

DEVELOPMENT PLAN REVIEW FILING for

UNION FIRE DISTRICT STATION 7, MATUNUCK

49 MATUNUCK SCHOOLHOUSE ROAD
SOUTH KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

ZONING DISTRICT: GI (GOVERNMENT & INSTITUTION)

OWNER/APPLICANT

UNION FIRE DISTRICT
OF SOUTH KINGSTOWN
MR. ANTHONY CICCONE, CHAIR
BOARD OF WARDENS
131 ASA POND ROAD
WAKEFIELD, RI 02880

ARCHITECT

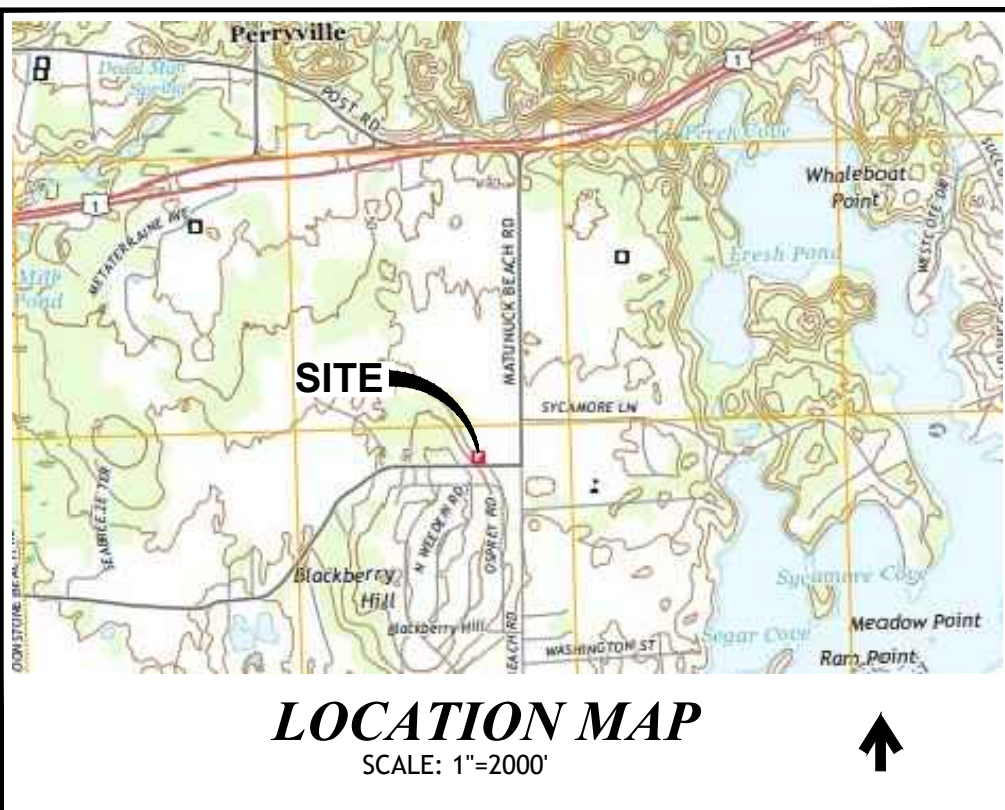
AHARONIAN & ASSOCIATES INC.
310 G. WASHINGTON HWY.
SMITHFIELD, RI 02917
(401) 232-5010

ENGINEER

JOE CASALI ENGINEERING, INC.
300 POST ROAD
WARWICK, RI 02888
(401) 944-1300 phone
(401) 944-1313 fax

SURVEYOR

PINCH LAND SURVEYING
148 HIGH STREET
WAKEFIELD, RI 02879
(401) 789-8087 phone



GENERAL NOTES:

- CLASS I PROPERTY LINE SURVEY AND CLASS III TOPOGRAPHIC SURVEY COMPLETED BY PINCH LAND SURVEYING, 148 STREET, WAKEFIELD, RI IN MARCH 2014.
- 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.
- THE PROJECT SITE IS LOCATED WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS SHOWN ON FLOOD INSURANCE RATE MAP FOR THE TOWN OF SOUTH KINGSTOWN, MAP NO. 44009C0193J EFFECTIVE DATE OF OCTOBER 16, 2013.
- BENCHMARK NO. 1: CHISELED "X" SET IN TOP OF 3x4 ROCK AT ELEVATION = 97.73'. BENCHMARK NO. 2: MAG NAIL SET IN ASPHALT DRIVE AT ELEVATION = 96.96.
- THERE ARE NO HISTORIC CEMETERIES OR FEATURES ON OR IMMEDIATELY ADJACENT TO THE DEVELOPMENT PARCEL.
- THE SUBJECT SITE IS WITHIN THE OWTS CRITICAL RESOURCE AREA.
- THE PROJECT SITE IS NOT WITHIN THE TOWN OF SOUTH KINGSTOWN'S GROUNDWATER PROTECTION OVERLAY DISTRICT; NOR WITHIN A TMDL WATERSHED; NOR A DRINKING WATER SUPPLY WATERSHED; NOR A NATURAL HERITAGE AREA.
- THE PROJECT SITE LIES WITHIN THE RICRMC'S SPECIAL AREA MANAGEMENT PLAN (SAMP) FOR THE SALT PONDS REGION. ACCORDING TO THE RICRMC, THE PROJECT DOES NOT PROPOSE ANY "WATERSHED ACTIVITY" REQUIRING AN APPLICATION.
- THE DEVELOPMENT PARCEL NOR THE EXISTING BUILDING WITHIN THE SUBJECT PARCEL IS NOT LISTED ON THE NATURAL REGISTER OF HISTORIC PLACES.
- THERE ARE NO EXISTING OR ACTIVE AGRICULTURE USE PRESENT ON THE SITE. THERE ARE NO UNIQUE NATURAL FEATURES PRESENT ON THE SITE.

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.

ZONING CRITERIA	REQUIRED
ZONING DISTRICT	GI
MINIMUM LOT AREA	NONE
MINIMUM LOT WIDTH	NONE
MINIMUM FRONTAGE	NONE
MINIMUM FRONT YARD	NONE
MINIMUM SIDE YARD SETBACK	NONE
MINIMUM REAR YARD SETBACK	NONE
MAXIMUM BUILDING HEIGHT MAX. LOT COVERAGE (STRUCTURE)	NONE

INDEX OF DRAWINGS

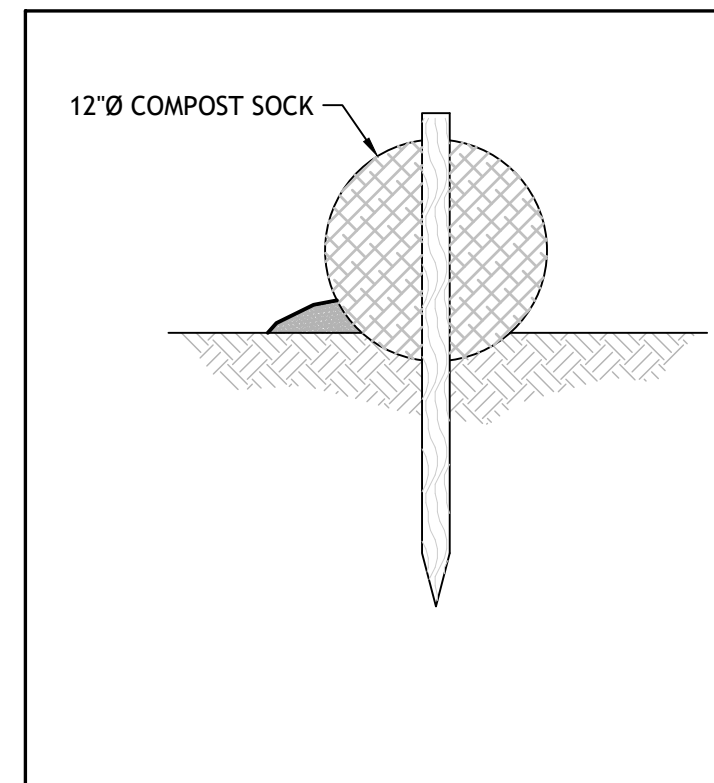
SHEET NO.	PLAN
1	EXISTING CONDITIONS & SITE PREPARATION PLAN
2	SITE PLAN
3	UTILITY PLAN
4	GRADING & DRAINAGE PLAN
5	DETAILS I
6	DETAILS II
7	LANDSCAPE PLAN, BY DIANE C. SOULE & ASSOCIATES
8	LANDSCAPE DETAILS, BY DIANE C. SOULE & ASSOCIATES
A1	FIRE STATION ELEVATIONS, BY AHARONIAN & ASSOCIATES
A2	EMS BUILDING ELEVATIONS, BY AHARONIAN & ASSOCIATES
A3	EXTERIOR ELEVATIONS, BY AHARONIAN & ASSOCIATES
R1	SURVEY PLAN, BY PINCH LAND SURVEYING

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 STAKED SILT FENCE (R.I. STD. 9.2.0), SILT SACK SEDIMENT TRAPS OR COMPOST SOCKS 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 SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED 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 SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
- THE SILT FENCE/STRAW WATTLE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE/STRAW WATTLE AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE SILT FENCE/STRAW WATTLE 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 RESIDENT 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 IN 1989 (REVISED 2014, UPDATED 2016)

ORDER OF PROCEDURE:

- SEDIMENT CONTROL DEVICES SHALL SET IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY CLEANED AND MAINTAINED DURING THE CONSTRUCTION.
- IF WORK PROGRESS IS INTERRUPTED AT ANY TIME, REFERENCE EROSION & SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
- SPECIFIED PLANTINGS ARE TO TAKE PLACE IN EARLY SPRING (APRIL 1 THRU JUNE 15) OR EARLY FALL (SEPTEMBER 1 THRU OCTOBER 15) AND ARE TO BE MAINTAINED FOR A PERIOD OF ONE GROWING SEASON AND SHALL BE REPLACED IF NECESSARY.



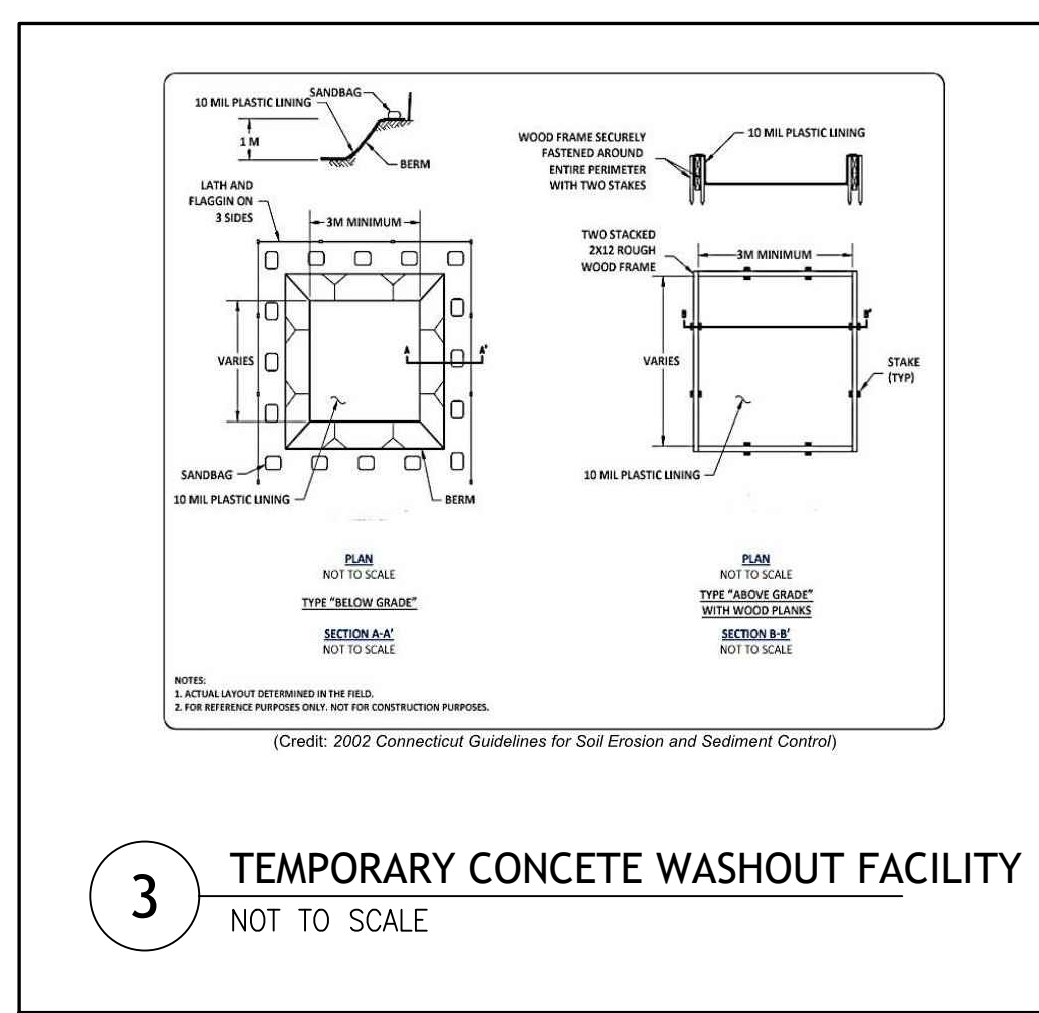
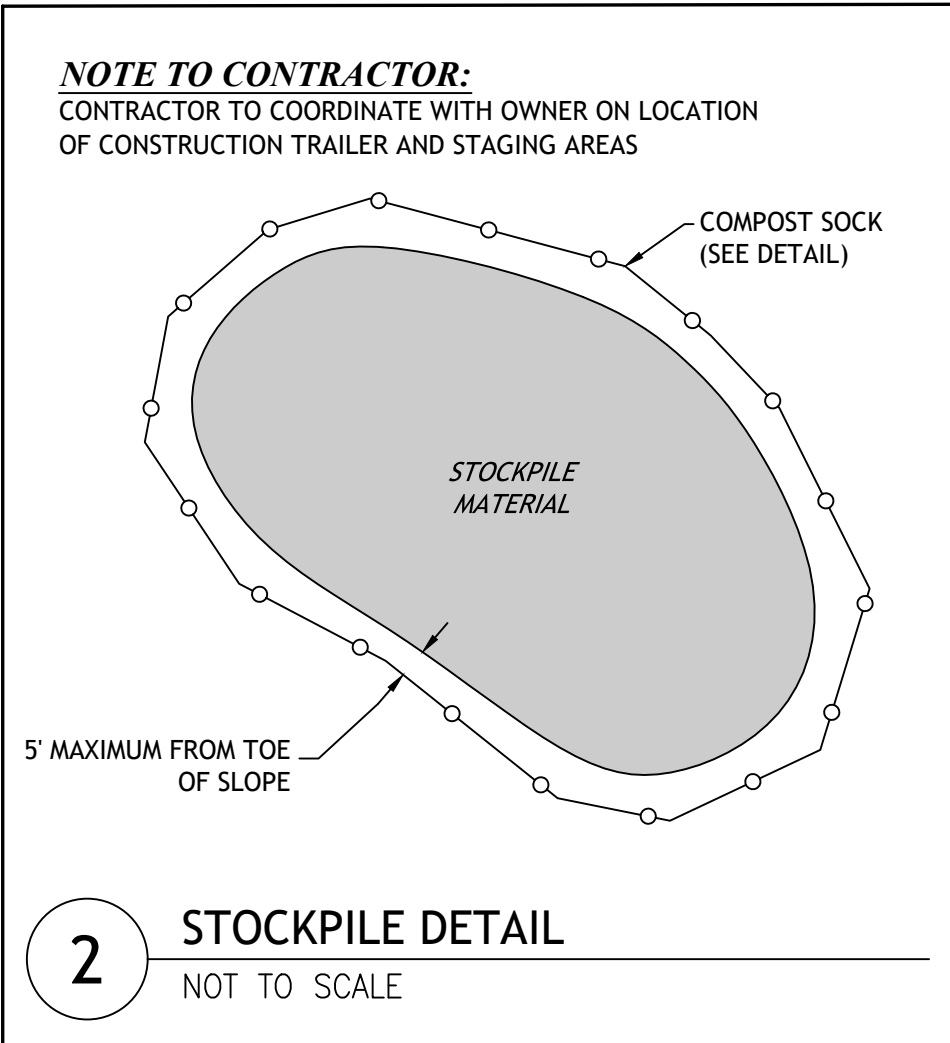
NOTES:

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

TOP WIDTH VS. HEIGHT
H = HEIGHT OF EMBANKMENT
W = TOP WIDTH OF EMBANKMENT

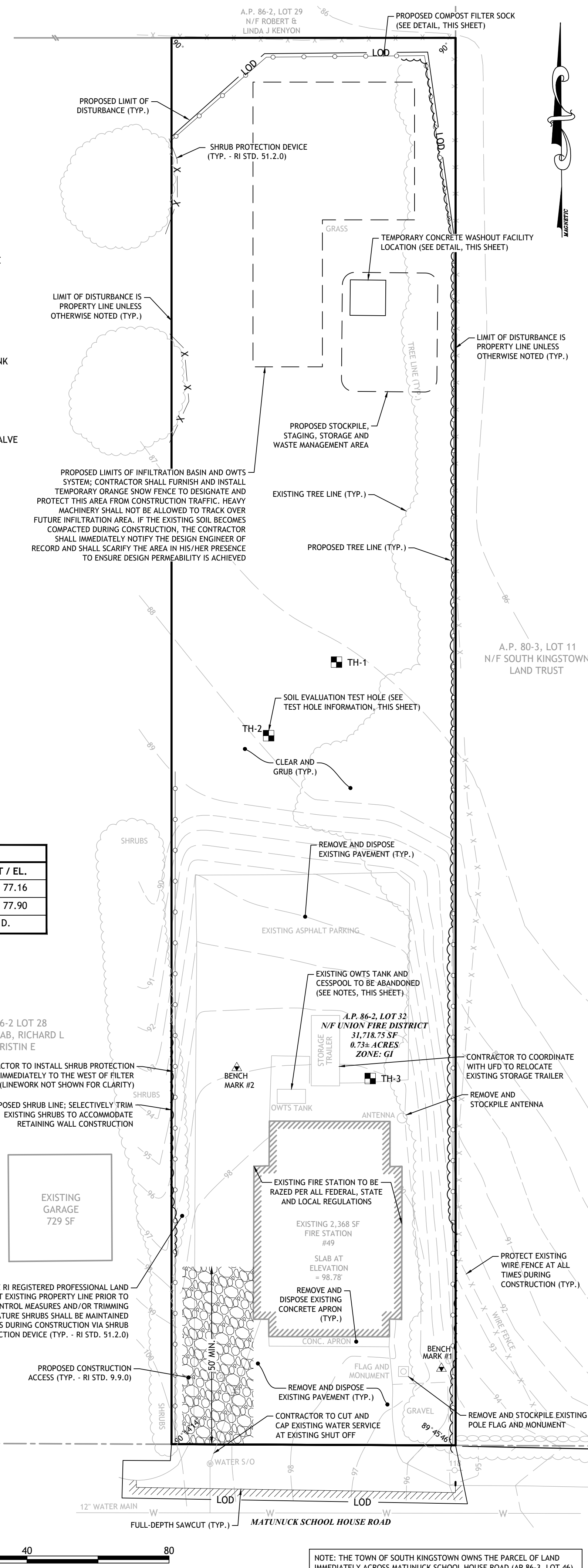
H (ft)	W (ft)
1.5	2.0
2.0	2.0
2.5	2.5
3.0	2.5
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5

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



LEGEND:

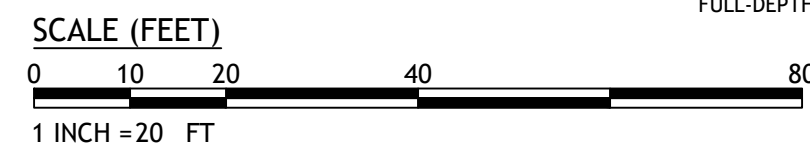
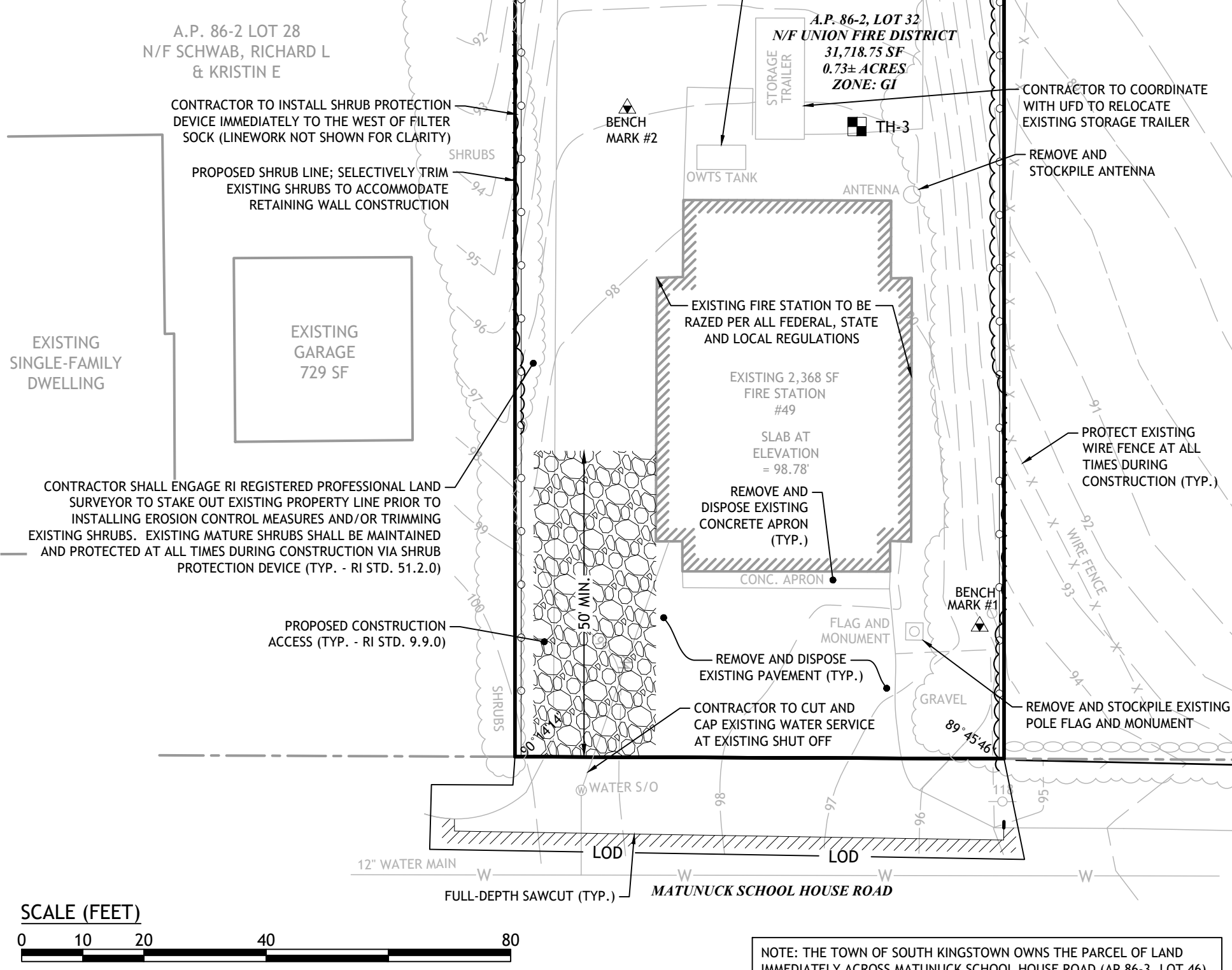
- EXISTING PROPERTY LINE
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING STONE WALL
- EXISTING CURB
- PROPOSED CURB
- EXISTING METAL FENCE
- CHAIN LINK FENCE
- EXISTING DRAIN LINE
- PROPOSED DRAIN LINE
- EXISTING DRAINAGE MANHOLE
- PROPOSED DRAINAGE MANHOLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE
- EXISTING TELECOM DUCTBANK
- EXISTING ELECTRIC DUCTBANK
- RELOCATED ELECTRIC DUCTBANK
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- WATER GATE
- PROPOSED WATER SHUT OFF VALVE
- EXISTING SEWER LINE
- PROPOSED SEWER LINE
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- N/F - NOW OR FORMERLY
- TREELINE
- COMPOST FILTER SOCK
- LIMIT OF DISTURBANCE
- TEST HOLE
- BOLLARD
- CONDUIT
- HYDRANT
- LAMP POLE
- FIRE DEPARTMENT CONTROL
- PROPOSED HANDICAP
- EXISTING TREE



SOIL EVALUATION TEST PIT DATA

EXPLORATION ID	SURFACE EL.	SHWT / EL.
TH-1	87.16	120' / 77.16
TH-2	87.90	120' / 77.90
TH-3	97.16	N.D.

NOTES:
N.D. = NOT DETERMINED



NOTE: THE TOWN OF SOUTH KINGSTOWN OWNS THE PARCEL OF LAND IMMEDIATELY ACROSS MATUNUCK SCHOOL HOUSE ROAD (AP 86-3, LOT 46)

JOE CASALI ENGINEERING, INC.
CIVIL ENGINEERING, ARCHITECTURE, SURVEYING, LANDSCAPE ARCHITECTURE, PLANNING
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JOSEPH A. CASALI
No. 7230
REGISTERED PROFESSIONAL ENGINEER
CIVIL

UNION FIRE DISTRICT OF S. KINGSTOWN
STATION 7, MATUNUCK
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

REVISIONS:

NO.	DATE	DESCRIPTION
1	7/30/2021	DPR

DESIGNED BY: DRD
DRAWN BY: SDSEP
CHECKED BY: JAC
DATE: JULY 2021
PROJECT NO: 09-31c

PRELIMINARY, NOT FOR CONSTRUCTION

EXISTING CONDITIONS & SITE PREP. PLAN

SHEET 1 OF 8

ZONING CRITERIA	REQUIRED
ZONING DISTRICT	GI
MINIMUM LOT AREA	NONE
MINIMUM LOT WIDTH	NONE
MINIMUM FRONTAGE	NONE
MINIMUM FRONT YARD	NONE
MINIMUM SIDE YARD SETBACK	NONE
MINIMUM REAR YARD SETBACK	NONE
MAXIMUM BUILDING HEIGHT MAX. LOT COVERAGE (STRUCTURE)	NONE

LIST OF RELIEF REQUIRED:

VARIANCES FROM TOWN OF SOUTH KINGSTOWN ZONING ORDINANCE:

ARTICLE 7, SECTION 708: WIDTH OF ACCESS DRIVEWAYS

- REQUIRED: 24-FEET
- PROPOSED: 20-FEET
- RELIEF REQUESTED: 4-FEET

ARTICLE 7, SECTION 711: MINIMUM OFF-STREET PARKING REQUIREMENTS

- REQUIRED: 16 SPACES
- PROPOSED: 12 SPACES
- RELIEF REQUESTED: 4 SPACES

SITE NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
- 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 CONTRACTOR'S 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 OWNER 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.
- 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).

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.

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 APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

- THE TOPSOIL IN THE SAND FILTER SHALL CONSIST OF 40% COMPOST AND 60% SAND (ASTM C-33) THE TOPSOIL SHALL ALSO HAVE AN ORGANIC CONTENT BETWEEN 8-10% AND THE PERCENT PASSING THE #200 SIEVE BETWEEN 2-5%. TYPICAL GRADATION OF THE TOP SOIL MIXTURE SHALL MEET THE FOLLOWING:

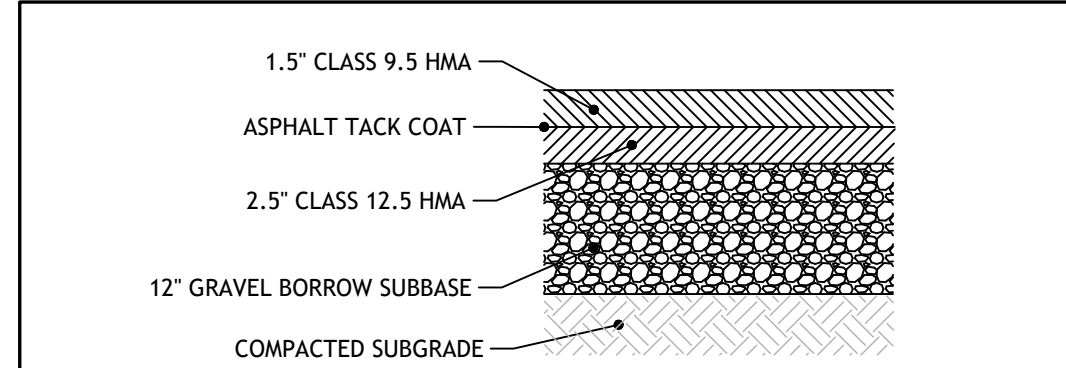
SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#10	75-90
#40	25-40
#100	4-10
#200	2-5

OFF-STREET PARKING REQUIREMENTS:
USE: PUBLIC SERVICE BUILDINGS
1 SPACE PER 350 SF OF FLOOR AREA

TOTAL FLOOR AREA: 5,470 SF
5,640 SF / 350 SF = 16 SPACES

REQUIRED: 16 SPACES (1 ADA)
PROVIDED: 12 SPACES (1 ADA)
RELIEF REQUESTED: 4 SPACES*

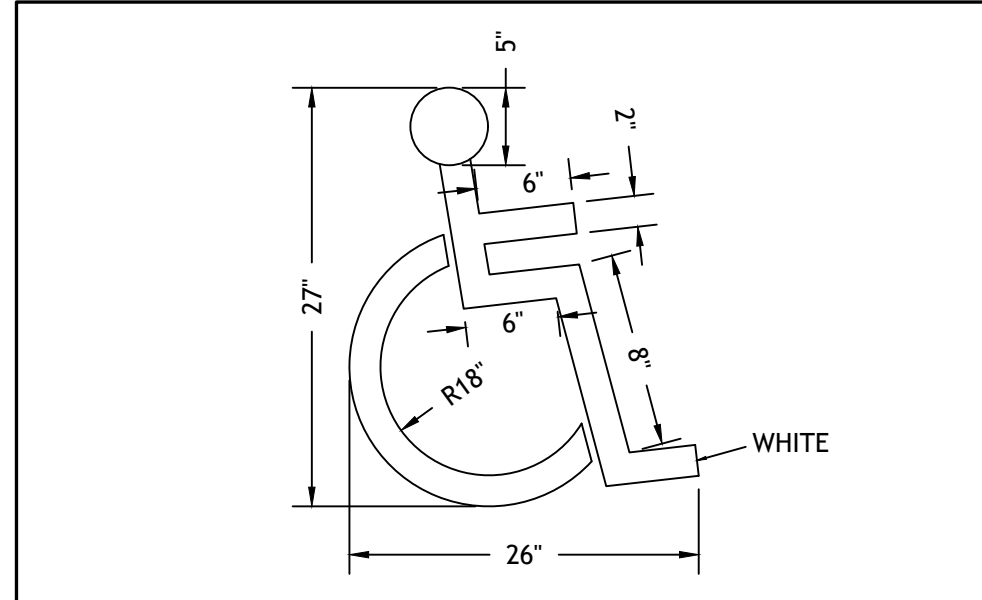
NOTE: RESCUE FACILITY TO HAVE TWO (2) EMPLOYEES MAX.; FIRE STATION TO HAVE SIX (6) EMPLOYEES MAX.; TWO (2) VISITOR SPOTS REQUIRED. THEREFORE, TO MEET PROGRAMMATIC NEEDS OF UFD, 10 SPACES TOTAL REQUIRED, 12 SPACES PROPOSED.



NOTE:

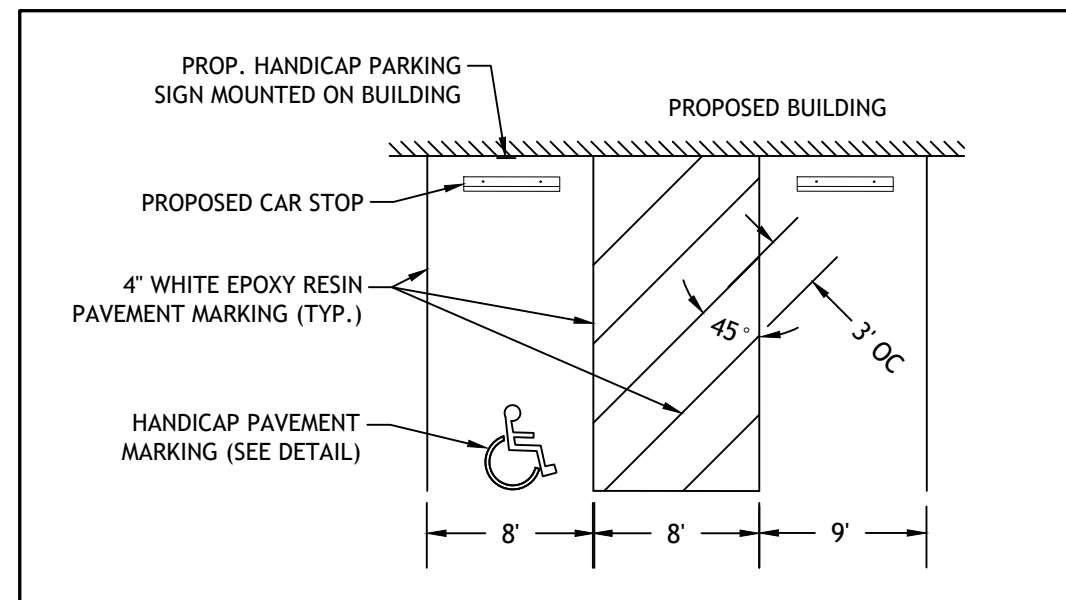
- IN AREAS OF EARTH EXCAVATION FOR BITUMINOUS CONCRETE PAVEMENT, THE CONTRACTOR SHALL REMOVE 16 INCHES OF EXISTING MATERIAL. IF UNSUITABLE MATERIALS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE DEPTH OF UNSUITABLE MATERIAL TO BE REMOVED WILL BE DETERMINED IN THE FIELD. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE THE UNSUITABLE MATERIALS AND REPLACE WITH SUITABLE MATERIAL APPROVED BY THE ENGINEER.

4 BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE



NOTE: ALL HANDICAP PARKING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND STATE BUILDING CODE.

5 HANDICAP PAVEMENT MARKING
NOT TO SCALE



6 HANDICAP PARKING STALLS DETAIL
NOT TO SCALE

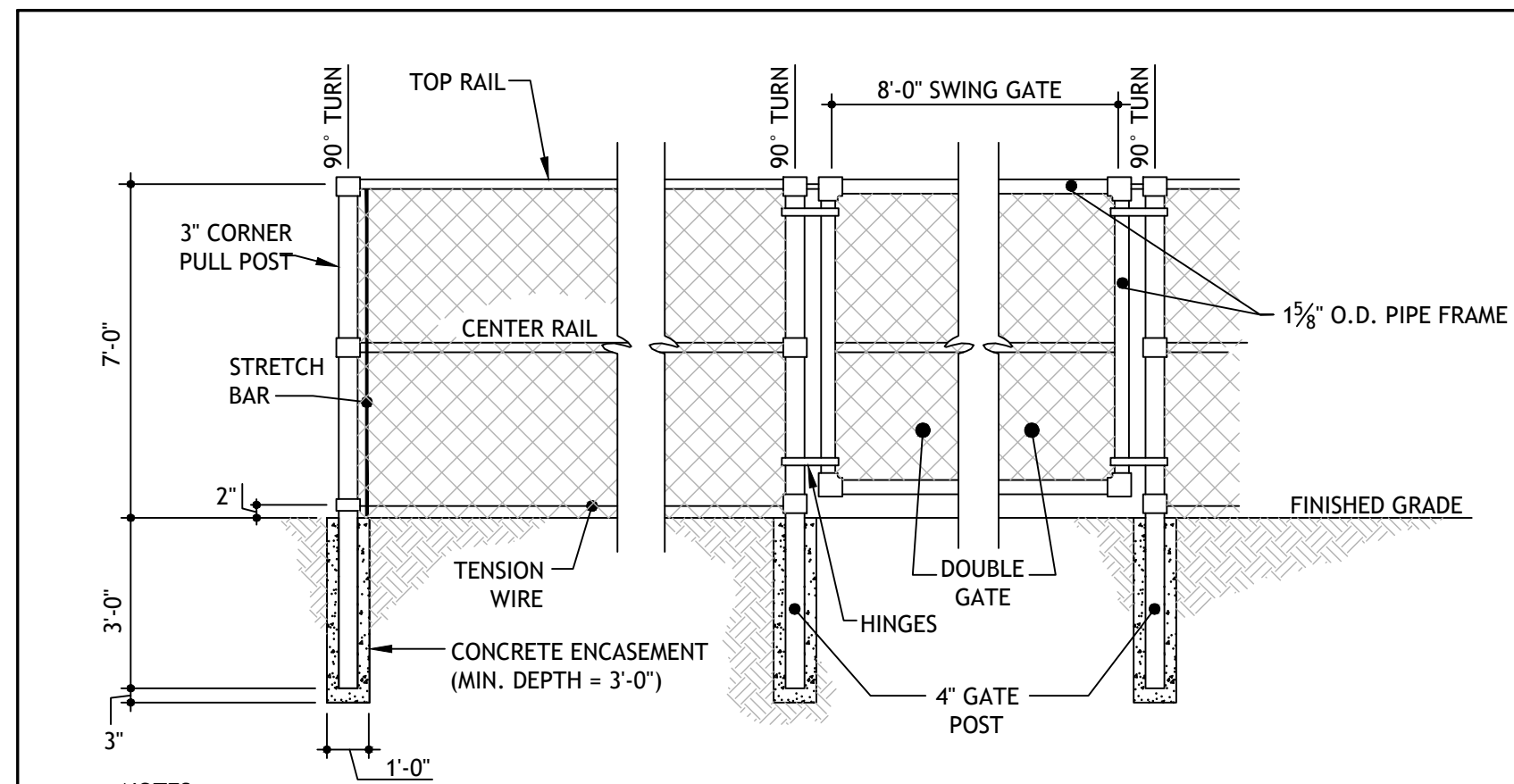
NOTE: SIGNS ARE TO CONFORM WITH THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

* VAN ACCESSIBLE SIGNS FOR SPACES ADJACENT TO THE 8' STRIPED ISLE.

SIGN NOTES:

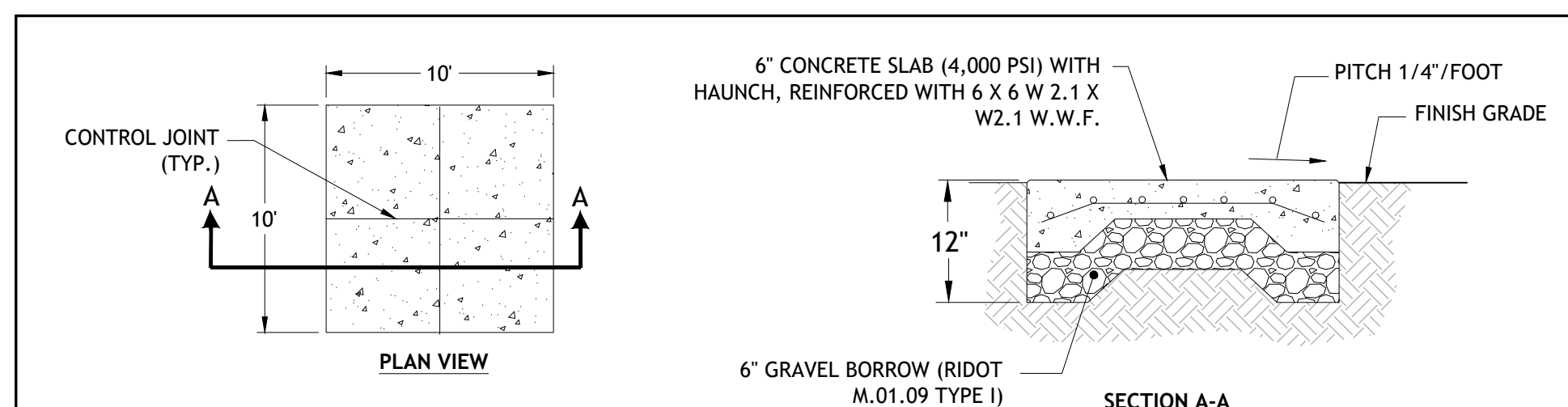
- SIGN POSTS SHALL BE GALVANIZED STEEL U-CHANNEL (3 1/2" WIDE-MIN) AND INSTALLED IN CONFORMANCE TO M.U.T.C.D. AND RHODE ISLAND STANDARD SPECIFICATIONS.
- POSTS SHALL BE DRIVEN TO A DEPTH OF 4 FEET (MIN).
- THE EDGE OF THE SIGN SHALL BE 18" FROM THE FACE OF THE CURB.
- WITHIN SIDEWALK LOCATIONS THE SIGN POST WILL BE INSTALLED WITHIN A 8'X8'X6" SQUARE BOX FORM.

7 HANDICAP PARKING SIGN
NOT TO SCALE



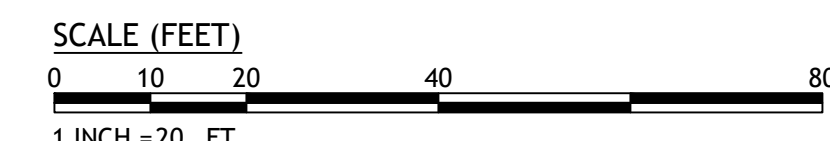
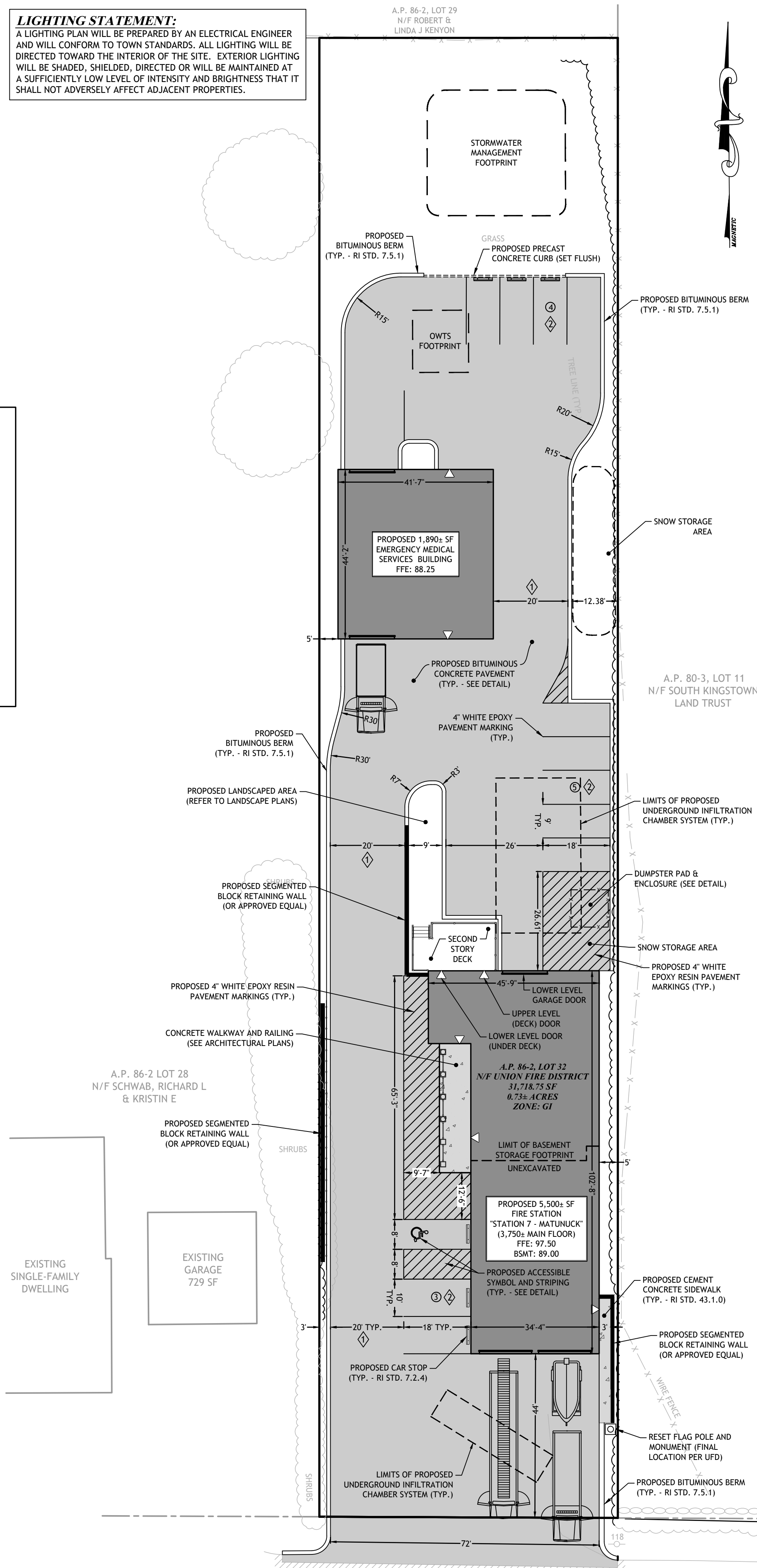
- NOTES:
- DOUBLE GATE SHALL HAVE A LOCKING MECHANISM, DROP ROD, AND TRUSS ROD.
 - ALL FENCING MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE RHODE ISLAND STANDARD SPECIFICATIONS.
 - FENCE MESH TO BE SECURED TO TOP RAIL AND CORNER POSTS USING TIE WIRES SPACED 12" ON CENTER.
 - PRIVACY SLATS TO BE INSTALLED AT THE COMPLETION OF CONSTRUCTION. PRIVACY SLATS SHALL BE GREEN AND SHALL BE BOTTOM-LOCKING AS MANUFACTURED BY PDS FENCE PRODUCTS INC. OR APPROVED EQUAL.

8 CHAIN-LINK FENCE DETAIL
NOT TO SCALE



9 DUMPSTER PAD DETAIL
NOT TO SCALE

LIGHTING STATEMENT:
A LIGHTING PLAN WILL BE PREPARED BY AN ELECTRICAL ENGINEER AND WILL CONFORM TO TOWN STANDARDS. ALL LIGHTING WILL BE DIRECTED TOWARD THE INTERIOR OF THE SITE. EXTERIOR LIGHTING WILL BE SHADED, SHIELDED, DIRECTED OR WILL BE MAINTAINED AT A SUFFICIENTLY LOW LEVEL OF INTENSITY AND BRIGHTNESS THAT IT SHALL NOT ADVERSELY AFFECT ADJACENT PROPERTIES.



JCE
JOE CASALI ENGINEERING, INC.
CIVIL ENGINEER
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300

JOSEPH A. CASALI
No. 7230
REGISTERED PROFESSIONAL ENGINEER
CIVIL

UNION FIRE DISTRICT OF S. KINGSTOWN
STATION 7, MATUNUCK
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

REVISIONS:

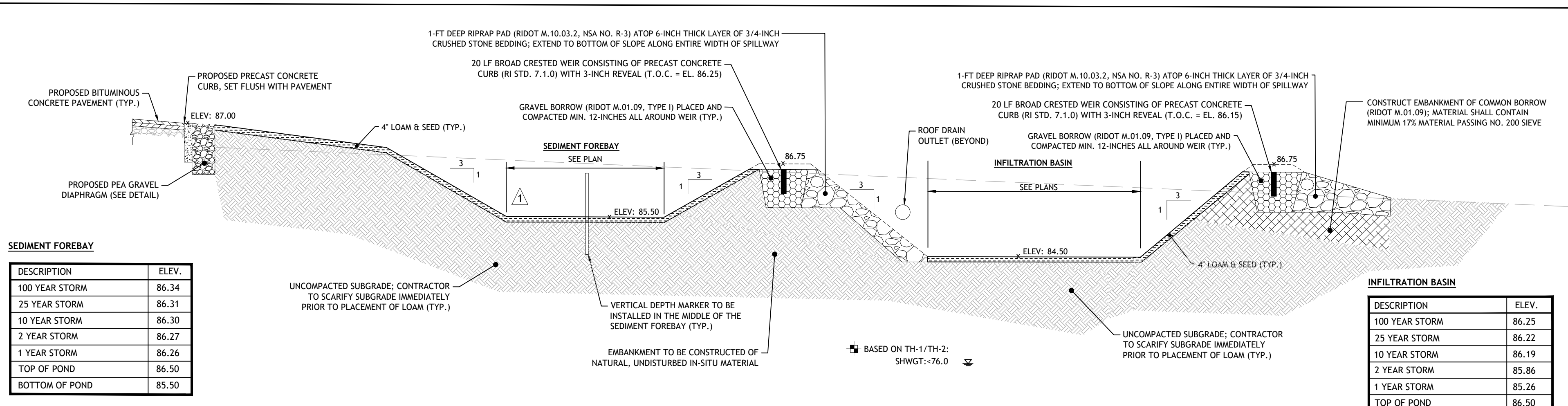
NO.	DATE	DESCRIPTION
1	7/30/2021	DPR

DESIGNED BY: DRD
DRAWN BY: SD/SEP
CHECKED BY: JAC
DATE: JULY 2021
PROJECT NO: 09-31c

PRELIMINARY, NOT FOR CONSTRUCTION

SITE PLAN

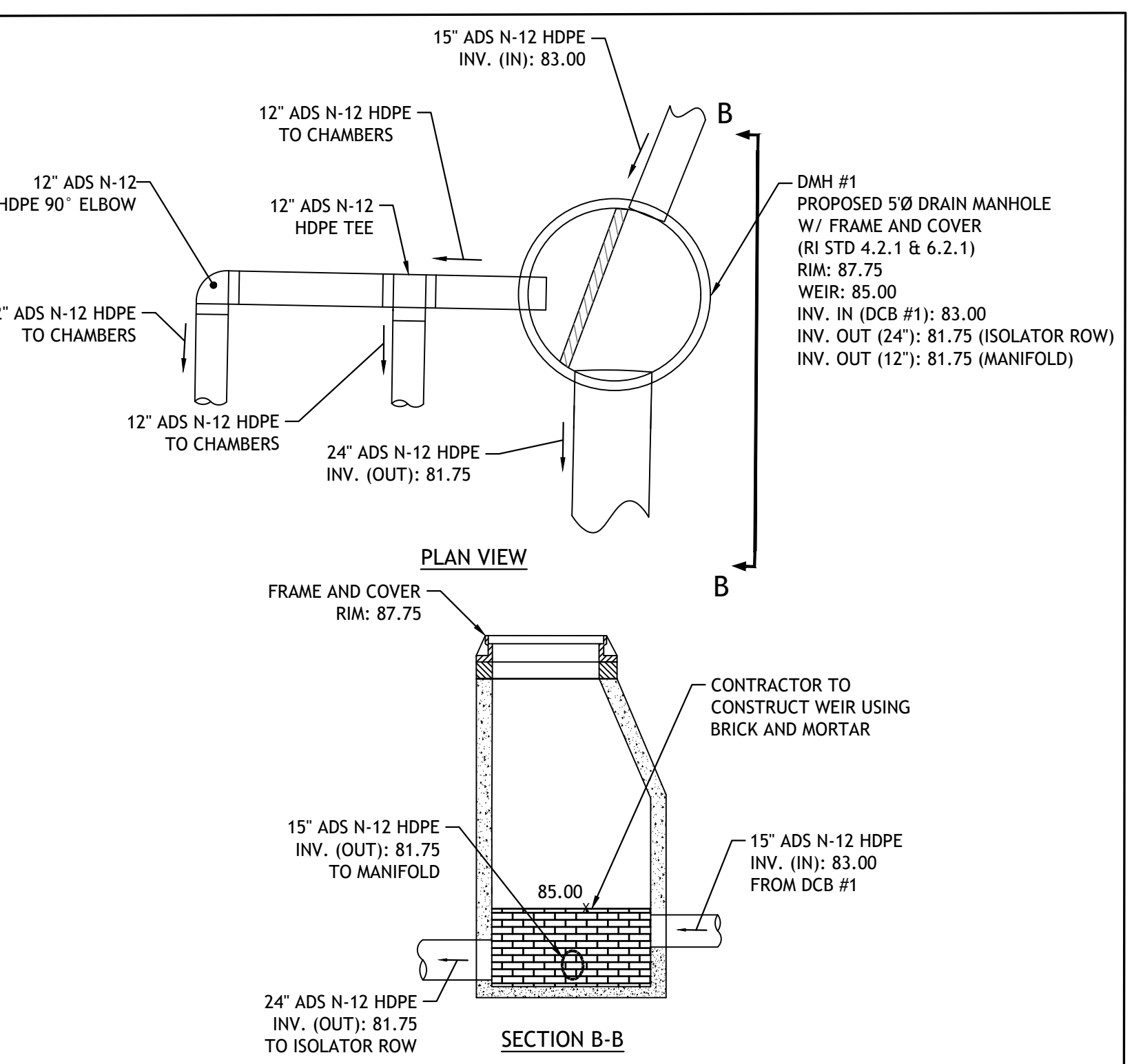
SHEET 2 OF 8



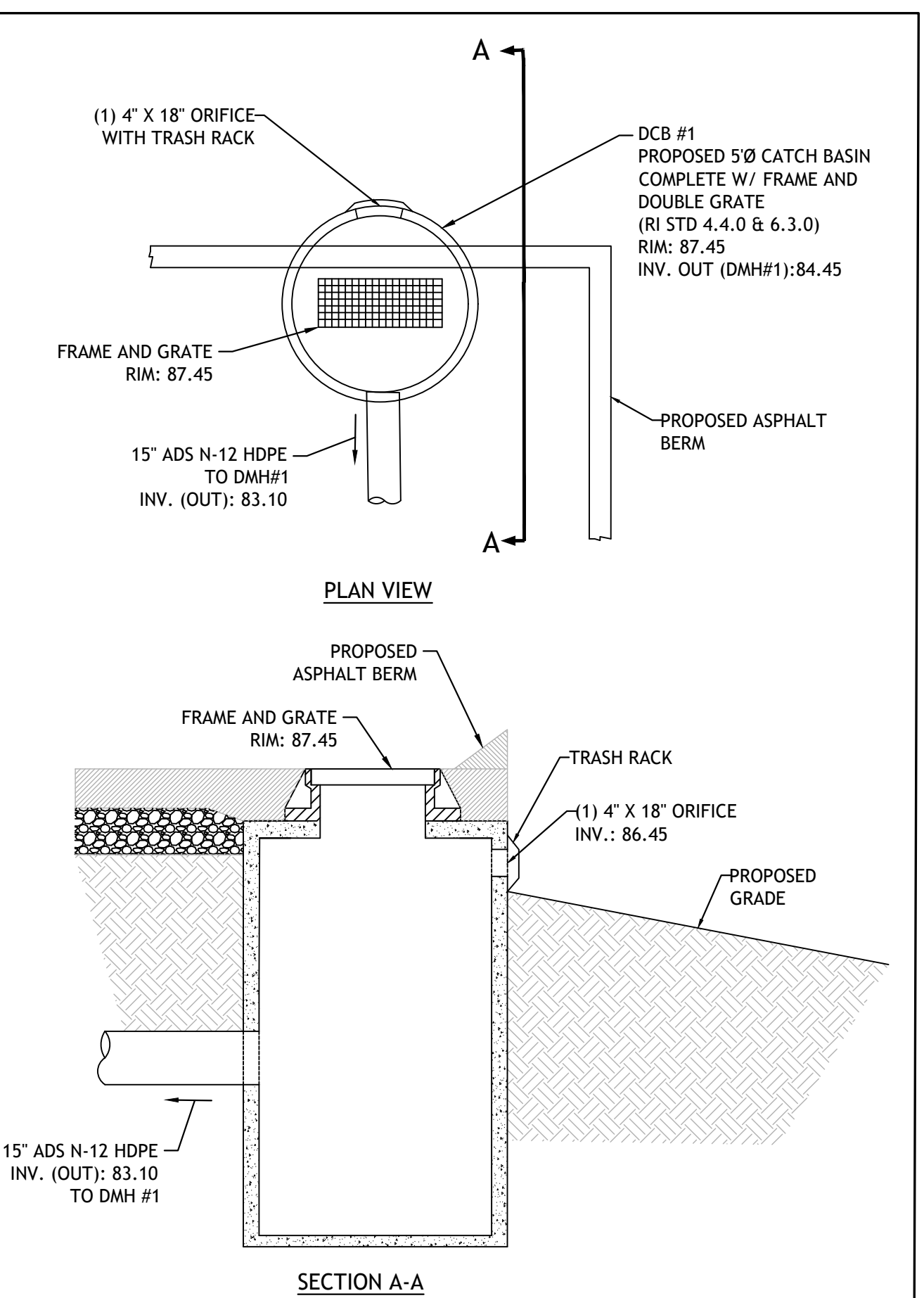
DESCRIPTION	ELEV.
100 YEAR STORM	86.34
25 YEAR STORM	86.31
10 YEAR STORM	86.30
2 YEAR STORM	86.27
1 YEAR STORM	86.26
TOP OF POND	86.50
BOTTOM OF POND	85.50

DESCRIPTION	ELEV.
100 YEAR STORM	86.25
25 YEAR STORM	86.22
10 YEAR STORM	86.19
2 YEAR STORM	85.86
1 YEAR STORM	85.26
TOP OF POND	86.50
BOTTOM OF POND	84.50

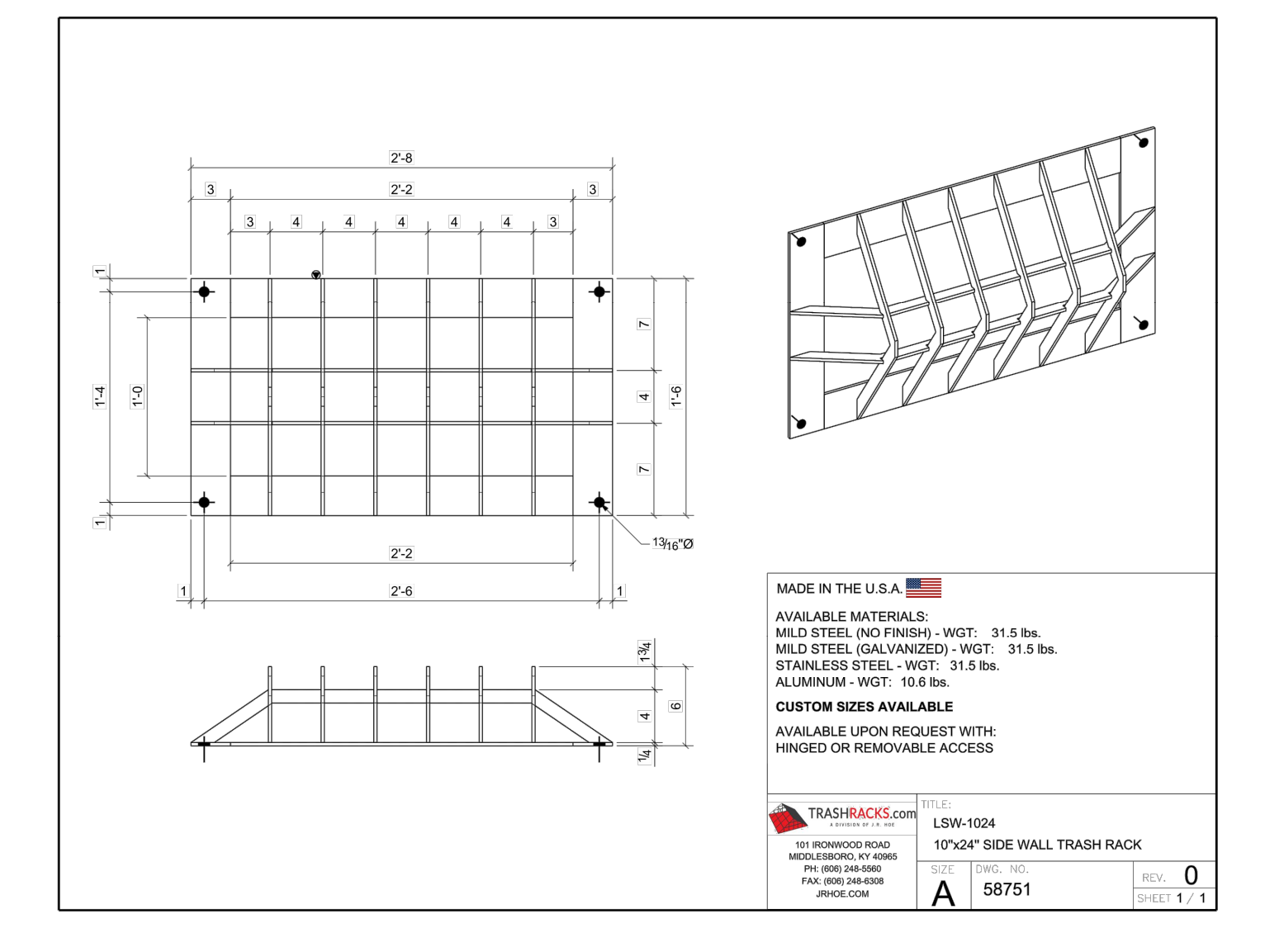
10 SEDIMENT FOREBAY & INFILTRATION BASIN SECTION A-A
NOT TO SCALE



11 DMH #1 - DIVERSION MANHOLE & MANIFOLD
NOT TO SCALE



12 DCB #1 - CATCH BASIN WITH OUTLET ORIFICE
NOT TO SCALE



13 PEA GRAVEL DIAPHRAGM
NOT TO SCALE

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:

- 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, INTAKES 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).

CATCH BASINS/ DRAIN LINES

- INSPECTIONS SHALL BE PERFORMED A MINIMUM OF 2 TIMES PER YEAR (SPRING/FALL). UNITS SHALL BE CLEANED WHENEVER THE DEPTH OF SEDIMENT IS GREATER THAN OR EQUAL TO 2 FEET LESS THAN 2 FEET FROM THE BOTTOM OF PIPE. ALL REMOVED SEDIMENT SHALL BE TESTED TO DETERMINE POLLUTANT CONTENT AND SHALL BE REMOVED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- THE INLET GRATE SHALL NOT BE WELDED TO THE FRAME SO THAT THE SUMP CAN BE EASILY INSPECTED AND MAINTAINED.

ROOF DRAIN LEADERS

- PERFORM ROUTINE ROOF INSPECTIONS QUARTERLY.
- KEEP ROOFS CLEAN AND FREE OF DEBRIS.
- KEEP ROOF DRAINAGE SYSTEMS CLEAR.

STORMTECH INFILTRATION SYSTEMS

- INFILTRATION SYSTEMS SHALL BE INSPECTED ON A BI-ANNUAL BASIS TO ENSURE PROPER FUNCTIONS. INSPECTION PORTS SHALL BE USED TO VERIFY THAT THE SYSTEMS ARE DRAINING WITHIN 72-HOURS, IF THE SYSTEM FAILS TO DRAIN WITHIN 72-HOURS, THE SYSTEM SHALL BE CLEANED OR REPLACED AS NECESSARY.
- THE INFILTRATION SYSTEM SHALL BE INSPECTED BI-ANNUALLY FOR SEDIMENT ACCUMULATION. IF THE SYSTEM HAS ACCUMULATED 3 INCHES OF SEDIMENT, THE SEDIMENT SHALL BE REMOVED BY FLUSHING FROM THE SYSTEM WITH HIGH PRESSURE JETS AND VACUUMING THE SEDIMENT AND DEBRIS THROUGH THE ACCESS PORTS. ALL SEDIMENT REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS. KEEP ROOFS CLEAN AND FREE OF DEBRIS.

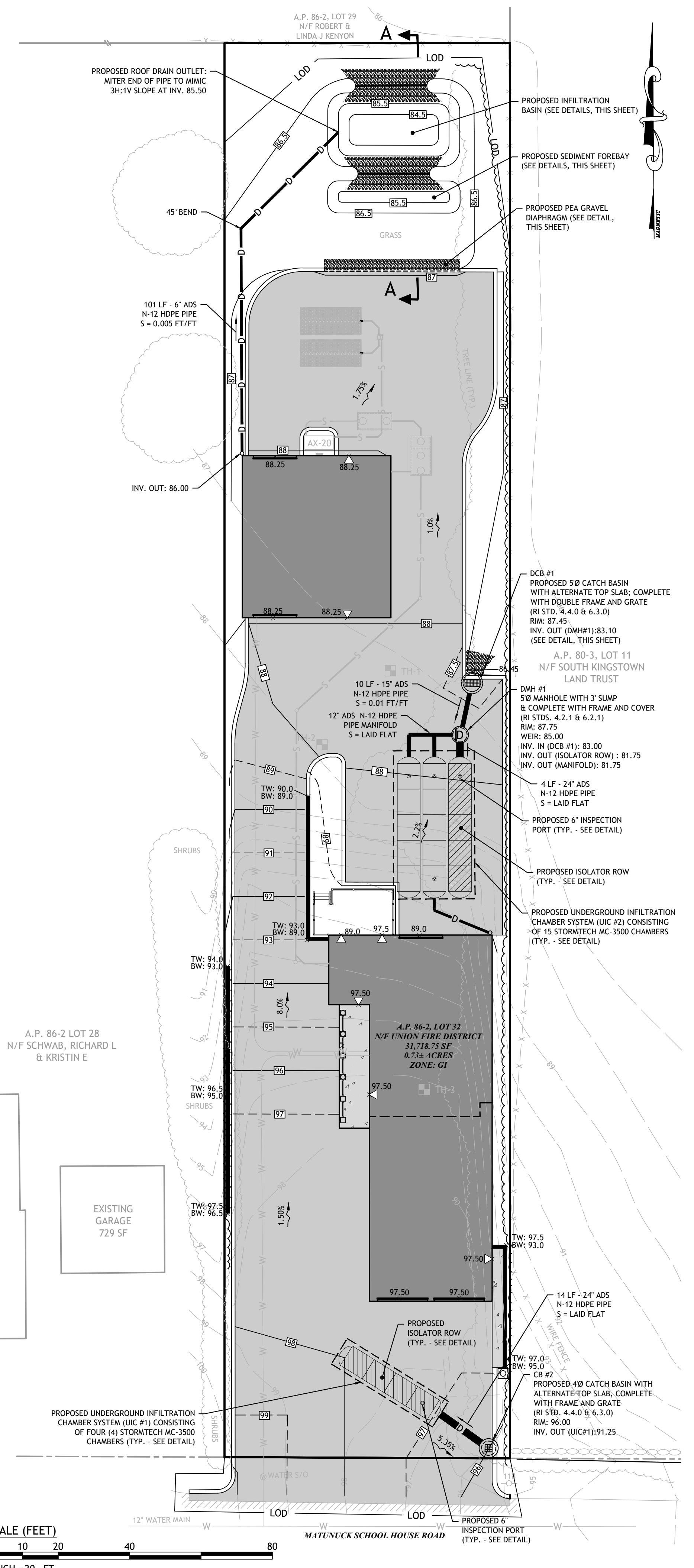
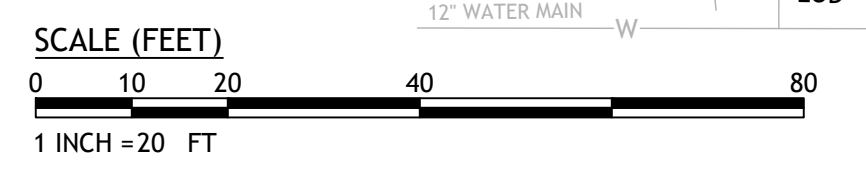
PRE-TREATMENT SEDIMENT FOREBAYS

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

INFILTRATION SYSTEM:

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

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



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REGISTERED PROFESSIONAL ENGINEER
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UNION FIRE DISTRICT OF S. KINGSTOWN
STATION 7, MATUNUCK
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

NO.	DATE	DESCRIPTION
1	7/30/2021	DPR

DESIGNED BY:	DRD
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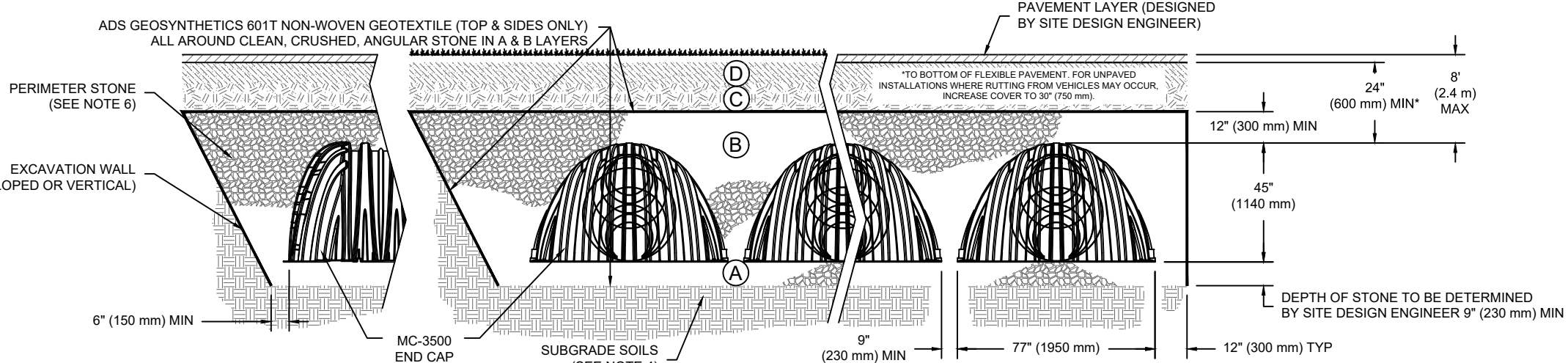
GRADING & DRAINAGE PLAN

SHEET 4 OF 8

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBGRADE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('F' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBGRADE MAY BE PART OF THE 'C' LAYER	AASHTO M145 ¹ A-1, A-2-A, A-3 OR AASHTO M33 ² 3, 3S7, 4, 4E7, 5, 5E, 5F, 6, 67, 68, 7, 7B, 8, 8B, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 96% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ³ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ³ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{1, 3}

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTION IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



*FOR COVER DEPTHS GREATER THAN 8.0' (2.4 m) PLEASE CONTACT STORMTECH

NOTES:

- MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBGRADE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

MC-3500 STANDARD CROSS SECTION
 DATE: 11/18/14
 DRAWN: JLM
 CHECKED: JLM
 PROJECT #:
 SHEET 1 OF 1

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
 A. INSPECTION PORTS (IF PRESENT)
 A.1. REMOVE OPEN LID ON NYLOPLAST INLINE DRAIN
 A.2. REMOVE AND CLEAN FLEXISTORM FILTER IF INSTALLED
 A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 B. ALL ISOLATOR ROWS
 B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 B.3. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 B.3.1. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 B.3.2. REMOVE COVER FROM STRUCTURE AT DOWNSTREAM END OF ISOLATOR ROW
 B.3.3. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 B.3.4. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 B.3.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
 A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

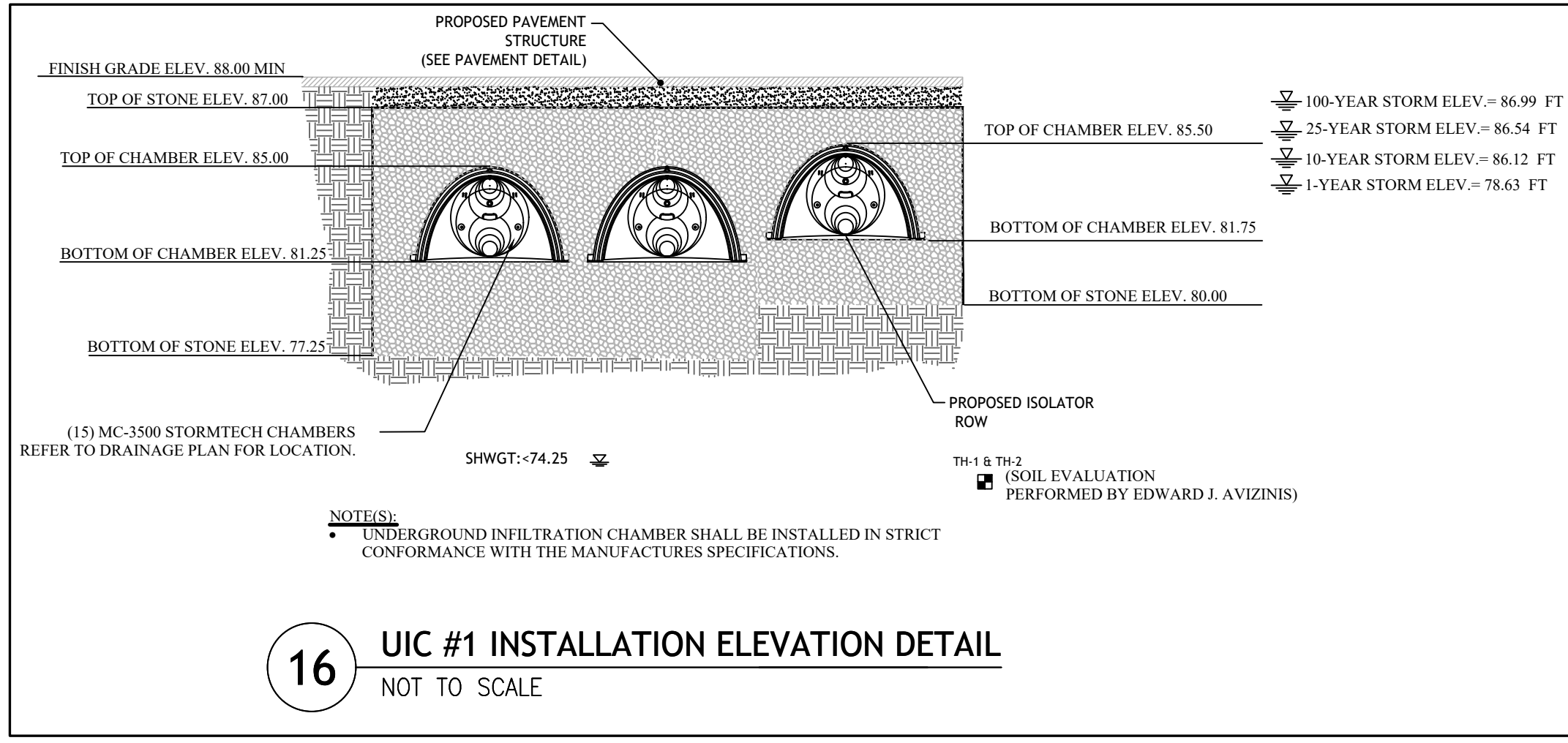
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

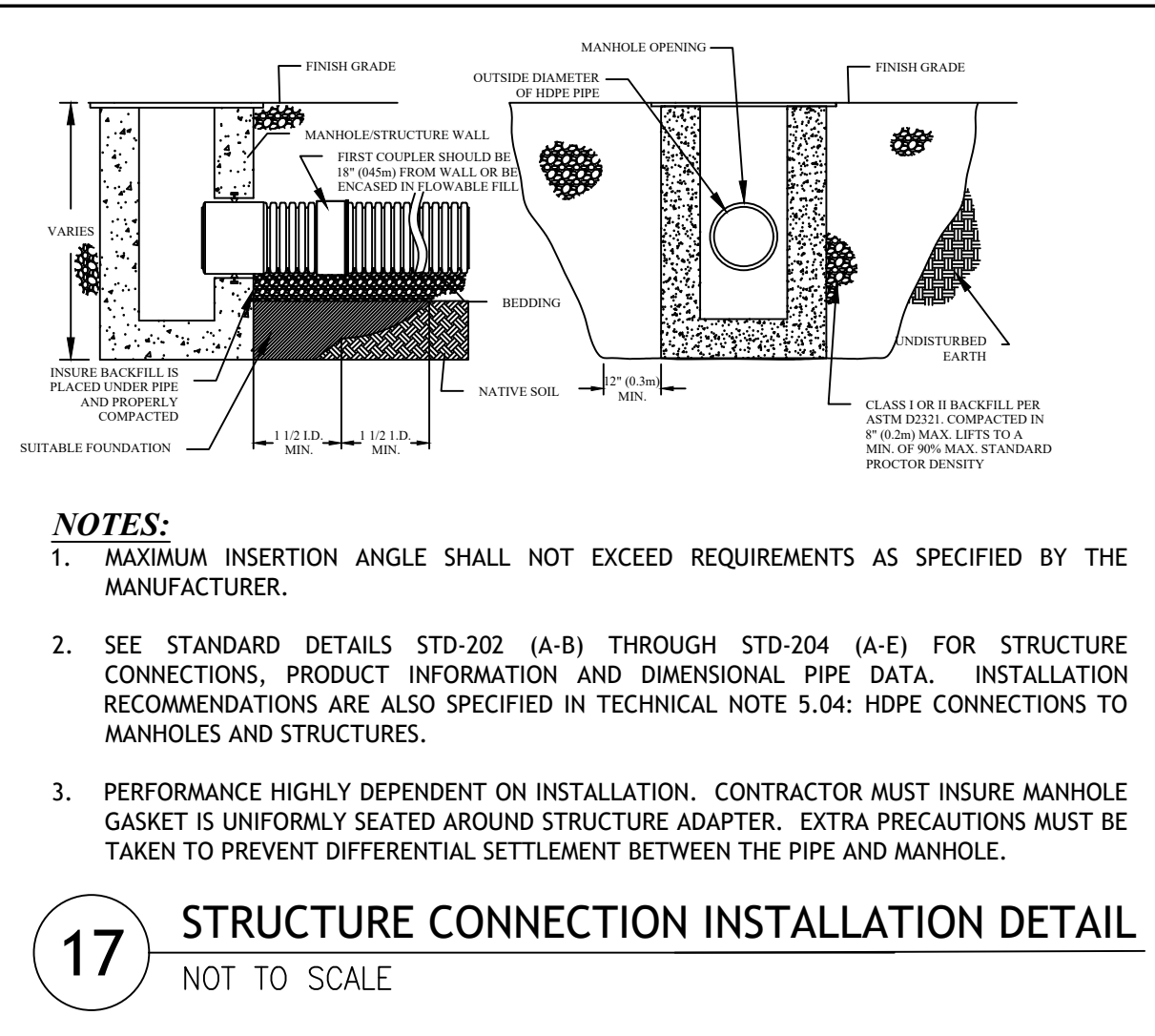
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

14 STORMTECH MC-3500 CROSS SECTION DETAIL
NOT TO SCALE

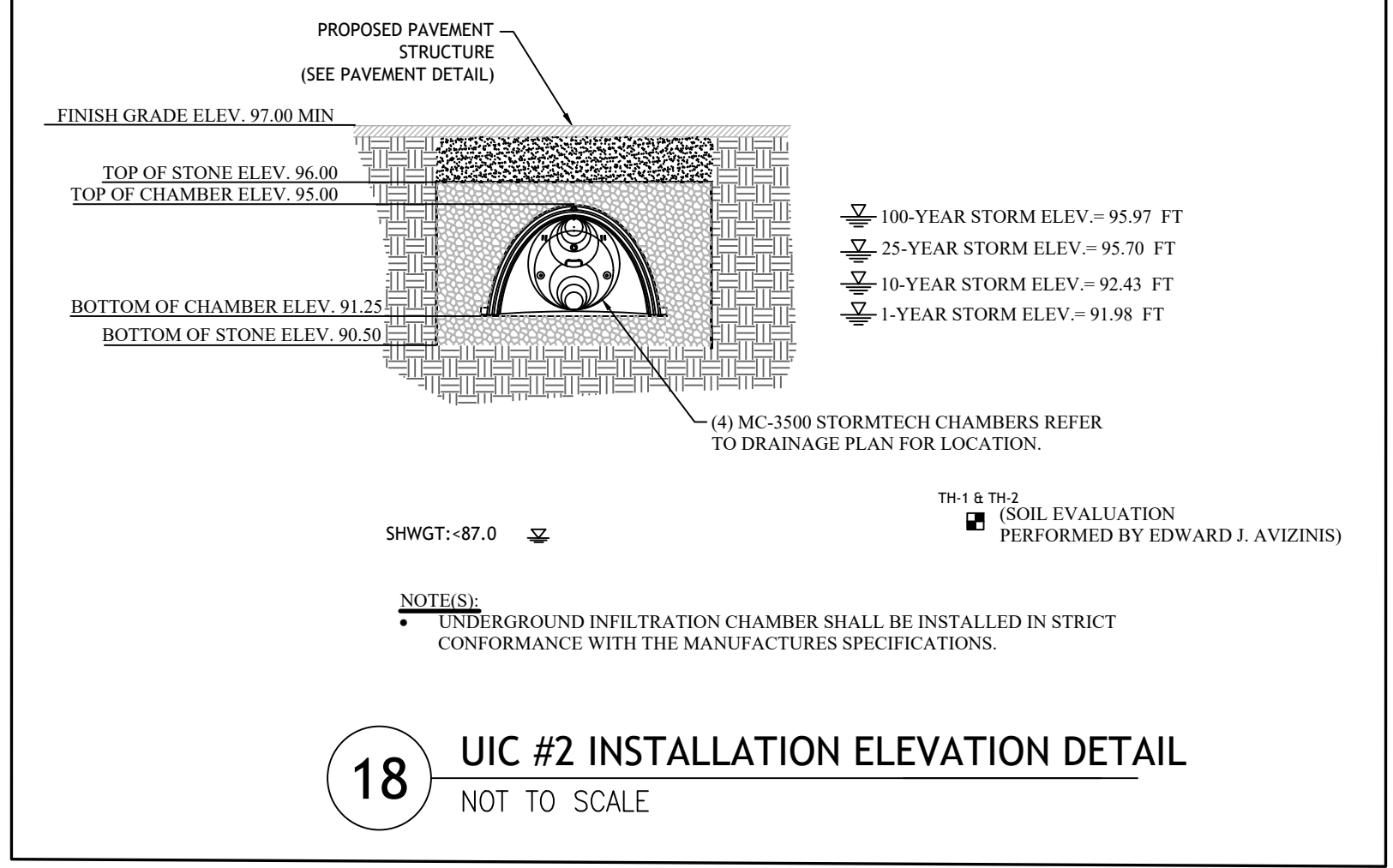
15 STORMTECH MC-3500 ISOLATOR ROW DETAIL
NOT TO SCALE



16 UIC #1 INSTALLATION ELEVATION DETAIL
NOT TO SCALE



17 STRUCTURE CONNECTION INSTALLATION DETAIL
NOT TO SCALE



18 UIC #2 INSTALLATION ELEVATION DETAIL
NOT TO SCALE

- STORMTECH GENERAL NOTES:**
- STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
 - OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICE REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
 - STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
 - THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
 - AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
 - STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
 - BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
 - THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
 - THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
 - STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM.

STORMWATER CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500 OR APPROVED EQUAL.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.55 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.55 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST CONSTRUCTION GUIDE.

NOTES FOR THE INSTALLATION OF THE MC-3500 SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2".
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXISTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-3500 & MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - THE USE OF CONSTRUCTION EQUIPMENT OVER MC-3500 & MC-4500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

JCE
 JOE CASALI ENGINEERING, INC.
 CIVIL ENGINEERING & CONSTRUCTION
 300 POST ROAD, WARWICK, RI 02888
 (401) 944-1300

JOSEPH A. CASALI
 No. 7230
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

UNION FIRE DISTRICT OF S. KINGSTOWN
 STATION 7, MATUNUCK
 49 MATUNUCK SCHOOL HOUSE ROAD
 SOUTH KINGSTOWN, RHODE ISLAND
 AP 86-2, LOT 32

REVISIONS:

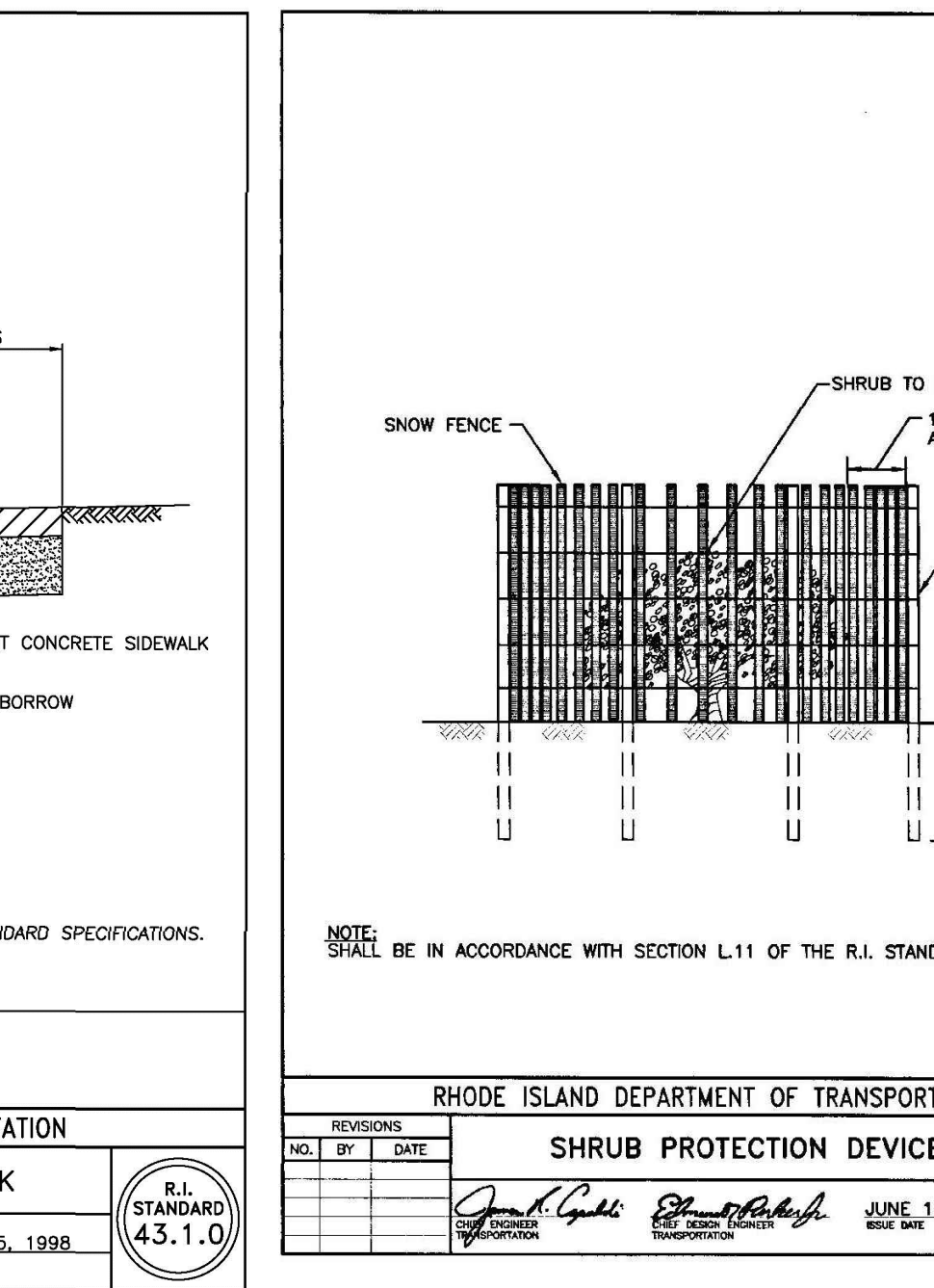
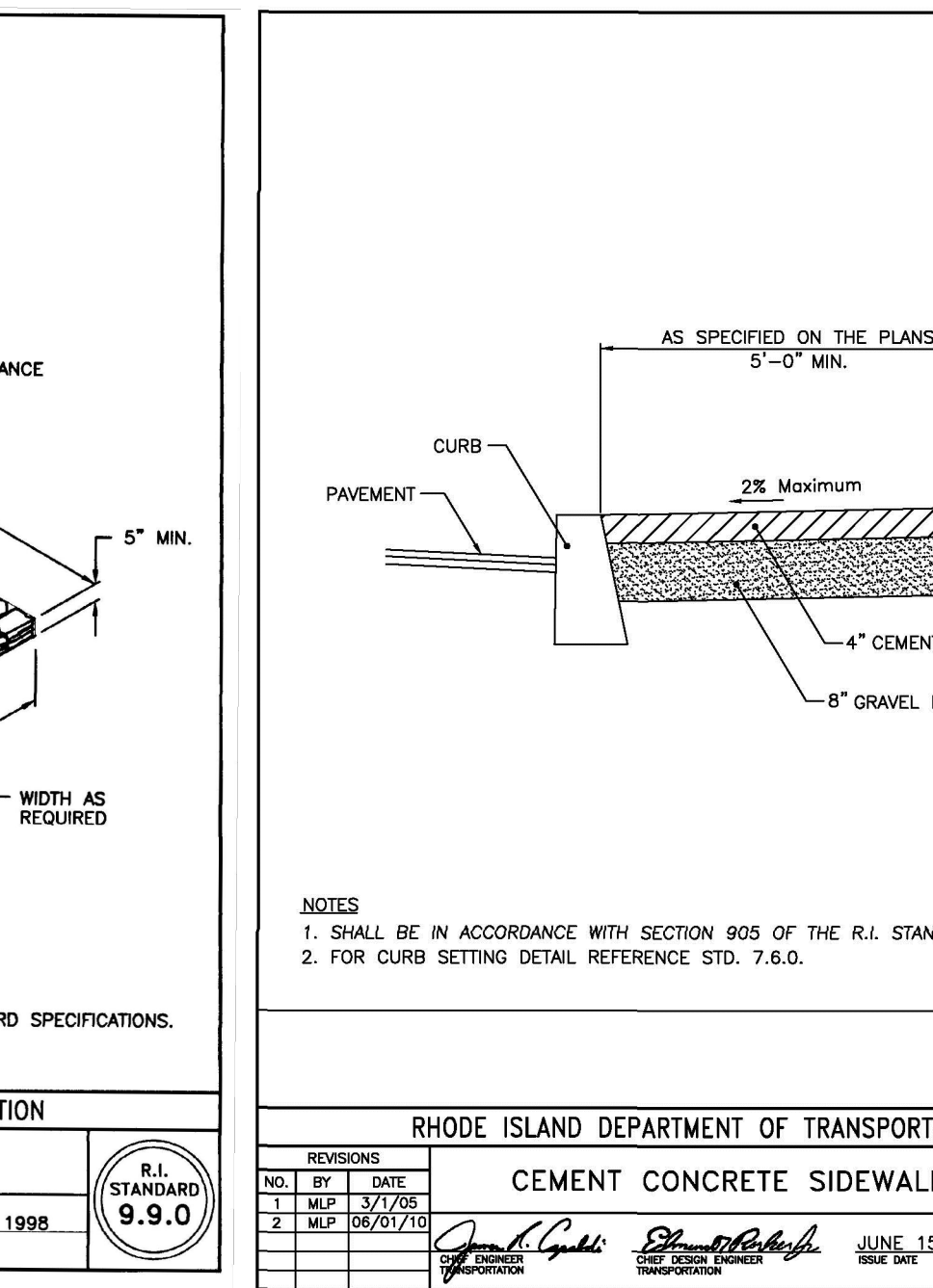
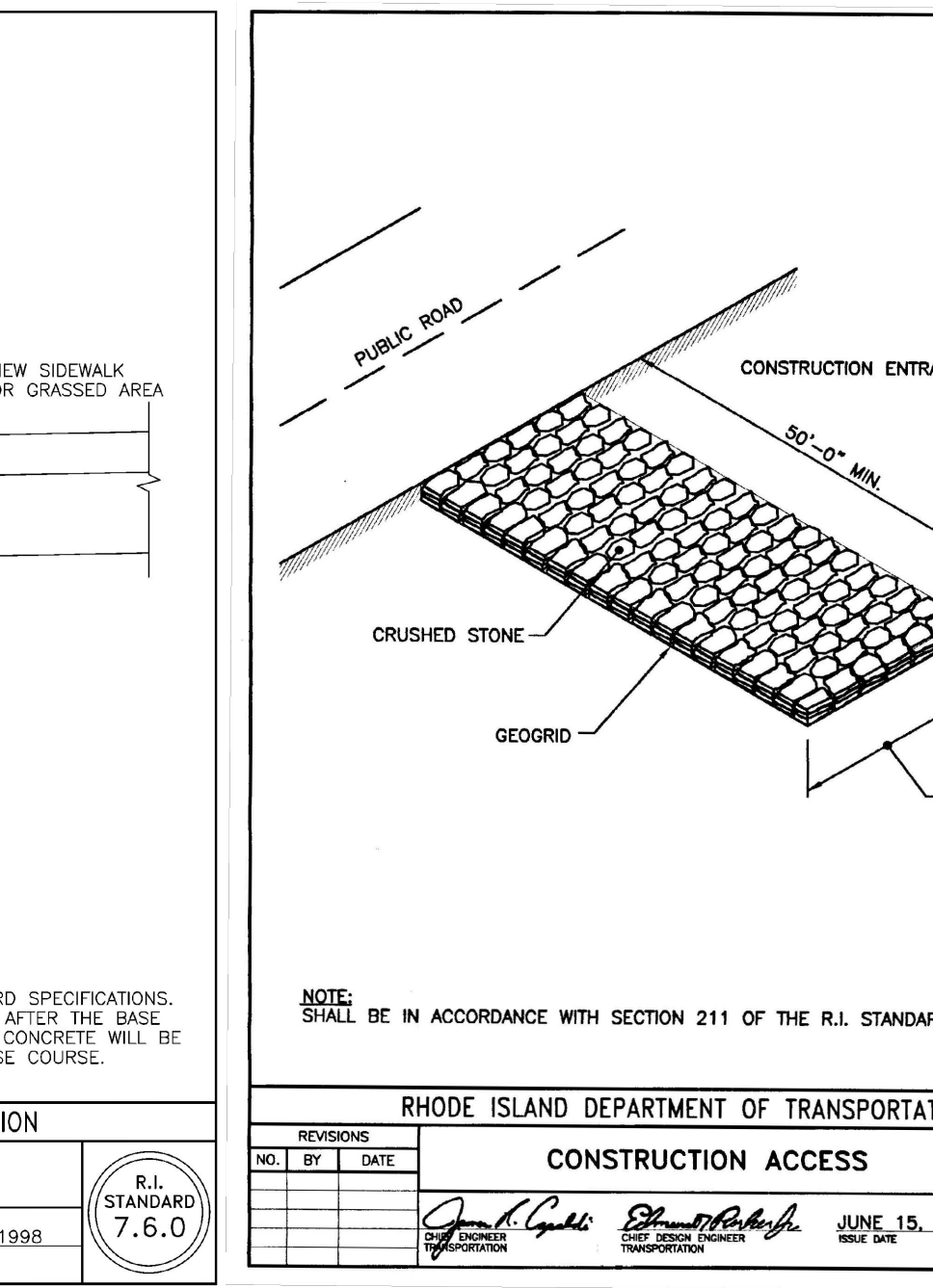
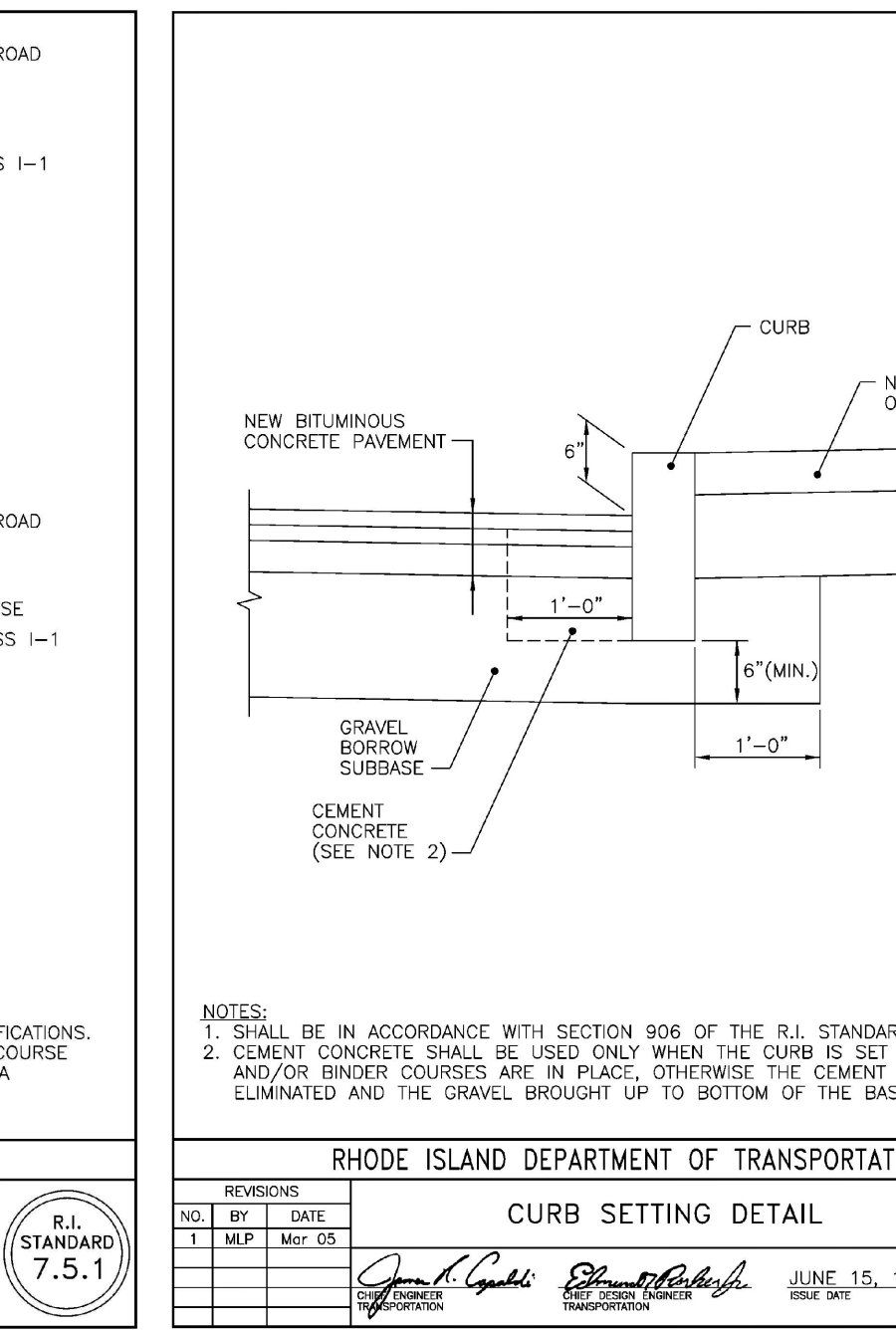
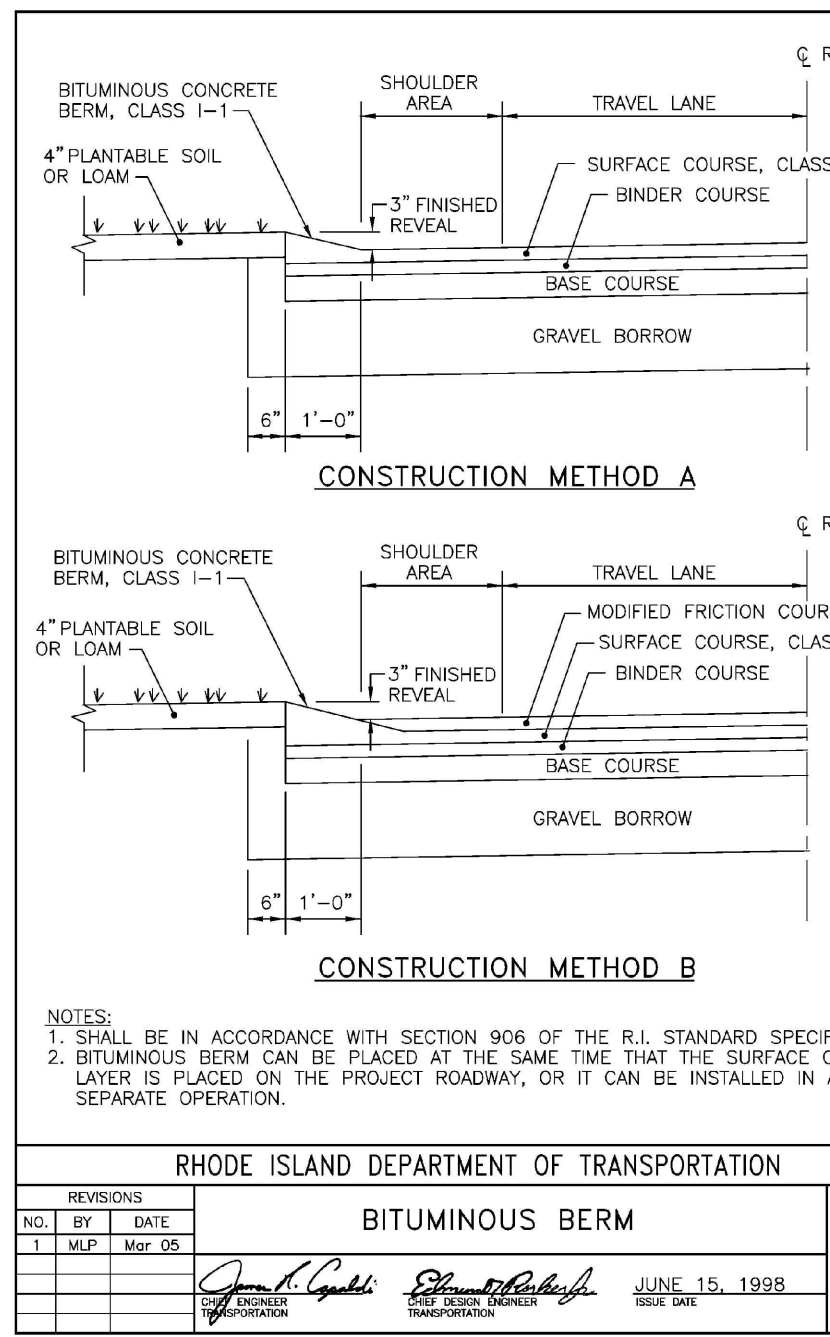
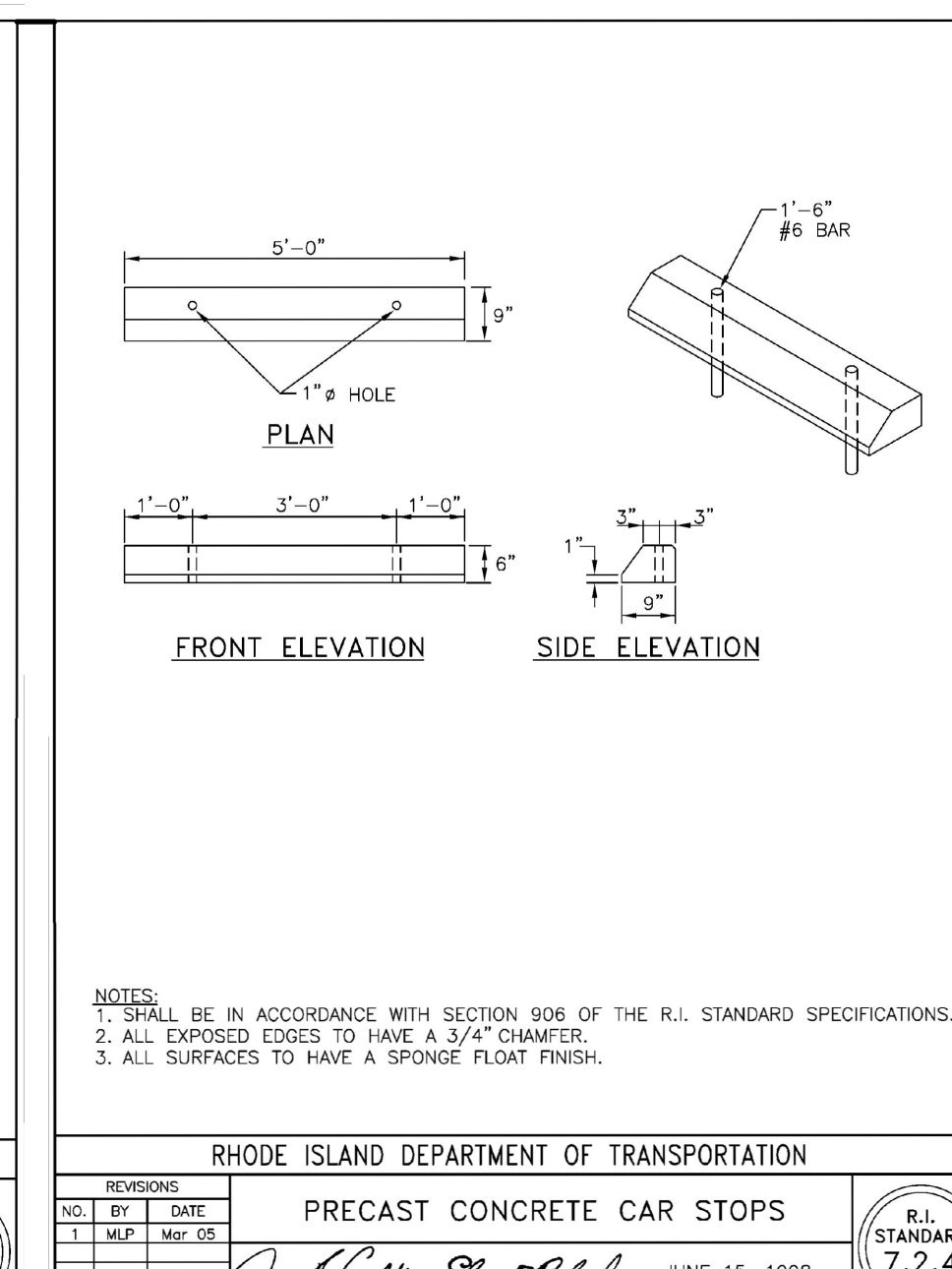
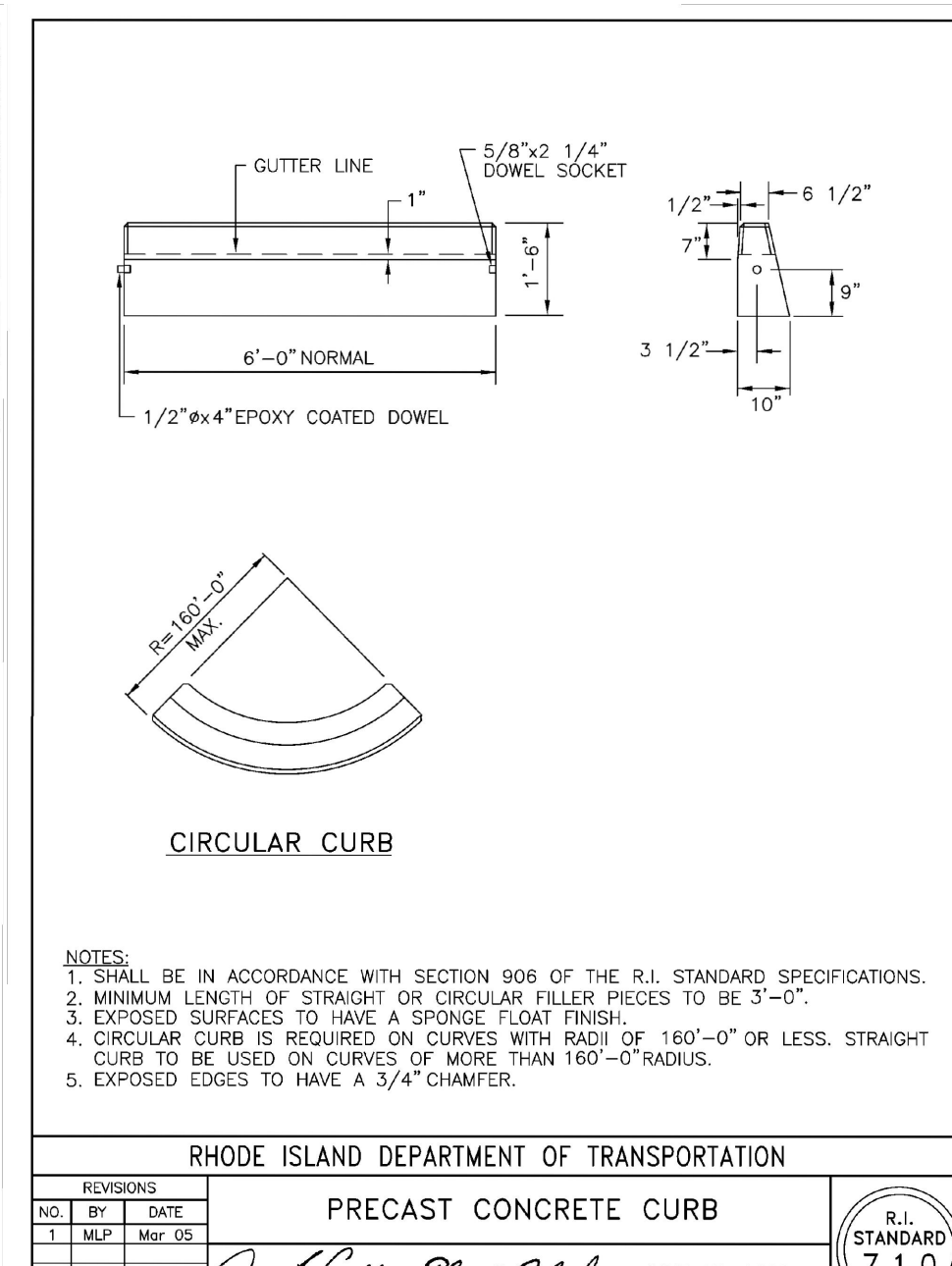
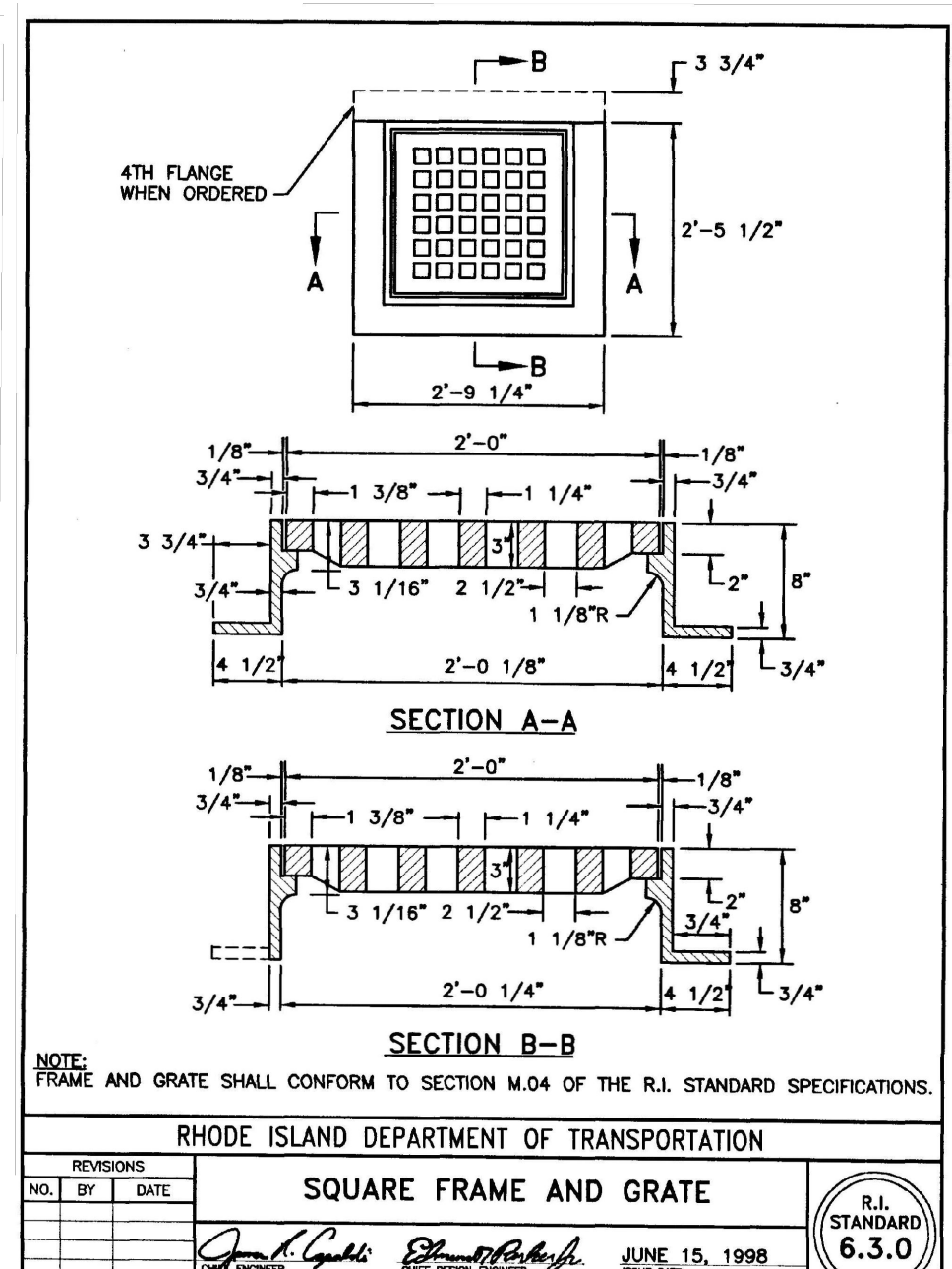
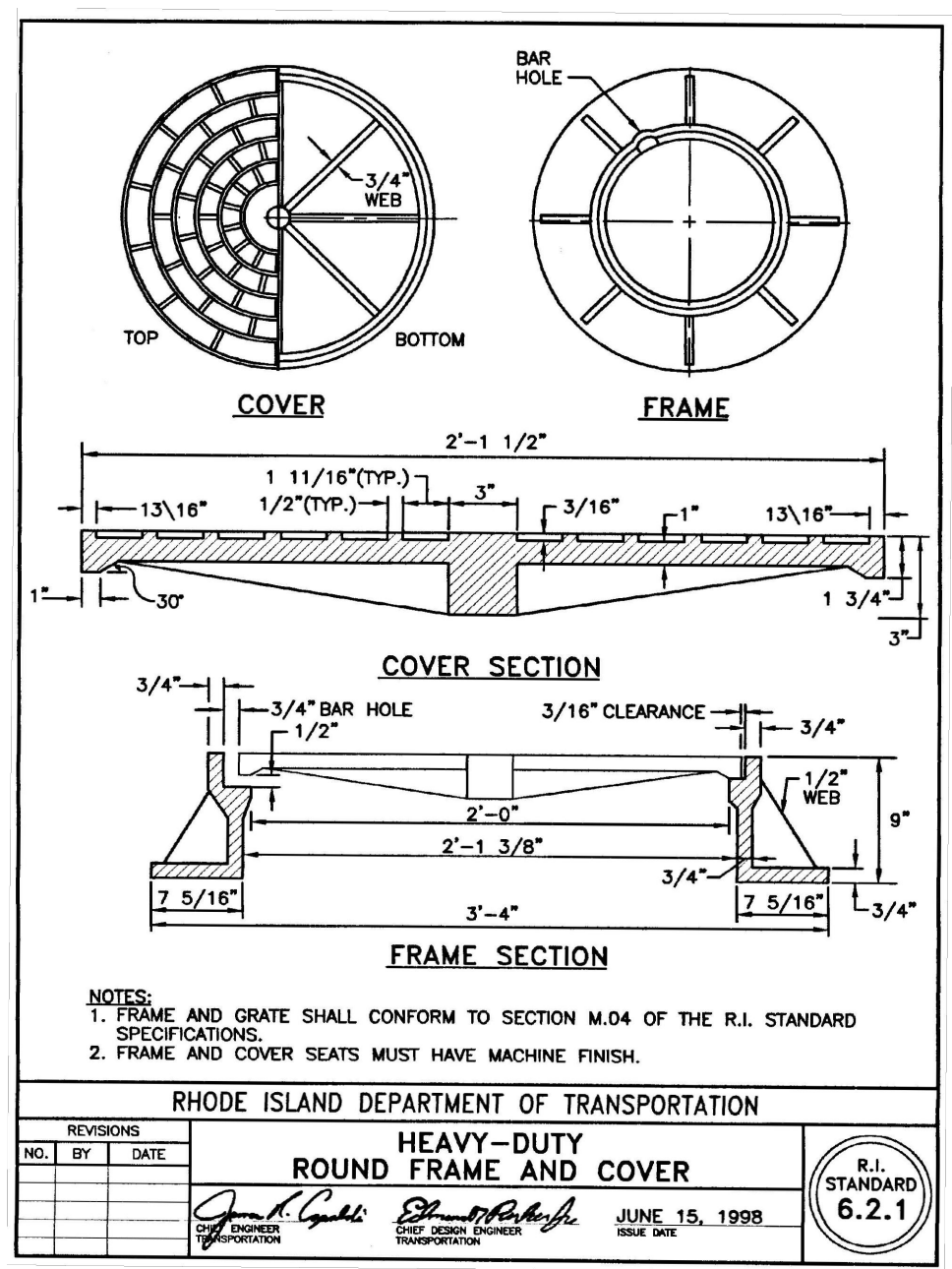
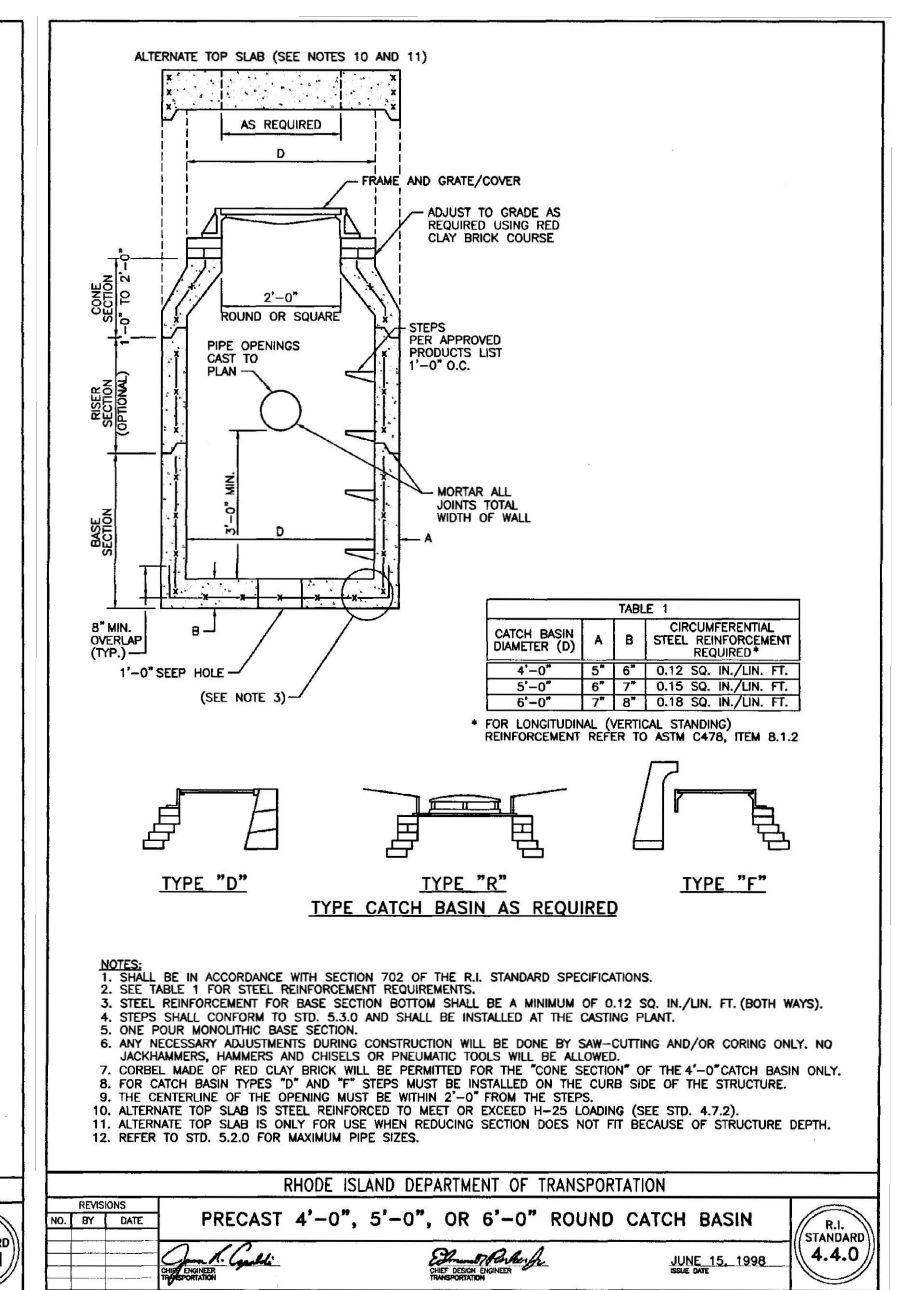
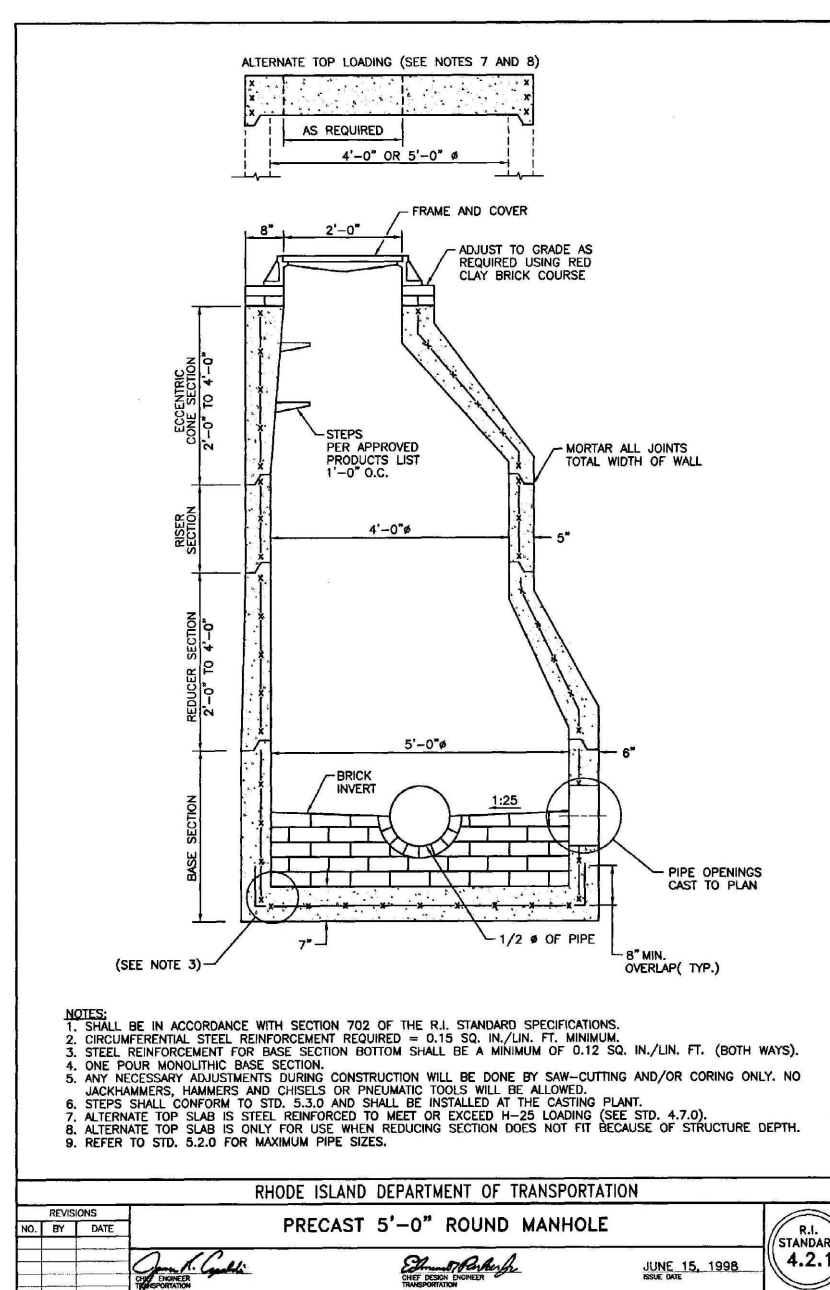
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DESIGNED BY: DRD
 DRAWN BY: SD/SEP
 CHECKED BY: JAC
 DATE: JULY 2021
 PROJECT NO: 09-31c

PRELIMINARY, NOT FOR CONSTRUCTION

DETAILS I

SHEET 5 OF 8



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
Department of Environmental Management
Office of Water Resources

Site Evaluation Form
Part A - Soil Profile Description
Application Number

Property Owner: The Union Fire District
Property Location: 49 Matunuck Schoolhouse Rd., South Kingstown, RI
Date of Test Hole: 9-23-13
Soil Evaluator: Edward J. Azizis License Number: 49885
Weather: Sunny - 60° Shaded Yes No Time: 12:00pm

PT. / Horizon	Depth	Horizon Boundaries	Color	Moisture	Texture	Structure	Consistence	Soil Category
H2M	0-3	g	5	10R 5/4	—	—	—	—
A1	3-7	C	5	10R 5/4	—	SL	1.5H	4/1i 3
A2	7-9	C	5	10R 5/4	—	SL	1.5H	4/1i 3
B1	9-20	g	5	10R 5/4	—	SL	1.5H	4/1i 3
B2	20-39	g	5	10R 5/4	—	SL	2.5H	4/1i 3
C	39-42	—	5	10R 5/4	—	LS	2.5H	4/1i 3
PT. / Horizon <th>Depth</th> <th>Horizon Boundaries</th> <th>Color</th> <th>Moisture</th> <th>Texture</th> <th>Structure</th> <th>Consistence</th> <th>Soil Category</th>	Depth	Horizon Boundaries	Color	Moisture	Texture	Structure	Consistence	Soil Category
A1	0-8	1c	5	10R 5/4	—	SL	1.5H	4/1i 3
B1	8-20	g	5	10R 5/4	—	SL	1.5H	4/1i 3
B2	20-39	g	5	10R 5/4	—	SL	2.5H	4/1i 3
C	39-42	g	5	10R 5/4	—	SL	2.5H	4/1i 3
C2	42-42	—	5	10R 5/4	—	SL	2.5H	4/1i 3

Soil Class: NY2M Total Depth of each Test Hole: 11.2'
Depth to Groundwater: >10' Depth to Impermeable or Limiting Layer: >90'
Estimated Seasonal High Water Table: 1'0" - 2'0" Comments: was constructed on a fill pile

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
Department of Environmental Management
Office of Water Resources

Site Evaluation Form
Part A - Soil Profile Description
Application Number

Property Owner: The Union Fire District
Property Location: 49 Matunuck Schoolhouse Rd., South Kingstown, RI
Date of Test Hole: 9-23-13
Soil Evaluator: Edward J. Azizis License Number: 49885
Weather: Sunny 60° Shaded Yes No Time: 12:00pm

PT. / Horizon	Depth	Horizon Boundaries	Color	Moisture	Texture	Structure	Consistence	Soil Category
H2M	0-20	—	—	—	—	—	—	—

Soil Class: NY2M Total Depth of each Test Hole: 20'
Depth to Groundwater: — Depth to Impermeable or Limiting Layer: >90'
Estimated Seasonal High Water Table: — Comments: was constructed on a fill pile

VeriComm® AXB Control Panels

Technical Data Sheet

For AdvanTex® Treatment Systems

Applications

VeriComm AXB1 and AXB2 remote telemetry control panels are used with two-pump operations — recirculation and discharge (on-demand or time) — for AdvanTex Treatment Systems. Interlocked controls prevent the recirculation pump from running if there is a high level alarm on the discharge side. Coupled with the VeriComm Web-based Monitoring System, these affordable control panels give wastewater system operators and maintenance organizations the ability to monitor and control each individual system's operation remotely, with real-time efficiency, while remaining invisible to the homeowner. VeriComm AXB panels allow remote operators to change system parameters, including timer settings, from the Web interface.

Communication and Alarm Management

- Remote telemetry capabilities coupled with a Web-based monitoring application (VeriComm Monitoring System, ATD-WEB-VCOM-1) for communication and alarm management. Updating of point values including timer settings and receipt of changed changes during each communication session with host. Communication sessions that occur monthly, at a minimum, and more frequently during alarm conditions.
- Multiple methods of communication, as follows:
 - Call-in to VeriComm® Host
 - Automatic notification to host of "Alarms," which signal less critical fault conditions and which trigger the panel's troublehooking logic and alternative operating mode (e.g., stuck float switch).
 - Automatic notification to host of "Updates," which include alarm updates or all-clear notifications following "Alarm" Alerts, as well as normally scheduled monthly panel reports.
 - Manual forced communication from panel to host to effect an updating of point values and receipt of queued changes.
 - Real-Time Direct Connection to Panel
 - Manual direct connection at the site via RS-232 serial port, to allow a local operator real-time access to detailed logged data and the ability to change point values from a laptop.
 - Manual forced communication by local operator's homeowner at the site to initiate an auto-renewal mode, allowing a remote operator real-time access to detailed logged data and the ability to change point values.

During real-time, manual connections, software with open architecture (and password security) is used to propagate software is required. V100 protocol allows access and control from any computer monitor (MAC or PC) with a simple communication program (e.g., WinVCOM HyperTerminal), multilevel password protection in panel ensures that only qualified personnel can access the panel's data.

Data Collection and Utilization

- Data logs of system conditions and events, such as pump run times, pump cycles, and alarm conditions.

Troubleshooting and Diagnostic Logic

- Troubleshooting capabilities that can report suspected failed components, which then trigger Alarms.

Advanced Control Logic

- Advanced control logic that activates during float malfunctions to diagnose the situation and keep the system operating normally until servicing.

Typical AXB, VeriComm Control Panel Standard Models: VCOM AXB1, VCOM AXB2

To Specify...

To specify this panel for your installation, require the following:

Basic Control Logic: Three Operating Modes

- A "Start-up Mode" for the initial 30 days, during which the system collects trend data to establish operating standards for future reference.
- A "Normal Mode" that manages dry-to-day functions.
- A "Test Mode" that suspends data collection and alarm reporting during installation and service.

Data Collection and Utilization

- Data logs of system conditions and events, such as pump run times, pump cycles, and alarm conditions.

Troubleshooting and Diagnostic Logic

- Troubleshooting capabilities that can report suspected failed components, which then trigger Alarms.

Advanced Control Logic

- Advanced control logic that activates during float malfunctions to diagnose the situation and keep the system operating normally until servicing.

VeriComm® AXB Control Panels

Technical Data Sheet

1. VeriComm® Remote Telemetry Board
2. Motor-Start Contactors
3. Toggle Switches
4. Control Circuit Breaker
5. Pump Circuit Breakers
6. Fuse
7. Transformer
8. Audio Alarm
9. Visual Alarm
10. Panel Enclosure

Standard Components

Feature	Specifications
VeriComm® Remote Telemetry Unit*	ATRU-100, 58/8 VAC (center tap transformer), 8 digital inputs, 4 analog inputs, 4 digital outputs, 1 analog outputs, on-board modem (2400 baud), LED input and output indicators, 1-year battery backup of data and program settings.
Motor-Start Contactors	120 VAC, 10 FLA, 1 hp, 60 Hz; 25 million cycles at FLA (10 million at 50% of FLA); 240 VAC, 10 FLA, 2 hp, 60 Hz; 25 million cycles at FLA (10 million at 50% of FLA).
Toggle Switches	Single-pole switch, automatic On, with spring-loaded, momentary manual On, 20 A, 1 hp.
Control Circuit Breaker	10 A OFF/ON switch, Single-pole 120 VAC, double-pole 240 VAC, DIN rail mounting with thermal magnetic tripping characteristics.
Pump Circuit Breakers	20 A OFF/ON switch, Single-pole 120 VAC, double-pole 240 VAC, DIN rail mounting with thermal magnetic tripping characteristics.
Fuse	120 VAC Primary, 30 VOLT 20 A B.A. Secondary.
Transformer	250 VAC, 1 A.
Audio Alarm	89 dB at 24 in. (610 mm), warble-tone sound.
Visual Alarm	78 x 122 mm diameter red lens, "Push-to-silence," NEMA 1 1/2 W bulb, 120 VAC.
Panel Enclosure	Measures 15.5 in. high x 11.3 in. wide x 6.7 in. deep (394 mm x 288 mm x 170 mm). NEMA 4X rated. Constructed of UV-resistant fiberglass; hinges and latch are stainless steel. Control couplings provided.
VCOM-AXB1	120 VAC, 34 hp, 14 A, single-phase, 60 Hz.
VCOM-AXB2	240 VAC, 2 hp, 14 A, single-phase, 60 Hz.

Optional Components

Feature	Specifications	Product Code Adder
Pump Run Light	7/8 in. (22 mm) diameter green lens, NEMA 4, 1 W bulb, 120 VAC.	PRL
Anticorrosion Heater	Self-adjusting radiates additional wattage as temperature drops.	HT
Programmable Timer	Discharge time timed dosing.	PT
UV Disinfection Compatibility	UV grounded power circuit and alarm contacts. Pump disable upon UV failure.	UV

*See VeriComm® Remote Telemetry Unit (ATD-CP-VCOM-1) and VeriComm® Monitoring System (ATD-WEB-VCOM-1) for more detail.

AXB 05 0008 3 Rev. 23 10 08 Page 1 of 2

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No. 7230
REGISTERED PROFESSIONAL ENGINEER
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STATION 7, MATUNUCK
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

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DETAILS II

SHEET 6 OF 8

SOUTH KINGSTOWN LANDSCAPE PLANNING DATA

**ARTICLE XIII Design and Public Improvement Standards
Subdivision and Land Development Regulations - ARTICLE IV
Special Requirements**

ZONING CRITERIA	REQUIRED	PROPOSED	REGULATION 16
STREET TREE LOCATION	LOCATED WITHIN 10 FEET OF THE STREET RIGHT-OF-WAY LINE	NO TREES PROPOSED - DRIVEWAY EXTENDS WIDTH OF SIDE PROPERTY LINES	ARTICLE XIII 1.3.g.
SPACING OF STREET TREES	30 TO 50 FEET ON CENTER	NO TREES PROPOSED - DRIVEWAY EXTENDS WIDTH OF SIDE PROPERTY LINES	ARTICLE XIII 1.3.g.
TREE SIZE	1 1/2" TO 2" CALIPER AND 6 TO 8 FEET TALL	2" CALIPER AND 6 TO 8 FEET TALL	ARTICLE XIII 1.3.c.
SMALL SHRUB SIZE	4 FEET MINIMUM	4 FEET MINIMUM	ARTICLE IV G.1.c.
SMALL EVERGREEN TREE AND LARGE SHRUB SIZE	6 TO 8 FEET MINIMUM	NONE PROPOSED	ARTICLE IV.G.1.b.
PARKING LOT SCREENING ADJACENT TO A PUBLIC STREET	SELECTION OF 5 OPTIONS POSSIBLE	NO OPTION SELECTED - NO PARKING PROPOSED ADJACENT TO A PUBLIC STREET	ARTICLE IV.G.3
PERIMETER LANDSCAPING PLANT COUNTS-PARKING LOTS AND LOADING FACILITIES	1 TREE PLUS 3 LOW SHRUBS OR GROUNDCOVER PLANTS FOR EVERY 35 LINEAR FEET OF PERIMETER	NONE PROPOSED - 4.6 FOOT BUFFER STRIP BETWEEN PARKING AND PROPERTY LINE W/UG UTILITY	ARTICLE IV G.3.
INTERIOR LANDSCAPING	PARKING AREAS LESS THAN 2,500 SQUARE FEET - NO REQUIREMENT	NONE PROVIDED - ALL 3 PARKING AREAS LESS THAN 2,500 SQUARE FEET	ARTICLE IV.G.4.
INTERIOR LANDSCAPING COMBINATIONS	COMMON LANDSCAPE AREA SHALL CONTAIN 1 TREE AND 6 SHRUBS PER 300 SQUARE FEET	1 TREE AND 7 SHRUBS PROVIDED FOR AN AREA OF 302 SQUARE FEET	ARTICLE IV.G.4.1.
BUILDING LANDSCAPING	3 FOOT WIDE LANDSCAPE STRIP BETWEEN BUILDING AND PARKING AND BUILDING WALL FACING ADJACENT STREET SHALL BE LANDSCAPED	NO LANDSCAPE STRIPS PROVIDED	ARTICLE IV.G.5.

LIST OF WAIVERS REQUESTED:

WAIVER FROM ARTICLE XIII 1.3.A: STREET TREES
 REQ: LOCATED WITHIN 10-FT OF THE STREET RIGHT-OF-WAY
 PROP: NO TREES PROPOSED; DRIVEWAY EXTENDS WIDTH OF PROPERTY LIMITS

REQ: SPACED 30 TO 50 FEET ON CENTER
 PROP: NO TREES PROPOSED; DRIVEWAY EXTENDS WIDTH OF PROPERTY LIMITS

WAIVER FROM ARTICLE IV.G.1.B: SMALL EVERGREEN TREE AND LARGE SHRUB SIZE
 REQ: 6 TO 8 FEET MINIMUM
 PROP: NONE PROPOSED

ARTICLE IV.G.3: PARKING LOT SCREENING
 REQ: SELECTION OF 1 OF 5 OPTIONS
 PROP: NONE; NO PARKING PROPOSED ADJACENT TO PUBLIC STREET

REQ: 1 TREE PLUS 3 LOW SHRUBS FOR EVERY 35-FT OF PERIMETER
 PROP: NONE; 1- TO 3-FT BUFFER STRIP BETWEEN PARKING AND PROPERTY LINE

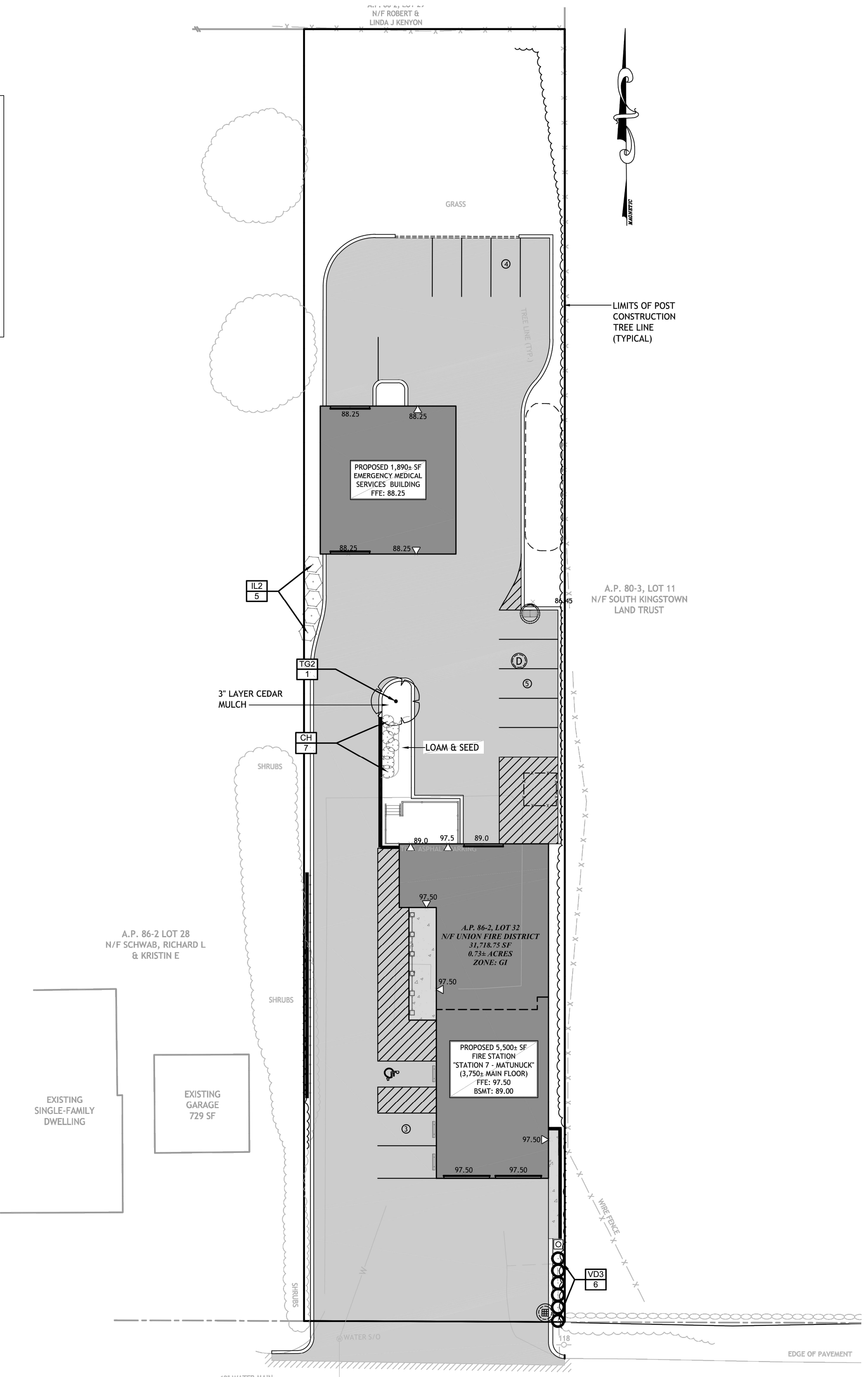
ARTICLE IV.G.5: BUILDING LANDSCAPING
 REQ: 3-FT WIDE LANDSCAPE STRIP BETWEEN BUILDING AND PARKING
 PROP: NO LANDSCAPE STRIPS PROVIDED

PLANT SCHEDULE

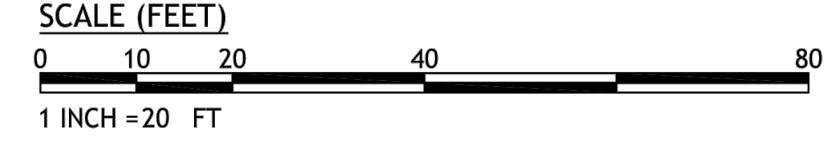
DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	B&B	CALIPER
	TG2	1	Tilia cordata 'Greenspire' / Greenspire Littleleaf Linden	B & B;	2"Cal

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT/B&B	SIZE
	CH	7	Clethra alnifolia 'Hummingbird' / Summersweet	5 gal	
	IL2	5	Ilex verticillata 'Red Sprite' / Red Sprite Winterberry Mature Height: 3'-5'	5 gal	
	VD3	6	Viburnum dentatum 'Arrowwood' / Arrowwood Viburnum	5 gal	

NOTE: LOAM AND SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED



LANDSCAPE PLAN
1" = 20'



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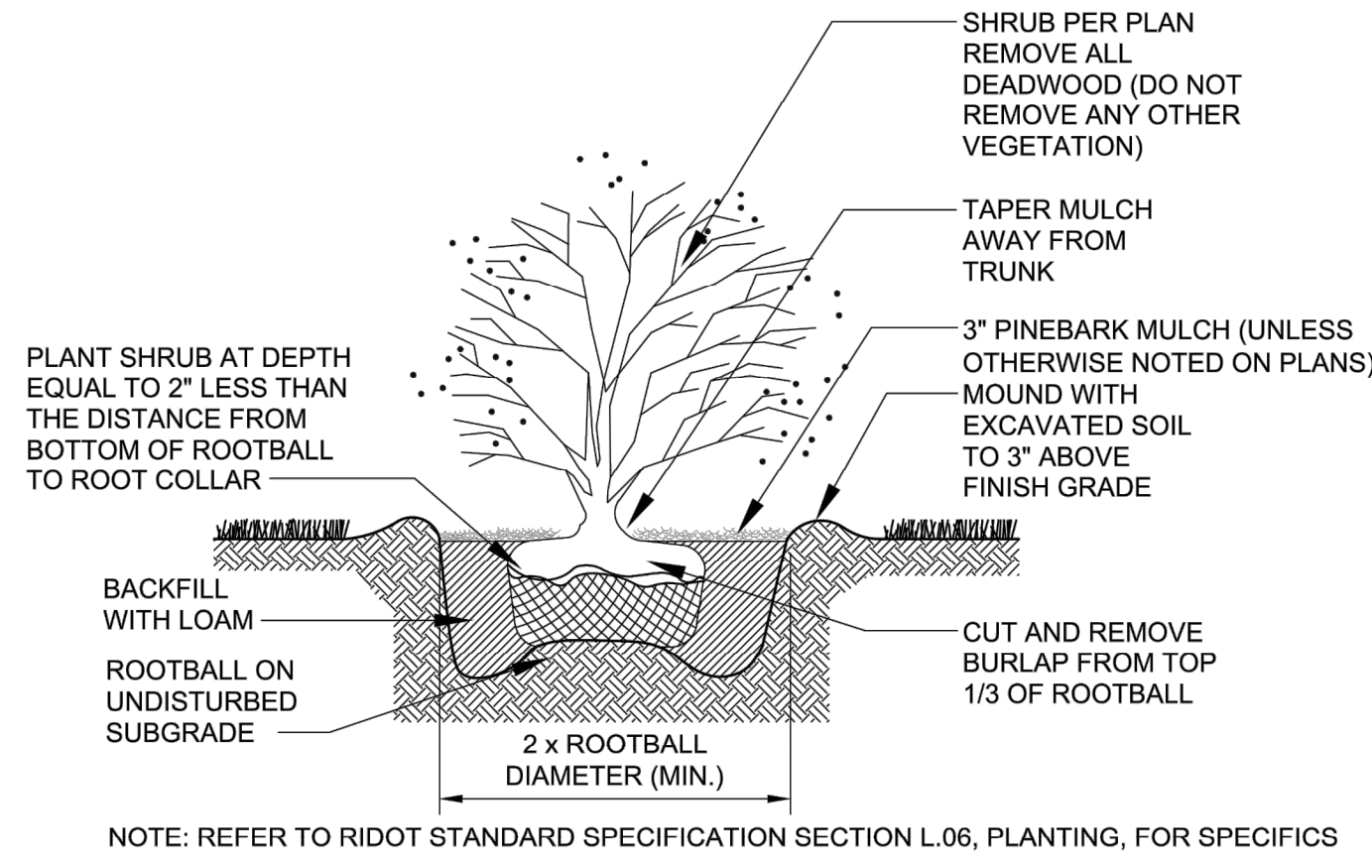
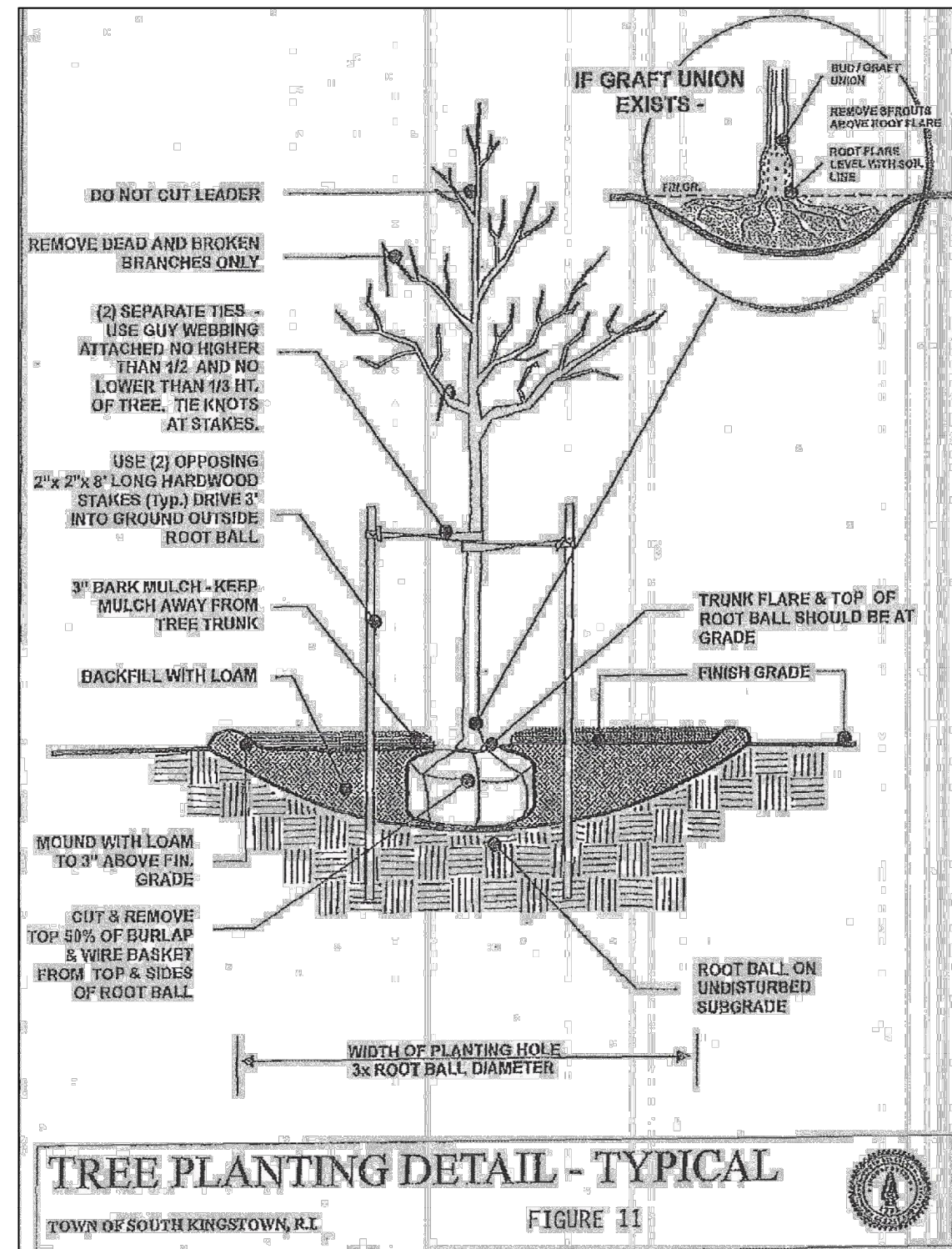
LANDSCAPE PLAN

SHEET 7 OF 8

C:\09-31 Union Fire Station\09-31c-Station 7 - Matunuck\Working Preliminary Set\dwg_Apl_30_2021 11:25am


1-888-910-SAFE
PROTECT YOURSELF. USE THESE WORKING DAYS NOTICE

LOCATION OF EXISTING UTILITIES SHOWN. USE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION. CALL BEFORE YOU DIG. 1-888-910-SAFE.



- LANDSCAPE NOTES:**
1. GUARANTEE THAT, UPON COMPLETION AND FINAL ACCEPTANCE, LANDSCAPE PLANTINGS CONFORM TO REQUIREMENTS OF CONTRACT DOCUMENTS. PROVIDE A WARRANTY FOR TREE PLANTINGS FOR A MINIMUM OF TWO (2) YEARS, INCLUDING TWO (2) CONTINUOUS GROWING SEASONS. COMMENCE WARRANTY ON DATE IDENTIFIED IN THE 'CERTIFICATE OF FINAL COMPLETION'.
 2. REPLACEMENTS: PLANTS OF SAME SIZE AND SPECIES AS SPECIFIED, PLANTED IN THE NEXT GROWING SEASON, WITH NEW WARRANTY AND EXTENDED MAINTENANCE SERVICE COMMENCING ON THE DATE OF REPLACEMENT.
 3. PLANT MATERIALS SHALL BE OF SIZE AND CALIPER REQUIRED AND CONFORM TO THE REQUIREMENTS DESCRIBED IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 4. PLANTS OF OTHER KINDS THAN THOSE NAMED IN THE PLANT SCHEDULE SHALL NOT BE ACCEPTED WITHOUT APPROVAL. REPLACEMENT PLANTS LARGER IN SIZE THAN EXISTING MAY BE USED IF APPROVED BY THE A/E, PROVIDED USE OF LARGER PLANTS DOES NOT INCREASE CONTRACT PRICE.
 5. A PROFESSIONAL HORTICULTURIST/NURSERYMAN SHALL BE CONSULTED TO DETERMINE THE PROPER TIME TO MOVE AND INSTALL PLANT MATERIAL SO THAT STRESS TO THE PLANT IS MINIMIZED. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING WINTER MONTHS PROVIDED THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL PLANTING MIXTURES ARE USED.
 6. UNLESS OTHERWISE APPROVED BY THE A/E, ALL PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES AND SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS.
 7. SET PLANTS PLUMB AND AT SUCH A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY & PROPERLY, BY FIRING OR TAMPING. ACCOMPANY BACKFILLING WITH THOROUGH WATERING UNLESS OTHERWISE APPROVED. FORM SAUCER CAPABLE OF HOLDING WATER AROUND INDIVIDUAL PLANTS.
 8. FERTILIZE SHRUB BEDS WITH 10-6-4 FERTILIZER AT THE RATE OF 3 POUNDS PER 100 SQUARE FEET OF SURFACE AREA, BROAD CAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO (2) INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT THE RATE OF ONE (1) AGRIFORM PELLETT PER INCH OF TREE DIAMETER (FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS). APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
 9. CONTAINER GROWN MATERIALS: REMOVE PLANT FROM CONTAINER AND "BUTTERFLY" ROOT BALL OR OTHERWISE SPREAD OUT ROOTS ON SETTING MOUND. BACKFILL SHALL BE SIFTED THROUGH THEM AND SOLIDLY FIRMED.
 10. AFTER PLANTING PRUNE ONLY BROKEN OR DEFORMED BRANCHES AND IN SUCH MANNER AS TO PRESERVE NATURAL CHARACTER OF PLANT.
 11. IMMEDIATELY AFTER PLANTING, STAKE TREES OVER FIVE (5) FEET AS INDICATED ON DETAIL DRAWING INDICATED OR APPROVED BY THE OWNERS REPRESENTATIVE. MULCH SHALL BE APPLIED A MINIMUM OF THREE (3) INCHES IN DEPTH IN ALL PLANTING BEDS, AS INDICATED ON THE DRAWINGS.
 12. THE PLANTS SHALL BE WATERED IMMEDIATELY FOLLOWING PLANTING, PREFERABLY WHEN TWO THIRDS OF THE BACKFILL HAS BEEN PLACED SO ALL AIR POCKETS ARE REMOVED AND THE PLANT PROPERLY SET. ADDITIONAL WATERING SHALL BE MADE AT LEAST ONCE EVERY THREE (3) WEEKS UNLESS OTHERWISE DIRECTED UNTIL FINAL ACCEPTANCE OF THE PLANT MATERIAL.
 13. INSTALL 'JUTE MESH' EROSION CONTROL FABRIC WHERE FINAL GRADES ARE 3:1 (33%) OR GREATER PER MANUFACTURER'S INSTRUCTIONS.
 14. UNLESS OTHERWISE SPECIFIED, CONTRACTOR TO LOAM AND SEED ALL DISTURBED AREAS. **SEEDING NOTE:** USE UNIVERSITY OF RHODE ISLAND NO. 2 IMPROVED SEED MIX OR EQUAL. **TREE PRUNING NOTE:** STREET TREES SHOULD BE PRUNED TO MAINTAIN A MINIMAL BRANCH HEIGHT OF 8' WITHIN TWO (2) YEARS OF INSTALLATION OF THE TREE.
 15. **LANDSCAPE ESTABLISHMENT AND MAINTENANCE NOTE:** CONTRACTOR SHALL ENSURE THAT ALL LAWN AREAS AND PLANTINGS ARE FULLY ESTABLISHED AND ACCEPTABLE TO THE OWNER'S REPRESENTATIVE PRIOR TO RELINQUISHING THEIR RESPONSIBILITIES FOR MAINTENANCE OF THESE AREAS.
 16. **TREE PROTECTION NOTE:** NO MATERIAL, TEMPORARY SOIL DEPOSIT OR EXCAVATION SHALL OCCUR WITHIN FOUR FEET OF SHRUBS OR WITHIN TWO FEET OF THE DRIP LINE OF ANY SHRUBS OR TREES TO REMAIN. ANY RETAINED EXISTING VEGETATION SHALL BE PROTECTED AS PER DETAIL ON PLAN.

C:\09-31 Union Fire Station\09-31c-Station 7 - Matunuck\09-31c-Station 7 - Matunuck\Working Preliminary Set.dwg, Jul. 30, 2021 11:25am



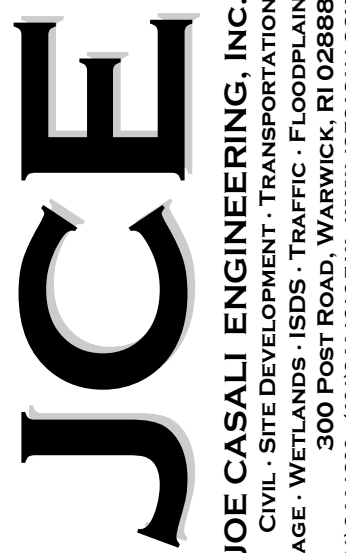
1-888-880-SAFE
 HOTLINE: 1-888-880-SAFE
 WORKING DATE NOTICE

LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING OCCUPATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL BEFORE 411-888-880-SAFE 1-888-344-7233

Diane C. Soule & Associates, ASLA
 Landscape Architecture

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 Smithfield, Rhode Island 02917
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JCE
 JOE CASALI ENGINEERING, INC.
 CIVIL ENGINEERING, ARCHITECTURE
 300 POST ROAD, WARWICK, RI 02888
 (401)944-1300 WWW.JOECASALI.COM



UNION FIRE DISTRICT OF S. KINGSTOWN
 STATION 7, MATUNUCK
 49 MATUNUCK SCHOOL HOUSE ROAD
 SOUTH KINGSTOWN, RHODE ISLAND
 AP 86-2, LOT 32

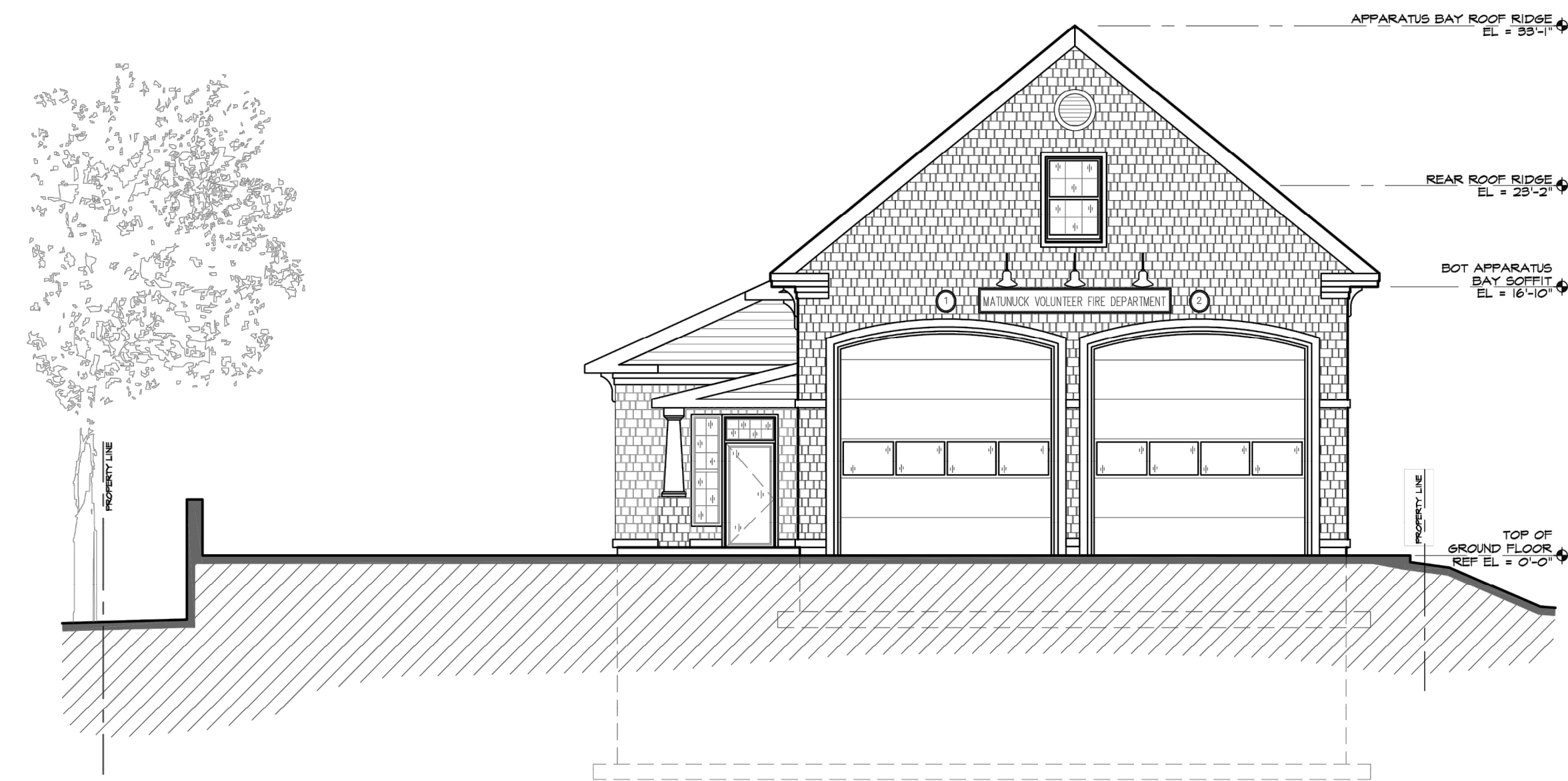
REVISIONS:		
NO.	DATE	DESCRIPTION
1	7/30/2021	DPR

DESIGNED BY:	DRD
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	JULY 2021
PROJECT NO.:	09-31c

PRELIMINARY, NOT FOR CONSTRUCTION

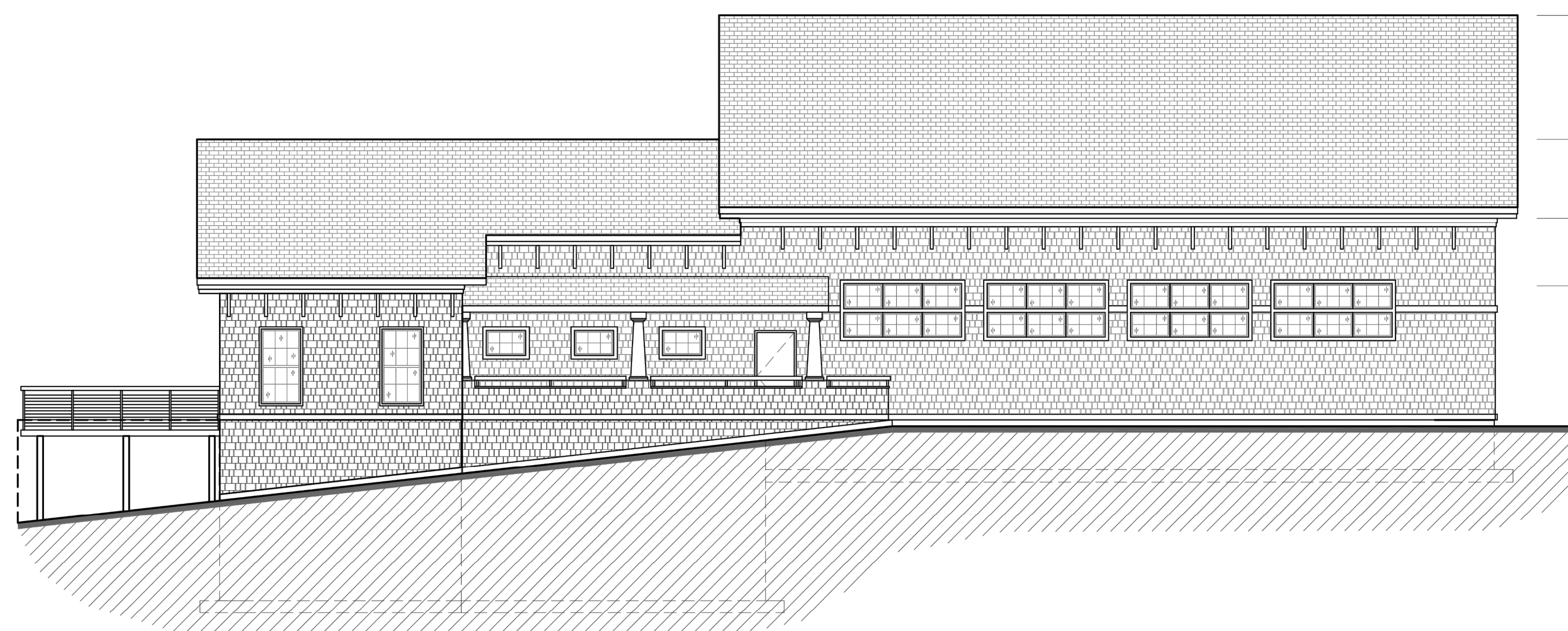
LANDSCAPE DETAILS

SHEET 8 OF 8



SOUTH ELEVATION (STREET SIDE)

SCALE: 1/8"=1'-0"



WEST ELEVATION

SCALE: 1/8"=1'-0"

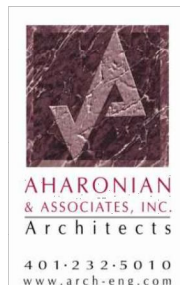


NORTH ELEVATION

SCALE: 1/8"=1'-0"

UNION FIRE DISTRICT - MATUNUCK FIRE
STATION EXTERIOR ELEVATIONS

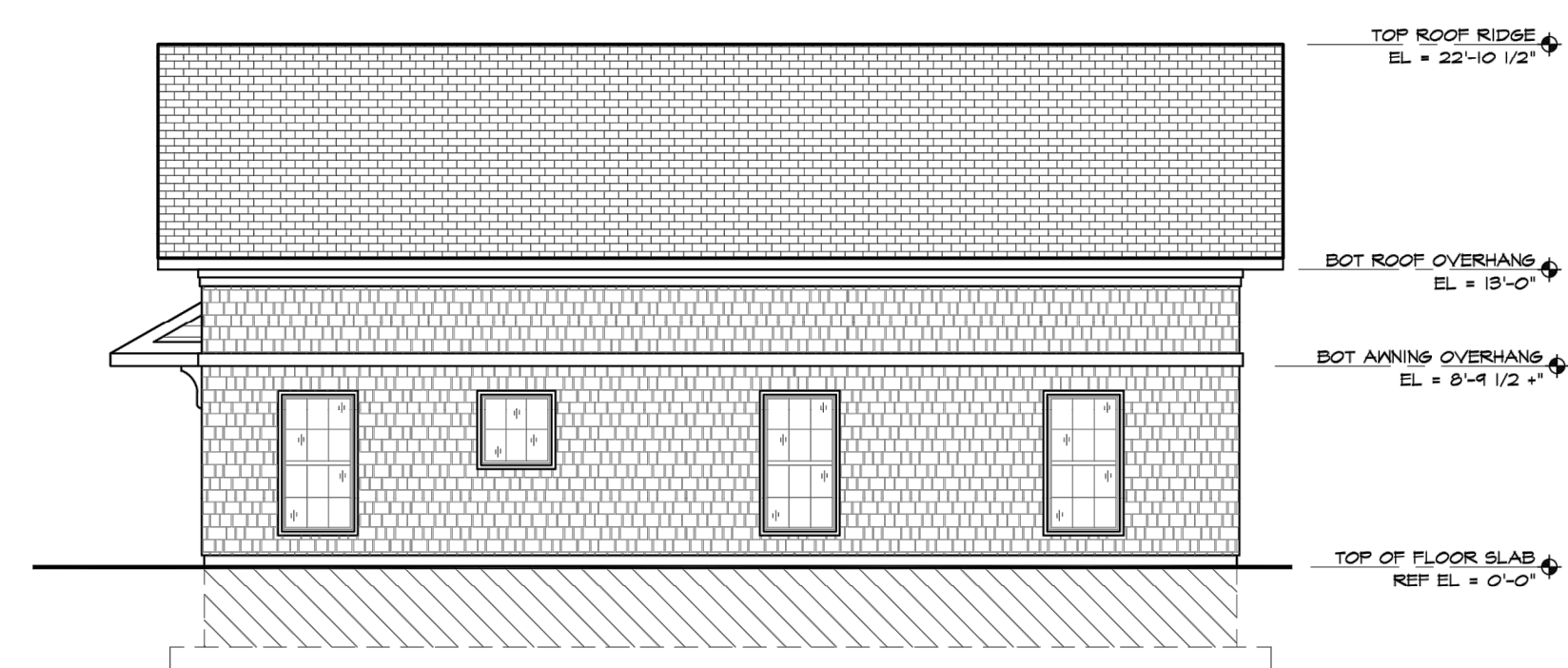
UNION FIRE DISTRICT:
MATUNUCK STATION
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RI 02917
JUNE 30, 2021





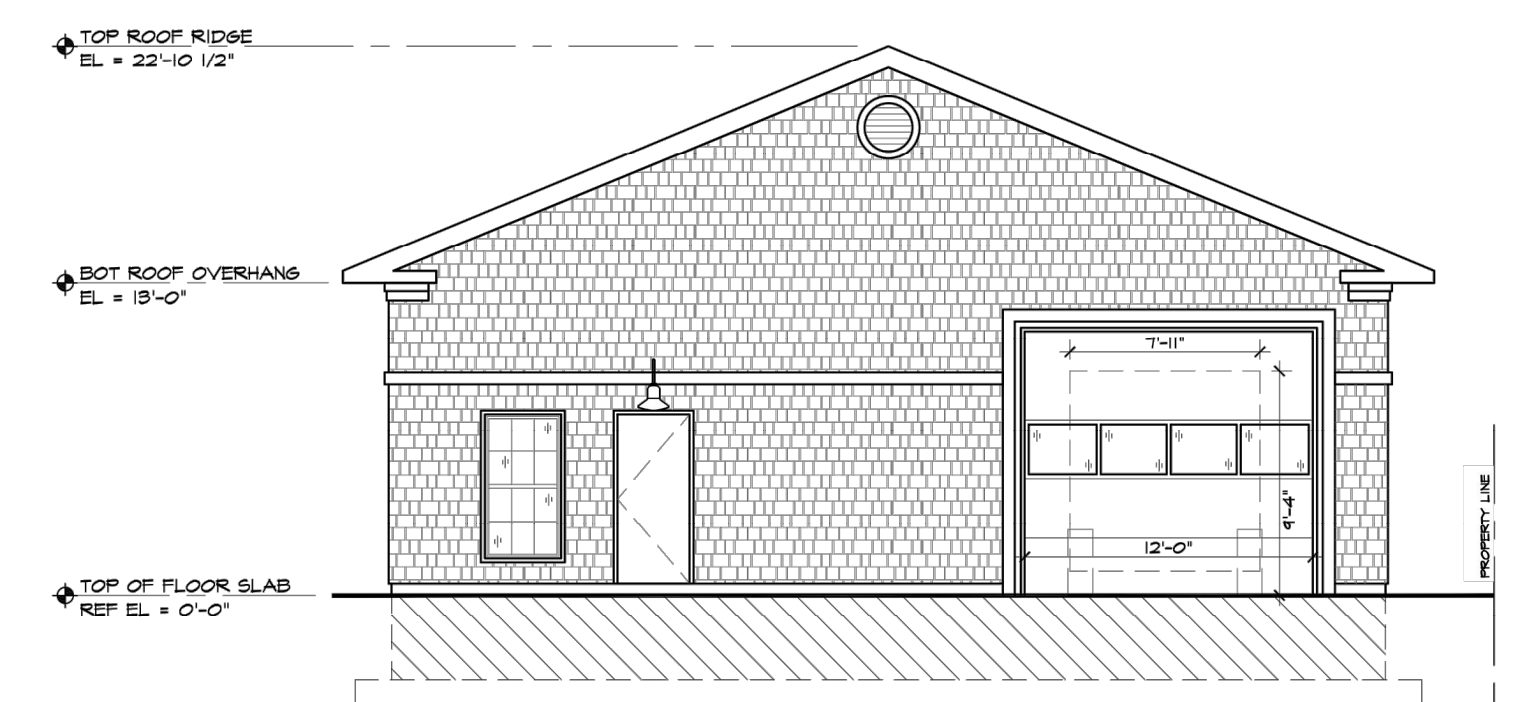
SOUTH ELEVATION

SCALE: 1/8"=1'-0"



EAST ELEVATION

SCALE: 1/8"=1'-0"

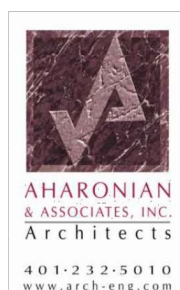


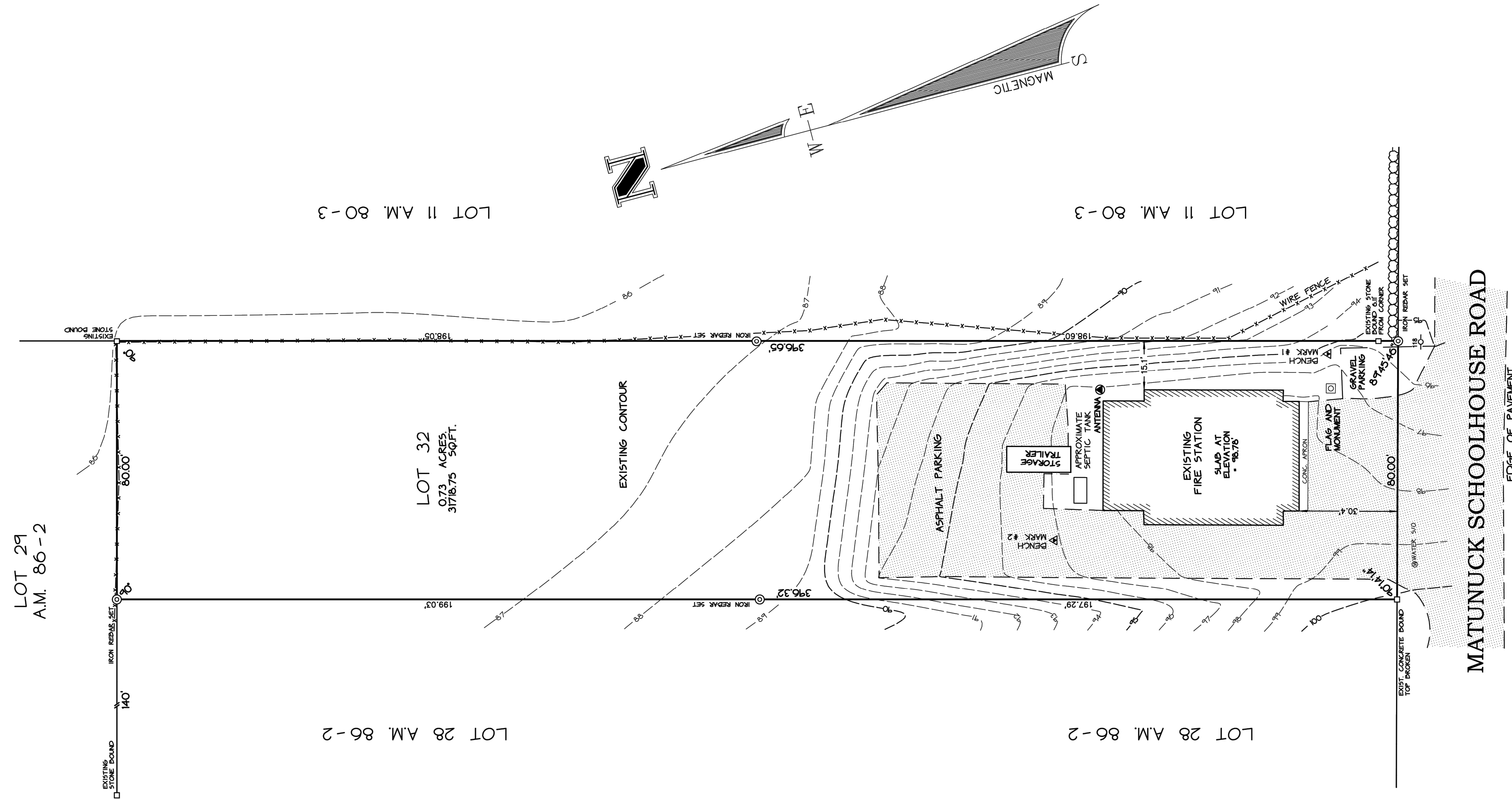
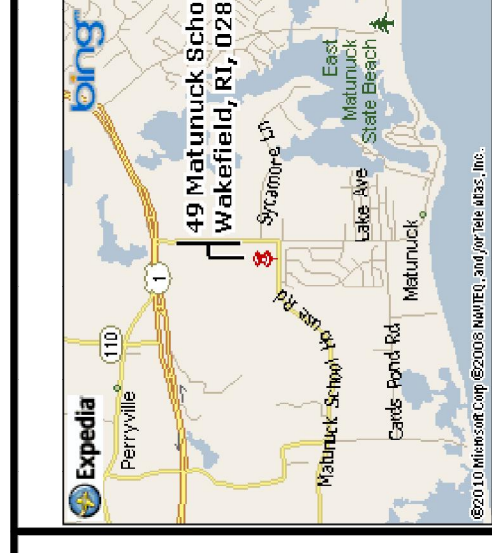
NORTH ELEVATION

SCALE: 1/8"=1'-0"

**UNION FIRE DISTRICT - MATUNUCK EMS
STATION EXTERIOR ELEVATIONS**

**UNION FIRE DISTRICT:
MATUNUCK STATION
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RI 02917
JUNE 30, 2021**





LOT 29
A.M. 86-2

LOT 28 A.M. 86-2

LOT 32
0.73 ACRES,
3176.75 SQ.FT.

LOT 11 A.M. 80-3

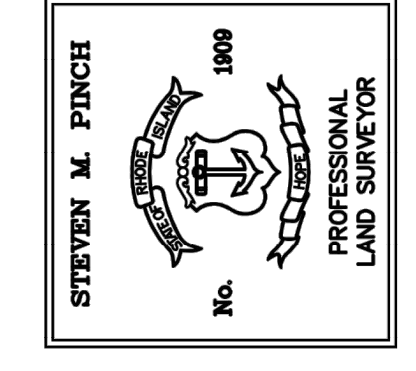
- BENCHMARK.**
- #1 - CHISELED "X" SET IN TOP OF 3"x4" ROCK
AT ELEVATION = 97.73'
 - #2 - MAG NAIL SET IN ASPHALT DRIVE
AT ELEVATION = 96.96'

THE BOUNDARIES SHOWN ON THIS PLAN SUBSTANTIALLY CONFORM TO A CLASS I STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

THE LOCATION OF THE PHYSICAL FEATURES SHOWN ON THIS PLAN CONFORM TO A CLASS III STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

BY: _____ DATE: _____
REGISTERED PROFESSIONAL
LAND SURVEYOR

PINCH LAND SURVEYING
148 High Street Unit 1
Wakefield, RI 02879
401-786-9087
www.pinchsurveying.com
pinchsurveying@verizon.net



LOCATION PLAN
LOT 32 ASSESSOR'S MAP 86-2
LOCATED AT
49 MATUNUCK SCHOOLHOUSE ROAD
OWNED BY:
THE UNION FIRE DISTRICT
IN THE TOWN OF
SOUTH KINGSTOWN, RI.
STEVEN M. PINCH P.L.S.
SCALE: 1" = 20' NOV., 2010

