOTES & LEGEND

LEGEND:

Legend symbols and descriptions for various utility lines, manholes, fences, and other site features.

03/21/21 7:17 AM C:\Users\jmc\Documents\Projects\21-71\21-71.dwg [PERMIT SET - PRELIMINARY] dwg, Jun. 13, 2023, 11:20am

Logo and disclaimer text regarding utility locations and excavation safety.

SOIL EVALUATION TEST PIT DATA		
	SURFACE EL.	SHWT / EL.
TH-1	67.0	70' / 61.17
TH-2	67.6	65' / 62.18
TH-3	75.5	48' / 71.50
TH-4	77.5	60' / 72.50
TH-5	77.0	60' / 72.00
TH-6	76.3	60' / 71.30
TH-7	77.1	>144' / >65.10
TH-8	77.2	>144' / >65.20
TH-9	75.0	>144' / >63.00
TH-10	76.0	36' / 73.00

A-8 ZONE DIMENSIONAL REGULATIONS

ZONING CRITERIA	REQUIRED	EXISTING	
		LOT 1026	LOT 1023
ZONING DISTRICT	A-8	A-8	A-8
MINIMUM LOT AREA	8,000 SF	124,466 SF	127,886 SF
MINIMUM LOT WIDTH & FRONTAGE	80 FT	138.57 FT	NONE ¹
MINIMUM FRONT YARD SETBACK	25 FT	29.91 FT	N/A
MINIMUM REAR YARD SETBACK	20 FT	89.27 FT	>20 FT
MINIMUM SIDE YARD SETBACK	10 FT	18.29 FT	33.01 FT
MAXIMUM LOT COVERAGE	30%	1.69%	1.52%
MAXIMUM BUILDING HEIGHT	35 FT	<35 FT	<35 FT

NOTES:
1. PRE-EXISTING, NON-CONFORMING CONDITION.

NOTES:
1. TEST PIT LOGS AVAILABLE UPON REQUEST.



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 CIVIL ENGINEERING - TRICORPORATION
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JOSEPH A. CASALI
 No. 7250
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 06/08/2023

BRIARWOOD ESTATES
 A 14-LOT MAJOR SUBDIVISION
 CRANSTON, RHODE ISLAND
 AP 18/3, LOTS 1023 & 1026

REVISIONS:

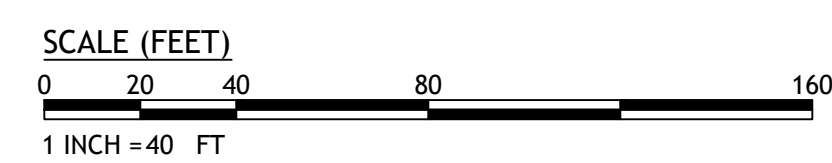
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R5	5/15/2023	KCWA RTC
R6	6/8/2023	RIDOT/SEWER RTC

DESIGNED BY: WMLR
 DRAWN BY: SEP/SD
 CHECKED BY: JAC
 DATE: MARCH 2022
 PROJECT NO: 21-71

PRELIMINARY, NOT FOR CONSTRUCTION

EXISTING CONDITIONS PLAN

SHEET 3 OF 17



A-8 ZONE DIMENSIONAL REGULATIONS

ZONING CRITERIA	REQUIRED	EXISTING	EXISTING	PROPOSED													
	A-8	LOT 1026	LOT 1023	LOT 1026 ²	LOT 1023	LOT 1	LOT 2	LOT 3	LOT 4	LOT 5	LOT 6	LOT 7	LOT 8	LOT 9	LOT 10	LOT 11	LOT 12
ZONING DISTRICT	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8	A-8
MINIMUM LOT AREA	8,000 SF	124,466 SF	80,695 SF	18,058 SF	53,279 SF	8,937 SF	9,771 SF	11,021 SF	12,371 SF	12,371 SF	12,065 SF	10,000 SF	10,209 SF	8,967 SF	8,245 SF	8,183 SF	11,179 SF
MINIMUM LOT WIDTH & FRONTAGE	80 FT	138.57 FT	50.18 FT	105.68 FT (W)	223.43 FT	88.07 FT	80.46 FT	80.00 FT	80.00 FT	80.00 FT	81.89 FT	182.54 FT	80.00 FT	80.00 FT	80.00 FT	82.27 FT	85.20 FT
MINIMUM FRONT YARD SETBACK	25 FT	29.91 FT	N/A	29.63 FT	76.75 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT	>25 FT
MINIMUM REAR YARD SETBACK	20 FT	89.27 FT	N/A	N/A	36.88 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT	>20 FT
MINIMUM SIDE YARD SETBACK	10 FT	18.29 FT	N/A	18.29 FT	33.77 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT	>10 FT
MAXIMUM LOT COVERAGE	30%	1.69%	N/A	6.01%	33.77 FT	<30%	<30%	<30%	<30%	<30%	<30%	<30%	<30%	<30%	<30%	<30%	<30%
MAXIMUM BUILDING HEIGHT	35 FT	<35 FT	N/A	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT	<35 FT

- NOTES:
 1. PRE-EXISTING, NON-CONFORMING CONDITION.
 2. REGARDING LOT 1026: THE EXISTING ACCESSORY GARAGE MEETS THE REQUIRED 5' SETBACK; THE EXISTING IN-GROUND SWIMMING POOL MEETS THE REQUIRED FRONT SETBACK OF 25 FEET UNDER PROPOSED CONDITIONS



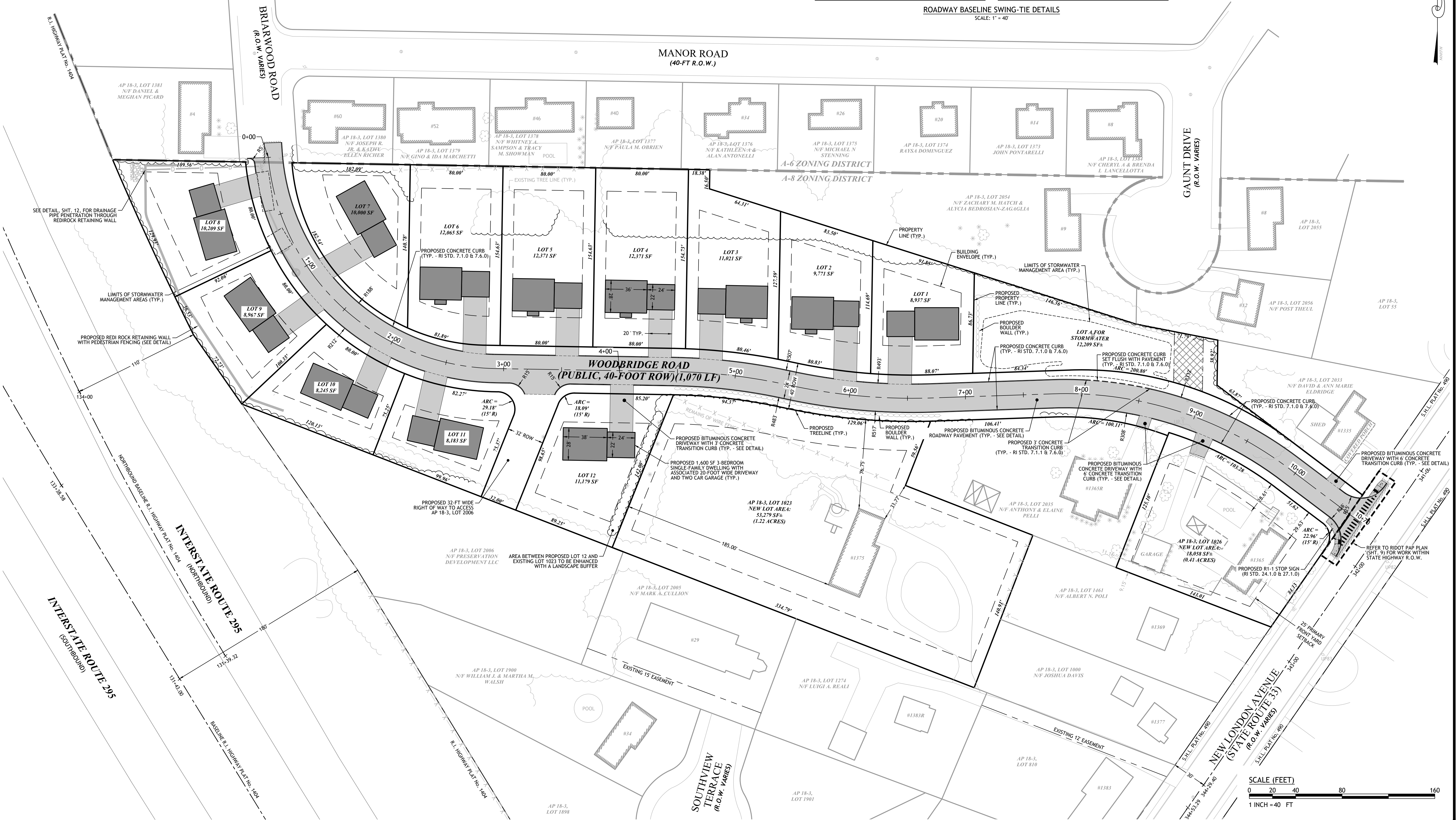
CRANSTON ZONING ORDINANCE

SECTION XII, ARTICLE B.3.a.: STREET WIDTHS: RIGHT OF WAY: STREET RIGHTS-OF-WAY SHALL NOT BE LESS THAN THE WIDTHS SHOWN BELOW: LOCAL ROAD = 40 FEET RIGHT-OF-WAY WIDTH; 24 FEET PAVEMENT WIDTH

PROPOSED RIGHT OF WAY TO ACCESS LOT AP 18-3, LOT 2006
 REQUIRED: 40' ROW WIDTH; 24' PAVEMENT WIDTH
 PROPOSED: 32' ROW WIDTH; 24' PAVEMENT WIDTH
 WAIVER REQUESTED: 8' ROW WIDTH

SECTION XII, ARTICLE B.18: SIDEWALKS: SIDEWALKS SHALL BE REQUIRED TO BE INSTALLED AT MINIMUM ON ONE SIDE OF ALL PROPOSED NEW PUBLIC STREETS IN RESIDENTIAL SUBDIVISIONS

WAIVER REQUESTED TO NOT INSTALL SIDEWALKS TO MATCH EXISTING CONDITIONS OF BRIARWOOD ROAD



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 06/08/2023

BRIARWOOD ESTATES
 A 14-Lot Major Subdivision
 CRANSTON, RHODE ISLAND
 AP 18/3, LOTS 1023 & 1026

REVISIONS:

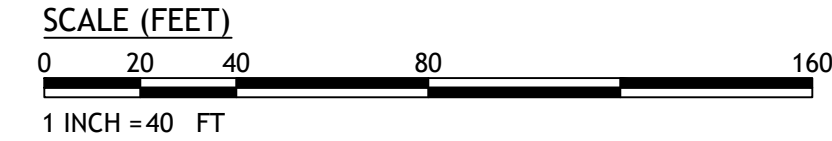
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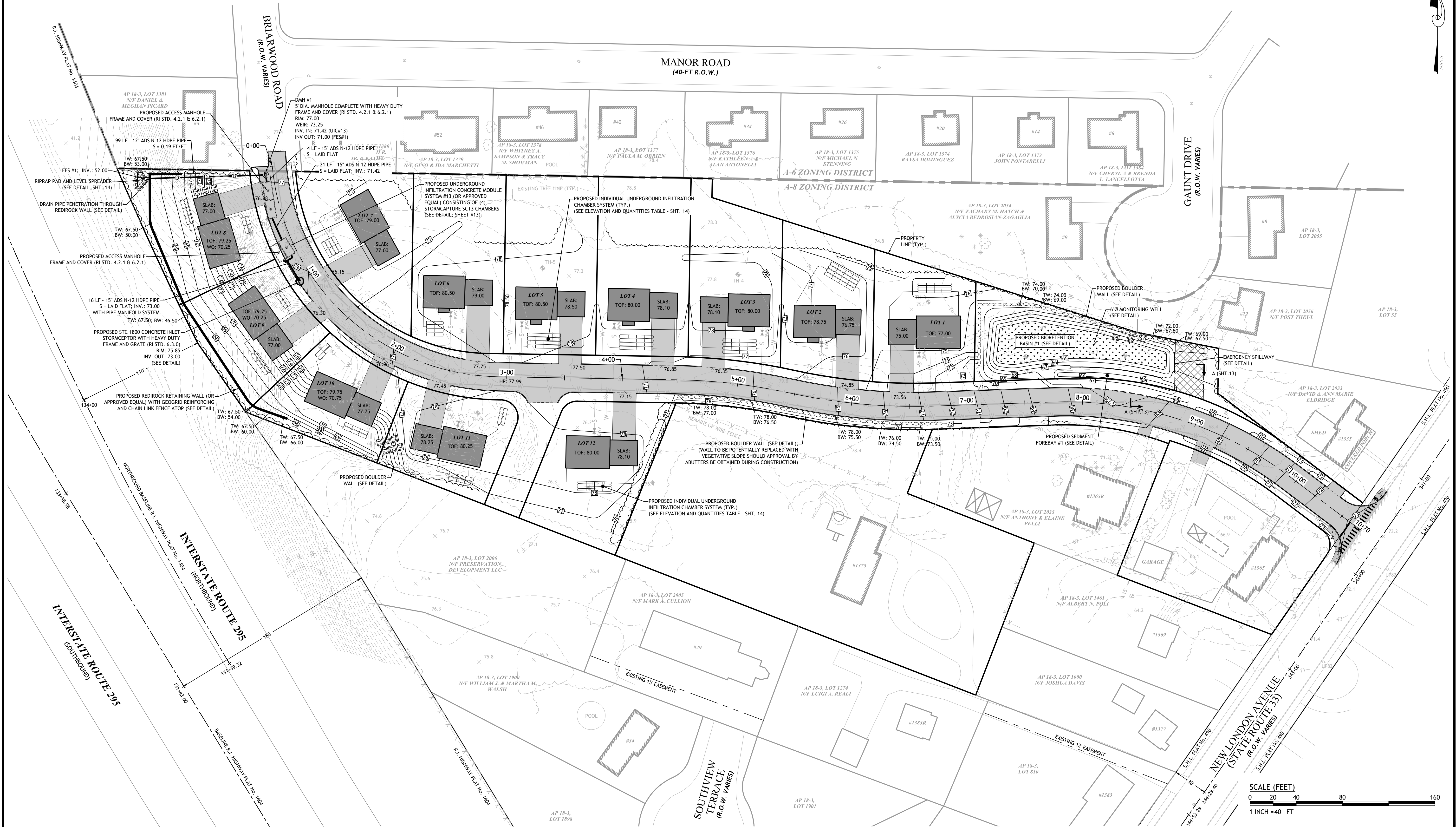
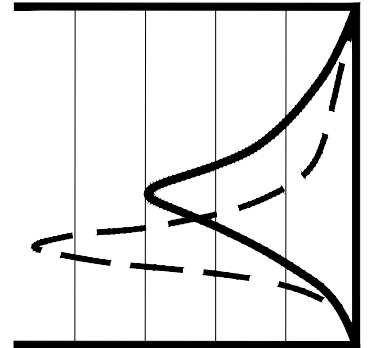
SITE PLAN

SHEET 5 OF 17



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02/21/23 7:17 AM C:\Users\jcasali\OneDrive\Documents\Projects\Briarwood\Briarwood Major Subdivision\Briarwood Major Subdivision.dwg, Jun. 13, 2023 11:23:37 AM

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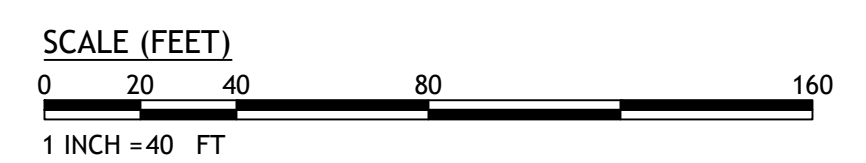
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GRADING & DRAINAGE PLAN

SHEET 6 OF 17



SEWER MAIN CONSTRUCTION NOTES:

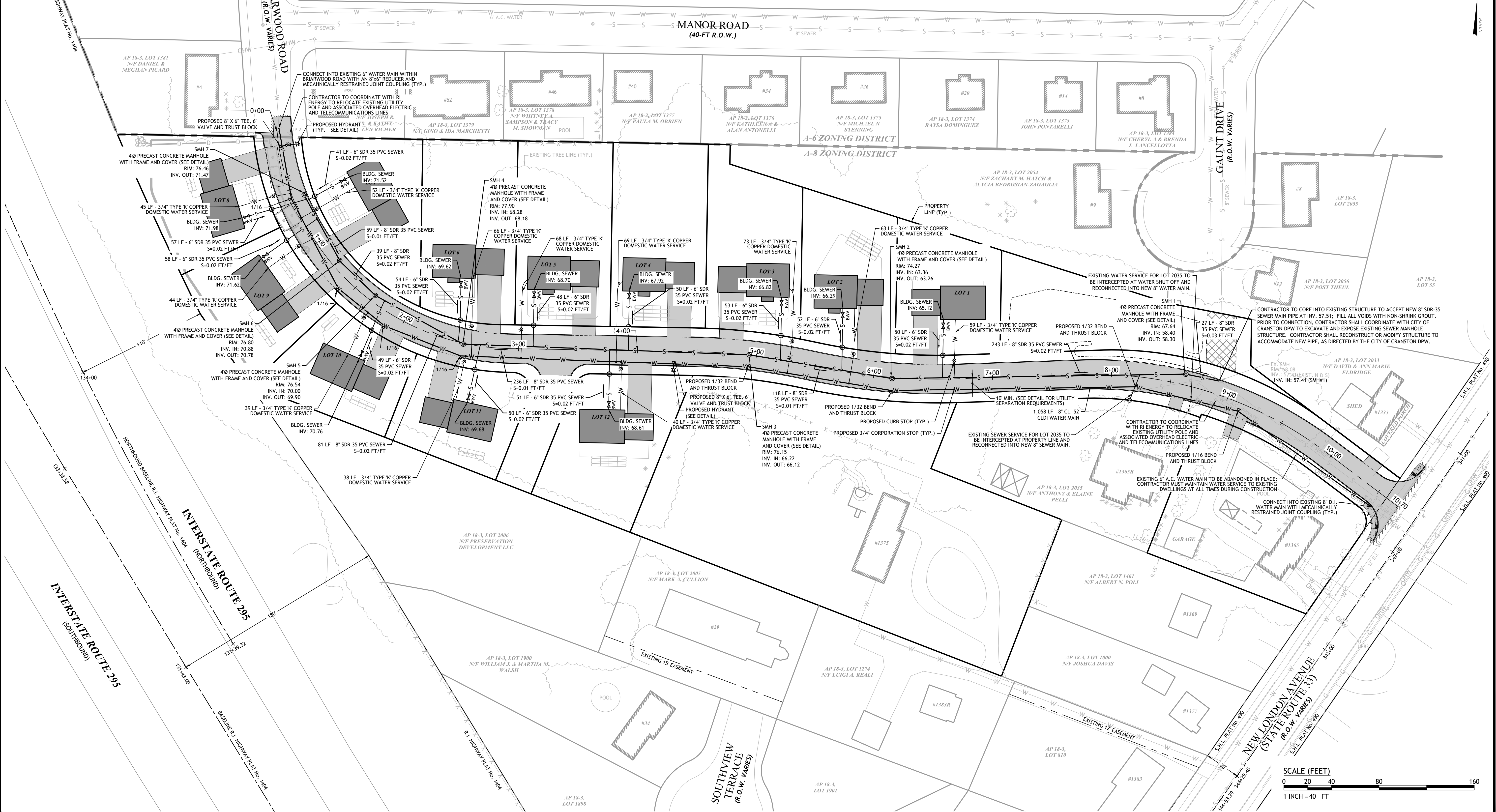
- FOR GENERAL SPECIFICATIONS REGARDING ALL CONSTRUCTION AS WELL AS THE SANITARY SEWERS THE CONTRACTOR SHALL REFERENCE THE CITY OF CRANSTON CITY CODE, CHAPTER 26, SEWERS, SPECIFICATIONS FOR HIGHWAYS COVERING RESIDENTIAL AND INDUSTRIAL PLAT DEVELOPMENTS, AND OTHER CITY OF CRANSTON DEPARTMENT OF PUBLIC WORKS GUIDELINES, RULES, REGULATIONS AND OTHER APPLICABLE LAWS, INCLUDING ANNEX A-DESIGN OF SEWERS (PROMULGATED 8/15/02), REGARDING SANITARY SEWER CONSTRUCTION, THE CONTRACTOR SHALL SPECIFICALLY REFERENCE THE TECHNICAL RELEASE #16 GUIDE FOR THE DESIGN OF WASTEWATER TREATMENT WORKS (PUBLISHED BY THE N.E. INTERSTATE WATER POLLUTION CONTROL COMMISSION).
- PRIVATE SEWERS AND SEWER EXTENSION INTO ADJACENT COMMUNITIES WHICH CONNECT TO THE CITY SEWER SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH THE CITY SEWER USE ORDINANCE AND THESE REGULATIONS UNLESS OTHERWISE APPROVED BY THE CITY PUBLIC WORKS DIRECTOR.
- ALL SANITARY SEWER CONSTRUCTION SHALL BE INSPECTED BY THE VEOLIA WATER NORTH AMERICA COLLECTIONS SYSTEM DEPARTMENT. (VEOLIA-CRANSTON WPCF).
- NO PERSON SHALL MAKE A CONNECTION OF ROOF DOWNSPOUTS, FLOOR DRAINS, SUMP PUMPS, EXTERIOR FOUNDATION DRAINS, AREA WAY DRAINS, OR OTHER SOURCES OF SURFACE RUNOFF OR GROUNDWATER TO ANY COMPONENT OF THE SANITARY SEWER SYSTEM.
- NO GRAVITY SEWER MAIN SHALL BE LESS THAN EIGHT (8) INCHES (20.3 cm) DIAMETER.
- GRAVITY SEWER PIPE SHALL BE ASTM RIGID SCHEDULE 35 PVC PIPE FOR SEWER USE CONFORMING TO ASTM SPECIFICATIONS D-3034. ALL PIPES SHALL HAVE COMPRESSION POINTS WITH AN ELASTOMERIC GASKET TYPE CONFORMING TO ASTM D-3212; OR AS APPROVED BY THE CITY PUBLIC WORKS DIRECTOR.
- MAIN GRAVITY SEWER PIPE SHALL BE INSTALLED BY USING A LASER INVERT MACHINE THAT SETS UP IN AN INVERT IN THE DOWNSTREAM MANHOLE. A TARGET WILL BE PLACED AT THE END OF EACH PIPE THAT IS INSTALLED TO ENSURE PROPER ALIGNMENT AND SLOPE.
- ALL SANITARY SEWER CONNECTIONS SHALL BE MADE GAS TIGHT.
- THE MINIMUM COVER SHALL BE FOUR (4) FEET OVER THE CROWN OF THE PIPE FOR ALL MAINS AND LATERALS EXCEPT THAT INSULATION MAY BE PROVIDED FOR SEWERS THAT CANNOT BE PLACED AT A DEPTH SUFFICIENT TO PREVENT FREEZING UPON THE APPROVAL OF THE PUBLIC WORKS DIRECTOR.
- SEWER LATERALS SHALL BE 6" PVC SCHEDULE 35 AND BE INSTALLED AT THE MINIMUM SLOPE OF AT LEAST ONE-QUARTER INCH PER FOOT. ALL PIPES SHALL HAVE COMPRESSION JOINTS.
- WHERE PRACTICAL, SEWER LATERALS SHALL BE TIED INTO A MANHOLE. A BORING MACHINE SHALL BE USED TO MAKE A HOLE THROUGH ANY MANHOLE STRUCTURE. A FLEXIBLE WATER TIGHT GASKET SHALL BE USED TO CONNECT THE STRUCTURE TO THE PIPE OR AN APPROVED WATER TIGHT FLEXIBLE SLEEVE. THE PIPE SHALL BE CEMENTED ON THE INSIDE OF THE MANHOLE TO MAKE THE INVERT CLEAN AND TRUE.
- WHERE SEWER LATERALS CONNECT TO A SEWER MAIN A WYE SHALL BE INSTALLED IN THE MAIN TO MAKE THE CONNECTION. A 6" SDR-35 ANGLE, NOT GREATER THAN 45°, IS TO BE USED TO PROVIDE THE PROPER FLOW ALIGNMENT.
- NO LATERAL MAY SERVICE MORE THAN ONE BUILDING OR PRIVATELY OWNED BUILDING UNITS.
- MINIMUM BEDDING MATERIAL REQUIREMENTS FOR SEWER PIPE INSTALLATION SHALL BE CLASS "B" AS DESCRIBED IN ASTM C-12 WITH A MINIMUM DEPTH OF SIX (6) INCHES.
- BEDDING MATERIAL SHALL BE COMPACTED EVENLY UNDER AND ON BOTH SIDES OF THE PIPE SO THAT THE PIPE REMAINS ALIGNED AND TRUE.
- BACKFILL SHALL BE INSTALLED IN LAYERS NO MORE THAN 8" THICK AFTER COMPACTION AND SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-180.
- BACKFILL MATERIAL SHALL NOT CONTAIN FROZEN MATERIAL, LARGE DIRT CLOUDS, STONES, ORGANIC MATTER, OR UNSUITABLE MATERIALS. ADDITIONAL BACKFILL DETAILS, FOR CITY STANDARDS CR-10-S-1, WHICH ARE AVAILABLE IN THE DIVISION OF ENGINEERING.
- MANHOLES SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, ASTM C-478, LATEST EDITION; OR AS APPROVED BY THE DIRECTOR, AND SHALL HAVE O-RINGS OR BITUMINOUS BASED GASKETED JOINTS. A TWELVE-INCH (12") BEDDING OF COMPACTED 3/4-INCH CRUSHED STONE SHALL BE PLACED UNDERNEATH ALL MANHOLE STRUCTURES. THE MINIMUM INTERNAL DIAMETER SHALL BE FORTY-EIGHT (48") INCHES. ALL MANHOLE JOINTS AND PINHOLES SHALL BE PARGED FROM THE OUTSIDE AND INSIDE TO PREVENT INFILTRATION. FOLLOWING WHICH, A BITUMINOUS COATING SHALL BE INSTALLED ON THE ENTIRE EXTERIOR. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED, FLEXIBLE WATER TIGHT CONNECTION OR WITH ANOTHER WATER TIGHT CONNECTION ARRANGEMENT THAT ALLOWS FOR DIFFERENTIAL SETTLEMENT OF THE PIPE AND THE MANHOLE. ALL INVERTS AND TABLES SHALL BE CONSTRUCTED WITH SMOOTH RED SEWER BRICKS. AT LEAST ONE ROW OF RED SEWER BRICKS SHALL BE INSTALLED BETWEEN THE MANHOLE STRUCTURE AND THE SEWER COVERS FRAME, BUT NOT TO EXCEED A (MAX. OF 12" HIGH); THE BRICKS SHALL BE WELL CEMENTED BUT NO CEMENT IS ALLOWED ON THE FACE OF THE BRICKS.

- AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS APPROVED BY THE CITY PUBLIC WORKS DIRECTOR.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

SEWER MAIN ORDER OF PROCEDURE:

- THE OWNER OR THE DEVELOPER SHALL SUBMIT TO THE CITY OF CRANSTON'S DIRECTOR OF PUBLIC WORKS THE NAME OF THE QUALIFIED SEWER CONTRACTOR THAT WILL BE RESPONSIBLE FOR THE INSTALLATION OF THE SANITARY SEWER SYSTEM, TOGETHER WITH A BREAKDOWN OF ITEMS, QUANTITIES AND UNIT PRICES FOR THE PROJECT.
- NO WORK CAN COMMENCE ON ANY SEWER INSTALLATION WITHOUT THE DIRECTOR'S APPROVAL OF THE PLANS AND CONTRACTOR.
- THE CONTRACTOR THAT WAS APPROVED SHALL NOTIFY VEOLIA WATER OF NORTH AMERICA COLLECTIONS SYSTEM DEPARTMENT AND THE DIRECTOR OF PUBLIC WORKS FIVE (5) WORKING DAYS PRIOR TO COMMENCING ANY SEWER RELATED EXCAVATION. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION: COMPANY NAME, PHONE NUMBER AND ADDRESS OF BOTH THE DEVELOPER AND CONTRACTOR ALONG WITH THE NAME AND PHONE NUMBER OF THE SEWER CONTRACTOR'S FOREMAN.
- VEOLIA WATER SHALL INSPECT THE NEW PLAT CONSTRUCTION CONSISTING OF EXCAVATION, LYING OF SEWER MAINS AND STREET LATERALS, INSTALLATION OF MANHOLES, AND BACKFILLING TO THE ELEVATION OF THE EXISTING GROUND, CAMERA INSPECTION, AND PRESSURE TESTING; AND SHALL PERFORM THE FLOW TEST. THE CONTRACTOR AT HIS CHOICE AND EXPENSE HAS THE OPTION OF USING A PRIVATE CONTRACTOR OR HIRING VEOLIA WATER TO CAMERA AND VIDEO TAP THE SEWER SYSTEM. IF THE CONTRACTOR CHOOSES TO USE A PRIVATE CAMERA CONTRACTOR TO VIDEO TAP THE SEWER SYSTEM AN INSPECTOR FROM VEOLIA WATER SHALL BE PRESENT FOR THE VIDEO TAPING.
- AFTER THE SEWER SYSTEM HAS BEEN INSTALLED THE CONTRACTOR SHALL HAVE THE ENTIRE MANHOLES VACUUM TESTED: TEN (10) INCHES OF VACUUM FOR SIXTY (60) SECONDS, THEN THE GRAVITY SEWER PIPES SHALL BE TESTED FOR: FIVE (5) LBS OF PRESSURE FOR

- TEN (10) MINUTES. VEOLIA'S INSPECTOR SHALL BE PRESENT FOR ALL TESTING OF MANHOLES AND PIPES.
- AFTER THE TESTING OF THE MANHOLES AND PIPES THE CONTRACTOR SHALL HAVE THE ENTIRE SEWER SYSTEM FLUSHED AND CLEANED.
- NEXT THE SYSTEM SHALL BE CAMERA INSPECTED AND VIDEO TAPED.
- VEOLIA WATER SHALL REVIEW THE VIDEOTAPES AND WRITE A PUNCH LIST OF ALL OR ANY ITEMS THAT REQUIRE ATTENTION.
- AS A CONDITION OF THE FINAL ACCEPTANCE OF THE SANITARY SEWER SYSTEM, THE CONTRACTOR SHALL FORMALLY REQUEST, THROUGH THE CITY ENGINEERING DIVISION, A FINAL INSPECTION BY VEOLIA.
- BEFORE FINAL APPROVAL OF THE SEWER SYSTEM CAN BE GRANTED AND CERTIFICATES OF OCCUPANCY ARE ISSUED, THE CONTRACTOR SHALL SUBMIT TO VEOLIA TWO (2) SETS OF SEWER AS-BUILT PLANS WITH GS COORDINATES FOR EACH MANHOLE. THE AS-BUILTS SHALL BE OF "COPY-TUFF" MEDIA AND IN COMPUTER .dxf OR AUTOCAD R14 OR AUTOCAD LT 2002 VERSION FILE FORMAT AND MEET THE FOLLOWING CRITERIA:
 - ALL RECORD PLANS ARE REQUIRED TO BE THE UNIFORM SIZE OF 20" x 40".
 - SCALE FOR THE PLANS: HORIZONTAL 1" = 40' AND VERTICAL 1" = 10'.
 - STATION FIGURES ARE TO BE SHOWN ON ALL MANHOLES.
 - DISTANCES OF LATERALS ARE TO BE SHOWN WITH DEPTHS OF THE END OF THE PIPE AT THE STREET LINE.
 - TIES TO THE "Y", MANHOLES, AND ENDS OF LATERALS ARE TO BE SHOWN FROM PERMANENT STRUCTURES.
 - LEDGE AND SELECT MATERIALS ARE TO BE SHOWN ON THE PROFILE.
 - SLOPE, SIZE, LENGTH, AND TYPE OF PIPE ARE TO BE SHOWN ON THE PROFILE. ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO BE SHOWN ON THE PROFILE.
 - ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO BE SHOWN ON THE PROFILE.
 - SEWER RECORD AND STORM DRAIN PLANS ARE TO BE DRAWN SEPARATELY.
 - THE RECORD PLAN SHALL BE DRAWN SO THAT THE NORTH DESIGNATION IS POINTING IN THE UPPER QUADRANT. AN ID TABLE NEEDS TO BE PROVIDED ON THE PLANS.
 - THE X AND Y COORDINATES SHALL BE THE NAD 83 RI STATE PLANE FEET COORDINATES.
 - ELEVATIONS SHALL BE BASED ON THE CITY OF CRANSTON'S MEAN HIGH WATER (MHW) DATA FOR THE VERTICAL COORDINATES.
- FINAL APPROVAL AND ISSUANCE OF THE CERTIFICATES OF OCCUPANCY ARE CONTINGENT UPON THE OWNER/DEVELOPER'S SUBMISSION OF AN ACCEPTABLE, PERPETUAL OPERATION AND MAINTENANCE PLAN TO THE CITY AND VEOLIA FOR THE PRIVATE SEWAGE SYSTEM.



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 06/08/2023

BRIARWOOD ESTATES
 A 14-LOT MAJOR SUBDIVISION
 CRANSTON, RHODE ISLAND
 AP 18/3, LOTS 1023 & 1026

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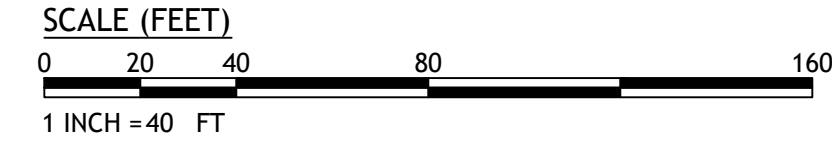
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UTILITY PLAN

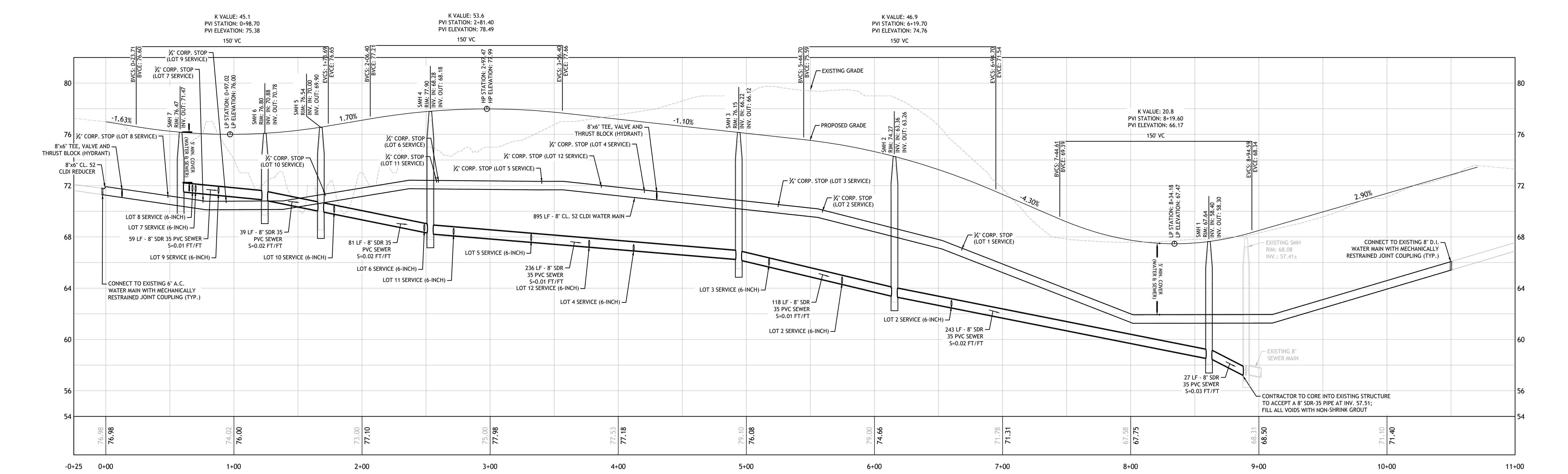
SHEET 7 OF 17



02/21/21 Rudy Proccaccianti\MCAD\New London Ave [PERMIT SET - PRELIMINARY].dwg, Jun. 13, 2023, 11:21:21pm



GRADING AND UTILITY LAYOUT PLAN
SCALE: 1" = 40'



ROADWAY AND UTILITY PROFILE (STA 0+00 TO 11+00)
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

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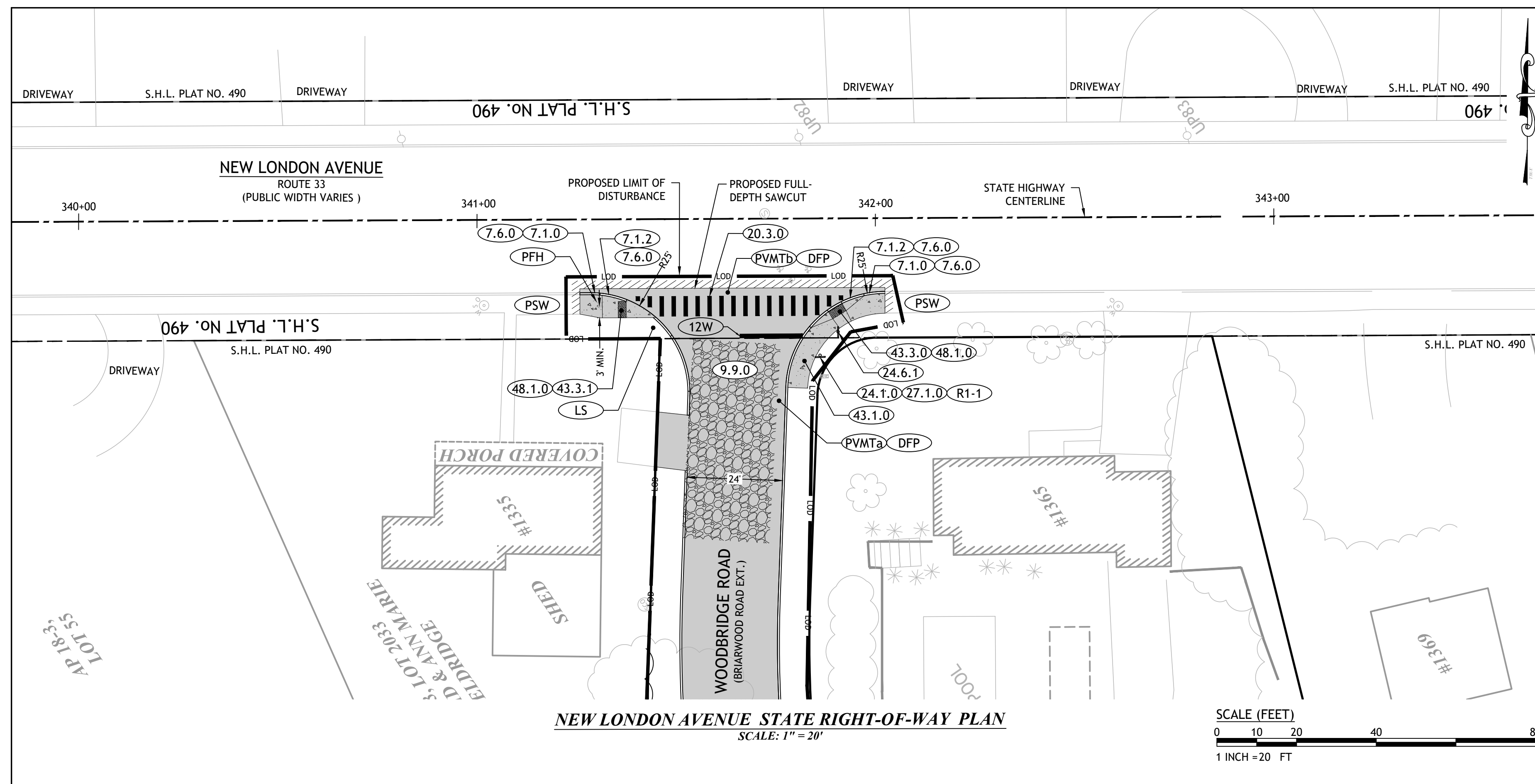
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ROADWAY AND UTILITY PROFILE

SHEET 8 OF 17

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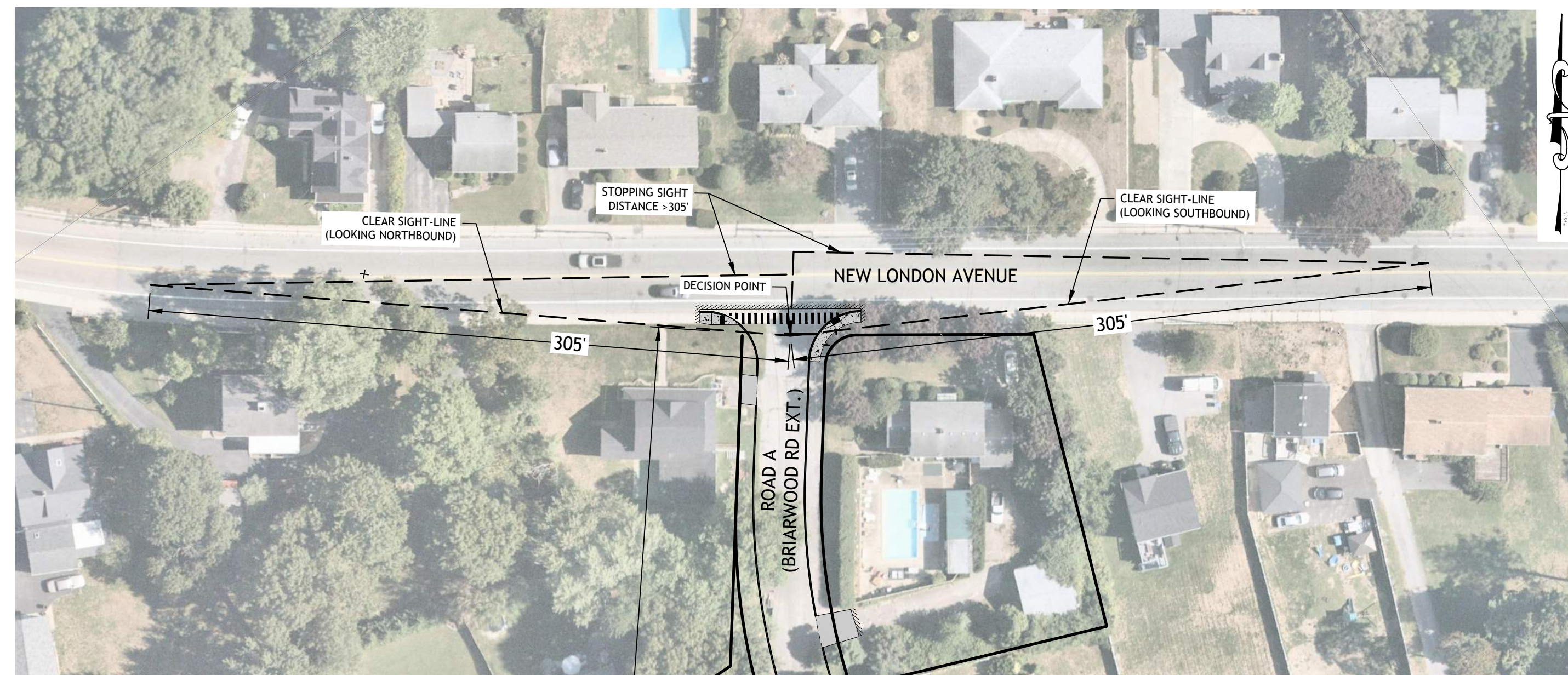
RHODE ISLAND STANDARDS

- (DFP) REMOVE AND DISPOSE FLEXIBLE PAVEMENT
- (LS) LOAM AND SEED
- (PFH) PROTECT FIRE HYDRANT
- (PSW) PROTECT SIDEWALK
- (R1-1) STOP SIGN
- (12W) 12" EPOXY RESIN PAVEMENT MARKINGS - WHITE
- (7.1.0) PRECAST CONCRETE CURB
- (7.1.2) 6'-0" PRECAST CONCRETE TRANSITION CURB
- (7.6.0) CURB SETTING DETAIL
- (9.9.0) CONSTRUCTION ACCESS
- (20.3.0) PAVEMENT MARKINGS - CROSSWALKS AND STOP LINES
- (24.1.0) SIGN POST INSTALLATION SQUARE POST
- (24.6.1) STREET SIGN
- (27.1.0) REGULATORY SIGN
- (43.1.0) CEMENT CONCRETE SIDEWALK
- (43.3.0) WHEELCHAIR RAMP
- (43.3.1) WHEELCHAIR RAMP FOR LIMITED ROW AREAS
- (48.1.0) DETECTABLE WARNING PANEL PLACEMENT

- (PVTM A) PROPOSED ROADWAY STRUCTURE (PER CITY STANDARDS):
 - 1.5" CLASS 9.5 HOT MIX ASPHALT (HMA)
 - 2.5" CLASS 12.5 HMA
 - 8" GRAVEL BORROW SUBBASE COURSE (RIDOT M.01.09 TYPE I) PLACED AND COMPACTED IN 8-INCH THICK (MAX.) LOOSE LIFTS
 - NOTE: REFER TO THE ROW SAWCUT AND MATCH DETAIL BELOW
- (PVTM B) EXISTING STATE ROADWAY PAVEMENT STRUCTURE PER CONTRACT NO. 20040CH-013:
 - 1.5" BITUMINOUS CONCRETE SURFACE COURSE, MODIFIED CLASS 12.5 HMA
 - 8" REINFORCED CONCRETE BASE (CLASS XX)
 - NOTE: REFER TO THE ROW SAWCUT AND MATCH DETAIL BELOW

NOTES:

- ALL WORK TO BE DONE WITHIN THE STATE RIGHT-OF-WAY (ROW) SHALL CONFORM TO RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2022 EDITION. STANDARD DETAILS FOR THIS WORK ARE RIDOT STANDARD DETAILS 1998 EDITION WITH ALL REVISIONS.
- UTILITY WORK SHOWN FOR REFERENCE ONLY. ALL UTILITY WORK REQUIRES A PHYSICAL UTILITY PERMIT (PUP) WITH RIDOT'S DIVISION OF MAINTENANCE. APPROVAL OF THIS PAPA PLAN DOES NOT CONSTITUTE APPROVAL OF ANY UTILITY WORK, SHOWN OR UN-SHOWN, WITHIN THE STATE ROW.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- CONTRACTOR TO PROVIDE TEMPORARY EROSION CONTROLS TO PROTECT THE STATE ROW DURING THE DEMOLITION OF EXISTING DRIVEWAY AND CONSTRUCTION OF NEW DRIVEWAY.



POSTED SPEED LIMIT ON NEW LONDON AVENUE (ROUTE 33): 30 MPH
OBSERVED SPEEDS ON NEW LONDON AVENUE (ROUTE 33): 40 MPH

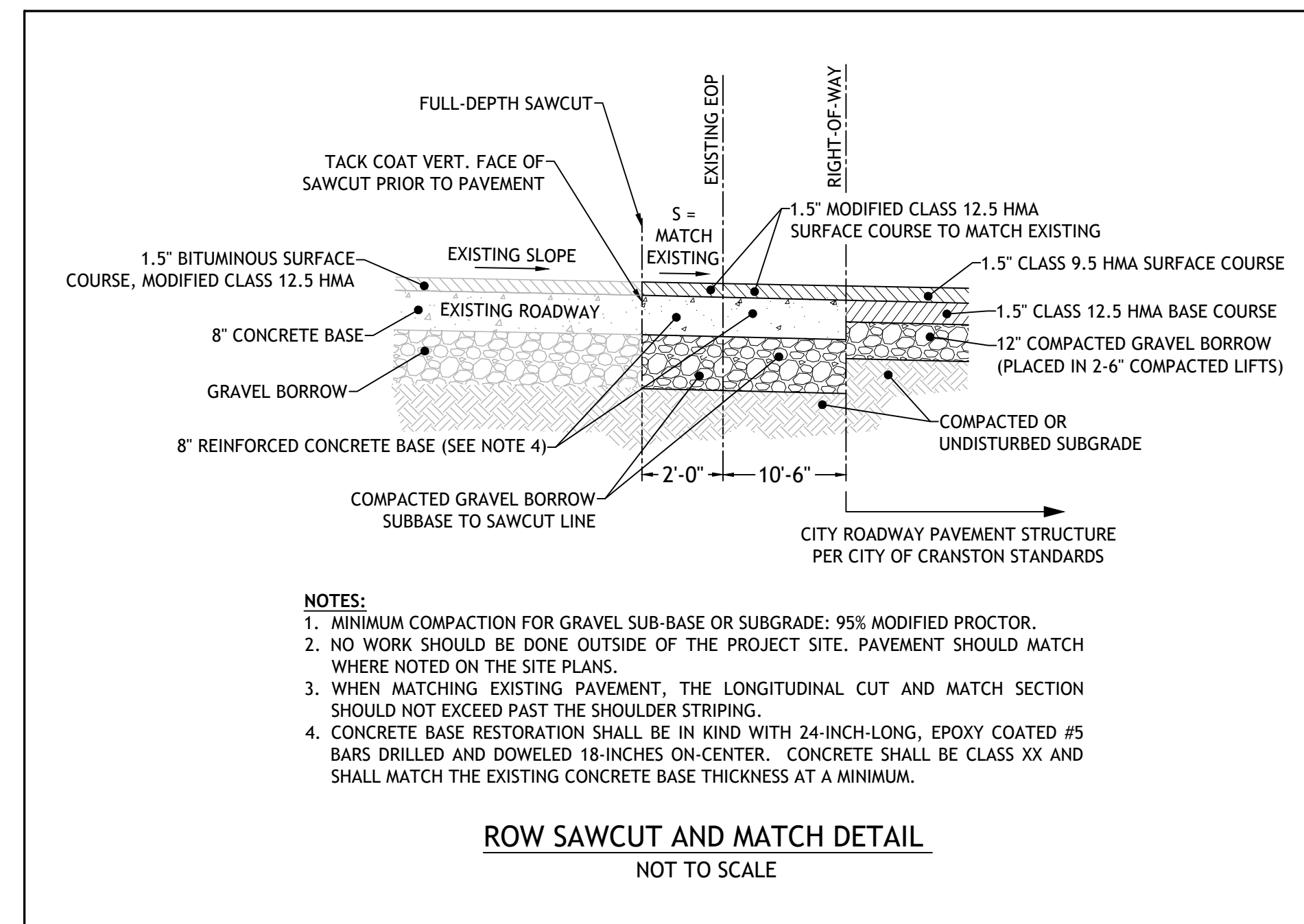
AASHTO STOPPING SIGHT DISTANCE (SSD) REQUIREMENTS:

SPEED	DISTANCE	
25	155 FT.	
30	200 FT.	← POSTED
35	250 FT.	
40	305 FT.	← OBSERVED
50	425 FT.	

THE SITE MEETS REQUIREMENTS FOR THE POSTED SPEED LIMIT ON NEW LONDON AVENUE. THE AVAILABLE SIGHT DISTANCES AT THE PROPOSED ROADWAY LOCATION ON NEW LONDON AVENUE ARE IN EXCESS OF 305 FEET TO THE NORTH AND SOUTH. THESE VALUES ARE GREATER THAN AASHTO'S RECOMMENDED MINIMUM SIGHT DISTANCE OF 200 FEET BASED ON THE POSTED SPEED LIMIT OF 30 MPH AND THE 305 FEET BASED ON THE OBSERVED SPEED OF 40 MPH RECORDED ALONG ROUTE 33.

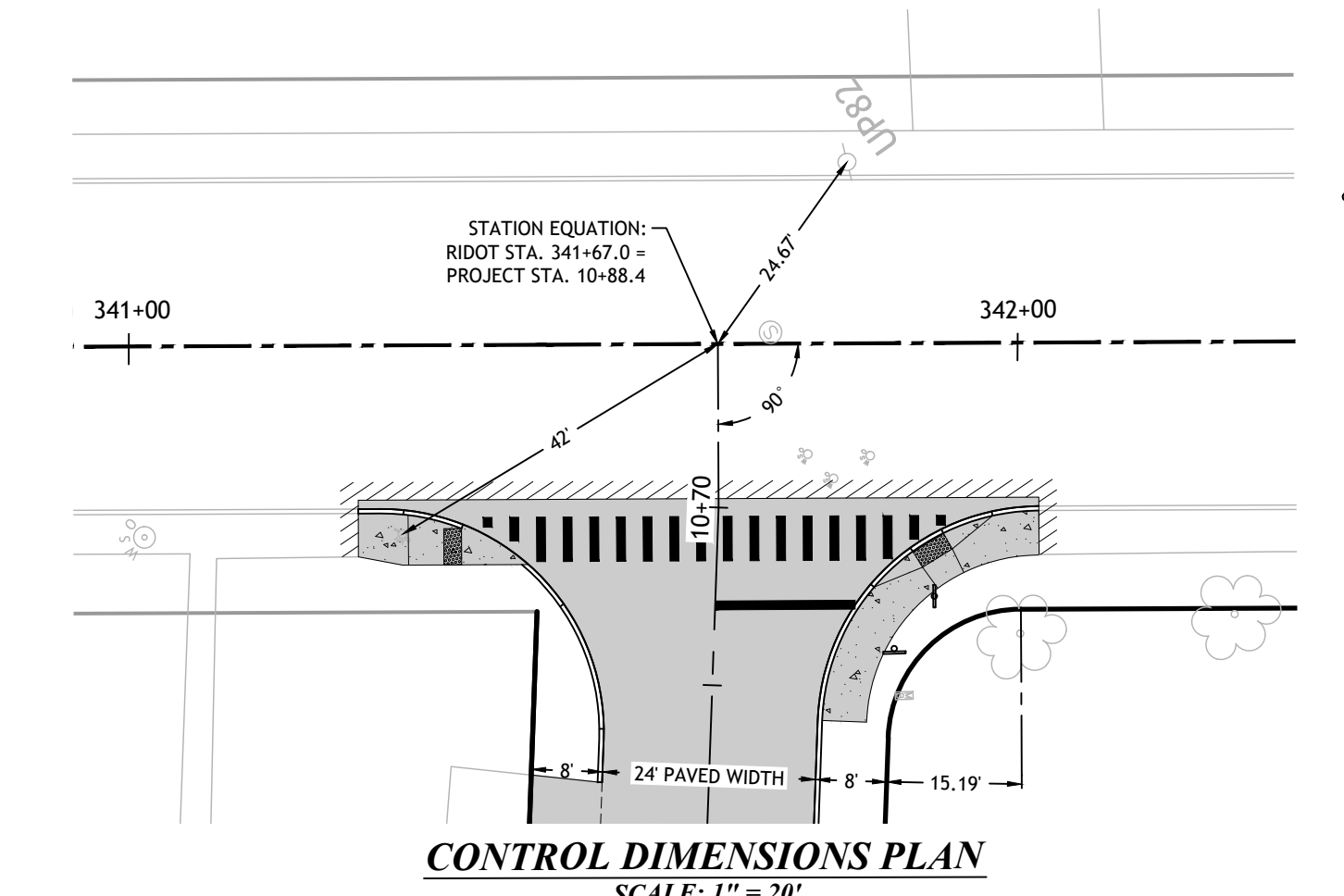


LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL DIGSAFE AT: 1-888-DIG-SAFE 1-888-344-7233

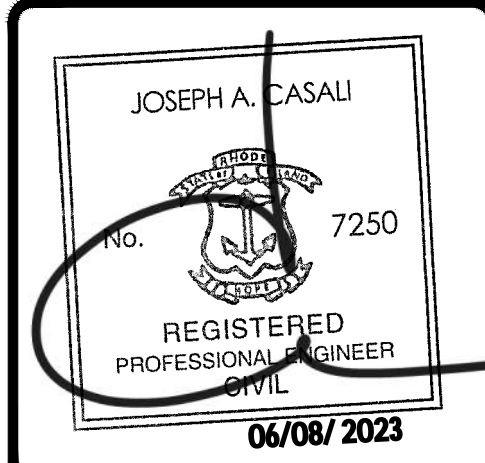
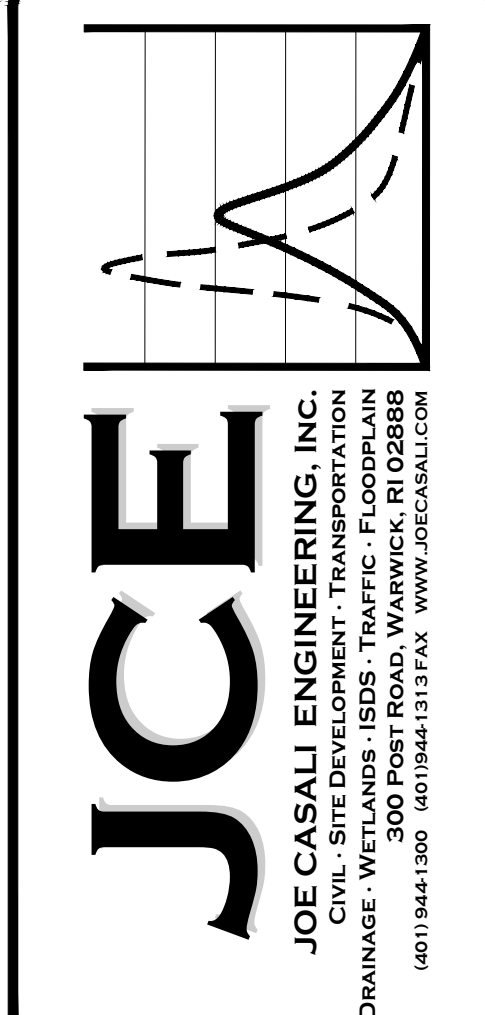


- NOTES:**
- MINIMUM COMPACTION FOR GRAVEL SUB-BASE OR SUBGRADE: 95% MODIFIED PROCTOR.
 - NO WORK SHOULD BE DONE OUTSIDE OF THE PROJECT SITE. PAVEMENT SHOULD MATCH WHERE NOTED ON THE SITE PLANS.
 - WHEN MATCHING EXISTING PAVEMENT, THE LONGITUDINAL CUT AND MATCH SECTION SHOULD NOT EXCEED PAST THE SHOULDER STRIPING.
 - CONCRETE BASE RESTORATION SHALL BE IN KIND WITH 24-INCH-LONG, EPOXY COATED #5 BARS DRILLED AND DOWELED 18-INCHES ON-CENTER. CONCRETE SHALL BE CLASS XX AND SHALL MATCH THE EXISTING CONCRETE BASE THICKNESS AT A MINIMUM.

ROW SAWCUT AND MATCH DETAIL
NOT TO SCALE



CONTROL DIMENSIONS PLAN
SCALE: 1" = 20'



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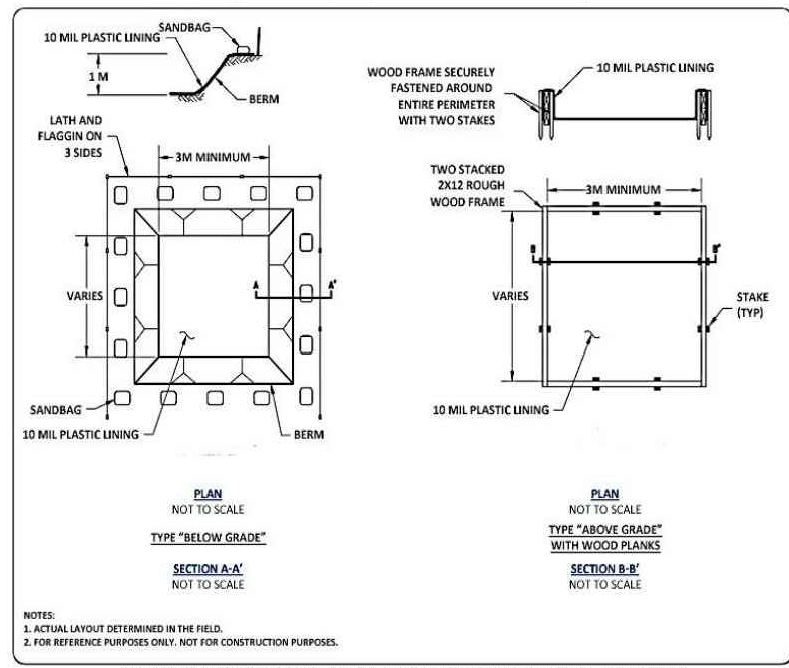
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PROJECT NO: 21-71

PRELIMINARY, NOT FOR CONSTRUCTION

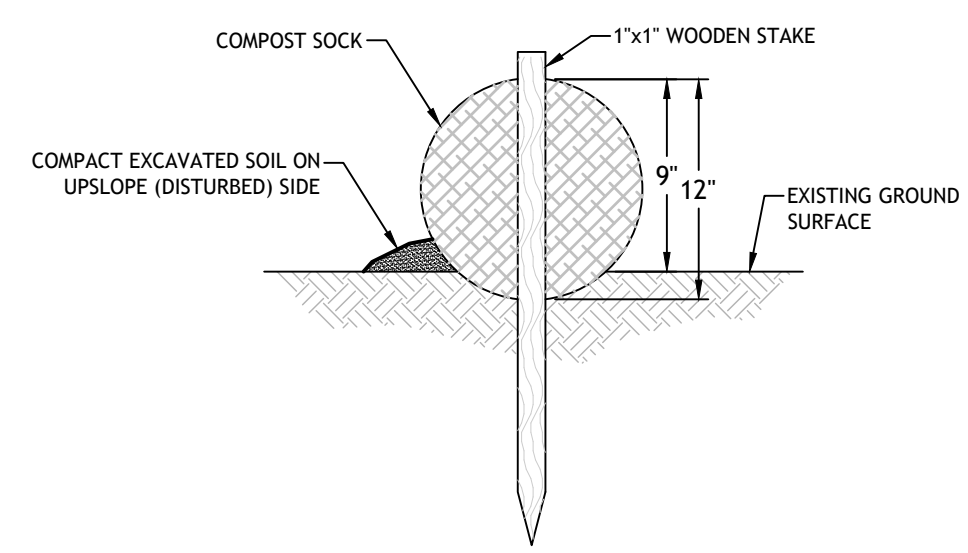
RIDOT PAP PLAN

SHEET 9 OF 17

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1 2002. CONCRETE WASHOUT FACILITY
NOT TO SCALE

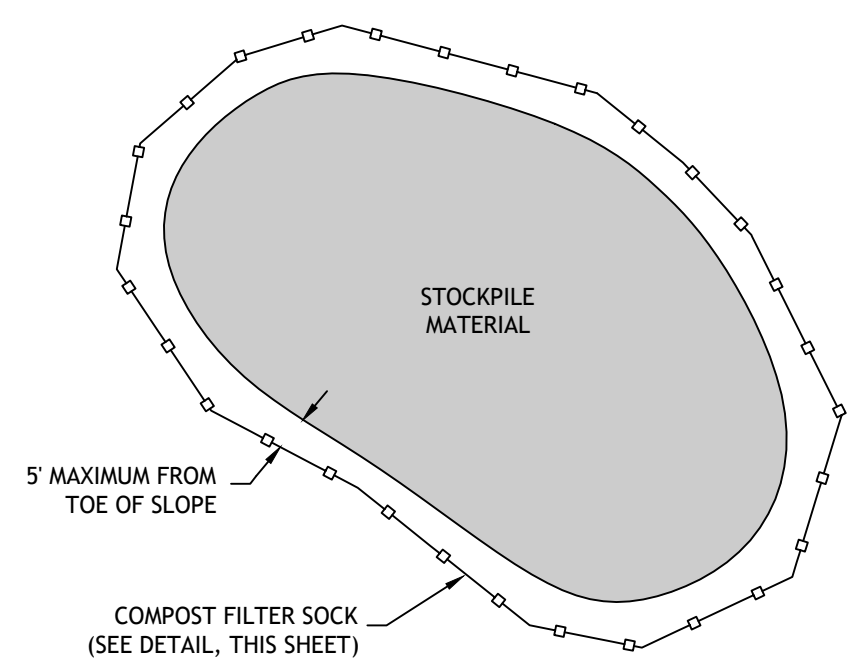


Slope %	Maximum slope length above compost filter sock in ft. (m)			
	8-inch (200-mm)	12-inch (300-mm)	18-inch (450-mm)	24-inch (600-mm)
2 (or less)	300 (90)	375 (110)	500 (150)	650 (200)
5	200 (60)	250 (75)	275 (85)	325 (100)
10	100 (30)	125 (35)	150 (45)	200 (60)
15	70 (20)	85 (25)	100 (30)	160 (50)
20	50 (15)	65 (20)	70 (20)	130 (40)
25	40 (12)	50 (15)	55 (16)	100 (30)
30	30 (9)	40 (12)	45 (13)	65 (20)
35	30 (9)	40 (12)	45 (13)	55 (18)
40	30 (9)	40 (12)	45 (13)	50 (15)
45	20 (6)	25 (8)	30 (9)	40 (12)
50	20 (6)	25 (8)	30 (9)	35 (10)

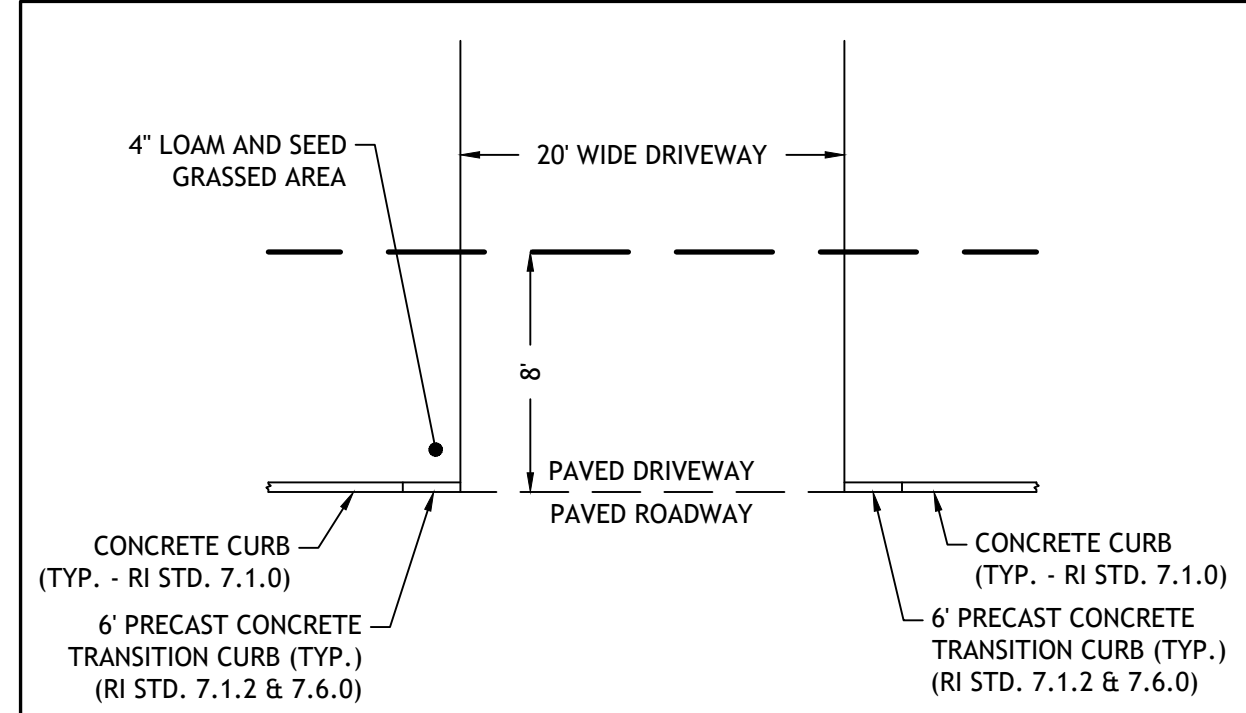
FIGURE 2: RECOMMENDED SPACING AND DIAMETER REQUIREMENTS FOR COMPOST FILTER SOCKS

- NOTES:**
- BEGIN SOCK INSTALLATION BY EXCAVATING A 2 TO 3-INCH-DEEP BY 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE OR ALONG THE EXISTING GROUND SURFACE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE OR ON THE DISTURBED SIDE OF THE ANCHOR TRENCH.
 - PLACE SOCK IN THE TRENCH SUCH THAT IT CONTOURS TO THE EXISTING SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE SOCK ON THE UP-SLOPE OR DISTURBED SIDE. ADJACENT SOCKS SHOULD TIGHTLY ABUT.
 - SECURE SOCK WITH 18 TO 24-INCH-LONG STAKES. INSTALL AN ADDITIONAL STAKE AT EACH END OF THE SOCK. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE SOCK LEAVING AT LEAST 2 TO 3 INCHES OF STAKE EXTENDING ABOVE. THE STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE OR GROUND SURFACE.
 - COMPOST FILTER SOCK SPACING BASED ON 12-INCH DIAMETER SOCK; SHOULD SMALLER OR LARGER DIAMETER SOCK BE USED, SPACING SHALL BE ADJUSTED BASED ON TABLE 2 (TO THE RIGHT).
 - COMPOST FILTER SOCK INSTALLATION AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE RI SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, 2014.
 - COMPOST FILTER SOCKS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.

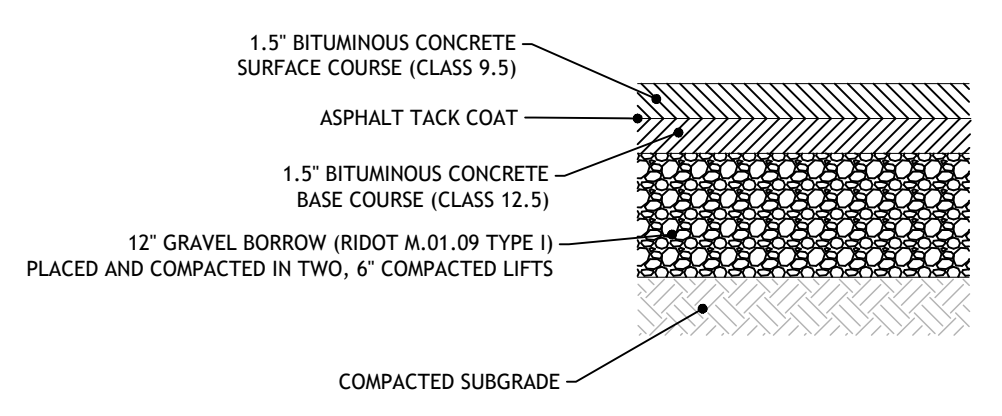
2 COMPOST FILTER SOCK
NOT TO SCALE



4 STOCKPILE DETAIL
NOT TO SCALE

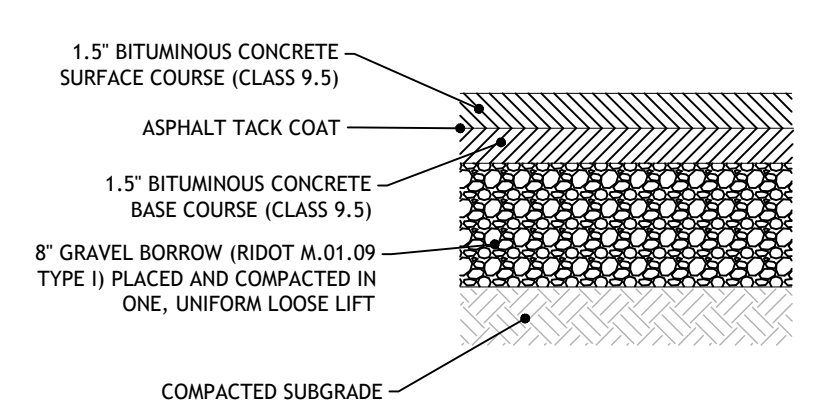


5 TYPICAL DRIVEWAY DETAIL
NOT TO SCALE



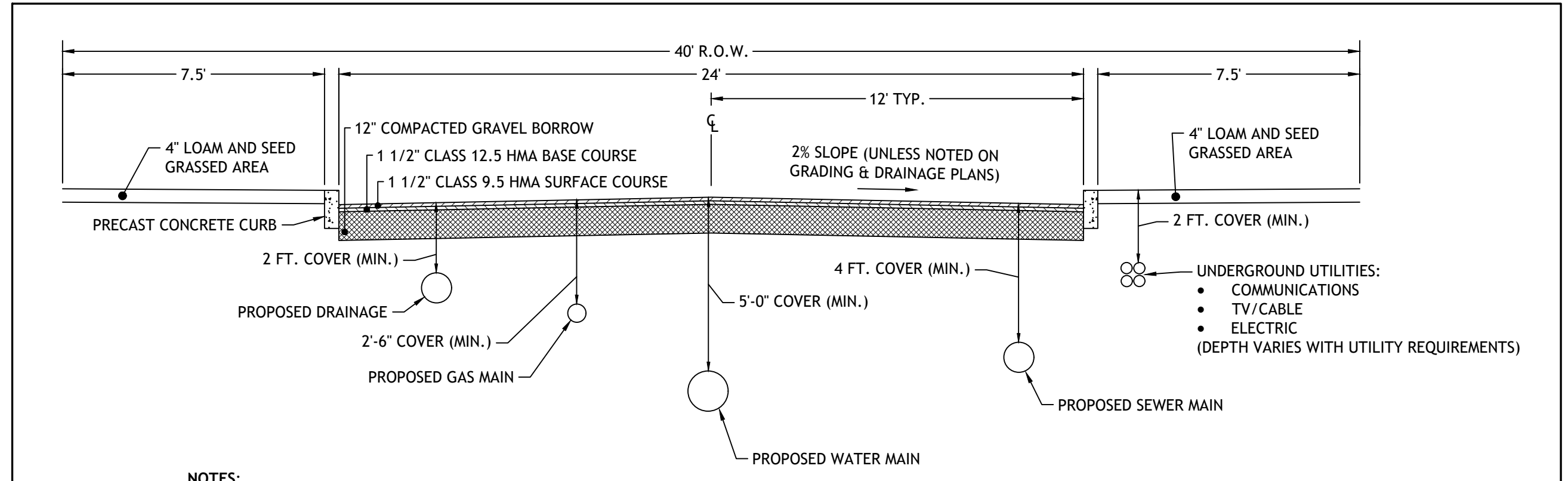
- NOTES:**
- IF UNSUITABLE MATERIALS ARE ENCOUNTERED AT SUBGRADE ELEVATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE DEPTH OF UNSUITABLE MATERIAL TO BE REMOVED WILL BE DETERMINED IN THE FIELD. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE THE UNSUITABLE MATERIALS AND REPLACE WITH SUITABLE MATERIAL APPROVED BY THE ENGINEER.
 - MINIMUM COMPACTION FOR GRAVEL BORROW SUB-BASE AND SUBGRADE: 95% MODIFIED PROCTOR.

6 BITUMINOUS CONCRETE PAVEMENT ROADWAY
NOT TO SCALE



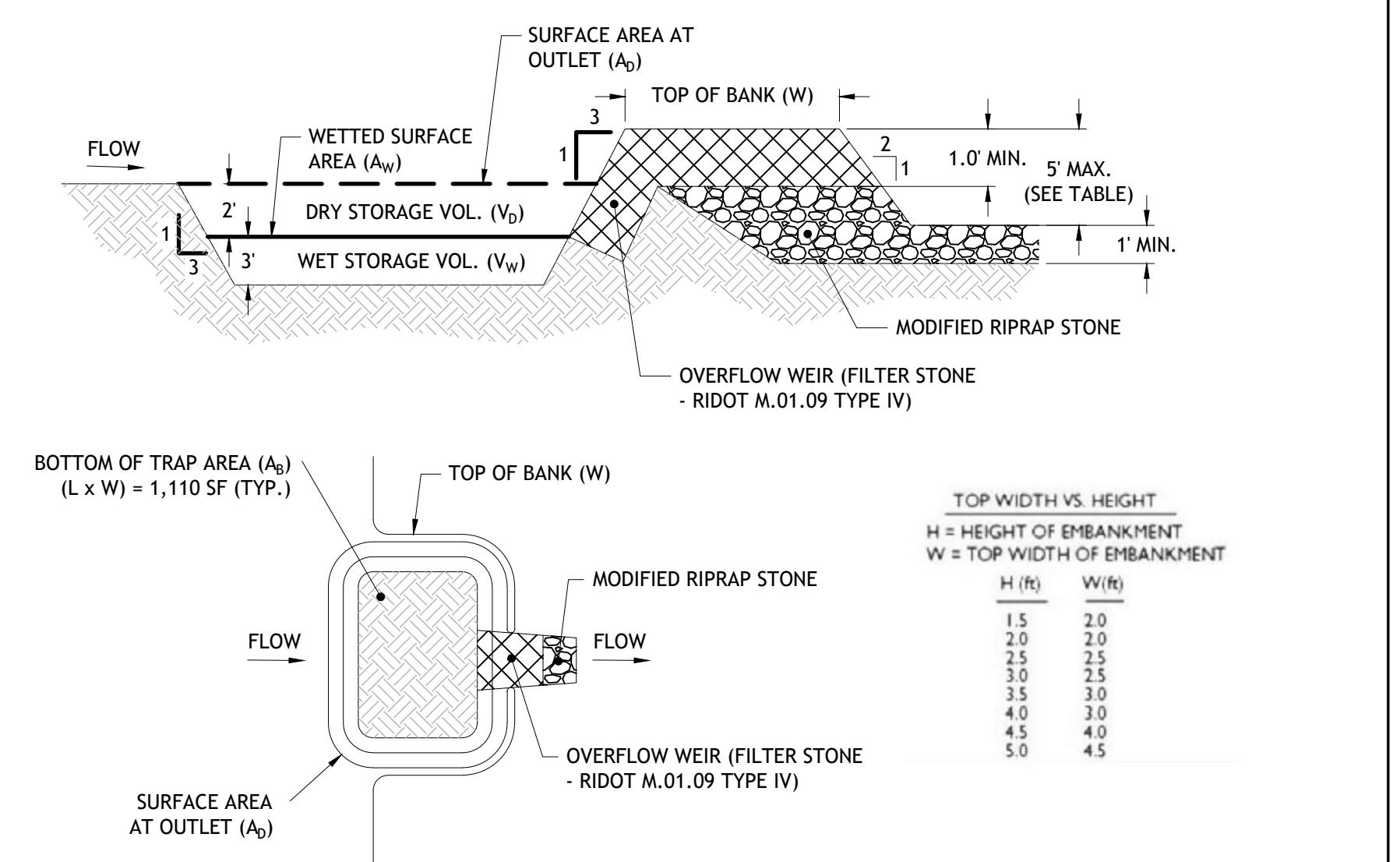
- NOTES:**
- IF UNSUITABLE MATERIALS ARE ENCOUNTERED AT SUBGRADE ELEVATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE DEPTH OF UNSUITABLE MATERIAL TO BE REMOVED WILL BE DETERMINED IN THE FIELD. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE THE UNSUITABLE MATERIALS AND REPLACE WITH SUITABLE MATERIAL APPROVED BY THE ENGINEER.
 - MINIMUM COMPACTION FOR GRAVEL BORROW SUB-BASE AND SUBGRADE: 95% MODIFIED PROCTOR.

7 BITUMINOUS CONCRETE PAVEMENT DRIVEWAY
NOT TO SCALE



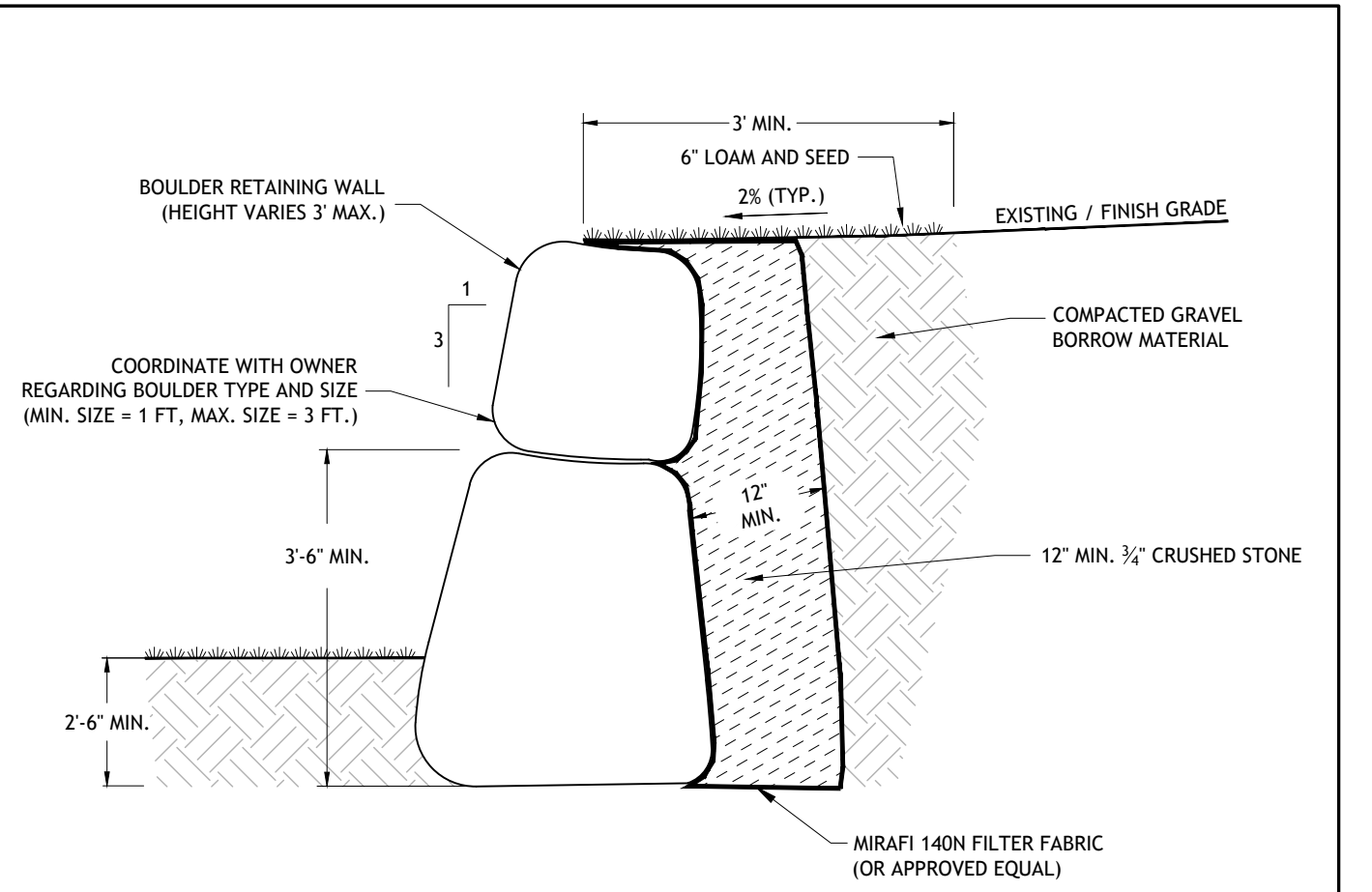
- NOTES:**
- WAIVER REQUESTED FROM THE PLAN COMMISSION FOR LESS THAN THE REQUIRED RIGHT-OF-WAY WIDTH AND NO SIDEWALKS.
 - REFER TO UTILITY PLAN FOR PIPE SIZE AND MATERIAL. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. REFER TO UTILITY PLANS FOR EXACT LOCATION.

8 TYPICAL ROADWAY CROSS SECTION
NOT TO SCALE

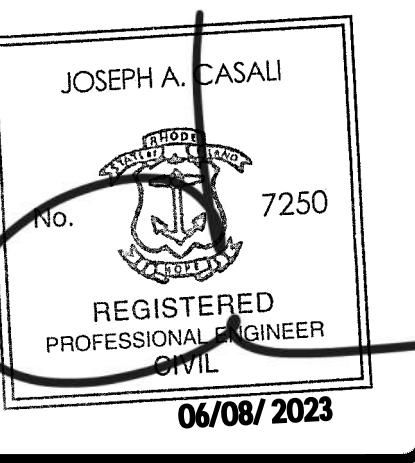
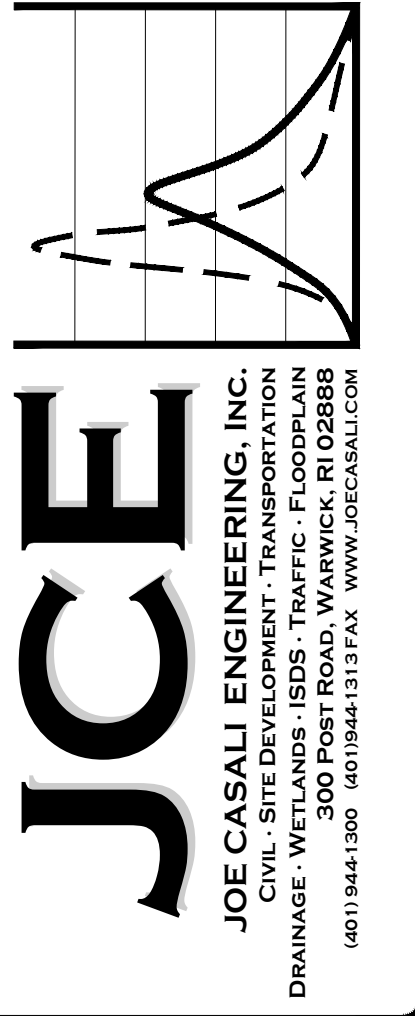


- NOTES:**
- PHASING IS ANTICIPATED TO BE UTILIZED FOR THIS PROJECT IN ORDER TO COMPLETE DISTURBANCE ACTIVITIES WITHIN A SIX (6) MONTH WINDOW. A DETAILED PHASING PLAN WILL BE DEVELOPED UPON ENGAGEMENT OF A SITE CONTRACTOR AND SUBMITTED TO THE DESIGN ENGINEERING AND THE TOWN OF COVENTRY FOR REVIEW AND APPROVAL.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD FIT AND DETERMINE ACTUAL SEDIMENT TRAP SIZES, LOCATIONS, DIVERSION BERM LOCATIONS, SWALES, SILT FENCE LOCATIONS AND ANY OTHER APPROPRIATE SEDIMENT CONTROL MEASURES. ALL SOIL EROSION MEASURES SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (2016).
 - PROPOSED SEDIMENT TRAP SHOWN SHALL BE DESIGNED TO ACCOMMODATE DRAINAGE FROM CONTRIBUTING AREAS OF 1 TO 5 ACRES.
 - EACH TEMPORARY SEDIMENT TRAP SHALL BE PROVIDED A SEDIMENT STORAGE STAKE AND MARKER, IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (2016).

3 TEMPORARY SEDIMENT TRAP DETAIL
NOT TO SCALE



9 BOULDER RETAINING WALL
NOT TO SCALE



BRIARWOOD ESTATES
A 14-LOT MAJOR SUBDIVISION
CRANSTON, RHODE ISLAND
AP 18/3, LOTS 1023 & 1026

REVISIONS:

NO.	DATE	DESCRIPTION
R1	4/19/2022	REMOVED LOT 1006
R2	5/24/2022	REDUCED ROW
R3	4/6/2023	RIDEM RTC
R4	4/26/2023	RIDOT RTC
R5	5/15/2023	KCWA RTC
R6	6/8/2023	RIDOT/SEWER RTC

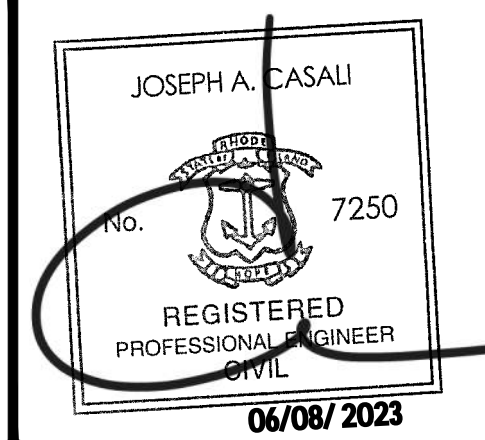
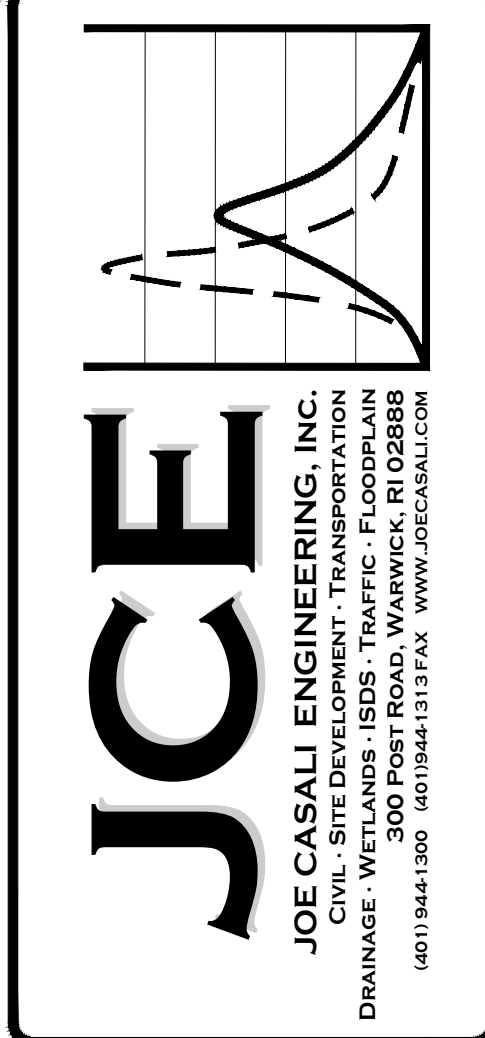
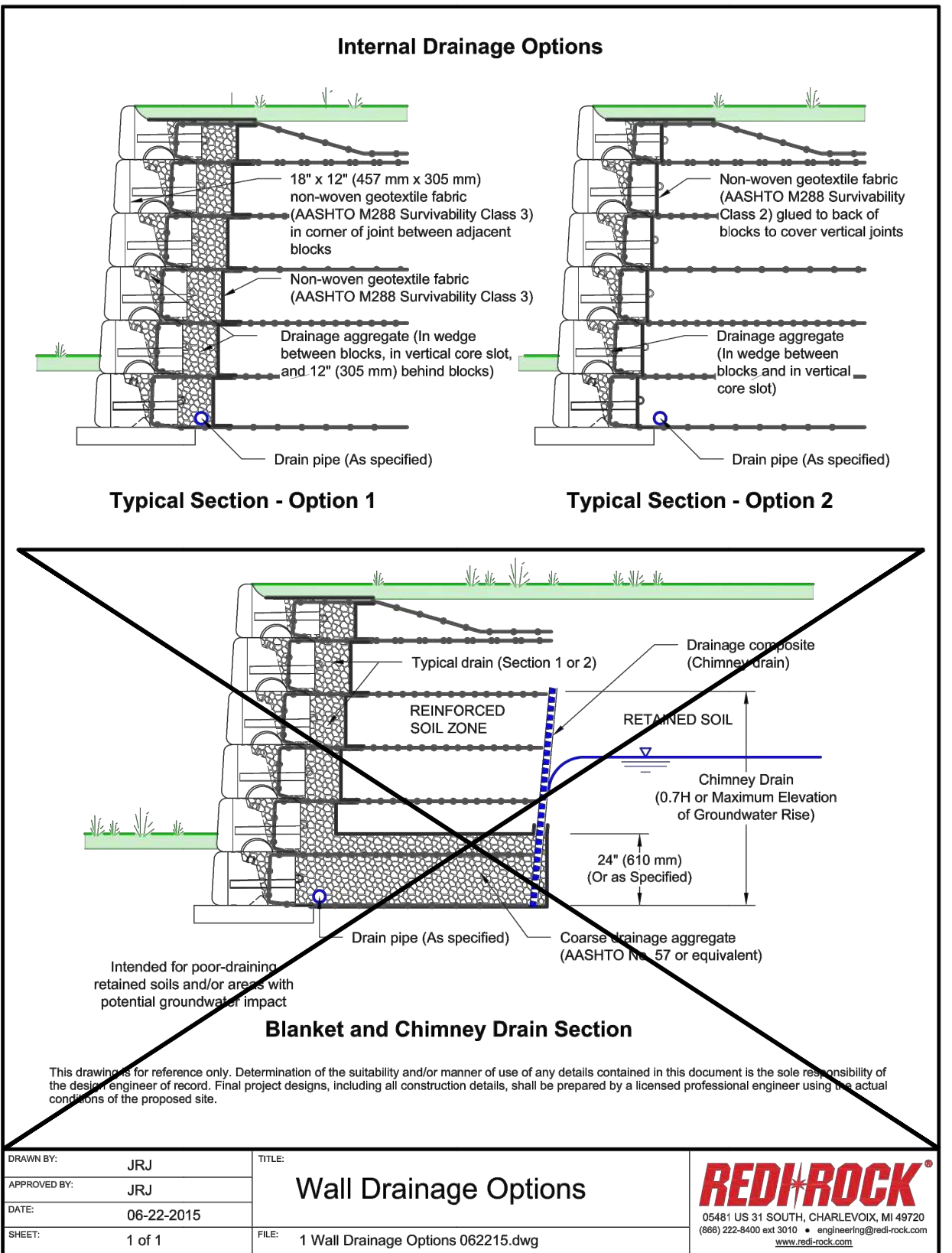
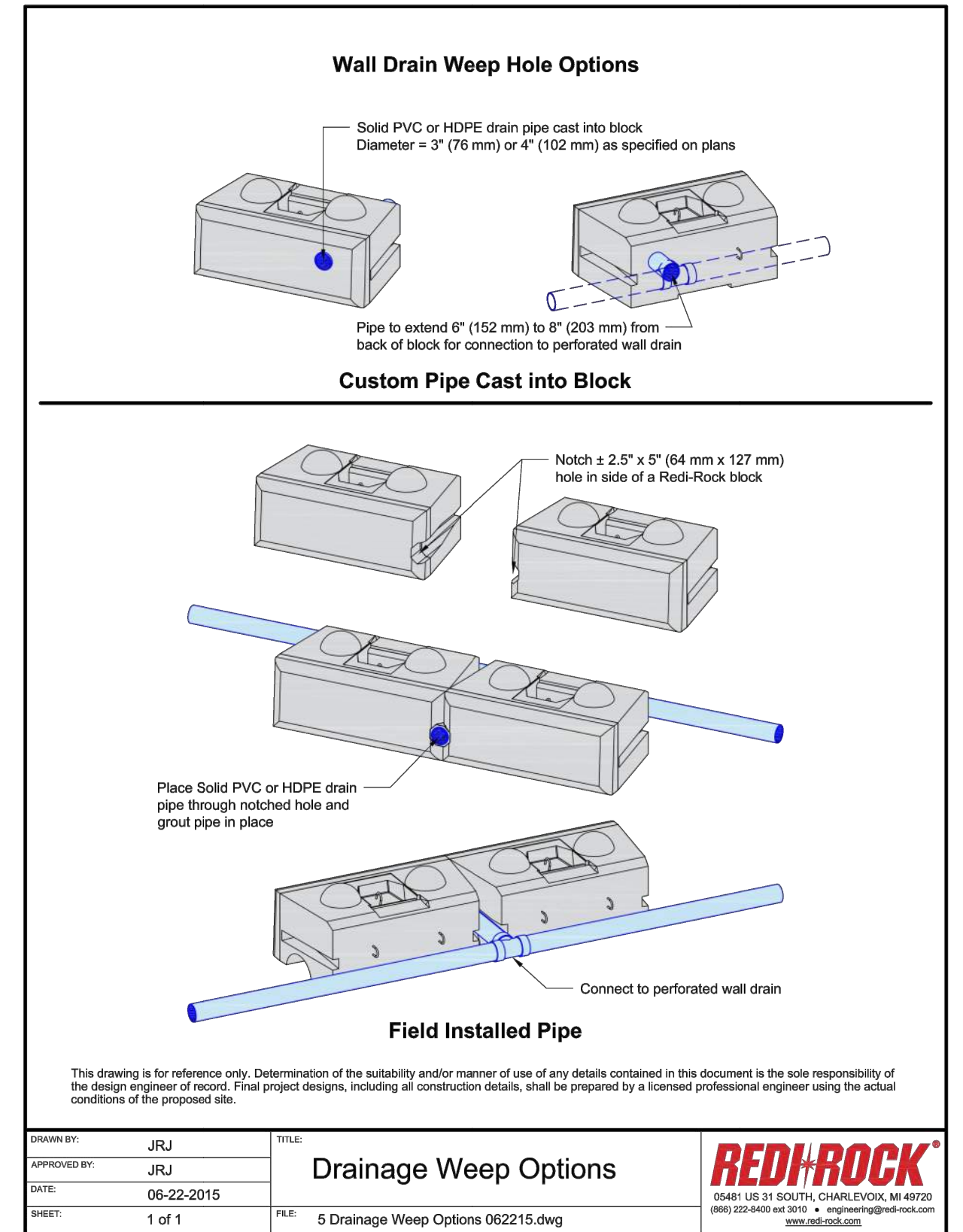
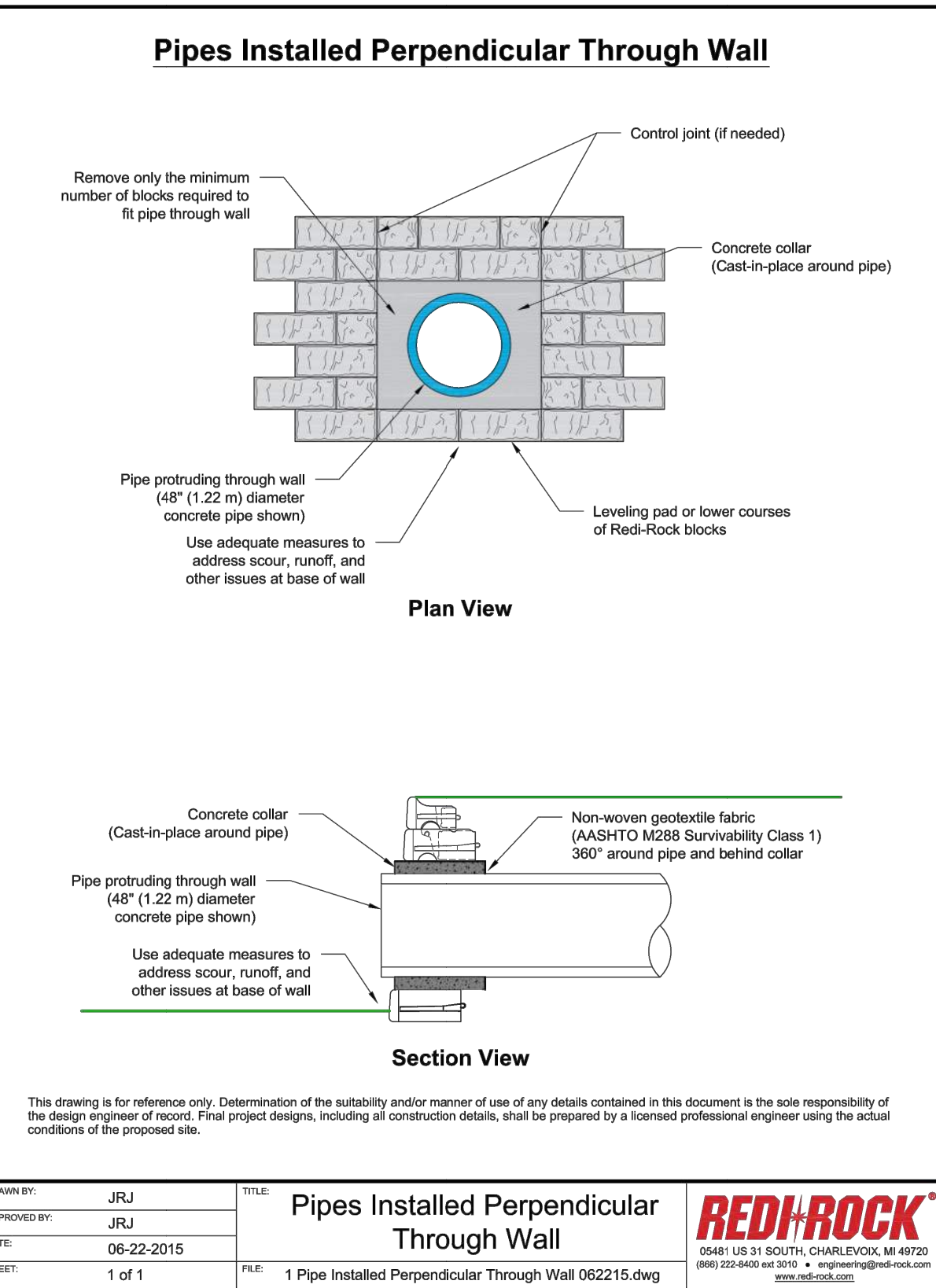
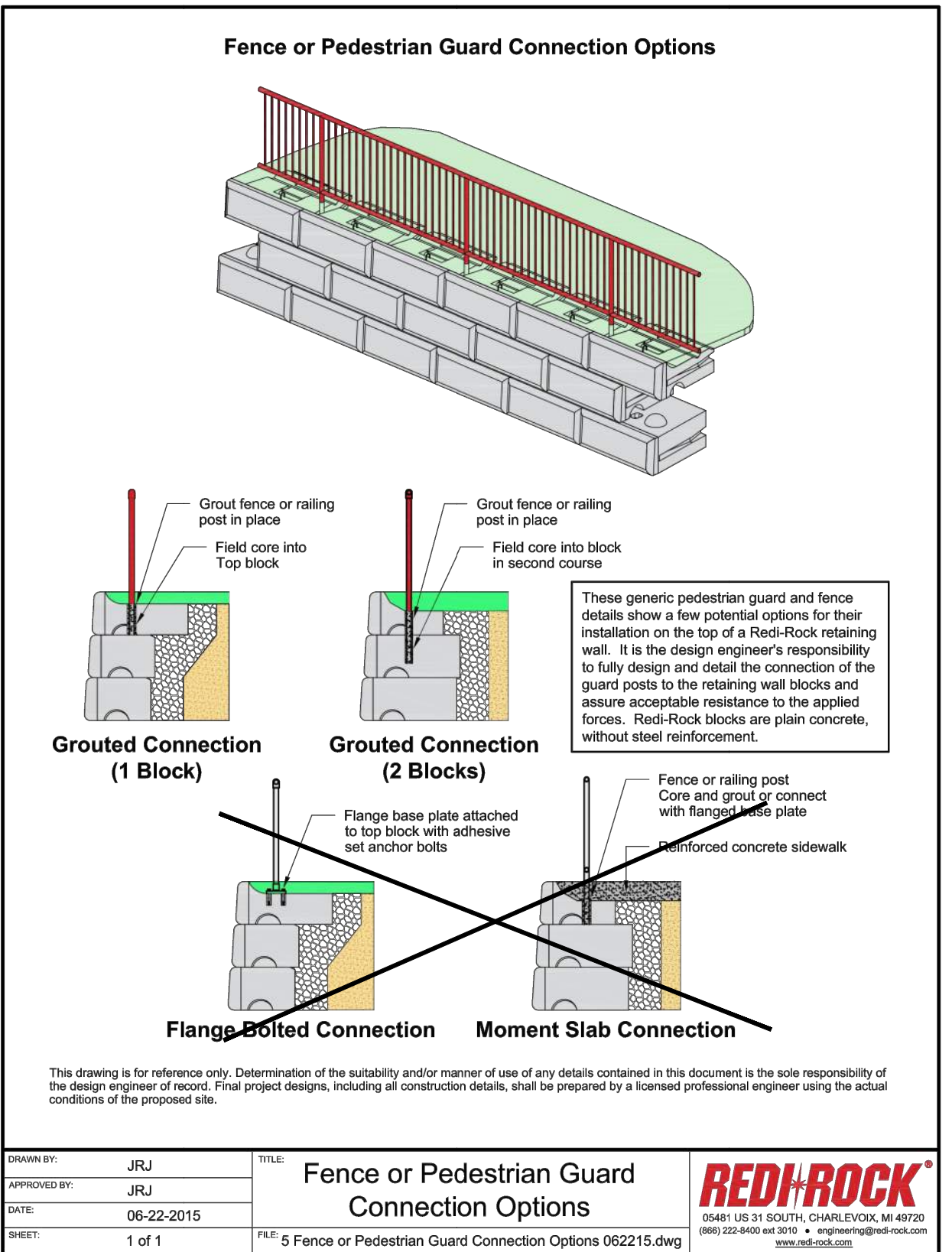
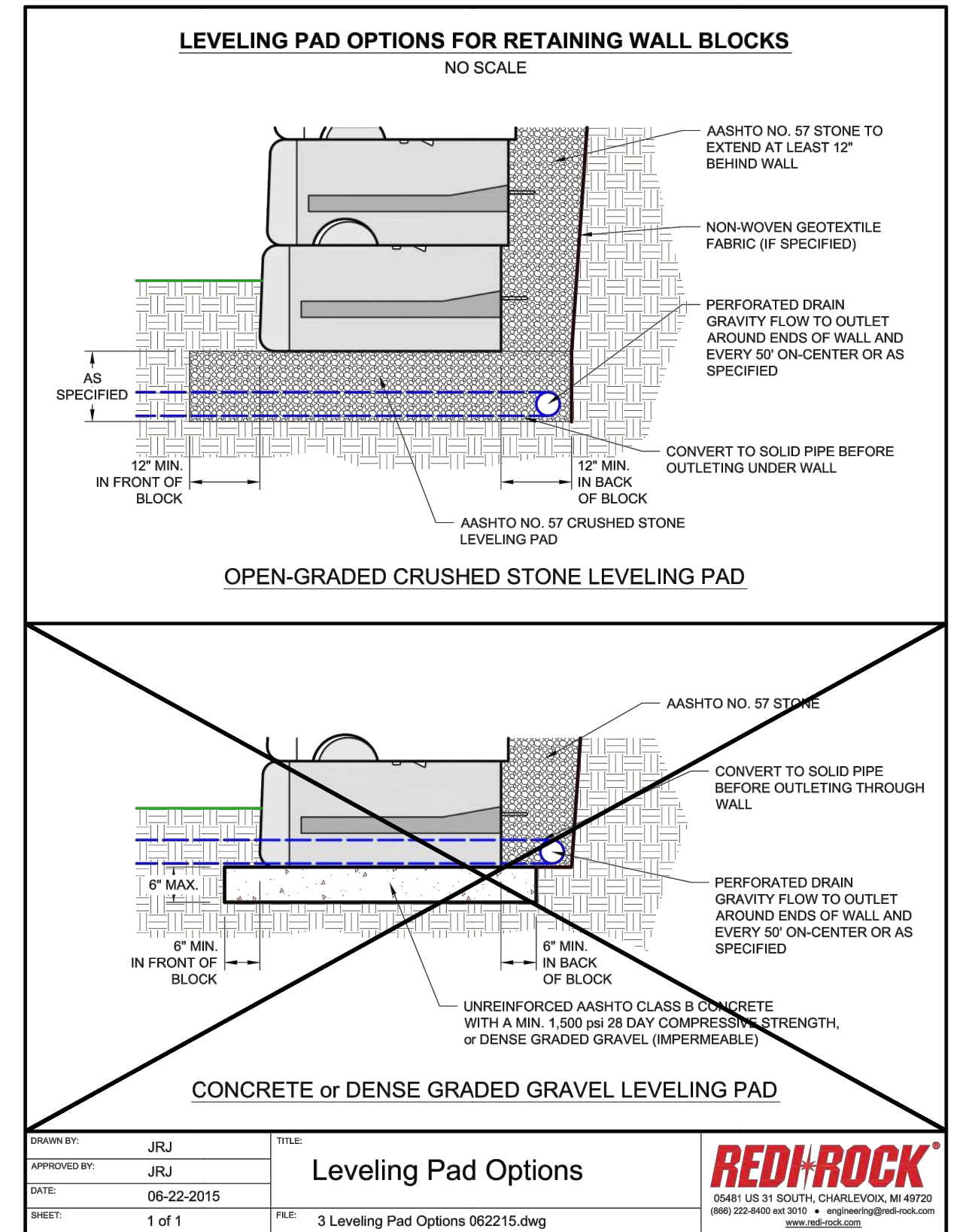
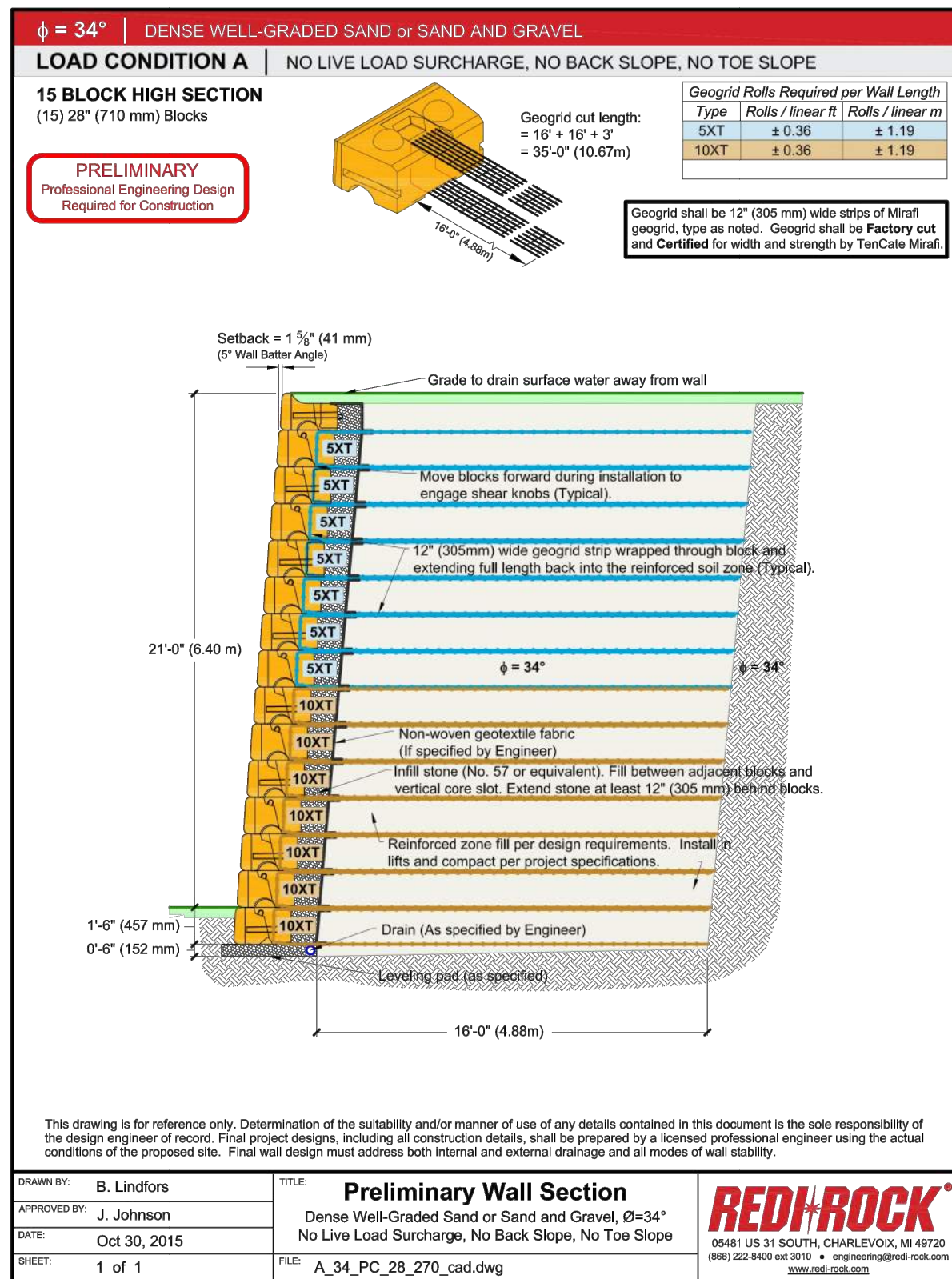
DESIGNED BY: WMLR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: MARCH 2022
PROJECT NO: 21-71

PRELIMINARY, NOT FOR CONSTRUCTION

SITE DETAILS I

SHEET 11 OF 17

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BRIARWOOD ESTATES
A 14-LOT MAJOR SUBDIVISION
CRANSTON, RHODE ISLAND
AP 18/3, LOTS 1023 & 1026

NO.	DATE	DESCRIPTION
R1	4/19/2022	REMOVED LOT 2006
R2	5/24/2022	REDUCED ROW
R3	4/6/2023	RIDEM RTC
R4	4/26/2023	RI DOT RTC
R5	5/15/2023	KCWA RTC
R6	6/8/2023	RI DOT/SEWER RTC

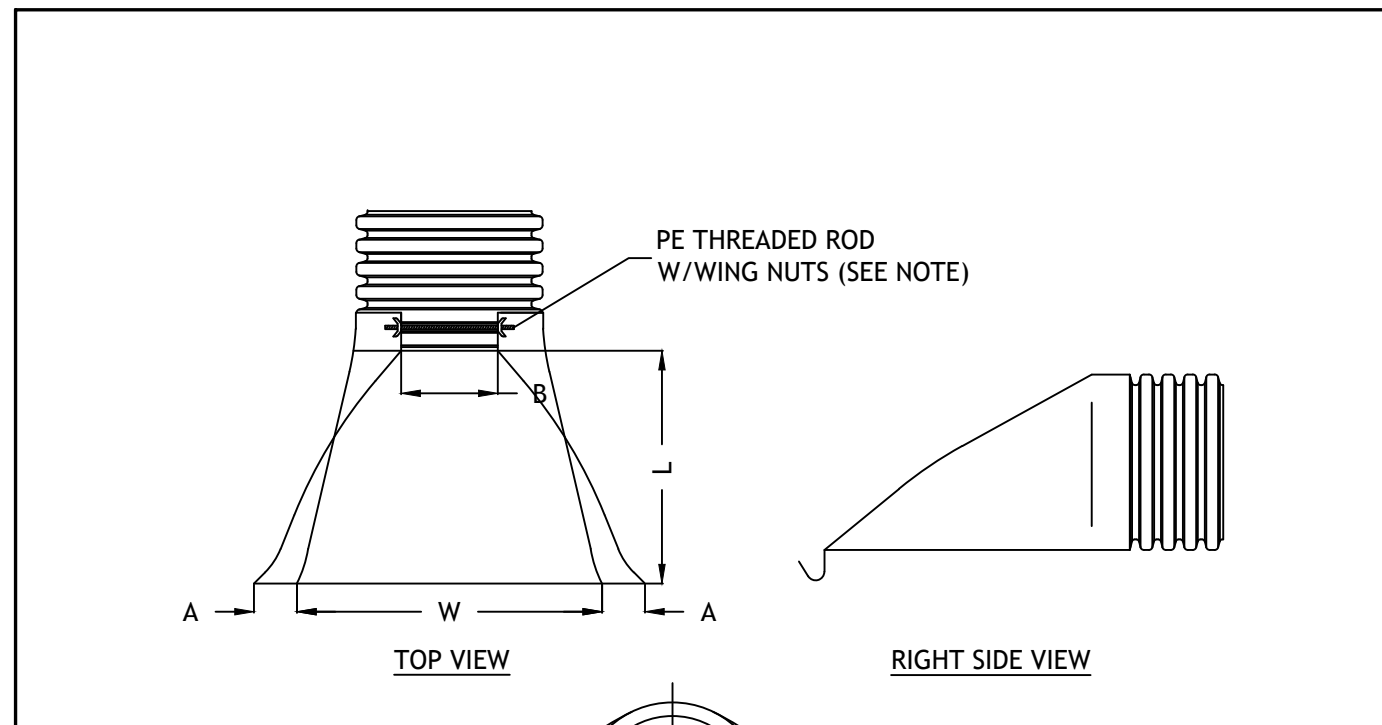
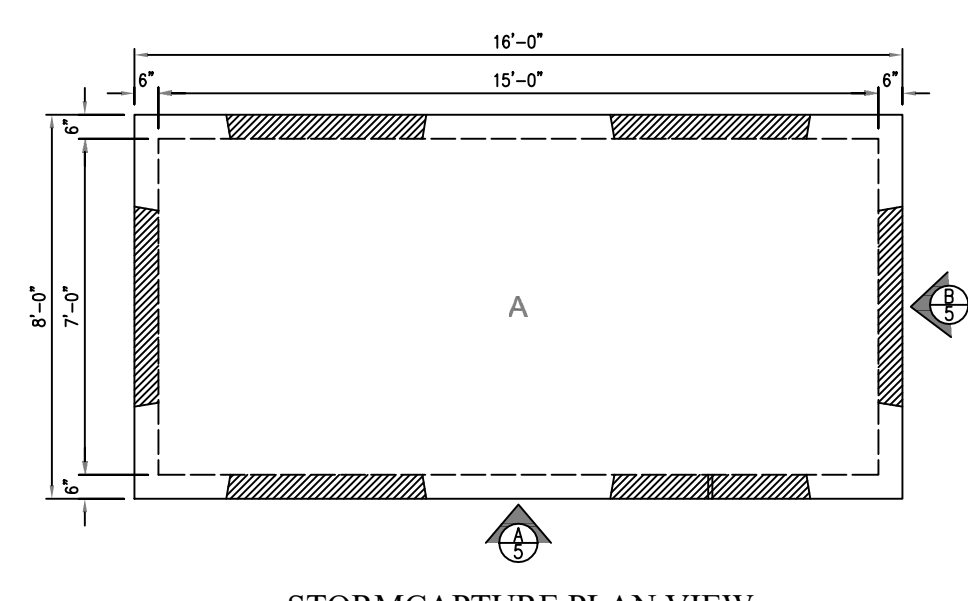
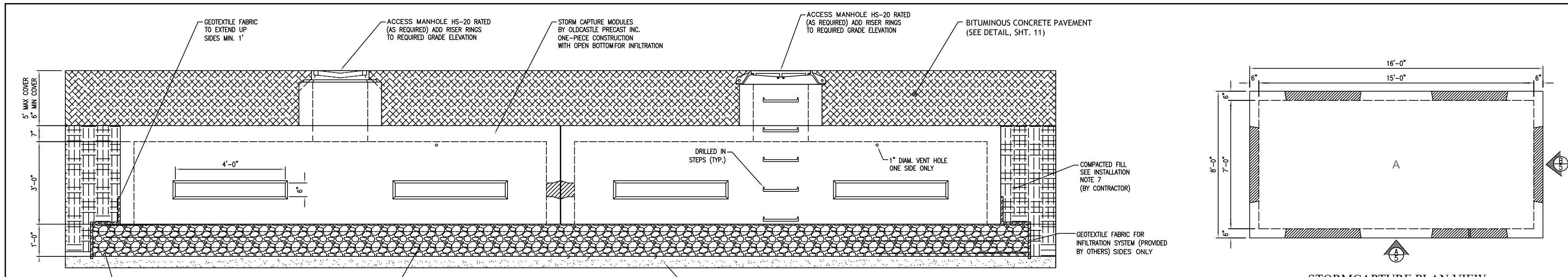
DESIGNED BY: WMLR
 DRAWN BY: SEP/SD
 CHECKED BY: JAC
 DATE: MARCH 2022
 PROJECT NO: 21-71

PRELIMINARY, NOT FOR CONSTRUCTION

SITE DETAILS II

SHEET 12 OF 17

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PART NO.	PIPE SIZE	A	B (MAX)	H	L	W
1210-NP	12"	6.5"	10"	6.5"	25"	29"
	300 mm	165 mm	254 mm	165 mm	635 mm	735 mm
1210-NP	15"	6.5"	10"	6.5"	25"	29"
	375 mm	165 mm	254 mm	165 mm	635 mm	735 mm
1810-NP	18"	7.5"	15"	6.5"	32"	35"
	450 mm	190 mm	380 mm	165 mm	812 mm	890 mm
2410-NP	24"	7.5"	18"	6.5"	36"	45"
	600 mm	190 mm	450 mm	165 mm	900 mm	1140 mm
3012-NP	30"	10.5"	N/A	7.0"	53"	68"
	750 mm	266 mm	N/A	178 mm	1345 mm	1725 mm
3612-NP	36"	10.5"	N/A	7.0"	53"	68"
	900 mm	266 mm	N/A	178 mm	1345 mm	1725 mm

NOTE: PE THREADED ROD W/WING NUTS PROVIDED FOR END SECTIONS 12"-24", 30" & 36" END SECTIONS TO BE WELDED TO PIPE PER MANUFACTURER'S RECOMMENDATIONS.

11 ADS FLARED END SECTION NOT TO SCALE

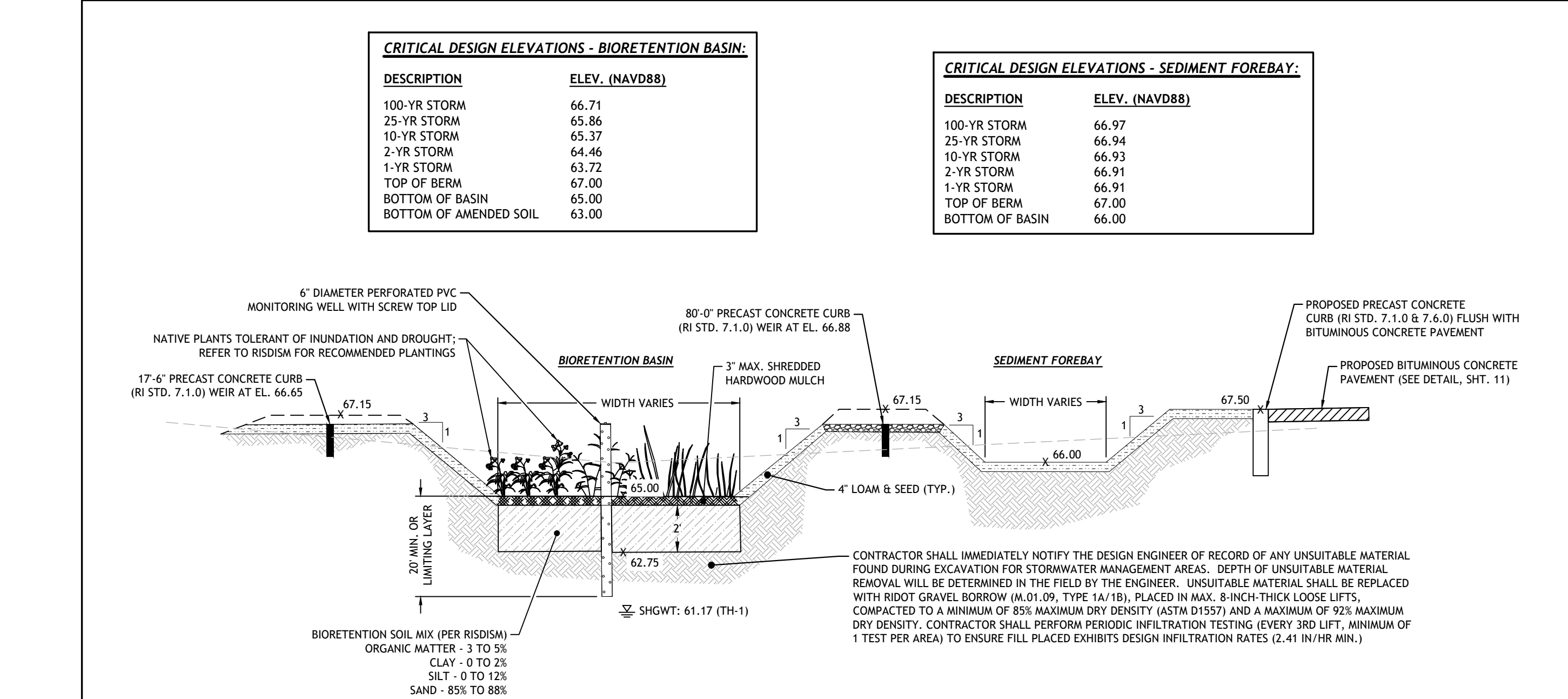
STORMCAPTURE GENERAL NOTES:
 THE STORM CAPTURE™ SYSTEM BY OLDCASTLE PRECAST IS PART OF THE STORMWATER MANAGEMENT SYSTEM FOR THE RESPECTIVE SITE, AS PREPARED BY THE PROJECT DESIGN ENGINEER. IT IS THE RESPONSIBILITY OF THE DESIGN ENGINEER TO DETERMINE DESIGN FLOW RATES, PRE-TREATMENT AND POST-TREATMENT REQUIREMENTS, STORAGE VOLUME, AND ENSURE THE FINAL DESIGN MEETS ALL CONVEYANCE AND STORAGE REQUIREMENTS. SYSTEM DESIGN AND TYPE, SOIL ANALYSIS, LOADING REQUIREMENTS, COVER HEIGHT AND MODULE SIZE DETERMINE THE FOUNDATION TYPE AND REQUIREMENTS AS STATED HEREIN. ANY VARIATIONS FOUND DURING CONSTRUCTION FROM THE SITE AND SYSTEM ANALYSIS MUST BE REPORTED TO THE PROJECT DESIGN ENGINEER. THE PROJECT DESIGN ENGINEER IS RESPONSIBLE FOR OBTAINING A GEOTECHNICAL ENGINEERING REPORT VERIFYING THE BEARING CAPACITY STATED IN DESIGN NOTES.

DESIGN NOTES:
 1. DESIGN LOADINGS:
 A. AASHTO HS20-44 W/ IMPACT.
 B. DEPTH OF COVER = 6" - 5'-0"
 C. ASSUMED WATER TABLE = BELOW BOTTOM.
 D. EQUIVALENT FLUID PRESSURE = 45 PCF.
 E. LATERAL LIVE LOAD SURCHARGE = 80 PSF.
 F. NO LATERAL SURCHARGE FROM ADJACENT STRUCTURES.
 2. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 6,000 PSI.
 3. STEEL REINFORCEMENT: REBAR, ASTM A-615, GRADE 60.
 4. CEMENT: ASTM C-150 SPECIFICATION.
 5. STORM CAPTURE MODULE TYPE - INFILTRATION.
 6. DEPTH OF AGGREGATE BEARING LAYER TO BE DETERMINED IN ACCORDANCE WITH OLDCASTLE TECH NOTE SC-01.
 7. ALLOWABLE SOIL BEARING PRESSURE ADDRESSED IN OLDCASTLE TECH NOTE SC-01.
 8. REFERENCE STANDARDS:
 A. ASTM C 890
 B. ASTM C 891
 C. ASTM C 913
 9. LESS THAN 6" OR GREATER THAN 5' OF COVER REQUIRES CUSTOM STRUCTURAL DESIGN AND MAY REQUIRE THICKER AGGREGATE BEARING LAYER.

INSTALLATION NOTES STORMCAPTURE MODULES:
 THE STORM CAPTURE™ MODULE SYSTEM IS TO BE INSTALLED IN ACCORDANCE WITH ASTM C891, INSTALLATION OF UNDERGROUND PRECAST UTILITY STRUCTURES. PROJECT PLAN AND SPECIFICATIONS MUST BE FOLLOWED ALONG WITH ANY APPLICABLE REGULATIONS.
 1. PLAN LINE, GRADE AND ELEVATIONS MUST BE FOLLOWED.
 2. A. WHERE SPECIFIED, AN 8 OZ. NON-WOVEN GEOTEXTILE FABRIC MUST BE USED AS A SEPARATION LAYER AROUND THE STORM CAPTURE SYSTEM.
 3. PENETRATIONS IN THE GEOTEXTILE MAY ONLY BE MADE WITH SMOOTH WALL PIPES. MAKE PENETRATIONS FOR ALL OUTLETS BEFORE MAKING PENETRATIONS FOR ANY INLETS.
 4. THE AGGREGATE BEARING LAYER SHOULD CONSIST OF CLEAN, DURABLE CRUSHED AGGREGATE COMPACTED AS DIRECTED BY THE ENGINEER. OLDCASTLE RECOMMENDS MATERIALS SUCH AS NO. 56 OR NO. 57 STONE PER ASTM C33.
 5. DESIGNATED EMBEDDED LIFTERS MUST BE USED. USE PROPER RIGGING TO ASSURE ALL LIFTERS ARE EQUALLY ENGAGED WITH A MINIMUM 60 DEGREE ANGLE ON SLINGS AS NOTED AND IN ACCORDANCE WITH OLDCASTLE LIFTING PROCEDURES.
 6. MODULES MUST BE PLACED AS CLOSE TOGETHER AS POSSIBLE, AND GAPS SHALL NOT BE GREATER THAN 3/4". ALL EXTERIOR SYSTEM JOINTS SHALL BE COVERED WITH A MIN. 8" JOINT WRAP ON SIDES AND TOP (CS-212 CONSOLE OR EQUIVALENT). INSTALL ONE ROW CS-102 CONSOLE (OR EQUIVALENT) BETWEEN PRECAST PIECES.
 7. AUTHORIZATION SHOULD BE GIVEN BY THE PROJECT ENGINEER OR DESIGNATED PERSON PRIOR TO PLACEMENT ON BACKFILL FOR THE SYSTEM. CARE SHOULD BE TAKEN DURING PLACEMENT OF BACKFILL NOT TO DISPLACE MODULES OR JOINT WRAP. BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY OR AS SPECIFIED, AND SHOULD NOT BE COMPACTED WITHIN 6" OF MODULE.
 8. CONSTRUCTION EQUIPMENT EXCEEDING DESIGN LOADING SHALL NOT BE ALLOWED ON STRUCTURE.

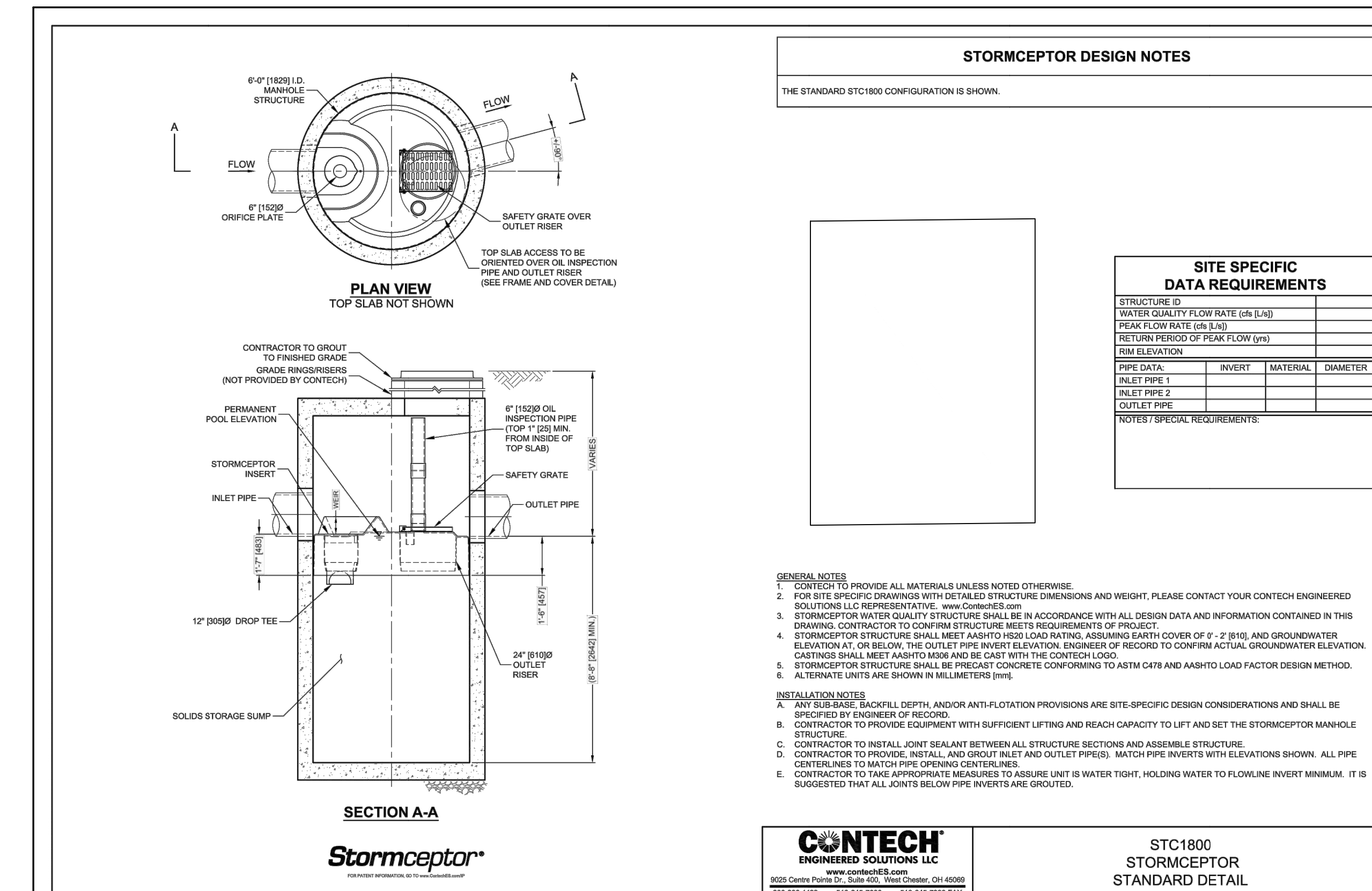
SPLASH PADS, INLETS AND RISERS:
 PLACE SPLASH PADS AS DESIGNATED TO PREVENT SCOUR FROM INLETS AND INLET PIPES. ALL PIPE INLETS SHALL EXTEND INSIDE MODULE A MINIMUM OF 4". PLACE A NON-SHRINK, NON-METALLIC GROUT, MIN. 3,000 PSI IN ANNULAR SPACE TO ELIMINATE ALL VOIDS.

10 STORMCAPTURE INFILTRATION MODULE CROSS SECTION DETAIL NOT TO SCALE



CRITICAL DESIGN ELEVATIONS - BIORETENTION BASIN:		CRITICAL DESIGN ELEVATIONS - SEDIMENT FOREBAY:	
DESCRIPTION	ELEV. (NAVD88)	DESCRIPTION	ELEV. (NAVD88)
100-YR STORM	66.71	100-YR STORM	66.97
25-YR STORM	65.86	25-YR STORM	66.94
10-YR STORM	65.37	10-YR STORM	66.93
2-YR STORM	64.46	2-YR STORM	66.91
1-YR STORM	63.72	1-YR STORM	67.00
TOP OF BERM	67.00	TOP OF BERM	67.00
BOTTOM OF BASIN	65.00	BOTTOM OF BASIN	66.00
BOTTOM OF AMENDED SOIL	63.00		

12 STORMWATER MITIGATION AREA - SECTION A-A NOT TO SCALE



STORMCEPTOR DESIGN NOTES
 THE STANDARD STC1800 CONFIGURATION IS SHOWN.

SITE SPECIFIC DATA REQUIREMENTS			
STRUCTURE ID:			
WATER QUALITY FLOW RATE (cfs [L/s]):			
PEAK FLOW RATE (cfs [L/s]):			
RETURN PERIOD OF PEAK FLOW (yrs):			
RIM ELEVATION:			
PIPE DATA:			
INLET PIPE 1:			
INLET PIPE 2:			
OUTLET PIPE:			
NOTES/SPECIAL REQUIREMENTS:			

GENERAL NOTES:
 1. CONTRACTOR TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERING SOLUTIONS LLC REPRESENTATIVE. www.contech8.com
 3. STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 4. STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20-44 RATING, ASSUMING EARTH COVER OF 2' (610), AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M282 AND BE CAST WITH THE CONTECH LOGO.
 5. STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C475 AND AASHTO LOAD FACTOR DESIGN METHOD.
 6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].
INSTALLATION NOTES:
 A. ANY SURFACE BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
 C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
 D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
 E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERING SOLUTIONS LLC
 9025 Dorset Pointe Dr., Suite 402, West Chester, OH 45388
 800-338-1122 513-445-7000 513-445-7993 FAX

STC1800 STORMCEPTOR STANDARD DETAIL

13 STC1800 STORMCEPTOR DETAIL NOT TO SCALE

JOE CASALI ENGINEERING, INC.
 CIVIL ENGINEERING & ARCHITECTURE
 300 POST ROAD, WARWICK, RI 02888
 (401) 941-3300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI
 No. 7250
 REGISTERED PROFESSIONAL ENGINEER
 06/08/2023

BRIARWOOD ESTATES
 A 14-LOT MAJOR SUBDIVISION
 CRANSTON, RHODE ISLAND
 AP 18/3, LOTS 1023 & 1026

REVISIONS:

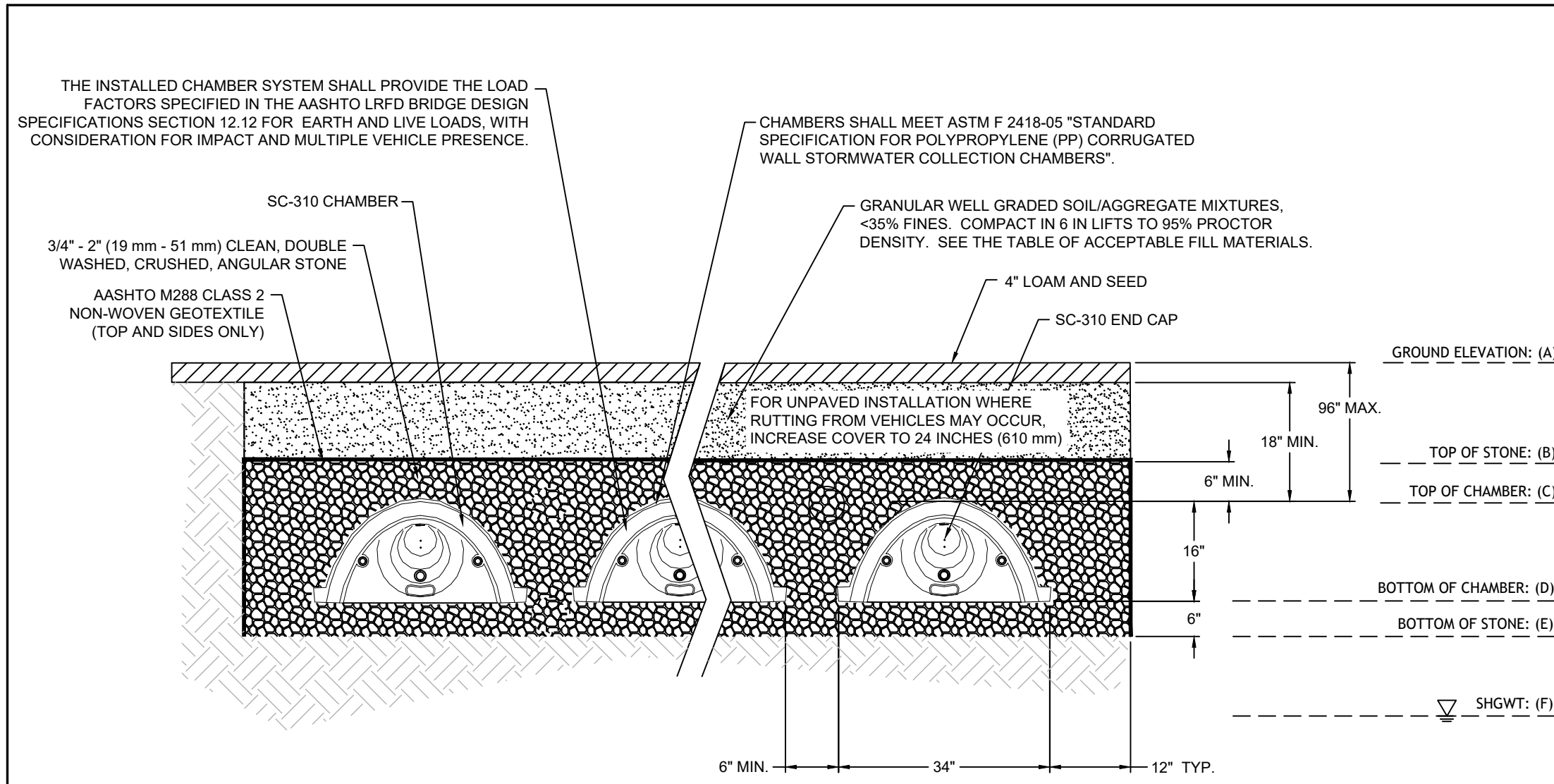
NO.	DATE	DESCRIPTION
R1	4/19/2022	REMOVED LOT 2006
R2	5/24/2022	REDUCED ROW
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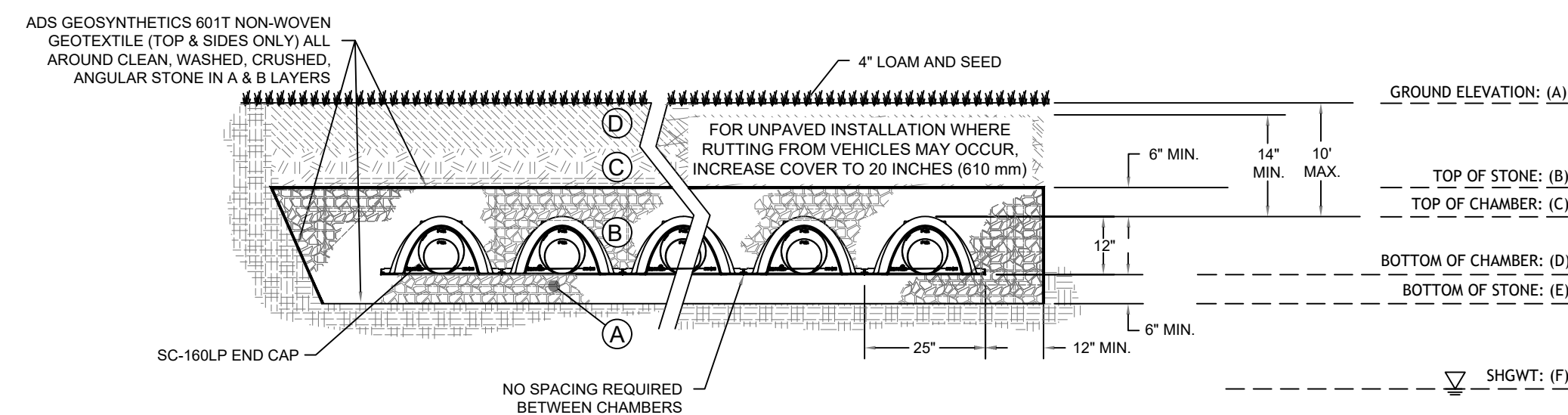
DRAINAGE DETAILS I

SHEET 13 OF 17



NOTE: THIS CROSS SECTION DETAILS THE REQUIREMENTS NECESSARY TO SATISFY THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS USING STORMTECH CHAMBERS.

STORMTECH SC-310 CHAMBER SYSTEMS



STORMTECH SC-100LP CHAMBER SYSTEMS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-160LP AND SC-310 CHAMBER SYSTEMS:

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION(1)	COMPACTION/DENSITY REQUIREMENT
(D)	FILL MATERIAL FOR LAYER D STARTS FROM THE TOP OF THE C LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUB-BASE MAY BE PART OF THIS LAYER.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
(C)	FILL MATERIAL FOR LAYER C STARTS FROM THE TOP OF THE EMBEDMENT STONE (B LAYER) TO 18\"/>		

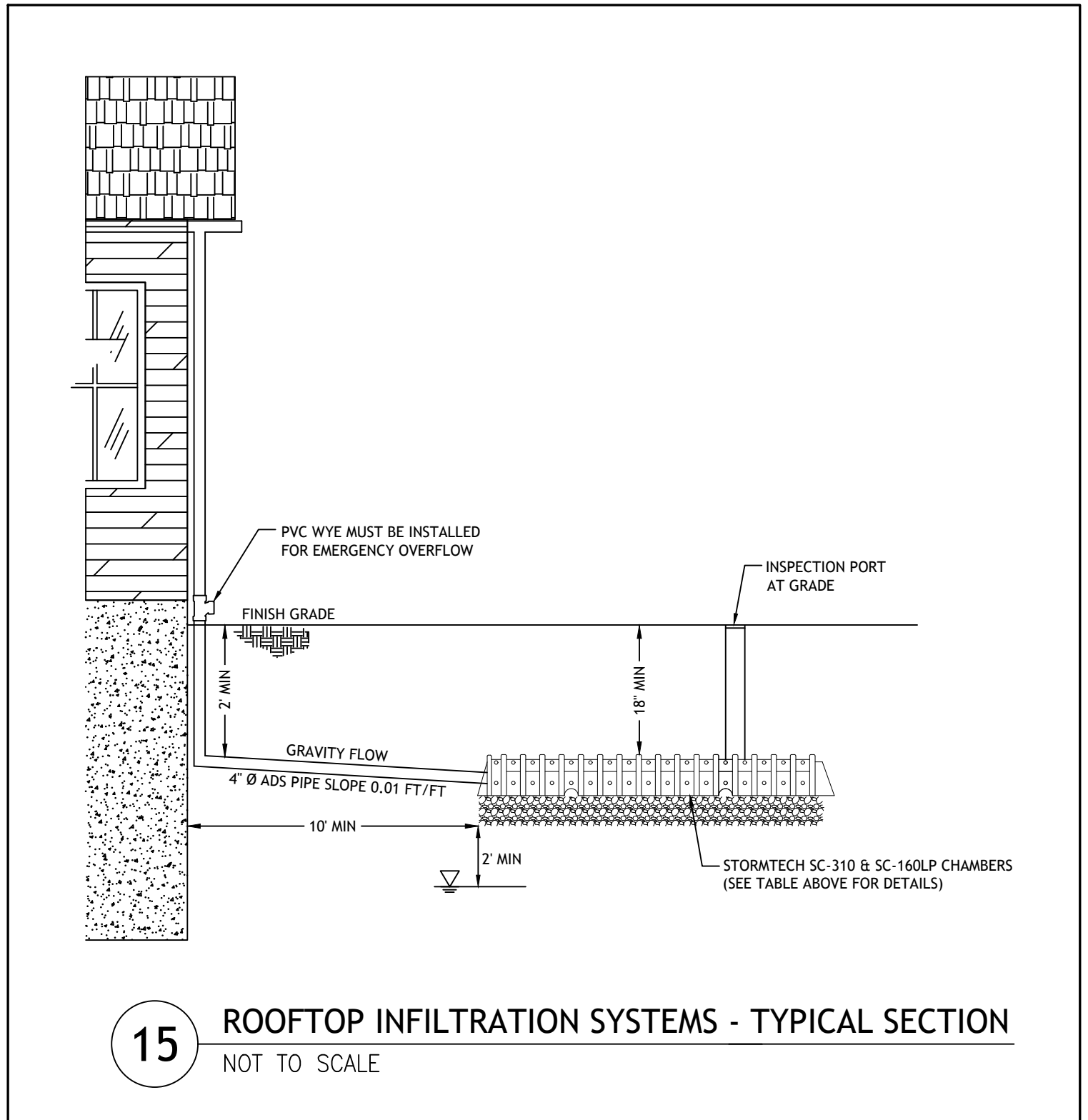
PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS IN OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9\"/>

STORMTECH GENERAL NOTES:

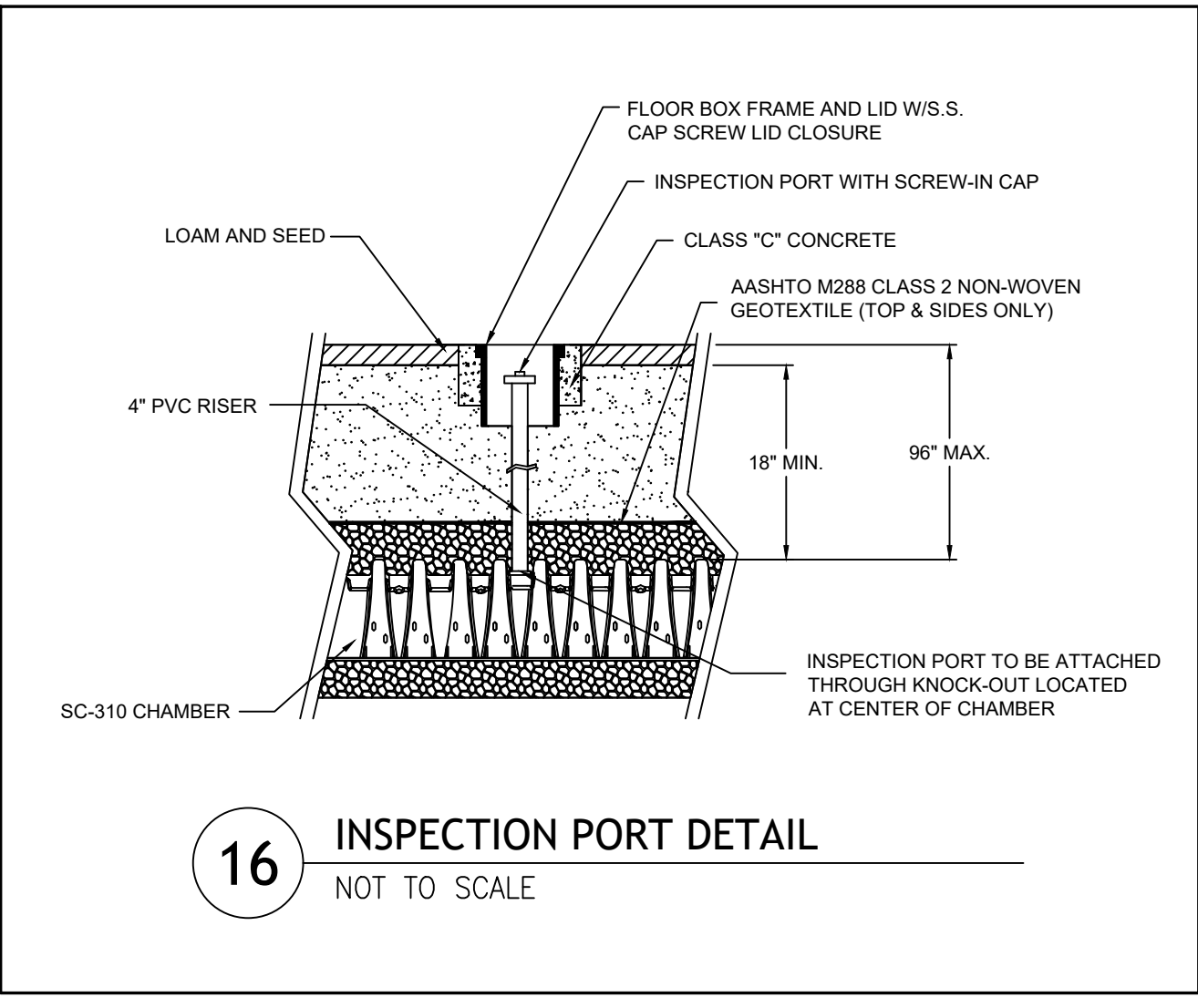
- STORMTECH REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
- OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICES REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.) MINIMUM COVER IS 18\"/>

UNDERGROUND INFILTRATION SYSTEM ELEVATIONS																
	LOT 1	LOT 2	LOT 3	LOT 4	LOT 5	LOT 6	LOT 7	LOT 8F	LOT 8R	LOT 9F	LOT 9R	LOT 10F	LOT 10R	LOT 11F	LOT 11R	LOT 12
CHAMBER SYSTEM	SC-160LP	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-310	SC-160LP
# OF CHAMBERS	16	16	16	16	16	8	8	4	6	4	6	4	6	4	6	16
A (GROUND ELEVATION)	76.17	76.50	77.50	77.50	78.00	78.00	76.50	77.00	70.00	77.00	70.00	77.00	70.00	78.00	77.00	78.00
B (TOP OF STONE)	75.50	75.50	76.50	76.50	77.00	77.00	75.50	76.00	69.00	76.00	69.00	76.00	69.00	77.00	76.00	77.33
C (TOP OF CHAMBER)	75.00	75.00	76.00	76.00	76.50	76.50	75.00	75.50	68.50	75.50	68.50	75.50	68.50	76.50	75.50	76.83
D (BOTTOM OF CHAMBER)	74.00	73.67	74.67	74.67	75.17	75.17	73.67	74.17	67.17	74.17	67.17	74.17	67.17	75.17	74.17	75.83
E (BOTTOM OF STONE)	73.50	73.17	74.17	74.17	74.67	74.67	73.17	73.67	66.67	73.67	66.67	73.67	66.67	74.67	73.67	75.33
F (SHGWT)	71.50	71.00	72.00	72.00	72.00	68.00	69.00	65.10	43.00	58.00	43.00	51.00	53.00	63.00	65.00	73.00
DIST. E-F (SEP. TO SHGWT)	2.00	2.17	2.17	2.17	2.67	6.67	4.17	8.57	23.67	15.67	23.67	22.67	13.67	11.67	8.67	2.33
TEST HOLE REFERENCE	TH-3: 48"	TH-4: 60"	TH-4: 60"	TH-5: 60"	TH-5: 60"	TH-6: 60"	TH-6: 60"	TH-7: 144"	TH-7: 144"	TH-8: 144"	TH-8: 144"	TH-9: 144"	TH-9: 144"	TH-9: 144"	TH-9: 144"	TH-10: 36"

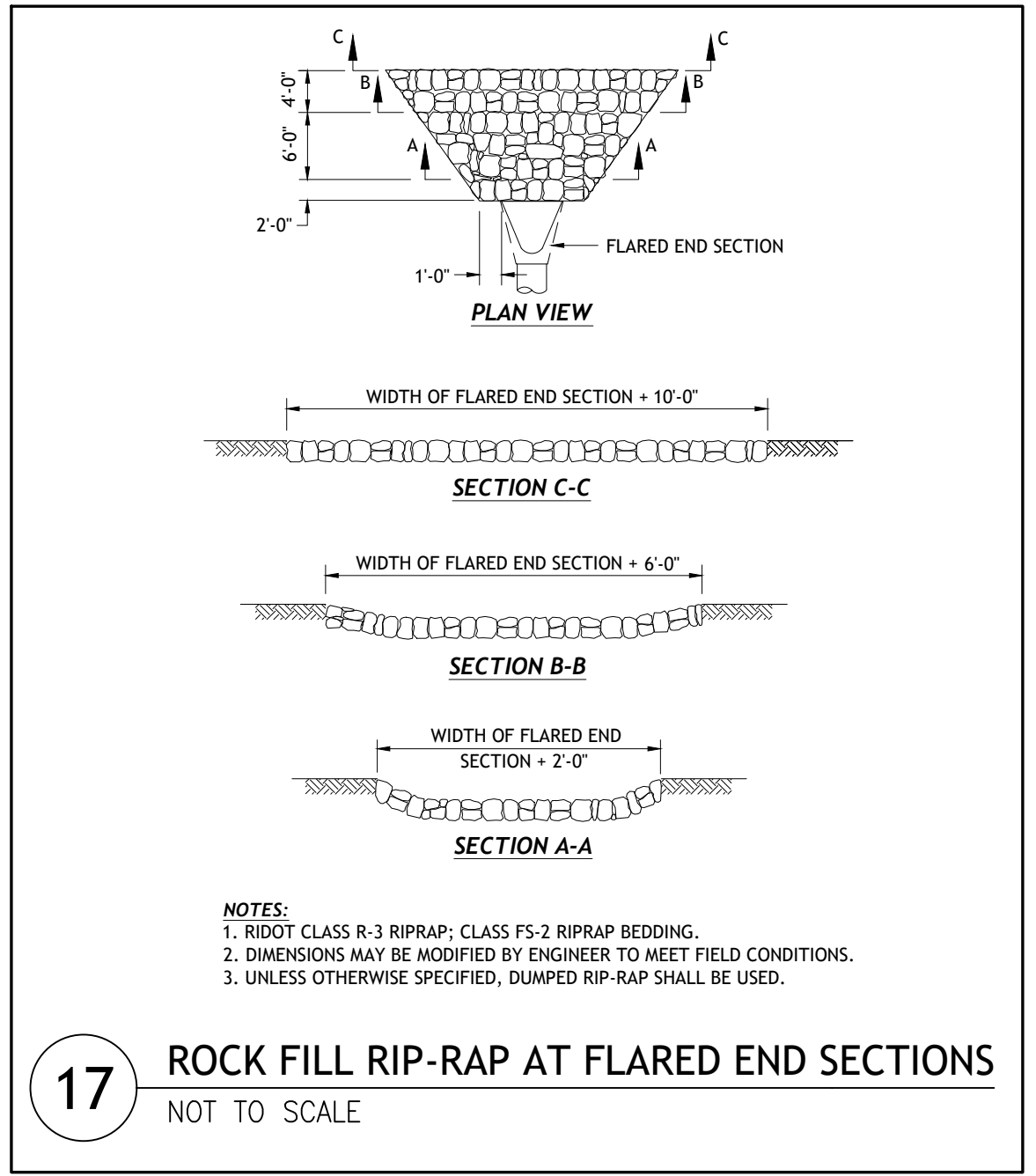
14 SC-310 & SC-160LP STANDARD DETAILS
NOT TO SCALE



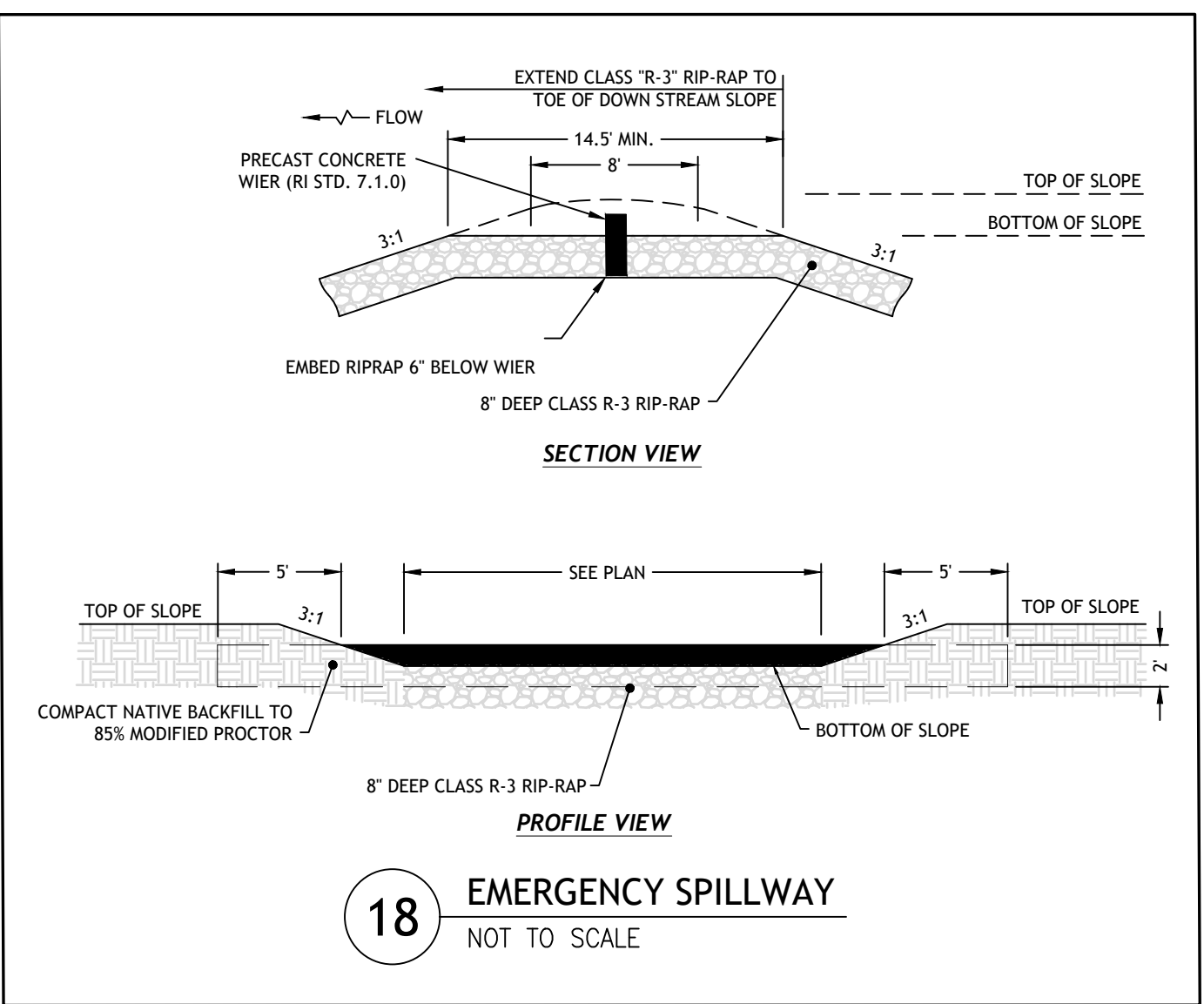
15 ROOFTOP INFILTRATION SYSTEMS - TYPICAL SECTION
NOT TO SCALE



16 INSPECTION PORT DETAIL
NOT TO SCALE



17 ROCK FILL RIP-RAP AT FLARED END SECTIONS
NOT TO SCALE



18 EMERGENCY SPILLWAY
NOT TO SCALE

JOE CASALI ENGINEERING, INC.
 CIVIL ENGINEERING & CONSTRUCTION
 300 POST ROAD, WARWICK, RI 02888
 (401) 941-3300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI
 No. 7250
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 06/08/2023

BRIARWOOD ESTATES
A 14-LOT MAJOR SUBDIVISION
 CRANSTON, RHODE ISLAND
 AP 18/3, LOTS 1023 & 1026

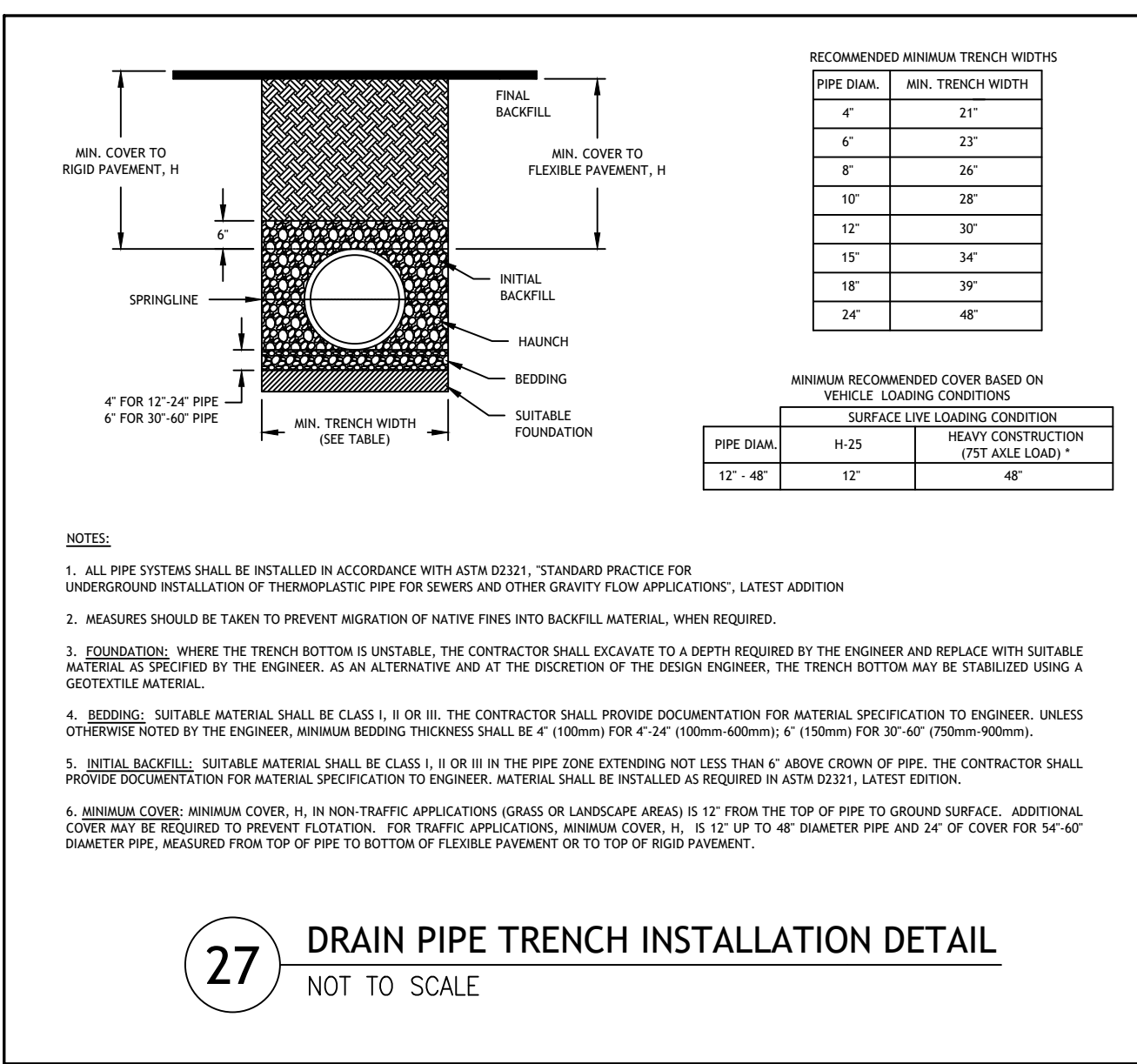
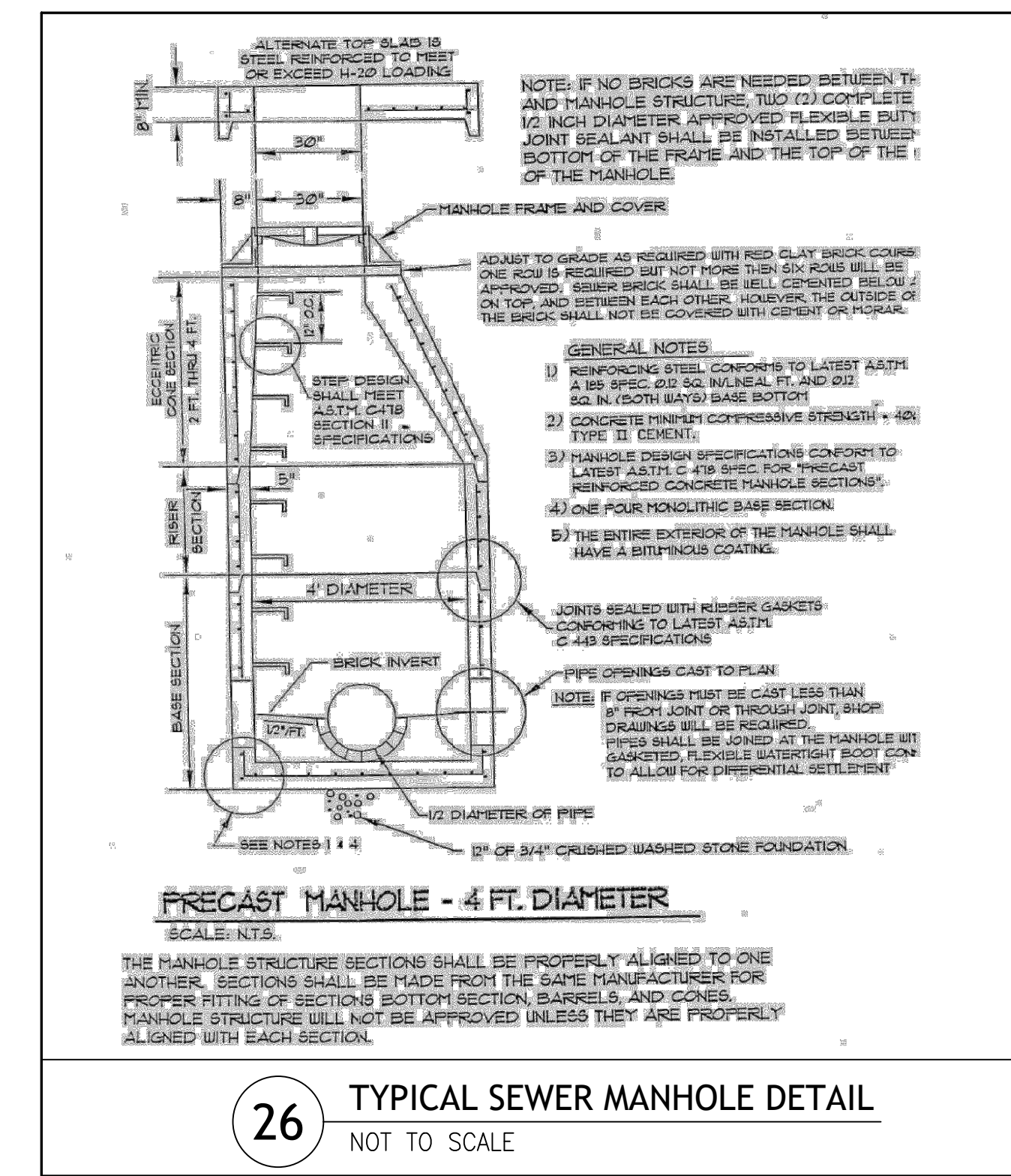
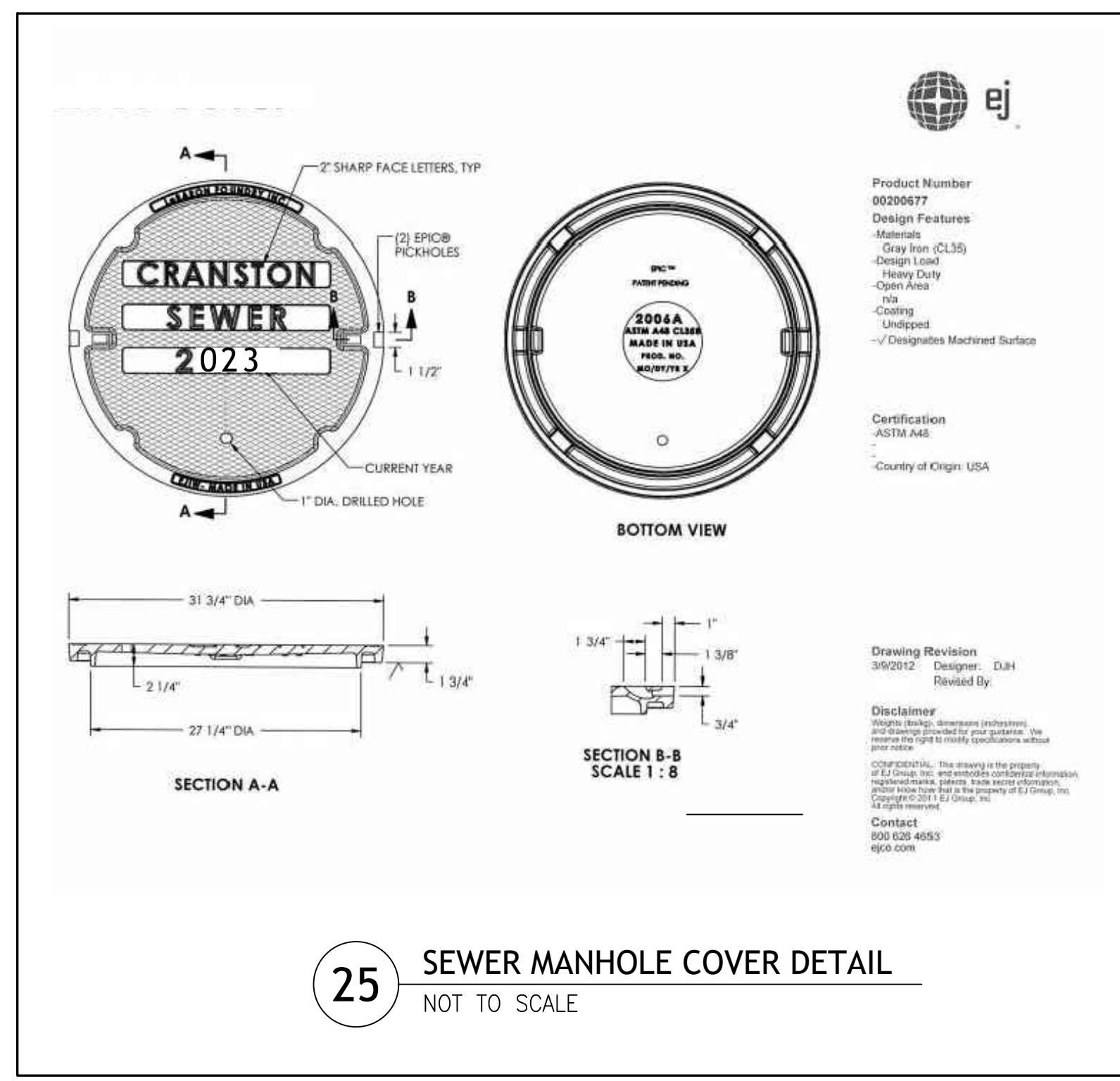
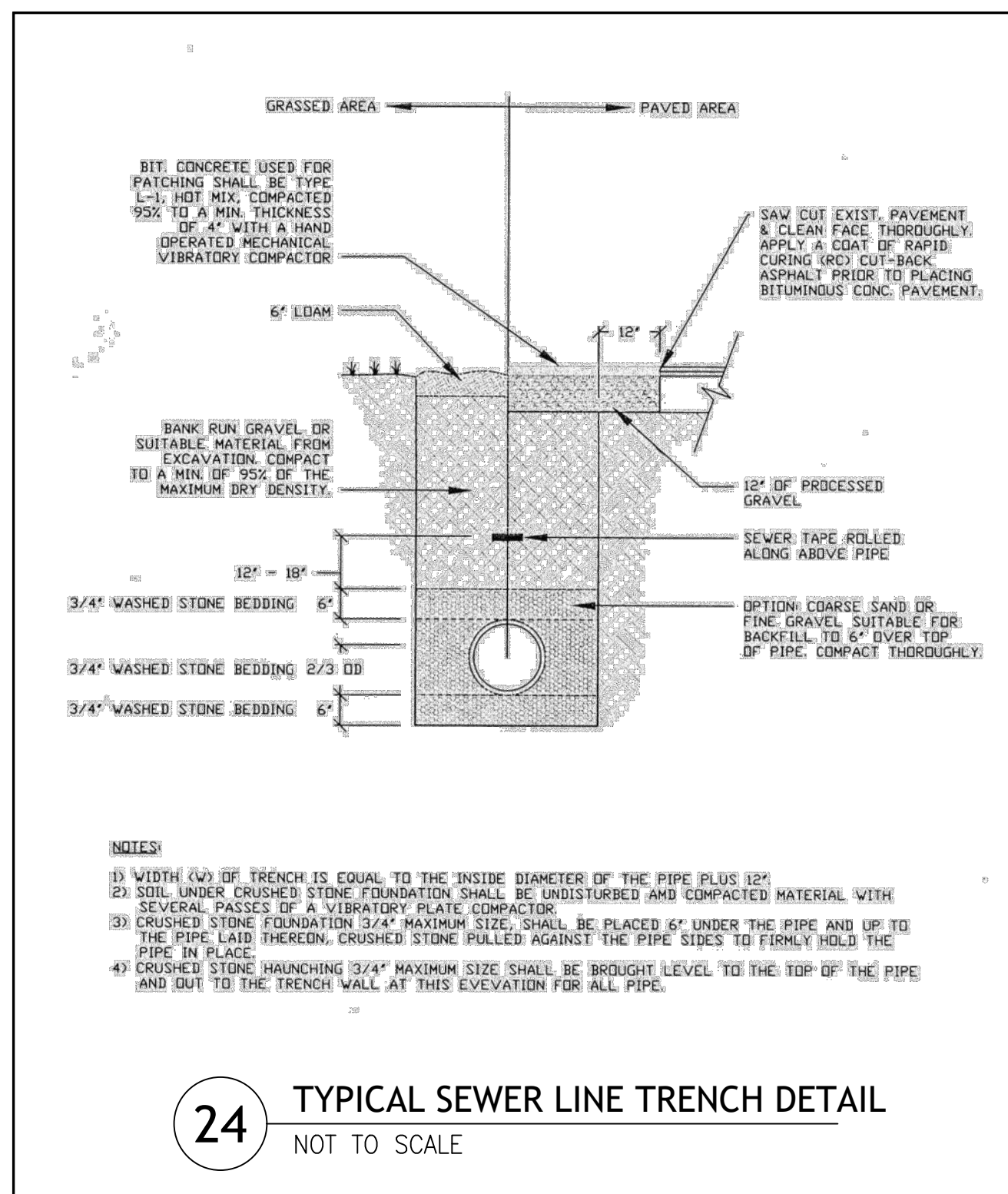
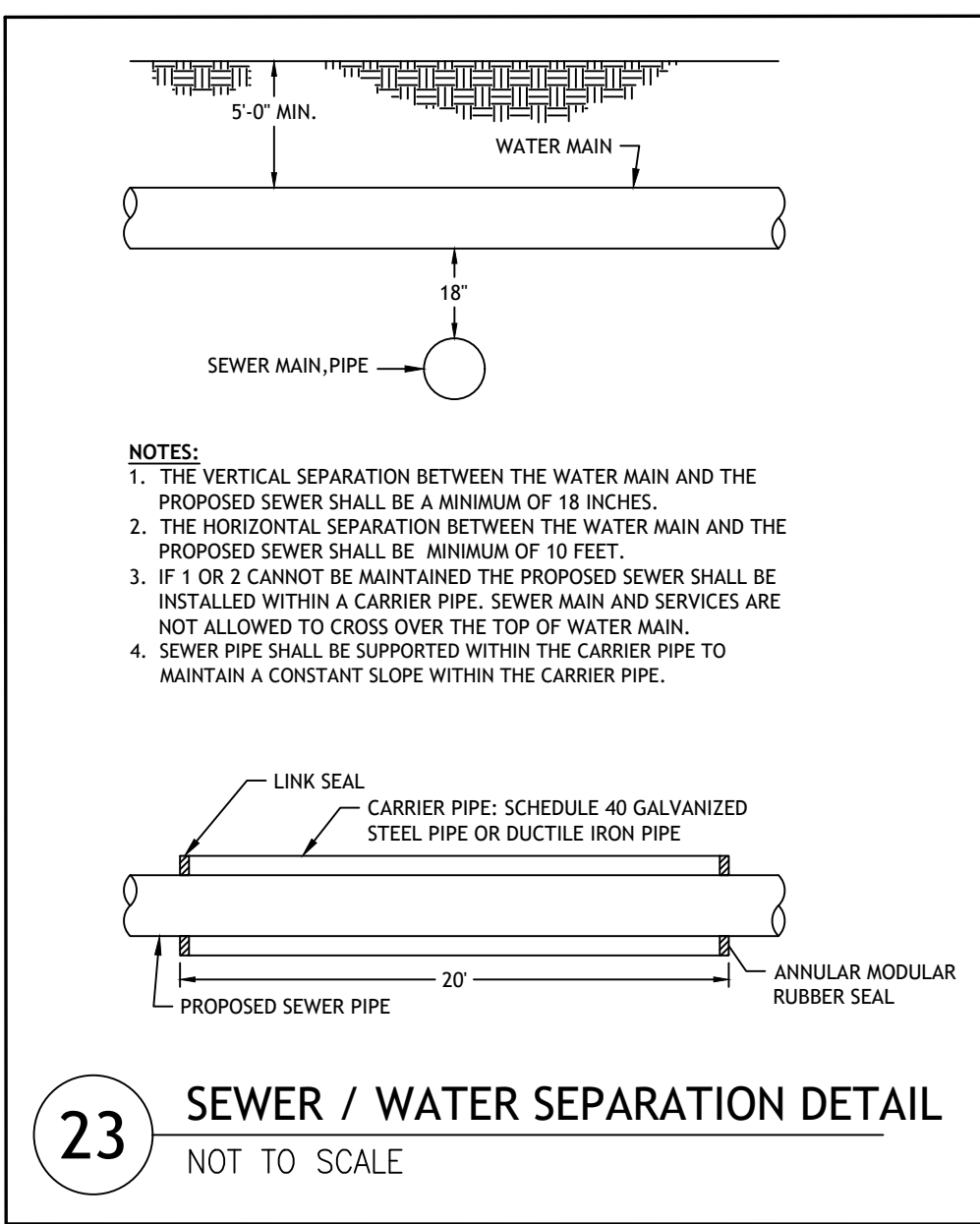
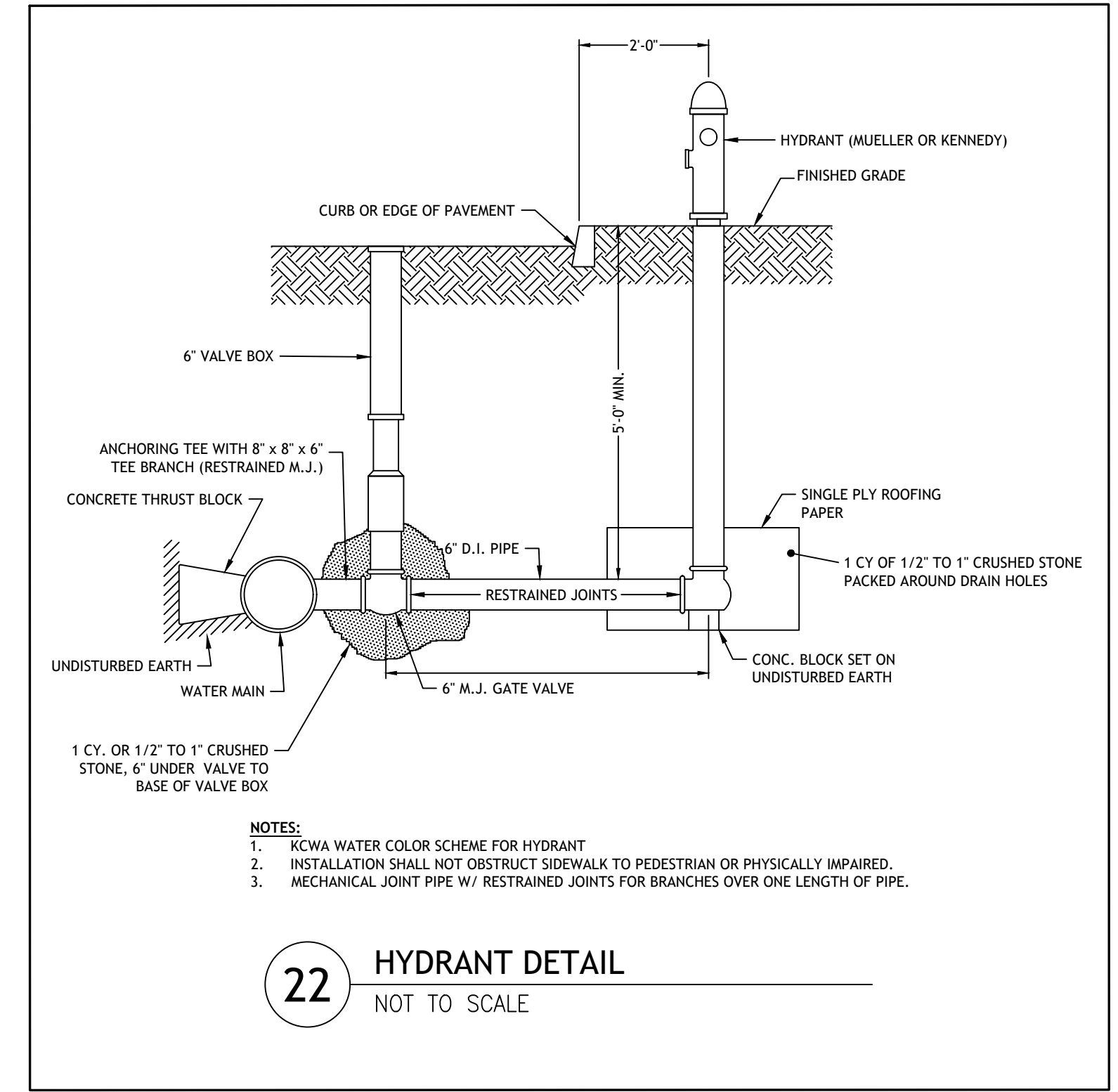
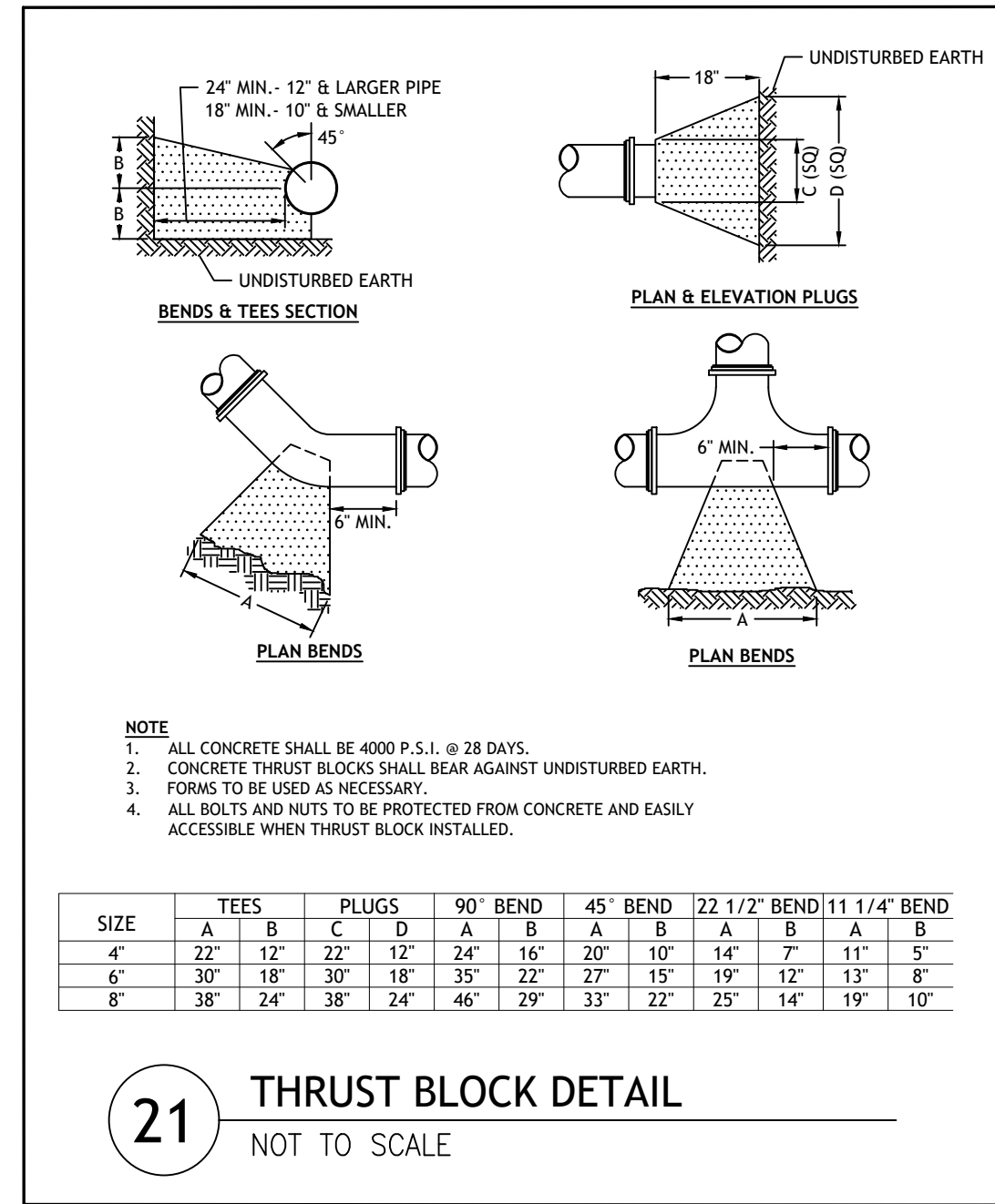
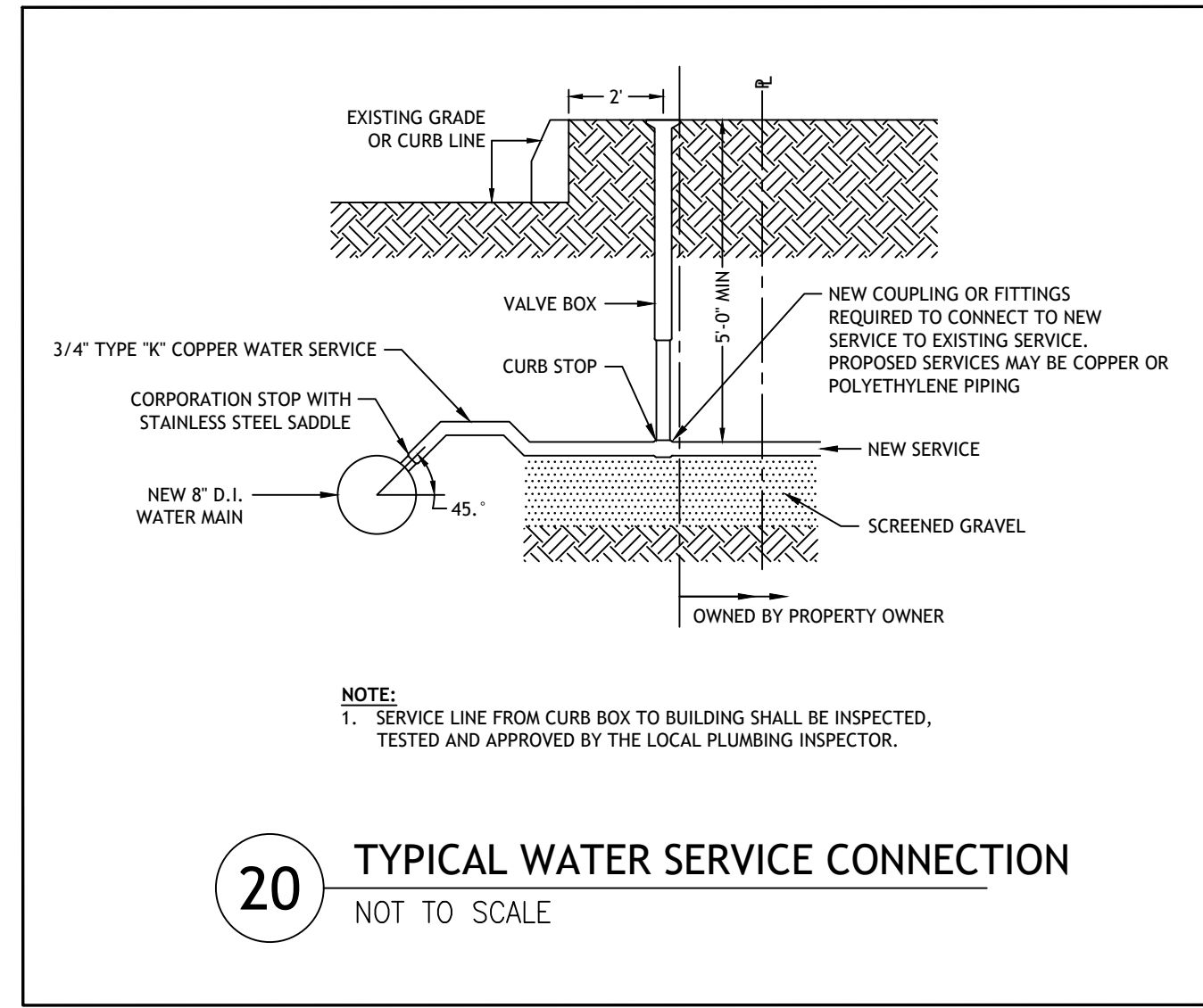
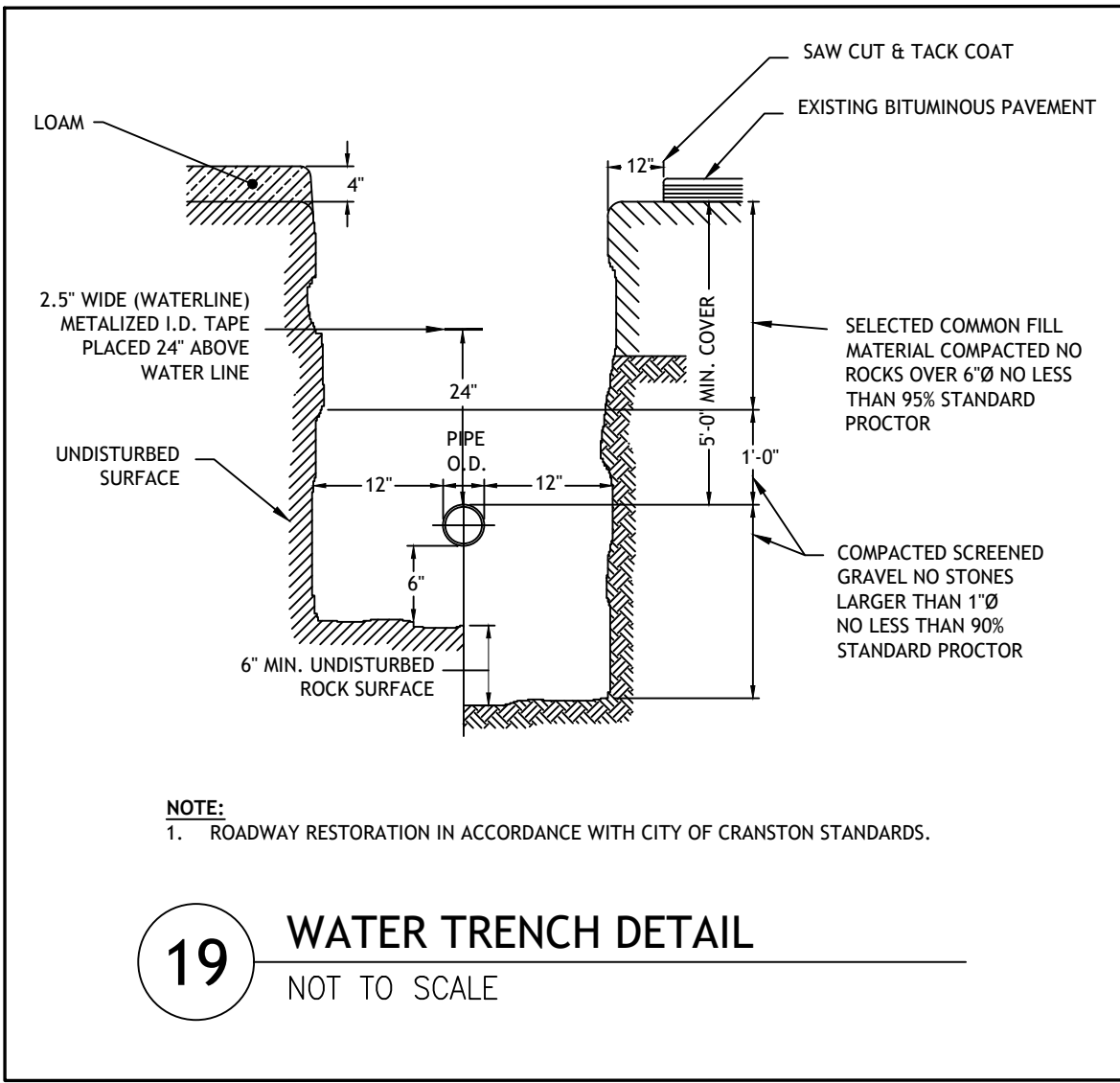
NO.	DATE	DESCRIPTION
R1	4/19/2022	REMOVED LOT 2006
R2	5/24/2022	REDUCED ROW
R3	4/6/2023	RIDEM RTC
R4	4/26/2023	RIDOT RTC
R5	5/15/2023	KCWA RTC
R6	6/8/2023	RIDOT/SEWER RTC

DESIGNED BY: WMLR
 DRAWN BY: SEP/SD
 CHECKED BY: JAC
 DATE: MARCH 2022
 PROJECT NO: 21-71

PRELIMINARY, NOT FOR CONSTRUCTION

DRAINAGE DETAILS II

SHEET 14 OF 17



JCE
JOE CASALI ENGINEERING, INC.
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DRAWN BY: SEP/SD
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UTILITY DETAILS

SHEET 15 OF 17

02/21/21 Rudy Proccaccianti\KCD\New London Ave [PERMIT SET - PRELIMINARY].dwg, Jun. 13, 2023, 11:22am

