

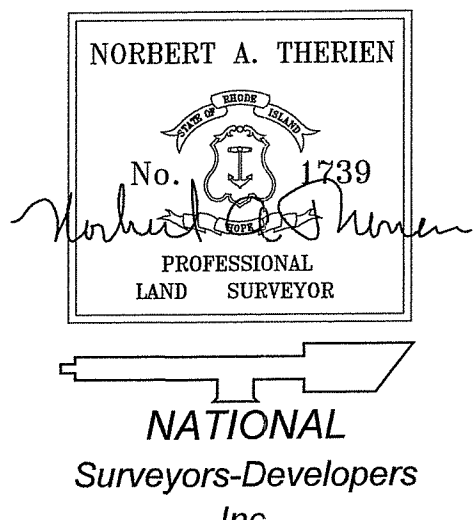
LOCUS MAP
1"=400'

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATIONS FOR PROFESSIONAL LAND SURVEYORS NOVEMBER 25, 2015 AS FOLLOWS:

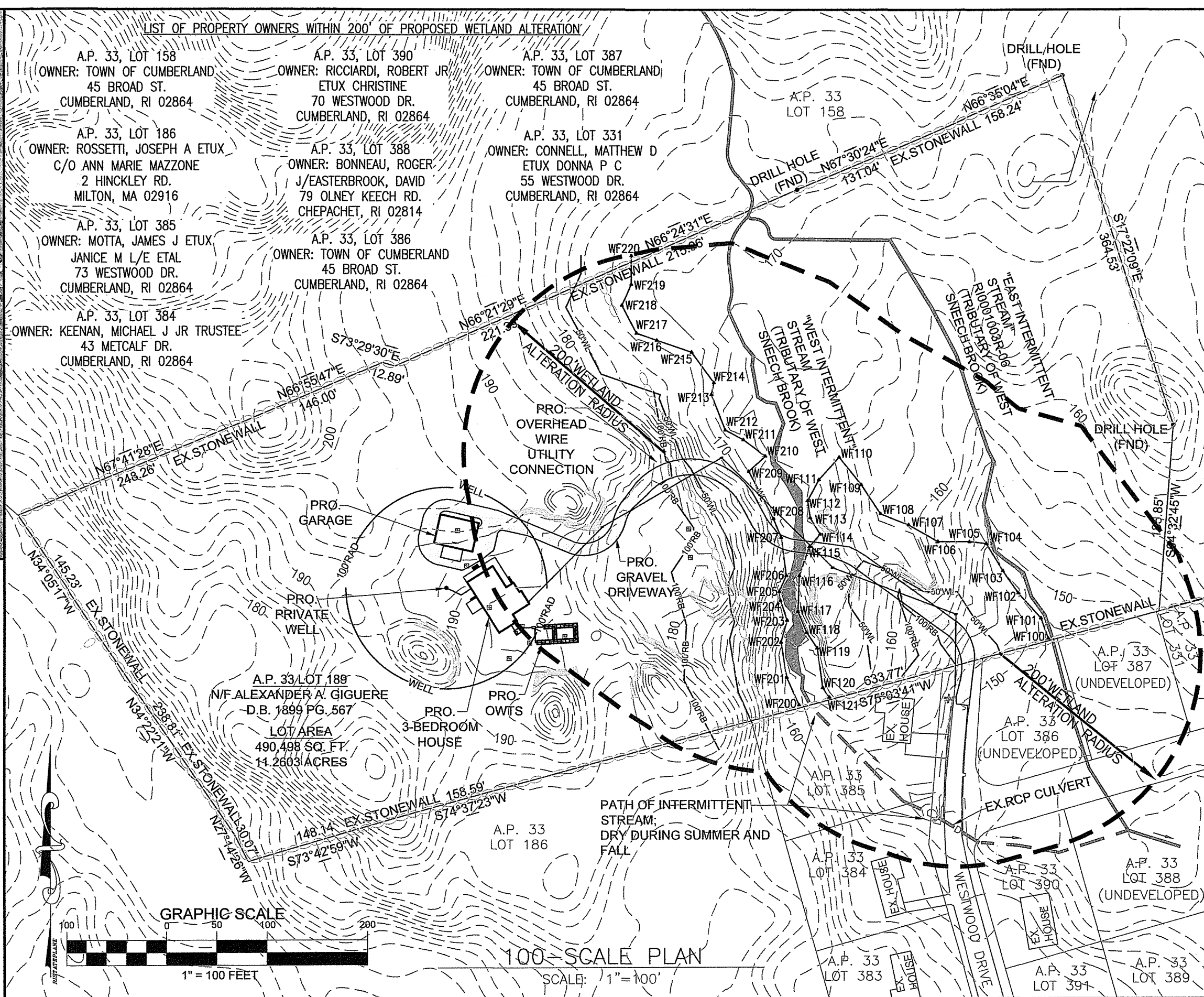
TYPE OF SURVEY: LIMITED CONTENT BOUNDARY SURVEY
MEASUREMENT SPECIFICATION: CLASS 1 STANDARD

PURPOSE OF SURVEY: BOUNDARY SURVEY

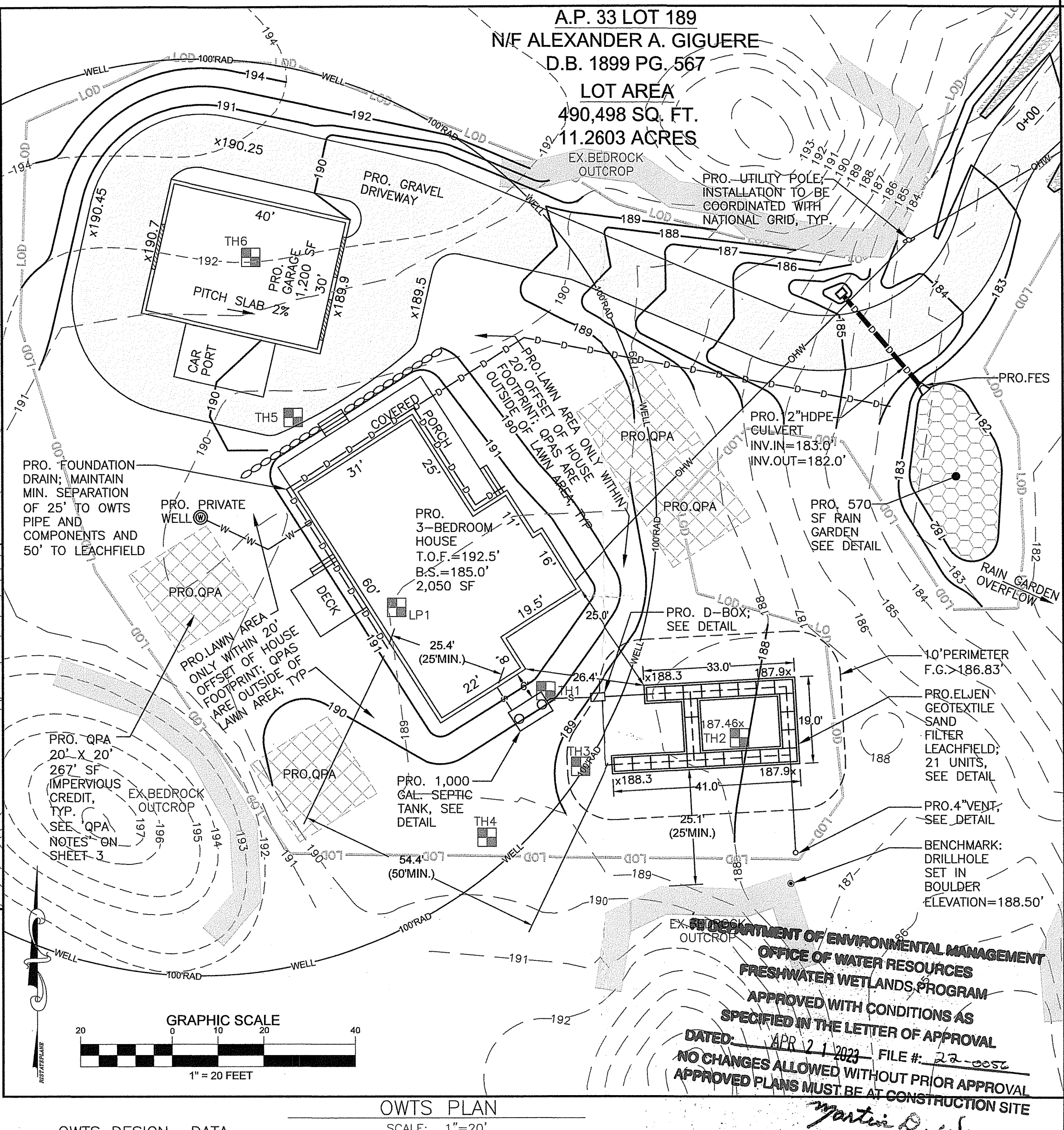
BY: *Norbert A. Therien*
NORBERT A. THERIEN, PLS NO. 1739



NATIONAL
Surveyors-Developers
Inc.
42 Hamlet Ave., Woonsocket, R.I.
(401) 769-7779



GRAPHIC SCALE
1"=100 FEET
100-SCALE PLAN
SCALE: 1"=100'



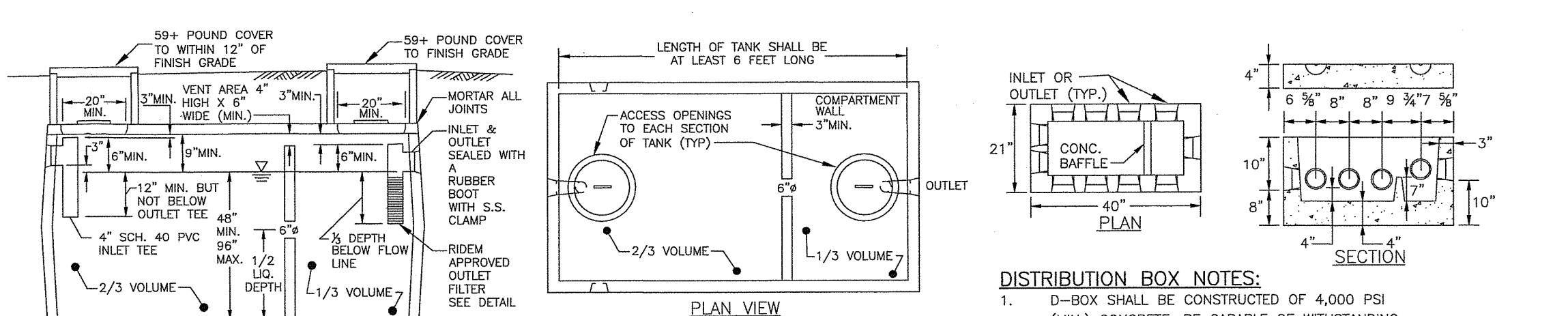
GRAPHIC SCALE
1"=20 FEET
OWTS PLAN
SCALE: 1"=20'

LEGEND

---	SUBJECT PROPERTY LINE	---	APPROX. B.S. CONC. ELEV.	---	APPROXIMATE BASEMENT SLAB CONCRETE ELEVATION
---	ABUTTER LINE	---	ELEV.	---	EXISTING HIGH-DENSITY POLYETHYLENE
---	EX-STONEWALL	---	EX. HDPE	---	EXISTING POLYETHYLENE
○	IRON PIN	---	LOC. MAX. MIN. PRO. RCP	---	LOCATION MAXIMUM MINIMUM PROPOSED REINFORCED CONCRETE PIPE
○	BOUND	---	REQ'D	---	REQUIRED SQUARE FOOT TOP OF FOUNDATION WETLAND FLAG
○	DRILL HOLE	---	WF	---	WETLAND FLAG
○	UTILITY POLE	---	REFO'D	---	REQUIRE TOP OF FOUNDATION WETLAND FLAG
---	EX. CONTOUR	---	T.O.F.	---	TOP OF FOUNDATION WETLAND FLAG
---	FLAGGED WETLAND EDGE	---	REFO'D	---	REQUIRED SQUARE FOOT TOP OF FOUNDATION WETLAND FLAG
---	APPROX. WETLAND EDGE	---	T.O.F.	---	TOP OF FOUNDATION WETLAND FLAG
---	50' PERIMETER WETLANDS	---	WF	---	WETLAND FLAG
---	100' RIVERBANK WETLANDS	---	WF	---	WETLAND FLAG
---	STREAM	---	WF	---	WETLAND FLAG
---	SOIL EVALUATION HOLE	---	WF	---	WETLAND FLAG
---	EXISTING WELL	---	WF	---	WETLAND FLAG
---	PROPOSED CONTROL FENCE	---	WF	---	WETLAND FLAG
---	LIMIT OF DISTURBANCE	---	WF	---	WETLAND FLAG
---	PRO. CONTOUR	---	WF	---	WETLAND FLAG
---	PRO. OVERHEAD UTILITIES (ELECTRIC, CABLE, COMMUNICATIONS)	---	WF	---	WETLAND FLAG
---	PRO. STORMWATER DRAIN	---	WF	---	WETLAND FLAG
---	PRO. SEWER LINE	---	WF	---	WETLAND FLAG
---	PRO. BOULDER RETAINING WALL	---	WF	---	WETLAND FLAG

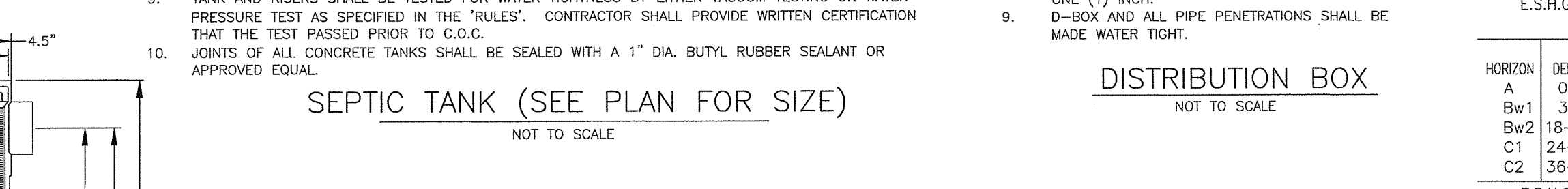
REFERENCES & NOTES:

- PROPERTY LINE INFORMATION OBTAINED FROM SURVEY PERFORMED BY NATIONAL LAND SURVEYORS-DEVELOPERS, INC. DETERMINATION AND FLAGGING OF WETLAND EDGE PERFORMED BY MASON & ASSOCIATES, INC. ON SEPTEMBER 29, 2021.
- AERIAL IMAGERY OBTAINED FROM RIGIS DATA
- TOPOGRAPHY OBTAINED FROM FROM ON-SITE MEASUREMENTS AND RIGIS LIDAR DATA.
- THE ENTIRE SUBJECT PROPERTY LIES WITHIN A DEM "NATURAL HERITAGE AREA"



SEPTIC TANK NOTES:

- SEPTIC TANK SHALL BE WATER TIGHT AND CONSTRUCTED OF PRECAST REINFORCED CONCRETE.
- PRECAST REINFORCED CONCRETE TANKS SHALL CONFORM WITH ASTM C-1227-02, LATEST EDITION.
- TANK SHALL BE PERMANENTLY MARKED AT THE INLET END OF THE TANK WITH DATE OF MANUFACTURE, NAME OF MANUFACTURER, CAPACITY, AN EXTERNAL LEAD FOR WHICH TANK IS DESIGNED TO RESIST.
- A WARNING LABEL AT ALL OPENINGS SHALL BE PROVIDED WHICH READS "ENTRANCE INTO THE TANK COULD BE FATAL".
- TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
- TANK SHALL BE INSTALLED ON A LEVEL, STABLE BASE THAT WILL NOT SETTLE.
- SURFACE WATER SHALL BE DIVERTED AWAY FROM THE TANK OPENINGS.
- TANK SHALL NOT BE DAMAGED DURING BACKFILLING. BACKFILL MATERIAL SHALL BE FREE OF LARGE STONES, STUMPS, WASTE, CONSTRUCTION MATERIAL, RUBBISH, ORGANIC MATERIAL, AND FROZEN SOILS.
- TANK AND RISERS SHALL BE TESTED FOR WATER TIGHTNESS BY EITHER VACUUM TESTING OR WATER PRESSURE TEST AS SPECIFIED IN THE "RULES". CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION THAT THE TEST PASSED PRIOR TO C.O.C.
- JOINTS OF ALL CONCRETE TANKS SHALL BE SEALED WITH A 1" DIA. BUTYL RUBBER SEALANT OR APPROVED EQUAL.

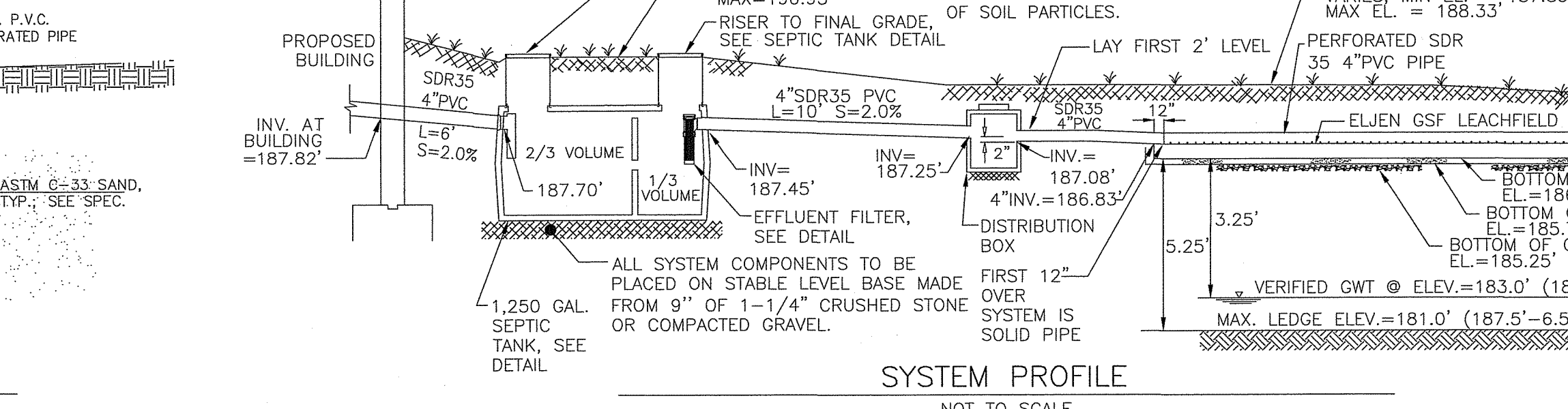


DISTRIBUTION BOX NOTES:

- D-BOX SHALL BE CONSTRUCTED OF 4,000 PSI (MIN.) CONCRETE, BE CAPABLE OF WITHSTANDING H=20 LOADINGS & A TOP LOAD CARRYING CAPACITY OF 300 LBS/SQ. INCH.
- INLET SHALL ACCEPT 4" SCH 40 OR SDR 35 PVC PIPE.
- OUTLETS SHALL HAVE STATE APPROVED SEALS THAT EXCEED 4" SCH 40 OR 4" SDR 35 PVC PIPE.
- EXTEND COVER TO WITHIN 12" OF FINISHED GRADE WITH CONCRETE RISERS AND PLACE A MARKER TO FINISH GRADE OVER THE COVER.
- D-BOX SHALL BE PLACED ON A LEVEL AND COMPACTED BASE.
- D-BOX SHALL HAVE A MINIMUM AREA OF 3 SQUARE FEET.
- PROVIDE AN INLET TEE IF A CONCRETE BAFFLE IS NOT PROVIDED.
- PIPES SHALL EXTEND INTO THE DISTRIBUTION BOX ONE (1) INCH.
- D-BOX AND ALL PIPE PENETRATIONS SHALL BE MADE WATER TIGHT.

SEPTIC GRAVEL SPECIFICATION:
GRAVEL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 3". UP TO 10% MAY BE SIZED BETWEEN 3/4" AND 3". GRAVEL SHALL MEET THE FOLLOWING:

SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
3/4"	100%	#40	10%-50%
#4	55%-100%	#100	0%-20%
#10	40%-100%	#200	0%-2%



SYSTEM PROFILE
NOT TO SCALE

OWTS DESIGN DATA
3 BEDROOM DWELLING
115 GAL/BR/DAY = 345 GAL/DAY
0.52 GAL/SF/DAY = 664 SF REQUIRED
ELVEN GSF 28 SF/UNIT
24 UNITS PROVIDED = 672 SF

OWNER'S NOTES:

- FOOD/GARBAGE GRINDERS ARE PROHIBITED FROM BEING CONNECTED TO THE SEPTIC SYSTEM.
- VEHICLE PARKING OR TRAFFIC OVER THE SEPTIC TANK AND/OR LEACHFIELD IS PROHIBITED.
- BACKFLOW WATER FROM WATER TREATMENT SYSTEMS (IF INSTALLED) SHALL NOT BE DISCHARGED INTO THE SEPTIC SYSTEM. SEPTIC TANKS SHALL BE PUMPED OUT EVERY 24 MONTHS AND EFFLUENT FILTERS WASHED ANNUALLY UNLESS MORE FREQUENT MAINTENANCE IS DETERMINED TO BE REQUIRED BY OPERATION AND MAINTENANCE PROVIDER OF THE OWTS SYSTEM.
- ONLY WASTEWATER AS DEFINED IN THE RIDEM OWTS REGULATIONS IS ALLOWED TO BE DISCHARGED INTO THE SEPTIC SYSTEM. ABSOLUTELY NO CHEMICALS, OILS, FATS, GREASE OR PAINTS ARE ALLOWED. THIS IS NOT A GARBAGE DISPOSAL SYSTEM.
- BATHTUBS GREATER THAN 100 GALLONS ARE NOT ALLOWED IN THE HOUSE.
- NO TREES OR LARGE SHRUBS SHALL BE PLANTED WITHIN 10 FEET OF THE LEACHFIELD.
- NO SUBSURFACE DRAINS OR SUBDRAINS SHALL BE INSTALLED WITHIN 50 FEET OF THE OWTS UNLESS IN ACCORDANCE WITH OWTS REGULATIONS.
- THE DESIGN INTENT IS TO MEET THE STATE STANDARDS. THE SYSTEM OPERATION IS DEPENDENT ON PROPER USAGE, AND ITS OPERATION IS NOT GUARANTEED BY THIS PLAN.

CONTRACTOR'S NOTES - CONSTRUCTION:

- NOTIFY ENGINEER 5 DAYS PRIOR TO START OF CONSTRUCTION.
- ENGINEER TO APPROVE BOTTOM OF LEACHFIELD BED PRIOR TO PLACEMENT OF GRAVEL.
- SCAFFRY LEACHFIELD BOTTOM IMMEDIATELY PRIOR TO PLACEMENT OF GRAVEL, NOT THE DAY BEFORE.
- ENGINEER TO INSPECT SEPTIC TANK PRIOR TO BACKFILLING. CONTRACTOR SHALL PROVIDE VACUUM TEST REPORT FROM TANK MANUFACTURER.
- ENGINEER TO INSPECT COMPLETED SYSTEM PRIOR TO BACKFILLING. FINE GRADE LEACHFIELD AND SEPTIC TANK AREA SO RUNOFF DOES NOT FLOW ONTO AREA FROM UPLAND AREAS DURING & AFTER CONSTRUCTION.
- ALL CONCRETE RISER SECTIONS SHALL BE MORTAR/SEALED WATER TIGHT TO TANK.
- CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD AND DESIGN DATA SHOWN HEREON TO BE REPORTED TO THE ENGINEER.
- ANY DAMAGE OR DISTURBANCE OF LAND DUE TO CONSTRUCTION ACTIVITIES TO ADJUTING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR.

LEACHFIELD NOTES:

- BOTTOM OF BED ELEVATION REQUIRES FIELD APPROVAL BY ENGINEER & RIDEM.
- ALL ORGANIC HORIZONS AND A-HORIZONS LOCATED BELOW THE SYSTEM SHALL BE REMOVED AND REPLACED WITH SEPTIC GRAVE AS NECESSARY.
- A MINIMUM OF 6" OF SEPTIC GRAVE SHALL BE PLACED BELOW THE SAND.
- ALL PIPING ON IN-DRAINS SHALL BE 4" DIA. SDR35 PERFORATED PVC.

PLAN FOR NOTICE

OWTS GENERAL NOTES:

- THIS PLAN WAS PREPARED FOR RIDEM PERMIT APPLICATION ONLY AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER. THIS IS NOT THE BUILDING PERMIT PLOT PLAN.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE "RULES" ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS. LATEST REVISION, AS REGULATED THROUGH THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (THESE ARE REFERRED TO AS THE "RULES").
- THE PROPOSED ACTS OF (ARE NOT) UNDER THE JURISDICTION OF THE RHODE ISLAND COASTAL RESOURCE MANAGEMENT COUNCIL'S JURISDICTION.
- CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS (IF INSTALLED) SHALL NOT BE DISCHARGED INTO THE SEPTIC SYSTEM.
- DRINKING WATER LINES (ARE X) OR (ARE NOT X) LOCATED WITHIN 50 FEET OF THE PROPOSED OWTS. ALL DRINKING WATER LINES WITHIN 50 FEET OF THE PROPOSED OWTS HAVE BEEN SHOWN, IF PRESENT.
- WATER SUPPLY IS BY (PUBLIC WATER SYSTEM) OR (PRIVATE WELL X).
- THERE (ARE X) OR (ARE NOT X) EXISTING AND PROPOSED PRIVATE DRINKING WATER WELLS LOCATED WITHIN THE SPECIFIED SETBACK DETAILED IN TABLE 22.5 OF THE "RULES" + 100 FEET. IF WELLS (ARE) PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN.
- THERE (ARE X) OR (ARE NOT X) EXISTING AND PROPOSED WELLS SERVING NON-POTABLE USES WITHIN 100' OF THE OWTS. IF WELLS (ARE) PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN.
- THERE (ARE X) OR (ARE NOT X) EXISTING AND PROPOSED PUBLIC DRINKING WATER SUPPLY WELLS WITHIN 500 FEET OF THE PROPOSED OWTS. IF WELLS (ARE) PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN.
- THERE (ARE X) OR (ARE NOT X) WATERCOURSES AND/OR WETLANDS WITHIN 200 FEET OF THE PROPOSED OWTS. IF PRESENT, THE LOCATIONS ARE SHOWN ON THE PLAN.
- THERE (ARE X) OR (ARE NOT X) STORM AND SUBSURFACE DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS. SAID DRAINS (DO) OR (DO NOT X) DISCHARGE DIRECTLY OR INDIRECTLY INTO A CRITICAL RESOURCE AREA AS IDENTIFIED IN RULE 38 OF THE "RULES".
- THERE (ARE X) OR (ARE NOT X) EXISTING OWTS WITHIN 200 FEET OF ANY PROPOSED WELL. IF PRESENT, THE LOCATION AND SIZE HAS BEEN SHOWN ON THE PLAN.
- EXISTING OWTS WITH A DESIGN FLOW GREATER THAN 1,000 GAL/DAY (ARE X) OR (ARE NOT X) LOCATED WITHIN 400 FEET OF THE PROPOSED WELL. IF PRESENT, THE LOCATION AND SIZE HAS BEEN SHOWN ON THE PLAN.
- THERE (ARE X) OR (ARE NOT X) AREAS ON SUBJECT PROPERTY WHERE SAND HAS BEEN EXCAVATED AND/OR WHERE STORM DEPOSITED SAND IN THE BACKYARD ENVIRONMENT OR WHERE HUMAN TRANSPORTED MATERIAL HAS BEEN DEPOSITED.
- THE POTENTIAL FOR FLOODING WITHIN 100 FEET OF THE PROPOSED OWTS DOES NOT EXIST.
- THE PROPOSED WELL, IF APPLICABLE, (DOES X) OR (DOES NOT X) REQUIRE A VARIANCE FROM RIDEM'S "RULES AND REGULATIONS GOVERNING THE ENFORCEMENT OF CHAPTER 48-13.2 RELATING TO THE DRILLING OF DRINKING WATER WELLS".
- THIS APPLICATION (IS X) OR (IS NOT X) PART OF A SUBDIVISION OF FIVE (5) LOTS OR LESS WITH EXISTING ROAD FRONTAGE.
- THE SUBJECT PROPERTY (IS X) OR (IS NOT X) SERVED WITH AN OWTS & PRIVATE WELL. THE NITROGEN LOADING RATE SHALL NOT EXCEED 345 GAL/DAY PER 20,000 SQUARE FEET OF PROPERTY WHEN SERVED WITH AN OWTS & PRIVATE WELL.
- THE CONTRACTOR SHALL STAKE AND FLAG TO PROTECT THE LEACHFIELD FROM VEHICLE TRAFFIC AND EXCESS WEIGHT LOADS BEFORE AND DURING CONSTRUCTION OF THE OWTS AND THE STRUCTURE. FLAGGING SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES AT THE SITE ARE COMPLETE.

OWNER/APPLICANT
ALEXANDER GIGUERE
11 WESTWOOD DRIVE
CUMBERLAND, RI 02864

REGISTRATION:
DAVID KENNETH MANON
REGISTERED PROFESSIONAL ENGINEER (C&M)

GROUND BREAKING
DESIGNS, LLC
CIVIL ENGINEERING SOLUTIONS
90 HIGHLAND AVE., SOUTH KINGSTOWN, RI 02879 ■ PHONE: (401) 622-2932

PLAN FOR NOTICE

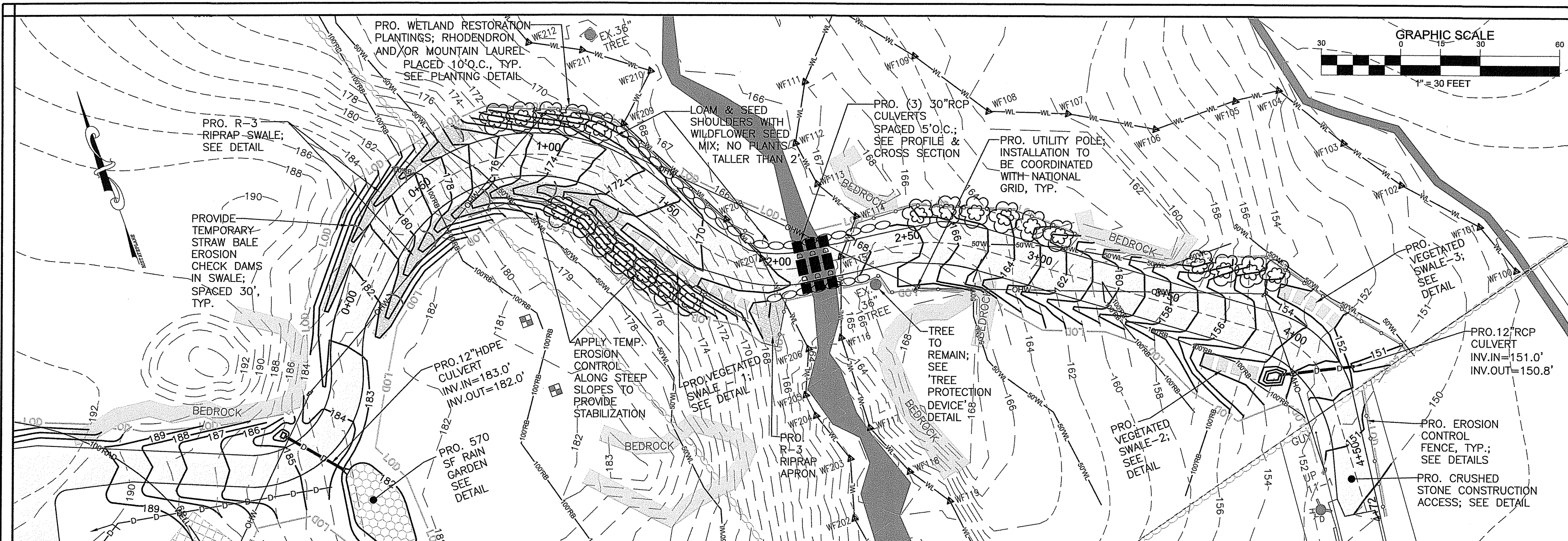
RIDEM APPLICATION PLAN
101 WESTWOOD DRIVE
SITE PLAN
A.P. 33, LOT 189
CUMBERLAND, RHODE ISLAND 02864
SCALE: AS SHOWN DATE: 01/21/22 SHEET 1 of 3

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1.	08-02-22	RIDEM COMMENTS	DKM
2.	09-16-22	RIDEM COMMENTS	DKM

OFFICE OF ENVIRONMENTAL MANAGEMENT
FRESH WATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: APR 21 2022 FILE # 23-0052
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Sencel

GROUND BREAKING
DESIGNS, LLC
CIVIL ENGINEERING SOLUTIONS
90 HIGHLAND AVE., SOUTH KINGSTOWN, RI 02879 ■ PHONE: (401) 622-2932



LEGEND

—	SUBJECT PROPERTY LINE	APPROX. B.S. CONC. ELEV.	APPROXIMATE BASEMENT SLAB CONCRETE ELEVATION
—	ABUTTER LINE	EX. EX.	EXISTING HIGH-DENSITY POLYETHYLENE
—	EX. STONEWALL	HDPE LOC. MAX. MIN. PRO. RCP	MINIMUM PROPOSED REINFORCED CONCRETE PIPE
○	IRON PIN	REQ'D SF T.O.F. WF	REQUIRED SQUARE FOOT TOP OF FOUNDATION WETLAND FLAG
○	BOUND		
○	DRILL HOLE		
○	UTILITY POLE		
—	EX. CONTOUR		
—	FLAGGED WETLAND EDGE		
—	APPROX. WETLAND EDGE		
—	50' PERIMETER WETLANDS		
—	100' RIVERBANK WETLANDS		
—	STREAM		
○	SOIL EVALUATION HOLE		
○	EXISTING WELL		
○	PROPOSED WELL		
—	EROSION CONTROL FENCE		
—	LIMIT OF DISTURBANCE		
—	PRO. CONTOUR		
—	PRO. OVERHEAD UTILITIES (ELECTRIC, CABLE, COMMUNICATIONS)		
—	PRO. STORMWATER DRAIN		
—	PRO. SEWER LINE		
—	PRO. BOULDER RETAINING WALL		

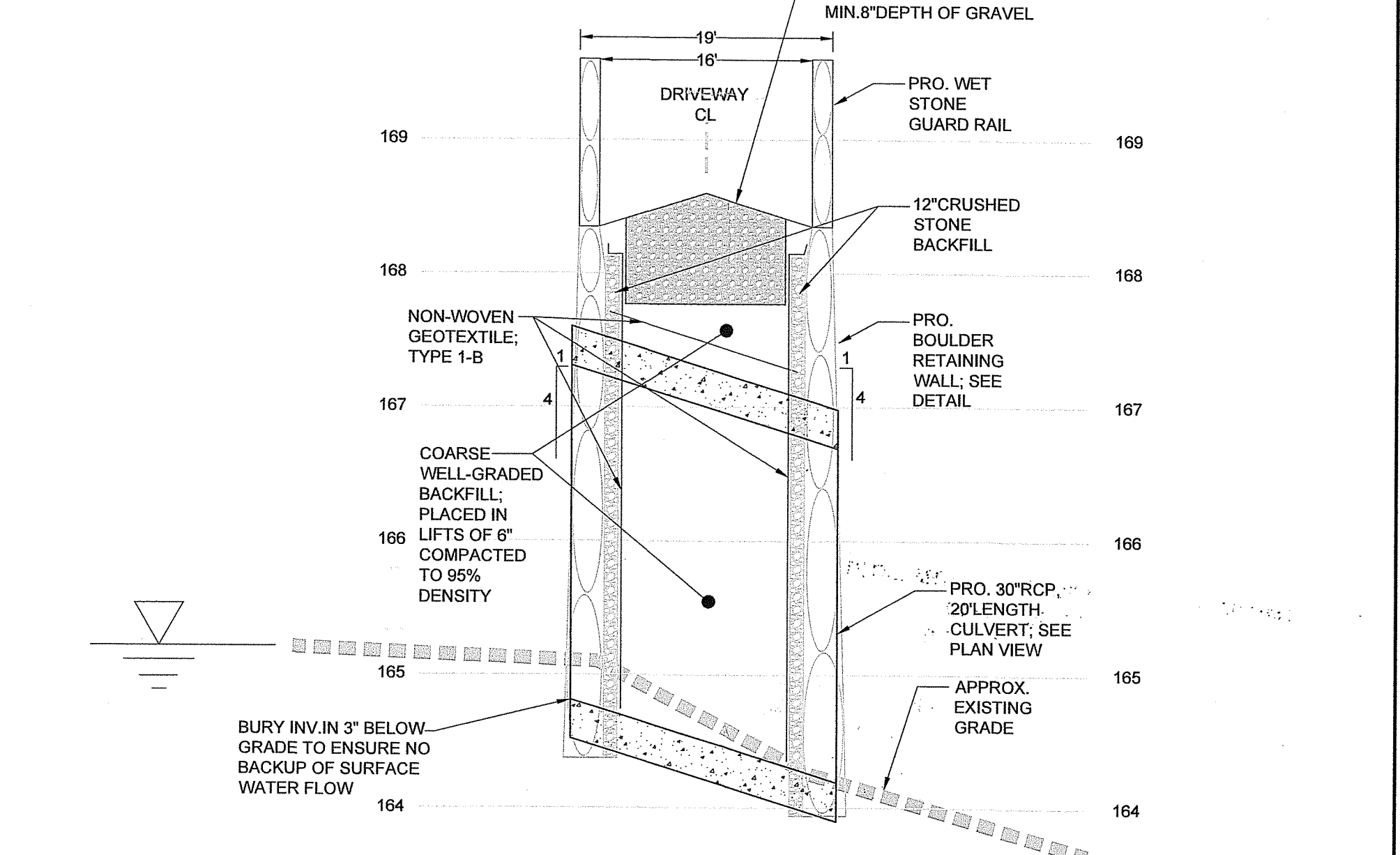
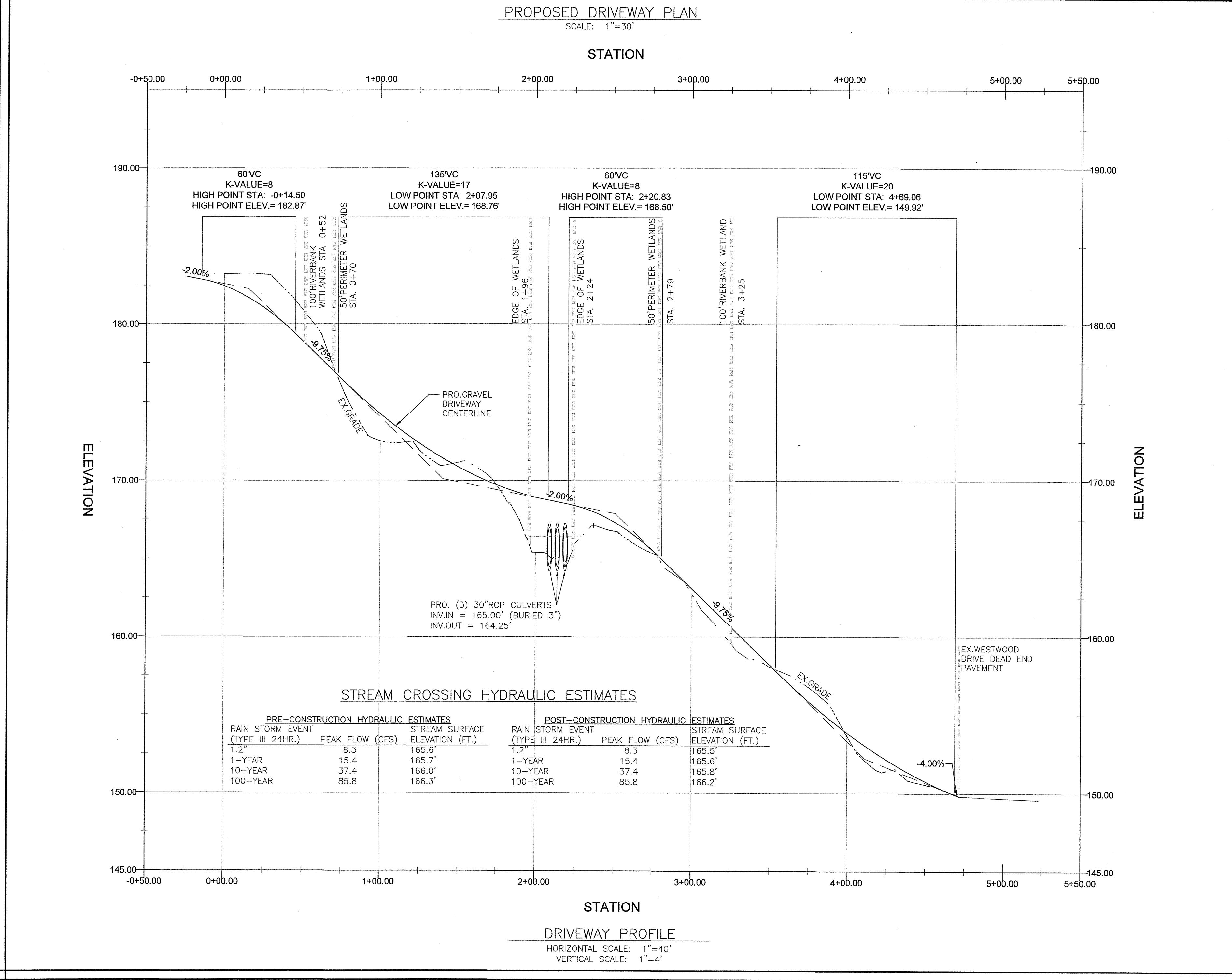
Environmental Management
OCT 17 2022
Office of Water Resources

RIDEM APPLICATION PLAN

101 WESTWOOD DRIVE

WETLAND CROSSING PLAN

A.P. 33, LOT 189
CUMBERLAND, RHODE ISLAND 02864
SCALE: AS SHOWN DATE: 01/21/22 SHEET 2 of 3



OWNER/APPLICANT
ALEXANDER GIGUERE
11 WESTWOOD DRIVE
CUMBERLAND, RI 02864

REVISIONS:

NO.	DATE	DESCRIPTION	BY	CHK
1.	08-02-22	RIDEM COMMENTS	DKM	DKM
2.	09-16-22	RIDEM COMMENTS	DKM	DKM

REGISTRATION:

DAVID KENNETH MANONI
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

JOB NO.: 21.34

NON-WOVEN GEOTEXTILE (TYPE 1-B) SPECIFICATION
AVG. OPENING SIZE: 0.25 MM MAX.
PERMITTIVITY: 0.2 SEC⁻¹

CRUSHED STONE SPECIFICATION

SIEVE SIZE	% PASSING
6"	100
4"	10-50
3"	0-15
No. 4	0-5
No. 200	0-2

DIMENSION SCHEDULE

T _w	B _w	E _t
H _t > 4'-5"	2'	3.5' 1'
H _t > 3'-4"	1.5'	3' 1'
H _t > 2'-3"	1.5'	2.5' 1'

NOTES:

- CAP ROCKS SHALL WEIGH AT LEAST 200 LBS FOR WALL HEIGHTS 4' OR GREATER
- OVERLAP JOINTS
- OUTERMOST POINT OF CONTACT BETWEEN AN UPPER AND A LOWER ROCK SHOULD BE WITHIN 6" OF THE FACE OF THE ROCKERY
- ROCKS SHALL EXTEND THROUGH ENTIRE WIDTH OF WALL

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

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

DATED: APR 21 2023 FILE #: 22-0052

BOULDER RETAINING WALL
NOT TO SCALE

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin D. Wencsek

GROUND BREAKING

DESIGNS, LLC

CIVIL ENGINEERING SOLUTIONS

90 HIGHLAND AVE., SOUTH KINGSTOWN, RI 02879 ☎ PHONE: (401) 622-2932

SQL EROSION AND SEDIMENTATION CONTROL NOTES:

1. THE "LOD" LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
2. SILT SOCKS AND/OR SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SLOPES WITHIN THE LIMIT OF DISTURBANCE WITHIN THE VICINITY OF ANY WETLAND AREA; SEE THE PLAN FOR LOCATION OF SOIL EROSION CONTROL FENCES.
3. 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.
4. 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.
5. ALL STRAW BALES, SILT SOCKS, SILT FENCES, TEMPORARY TREATMENT (STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
6. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLAND EDGES. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
7. THE EROSION CONTROL FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE THE EROSION CONTROL FENCE AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE EROSION CONTROL FENCE BECOMES FILLED WITH SEDIMENTS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (STRAW BALES, 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.
9. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK", UPDATED 2016.
10. INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES (INCLUDING ROADWAY SIDE SLOPES, 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. REPLANTING, REGRADING, OR OTHER REPAIRS NEEDED AS A RESULT OF SOIL EROSION AND SEDIMENTATION PROCESSES SHALL BE COMPLETED PROMPTLY.

SITE PLAN NOTES:

1. 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 TOWN WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
2. THE SUBJECT SITE LIES WITHIN "ZONE X - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN" AS PER THE FEMA FLOOD INSURANCE RATE MAP NUMBER 44007C0179G PANEL 179 OF 451 IN PROVIDENCE COUNTY, RHODE ISLAND, EFFECTIVE DATE MARCH 2, 2009.

ESTABLISHMENT OF VEGETATIVE COVER:

1. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE R.I. STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 202.
2. SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
3. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM TO RHODE ISLAND STANDARD SPECIFICATION M.20.
4. THE SEED MIX TO BE USED ON SLOPE APPROACHING WETLAND SHALL BE THE NEW ENGLAND CONSERVATION/WILDLIFE MIX FROM NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL APPLIED AT A RATE OF 25 LBS. PER ACRE AND MULCHED WITH STRAW.
5. EARLY SPRING OR LATE SUMMER SEEDING IS RECOMMENDED. LIME AND FERTILIZE AS REQUIRED BY SOIL TESTING TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.

STORMWATER CALCULATIONS

(AS PER THE STATE OF RHODE ISLAND STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL LOT DEVELOPMENT)

PROPOSED RAIN GARDEN SIZING:

HOUSE ROOF: 2,050SF = (1,064SF QPA CREDIT) = 986SF
 GARAGE ROOF: 1,200 SF
 DRIVEWAY (INCLUDES CARPORT): 4,870 SF
 TOTAL IMPERVIOUS AREA = 7,056 SF

RAIN GARDEN: 8" DEPTH, SANDY SOILS

REQ'D SURFACE AREA: 7056/1000 * 80 = 565 SF
 PROPOSED: 570 SF X 8" DEEP RAIN GARDEN

PROPOSED VEGETATED SWALE-1 SIZING:

TOTAL IMPERVIOUS AREA (GRAVEL DRIVEWAY) = 2,720 SF

VEGETATED SWALE: 8" DEPTH, SANDY SOILS

REQ'D SURFACE AREA: 2,720/1000 * 80 = 220 SF
 PROPOSED: 3.5'W X 63'L (220 SF) X 8" DEEP SWALE

PROPOSED VEGETATED SWALE-2 SIZING:

TOTAL IMPERVIOUS AREA (GRAVEL DRIVEWAY) = 1,300 SF

VEGETATED SWALE: 8" DEPTH, SANDY SOILS

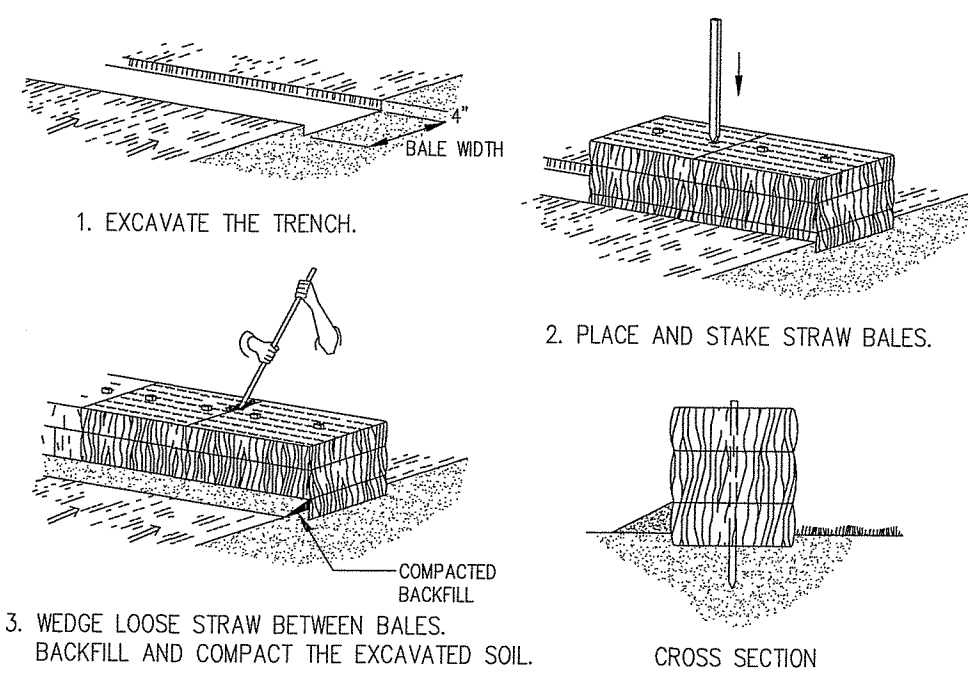
REQ'D SURFACE AREA: 1,300/1000 * 80 = 104 SF
 PROPOSED: 5'W X 21'L (105 SF) X 8" DEEP SWALE

PROPOSED VEGETATED SWALE-3 SIZING:

TOTAL IMPERVIOUS AREA (GRAVEL DRIVEWAY) = 1,300 SF

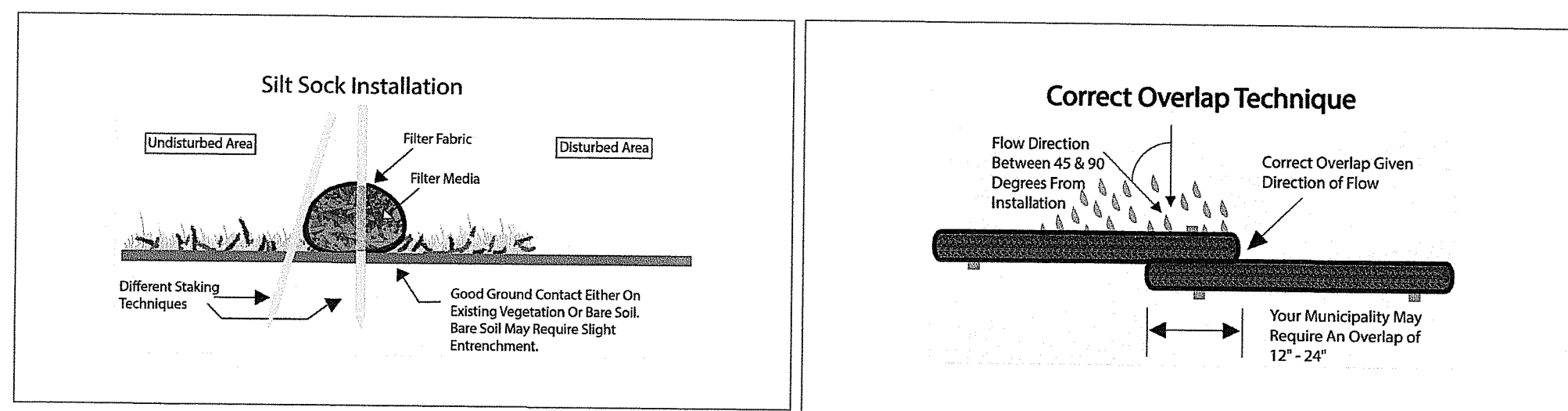
VEGETATED SWALE: 8" DEPTH, SANDY SOILS

REQ'D SURFACE AREA: 1,300/1000 * 80 = 104 SF
 PROPOSED: 5'W X 21'L (105 SF) X 8" DEEP SWALE



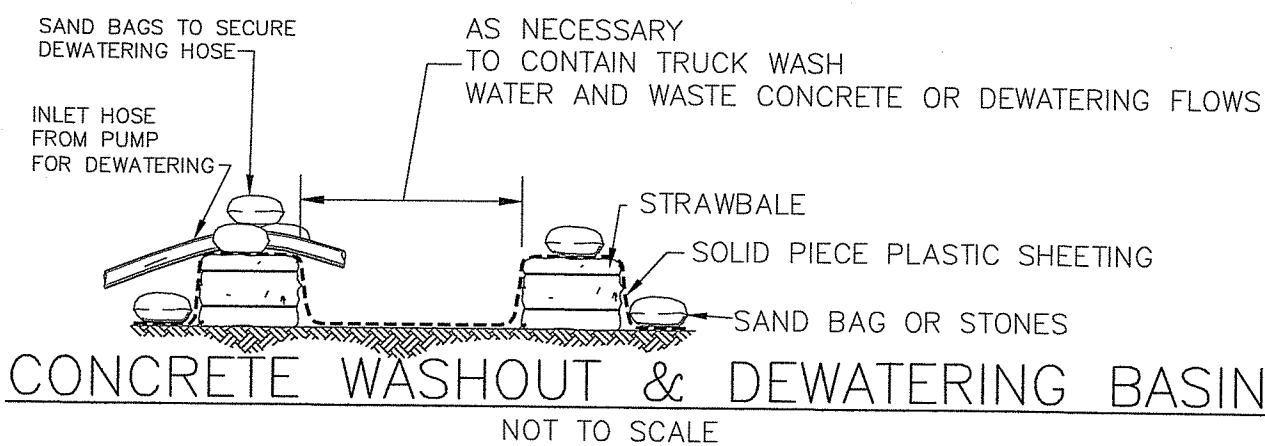
PLACEMENT AND CONSTRUCTION OF STRAWBALE EROSION CHECK

NOT TO SCALE



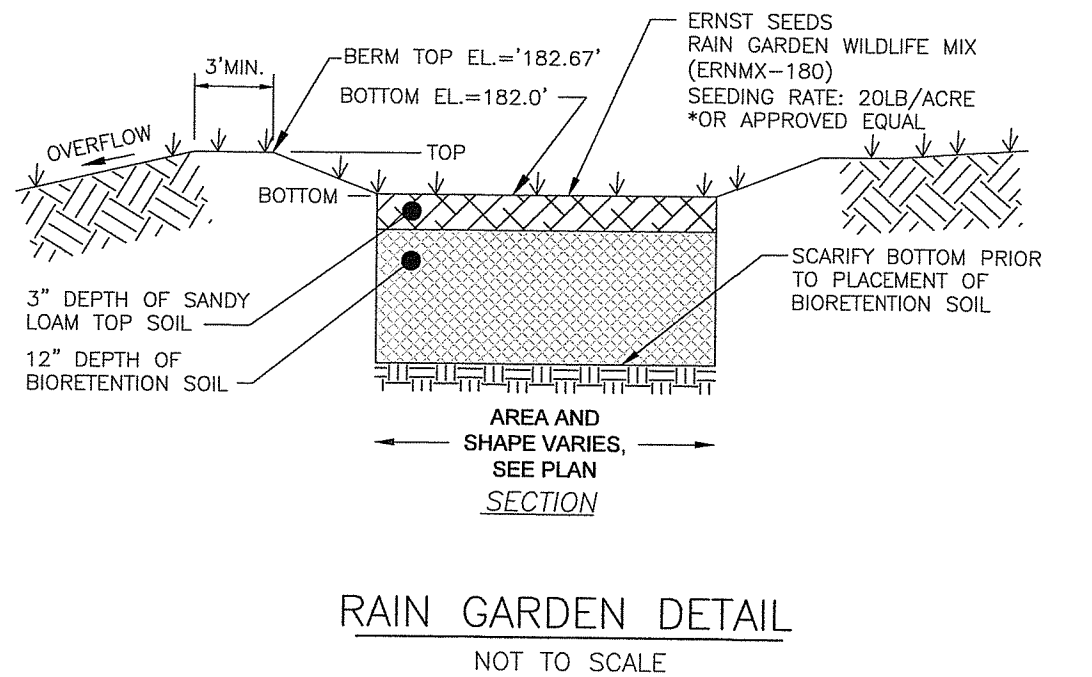
SILT SOCK DETAIL

NOT TO SCALE



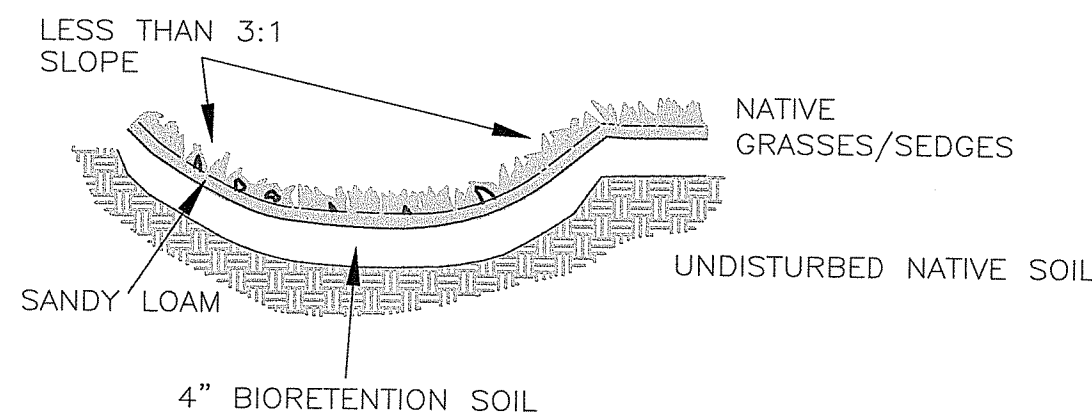
CONCRETE WASHOUT & DEWATERING BASIN

NOT TO SCALE



RAIN GARDEN DETAIL

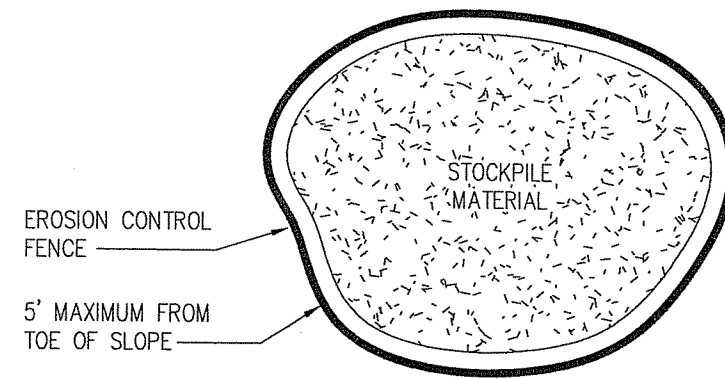
NOT TO SCALE



VEGETATED SWALE SIZING SCHEDULE:
 VEG-SWALE-1: BOTTOM WIDTH=3.5', LENGTH=63', DEPTH>8"
 VEG-SWALE-2: BOTTOM WIDTH=5', LENGTH=21', DEPTH>8"
 VEG-SWALE-3: BOTTOM WIDTH=5', LENGTH=21', DEPTH>8"

VEGETATED SWALE DETAIL

NOT TO SCALE



STOCKPILE DETAIL

NOT TO SCALE

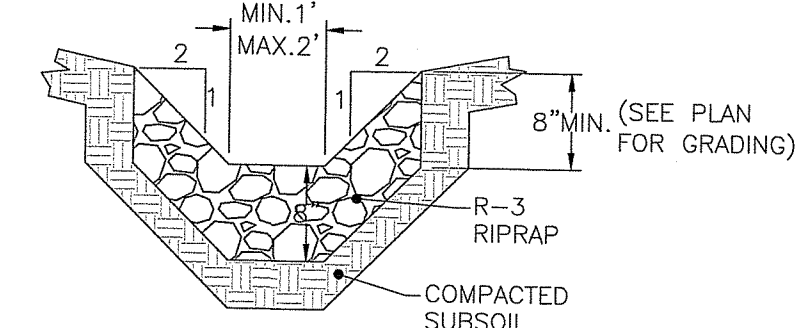
BMP NOTES:

1. DO NOT COMPACT SOILS IN RAIN GARDEN OR VEGETATED SWALE AREA. TILL BOTTOM OF RAIN GARDEN AND VEGETATED SWALE PRIOR TO PLACEMENT OF SANDY LOAM TOPSOIL AND BIORETENTION SOIL TO PROMOTE GOOD INFILTRATION RATES.
2. FINE GRADE RAIN GARDEN SO IT HOLDS REQUIRED DEPTH OF RUNOFF PRIOR TO OVERFLOWING.
3. DIRECT IMPERVIOUS AREAS (TO THE MAXIMUM EXTENT POSSIBLE) TO FLOW INTO RAIN GARDEN AND VEGETATED SWALE.
4. **BIORETENTION SOIL MIX (BY VOLUME):**
 SAND 85 TO 88%
 SILT 0 TO 12%
 CLAY 0 TO 2%
 ORGANIC MATTER 3 TO 5%
5. THE BIORETENTION SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OTHER WOODY MATERIAL OVER 1" IN DIAMETER, OR BRUSH/SEEDS FROM NOXIOUS WEEDS. PLACEMENT OF THE SOIL SHOULD BE IN LIFTS OF 6 INCHES, LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET). SURFACE OF RAIN GARDEN SHALL NOT BE MULCH OR ANY OTHER SURFACE PRONE TO FLOATING AWAY.

BMP MAINTENANCE:

1. SEDIMENT SHALL BE REMOVED FROM THE RAIN GARDEN BED WHEN THE ACCUMULATION EXCEEDS 1".
2. WHEN THE FILTERING CAPACITY OF THE FILTER DIMINISHES SUBSTANTIALLY, THE TOP FEW INCHES OF MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL.
3. DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE RAIN GARDEN AND VEGETATED SWALES SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0" 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 TO 2.7" OF RAINFALL IN A 24-HOUR PERIOD.
4. PRUNING OR REPLACEMENT OF WOODY VEGETATION SHALL OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
5. FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
6. PERENNIAL PLANTS AND GROUND COVERS SHALL BE REPLACED AS NECESSARY TO MAINTAIN AN ADEQUATE VEGETATED GROUND COVER. ANNUAL PLANTS MAY ALSO BE USED TO MAINTAIN GROUND COVER.

R-3 RIPRAP SPECIFICATION
 100% PASSING 0-50% PASSING 0-15% PASSING
 8" 4" 2"

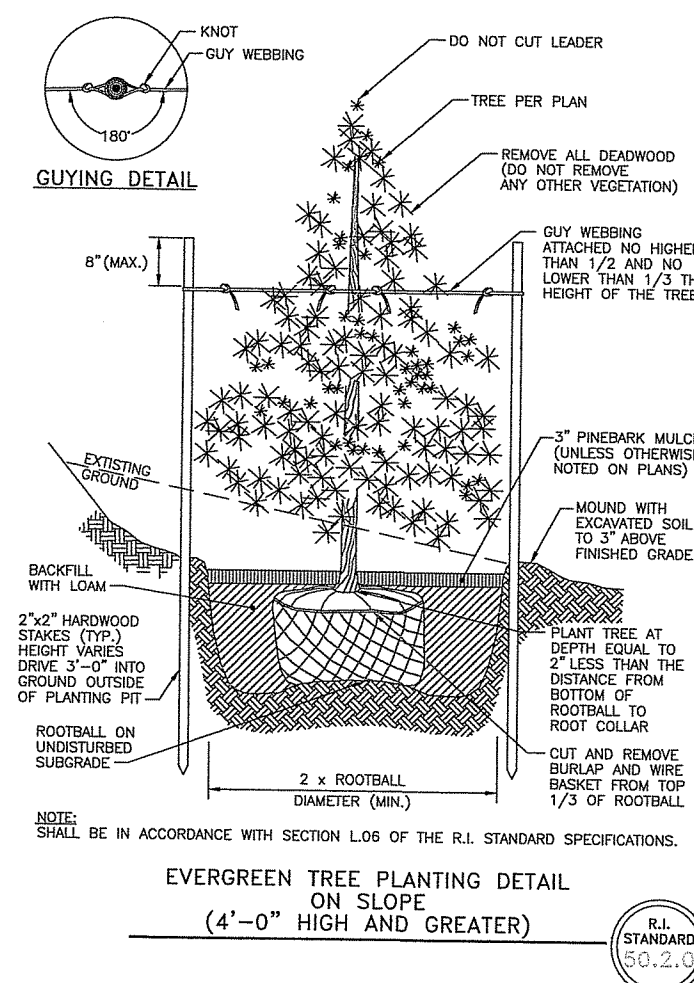


RIPRAP SWALE DETAIL

NOT TO SCALE

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

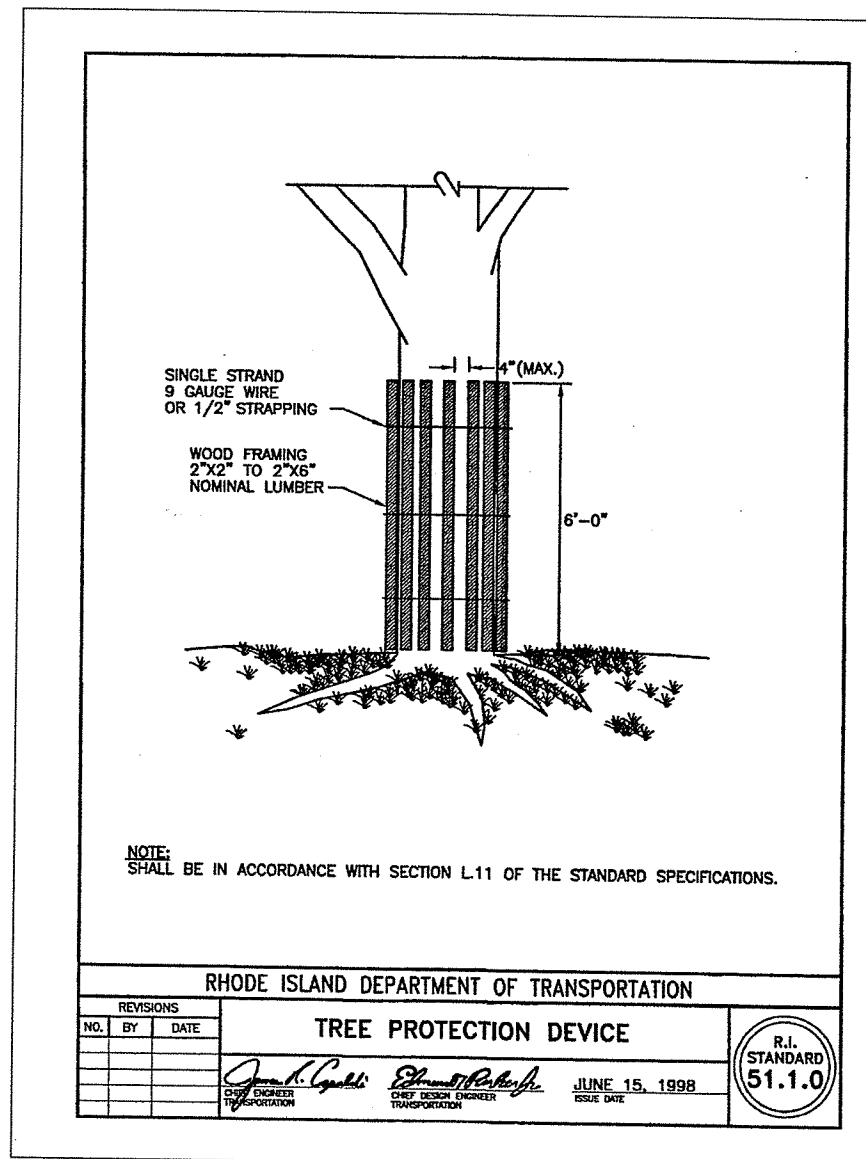
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: APR 21 2023 FILE #: 22-0056
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencsek



EVERGREEN TREE PLANTING DETAIL

(4'-0" HIGH AND GREATER)

R.I. STANDARD 9.2.0

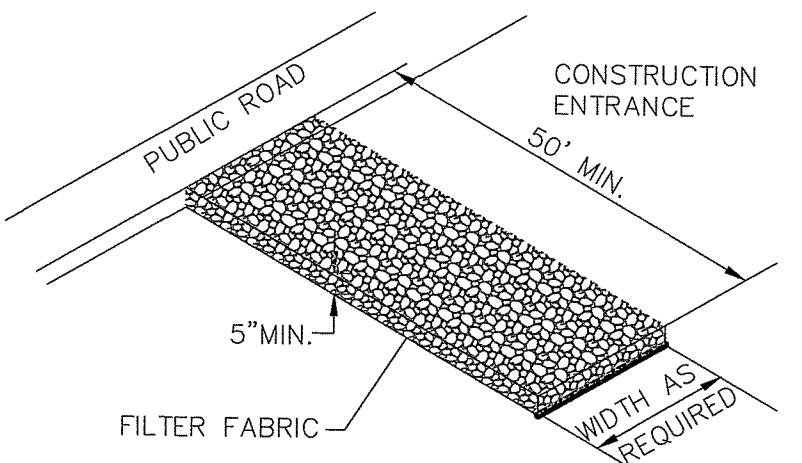


RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TREE PROTECTION DEVICE

NO. BY DATE
 1. 08-02-22
 2. 09-16-22

APPROVED: *[Signature]* JUN 15, 1999
 R.I. STANDARD 9.1.1.0



MATERIALS SIZE

SQUARE MESH SIEVES	2" CRUSHED STONE OR GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
2-1/2 INCHES	100	90-100	90-100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	-	-
1 INCH	0-5	-	0-15
3/4 INCH	-	0-5	-
1/2 INCH	-	-	-
3/8 INCH	-	-	-

NOTE: STABILIZATION PAD TO BE IN CONFORMANCE WITH STANDARDS SET FORTH IN THE "RHODE ISLAND GUIDELINES FOR SOIL & SEDIMENT CONTROL".

CONSTRUCTION ACCESS

SCALE: NOT TO SCALE

RI DEM APPLICATION PLAN
101 WESTWOOD DRIVE
DETAIL SHEET
 A.P. 33, LOT 189
 CUMBERLAND, RHODE ISLAND 02864
 SCALE: AS SHOWN DATE: 01/21/22 SHEET 3 of 3

OWNER/APPLICANT
ALEXANDER GIGUERE
 11 WESTWOOD DRIVE
 CUMBERLAND, RI 02864

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1.	08-02-22	RIDEM COMMENTS	DKM
2.	09-16-22	RIDEM COMMENTS	DKM

REGISTRATION:
 DAVID KENNETH MANONI
 12484
 REGISTERED PROFESSIONAL ENGINEER (CEM)

GROUND BREAKING
DESIGNS, LLC
 CIVIL ENGINEERING SOLUTIONS
 90 HIGHLAND AVE., SOUTH KINGSTOWN, RI 02879 ☎ PHONE: (401) 622-2932