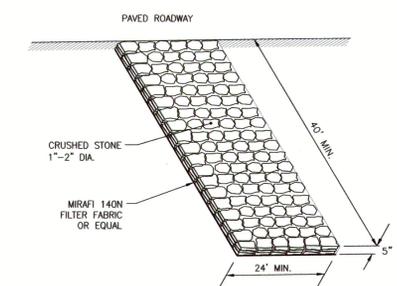
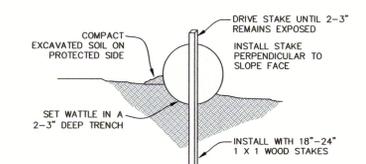


1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM - STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.

EROSION CONTROL MATTING - SLOPE PROTECTION
NOT TO SCALE



CONSTRUCTION ENTRANCE
NOT TO SCALE



- INSTALLATION NOTES:**
1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP X 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
 2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT THE SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
 3. SECURE THE WATTLE WITH 18" - 24" STAKES EVERY 3 - 4' WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLES LEAVING AT LEAST E - 3" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.

STRAW WATTLE DETAIL
NOT TO SCALE

- General Notes**
1. THE CONTRACTOR MUST CONTACT DIG-SAFE AT LEAST 72 HOURS PRIOR TO CONSTRUCTION AND MAINTAIN MARKINGS THROUGHOUT CONSTRUCTION.
 2. CONTRACTOR SHALL VERIFY GRADES, LOCATIONS OF SITE FEATURES, AND UNDERGROUND UTILITIES. ANY DISCREPANCIES SHALL BE NOTED AND THE SITE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEER. THESE CONDITIONS CAUSE CONCERN OR POTENTIAL ISSUES.
 3. PERIMETER EROSION CONTROLS SHALL BE INSTALLED AS SHOWN PRIOR TO ANY LAND DISTURBANCE.
 4. THE TEMPORARY STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED IMMEDIATELY AND MAINTAINED THROUGHOUT CONSTRUCTION.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING AND MANAGING STORMWATER RUNOFF AND TRACKING OF SEDIMENT ONTO ADJACENT ROADWAYS DURING CONSTRUCTION.
 6. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZING ALL DISTURBED AREAS AND SLOPES.
- Survey Reference**
PROPERTY LINE SURVEY, TOPOGRAPHY, AND EXISTING SITE FEATURES WERE PREPARED AND PROVIDED BY FOSTER SURVEY COMPANY, 8 NORTH ROAD, FOSTER, RHODE ISLAND 02825.

- Erosion Control Maintenance Notes**
1. THE OWNER AND CONTRACTOR WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE TEMPORARY STORMWATER FACILITIES, SLOPE PROTECTION, AND ALL EROSION CONTROLS DEPICTED ON THESE PLANS. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DURING CONSTRUCTION AND PHASING OPERATIONS.
 2. STREET SWEEPING AND DUST CONTROL SHOULD BE DONE ON AN AS NEEDED BASIS.
 3. PHOTOGRAPHS AND INSPECTION LOGS ARE RECOMMENDED TO DOCUMENT CORRECTIVE ACTIONS.
 4. EROSION CONTROLS SHALL BE MAINTAINED AS FOLLOWS:
STRAW WATTLES
LOCATION: BOTTOM SLOPE OF LAND DISTURBING ACTIVITY AND AROUND PERIMETER OF STOCKPILES.
WHEN: INSPECT AT A MINIMUM EVERY SEVEN (7) DAYS AND AFTER RAINFALL OF 0.25" AND GREATER.
MAINTENANCE: REPLACE OR REPAIR IMMEDIATELY AFTER INSPECTION. ACCUMULATED SEDIMENT BEHIND THE CONTROL IS NECESSARY IF 1/2 OF THE ORIGINAL HEIGHT OF THE CONTROL BECOMES FILLED WITH SEDIMENT.
STONE CONSTRUCTION ENTRANCE
LOCATION: CONSTRUCTION SITE ENTRANCE(S)
WHEN: BASED ON OBSERVATIONS AND WHEN TRACKING OF SEDIMENT ONTO ADJACENT ROADS IS OCCURRING.
MAINTENANCE: REMOVE AND REPLACE RIP-RAP IF RIP-RAP BECOMES FILLED WITH SEDIMENT AND WHEN ANTI-TRACKING PAD IS NOT MAINTAINING A CLEAN RIGHT-OF-WAY.

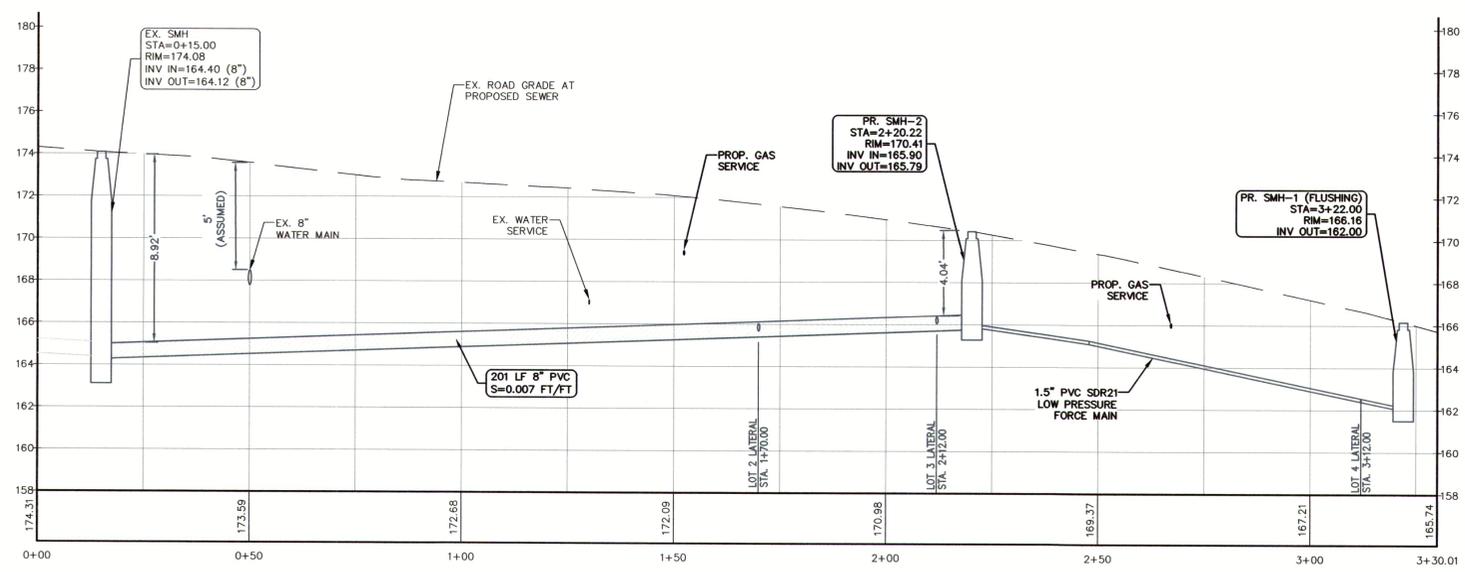
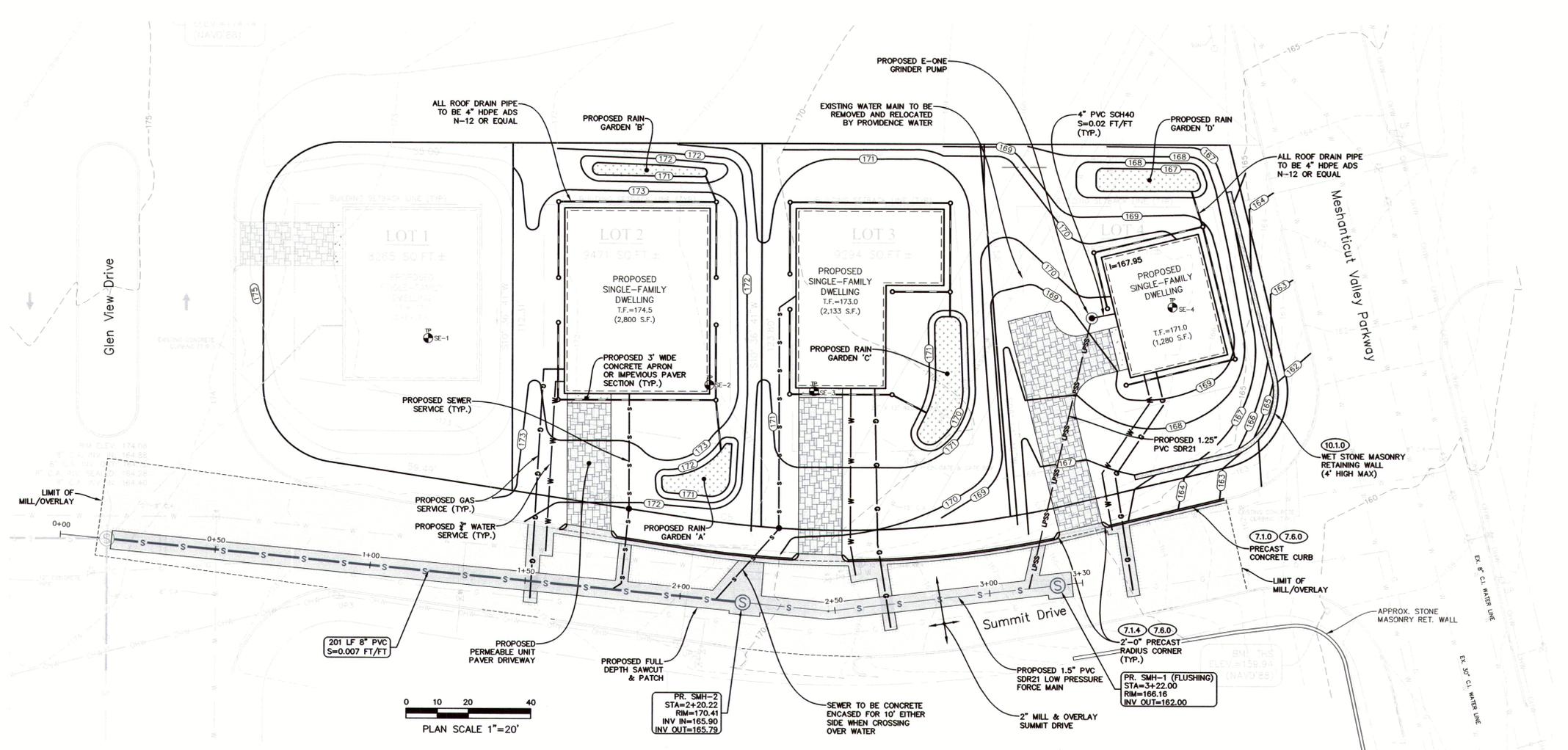
Advanced Civil Design, Inc.
CIVIL ENGINEERS
88 PEEPTOAD ROAD
SCITUATE, RI 02857
PH: (401) 644-8656

NO.	DATE	REVISION

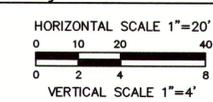
PROJECT:
Summit Estates
A.P. 16-4, LOTS 449 & 459
SUMMIT DRIVE
CRANSTON, RI
PREPARED FOR:
Summit Estate, LLC
35 TRIPOLO STREET
PROVIDENCE, RI 02909

SOIL EROSION & SEDIMENT CONTROL PLAN

DATE: MAY 2023	DESIGNED BY: C.S.R.
SCALE: 1"=20'	CHECKED BY: N.J.P.
DRAWING NO. C-1	



Sanitary Sewer Main Profile



Rain Garden Construction & Maintenance Notes

- CONSTRUCTION**
- A RIP-RAP / CRUSHED STONE APRON SHOULD BE INSTALLED AT THE ENTRANCE PIPE TO PREVENT CHANNELING.
 - A BERM TO DETAIN STORMWATER SHOULD BE CONSTRUCTED ALONG THE DOWNHILL SIDE OF THE RAIN GARDEN, PERPENDICULAR TO THE SLOPE OF THE LAWN.
 - ENSURE THE SOIL WITHIN THE RAIN GARDEN AREA DOES NOT BECOME COMPACTED BY CONSTRUCTION ACTIVITIES (I.E. HEAVY MACHINERY). IF SOIL BECOMES SEVERELY COMPACTED, TILL AND AMEND THE SOIL TO MAINTAIN PROPER DRAINAGE.
- LONG-TERM MAINTENANCE**
- RAIN GARDENS SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, THE RAIN GARDEN SHALL BE MONITORED AND MAINTAINED TO ASSURE PROPER FUNCTIONING. PLANT GROWTH AND SURVIVAL PLANTS SHALL BE REPLACED ON AN AS-NEEDED BASIS DURING THE GROWING SEASON.
 - SLT/SEDIMENT SHALL BE REMOVED FROM THE RAIN GARDEN WHEN THE ACCUMULATION EXCEEDS ONE INCH, OR WHEN WATER PONDS ON THE SURFACE OF THE RAIN GARDEN FOR MORE THAN 48 HOURS. THE TOP FEW INCHES OF MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH SOIL MIXTURE AND MULCH.
 - PRUNING OR REPLACEMENT OF WOODY VEGETATION SHALL OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
 - SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
 - FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
 - PERENNIAL PLANTS AND GROUND COVERS SHALL BE REPLACED AS NECESSARY TO MAINTAIN AN ADEQUATE VEGETATED GROUND COVER. ANNUAL PLANTS MAY ALSO BE USED TO MAINTAIN GROUND COVER.

Drainage & Utility General Notes

- THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY BASED ON BEST AVAILABLE INFORMATION. THE OWNER OR ITS REPRESENTATIVE(S) MUST VERIFY THIS INFORMATION PRIOR TO START OF CONSTRUCTION.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED BY THE CONTRACTOR. THE INFORMATION SHALL BE FURNISHED IN WRITING TO THE ENGINEER FOR THE RESOLUTION OF ANY CONFLICT.
- EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE, AND UTILITY COMPANY STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
- PAY FOR AND OBTAIN ALL PERMITS AS REQUIRED. COORDINATE WITH TOWN OF SMITHFIELD ENGINEER'S OFFICE FOR SOIL EROSION, STORMWATER, AND SANITARY SEWER PERMITS AND INSPECTIONS.
- ALL DRAINAGE PIPE SHALL BE HDPE (ADS N-12 OR EQUAL) UNLESS NOTED OTHERWISE.
- MATERIALS, INSTALLATION, TESTING, AND/OR DISINFECTION OF WATER DISTRIBUTION SYSTEM SHALL BE IN ACCORDANCE WITH "PROVIDENCE WATER SUPPLY BOARD", AND "STANDARD SPECIFICATIONS AND DETAILS FOR THE INSTALLATION OF SEWER AND APPURTENANCES BY PRIVATE DEVELOPERS".
- MATERIALS, INSTALLATION, AND TESTING OF SEWER MAINS, LATERALS, MANHOLES, FITTINGS, ETC. SHALL BE IN ACCORDANCE WITH CRANSTON SEWER AUTHORITY RULES AND REGULATIONS.

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 #18 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, AREAWAY 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 OR HEAVIER PVC PIPE FOR SEWER USE CONFORMING TO ASTM SPECIFICATIONS D-3034; OR CEMENT LINED DUCTILE IRON MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C151 /A21.51, C111/A21.11, AND C150/A21.50, OR AS APPROVED BY THE CITY PUBLIC WORKS DIRECTOR. ALL PIPES SHALL HAVE COMPRESSION JOINTS 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 1/4 INCH PER FOOT (21 cm/m). 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.
- 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 6".
- 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 T180.
- BACKFILL MATERIAL SHALL NOT CONTAIN FROZEN MATERIAL, LARGE DIRT CLODS, 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 DESIGNATION: 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" WASHED STONE SHALL BE PLACED UNDERNEATH ALL MANHOLE STRUCTURES. THE MINIMUM INTERNAL DIAMETER SHALL BE FORTY-EIGHT-INCHES (48"). ALL MANHOLE JOINTS AND MANHOLES 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 ALLOW 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.

Legend (PROPOSED)

- LOW LIMIT OF WORK
- PERIMETER EROSION CONTROL
- CONTOUR
- DRAIN PIPE
- SEWER PIPE
- WATER PIPE
- GAS PIPE
- SEWER MANHOLE
- CLEANOUT
- SAWCUTTING
- BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- UNIT PAVERS

RIDOT Standard Details

- 7.1.0 PRECAST CONCRETE CURB
- 7.1.4 PRECAST CONCRETE 2'-0" RADIUS CORNER
- 7.6.0 CURB SETTING DETAIL
- 10.1.0 WET STONE MASONRY RETAINING WALL

Groundwater Elev. Schedule

Soil Evaluation	Ex. Grade	Depth To Seasonal High GWT (inches)	SHGWT Elev.
SE-1	172.5	48	168.5
SE-2	171.0	30	168.5
SE-3	170.6	36	167.6
SE-4	167.4	48	163.4

Advanced Civil Design, Inc.
 CIVIL ENGINEERS
 88 PEEPOD ROAD
 SCITUATE, RI 02857
 PH: (401) 644-8656

NO.	DATE	REVISION
1	6/9/23	ADDRESS SEWER COMMENTS

Summit Estates
 A.P. 16-4, LOTS 449 & 459
 SUMMIT DRIVE
 CRANSTON, RI

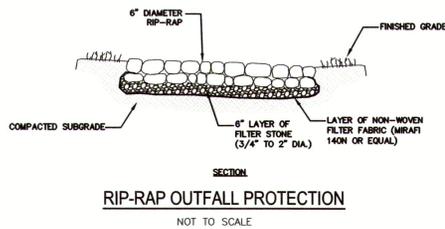
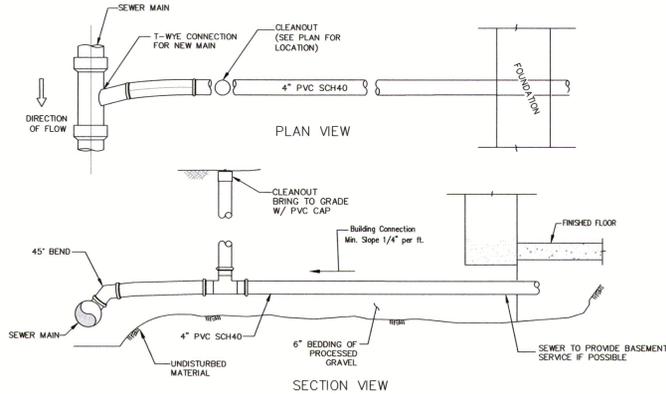
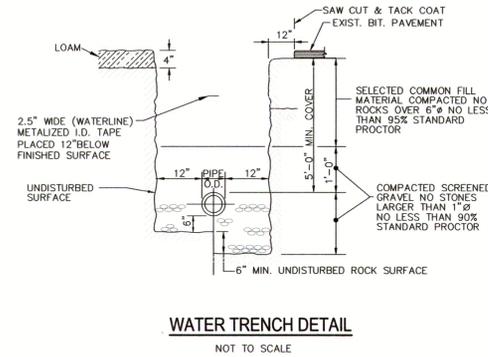
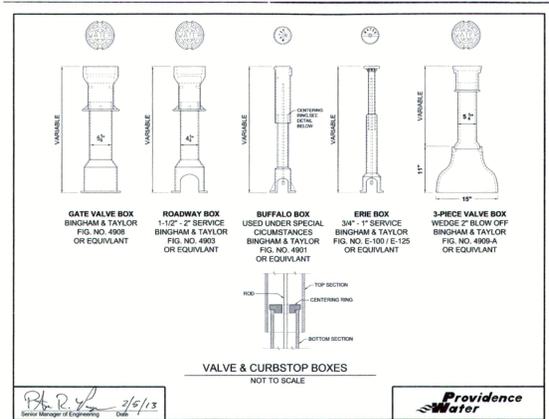
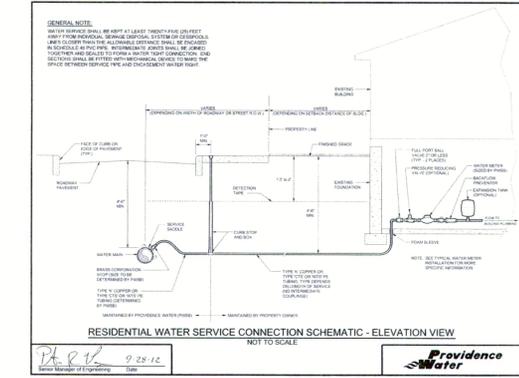
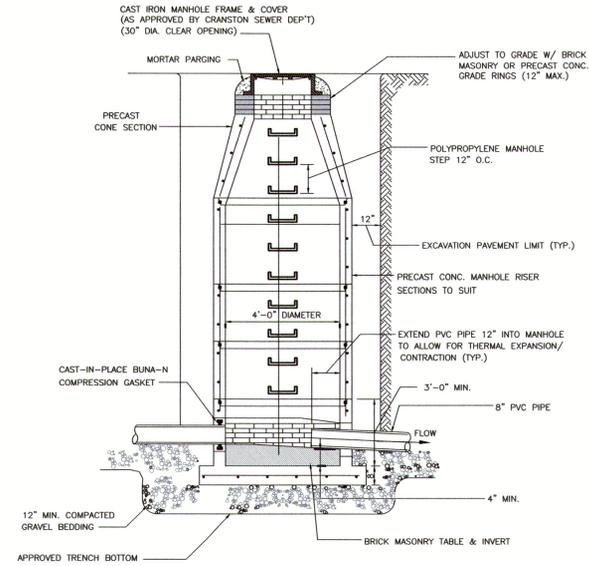
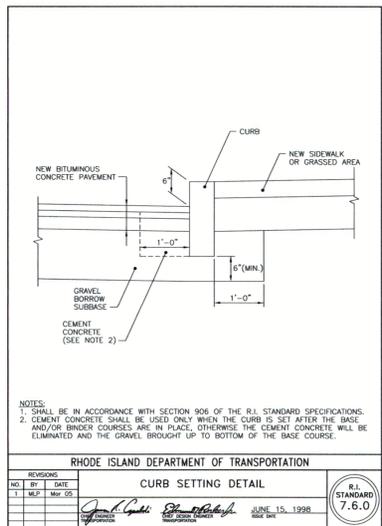
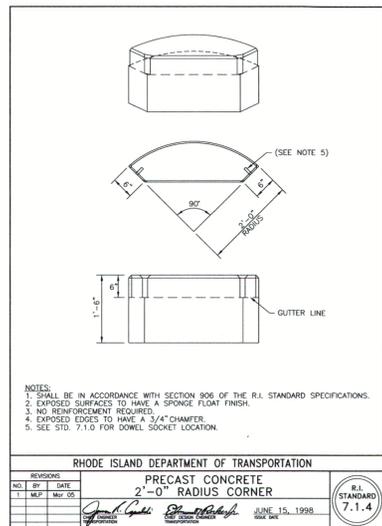
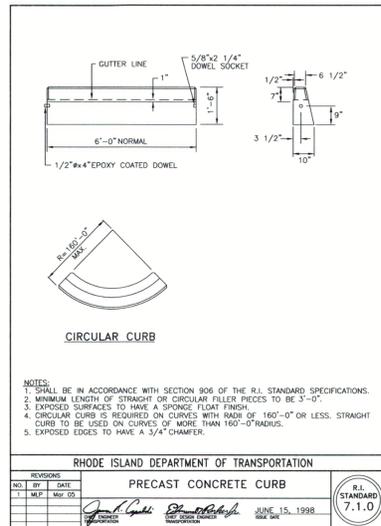
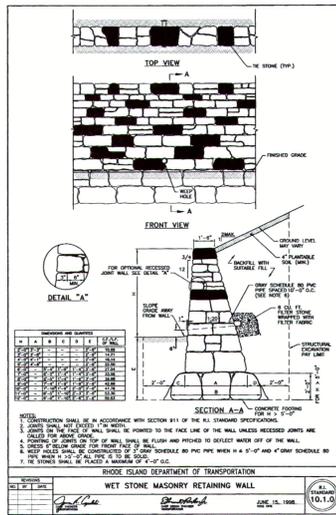
PREPARED FOR:
Summit Estate, LLC
 35 TROPOI STREET
 PROVIDENCE, RI 02909

DRAWING TITLE:
GRADING, DRAINAGE, & UTILITY PLAN

DATE: MAY 2023
 SCALE: 1"=20'
 DESIGNED BY: C.S.R.
 CHECKED BY: N.J.P.

DRAWING NO.
C-2

NICHOLAS J. PIAMPIANO
 No. 6512
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)



Rain Garden Elevation Table

RAIN GARDEN DESCRIPTION	'A'	'B'	'C'	'D'
SEASONAL HIGH GWT	168.50	168.50	167.60	163.40
TOP OF FILTER SOIL	171.00	171.00	170.00	167.00
TOP OF BERM / STORAGE	172.00	172.00	171.00	168.00
WATER QUALITY ELEV.	170.26	170.63	169.16	166.12
1-YEAR STORM ELEV.	171.08	171.31	169.93	166.78
10-YEAR STORM ELEV.	171.52	171.77	170.36	167.26
100 YEAR STORM ELEV.	172.02	172.05	171.02	167.76

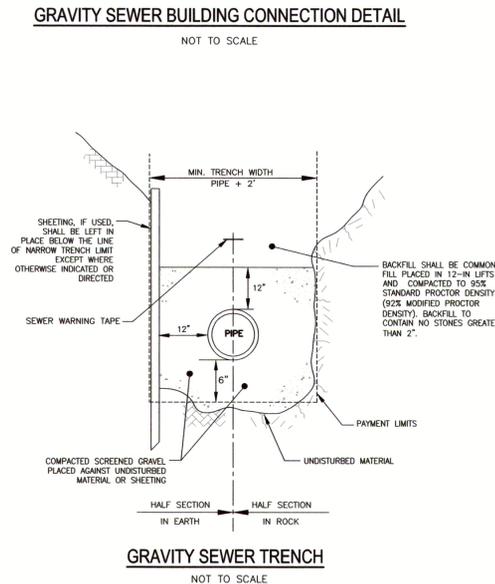
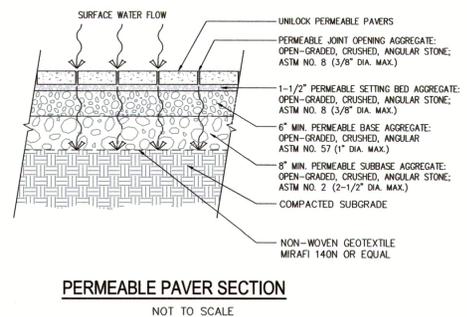
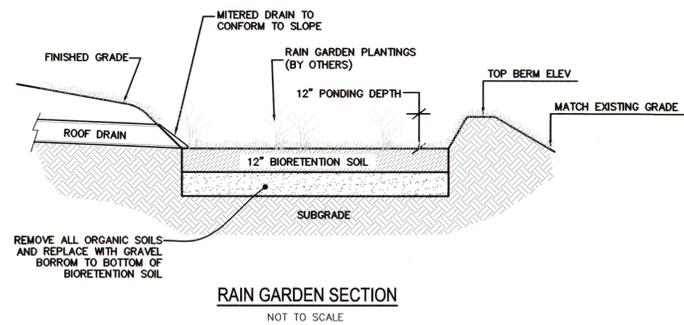
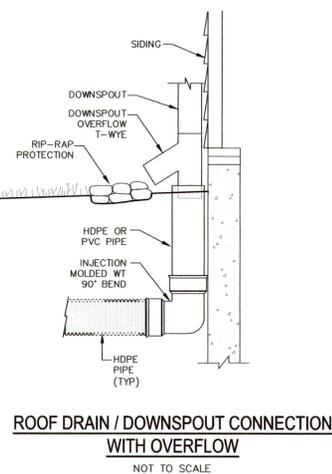
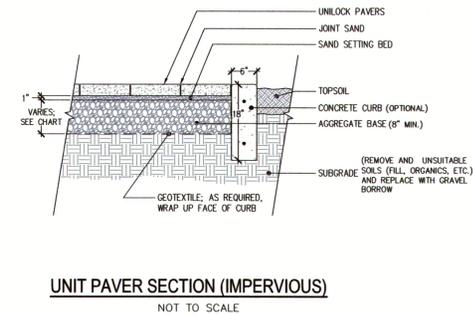
Bioretention Soil Mix Specification

The bioretention soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain 65-85% sand by volume). The clay content for these soils should be (less than 2% by volume). A permeability of at least 2.0 feet per day (1.0 in/hr) is required. The soil should be free of stones, stumps, roots, other woody material over 1 inch in diameter, or brush/branches from noxious weeds. Placement of the planting soil should be in lifts of 12 to 18 inches, loosely compacted (tamped lightly with a dozer or backhoe bucket). The specific characteristics are presented in the table below.

Table B-3 Planting Soil Characteristics

Parameter	Value
Organic matter	3 to 6%
Clay	0 to 2%
Silt	0 to 12%
Sand	95-98%

*Soil characteristics. Align with soils with aged leaf compost and acceptable texture.



Advanced Civil Design, Inc.
 CIVIL ENGINEERS
 88 PEEPTOAD ROAD
 SCITUATE, RI 02857
 PH: (401) 644-8656

NO.	DATE	REVISION
1	6/9/23	ADDRESS SEWER COMMENTS

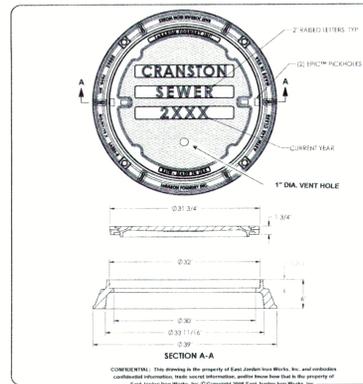
Summit Estates
 A.P. 16-4, LOTS 449 & 459
 SUMMIT DRIVE
 CRANSTON, RI
 PREPARED FOR:
Summit Estate, LLC
 35 TRIPOLI STREET
 PROVIDENCE, RI 02909

DRAWING TITLE: DETAILS

DATE: MAY 2023	DESIGNED BY: C.S.R.
SCALE: AS NOTED	CHECKED BY: N.J.P.
DRAWING NO. _____	

NICHOLAS J. PIAMPIANO
 No. 6512
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

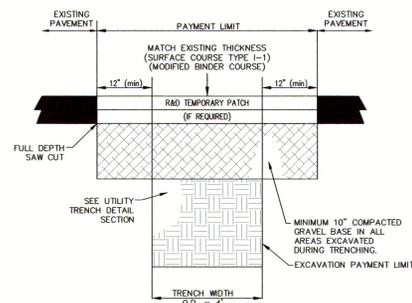
C-3



EJW EAST JORDAN
 800-843-8633
 www.ejw.com
 MADE IN USA
 PROJECT NUMBER
NPR - TBD
 CATALOG NUMBER
**2006A
 2006Z**
 ASSEMBLY
 LODES EXHIBIT
HEAVY DUTY
 COATING
UNDIPPED
 SPECIFICATION
 COVER - GRAY IRON
 ASTM A48 C136B
 FRAME - GRAY IRON
 ASTM A48 C136B

OPEN AREA
 N/A
 DESIGNATED
 MACHINED SURFACE
 DRAWN: DATE:
 SBH 04/13/09
 LAST REVISION: DATE:

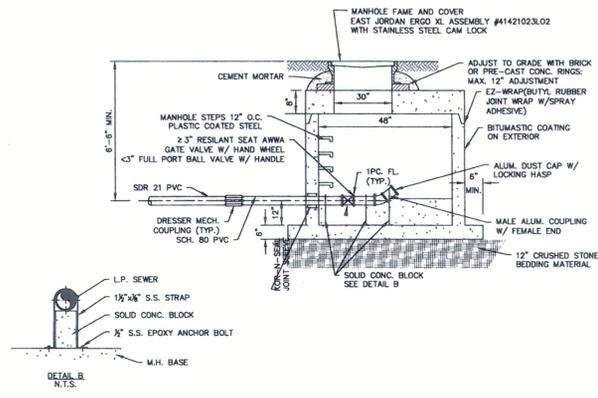
SEWER MANHOLE COVER
 NOT TO SCALE



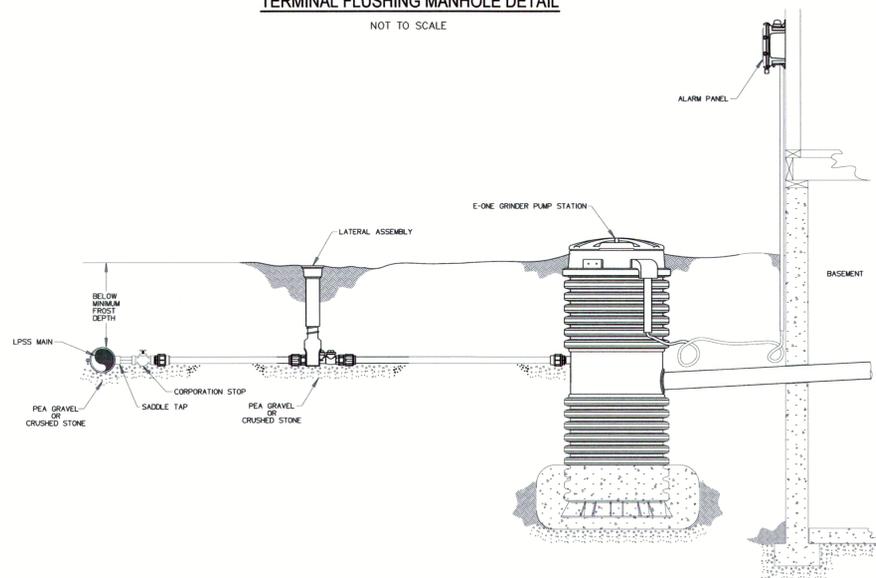
NOTES:

1. REMOVE AND DISPOSE OF TOP 10" OF SELECTED BACKFILL AND RE-COMPACT TOP OF TRENCH PRIOR TO SPREADING THE BASE COURSE.
2. EXISTING PAVEMENT SHALL BE SAW CUT BACK AN ADDITIONAL 12" TO PAYMENT LIMIT LINE OR UNDISTURBED PAVEMENT, WHICHEVER IS GREATER.
3. TEMPORARY BITUMINOUS PAVEMENT, SELECTED BACKFILL AND UNSUITABLE MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF THE PERMANENT PAVEMENT.
4. ALL PREPARATION WORK SHALL BE APPROVED BY THE PROPER AUTHORITY PRIOR TO BACKFILL AND PAVING.

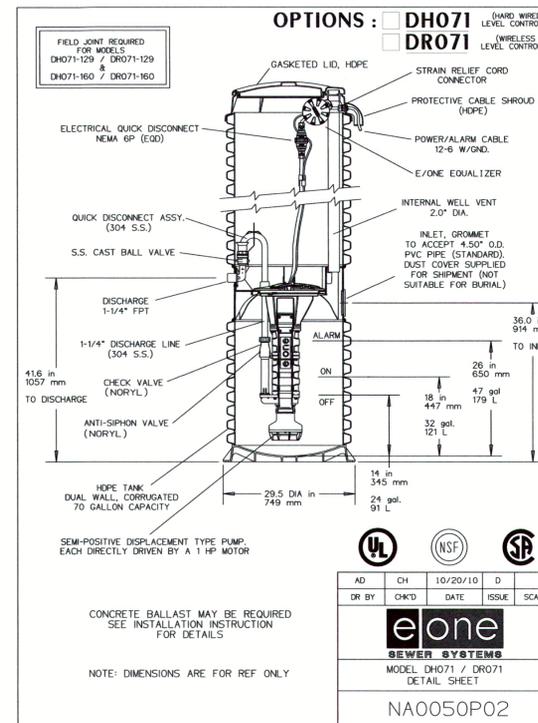
TRENCH SAWCUT & PATCH DETAIL
 NOT TO SCALE



TERMINAL FLUSHING MANHOLE DETAIL
 NOT TO SCALE



TYPICAL LOW PRESSURE SEWER LATERAL INSTALLATION
 E/ONE SEWER® SYSTEMS
 NOT TO SCALE



Advanced Civil Design, Inc.
 CIVIL ENGINEERS
 88 PEEPTOAD ROAD
 SCITUATE, RI 02857
 PH: (401) 644-8656

NO.	DATE	REVISION
1	6/9/23	ADDRESS SEWER COMMENTS

PROJECT:
Summit Estates
 A.P. 15-4, LOTS 449 & 459
 SUMMIT DRIVE
 CRANSTON, RI

PREPARED FOR:
Summit Estate, LLC
 35 TRIPOU STREET
 PROVIDENCE, RI 02909

DRAWING TITLE:
DETAILS

DATE: MAY 2023	DESIGNED BY: C.S.R.
SCALE: AS NOTED	CHECKED BY: N.J.P.
DRAWING NO.	

NICHOLAS J. PIAMPIANO
 No. 6512
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

C-4