

**PRELIMINARY PLAN FILING
FOR A PROPOSED 4-LOT RESIDENTIAL COMPOUND (MINOR SUBDIVISION)**

THE FARMLANDS

**1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96**

ZONING DISTRICT: RESIDENCE R-40

APPROVALS:

- JOHNSTON PLANNING BOARD OF REVIEW - MINOR SUBDIVISION PRE-APPLICATION / CONCEPT REVIEW PLAN (AUGUST 3, 2021)**
- JOHNSTON PLANNING BOARD OF REVIEW - PRELIMINARY PLAN (APRIL 5, 2022)**
- PROVIDENCE WATER SUPPLY BOARD**
- TOWN OF JOHNSTON ENGINEERING**

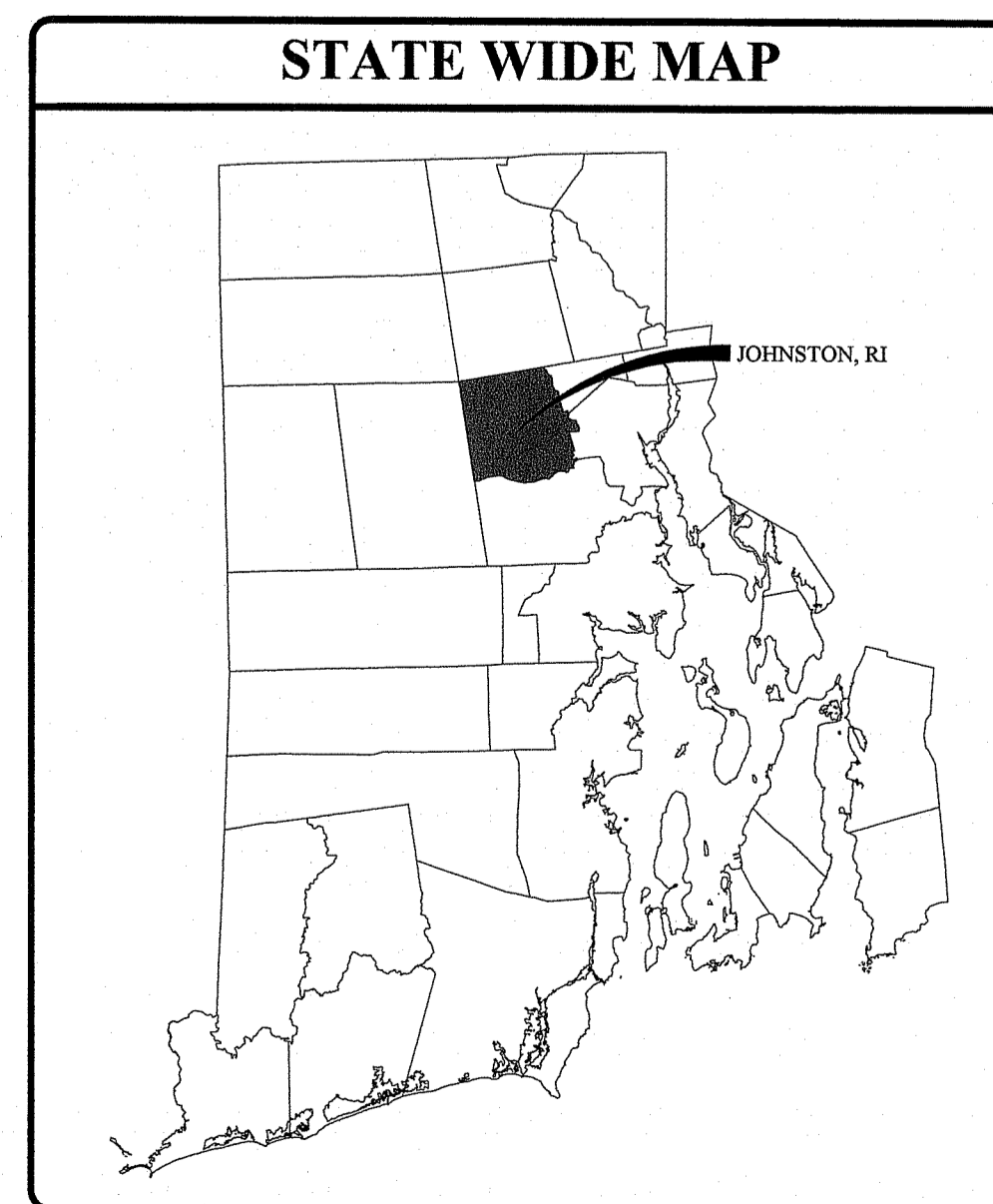
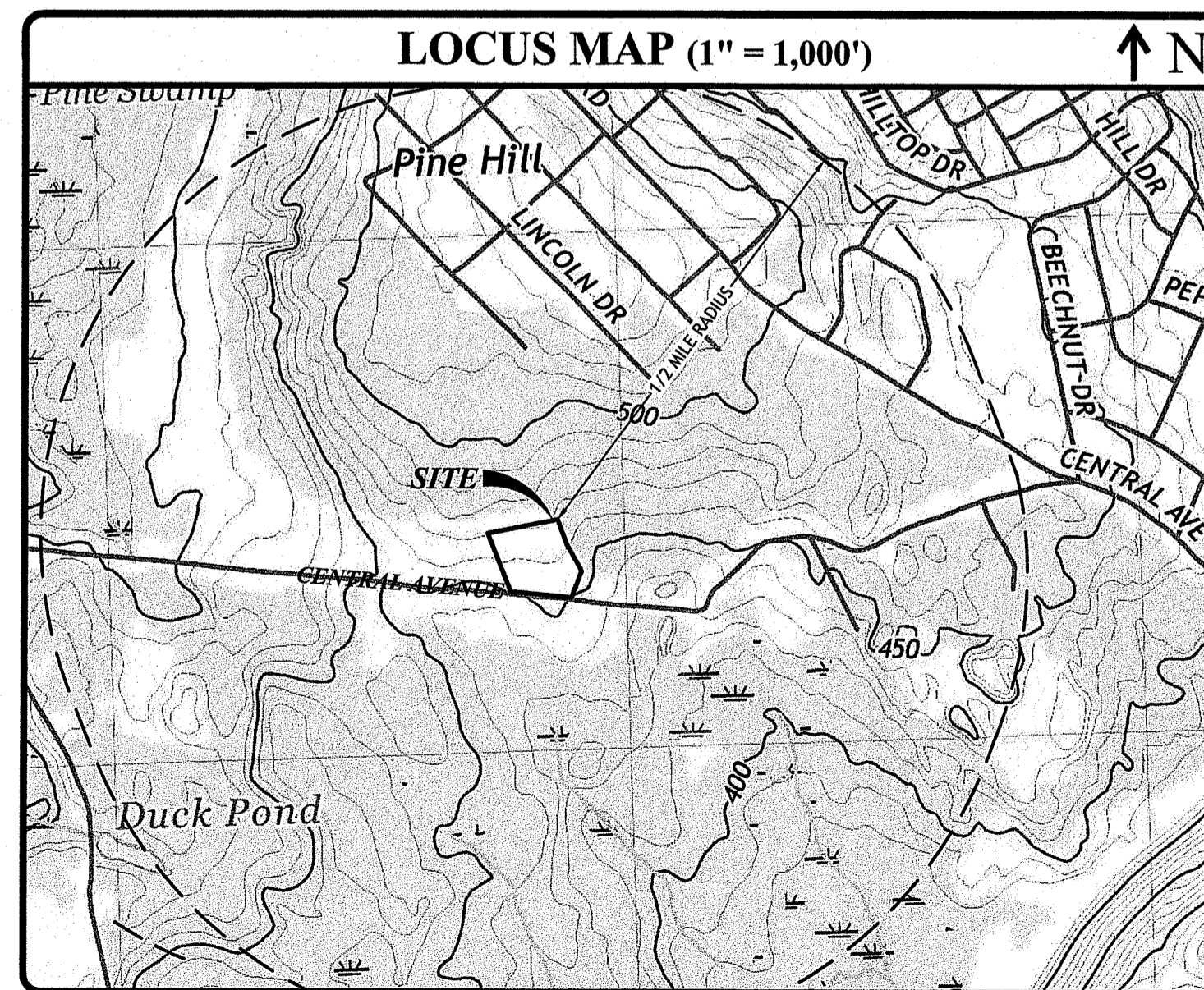
FILINGS:

- RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - PRELIMINARY DETERMINATION APPLICATION**
- RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - SUBDIVISION SITE SUITABILITY APPLICATION**

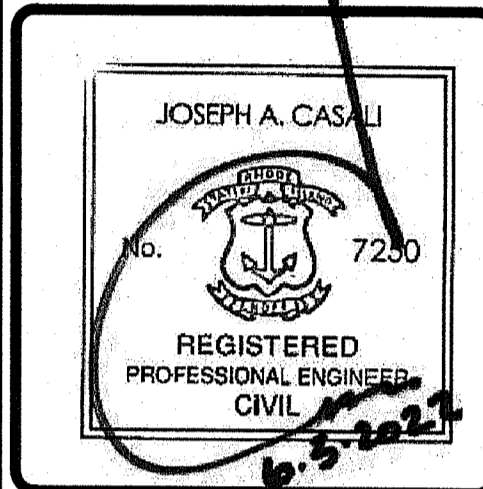
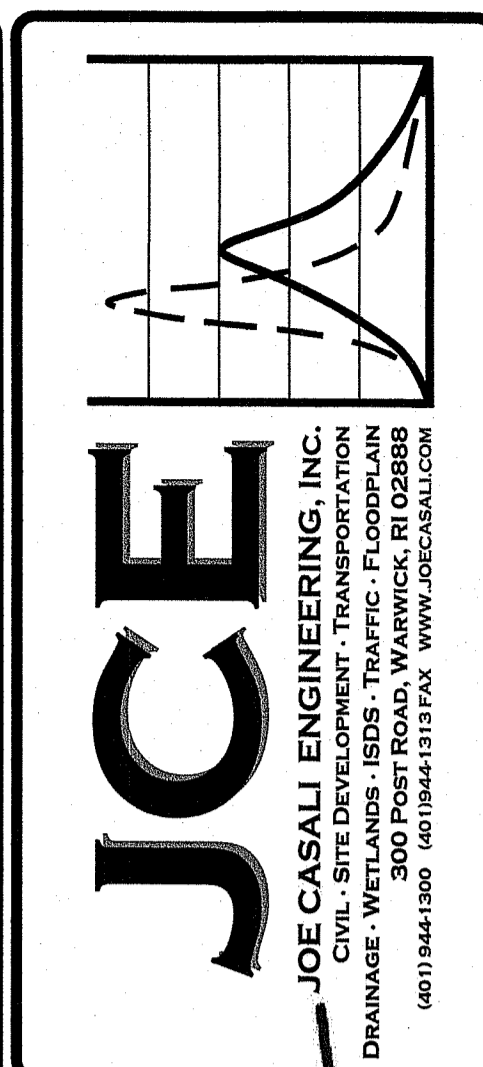
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: AUG 23 2022 FILE # 22-00716
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Matthew J. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 NOTE PER DEM:
 Kindly be advised that this Permit
 is not equivalent to a
 verification of the type or extent
 of freshwater wetlands on site

PROJECT TEAM			
OWNER/ APPLICANT:	A.G. CONSTRUCTION, INC. P.O. BOX 600 PORTSMOUTH, RI 02871 PHONE: 401-623-5900	LAND SURVEYOR:	WATERMAN ENGINEERING CO. 46 SUTTON AVENUE EAST PROVIDENCE, RI 02914 PHONE: 401-438-5775
CIVIL ENGINEER:	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313 JOECASALI.COM	WETLAND BIOLOGIST:	NATURAL RESOURCE SERVICES 180 TINKHAM LANE PO BOX 311 HARRISVILLE, RI 02830 PHONE: (401) 568-7490



INDEX OF DRAWINGS	
SHEET NO.	SHEET DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	SITE PREPARATION PLAN
4	SITE PLAN
5	GRADING AND DRAINAGE PLAN
6	UTILITY PLAN
7	ROADWAY PROFILE
8	CIVIL/SITE DETAILS I
9	CIVIL/SITE DETAILS II
10	TYPICAL OWTS DETAILS I
11	TYPICAL OWTS DETAILS II
RI	BOUNDARY & TOPOGRAPHIC SURVEY PLAN, PREPARED BY WATERMAN ENGINEERING COMPANY, OCTOBER 2021



THE FARMLANDS
PROPOSED MINOR SUBDIVISION
 1257 CENTRAL AVENUE
 JOHNSTON, RHODE ISLAND
 AP 43-4, LOT 96
 RI Environmental Management
 JUN 08 2022
 Office of Water Resources

REVISIONS:		
NO.	DATE	DESCRIPTION
1	6/2022	RIDEM COMMENTS

DESIGNED BY: WMLJR
 DRAWN BY: SEP/SD
 CHECKED BY: JAC
 DATE: FEB. 2022
 PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

COVER SHEET

SHEET 1 OF 11

GENERAL NOTES:

- CLASS I PROPERTY LINE AND CLASS III TOPOGRAPHIC SURVEY COMPLETED BY WATERMAN ENGINEERING COMPANY, 46 SUTTON AVENUE, EAST PROVIDENCE, RI 02914 IN OCTOBER 2021.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
- THIS SITE LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD), AS SHOWN ON THE FIRM MAP FOR THE TOWN OF JOHNSTON, COMMUNITY PANEL NO. 44007C0283H, EFFECTIVE OCTOBER 2, 2015. FEMA HAS NOT PUBLISHED ANY DATA FOR THE PERENNIAL STREAM LOCATED ON THE WESTERLY SIDE OF THE SUBJECT PARCEL. THE PERENNIAL STREAM FALLS UNDER THE JURISDICTION OF RIDEM AND IS AFFORDED A 100-FT RIVERBANK WETLAND.
- SOILS EXISTING ON THE SITE CONSISTS OF WOODBRIDGE FINE SANDY LOAM, 0-8 PERCENT SLOPES, VERY STONY (Wha), PAXTON FINE SANDY LOAM, 3-8 PERCENT SLOPES (Pab), AND RIDGEBURY, LEICESTER AND WHITMAN SOILS, 0-8 PERCENT SLOPES, EXTREMELY STONY (Rf). SOIL EVALUATION TEST HOLES FOR ON-SITE WASTEWATER TREATMENT SYSTEM (OWTS) DESIGN WERE PERFORMED BY AVIZINIS ENVIRONMENTAL SERVICES, INC. IN NOVEMBER 2021.
- FRESHWATER WETLANDS WERE DELINEATED IN MARCH 2021 BY NATIONAL RESOURCES SERVICES, INC., P.O. BOX 311 HARRISVILLE, RI 02830.
- THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE POCASSET RIVER WATERSHED (RIDEM INVENTORY #010900040608). THERE ARE NO EXTRAORDINARY OR UNUSUAL FEATURES ON THE SUBJECT SITE.
- AN EASEMENT MAY EXIST REGARDING THE EXISTING OVERHEAD ELECTRIC SERVICE AND POLES OVER AND ACROSS AP 43-3, LOT 96 AS SHOWN ON THE PLANS (NO RECORDS FOUND).
- TELEPHONE, ELECTRIC AND WATER SERVICES ARE AVAILABLE FROM WITHIN CENTRAL AVENUE.

SITE NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
- 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.
- STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
- ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
- 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. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
- 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.
- 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. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
- 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 TOWN AT NO ADDITIONAL COST TO THE OWNER.
- ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
- 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.
- THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
- ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
- WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
- ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
- 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.
- ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, 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, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- 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.
- THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
- ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH SILT SACK SEDIMENT TRAPS AND/OR STRAW WATTLES DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0), OR STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) OUTLET PROTECTION (STAKED HAYBALE OR STAKED HAYBALE WITH SILT FENCE) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDING AREAS TO ENSURE THAT A GOOD STAND OF VEGETATION IS MAINTAINED.
- 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.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
- THE SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. WEEKLY INSPECTION REPORTS SHALL BE PREPARED IN ACCORDANCE WITH THE PROJECT'S SOIL EROSION AND SEDIMENTATION CONTROL PLAN (SESCP). THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE SILT FENCE BECOMES FILLED WITH SEDIMENTS.
- 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. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE ENGINEER, TOWN ENGINEER, OR OWNER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
- 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", ISSUED 1989 (REVISED 2014, UPDATED 2016).

DRAINAGE SYSTEM NOTES:

- THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HDPE PIPE OR AN APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE SITE PLANS.
 - ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.
- BMP MAINTENANCE SCHEDULE:**
- PRIOR TO THE START OF CONSTRUCTION, THE SITE CONTRACTOR SHALL STAKE OUT AND PROTECT ALL SURFICIAL STORMWATER INFILTRATION AREAS, INCLUDING THE SEDIMENT FOREBAY AND SAND FILTER BASIN. CONSTRUCTION TRAFFIC IS NOT ALLOWED WITHIN THE INFILTRATION AREAS. CONSTRUCTION FENCING SHALL BE USED TO PROTECT AREA FROM CONSTRUCTION TRAFFIC. STORMWATER INFILTRATION AREAS SHALL BE PROTECTED FROM RUNOFF DURING CONSTRUCTION AND MAY NOT BE USED AS TEMPORARY SEDIMENTATION AREAS DURING CONSTRUCTION. SILT FENCE SHALL BE USED TO PROTECT THESE AREAS FROM RUNOFF.
 - ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
 - MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.
 - 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. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.
 - 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.
 - 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. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE INSTALLATION, CLEANING, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, 2010).
 - STORMWATER BMPs SHALL BE INSPECTED AND MAINTAINED BY THE OWNER AS FOLLOWS:

RAIN GARDENS

- 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 GROWING SEASON.
- SILTS/SEDIMENT SHALL BE REMOVED FROM THE RAIN GARDEN WHEN 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 & MULCH.
- PRUNING OR REPLACEMENT OF WOODY VEGETATION SHALL OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
- SOIL EROSION GULLIES SHALL BE REPAIRED AS THEY OCCUR.
- FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
- PERENNIAL PLANTS AND GROUND COVER SHALL BE REPLACED AS NECESSARY TO MAINTAIN AN ADEQUATE VEGETATED GROUND COVER. ANNUAL PLANTS MAY ALSO BE USED TO MAINTAIN GROUND COVER.
- SNOW STORAGE IS PROHIBITED WITHIN RAIN GARDENS.

PEA GRAVEL DIAPHRAGMS

- PEA GRAVEL DIAPHRAGMS SHALL BE INSPECTED BI-ANNUALLY FOR SEDIMENT BUILDUP AND SEDIMENT SHALL BE REMOVED WHEN IT REACHES 25% OF THE TOTAL STORAGE VOLUME.
- PEA GRAVEL DIAPHRAGMS SHALL BE KEPT FREE FROM LITTER AND DEBRIS.
- SNOW STORAGE IS PROHIBITED WITHIN PEA GRAVEL DIAPHRAGMS.

INFILTRATION TRENCHES

- AFTER CONSTRUCTION, THE INFILTRATION TRENCHES SHALL BE INSPECTED ON AN ANNUAL BASIS FOR SEDIMENT BUILDUP AND SEDIMENT SHALL BE REMOVED WHEN IT REACHES 25% OF THE TOTAL STORAGE VOLUME.
- LITTER AND DEBRIS SHALL BE REMOVED AND PROPERLY DISPOSED OF.
- VEGETATION ALONG THE SYSTEM SHOULD BE MOWED AS FREQUENTLY AS NEEDED TO MAINTAIN HEIGHTS BETWEEN 2 TO 3 INCHES.
- SNOW STORAGE IS PROHIBITED WITHIN INFILTRATION TRENCHES.

- 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. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO 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, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
- 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. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

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. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
- 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.

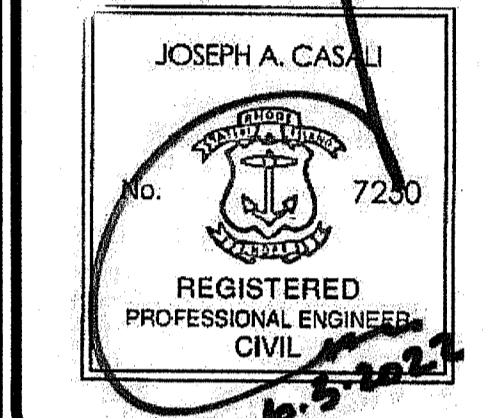
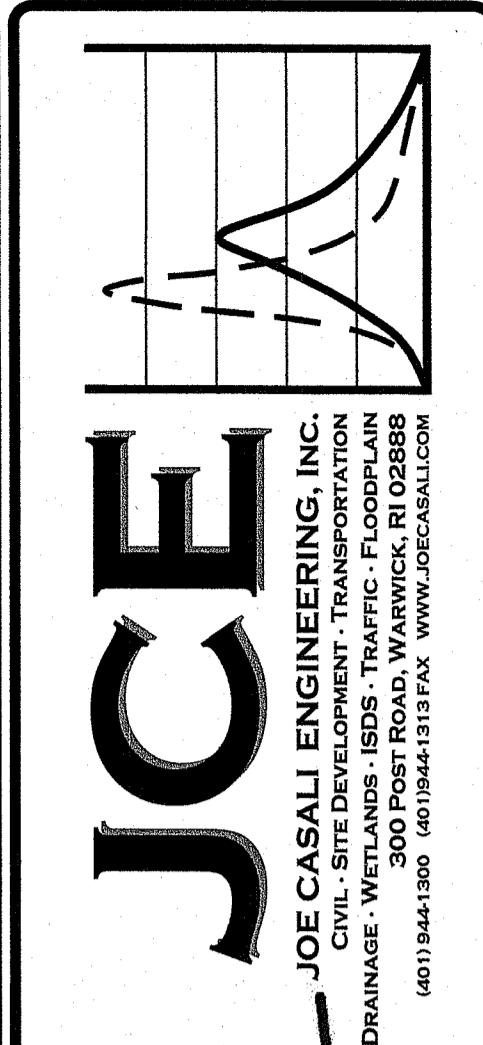
MISCELLANEOUS UTILITY NOTES:

- PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- 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 TOWN OF SMITHFIELD.
- 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.
- 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.

LEGEND:

- EXISTING PROPERTY LINE
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- WETLAND EDGE
- WETLAND FLAG
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING CURB
- PROPOSED CURB
- EXISTING METAL FENCE
- CHAIN LINK FENCE
- EXISTING DRAIN LINE
- PROPOSED DRAIN LINE
- EXISTING DRAINAGE MANHOLE
- PROPOSED DRAINAGE MANHOLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE
- EXISTING TELECOM DUCTBANK
- EXISTING ELECTRIC DUCTBANK
- PROPOSED GAS LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- WATER GATE
- WATER VALVE
- EXISTING SEWER LINE
- PROPOSED SEWER LINE
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- N/F NOW OR FORMERLY
- TREELINE
- SILT FENCE
- LIMIT OF DISTURBANCE
- TEST HOLE
- BOLLARD
- HYDRANT
- LAMP POLE
- FIRE DEPARTMENT CONTROL
- EXISTING HANDICAP
- PROPOSED HANDICAP
- EXISTING TREE

RI Environmental Management
JUN 06 2022
Office of Water Resources



**THE FARMLANDS
PROPOSED MINOR SUBDIVISION**
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: AUG 23 2022 FILE #: 22-0076
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

NO.	DATE	DESCRIPTION
1	6/2022	RIDEM COMMENTS

DESIGNED BY:	WMLJR
DRAWN BY:	SEP/SD
CHECKED BY:	JAC
DATE:	FEB, 2022
PROJECT NO.:	21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

GENERAL NOTES & LEGEND

SHEET 2 OF 11

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

ZONING CRITERIA	REQUIRED	EXISTING (LOT 96)
ZONING DISTRICT	R-40	R-40
MINIMUM LOT AREA	40,000 SF	209,100 SF
MINIMUM LOT WIDTH AND FRONTAGE (1)	140 FT	379.81 FT
MINIMUM FRONT YARD DEPTHS	40 FT	231.7 FT
MINIMUM SIDE YARD DEPTH	35 FT	100.3 FT
MINIMUM REAR YARD DEPTH	75 FT	217.0 FT
MAXIMUM STRUCTURE HEIGHT (MAIN)	30 FT	<30 FT
MAXIMUM BUILDING COVERAGE	15%	0.91%

(1) LOT WIDTH AND FRONTAGE SHALL BE CONTINUOUS, NOT INTERRUPTED BY ANY OTHER LOT AND ON A TOWN-ACCEPTED ROAD.

SOIL EVALUATION TEST PIT DATA			
	SURFACE EL.	SHWT / EL.	LEDGE / EL.
TH-1A	438.2	18"/436.7	NE
TH-1B	432.0	18"/430.5	NE
TH-2A	443.0	30"/440.5	NE
TH-2B	438.0	29"/435.6	NE
TH-3A	449.0	60"/444.0	NE
TH-3B	440.5	72"/434.5	NE
TH-4A	433.5	12"/432.5	NE
TH-4B	430.3	22"/428.5	NE
TH-4C	431.8	18"/430.3	NE
TH-5 SW	426.5	21"/424.8	NE

NOTE: TEST PITS TH-1A THROUGH TH-5 SW WERE OBSERVED AND DOCUMENTED BY AVIZINIS ENVIRONMENTAL SERVICES, INC., IN NOVEMBER 2021. SOIL EVALUATION LOGS ARE AVAILABLE TO THE CONTRACTOR UPON REQUEST. NE = NOT ENCOUNTERED.

CESSPOOL ABANDONMENT PROCEDURE:

- EXISTING CESSPOOL TO BE EMPTIED OF ALL CONTENTS, CRUSHED AND FILLED WITH COMMON BORROW PLACED IN 12" THICK LOOSE LIFTS COMPACTED TO 92% MODIFIED PROCTOR.

RI Environmental Management
JUN 06 2022
Office of Water Resources

JCE
JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRANSPORTATION
DRINKWATER, 500 POST ROAD, WARWICK, RI 02886
(401) 944-1300 (401) 944-1313 FAX WWW.JCEASAL.COM

JOSEPH A. CASALI
No. 7250
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: AUG 23 2022 FILE #: 22-0076
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

**THE FARMLANDS
PROPOSED MINOR SUBDIVISION
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96**

REVISIONS:

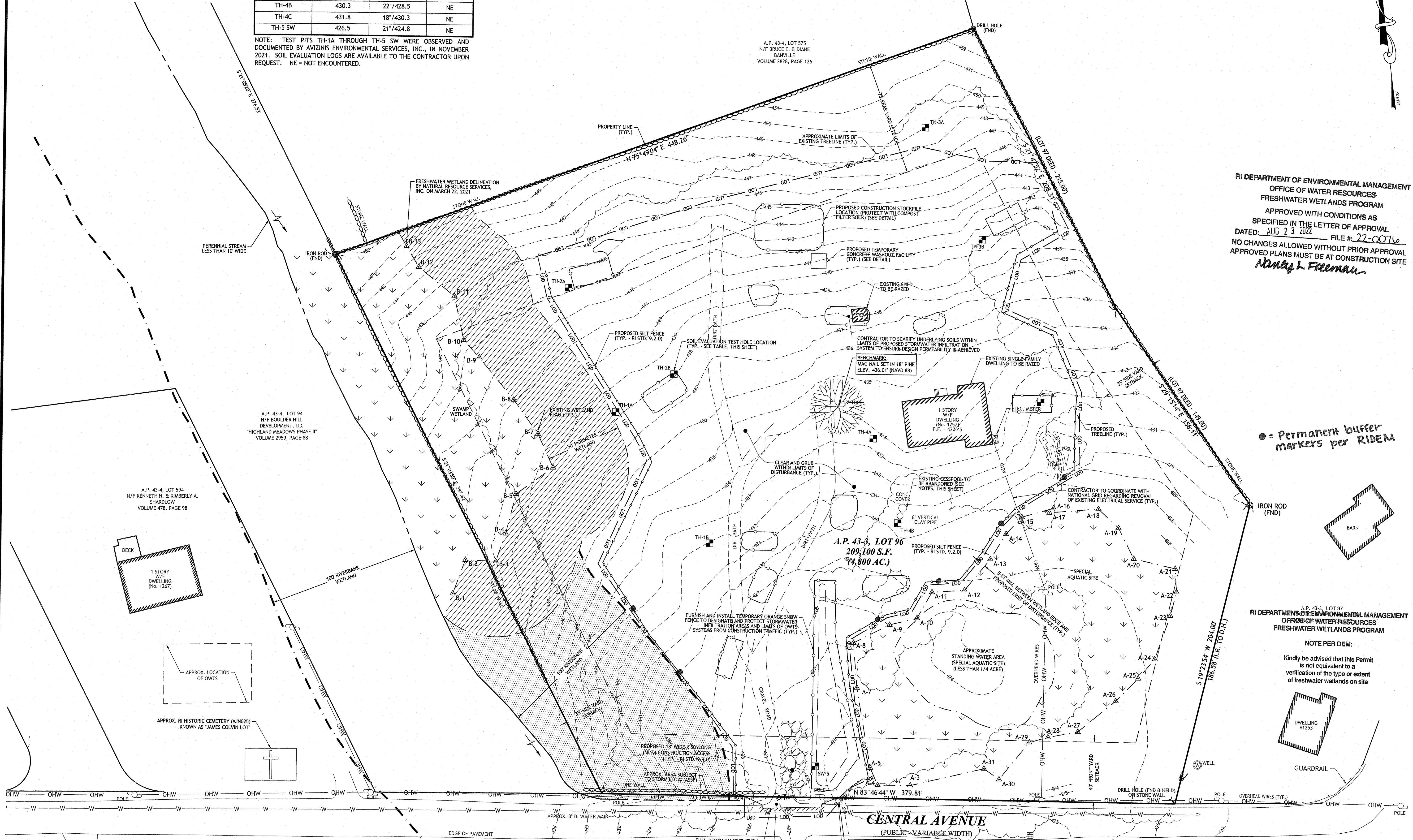
NO.	DATE	DESCRIPTION
1	6/2022	RIDEM COMMENTS

DESIGNED BY: WMLJR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: FEB. 2022
PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

SITE PREPARATION PLAN

SHEET 3 OF 11



● = Permanent buffer markers per RIDEM

NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

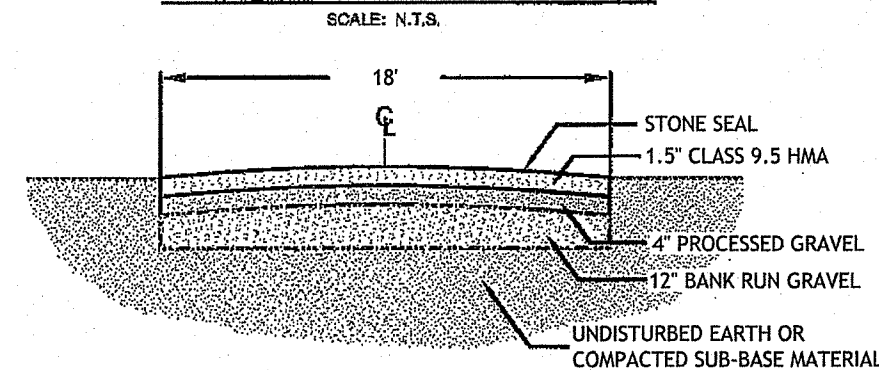
SCALE (FEET)
0 15 30 60 120
1 INCH = 30 FT

Q:\21-64-Angelo Griffin\ACAD\1257 Central Pike [Preliminary Plan] - RTC DEM.dwg Jun. 03, 2022 1:28pm

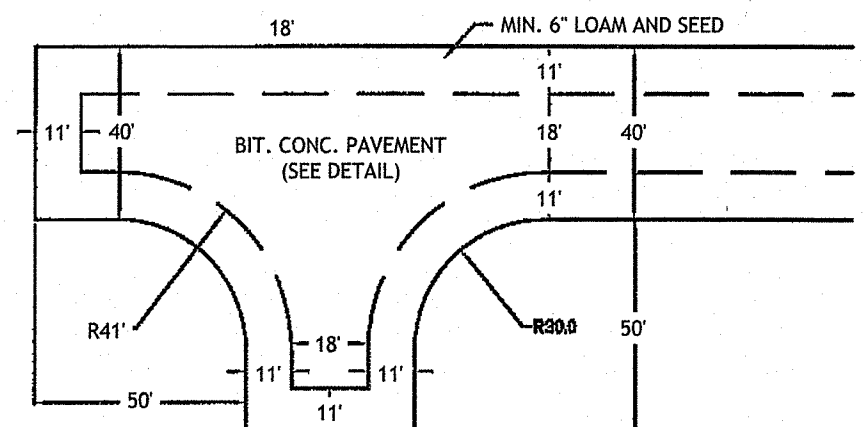


**Town of Johnston
Planning Department
RESIDENTIAL COMPOUND / PRIVATE STREETS
IN MINOR SUBDIVISIONS**

PAVEMENT DETAIL FIGURE (B)



**HAMMERHEAD (ALTERNATE) TURNAROUND FOR MINOR
SUBDIVISION RESIDENTIAL COMPOUND (PRIVATE)**



**1 TOWN OF JOHNSTON
PRIVATE ROADWAY CROSS-SECTION & HAMMERHEAD TURN-AROUND
NOT TO SCALE**

YIELD CALCULATION:

TOTAL AREA OF LOT 96: 209,100 SF
BUILDABLE AREA: 172,816 SF
YIELD = 172,816 SF / 40,000 SF = 4.32

ALLOWED YIELD: 4 LOTS
PROPOSED: 4 LOTS

ZONING CRITERIA	REQUIRED	EXISTING (LOT 96)	PROPOSED			
			LOT 1	LOT 2	LOT 3	LOT 4
ZONING DISTRICT	R-40	R-40	RS-40	RS-40	RS-40	RS-40
MINIMUM LOT AREA	40,000 SF	185,130 SF	40,367 SF	51,697 SF	40,727 SF	76,309 SF
MINIMUM LOT WIDTH AND FRONTAGE (1)	140 FT	379.81 FT	277.85 FT	182.34 FT	182.34 FT	277.85 FT
MINIMUM FRONT YARD DEPTHS	40 FT	231.7 FT	40.00 FT	41.00 FT	48.20 FT	48.00 FT
MINIMUM SIDE YARD DEPTH	35 FT	100.3 FT	71.86 FT	38.25 FT	53.41 FT	52.61 FT
MINIMUM REAR YARD DEPTH	75 FT	217.0 FT	76.63 FT	177.25 FT	104.41 FT	185.33 FT
MAXIMUM STRUCTURE HEIGHT (MAIN)	30 FT	<30 FT	<30 FT	<30 FT	<30 FT	<30 FT
MAXIMUM BUILDING COVERAGE	15%	0.95%	4.46%	3.48%	4.42%	2.36%

(1) LOT WIDTH AND FRONTAGE SHALL BE CONTINUOUS, NOT INTERRUPTED BY ANY OTHER LOT AND ON A TOWN-ACCEPTED ROAD.

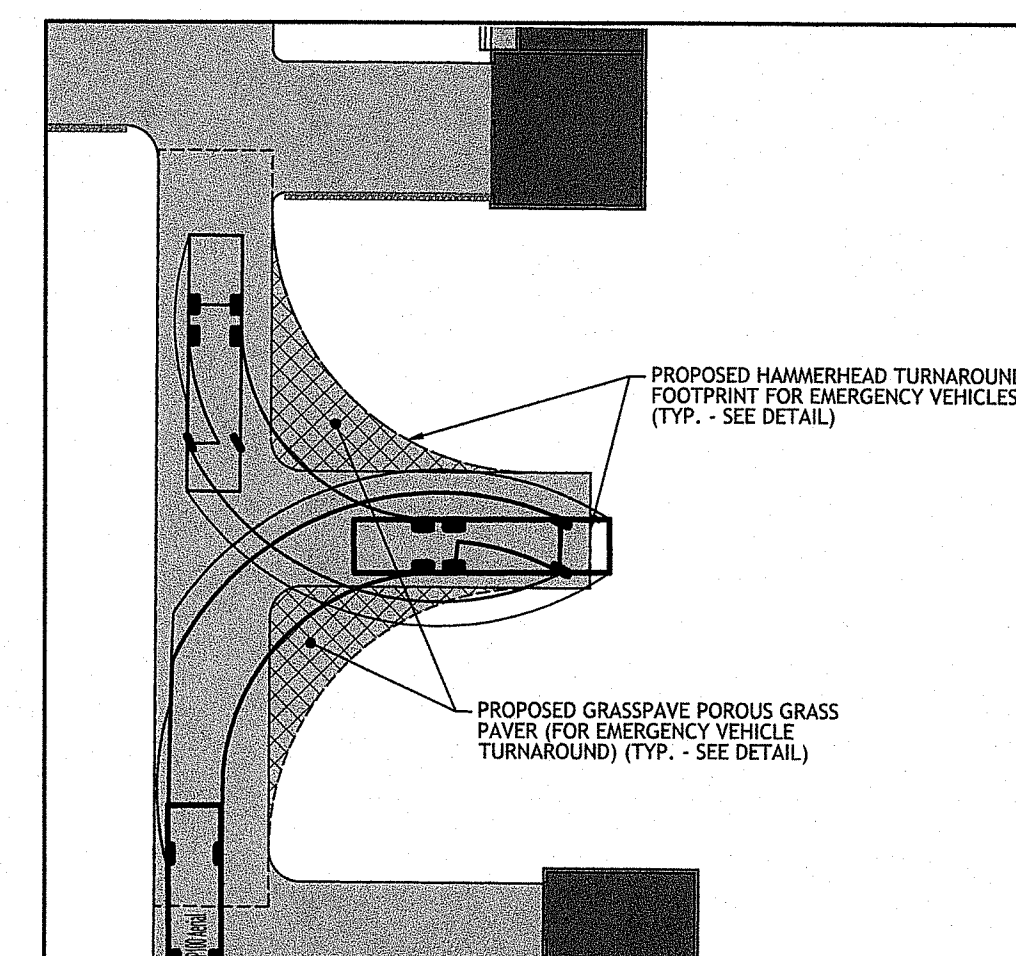
SUBDIVISION NOTES:

- PROPOSED LOTS ARE TO BE SERVICED BY INDIVIDUAL ON-SITE WASTEWATER TREATMENT SYSTEMS (OWTS) AND INDIVIDUAL WATER SERVICES. ELECTRICAL SERVICE IS PROPOSED TO BE PROVIDED VIA UNDERGROUND ELECTRIC.
- A HOMEOWNERS ASSOCIATION WILL BE DEVELOPED FOR PURPOSES OF ENSURING LONG-TERM MONITORING AND MAINTENANCE OF THE SHARED DRIVEWAY AND STORMWATER MANAGEMENT AREAS.

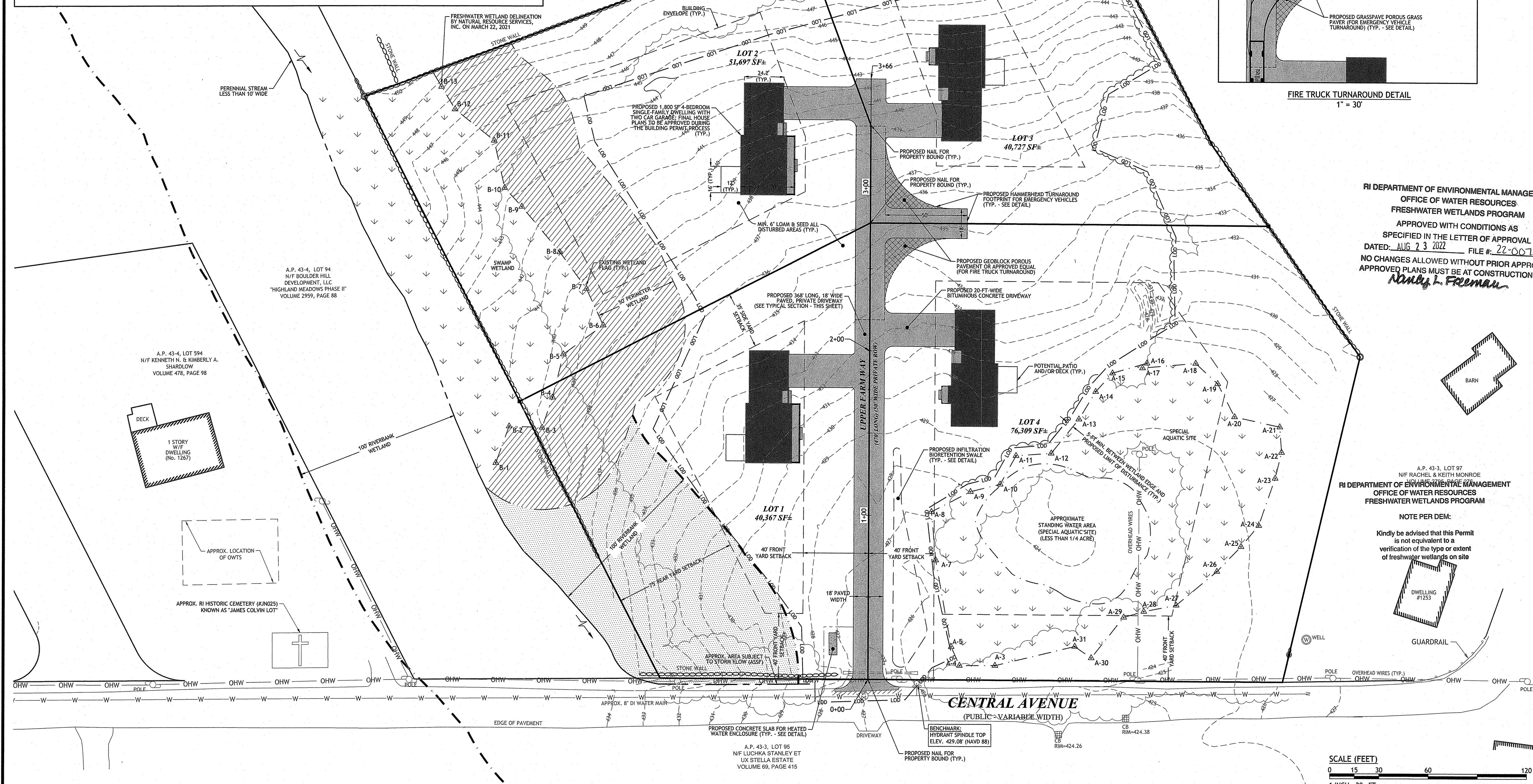
**JOHNSTON LAND DEVELOPMENT
& SUBDIVISION REVIEW REGULATIONS**

SECTION II, ARTICLE C.2a.e.2: RESIDENTIAL DRIVEWAY AND GRASSPAVE POROUS GRASS PAVEMENT PROPOSED FOR TURNAROUND IN LIEU OF CUL-DE-SAC OR HAMMERHEAD.

RI Environmental Management
JUN 06 2022
Office of Water Resources



**FIRE TRUCK TURNAROUND DETAIL
1" = 30'**

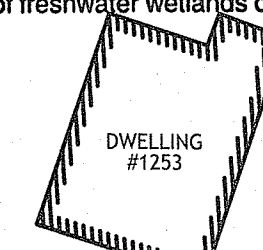


RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: AUG 23 2022 FILE #: 22-0076
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

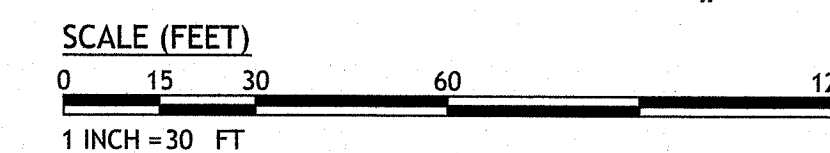
A.P. 43-3, LOT 97
N/F RACHEL & KEITH MONROE
VOLUME 775, PAGE 52
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site



GUARDRAIL



JCE
JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRANSPORTATION
DRAINAGE - 3000 POST ROAD, WARWICK, RI 02888
401.944.1300 401.944.1313 FAX WWW.JCEONLINE.COM

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL

**THE FARMLANDS
PROPOSED MINOR SUBDIVISION
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96**

REVISIONS:

NO.	DATE	DESCRIPTION	RIDEM COMMENTS
1	6/2022		

DESIGNED BY: WMLJR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: FEB. 2022
PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

SITE PLAN

SHEET 4 OF 11

100-YEAR FLOODPLAIN IMPACT AVOIDANCE NOTES:

- THIS SITE LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS SHOWN ON THE FEMA FIRM MAP FOR THE TOWN OF JOHNSTON, COMMUNITY PANEL NO. 44007C0283G, EFFECTIVE OCTOBER 2, 2015. FEMA HAS NOT PUBLISHED ANY DATA FOR THE PERENNIAL STREAM LOCATED ON THE WESTERLY SIDE OF THE SUBJECT PARCEL. THE PERENNIAL STREAM FLOWS IN A GENERALLY NORTH TO SOUTH DIRECTION. THE PERENNIAL STREAM FALLS UNDER THE JURISDICTION OF RIDEM AND IS AFFORDED A 100-FT RIVERBANK WETLAND.
- THE PROPOSED DEVELOPMENT WILL HAVE NO ADVERSE IMPACT ON THE 100-YEAR FLOODPLAIN ASSOCIATED WITH THE PERENNIAL STREAM LOCATED ON THE SUBJECT SITE. ALL PROPOSED IMPROVEMENTS ARE OUTSIDE OF THE 100-YEAR RIVERBANK WETLAND.

OWTS DESIGN DATA									
LOT NUMBER	GOVERNING TEST HOLE NOS.	SOIL CATEGORY	HIGH ELEV. CONTOUR	DEPTH TO GROUNDWATER	TOP OF BSF	MAX. GS WITHIN 5' OF BSF	MIN. GS WITHIN 5' OF BSF	MIN. SYSTEM BOTTOM ELEV.	MIN. COVER ELEV.
LOT 1	TH-1B	8	429.0	18" / 427.5	432.50	432.00	430.50	N/A	N/A
LOT 2	TH-2A	9	444.0	18" / 442.5	445.50	445.00	443.50	N/A	N/A
LOT 3	TH-3B	9	442.0	72" / 436.0	N/A	N/A	N/A	438.17	441.00
LOT 4	TH-4C	8	433.0	18" / 431.5	435.00	434.50	433.00	N/A	N/A

SOIL EVALUATION TEST PIT DATA			
	SURFACE EL.	SHWT / EL.	LEDGE / EL.
TH-1A	438.2	18" / 436.7	NE
TH-1B	432.0	18" / 430.5	NE
TH-2A	443.0	30" / 440.5	NE
TH-2B	438.0	29" / 435.6	NE
TH-3A	449.0	60" / 444.0	NE
TH-3B	440.5	72" / 434.5	NE
TH-4A	433.5	12" / 432.5	NE
TH-4B	430.3	22" / 428.5	NE
TH-4C	431.8	18" / 430.3	NE
TH-5 SW	426.5	21" / 424.8	NE

NOTE: TEST PITS TH-1A THROUGH TH-5 SW WERE OBSERVED AND DOCUMENTED BY AVIZINIS ENVIRONMENTAL SERVICES, INC., IN NOVEMBER 2021. SOIL EVALUATION LOGS ARE AVAILABLE TO THE CONTRACTOR UPON REQUEST. NE = NOT ENCOUNTERED.

TEST HOLE RESULTS
 APPLICATION #2116-1572
 PERFORMED BY: EDWARD AVIZINIS, D4083
 DATE OF TEST: 11/19/2021
 (SEE SOIL EVALUATION TEST PIT DATA, THIS SHEET)

DESIGN DATA
 4-BEDROOM SINGLE-FAMILY DWELLING
 4 BEDROOMS * 115 GAL/BEDROOM/DAY = 460 GAL/DAY

SEPTIC TANK DESIGN:
 RESIDENTIAL BUILDINGS: FOR THREE (3) BEDROOMS OR LESS THE MINIMUM CAPACITY SHALL BE ONE THOUSAND (1,000) GALLONS. FOR EACH ADDITIONAL BEDROOM, ADD TWO HUNDRED AND FIFTY (250) GALLONS.

REQUIRED VOLUME: 4 BEDROOMS = 1,250 GALLONS
 PROVIDED VOLUME: 1,500 GALLONS

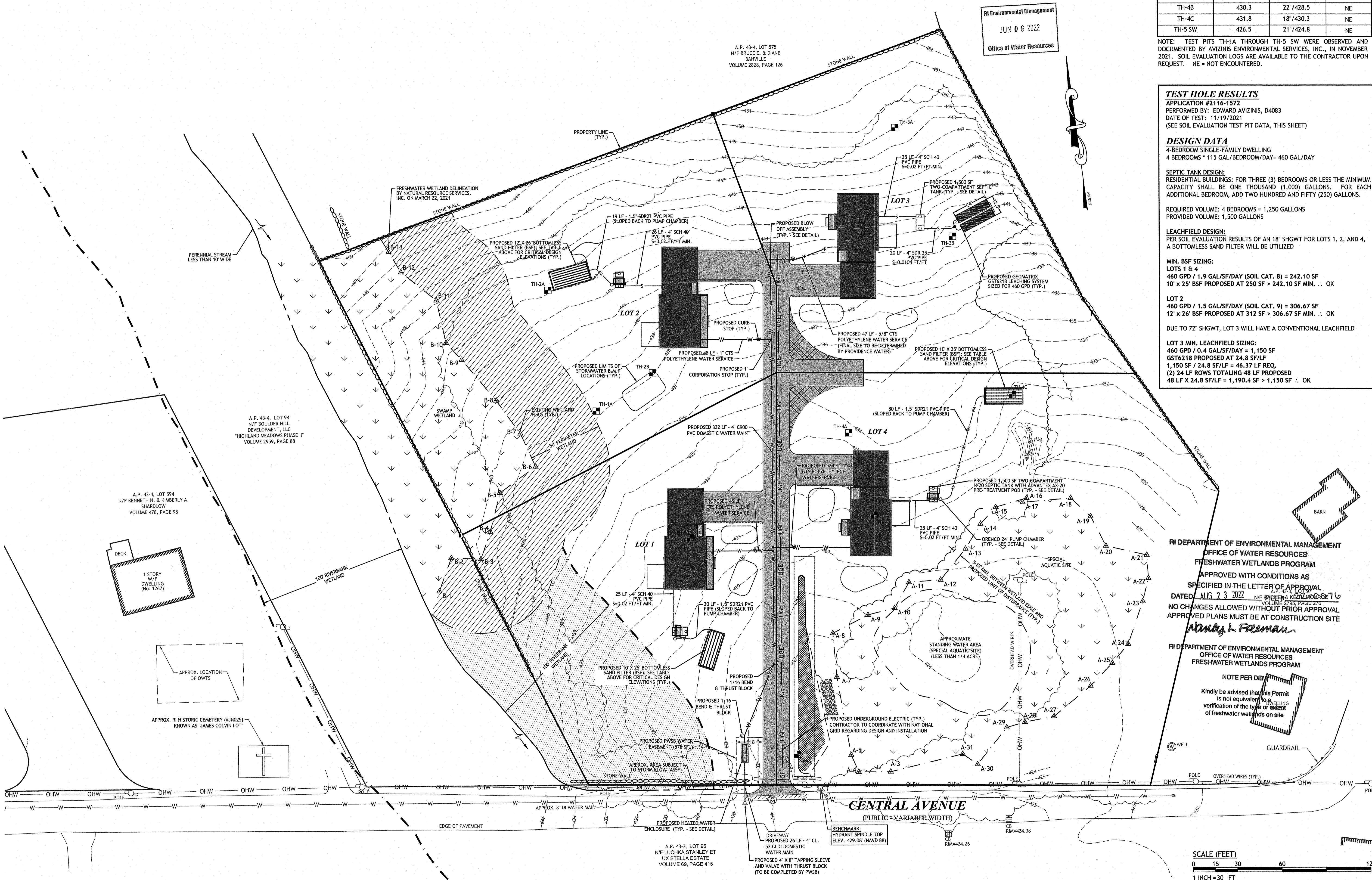
LEACHFIELD DESIGN:
 PER SOIL EVALUATION RESULTS OF AN 18" SHGWT FOR LOTS 1, 2, AND 4, A BOTTOMLESS SAND FILTER WILL BE UTILIZED

MIN. BSF SIZING:
 LOTS 1 & 4
 460 GPD / 1.9 GAL/SF/DAY (SOIL CAT. 8) = 242.10 SF
 10' x 25' BSF PROPOSED AT 250 SF > 242.10 SF MIN. .. OK

LOT 2
 460 GPD / 1.5 GAL/SF/DAY (SOIL CAT. 9) = 306.67 SF
 12' x 26' BSF PROPOSED AT 312 SF > 306.67 SF MIN. .. OK

DUE TO 72" SHGWT, LOT 3 WILL HAVE A CONVENTIONAL LEACHFIELD

LOT 3 MIN. LEACHFIELD SIZING:
 460 GPD / 0.4 GAL/SF/DAY = 1,150 SF
 GST6218 PROPOSED AT 24.8 SF/LF
 1,150 SF / 24.8 SF/LF = 46.37 LF REQ.
 (2) 24 LF ROWS TOTALING 48 LF PROPOSED
 48 LF X 24.8 SF/LF = 1,190.4 SF > 1,150 SF .. OK



RI Environmental Management
 JUN 06 2022
 Office of Water Resources

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED AUG 23 2022
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 Nancy L. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 NOTE PER DEPT
 Kindly be advised that this Permit is not equivalent to a building verification of the type of wetlands on site

JCE
 JOE CASALI ENGINEERING, INC.
 CIVIL, SITE DESIGN, SURVEYING, TRAFFIC ENGINEERING, ENVIRONMENTAL ENGINEERING
 300 POST ROAD, WARWICK, RI 02888
 (401) 944-1500 (401) 944-5151 FAX WWW.JCEASAL.COM

JOSEPH A. CASALI
 No. 7250
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 6-5-2024

THE FARMLANDS
PROPOSED MINOR SUBDIVISION
 1257 CENTRAL AVENUE
 JOHNSTON, RHODE ISLAND
 AP 43-4, LOT 96

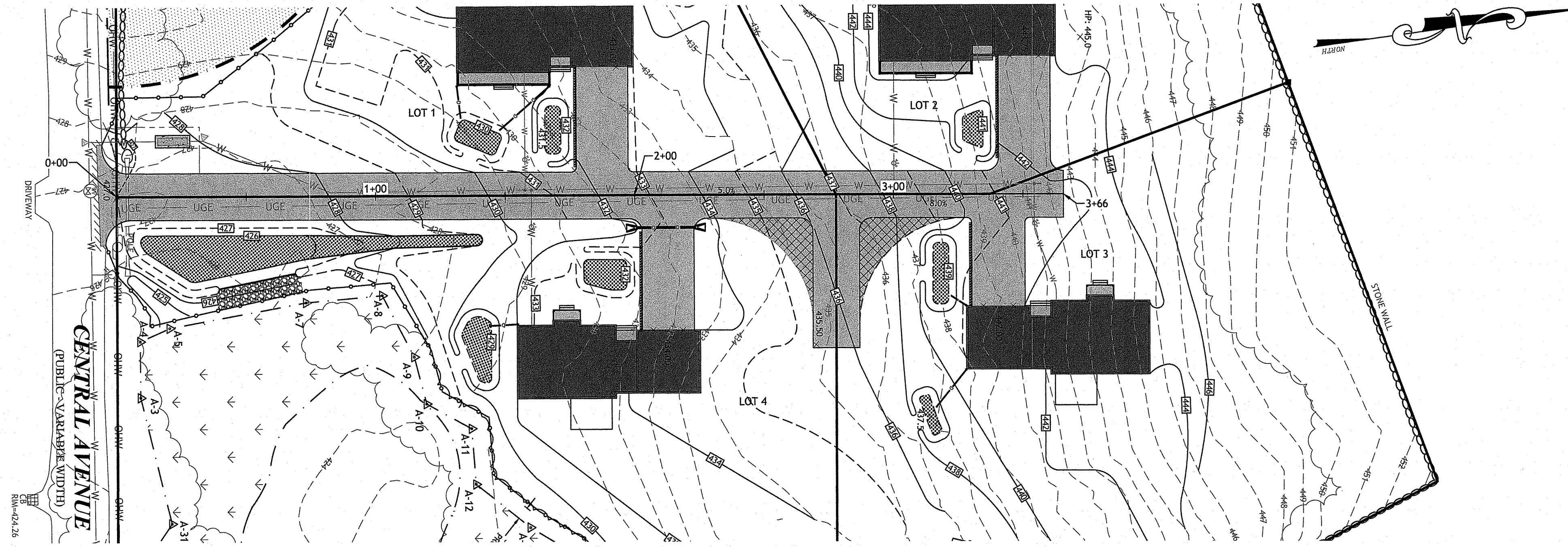
REVISIONS:
 NO. DATE DESCRIPTION
 1 6/2022 RIDEM COMMENTS

DESIGNED BY: WMLJR
 DRAWN BY: SEP/SD
 CHECKED BY: JAC
 DATE: FEB. 2022
 PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

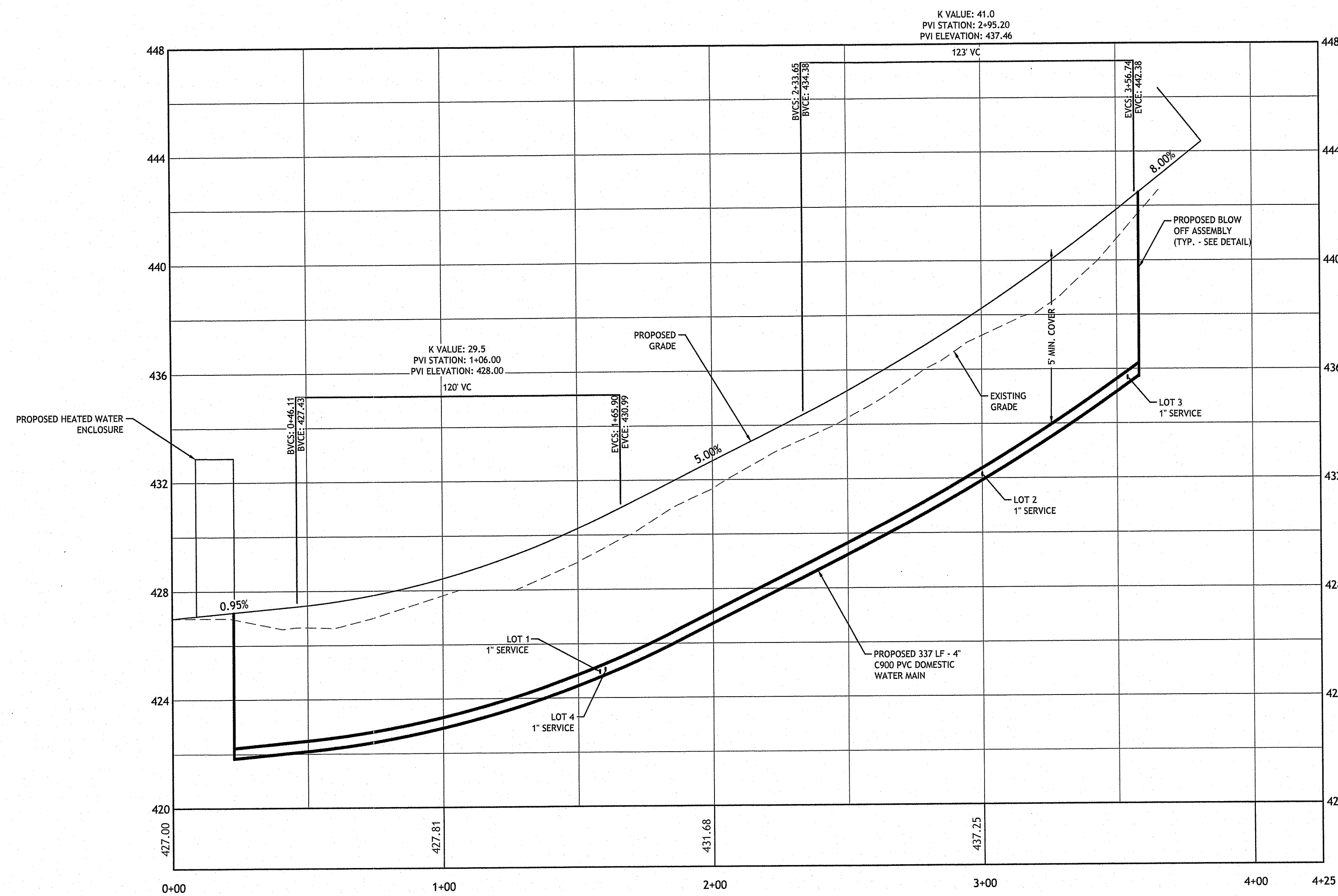
UTILITY PLAN
SHEET 6 OF 11

Q:\21-64 Angelo Grilli\CAD\1257 Central Pike [Preliminary Plan] - RTC DEM.dwg Jun. 03, 2022 1:28pm



ROADWAY PLAN VIEW
SCALE: 1" = 30'

RI Environmental Management
JUN 0 6 2022
Office of Water Resources



ROADWAY PROFILE (STA 0+00 TO 4+25)
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: AUG 23 2022 FILE #: 22-0076
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
NDMby L. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
NOTE PER DEM:
Kindly be advised that this Permit
is not equivalent to a
verification of the type or extent
of freshwater wetlands on site

JCE
JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRAFFIC ENGINEERING, ENVIRONMENTAL ENGINEERING
300 POST ROAD, WARWICK, RI 02888
(401) 844-1300 (401) 844-1313 FAX WWW.JCE-RI.COM

JOSEPH A. CASALI
No. 7200
REGISTERED
PROFESSIONAL ENGINEER
CIVIL
6-5-2022

**THE FARMLANDS
PROPOSED MINOR SUBDIVISION**
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96

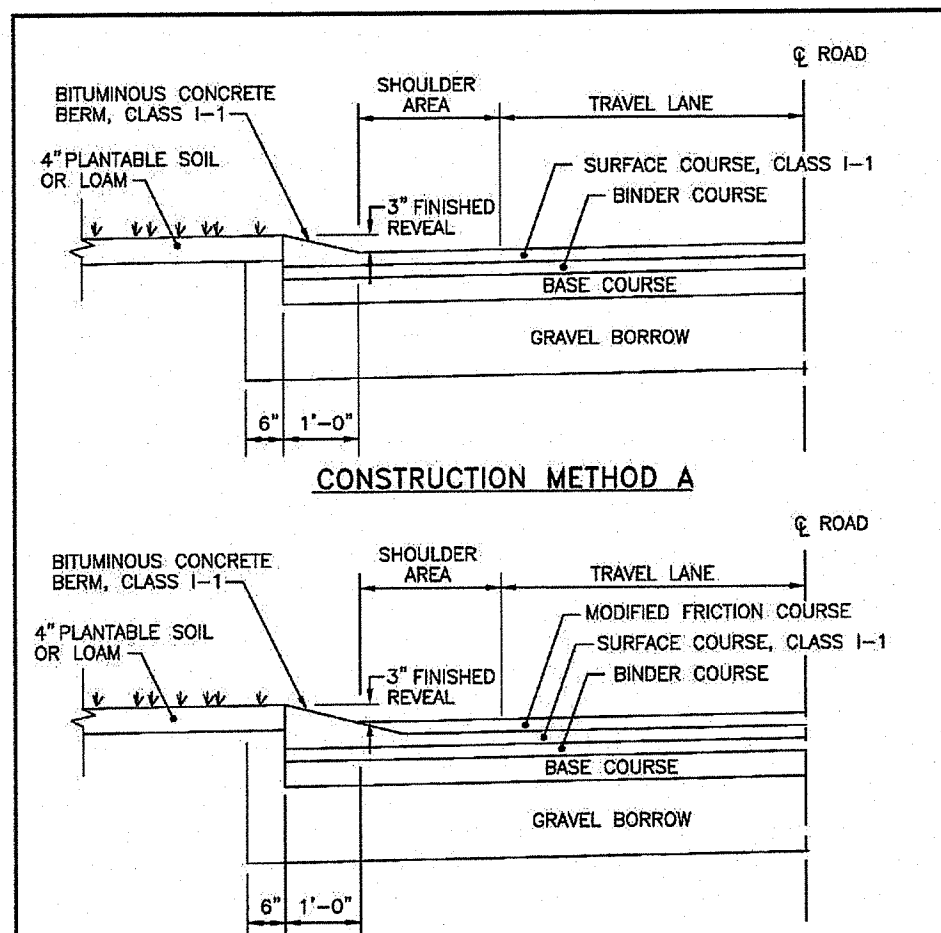
NO.	DATE	DESCRIPTION
1	6/2022	RIDEM COMMENTS

DESIGNED BY: WMLJR
DRAWN BY: SEPS/D
CHECKED BY: JAC
DATE: FEB. 2022
PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

ROADWAY PROFILE

SHEET 7 OF 11



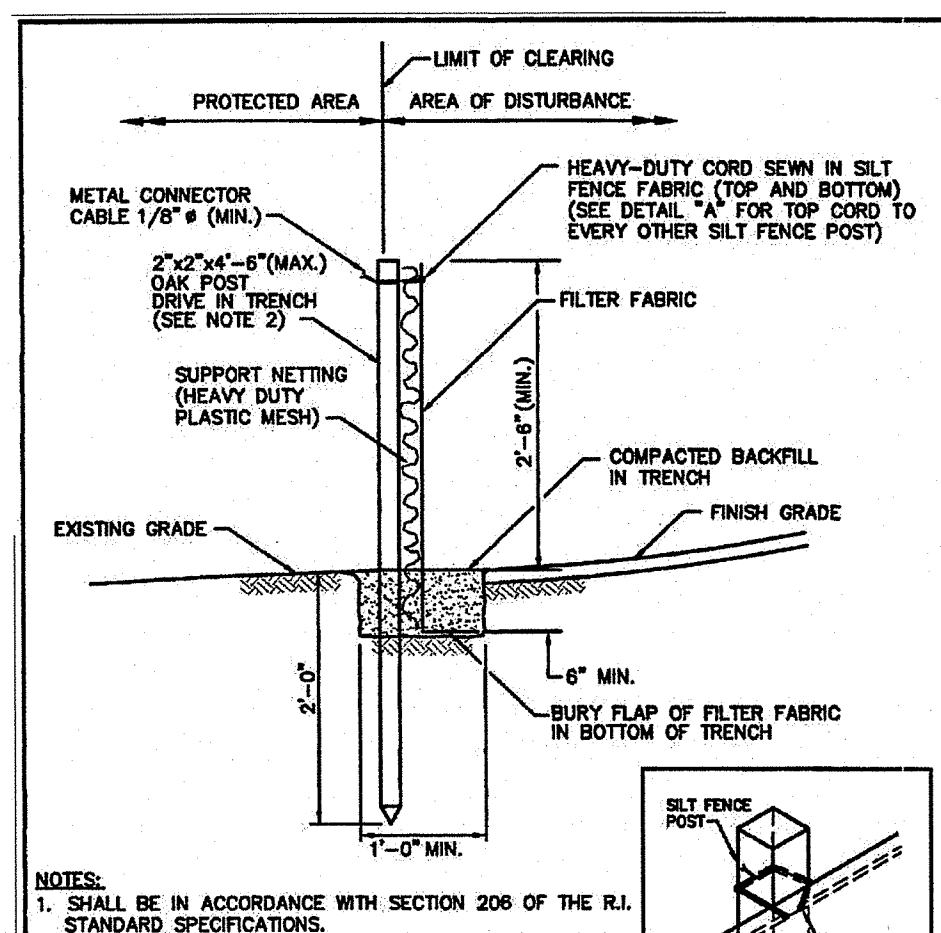
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BITUMINOUS BERM

REVISIONS: NO. BY DATE

DATE: JUNE 15, 1998

R.I. STANDARD 7.5.1



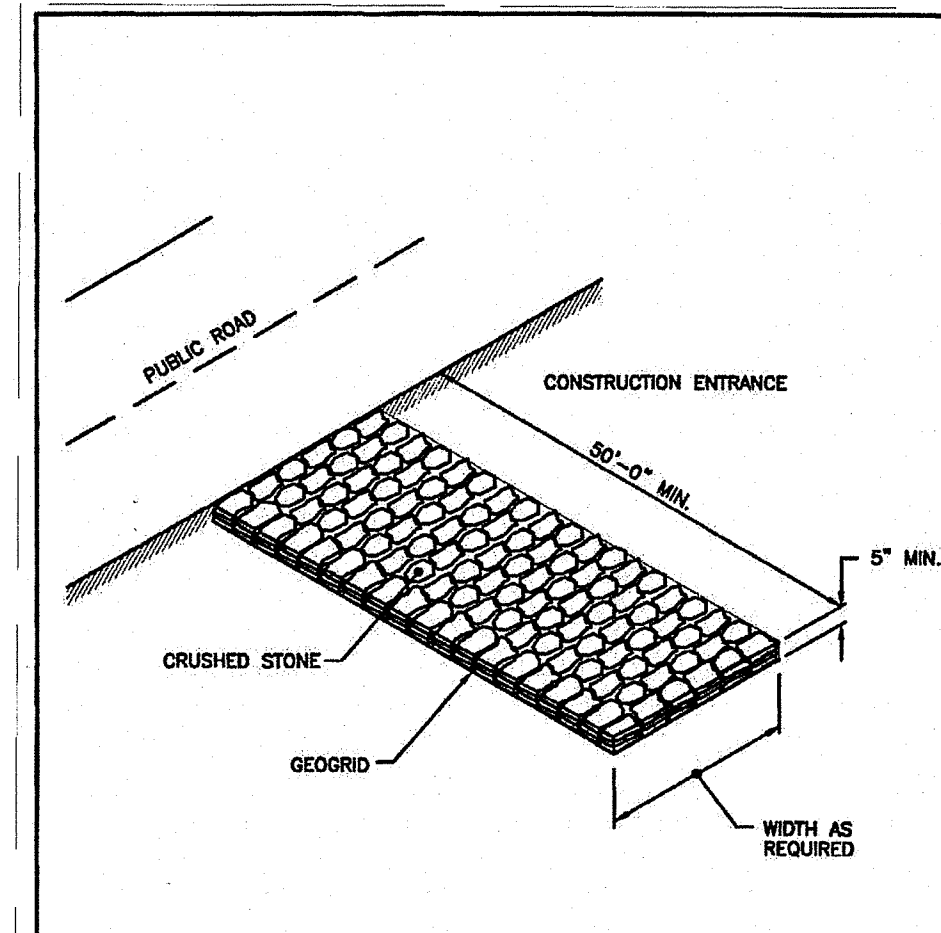
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SILT FENCE DETAIL

REVISIONS: NO. BY DATE

DATE: JUNE 15, 1998

R.I. STANDARD 9.2.0



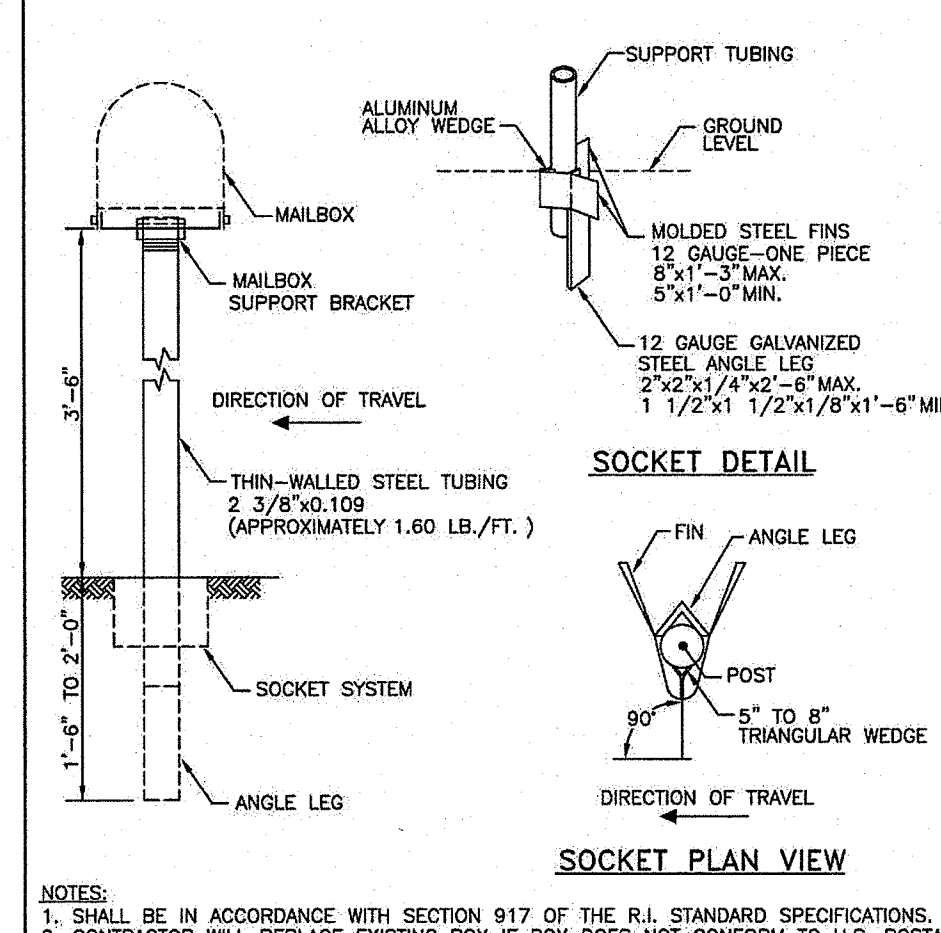
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONSTRUCTION ACCESS

REVISIONS: NO. BY DATE

DATE: JUNE 15, 1998

R.I. STANDARD 9.9.0



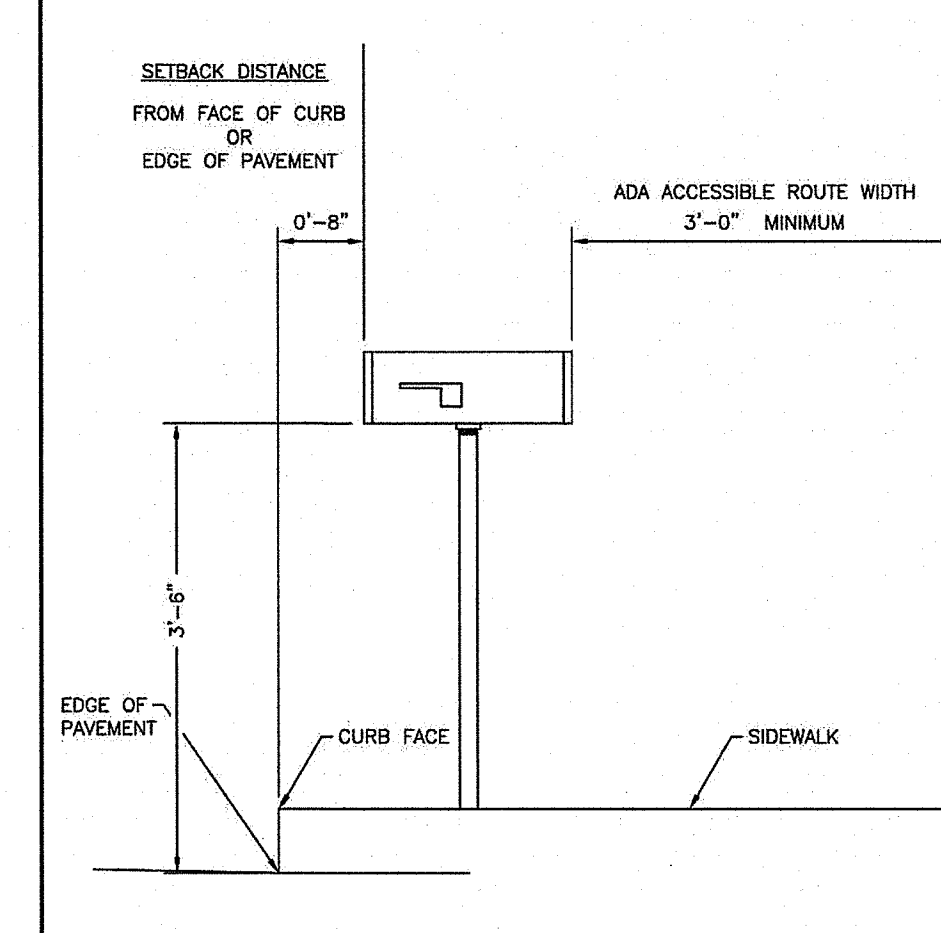
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

POST AND MOUNTING FOR RURAL MAILBOX

REVISIONS: NO. BY DATE

DATE: JUNE 15, 1998

R.I. STANDARD 15.1.0



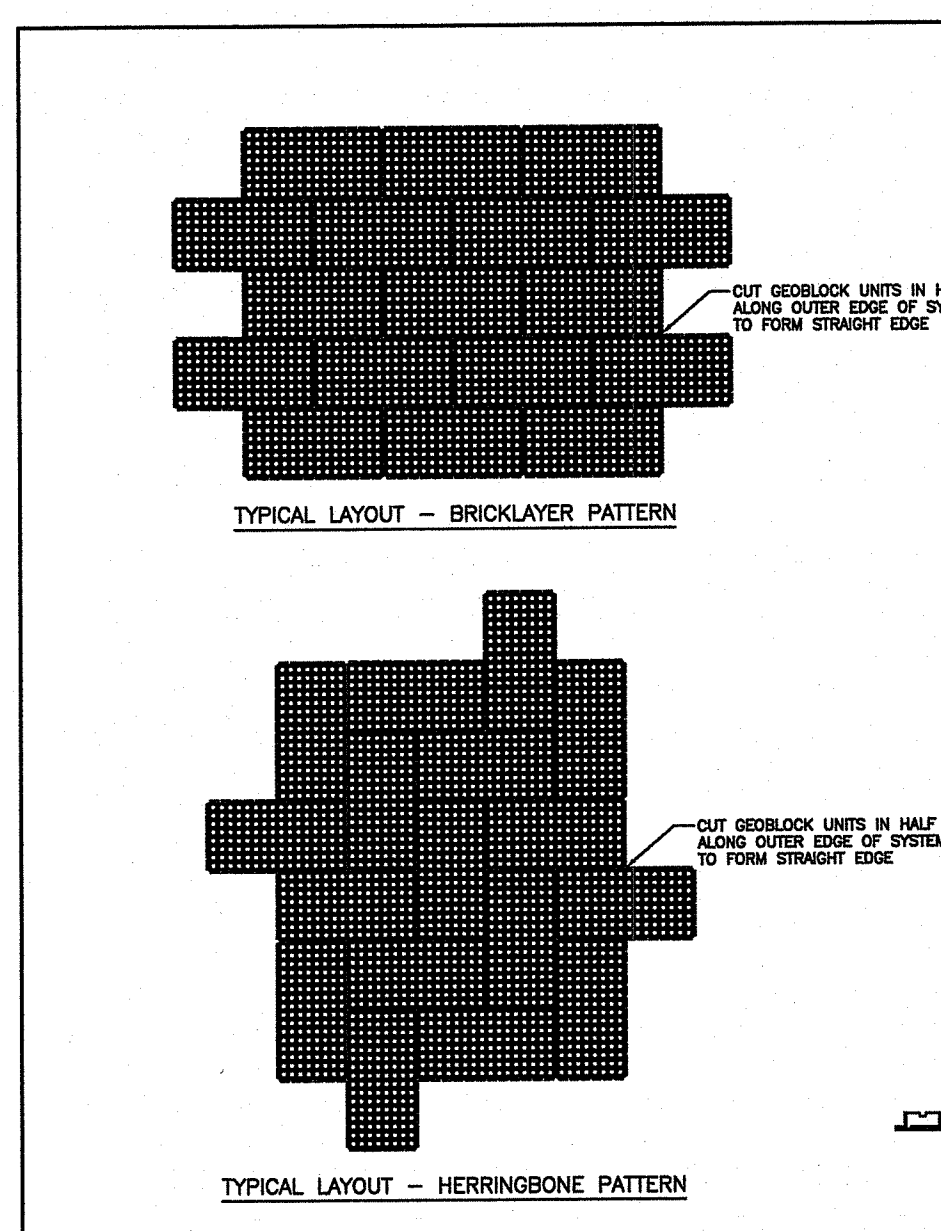
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SETTING AND MOUNTING DIMENSIONS FOR RURAL MAILBOX

REVISIONS: NO. BY DATE

DATE: JUNE 1, 2010

R.I. STANDARD 15.1.1



GEOBLOCK MATERIAL SPECIFICATION

MATERIAL	UP TO 100% RECYCLED POLYETHYLENE
COLOR	RANGES DARK SHADES GRAY TO BLACK
CHEMICAL RESISTANCE	1.5 TO 2.0K
CARBON BLACK FOR UV STABILIZATION, %	420 PSI (2,900 KPA)
UNIT MIN CRUSH STRENGTH - EMPTY @ 70F (21C)	5,980 PSI (41,293 KPA)
UNIT MIN CRUSH STRENGTH - SAND FILLED @ 70F (21C)	35,000 PSI (240,000 KPA)
FLEXURAL MODULUS @ 70F (21C)	20 X 40 IN (0.3 X 1.0 M)
NOMINAL DIMENSIONS - WIDTH X LENGTH	1.2 (30 MM)
NOMINAL UNIT THICKNESS	0.5 SQFT (0.5 SQMTR)
NOMINAL AREA	1.2
CELLS PER UNIT	2.25 X 2.25 IN (57 X 57 MM)
TOP OPEN AREA PER UNIT	88%
BRITCH CRUSH STRENGTH PER UNIT	550
INTERLOCKING OFFSET SHEAR TRANSFER PINS	12 TABS PER 40 IN (PER 1 M)
NOMINAL WEIGHT PER UNIT	4.7 LBS (2.1 KG)
RUNOFF COEFFICIENT @ 2.5 IN/HR (64 MM) RAIN	0.15
UNITS PER PALLET	52

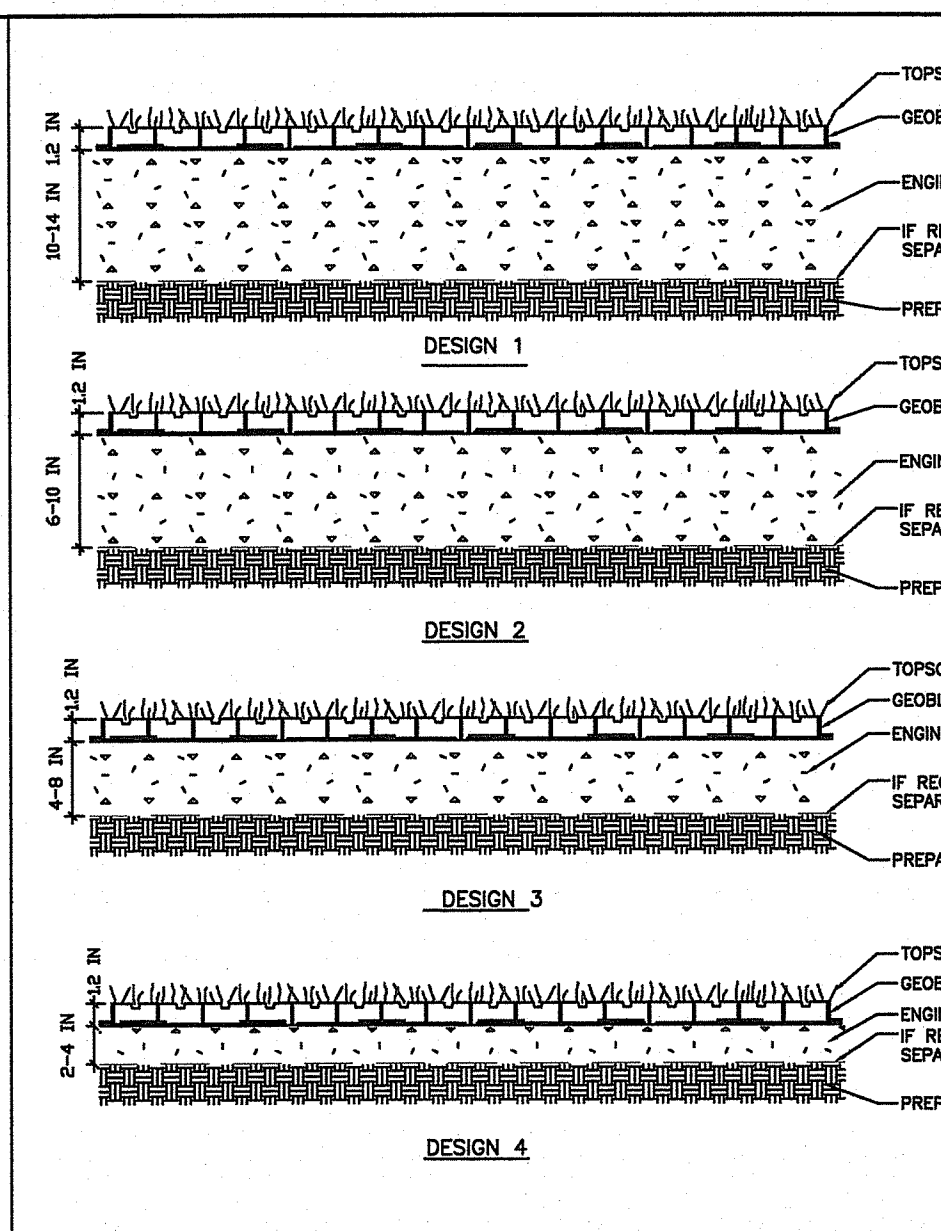
GEOBLOCK COMPONENTS

PRESTO PRODUCTS CO. 870 NORTH BROAD STREET, BOSTON, MA 02114

GEOBLOCK POROUS PAVEMENT SYSTEM

DATE: DECEMBER 2018 FILE NAME: GEBLOCK.dwg

SHEET 1



DESIGN GUIDELINES

LOAD DESCRIPTION

Heavy Fire Truck Access & H/HS-20 loading. Typical 110 psi (758 kPa) tire pressure. Single axle loadings of 32 kips (145 kN), tandem axle loadings of 48 kips (220 kN). Gross vehicle weight of 80,000 lbs (36.3 MT). Infrequent passes.

Light Fire Truck Access & H/HS-15 loading. Typical 85 psi (586 kPa) tire pressure. Single axle loadings of 24 kips (110 kN). Gross vehicle loads of 80,000 lbs (27.2 MT). Infrequent passes.

Utility & Delivery Truck Access & H/HS-10 loading. Typical 60 psi (414 kPa) tire pressure. Single axle loadings of 18 kips (81 kN). Gross vehicle loads of 40,000 lbs (18.1 MT). Frequent passes.

Corn & Pick-up Truck Access. Typical 45 psi (310 kPa) tire pressure. Single axle loadings of 4 kips (18 kN). Gross vehicle loads of 8,000 lbs (3.6 MT). Frequent passes.

Trail Use. Loading for pedestrian, wheelchair, equestrian, bicycle, motorcycle and ATV traffic.

DESIGN TYPES

Design 1 - 14" Base	Design 1 - 10" Base
Design 2 - 10" Base	Design 2 - 8" Base
Design 3 - 6" Base	Design 3 - 4" Base
Design 4 - 2" Base	Design 4 - 0-2" Base

Notes:

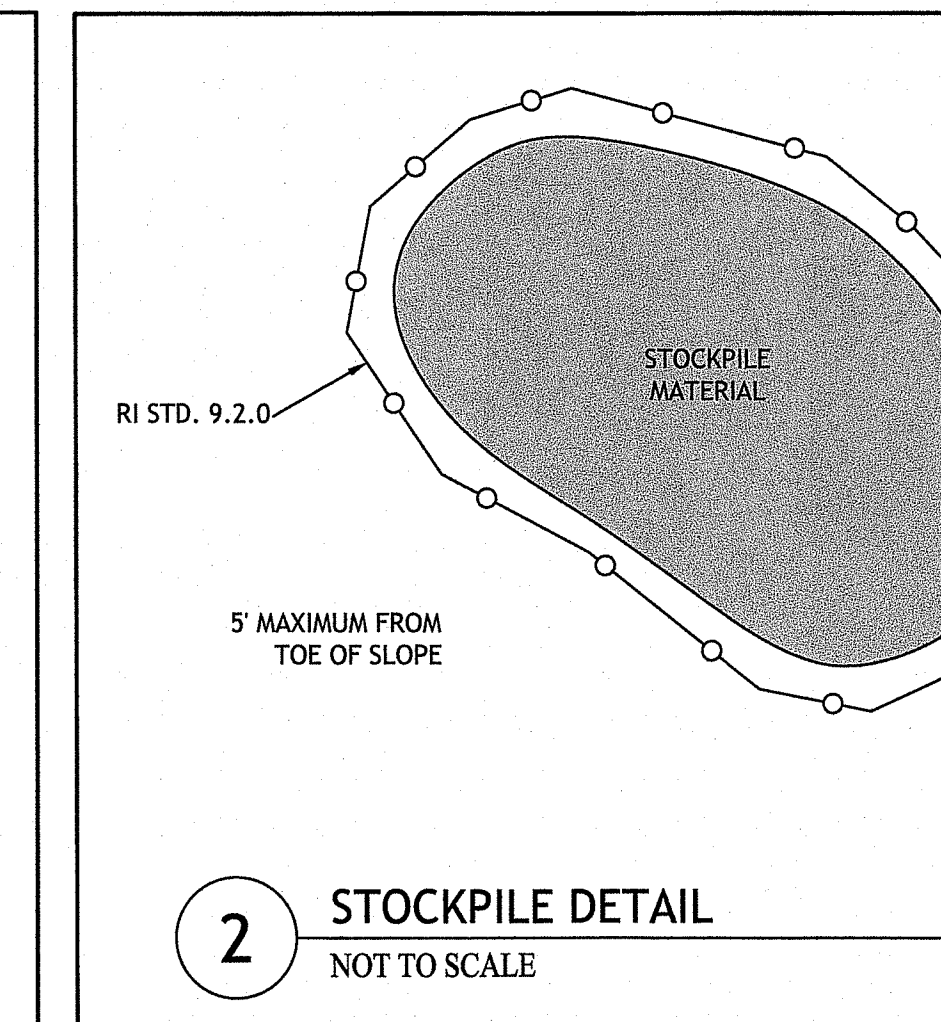
- This evaluation is based on the use of Geoblock manufactured by Presto Products Co. All rights reserved. Any use of this evaluation for any rigid porous paver product other than that manufactured by Presto is strictly prohibited and makes this evaluation invalid.
- Engineered base is a homogeneous mixture consisting of open graded crushed aggregate having an AASHTO # 5 or similar designation blended with pulverized topsoil and a void component generally containing air and/or water. This homogeneous mixture will promote vegetative growth and provide required structural support. The aggregate portion shall have a particle range from 9.5 mm to 25 mm (0.375 to 1.0 in) with a D50 of 13 mm (0.5 in). The percentage void-space of the aggregate portion when compacted shall be at least 30%. The pulverized topsoil portion shall equal 33% +/- of the total volume and be added and blended to produce a homogeneous mixture prior to placement.
- If required, provide non-woven geotextile separation layer and install in accordance with Manufacturer recommendations including overlap based on sub grade CBR.
- Connect Geoblock panels with 1/2" interlocking offset tab so that adjacent sections have horizontally level profiles.
- Refer to the Geoblock Design and Construction Overview for a complete description of the design and construction methods.

PRESTO PRODUCTS CO. 870 NORTH BROAD STREET, BOSTON, MA 02114

GEOBLOCK POROUS PAVEMENT SYSTEM

DATE: DECEMBER 2018 FILE NAME: GEBLOCK.dwg

SHEET 1



RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF WATER RESOURCES

FRESHWATER WETLANDS PROGRAM

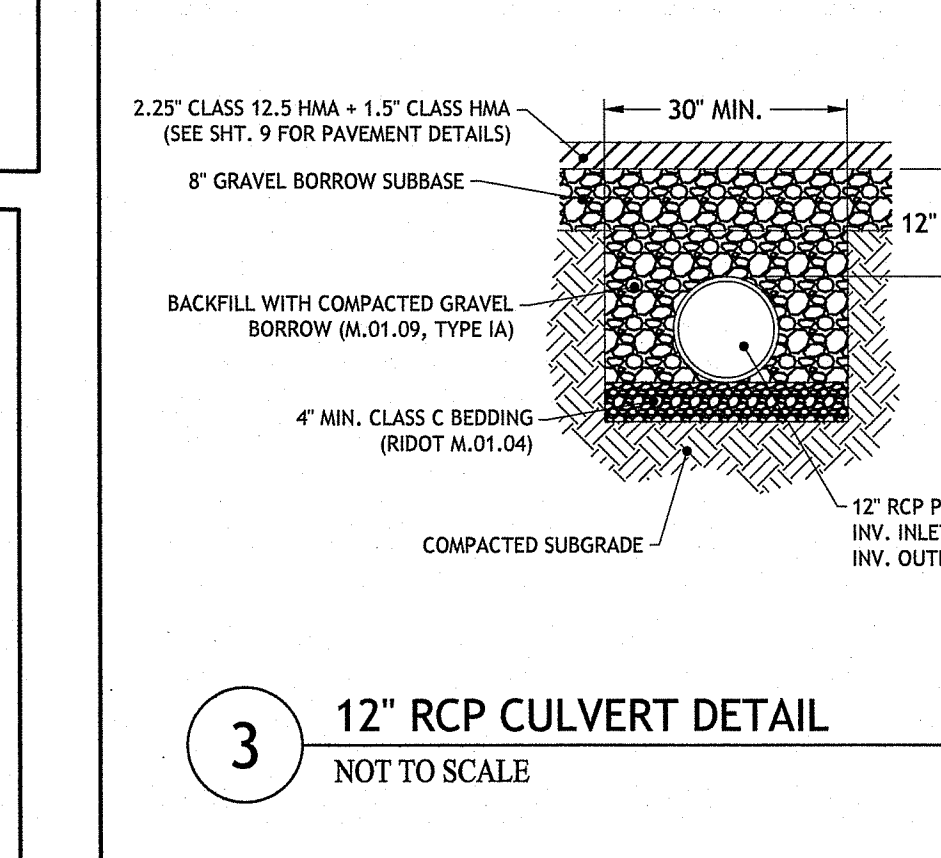
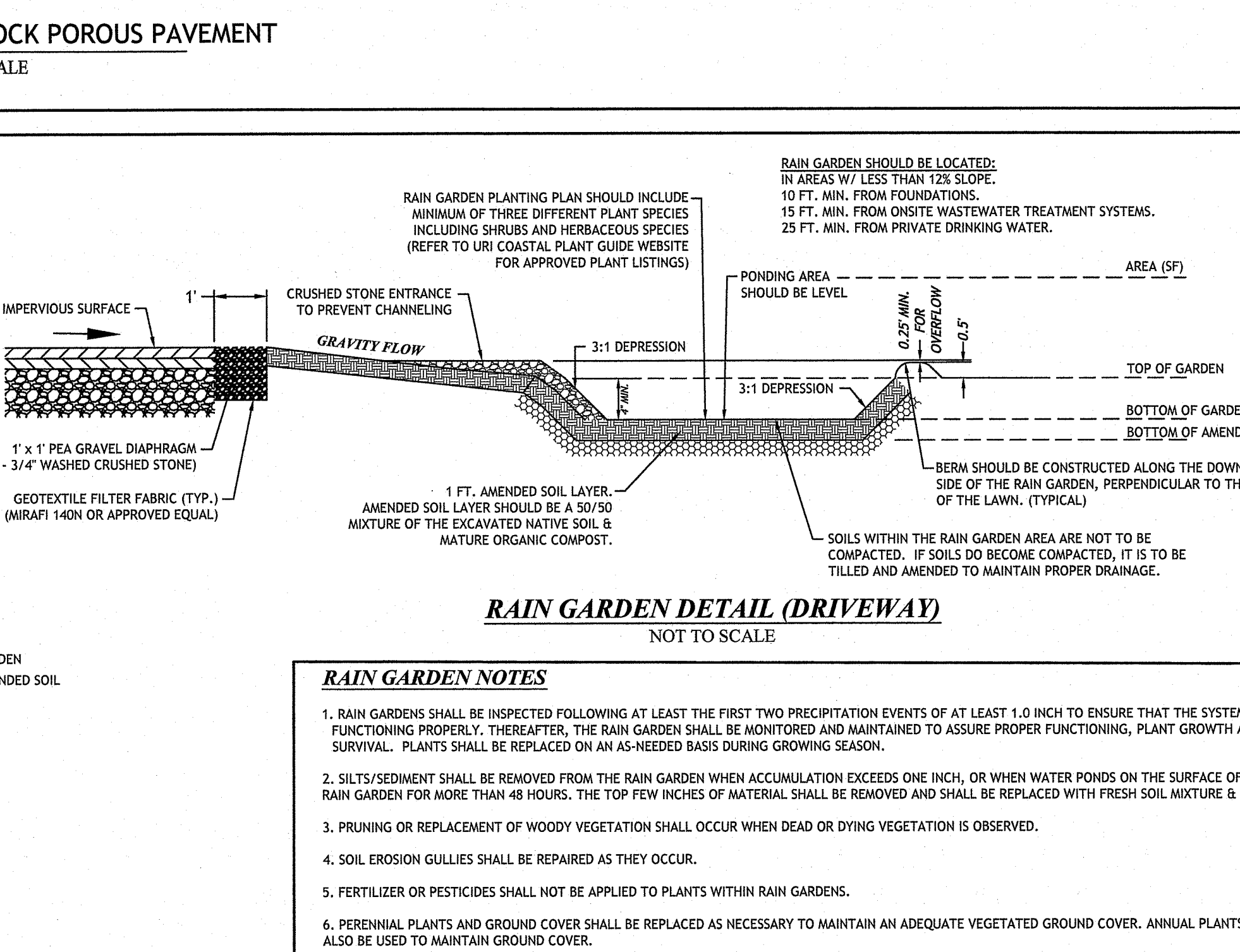
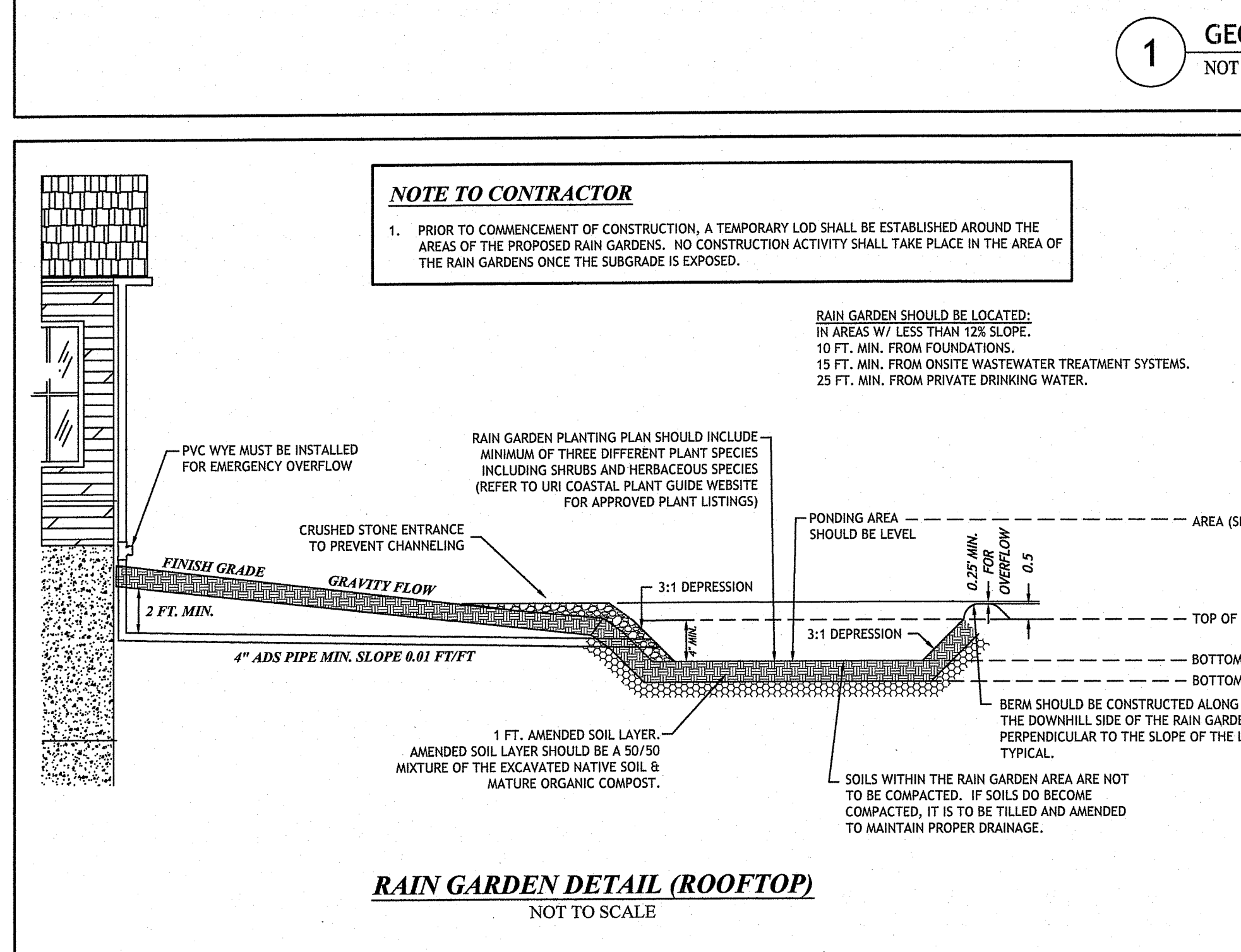
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

DATE: AUG 23 2022 FILE #: 22-0076

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL

APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman



RAIN GARDEN CRITICAL ELEVATIONS

RAIN GARDEN ID (SEE SHT. 5)	LOT 1	LOT 2	LOT 3	LOT 4
EXIST. GROUND ELEVATION	431.0	429.0	430.5	438.0
TOP OF GARDEN (BERM)	432.0	431.0	433.0	440.0
BOTTOM OF GARDEN	431.5	430.0	432.0	437.5
BOTTOM OF AMENDED SOIL	430.5	429.0	431.0	436.5
SHGWT ELEV.	429.5	427.5	430.0	438.0
SEPARATION TO SHGWT	2.0'	2.5'	2.0'	2.0'
TEST HOLE REFERENCE	TH-1B	TH-1B	TH-4A	TH-4B

RI Environmental Management
JUN 06 2022
Office of Water Resources

JCE
JOE CASALI ENGINEERING, INC.
CIVIL/SITE DESIGN, TRANSPORTATION, ENVIRONMENTAL ENGINEERING
300 POST ROAD, WARWICK, RI 02889
401.944.1300 401.944.1313 FAX WWW.JCEASAL.COM

JOSEPH A. CASALI
No. 7280
REGISTERED PROFESSIONAL ENGINEER
CIVIL

THE FARMLANDS
PROPOSED MINOR SUBDIVISION
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

DATE: AUG 23 2022 FILE #: 22-0076

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL

APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

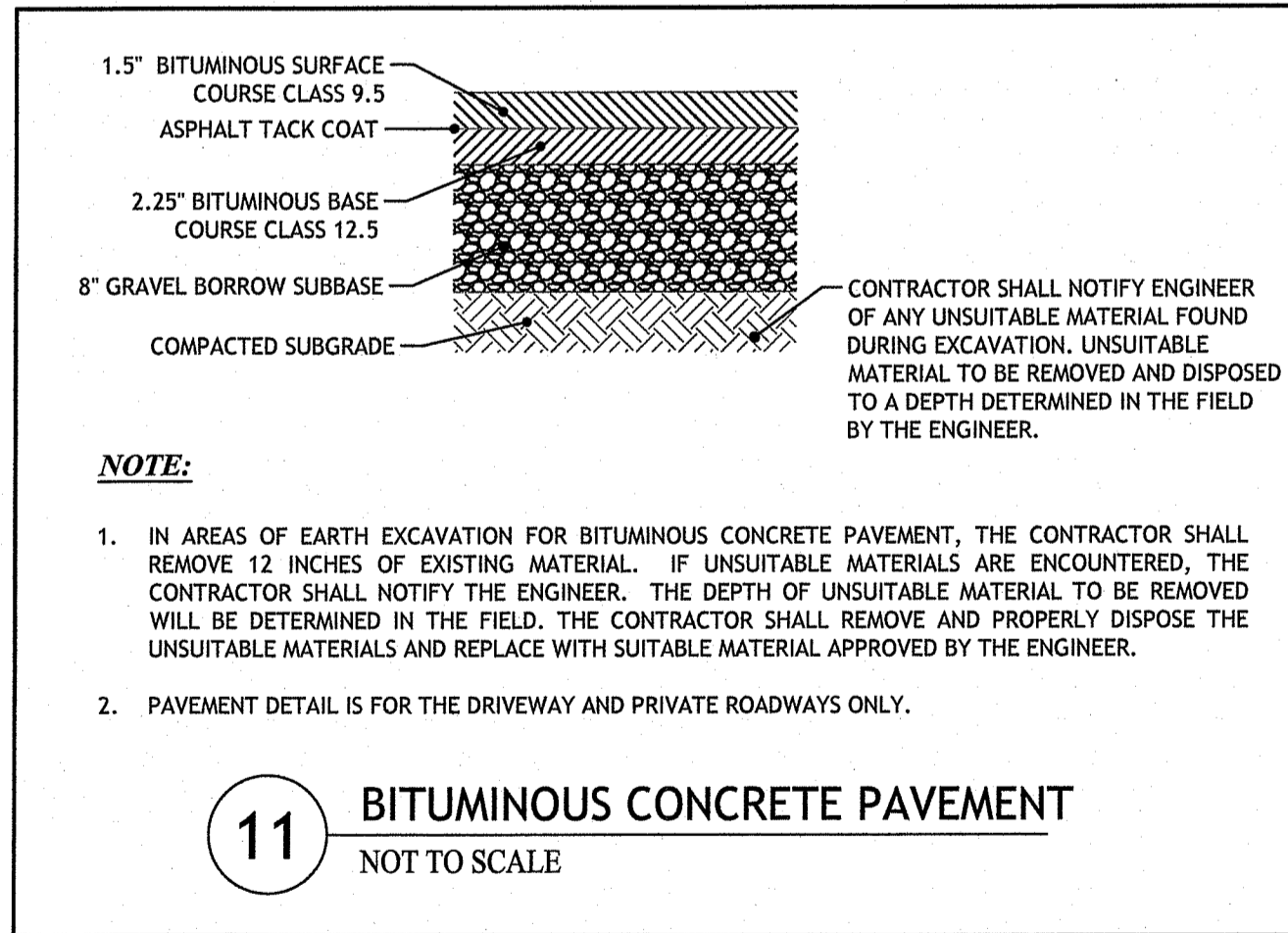
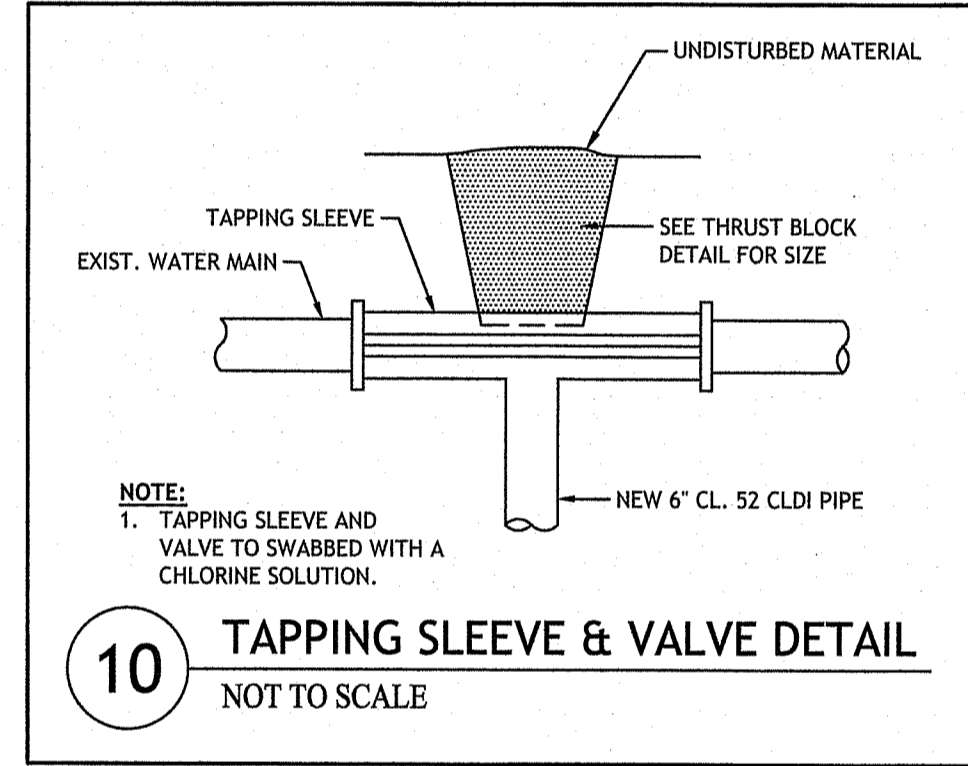
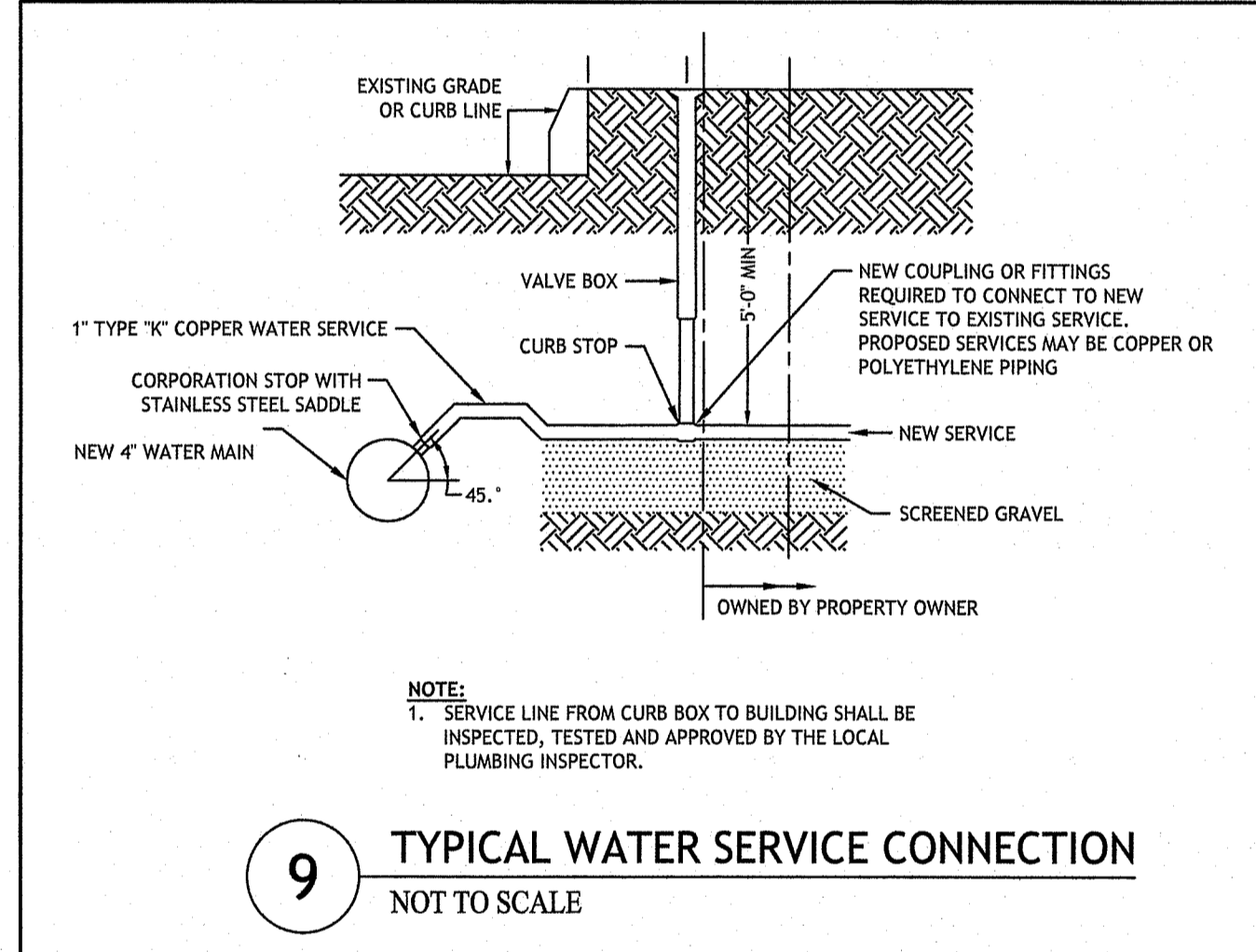
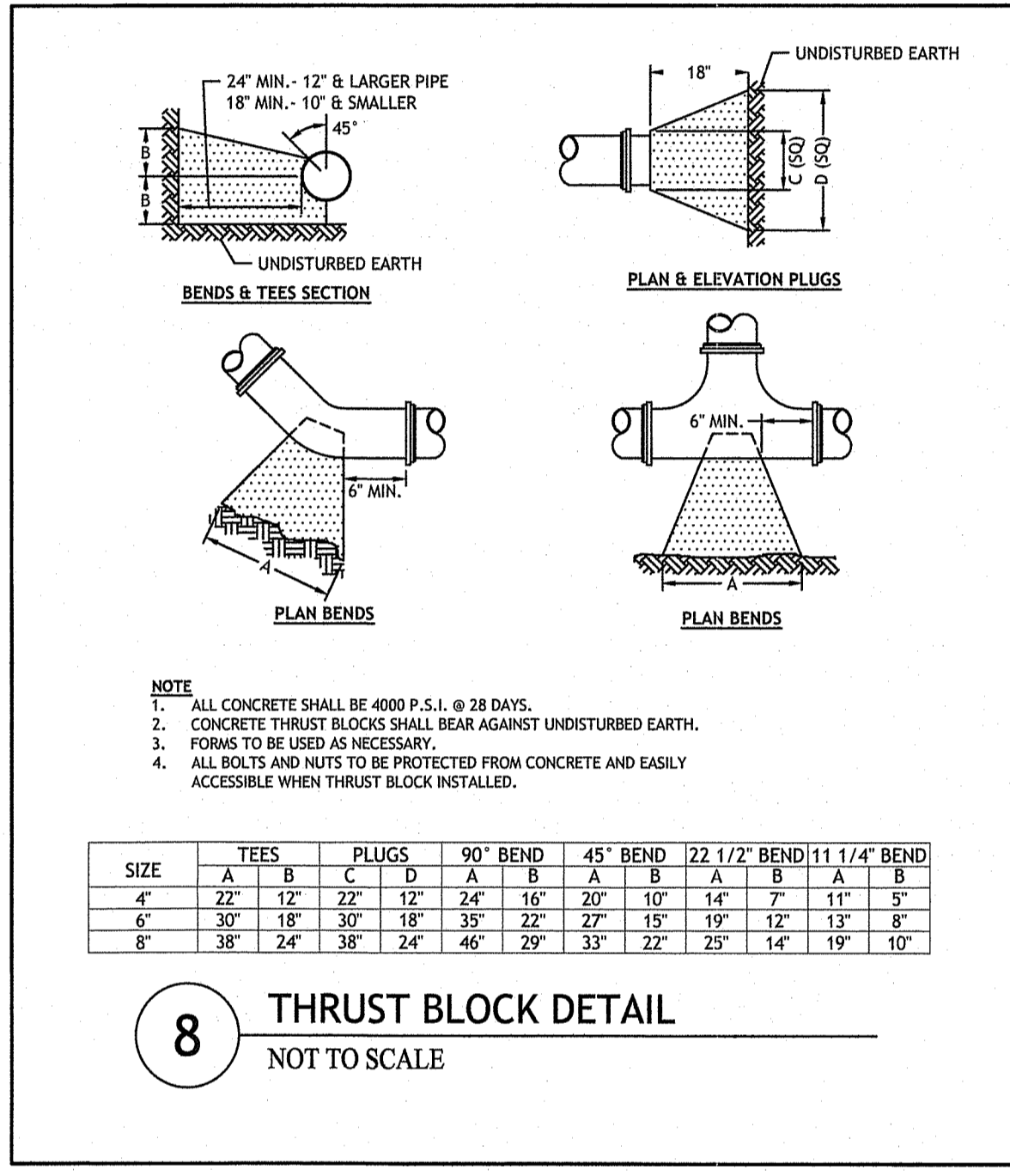
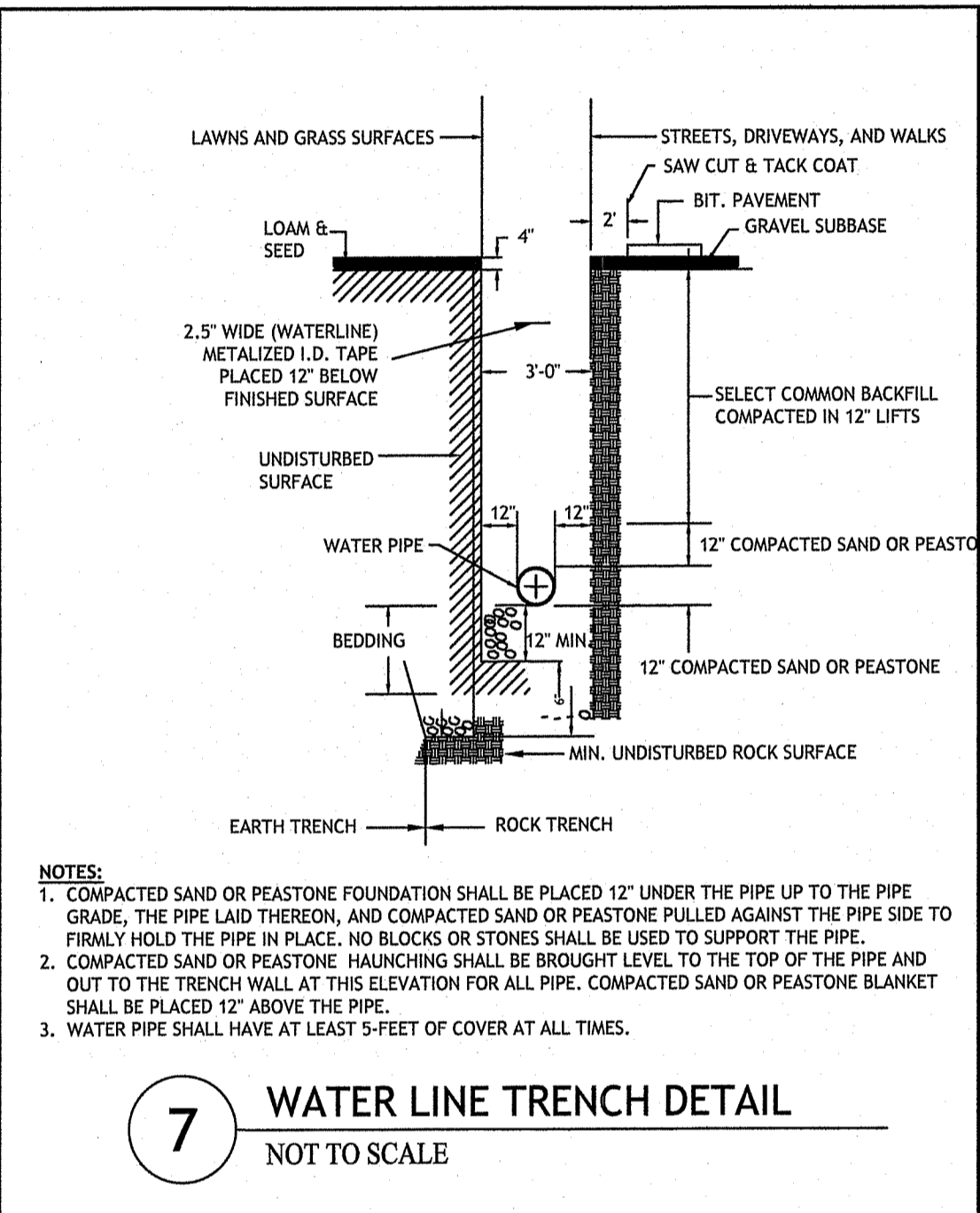
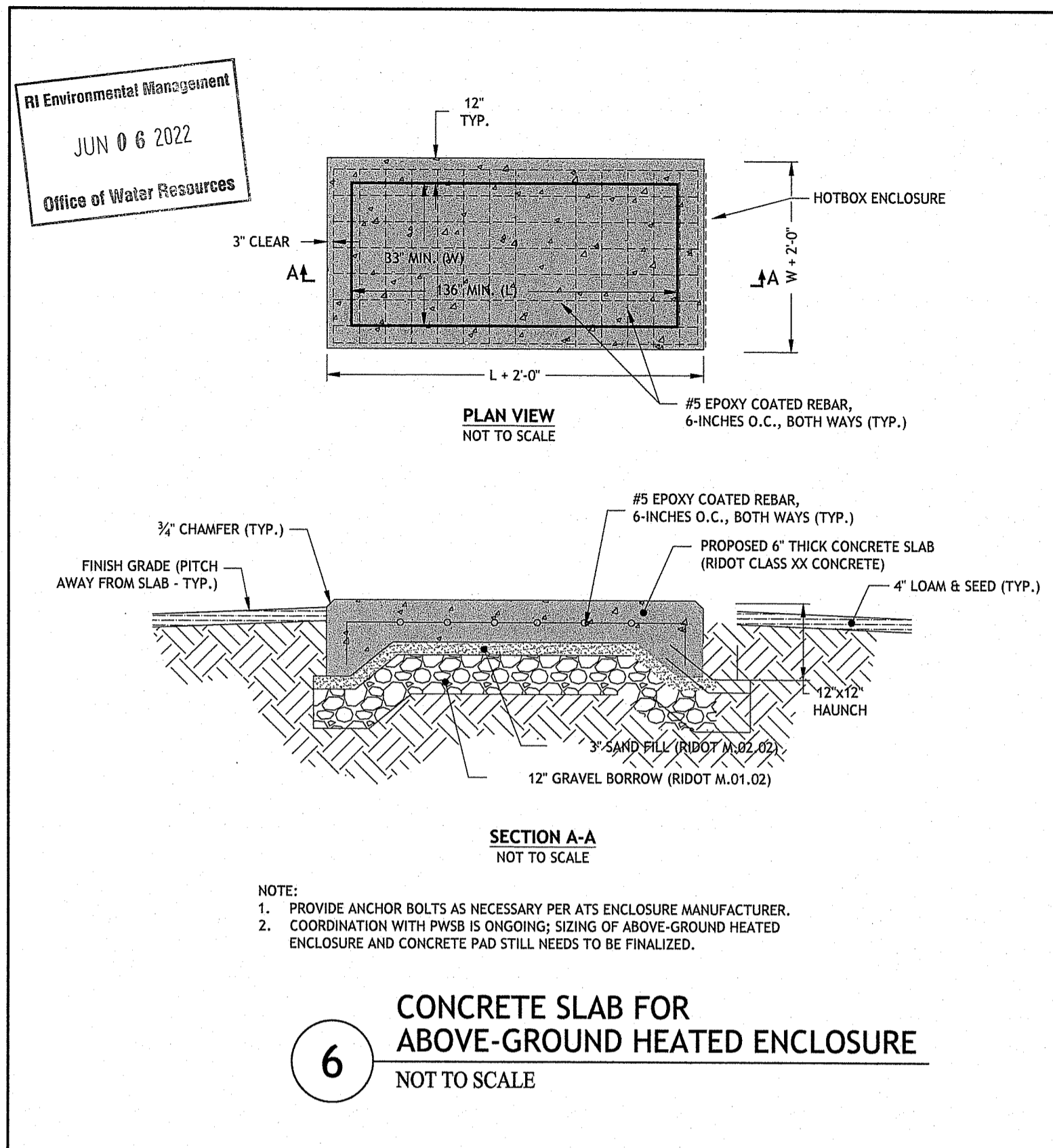
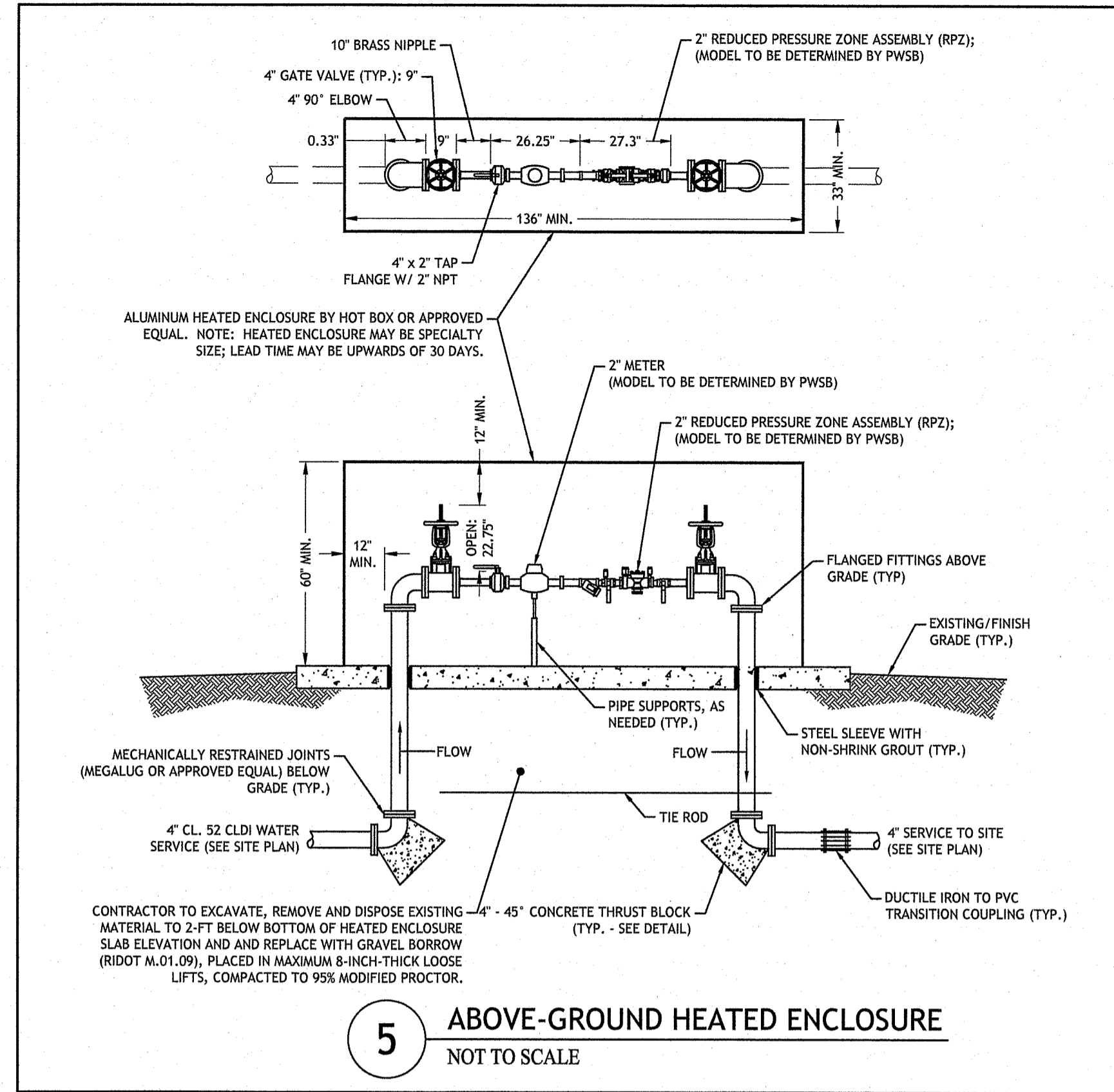
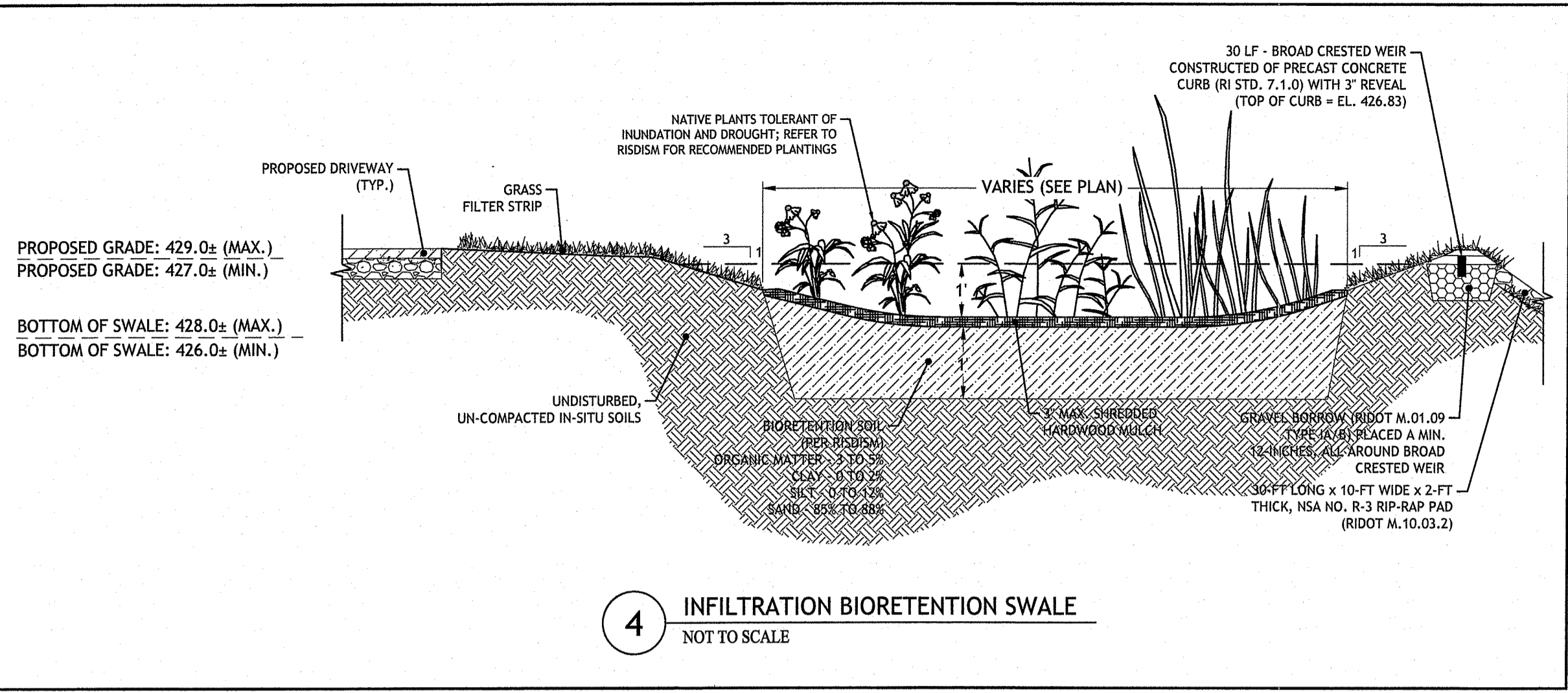
DESIGNED BY: WMLJR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: FEB. 2022
PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

CIVIL/SITE DETAILS I

SHEET 8 OF 11

Q:\21-64 Angelo Grilli\CAD\1257 Central Pike (Preliminary Plan) - RTC DEM.dwg Jun. 03. 2022 1:28pm



DL	DIMENSIONS							REINFORCEMENT	
	A	B	C	D	E	R	T	MIN. AREA OF REINFORCEMENT (SQ. IN.)	MIN. AREA OF TACK MAT (SQ. FT.)
4"	18"	12"	18"	12"	18"	12"	12"	0.060	0.060
6"	24"	18"	24"	18"	24"	18"	12"	0.072	0.072
8"	30"	24"	30"	24"	30"	24"	12"	0.084	0.084
10"	36"	30"	36"	30"	36"	30"	12"	0.096	0.096
12"	42"	36"	42"	36"	42"	36"	12"	0.108	0.108
14"	48"	42"	48"	42"	48"	42"	12"	0.120	0.120
16"	54"	48"	54"	48"	54"	48"	12"	0.132	0.132
18"	60"	54"	60"	54"	60"	54"	12"	0.144	0.144

PRECAST CONCRETE FLARED END SECTION
APPROVED BY: [Signature] DATE: JUN 15, 1998

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: AUG 23 2022 FILE #: 22-0076
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

JOSEPH A. CASALI
No. 7200
REGISTERED PROFESSIONAL ENGINEER
CIVIL

THE FARMLANDS
PROPOSED MINOR SUBDIVISION
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/2022	RIDEM COMMENTS

DESIGNED BY: WMLJR
DRAWN BY: SEPSD
CHECKED BY: JAC
DATE: FEB. 2022
PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

CIVIL/SITE DETAILS II

SHEET 9 OF 11

GENERAL OWTS NOTES:

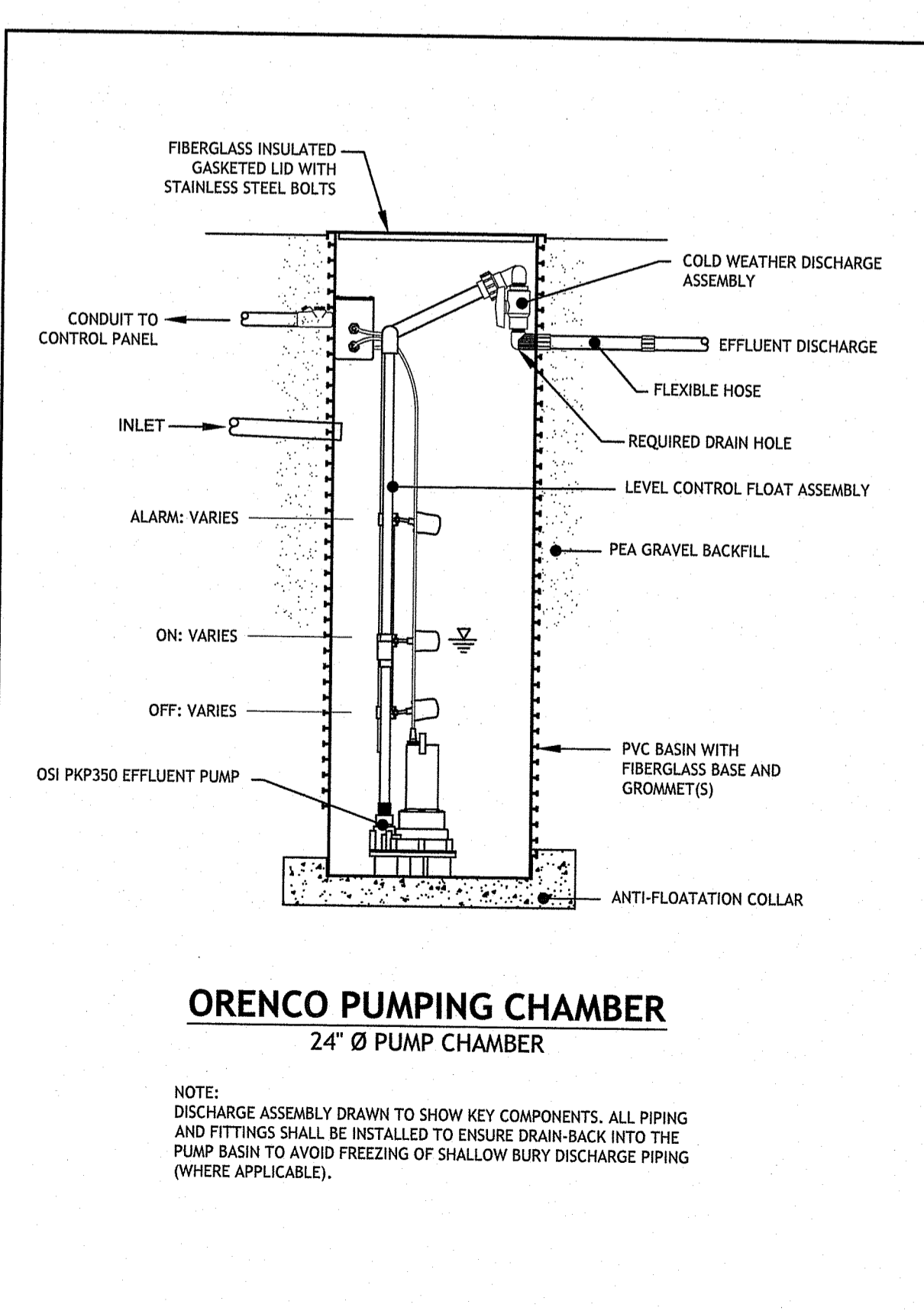
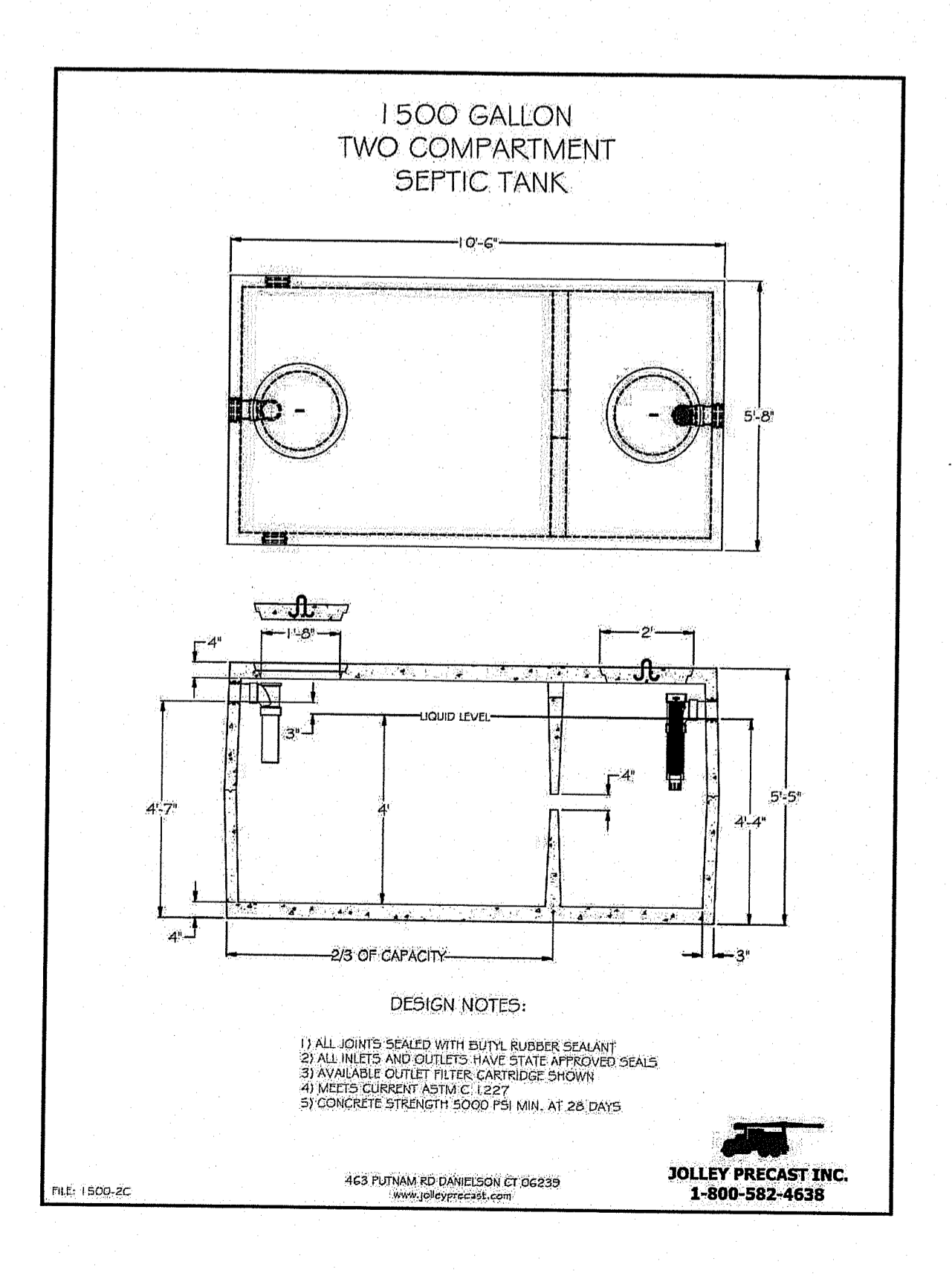
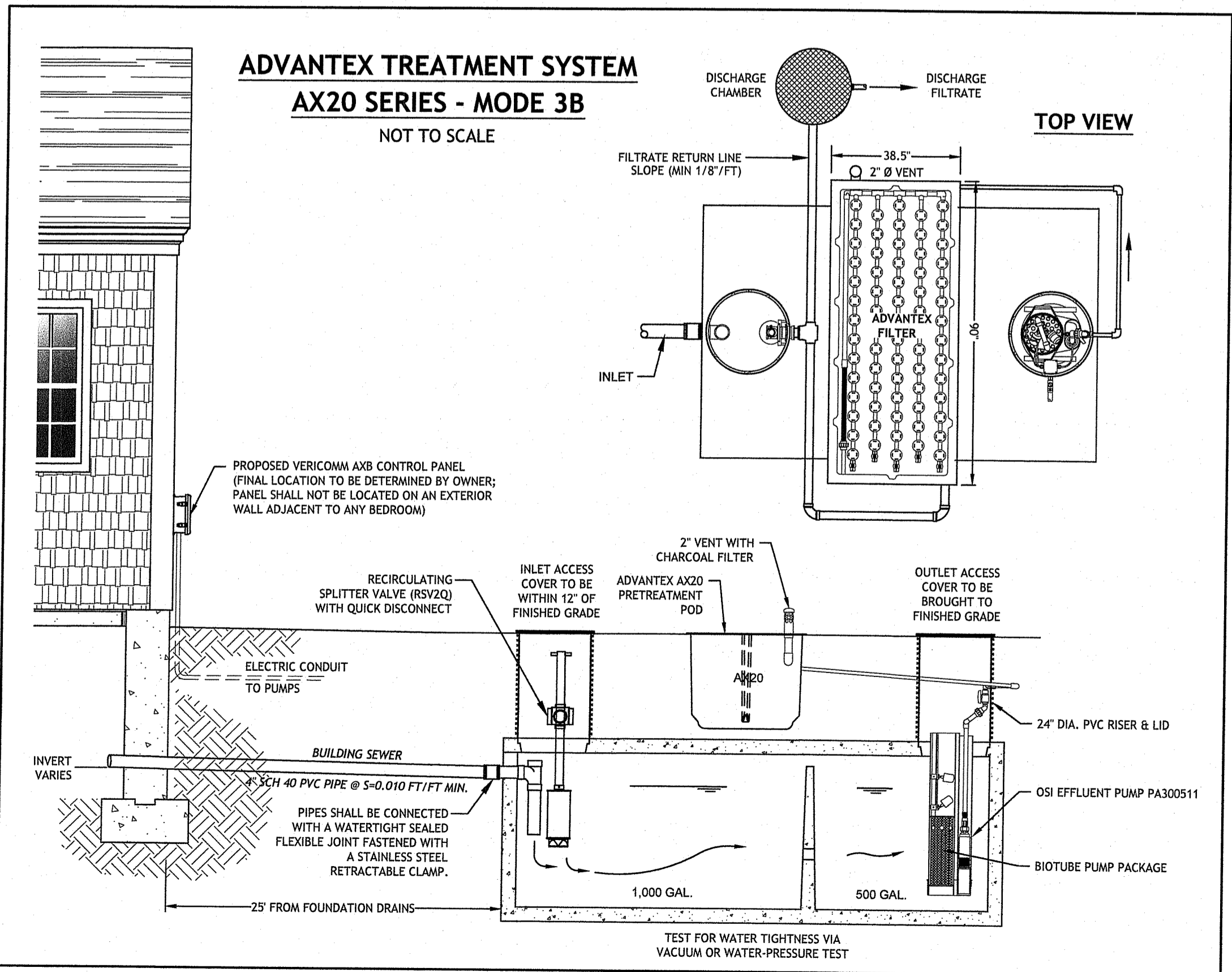
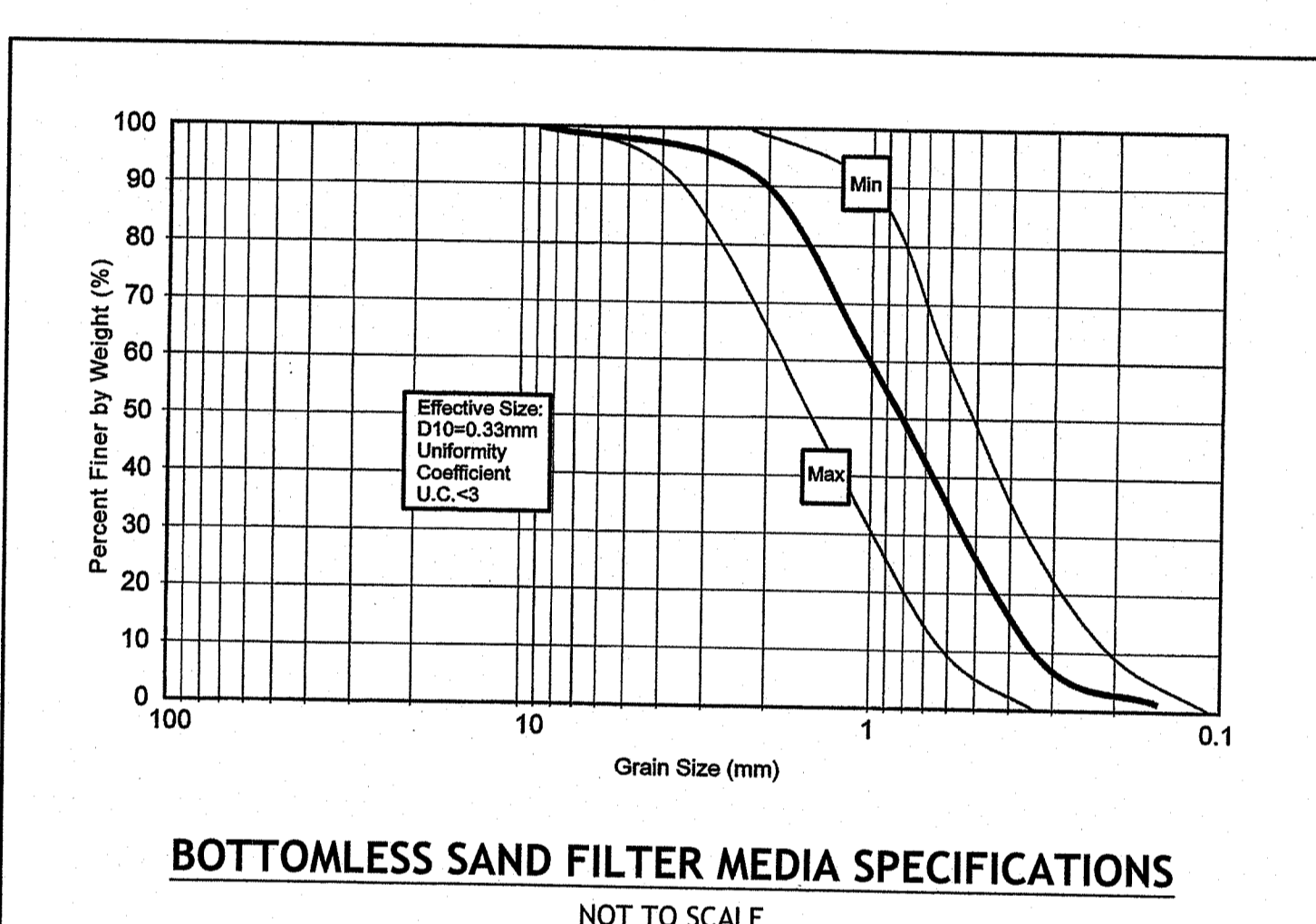
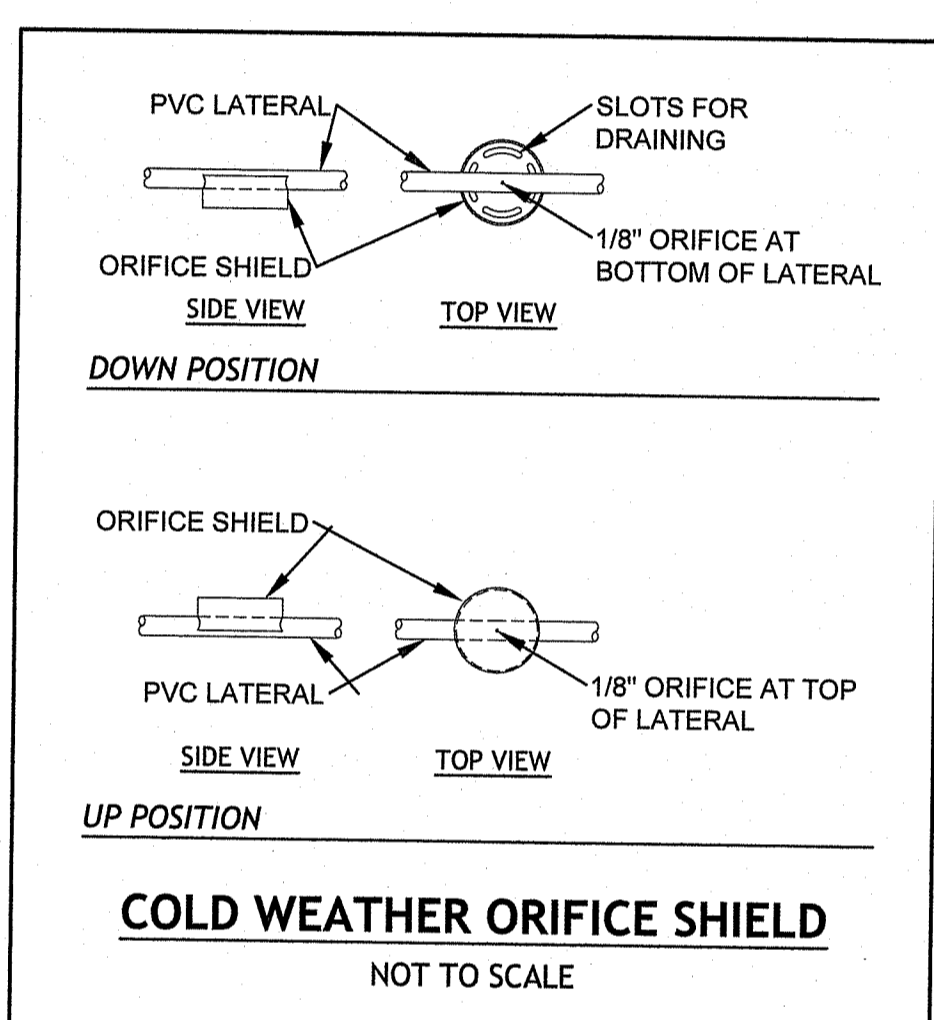
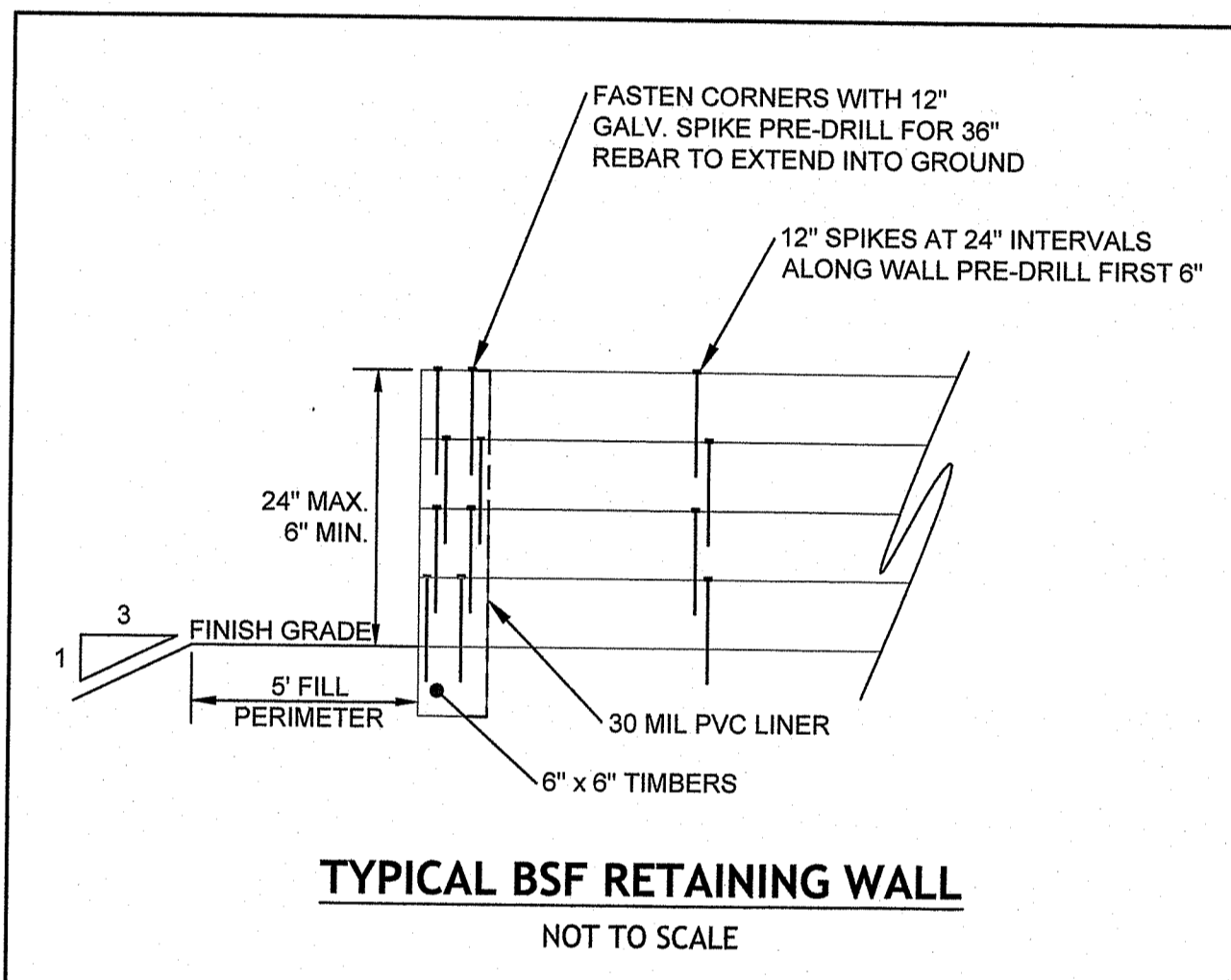
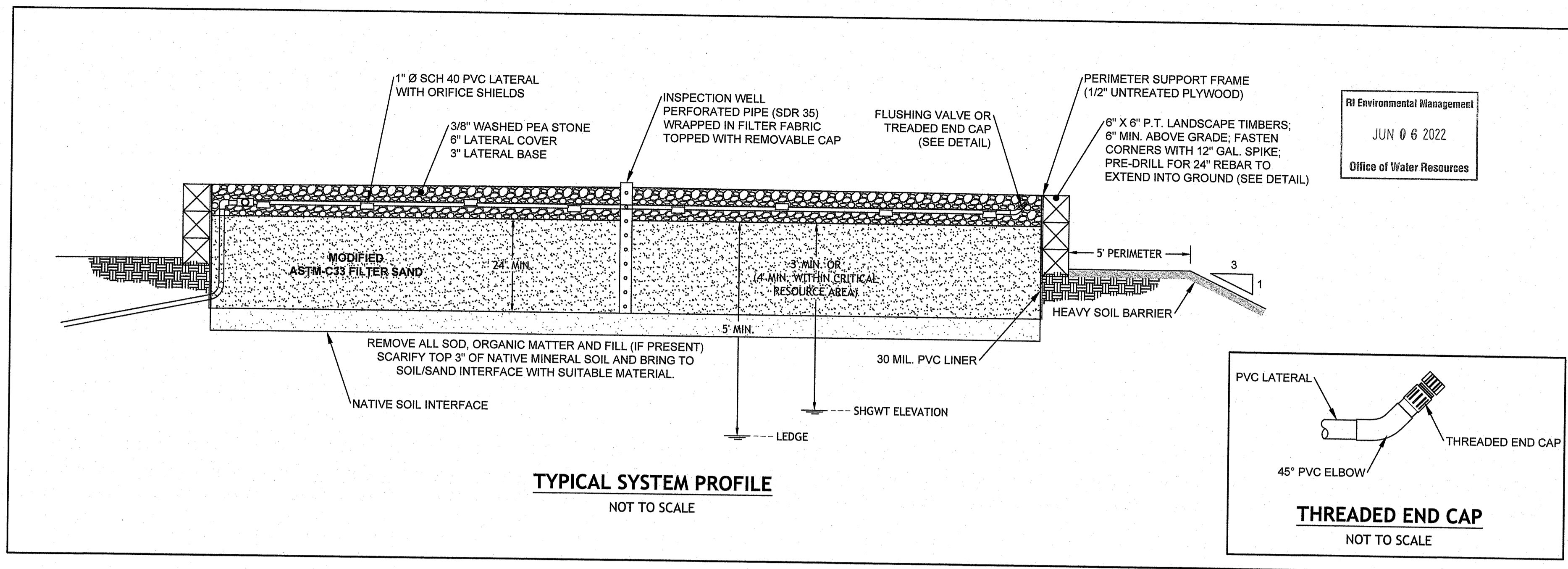
- THIS DESIGN IS SUBMITTED TO RIDEM TO BE REVIEWED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. CONSTRUCTION OF THIS SYSTEM WILL REQUIRE THE DESIGNER'S CERTIFICATE OF CONSTRUCTION FOR OWTS.
- UNLESS OTHERWISE SPECIFIED, THE SYSTEM HAS NOT BEEN DESIGNED WITH THE PROVISIONS FOR GARBAGE GRINDERS.
- THERE ARE NO KNOWN PUBLIC WELLS, EXISTING OR PROPOSED, WITHIN 500 FEET OF THE DESIGNED SYSTEM UNLESS SHOWN.
- NO DRIVING, PARKING OR PAVING WITHIN 10' OF BSF.
- THIS SEWERAGE DISPOSAL SYSTEM SHALL CONFORM TO ALL THE REGULATIONS UNDER SECTIONS 42-17.1-2(1), (M) (R) AND (S) AND SECTION 23-19.5-4 AND CHAPTER 42-35 OF THE GENERAL LAWS OF RHODE ISLAND.
- ALL PIPES EXCEPT IN THE LEACHING FIELD SHALL BE SOLID 4 INCH DIAMETER SDR 35 WITH WATER TIGHT JOINTS OR EQUIVALENT UNLESS OTHERWISE SPECIFIED.
- ALL GRAVITY PIPES UNLESS OTHERWISE SPECIFIED SHALL HAVE A SLOPE NOT LESS THAN 1/8 INCH PER FOOT BUT NO GREATER THAN 3%.
- SEPTIC TANK AND DOSING TANK SHALL BE SET ON A LEVEL STABLE BASE THAT WILL NOT SETTLE.
- INSPECTIONS OR AS-BUILT PLANS ARE REQUIRED, DESIGNER MUST BE NOTIFIED 48 HOURS IN ADVANCE AND COMPONENTS OF SYSTEM MUST BE LEFT EXPOSED.

OPERATIONAL AND MAINTENANCE NOTES:

- THIS SYSTEM SHALL PROVIDE FOR AN AUDIBLE ALARM FOR HIGH WATER IN THE PUMP CHAMBERS WHICH MAY BE SILENCED BY PUSHING A BUTTON ON THE CONTROL PANEL. THIS SITUATION MAY DEVELOP WITH UNUSUALLY HIGH WATER USAGE AND WILL NOT INDICATE AN ONGOING PROBLEM. REPEATED ALARMS, OR ALARMS WITH NO UNUSUAL WATER USAGE SHOULD BE REPORTED TO YOUR MAINTENANCE PROVIDER.
- THE PROPERTY OWNER SHALL ENTER INTO MAINTENANCE CONTRACTS FOR BOTH THE ADVANTEX AX SYSTEM AND THE BSF DISPOSAL FIELD. EACH UNIT SHOULD HAVE A MINIMUM OF 2 INSPECTIONS ANNUALLY.
- THE MAINTENANCE PROVIDER SHALL AFFIX THEIR NAME AND 24-HOUR CONTACT PHONE INSIDE THE CONTROL BOX LOCATED ON THE EXTERIOR OF THE HOUSE.
- THE BSF INSPECTION SHALL INCLUDE A SAMPLING OF THE BSF INFLUENT TO CHECK FOR CLARITY.
- BSF LATERALS SHALL BE CLEANED ANNUALLY BY OPENING THE LATERAL THREADED END CAP AND CLEANING THE ENTIRE LENGTH OF THE LATERAL WITH A BOTTLE BRUSH. THE ACCUMULATED CLEANED MATERIAL MAY BE DEPOSITED IN THE INLET OF THE SEPTIC TANK. EACH LATERAL IS TO BE FLUSHED AS REQUIRED.
- THE TOP OF THE BSF FIELD IS TO BE KEPT CLEAN OF DEBRIS AND UNWANTED VEGETATION (WEEDS, LEAVES, BRUSH, ETC.). LANDSCAPE TIMBERS AS DESIGNED SHALL BE MAINTAINED TO PREVENT CRUSHING OF THE SYSTEM BY UNWANTED LOADS, AND SURFACE WATER INDICATION OF THE SYSTEM.
- ELECTRONIC COMPONENTS OF THE ADVANTEX AND THE BSF SYSTEMS SHALL BE CHECKED ANNUALLY FOR OPERATION.
- ALL FLOATS IN THE PUMP CHAMBERS SHALL BE HOSED DOWN AND CLEANED FROM BUILD-UP.
- THE INLET OF THE SEPTIC TANK AND THE DOSING TANK SHALL BE INSPECTED FOR SLUDGE AND SCUM ACCUMULATION. WHEN THESE MATERIALS BUILD UP TO 33% OF THE SEPTIC TANK HEIGHT, THE TANK SHOULD BE PUMPED AND THE ACCUMULATIONS APPROPRIATELY REMOVED.
- THE FILTER IN THE PUMP CHAMBERS SHALL BE CLEANED ANNUALLY.
- SHOULD THE PUMP ASSEMBLY BE REMOVED, THE VAULT SHALL BE CLEANED AND FILLED WITH CLEAN WATER TO PREVENT THE SCREEN FROM BEING FOULED WITH SOLIDS.
- TIMER SETTINGS SHALL BE CHECKED AT EVERY ESTABLISHED MAINTENANCE AND INSPECTION VISIT AND ADJUSTED AS NEEDED BY THE SERVICE PROVIDER.
- ALL TANKS AND BASINS SHALL BE VISUALLY INSPECTED FOR WATER TIGHTNESS.
- PROPERTY OWNER TO REDUCE ANY SHADING IN THE AREA OF THE BOTTOMLESS SAND FILTER TO REDUCE FREEZE POTENTIAL. ANY ACTIVITY TO REDUCE SHADING MUST BE IN ACCORDANCE WITH THE RIDEM WETLANDS APPROVALS.

BOTTOMLESS SAND FILTER NOTES:

- THE BOTTOMLESS SAND FILTER (BSF) IS INCORPORATED AS THE DISPOSAL BED IN THIS DESIGN TO MAXIMIZE THE REMOVAL OF PATHOGENIC ORGANISMS (PAGE 6 RIDEM TRC GUIDELINES).
- PER RIDEM NOTICE 4/30/04, TOTAL PEA STONE DEPTH IS INCREASED TO 9" TO REDUCE WINTER FREEZE POTENTIAL.
- THE BSF AREA IS TO BE LOCATED AND STAKED IN THE FIELD BY THE INSTALLER PRIOR TO CONSTRUCTION. PROTECTION AGAINST HEAVY VEHICLE TRAFFIC MUST BE ESTABLISHED IN THE BSF AREA PRIOR TO INITIATING ANY CONSTRUCTION OPERATIONS ON THE SITE. DEGRADATION OF THE PROPOSED SITE AREA WILL REQUIRE A RE-DESIGN.
- SYSTEM COMPONENTS WITHIN THIS DESIGN ARE AVAILABLE FROM ORENCO SYSTEMS INC., 814 AIRWAY AVENUE, SUTHERLIN, OR 97479. LOCAL DEALER INFORMATION IS AVAILABLE AT 1-800-348-9843 OR WWW.ORENCO.COM.
- A MINIMUM TEN (10) FEET MUST BE MAINTAINED BETWEEN THE BSF AND ADJACENT TREES AND SHRUBS.
- INTERMITTENT PRESSURE DOSED EFFLUENT WILL PROVIDE A UNIFORM DISTRIBUTION OF WASTE WATER OVER THE BSF AREA, MINIMIZING LOCALIZED SATURATION. LATERAL GATE VALVES ARE DESIGNED FOR PLACEMENT OFF THE HEADER LINE SO AS TO EQUALIZE HYDRAULIC PRESSURE IN THE DISPERSAL.
- THE PRESSURE LINE IS TO BE SLOPED BACK TOWARDS THE PUMP CHAMBER FROM THE BSF FIELD TO ELIMINATE FREEZING.
- THE BSF SAND MEDIA MUST CONFORM TO ASTM C-33 SPECIFICATIONS. EFFECTIVE SIZE (D10) OF 0.3 mm AND A UNIFORMITY COEFFICIENT (D60/D10) OF 3.0 TO 4.0. MAXIMUM MATERIAL PASSING THE NUMBER 200 SIEVE SHALL BE 1%. THE INSTALLER SHALL PRODUCE GRADATION ANALYSIS RESULTS FOR THE MATERIAL PROVIDED FROM THE SUPPLIER.
- PERIMETER STRIPPING OF THE SOIL MATERIAL BELOW THE BSF IS PROHIBITED, UNLESS FILL MATERIAL IS PRESENT.
- THE WALLS OF THE BSF ENCLOSURE MUST BE LINED WITH A 30 MIL PVC LINER WITH ALL BOOTS, PATCHES, REPAIRS, AND SEAMS HAVING THE SAME PROPERTIES AS THE LINER.
- ANY PENETRATION THROUGH THE PVC LINER WALL SHALL BE DONE WITH A PVC BOOT ATTACHMENT GLUED TO THE LINER WITH APPROPRIATE RESILIENT SEALER.
- EXCAVATOR/BACKHOE BUCKET USED TO PLACE MEDIA SHALL BE WASHED THOROUGHLY BEFORE LOADING PROCESS.
- SAND MEDIA SHALL BE PLACED IN 6 INCH LIFTS AND WETTED TO PROVIDE EVEN SETTLING. AFTER PLACEMENT OF EACH LIFT EDGES OF THE FILTER SHALL BE WALKED DOWN, CLEAN SHOES ARE REQUIRED FOR THIS PROCESS.
- AFTER SAND MEDIA HAS SETTLED, 3 INCHES OF 3/8 INCH WASHED PEA STONE SHALL BE PLACED OVER SAND MEDIA. AFTER INSTALLATION OF DISTRIBUTION LATERALS ADD 6 INCHES OF WASHED PEA STONE TO COVER THE SYSTEM. NO FILTER FABRIC OF ANY KIND IS TO BE USED BETWEEN THE SAND AND OVERLYING PEA STONE LAYERS.
- THE ELEVATION OF THE BSF INVERT SHALL EXTEND 5 FEET BEYOND THE WALL PERIMETER.
- WHILE NOT NORMALLY EXPERIENCED, THERE HAVE BEEN REPORTED INSTANCES WHERE SAND FILTER SYSTEMS HAVE BEEN KNOWN TO EXPERIENCE PROBLEMS WITH FREEZING OF PIPES UNDER EXTREME COLD CONDITIONS. WHILE MOST SAND FILTER INSTALLATIONS OPERATE PROPERLY AND WITHOUT FREEZING PROBLEM, THE POSSIBILITY OF FREEZING MAY EXIST UNDER CERTAIN CIRCUMSTANCES. SHOULD THE OWNER WISH TO MAXIMIZE THE AVOIDANCE OF THIS POSSIBILITY, THE OWNER MAY ELECT THE OPTION OF INSTALLING AN ELECTRIC HEAT TRACING SYSTEM ON THE PIPELINES. OWNER SHOULD CONTACT MANUFACTURER/SUPPLIERS OF SUCH EQUIPMENT FOR FURTHER INFORMATION.
- SUPPORT WALLS ARE NEEDED TO PREVENT CAVING OF FILTER WALLS DURING CONSTRUCTION. THESE WALLS SHALL BE RIGID AND MADE OF PLYWOOD (OR EQUIVALENT) AND 2" x 4" SUPPORT BOARDS.
- A PERMANENT TOP FRAME STRUCTURE MUST BE PROVIDED ON ANY PORTION OF THE BSF THAT IS INSTALLED ABOVE GRADE (MAX OF 24" ABOVE GRADE). THE PERIMETER OF THE BSF, BELOW THE REQUIRED PERIMETER OF TIMBERS, MAY BE BERMED WITH NATIVE SOIL OR OTHER MATERIAL SUCH AS LANDSCAPE STONE OR OTHER NON-DEGRADING MATERIAL. BELOW GRADE USE OF TIMBERS IS PROHIBITED.



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: AUG 23 2022 FILE # 22-0076
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

JOE CASALI ENGINEERING, INC.
CIVIL - SITE DEVELOPMENT - TRANSPORTATION
DRAINAGE - WETLANDS - ISDS - TRAFFIC - FLOODPLAIN
(401)944-1300 (401)944-3313 FAX WWW.JOECSAL.COM

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL

THE FARMLANDS
PROPOSED MINOR SUBDIVISION
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/2022	RIDEM COMMENTS

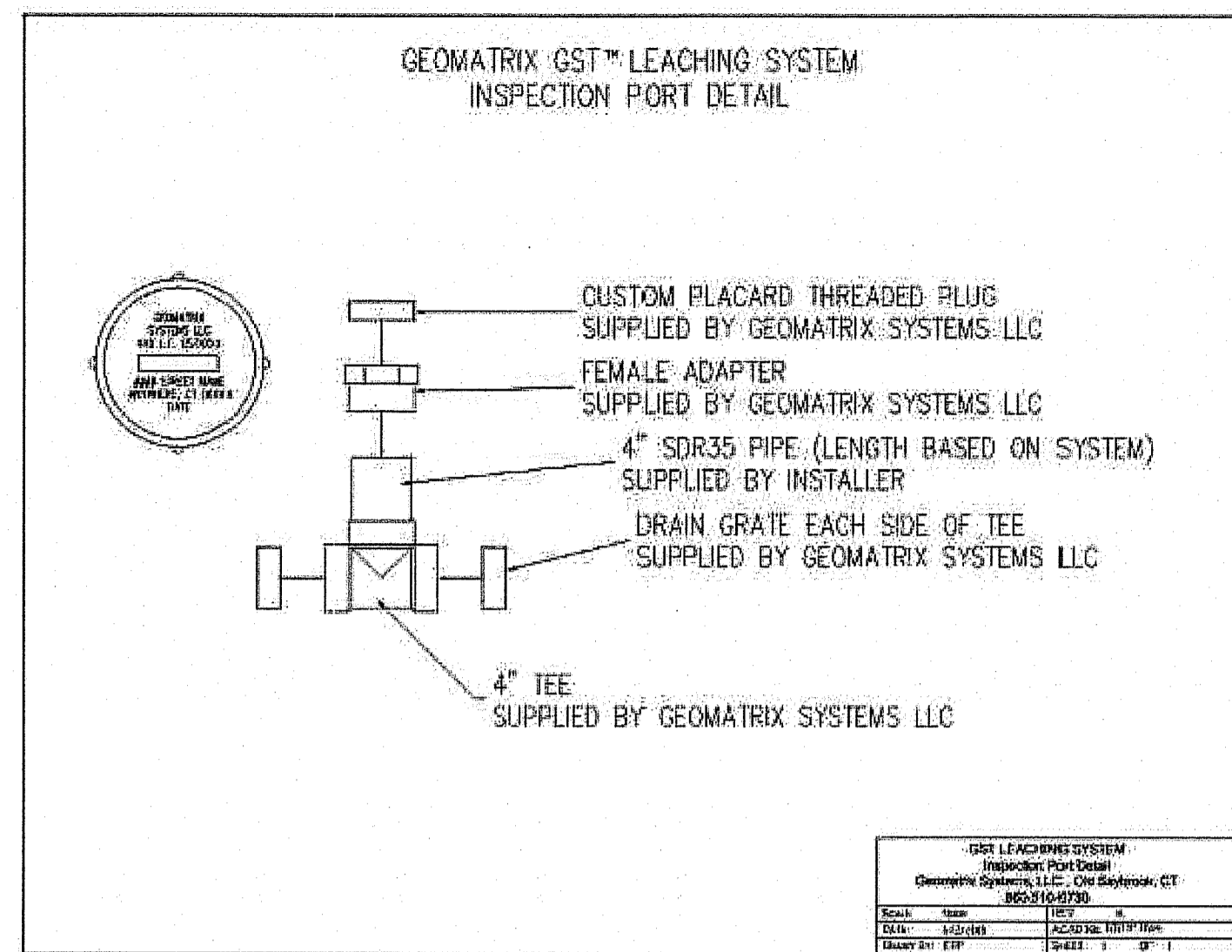
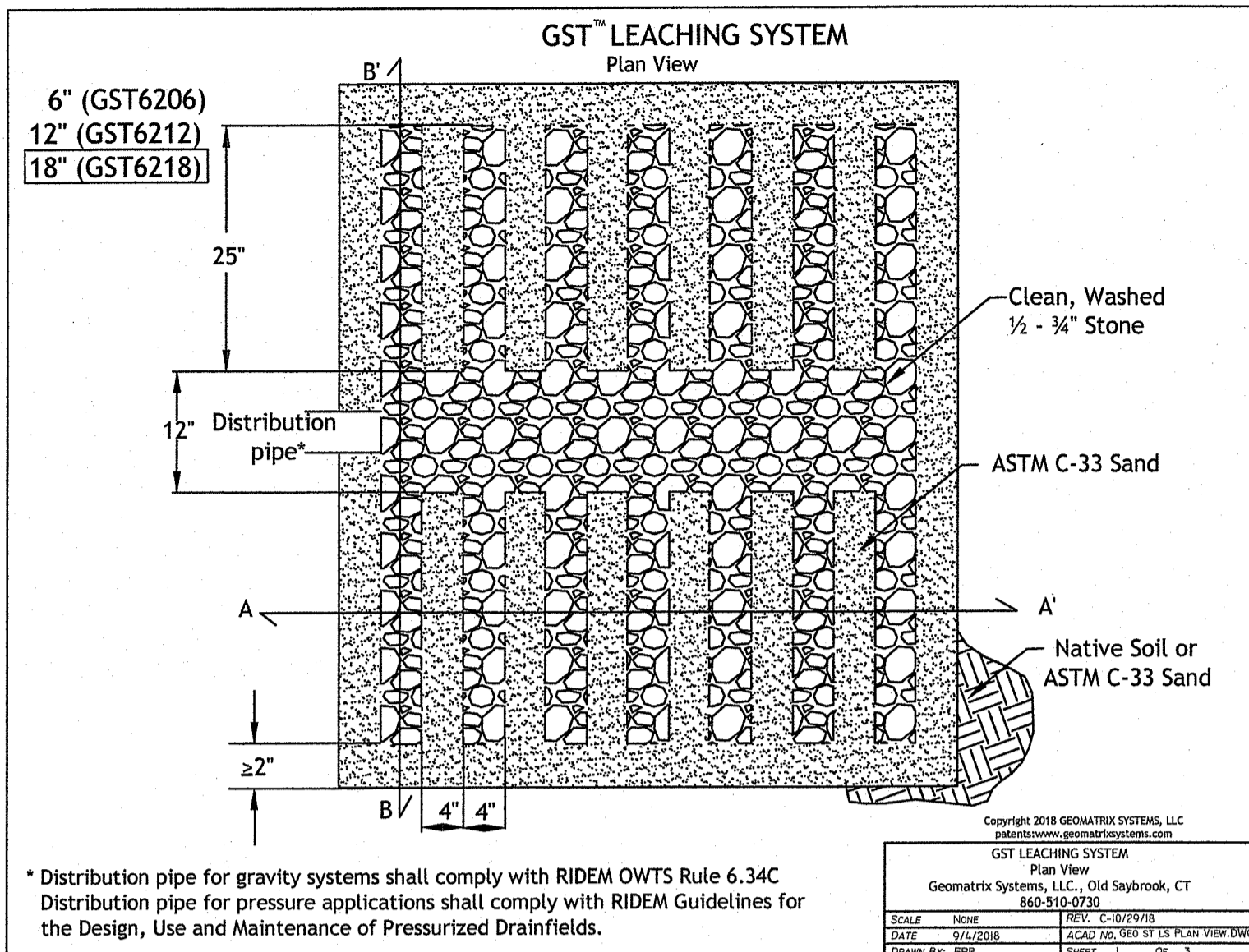
DESIGNED BY: WMLR
DRAWN BY: SEPSD
CHECKED BY: JAC
DATE: FEB. 2022
PROJECT NO: 21-648

PRELIMINARY, NOT FOR CONSTRUCTION

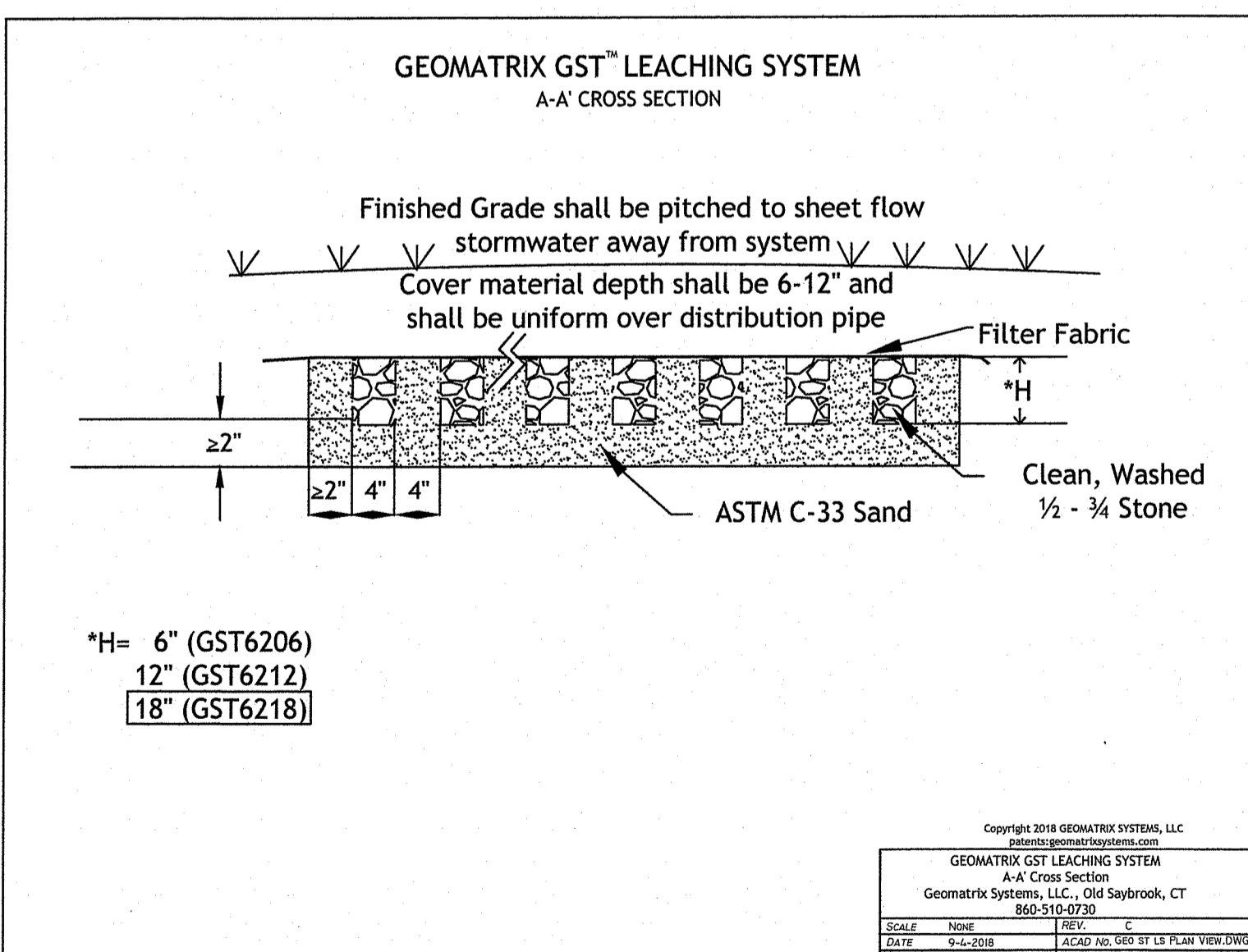
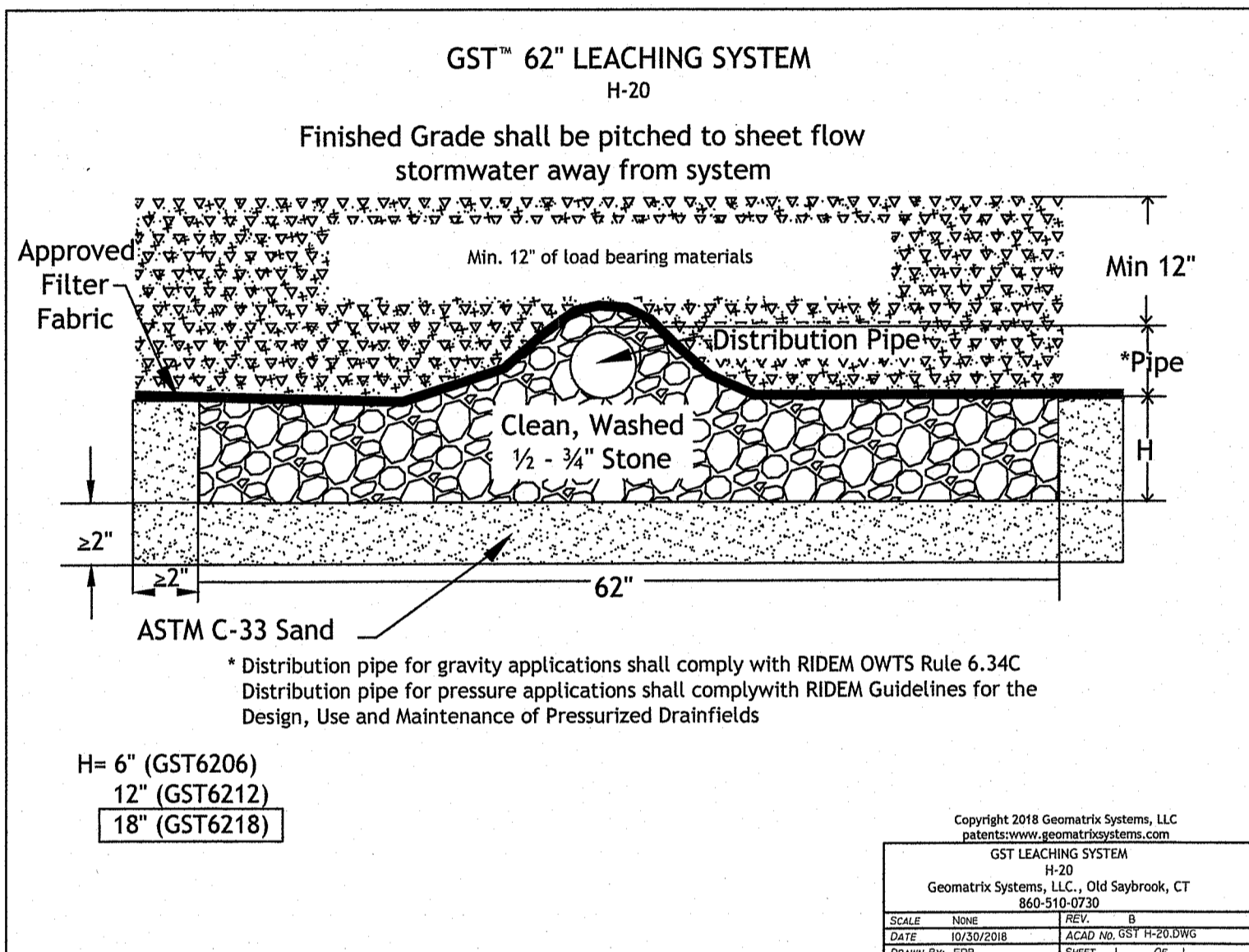
TYPICAL OWTS DETAILS I

SHEET 10 OF 11

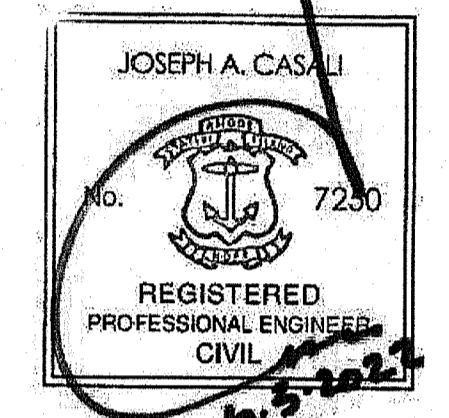
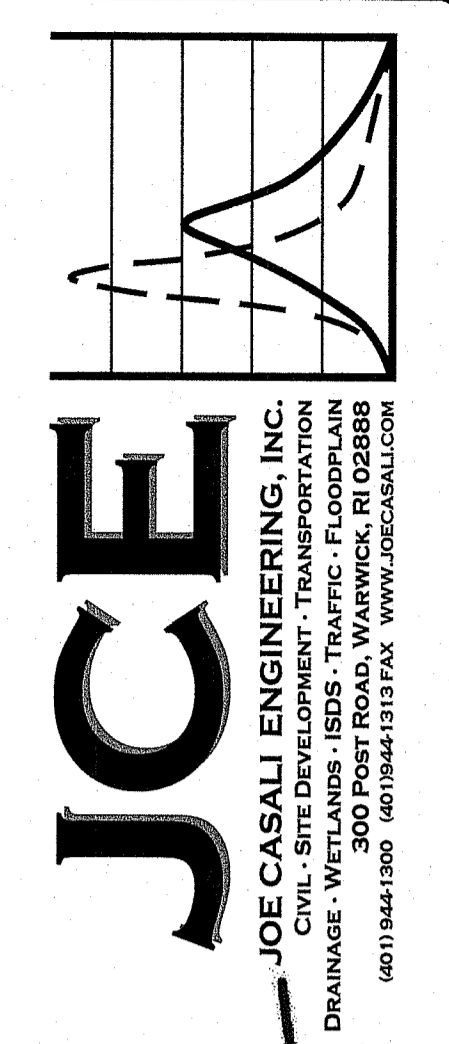
Q:\21-64-Angelo Grillo\ACAD\1257 Central Pike [Preliminary Plan] - RTC DEM.dwg Jun. 03. 2022 12:29pm



GST LEACHING SYSTEM INSPECTION PORT
NOT TO SCALE



RI Department of Environmental Management
JUN 06 2022
Office of Water Resources



THE FARMLANDS
PROPOSED MINOR SUBDIVISION
1257 CENTRAL AVENUE
JOHNSTON, RHODE ISLAND
AP 43-4, LOT 96

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: AUG 23 2022 FILE #: 22-0076
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/2022	RIDEM COMMENTS

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

DESIGNED BY: WMLJR
DRAWN BY: SEP/SD
CHECKED BY: JAC
DATE: FEB. 2022
PROJECT NO: 21-64a

PRELIMINARY, NOT FOR CONSTRUCTION

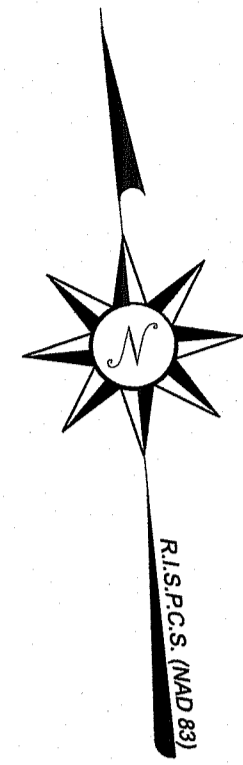
TYPICAL
OWTS
DETAILS II

SHEET
11 OF 11

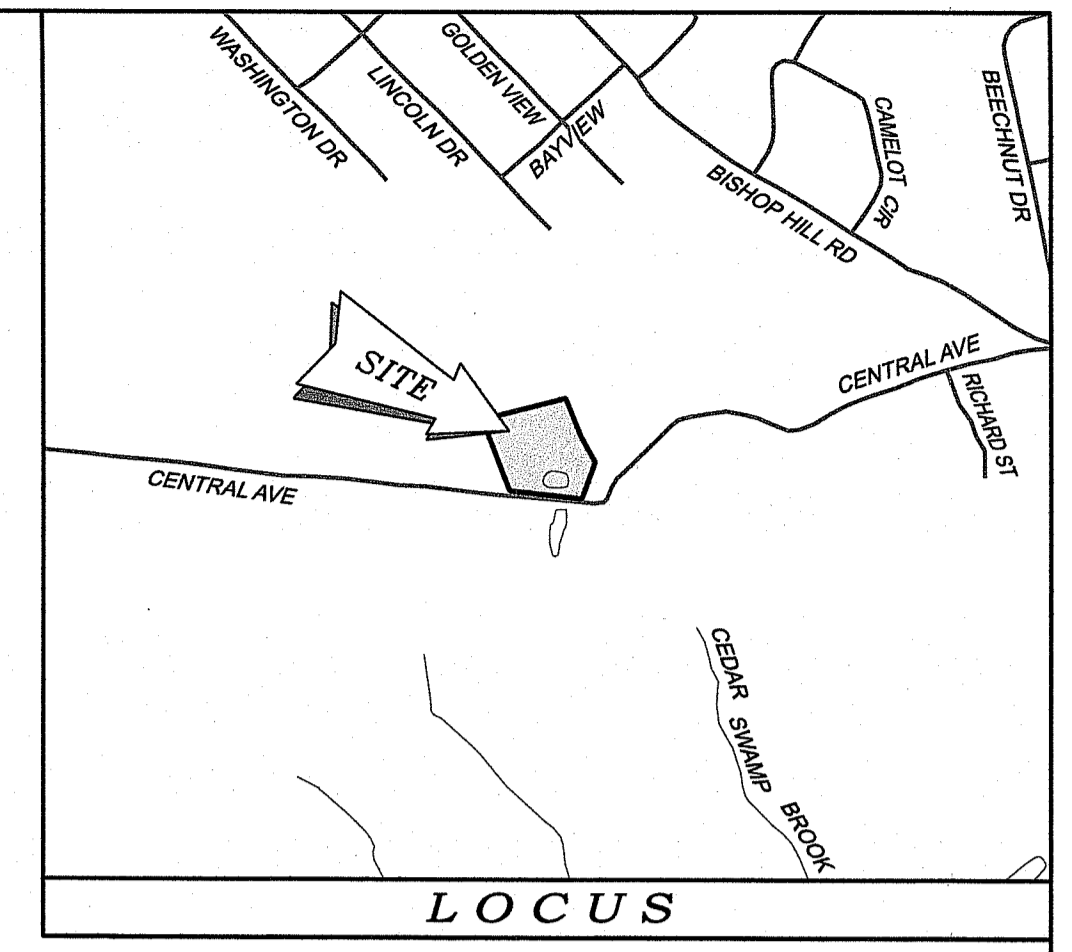
Q:\21-64-Angelo\Grill\KCAD\1257 Central Pike [Preliminary Plan] - RTC DEM.dwg Jun. 03. 2022 1:29pm

LEGEND & ABBREVIATIONS

- NF - NOW OR FORMERLY
- A.P. - ASSESSORS PLAT
- S.F. - SQUARE FEET
- AC. - ACRES
- ± - PLUS OR MINUS
- STY - STORY
- WF - WOOD FRAMED
- SHIP - STATE HIGHWAY PLAT
- RET. - RETAINING WALL
- PED. - PEDESTRIAN
- (FND.) - FOUND
- R/HB - RI HIGHWAY BOUND
- PK NAIL - MASONRY NAIL
- FE. - FLARED END
- RCP - REINFORCED CONCRETE PIPE
- CLF - CHAIN LINK FENCE
- INV. - INVERT
- x 10.80 - EXISTING SPOT GRADE
- x 10.80 - NEW SPOT GRADE
- PROPERTY LINE
- ZONING SETBACK LINE
- EXISTING CONTOUR
- NEW CONTOUR
- STONE WALL
- FENCE
- SEWER LINE
- DRAIN LINE
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- SANITARY SEWER MANHOLE
- CATCH BASIN
- STORM DRAIN MANHOLE
- WATER GATE
- GAS VALVE
- ELECTRIC MANHOLE
- GRANITE BOUND
- DRILL HOLE
- IRON PIPE



RI Environmental Management
JUN 06 2022
Office of Water Resources



NOTES / REFERENCES

- REFERENCE IS MADE TO THE FOLLOWING MAPS AND PLANS OF RECORD:
 - A.) PLAN ENTITLED "MINOR SUBDIVISION - FINAL - PHASE I HIGHLAND MEADOWS PREPARED FOR GREEN MEADOW INVESTMENTS, LLC & WILLIAM BALDWIN A.P. 43-4, LOTS 94, 569 & PORTION OF 570 TOTAL AREA = 10.05 AC. +/- JOHNSTON, RHODE ISLAND PREPARED BY N. VELTRI SURVEY, INC. SCALE: 1" = 60', DATED: 8/19/16, LAST REVISED: 12/09/16."
 - B.) PLAN ENTITLED "ADMINISTRATIVE PLAT PLAN, A.P. 43-2 LOTS 94, 168, AND 169, JOHNSTON RHODE ISLAND, OWNER: GREEN MEADOW INVESTMENTS L.L.C. & WILLIAM BALDWIN, PREPARED BY HUDSON PLACE ASSOCIATES, SCALE: 1" = 60', DATED: NOVEMBER 2007."
 - C.) PLAN ENTITLED "ADMINISTRATIVE PLAT - FINAL PLAN, A.P. 43-4 LOTS 94, 168, AND 169, JOHNSTON RHODE ISLAND, OWNER: GREEN MEADOW INVESTMENTS L.L.C. & WILLIAM BALDWIN, PREPARED BY HUDSON PLACE ASSOCIATES, SCALE: 1" = 60', DATED: SEPTEMBER 2010."
 - D.) PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY PLAN, A.P. 43-4, LOTS 94, 570 & 609, CENTRAL AVENUE, JOHNSTON, RHODE ISLAND, PREPARED FOR: JOE CASALI ENGINEERING, INC. PREPARED BY: WATERMAN ENGINEERING COMPANY, PROJECT No. 19.080, SCALE: 1" = 60', DATED: 11/04/19, LAST REVISED: 03/12/20."
 - E.) PLAN ENTITLED "MINOR SUBDIVISION - RECORD PLAN, HIGHLAND MEADOWS (PHASE II), A.P. 43-4, LOTS 94, CENTRAL AVENUE, JOHNSTON, RHODE ISLAND, PREPARED FOR: JOE CASALI ENGINEERING, INC. PREPARED BY: WATERMAN ENGINEERING COMPANY, PROJECT No. 19.080, SCALE: 1" = 60', DATED: 01/18/21."
 - F.) PLAN ENTITLED "PLAN OF SURVEY OF PROPOSED DIVISION OF LAND OF BRUCE E. BANVILLE, LOT 575, A.P. 43-2, GROSS ROAD AND WASHINGTON DRIVE, JOHNSTON, RHODE ISLAND, PREPARED FOR: REGAL DEVELOPMENT CORP., PREPARED BY: SCITUATE SURVEYS, INC. SCALE: 1" = 100', PROJECT No. SS 983.01, DRAWING: SS 1340, DATE: AUGUST 2, 1989."
- REFERENCE IS MADE TO THE FOLLOWING TOWN OF JOHNSTON LAND EVIDENCE RECORDS REGARDING RECORDED TITLE TO THE PREMISES SURVEYED:
 - A.) A.P. 43-3, LOT 96 - BOULDER HILL DEVELOPMENT LLC - VOLUME 2994, PAGE 104 VOLUME 2994, PAGE 107
- THESE PREMISES MAY BE SUBJECT TO THE FOLLOWING EASEMENTS, RIGHTS OF WAY OR AGREEMENTS OF RECORD:
 - A.) AN EASEMENT MAY EXIST REGARDING THE CURRENT OVERHEAD ELECTRIC SERVICE AND POLES OVER AND ACROSS A.P. 43-3, LOT 96 AS SHOWN (NO RECORDS FOUND)
- THESE PREMISES ARE SITUATED IN AN R-40 ZONE:

DIMENSIONAL REQUIREMENTS	SINGLE FAMILY
MIN. LOT AREA	= 40,000 SQ. FT.
MIN. FRONTAGE/WIDTH	= 140 FT.
MIN. S/B FRONT YARD	= 40 FT.
MIN. S/B REAR YARD	= 75 FT.
MIN. S/B SIDE YARD	= 35 FT.
MAX. STRUCTURE HEIGHT	= 30 FT.
MAX. BUILDING COVERAGE	= 15%

NOTE - ZONING INFORMATION IS FROM CURRENT ZONING AND MAY NOT REFLECT THE CONDITIONS AT THE TIME OF CONSTRUCTION OR ANY VARIANCES GRANTED.
- THESE PREMISES ARE SITUATED IN A ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS DESIGNATED ON THE "NATIONAL FLOOD INSURANCE PROGRAM, FIRM FLOOD INSURANCE RATE MAP PROVIDENCE COUNTY, RHODE ISLAND (ALL JURISDICTIONS) PANEL 283 OF 451 CITY OF PROVIDENCE MAP NUMBER 44070283H, MAP REVISED: OCTOBER 2, 2015. FEDERAL EMERGENCY MANAGEMENT AGENCY."
- ANY UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. PLEASE CONTACT DIG SAFETY 72 HOURS PRIOR TO CONSTRUCTION AT PHONE NO. 1-888-DIG-SAFE AND/OR ALL LOCAL UTILITY COMPANIES.
- THE HORIZONTAL DATUM FOR THIS PROJECT IS THE R.I.S.P.C.S. (NAD 83) AND THE VERTICAL DATUM FOR THIS PROJECT IS NAVD 88. THE PROJECT DATUMS WERE ESTABLISHED FROM REFERENCE STATIONS AND GNSS CORRECTED DATA OBTAINED FROM THE LEICA SMARTNET NORTH AMERICA RTK NETWORK VIA CARLSON BRX6 GNSS ANTENNAS / RECEIVERS.
- WETLAND DELINEATION BY NATURAL RESOURCE SERVICES, INC. P.O. BOX 311, HARRISVILLE, RI 02830 IN MARCH, 2021. WETLAND FLAGS FIELD LOCATED BY WATERMAN ENGINEERING COMPANY.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN LETTER OF APPROVAL
DATED: AUG 23 2022 FILE # 22-0676
NO CHANGES TO THE PROJECT PRIOR APPROVAL
APPLICABLE PLANS MUST BE AT CONSTRUCTION SITE
Bradley J. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

** SIGNATURES MUST BE IN BLUE INK TO CONSTITUTE AN ORIGINAL PLAN

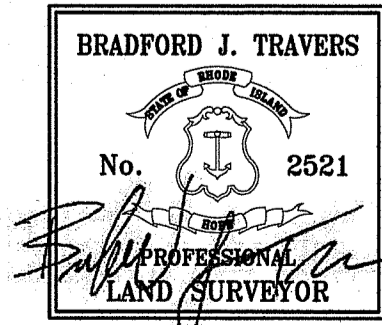
CERTIFICATION

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON APRIL 26, 2018, AS FOLLOWS:

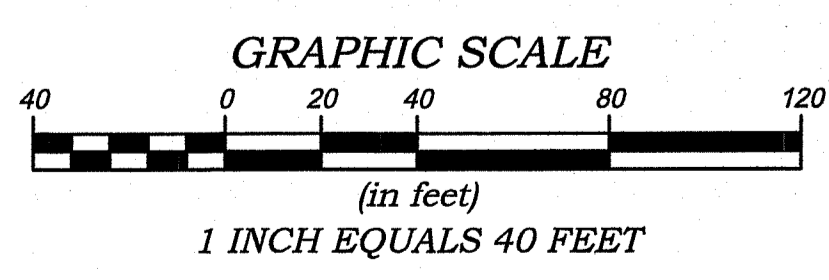
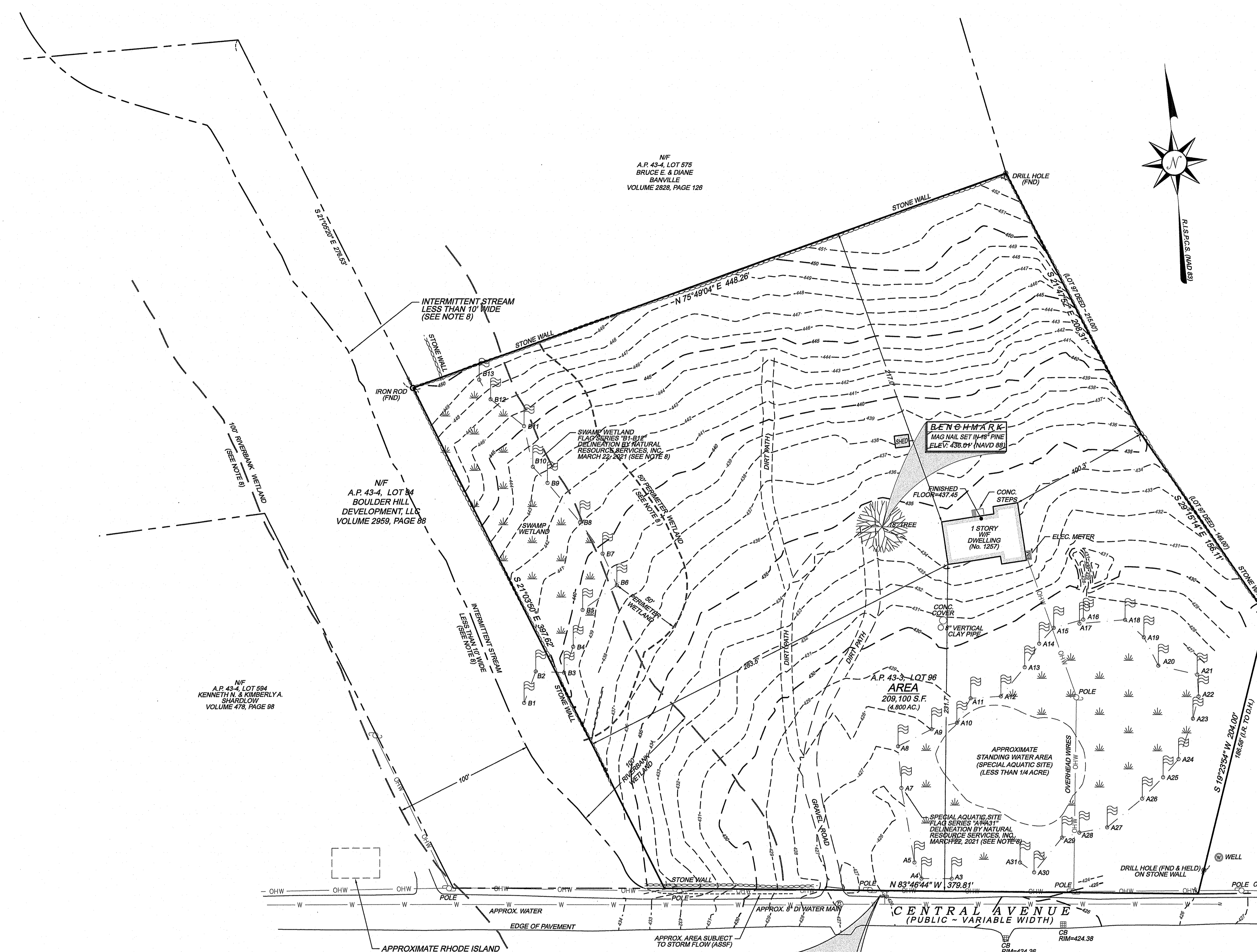
TYPE OF BOUNDARY SURVEY: COMPREHENSIVE BOUNDARY SURVEY
MEASUREMENT / ACCURACY SPECIFICATION: I

OTHER TYPE OF SURVEY: TOPOGRAPHIC SURVEY
DATA ACCUMULATION: III
TOPOGRAPHIC SURVEY: T-1

THE PURPOSE FOR CONDUCTING THIS SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS:
BOUNDARY & TOPOGRAPHIC SURVEY FOR THE FUTURE DEVELOPMENT OF THE SUBJECT PROPERTY.



BY: *Bradley J. Freeman* No. 2521 10/12/2021
BRADFORD J. TRAVERS, P.L.S. REG. NO. DATE
WATERMAN ENGINEERING COMPANY (COA No. LS.004483)



COPYRIGHT
THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER/SURVEYOR AND HAVE BEEN PREPARED FOR THE OWNER FOR THIS PROJECT AT THIS SITE AND ARE NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION OR OWNER WITHOUT WRITTEN CONSENT OF THIS OWNER OR ONE OF ITS DIRECTORS.
WATERMAN ENGINEERING CO.
CIVIL ENGINEERS & SURVEYORS
46 SUTTON AVENUE
EAST PROVIDENCE, RI 02914-3096

NO.	DATE	REVISION	CHECKED BY
BOUNDARY & TOPOGRAPHIC SURVEY PLAN ASSESSORS PLAT 43-3, LOT 96 CENTRAL AVENUE JOHNSTON, RHODE ISLAND			PROJECT NO. 21-050 SCALE: 1" = 40' DATE: 10/01/2021 DRAWN BY: EBP CHECKED BY: BJT FRENAME: 21-050_SU1 1 of 1 SHEETS DRAWING # SU1
JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RHODE ISLAND 02888			
Waterman ENGINEERING COMPANY Engineers & Surveyors - Est. 1894			
46 Sutton Avenue East Providence, RI Phone: (401) - 438 - 5775 Fax: (401) - 438 - 5773 www.watermanengineering.net			