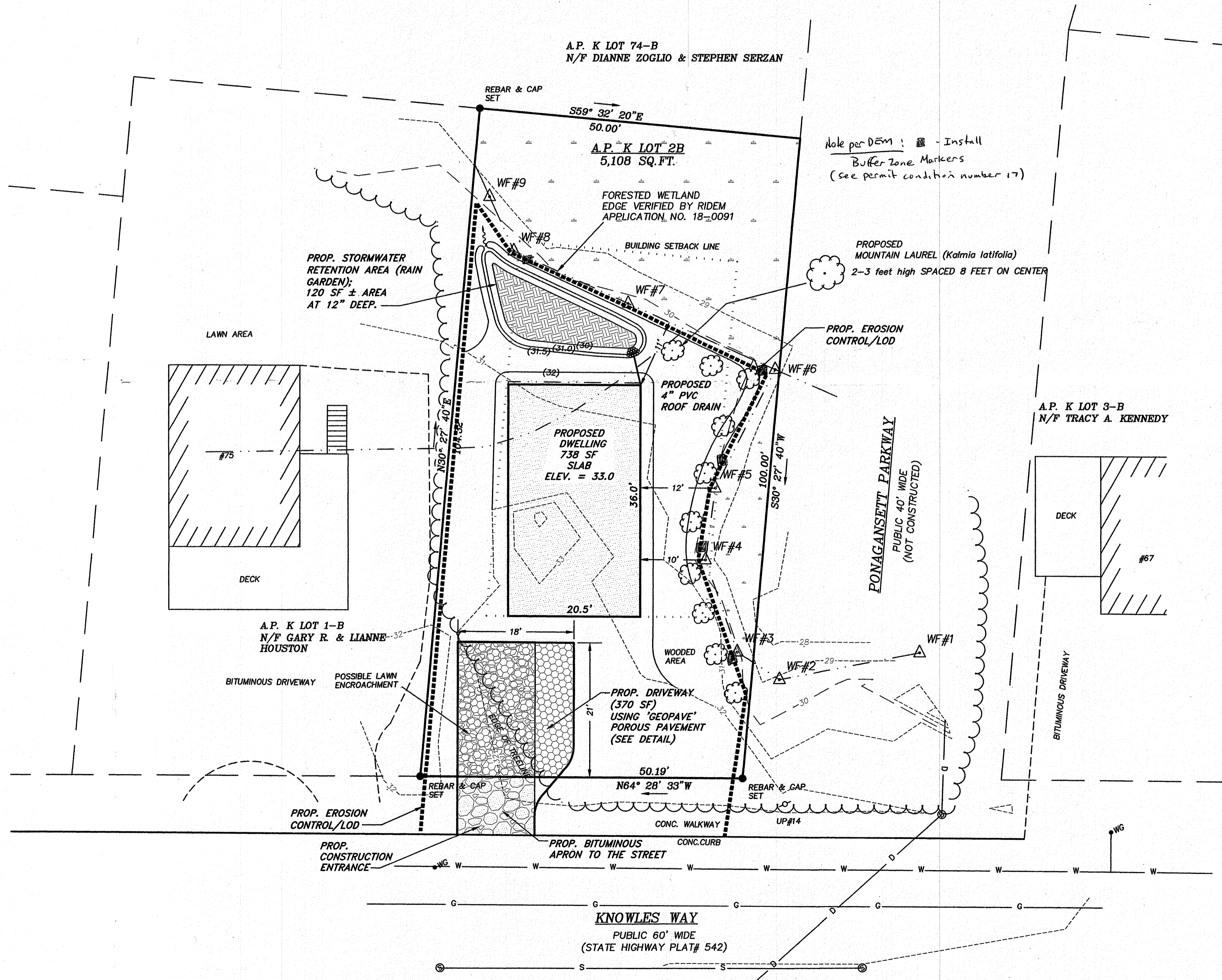
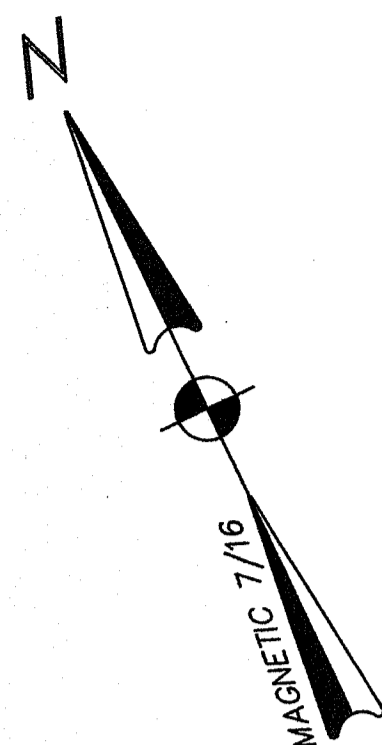


LOCATION MAP

LEGEND

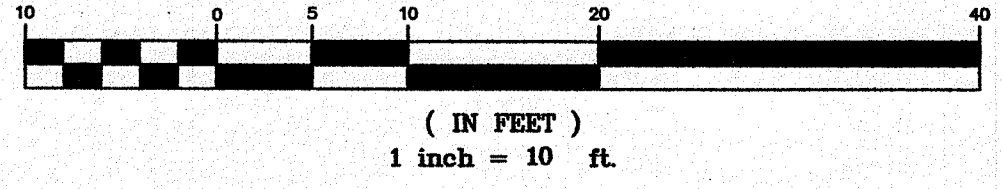
- EDGE OF PAVEMENT
- W WATER MAIN
- G GAS MAIN
- D STORM DRAIN LINE
- S SANITARY SEWER LINE
- BUILDING SETBACK LINE
- OVERHEAD WIRE
- REBAR (SET)
- SIGN
- UTILITY POLE
- EXISTING DRAINAGE MANHOLE
- EXISTING CATCH BASIN
- EXISTING SANITARY SEWER MANHOLE
- WG WATER GATE
- TREE LINE

MOUNTAIN LAUREL (*Kalmia latifolia*)
2-3 feet high SPACED 8 FEET ON CENTER



KNOWLES WAY
PUBLIC 60' WIDE
(STATE HIGHWAY PLAT# 542)

GRAPHIC SCALE



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WETLAND SERVICES
FRESHWATER WETLAND PROGRAM
APPROVED WETLAND SERVICES
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV. 21, 2018 FILE # 18-0254
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DATE	REVISIONS

DAVID D. GARDNER
No. 1809
PROFESSIONAL
LAND SURVEYOR

ZONING DISTRICT R-10
LOT SIZE 10,000 SQFT
LOT WIDTH 100'

BUILDING SETBACKS	STANDARD	SUBSTANDARD LOT
FRONT YARD	25'	(25)
SIDE YARD	10'	(8)
REAR YARD	20'	(20)
BUILDING HEIGHT	35'	
BUILDING COVERAGE	25%	25%

WETLAND NOTES
1. WETLAND DELINEATION BY NATURAL RESOURCE SERVICE, INC.
2. WETLAND EDGE VERIFIED AND APPROVED UNDER RIDEM WETLAND APPLICATION NO. 18-0091 ON 6/1/2018.

ZONING ORDINANCE 7.7 CERTIFICATION
THIS PLAN AND ACCOMPANYING CALCULATIONS FOR PROPOSED STORMWATER MANAGEMENT WAS PREPARED IN ACCORDANCE WITH THE PROVISIONS OF THE TOWN OF NARRAGANSETT ZONING ORDINANCE SECTION 7.7 "SUPPLEMENTARY DRAINAGE REQUIREMENTS" AND WAS DESIGNED TO CONFORM TO THE PROVISIONS THEREOF.
I UNDERSTAND THE TOWN OF NARRAGANSETT DOES NOT ASSUME LIABILITY FOR STORMWATER MANAGEMENT FACILITIES DESIGNED BY OTHERS.

- NOTES:
- THE PROPERTY SHOWN HEREON IS CLASSIFIED AS ZONE X (AREAS OF MINIMAL FLOODING) BY THE FLOOD INSURANCE RATE MAP FOR THE TOWN OF NORTH NARRAGANSETT, RHODE ISLAND, WASHINGTON COUNTY, FIRM COMMUNITY MAP 44009C0213J, MAP REVISED: 10/15/2013.
 - THE UTILITIES SHOWN HEREON ARE THE RESULT OF FIELD LOCATIONS OF VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY AND RECORD PLANS ACQUIRED FROM THE UTILITY COMPANIES. WE ACCEPT NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE DISTRIBUTION LINES SHOWN HEREON.
 - WETLAND DELINEATION WAS PERFORMED BY NATURAL RESOURCES SERVICES, INC. IN 2016 AND VERIFIED BY RIDEM APP NO. 18-0091
 - TOPOGRAPHY SHOWN IS FROM A SURVEY DONE IN 2018 DATUM NAVD88 USING NGS CONTROL POINT LW0653

- REFERENCES:
- SCARBORO GATEWAY AT NARRAGANSETT, R.I. OWNED BY LAWRENCE F. COFFEY SCALE 1"=100' SEPTEMBER 20, 1929 BY T.G. HAZARD, JR SURVEYOR
 - GATEWAY ANNEX AT NARRAGANSETT, R.I. OWNED BY LAWRENCE F. COFFEY SCALE 1"=100' APRIL 21, 1930 BY T.G. HAZARD, JR SURVEYOR
 - SCARBORO HILLS, SECTION B, NARRAGANSETT, R.I. OWNED BY LAWRENCE F. COFFEY ET UX. SEPTEMBER, 1941 SCALE 100 FT PER INCH BY WALTER J. GRADY, ENGR.
 - STATE HIGHWAY PLAT #542

CERTIFICATION
THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS EFFECTIVE NOVEMBER 25, 2015 AND ARE AS FOLLOWS:
COMPREHENSIVE BOUNDARY SURVEY SURVEY CLASS 1
TOPOGRAPHIC SURVEY T 1
THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: FOR THE PREPARATION OF A SITE PLAN FOR THE CONSTRUCTION OF A SINGLE FAMILY DWELLING.
BY *David D. Gardner*
DAVID D. GARDNER PLS. LICENSE NO. 1809
COA NO. A359

DAVID D. GARDNER & ASSOCIATES, INC.
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ENGINEERS • SURVEYORS • PLANNERS

RIDEM WETLAND SUBMISSION
SITE PLAN
KNOWLES WAY
NARRAGANSETT, R.I.
FOR
ESTATE OF LUCY D. EROLE
C/O CHERYL MUOIO
A.P. K LOT 2B

DATE ISSUED: 9/18/18
SCALE: 1"=10'
DESIGNED BY: D.D.G.
DRAWN BY: C.G.P.
CHECKED BY: D.D.G.
JOB NO.: 16-046
DWG NO.: 16-046WETLAND

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GENERAL CONSTRUCTION NOTES:

- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE AND THE MUNICIPALITY IN WHICH WORK IS BEING PERFORMED PRIOR TO START OF ANY WORK.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DOCUMENT EXISTING CONDITIONS OF SURROUNDING PROPERTIES AND TO MAINTAIN THE INTEGRITY OF THE SAME. ANY DAMAGE TO AND THE COST OF REPAIR OF UTILITIES, ROADWAYS, STRUCTURES AND SURROUNDING PROPERTY SHALL BE FULLY BORNE BY THE CONTRACTOR.
- ALL WORKMANSHIP AND MATERIALS SHALL MEET OR EXCEED THE LATEST STANDARDS OF THE MUNICIPALITY, AND THE LATEST STATE STANDARDS AND SPECIFICATIONS PUBLISHED FOR ROAD AND BRIDGE CONSTRUCTION.
- CONTACT DIG-SAFE AND UTILITY COMPANIES FOR EXACT ON-SITE LOCATION OF EXISTING UNDERGROUND UTILITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL OBTAIN REQUIRED INSPECTION SCHEDULE OF THE MUNICIPALITY. UTILITY COMPANIES AND ALL OTHER REQUIRED PARTIES AND SHALL STRICTLY ADHERE TO THOSE REQUIREMENTS.
- ALL CONTRACTORS SHALL ADHERE TO ALL CONDITIONS OF CONSTRUCTION APPROVALS AND SHALL KEEP A COPY OF ALL APPROVALS ON-SITE DURING CONSTRUCTION. CONTRACTOR SHALL READ ALL APPROVALS PRIOR TO START OF CONSTRUCTION AND SHALL CLARIFY ANY QUESTIONS BEFOREHAND.
- ALL ABSORBING PILLIONS OR OTHER MEANS SHALL BE USED TO REMOVE ACCUMULATIONS OF HYDROCARBONS (OIL, GREASE) THAT ARE REGULARLY OBSERVED TO CONTAIN HYDROCARBONS, THAT DO NOT EVAPORATE BETWEEN INSPECTIONS.
- ANY REFUELING, GREASING OR ADJUSTMENTS OF CONSTRUCTION VEHICLES OR EQUIPMENT SHALL TAKE PLACE AT LEAST 100 FEET FROM WETLAND AREAS.
- ANY ON-SITE DISPOSAL OF SOLID WASTE, INCLUDING EARTH MATERIALS, SHALL OCCUR OUTSIDE RIDEM/RICMJC JURISDICTIONAL WETLANDS AND OUTSIDE OF THE CONSTRUCTION AREAS (UNLESS OTHERWISE DESIGNATED). ANY MATERIAL NOT RE-USED ON-SITE SHALL BE HAULED OFF-SITE TO AN AUTHORIZED, LEGAL LOCATION.
- ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE INFORMED THAT THE CLEANING OF EQUIPMENT IS PROHIBITED IN AREAS WHERE THE WASH-WATER WILL DRAIN DIRECTLY TO WETLANDS.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS TO INCLUDE, BUT NOT LIMITED TO, TREES, STUMPS, UNSUITABLE MATERIAL, BITUMINOUS PAVEMENT, ETC.
- MATING AS SPECIFIED BY ENGINEER OR ENVIRONMENTAL CONSULTANT IS TO BE PLACED ALONG ACCESS ROUTE FROM PAVED DRIVEWAY TO STAGING AREA FOR ANY EQUIPMENT MOVEMENT.
- ALL STORMWATER FACILITIES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT VERSION OF RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL.

BIORETENTION AREA PLANTING NOTES:

THE FOLLOWING IS A LIST OF POTENTIAL BIORETENTION AREA PLANTINGS. A FULL PLANTING DETAIL WILL BE PROVIDED FOR FINAL DEVELOPMENT PLAN REVIEW.

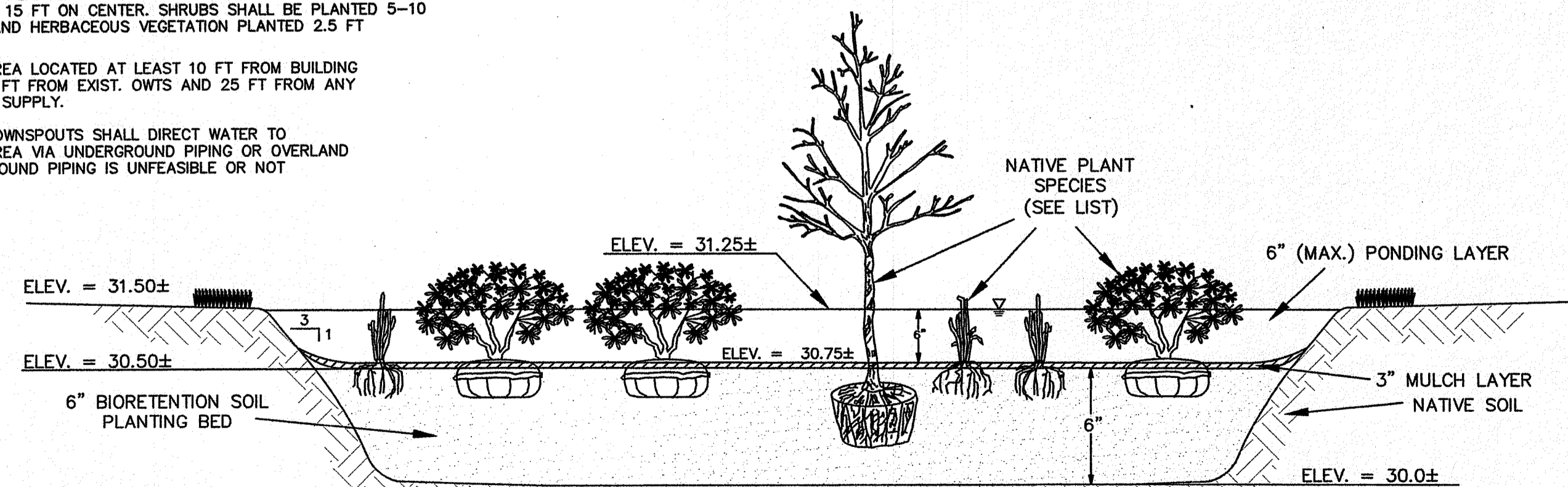
PLANT SPECIES WERE SELECTED FROM THE RHODE ISLAND COASTAL PLANT GUIDE PREPARED BY THE URI E&S AND RICMJC. ONLY THOSE NATIVE PLANTS THAT ARE SUITABLE FOR RAIN GARDENS AND ARE TOLERANT OF WET SITES AND SHADE ARE SHOWN HERE.

SPECIES	COMMON NAME	PLANT TYPE
<i>Ilex opaca</i>	AMERICAN HOLLY	TREE
<i>Iris versicolor</i>	BLUE FLAG	PERENNIAL
<i>Carex stricta</i>	TUSsock SEDGE	GRASS
<i>Cephalanthus occidentalis</i>	COMMON BUTTONBUSH	SHRUB
<i>Comptonia peregrina</i>	SWEET FERN	SHRUB
<i>Cornus racemosa</i>	GRAY DOGWOOD	SHRUB
<i>Ilex glabra</i>	INKBERRY HOLLY	SHRUB
<i>Ilex verticillata</i>	WINTERBERRY HOLLY	SHRUB
<i>Lindera benzoin</i>	SPICEBUSH	SHRUB
<i>Photinia melanocarpa</i>	BLACK CHOKEBERRY	SHRUB
<i>Photinia pyrifolia</i>	RED CHOKEBERRY	SHRUB
<i>Rhododendron viscosum</i>	SWAMP AZALEA	SHRUB
<i>Vaccinium corymbosum</i>	HIGHBUSH BLUEBERRY	SHRUB
<i>Viburnum dentatum</i>	ARROWWOOD	SHRUB

TREES SHALL BE PLANTED WITH A DENSITY OF NO MORE THAN ONE PER 250 SF, SPACED 5 FT ON CENTER. SHRUBS SHALL BE PLANTED 5-10 FT ON CENTER AND HERBACEOUS VEGETATION PLANTED 2.5 FT ON-CENTER.

BIORETENTION AREA LOCATED AT LEAST 10 FT FROM BUILDING FOUNDATION, 15 FT FROM EXIST. OWTS AND 25 FT FROM ANY WELL OR WATER SUPPLY.

ROOF GUTTER DOWNSPOUTS SHALL DIRECT WATER TO BIORETENTION AREA VIA UNDERGROUND PIPING OR OVERLAND WHERE UNDERGROUND PIPING IS UNFEASIBLE OR NOT PERMISSIBLE.



BIORETENTION AREA (RAIN GARDEN) - TYPICAL CROSS-SECTION

NOT TO SCALE

EROSION AND SEDIMENTATION CONTROL CONSTRUCTION NOTES:

- EROSION AND SEDIMENTATION (E&S) CONTROLS WILL BE INSTALLED PRIOR TO THE COMMENCEMENT OF WORK ALONG THE LIMITS OF DISTURBANCE (LOD) AS SHOWN ON THE SITE PLAN AND DETAILS.
- CRITICAL AREAS SUCH AS WETLAND AREAS, SLOPED AND STREAMS SHALL BE PROTECTED AS PER PLAN AND, IN THE PRESENCE OF WETLANDS, PER THE CONDITIONS OF THE CRMC ASSENT ORDER AND/OR RIDEM PERMIT.
- ALL E&S CONTROLS SHALL BE FULLY MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL VEGETATIVE STABILIZATION HAS BEEN ACHIEVED. E&S CONTROLS ARE TO BE INSPECTED WEEKLY AND IMMEDIATELY FOLLOWING ALL PRECIPITATION EVENTS THAT INCLUDE RAINFALL OF 1.0" OR MORE OR WHICH PRODUCES STORMWATER RUNOFF. UNDER NO CIRCUMSTANCE SHALL THE E&S CONTROLS BE COVERED WITH FILL MATERIAL. ANY FILL MATERIAL THAT IS PLACED ON OR AGAINST E&S CONTROLS SHALL BE IMMEDIATELY REMOVED.
- ALL FILTER SOX (OR SILT FENCE AND/OR STRAW WATTLÉS) SHALL BE INSTALLED IN ACCORDANCE WITH THE RIDOT STANDARD DETAILS. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS, INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE MOST CURRENT VERSION OF THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK AND THE RHODE ISLAND STORMWATER INSTALLATION & DESIGN MANUAL, AS APPROPRIATE.
- ALL EXPOSED SLOPES, INCLUDING STOCKPILES OF MATERIAL, SHALL RECEIVE TEMPORARY SEDIMENTATION AND EROSION CONTROLS. THIS WILL INCLUDE LOAMING AND SEEDING, MULCHING, HAYMATS, ETC., TO STABILIZE THE AREA.
- ALL DRAINAGE STRUCTURES SHALL BE SURROUNDED BY HAYBALES TO PREVENT INFILTRATION OF SEDIMENTS.
- SHOULD SEDIMENTS ENTER A CRITICAL AREA (WETLAND, BUFFER AREA OR ADJUTING PROPERTY), THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE THE AFFECTED AREA.
- ALL DISTURBED SOILS, EITHER NEWLY CREATED, OR EXPOSED, PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR SHALL BE SEEDED OR PROTECTED BY THAT DATE. ANY AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION BY NOVEMBER 15 OF THE SAME YEAR MUST BE STABILIZED BY INSTALLING EROSION CONTROL MATTING, HAY MULCH OR EQUIVALENT.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPER EROSION CONTROL BOTH ON AND OFF-SITE AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE CONTROLS ARE SPECIFIED ON THE SITE PLAN.
- TEMPORARY CONSTRUCTION ACCESS, CHECK DAMS AND STAGING AREAS WILL BE INSTALLED, THEN DEWATERING BASIN WILL BE EXCAVATED.
- PONDS SHALL BE EXCAVATED AND BANK STABILIZATION INSTALLED ONCE EXCAVATED MATERIALS HAVE BEEN REMOVED.
- TEMPORARY CONSTRUCTION ACCESS, CHECK DAMS AND STAGING AREAS WILL BE REMOVED, THE AREAS OF DISTURBANCE WILL BE RESTORED IF NECESSARY. ONCE VEGETATION IS ESTABLISHED, EROSION CONTROL MATERIALS SHALL BE REMOVED FOR OFF-SITE DISPOSAL.

SOIL STABILIZATION & PLANTING PROGRAM

ACCEPTABLE PLANTING MATERIALS: LOAM - THE MATERIAL TO BE FURNISHED SHALL CONSIST OF LOOSE, FRIABLE, SANDY LOAM OR LOAM TOPSOIL FREE OF A MIXTURE OF SUBSOIL, REFUSE, STUMPS, ROOTS, ROCKS, BRUSH, WEEDS AND OTHER MATERIAL WHICH WILL PREVENT THE FORMATION OF A SUITABLE SEED BED.

SEED MIXTURES - ALL LEGUME SEED SHALL BE INOCULATED WITHIN 24 HOURS BEFORE MIXING AND PLANTING WITH THE APPROPRIATE INOCULUM FOR EACH VARIETY. ALL INOCULA SHALL BE FRESH AND SHALL BE USED WITHIN THE DATE LIMIT PRESCRIBED BY THE MANUFACTURER.

FOR RELATIVELY FLAT SLOPES:

MIX	% BY WEIGHT
RED FESCUE - CHEWING'S PENNLAW OR CREEPING	70
KENTUCKY BLUEGRASS	15
COLONIAL BENTGRASS - ASTORIA OR EXETER	5
PERENNIAL RYEGRASS	10
- SEEDING RATE = 100 LBS. PER ACRE	

FOR STEEP SLOPES 3:1 OR GREATER:

MIX	% BY WEIGHT
RED FESCUE - PENNLAW OR CREEPING	75
PERENNIAL RYEGRASS	5
COLONIAL BENTGRASS - ASTORIA OR EXETER	5
BIRDFOOT TREFLOIL - EMPIRE	15
- SEEDING RATE: 100 LBS. PER ACRE	

FOR SOD WATERWAYS, DRAINAGE DITCHES, DRAINAGE BASINS:

MIX	% BY WEIGHT
CREEPING RED FESCUE	50
TALL FESCUE OR REED CANARYGRASS*	50

* USE REED CANARYGRASS WHERE MOWING IS NOT REQUIRED.

THE ACCEPTED PLANTING SEASON SHALL BE BETWEEN APRIL 1ST AND OCTOBER 15TH. CONTRACTOR SHOULD COORDINATE ON ALL DISTURBED AREAS. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF FOUR (4) INCHES OF LOAM ON AREAS UP TO 10% IN GRADE. ALL AREAS OVER 10% SHALL RECEIVE A MINIMUM OF SIX (6) INCHES.

REFERENCE IS HEREBY MADE TO THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, REVISED AUGUST 2014. PUBLISHED BY THE SOIL CONSERVATION SERVICE. THE GUIDELINES SHOWN THEREIN SHOULD BE INCORPORATED INTO THE CONSTRUCTION PRACTICES ON SITE.

PROJECT NARRATIVE

THE SUBJECT SITE IS LOCATED ON KNOWLES WAY AND IS IDENTIFIED AS ASSESSOR'S MAP K, LOT 2B IN THE TOWN OF NARRAGANSETT. THE PROPERTY CONTAINS 5,108 SQUARE FEET OF LAND CONSISTING OF AN UPLAND AREA OF APPROXIMATELY 3,000 SQUARE FEET THAT GENTLY SLOPES FROM THE STREET TOWARDS NORTHEAST CORNER OF LOT, WHICH CONSISTS OF 1,600 SQUARE FEET OF WETLAND AREA.

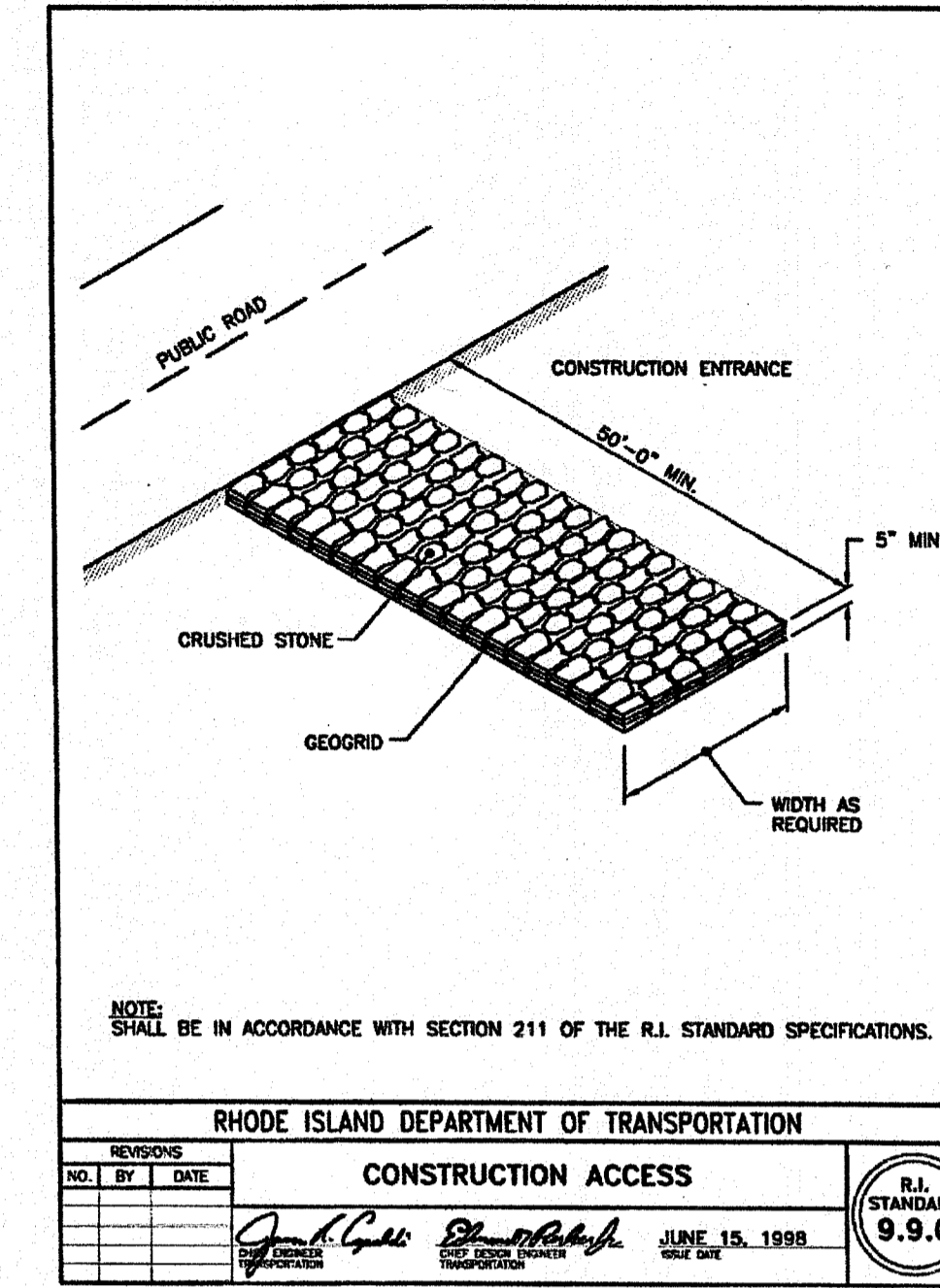
THE APPLICANT IS PROPOSING TO CONSTRUCT A NEW SINGLE FAMILY DWELLING (738 SF) AND ASSOCIATED SITE IMPROVEMENTS, INCLUDING UTILITY CONNECTIONS, A POROUS DRIVEWAY AND BIORETENTION (RAIN GARDEN) AREA TO TREAT STORMWATER RUN-OFF FOR WATER QUALITY. THE PROPOSED DWELLING WILL CONNECT TO PUBLIC WATER AND SEWER.

CONSTRUCTION SEQUENCE

- THE PROPOSED LAND DISTURBANCE AND CONSTRUCTION WILL BE COMPLETED IN THE FOLLOWING PHASES:
- INSTALL ALL EROSION & SEDIMENT (E&S) CONTROL MEASURES ON SITE AND OFF SITE IF NECESSARY.
 - CLEAR PROPERTY, STRIP, REMOVE AND STOCKPILE TOPSOIL TO DESIGNATED PROTECTED AREA.
 - EXCAVATE AREA FOR FOUNDATION; STOCKPILE MATERIAL TO DESIGNATED PROTECTED AREA.
 - POUR FOUNDATION, CONNECT SITE UTILITIES AND INSTALL STORMWATER MANAGEMENT FACILITIES.
 - RE-GRADE, LOAM & SEED SITE AND COMPLETE FINAL SITE LANDSCAPING.
 - CHECK & MAINTAIN ALL E&S CONTROL MEASURES THROUGHOUT CONSTRUCTION OF PROJECT. ONLY REMOVE WHEN SITE HAS BEEN STABILIZED AND ALL FINAL LANDSCAPING IS COMPLETE.

GENERAL LANDSCAPING NOTES:

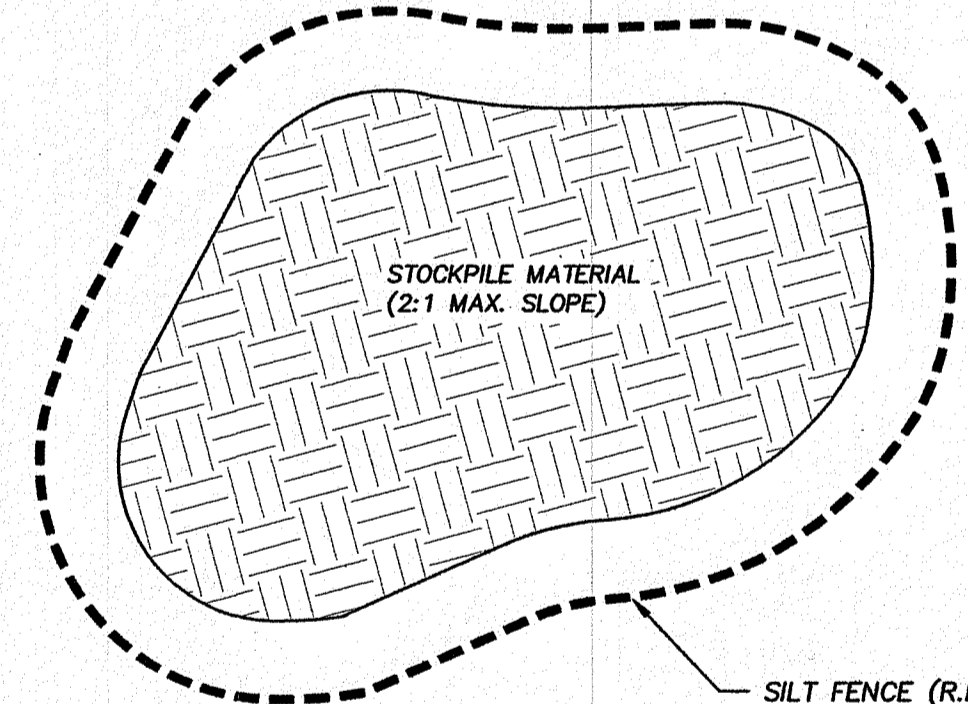
- ALL DISTURBED AREAS ARE TO BE REVEGETATED AS SOON AS POSSIBLE. ALL BANKS AND SLOPING AREAS ARE TO RECEIVE A MINIMUM OF 6" OF CLEAN TOPSOIL, THEN SEED AND FERTILIZE. LEVEL AREAS TO RECEIVE 4" MIN. OF CLEAN TOPSOIL, SEED AND FERTILIZE.
- SEED AND SOD SHALL CONSIST OF A BLEND OF KENTUCKY BLUE GRASSES. PLANT BY SUPPLIERS SPECIFICATIONS.
- LIME SHALL BE APPLIED AS NECESSARY.
- USE OF HAY OR STRAW MULCH DURING SLOPE STABILIZATION IN CONJUNCTION WITH TEMPORARY SEEDING. APPLY MULCH AT A RATE OF 75 TO 100 LBS. PER 1000 SQUARE FEET.
- CONTRACTOR TO MAINTAIN TREE REMOVAL AT A MINIMUM.
- STOCKPILE ALL STRIPPED TOPSOIL FOR LATTER USE. THE LOCATION IS TO BE APPROVED BY THIS ENGINEER. MULCH AND TEMPORARY SEED THE STOCKPILE.
- REMOVE ALL ROCKS 3" OR LARGER IN PLANTING AREA.
- ALL CLEARING SHALL CONFORM TO THE LIMITS AS SHOWN ON PLANS. CLEARING LIMITS ARE TO BE MARKED IN THE FIELD BY THE ENGINEER.



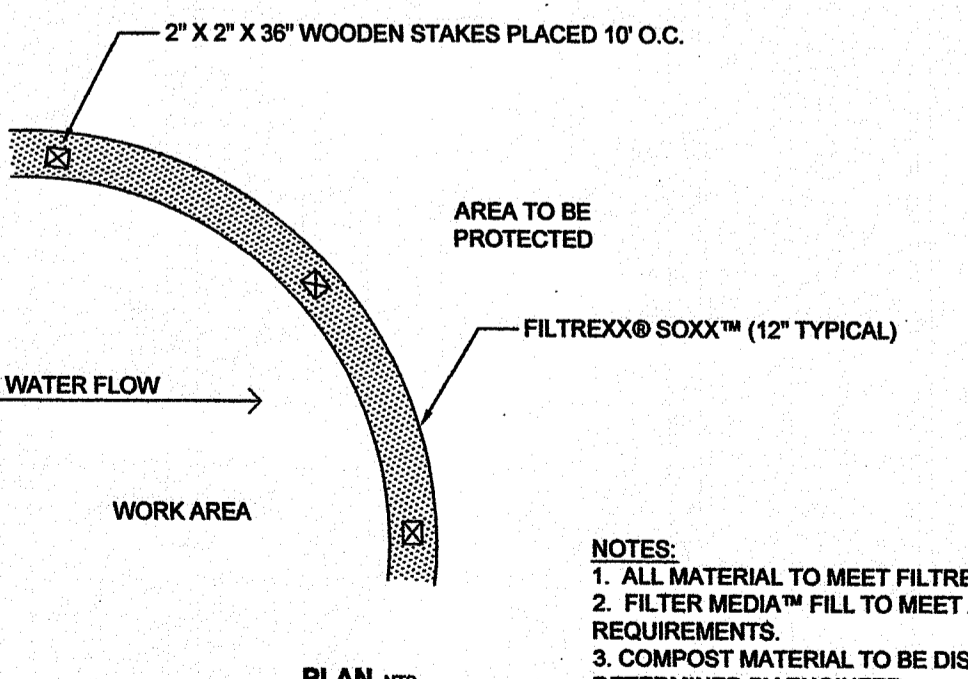
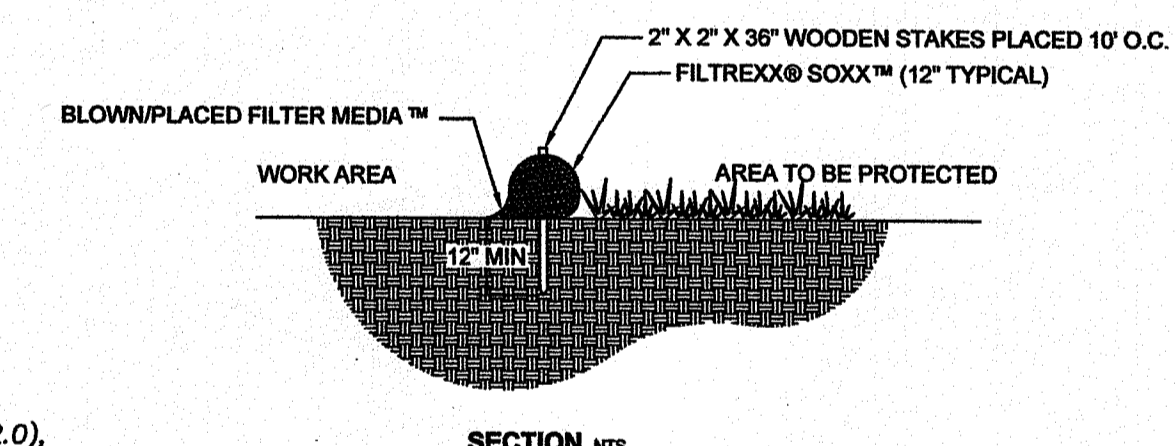
CONSTRUCTION ENTRANCE DETAIL NOTES:

- CONSTRUCTION ENTRANCE DEPTH SHALL BE A MINIMUM OF 5" THICK.
- CONSTRUCTION ENTRANCE WIDTH SHALL BE AT LEAST THE FULL WIDTH OF THE INGRESS/EGRESS ACCESS POINT.
- CONSTRUCTION ENTRANCE LENGTH SHALL BE A MINIMUM OF 50'.
- AGGREGATE SIZE SHALL BE RIDOT 2" CRUSHED STONE OR GRAVEL. DETAIL BASED ON RHODE DEPARTMENT OF TRANSPORTATION DETAIL, R.I. STANDARD 9.9.0 CONSTRUCTION ACCESS AND RIDOT STANDARD SPECIFICATIONS, SECTION 211, CONSTRUCTION ACCESSSES.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 1. STATE OF RHODE ISLAND
 2. FEDERAL CLEAN WATER ACT PROGRAM
 3. STATE OF RHODE ISLAND
 4. STATE OF RHODE ISLAND
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 21 2018 FILE # 18-0256
 DETAIL BASED ON RHODE DEPARTMENT OF TRANSPORTATION DETAIL, R.I. STANDARD 9.9.0 CONSTRUCTION ACCESS AND RIDOT STANDARD SPECIFICATIONS, SECTION 211, CONSTRUCTION ACCESSSES.
 Matthew D. Jensen



STOCKPILE PROTECTION DETAIL



- Soxx™ shall meet Filtraxx Soxx™ Specifications and use Filtraxx GrowingMedia™.
- Contractor is required to be a Filtraxx Certified™ Installer.
- Soxx™ must be installed and stabilized before flow is allowed from culverts and storm outlets.
- Land surface shall be cleared of debris, including rocks, roots, large clods, and sticks prior to Soxx™ installation.
- Channel bed shall be made smooth prior to installation of Soxx™.
- Soil bed may be compacted and graded prior to installation.
- The upslope end of the Soxx™ shall be installed under the lip of the culvert or outlet drain to ensure initial storm flow contact is on top of the Soxx™, not under or in front of the system.
- Soxx™ shall be placed parallel to water flow, where socks are tightly abutted to prevent water seepage between and underneath the Soxx™.
- Once in place, Soxx™ shall be lightly compacted and abutting edges leveled to tighten seal between socks and encourage even water flow over Soxx™ system.
- Stakes shall be installed through the middle of the Soxx™ on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes. Top of stakes should be cut off, leaving 3 in (75mm) above the top of the Soxx™.
- Soxx™ may be seeded at the time of application, seed selection will be determined by the Engineer.

FILTREXX® SEDIMENT CONTROL

NTS

DATE	REVISIONS

DAVID D. GARDNER
 No. 1609
 PROFESSIONAL LAND SURVEYOR

DAVID D. GARDNER & ASSOCIATES, INC.
 500 METRO CENTER BOULEVARD
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 ENGINEERS • SURVEYORS • PLANNERS

RIDEM WETLAND SUBMISSION
 SITE NOTES & DETAILS
 KNOWLES WAY
 NARRAGANSETT, R.I.
 FOR
 ESTATE OF LUCY D. BROLE
 C/O CHERYL MUOIO
 A.P. K LOT 2B

DATE ISSUED: 9/18/18
SCALE: 1"=10'
DESIGNED BY: D.D.G.
DRAWN BY: C.G.P.
CHECKED BY: D.D.G.
JOB NO.: 16-046
DWG NO.: 16-046WETLAND

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Load Description	Depth of Base		Depth of Base	
	AGGREGATE		ENGINEERED AGGREGATE/TOPSOIL ²	
	CBR ¹ 2-4	CBR ¹ >4	CBR ¹ 2-4	CBR ¹ >4
Heavy Fire Truck Access & H-20 loading. Typical 758 kPa (140 psi) maximum tire pressure. Single axle loadings of 145 kN (32 kip), tandem axle loadings of 220 kN (48 kip). Gross vehicle loads of 36.3 tonnes (80,000 lb).	150 mm (6 in)	150 mm (6 in)	Not Recommended	Not Recommended
Light Fire Truck Access & H-18 loading. Typical 588 kPa (95 psi) maximum tire pressure. Single axle loadings of 110 kN (24 kip). Gross vehicle loads of 27.2 tonnes (60,000 lb).	150 mm (6 in)	100 mm (4 in)	Not Recommended	Not Recommended
Utility & Delivery Truck Access & H-10 loading. Typical 414 kPa (60 psi) maximum tire pressure. Single axle loadings of 75 kN (16 kip). Gross vehicle loads of 18.1 tonnes (40,000 lb).	100 mm (4 in)	50 mm (2 in)	100 mm (4 in)	50 mm (2 in)
Car & Pick-up Truck Access. Typical 310 kPa (45 psi) maximum tire pressure. Single axle loadings of 16 kN (4 kip). Gross vehicle loads of 3.6 tonnes (8,000 lb).	50 mm (2 in)	None*	50 mm (2 in)	None*
Trail Use. Loading for pedestrian, wheelchair, equestrian, bicycle, motorcycle and ATV traffic.	None*	None*	None*	None*

A minimum of 50 mm (2 in) of aggregate base should be placed below the Geopave units as a drainage layer and an infiltration storage area. Greater depth may be required depending upon design rainfall needs and subbase permeability.

¹ CBR is the abbreviation for California Bearing Ratio. Methods for determining CBR vary from more sophisticated laboratory methods to simple field identification methods that use hand manipulation of the soil. Presto does not recommend one method over the other, however, the user must have a high degree of confidence in the results produced by the chosen method. If other than CBR soil strength values exist, use available correlation charts to relate the value to CBR.

² With the aggregate/topsoil mix and a vegetative surface, infrequent/occasional passes are recommended. Infrequent/occasional passes are defined as the number of passes over any period of time that causes no lasting damage to the vegetation. This number will be a function of vegetation type and age, climatic conditions, and maintenance practices. This number is not a function of the Geopave material.

BASE MATERIAL: IF NECESSARY FOR LOADING REQUIREMENTS, THE RECOMMENDED BASE SHALL BE AGGREGATE OR AN ENGINEERED AGGREGATE/TOPSOIL MIXTURE, AND SHOULD BE CONSISTENT WITH THE CHOSEN INFILL TYPE.

A MINIMUM OF 50 MM (2 IN) OF BASE MATERIAL IS GENERALLY RECOMMENDED FOR GRAVAGE, EVEN IF NOT REQUIRED BY DESIGN FOR LOAD SUPPORT. ADDITIONAL BASE DEPTH MAY BE ADDED IF REQUIRED OVER A LOW-PERMEABLE BASE OR TO FUNCTION AS A STORM WATER DETENTION/RETENTION LAYER.

RECOMMENDED AGGREGATE INFILL: THE AGGREGATE INFILL SHALL BE A WELL-GRADED 10 MM TO 13 MM (0.375 TO 0.5 IN) CRUSHED ANGULAR STONE WITH A FINE CONTENT LESS THAN 5%.

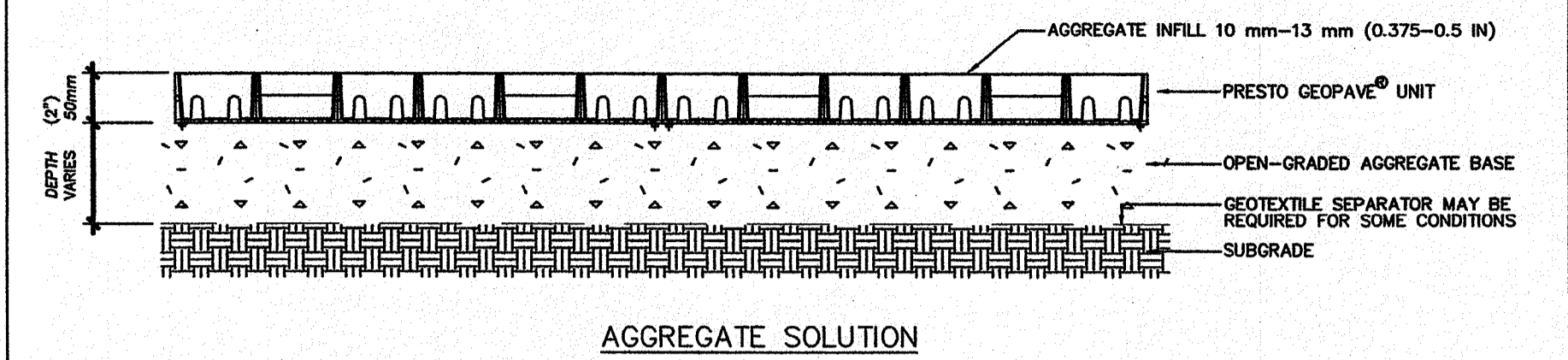
RECOMMENDED ENGINEERED INFILL FOR VEGETATED SOLUTIONS: SUPPORT SOIL SHALL CONSIST OF A HOMOGENEOUS MIXTURE, CONSISTING OF 1) A CLEAR-STONE/CRUSHED ROCK HAVING AN AASHTO M-50 OR SIMILAR DESIGNATION BLENDED WITH 2) PULVERIZED TOPSOIL AND 3) A VOID COMPONENT GENERALLY CONTAINING AIR AND/OR WATER. THIS HOMOGENEOUS MIXTURE WILL PROMOTE VEGETATIVE GROWTH AND PROVIDE REQUIRED STRUCTURAL SUPPORT. THE AGGREGATE PORTION SHALL HAVE A PARTICLE RANGE FROM 10 MM TO 25 MM (0.375 TO 1.0 IN) WITH A D₅₀ OF 13 MM (0.5 IN). THE PERCENTAGE VOID-SPACE OF THE AGGREGATE PORTION WHEN COMPACTED SHALL BE AT LEAST 30%. THE PULVERIZED TOPSOIL SHALL EQUAL 20% OF THE TOTAL VOLUME AND BE AGED AND BLENDED TO PRODUCE A HOMOGENEOUS MIXTURE PRIOR TO PLACEMENT. ONCE PLACED, THE MIXTURE SHALL BE COMPACTED TO 90% STANDARD PROCTOR DENSITY.

RECOMMENDED ENGINEERED INFILL FOR VEGETATED SOLUTIONS: SAME AS ENGINEERED BASE BUT WITH A PARTICLE RANGE FROM 10 MM TO 13 MM (0.375 TO 0.5 IN).

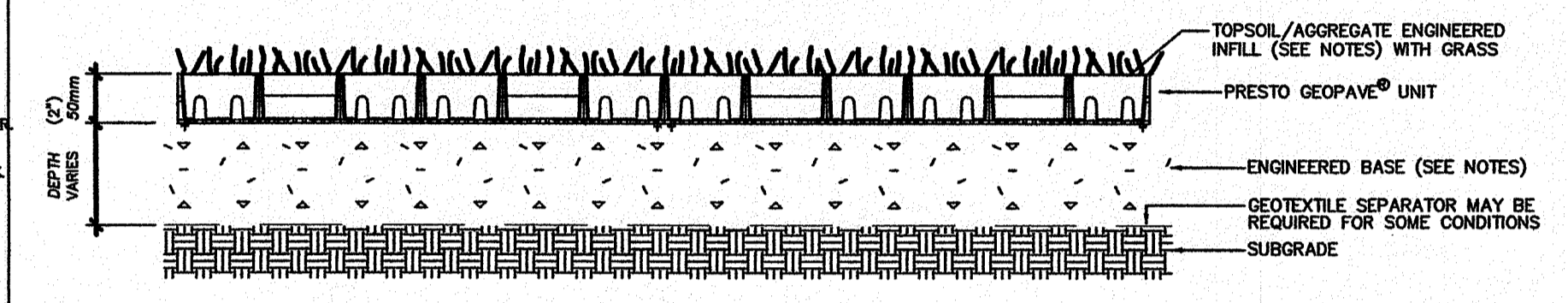
GEOPAVE SYSTEM USAGE GUIDELINES

Item	Specifications & Details
Material	Up to 97% Recycled Polyethylene*
Color	Ranges from dark shades of gray to black
Chemical Resistance	Superior
Carbon Blank for Ultraviolet Light Stabilization	1.5% - 2.0%
Empty Unit Minimum Crush Strength @ 21°C (70°F)	1,202 kPa (175 psi)
Aggregate or Aggregate/Topsoil Filled Unit Minimum Crush Strength @ 21°C (70°F)	6,869 kPa (1000 psi)
Nominal Dimensions (width x length)	0.50 m x 1.00 m (20 in x 40 in)
Nominal Unit Depth	50 mm (2 in)
Nominal Coverage Area	0.50 m ² (5.58 ft ²)
Cells per Unit	50
Cell Size (small cell)	63 mm x 63 mm (2.5 in x 2.5 in)
Cell Size (large cell)	83 mm x 165 mm (3.25 in x 6.5 in)
Top Open Area per unit	50.5%
Bottom Open Area per unit	32.6%
Bottom Mesh Openings	6.35 mm x 6.35 mm (25 in x 25 in)
Nominal Weight per Unit	3.6 kg (8.0 lb)
Flow Coefficient @ 63.5 mm/hr (2.5 in) Rainfall	0 - 0.15
Units per Pallet	40

GEOPAVE MATERIAL SPECIFICATIONS



AGGREGATE SOLUTION



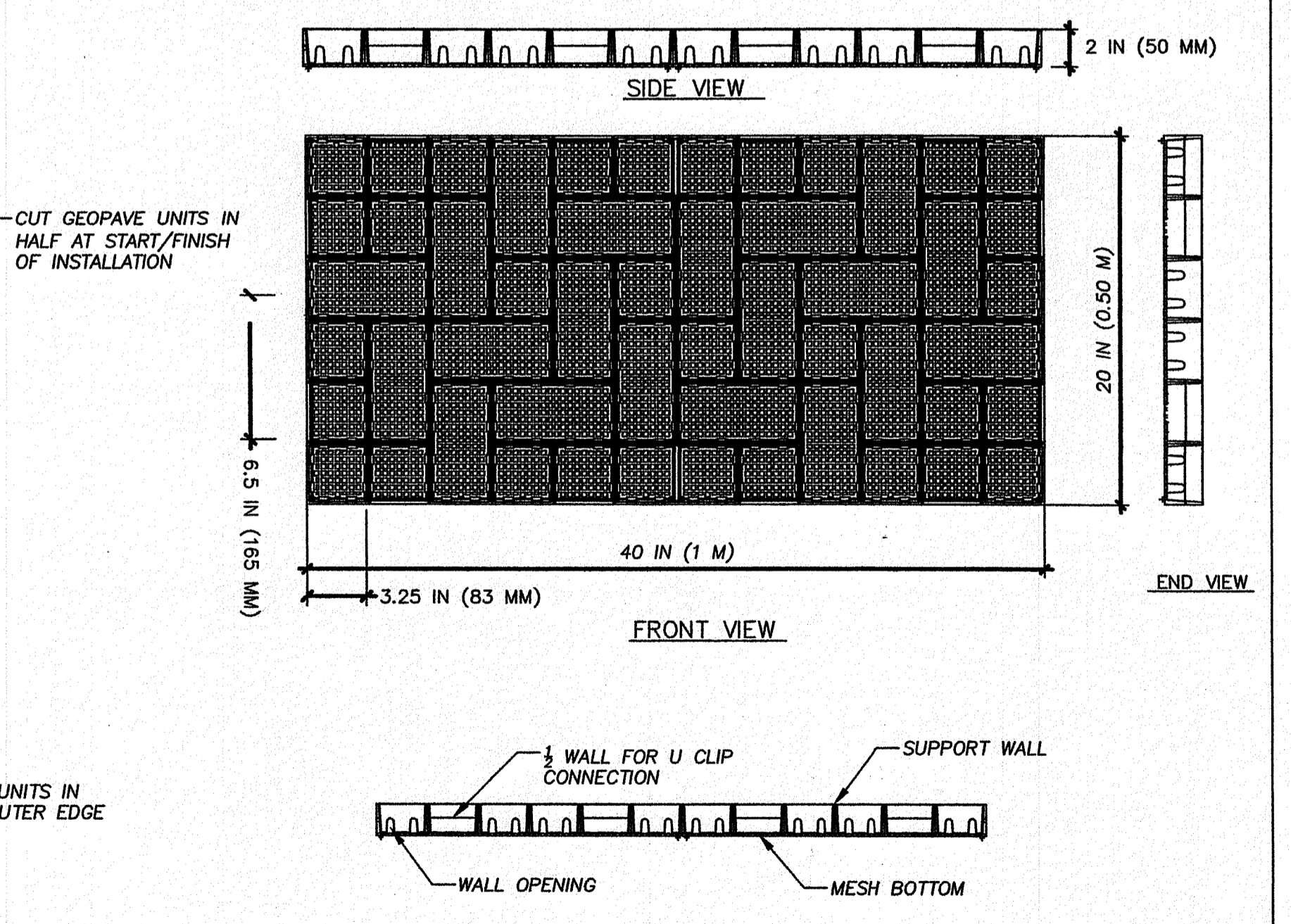
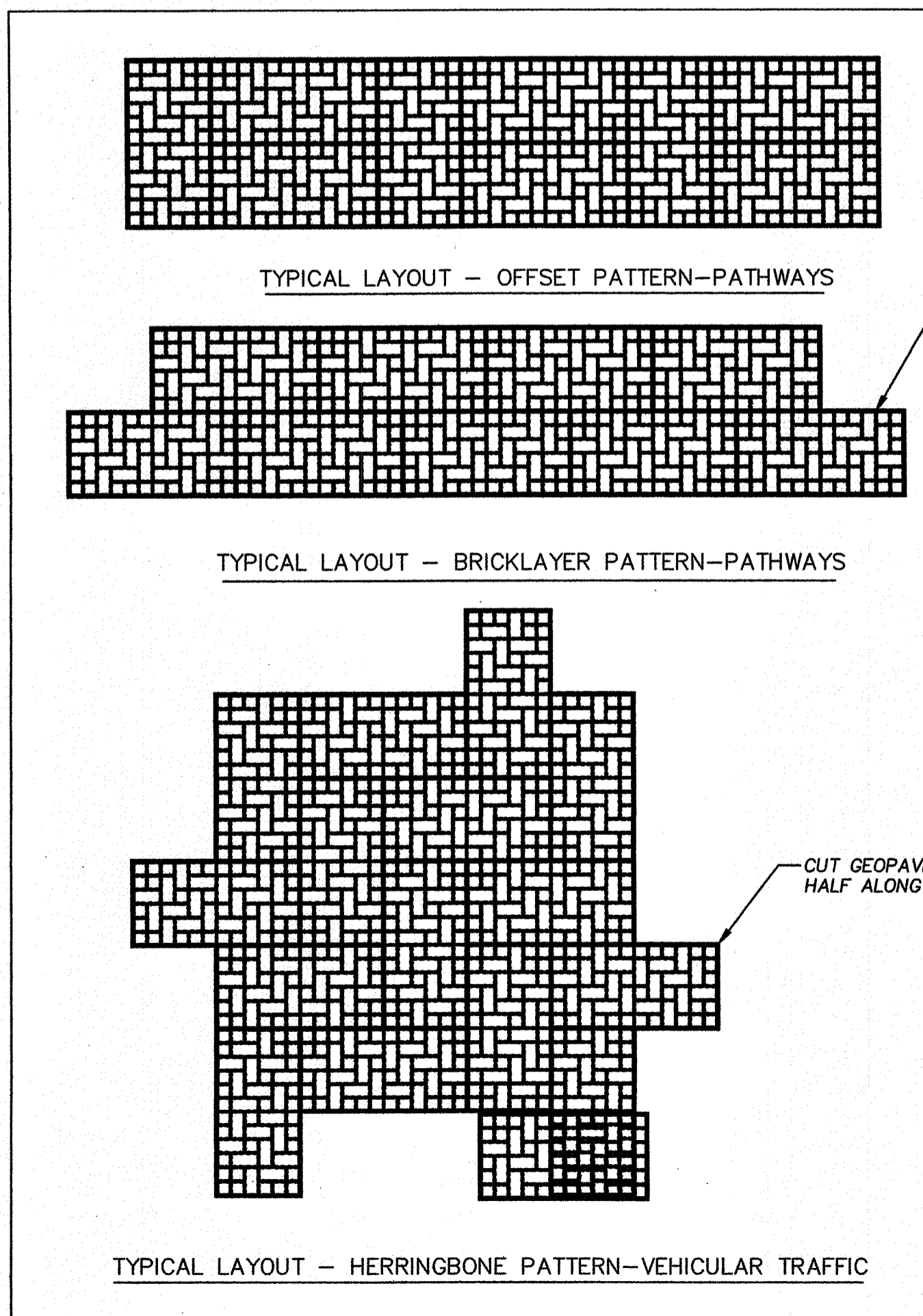
VEGETATED SOLUTION

PRESTO GEOSYSTEMS®

THE GEOPAVE® POROUS PAVEMENT SYSTEM

GEOSYSTEMS® AND GEOPAVE® ARE REGISTERED TRADEMARKS OF PRESTO PRODUCTS COMPANY.

DATE	DECEMBER, 2008	FILE NAME	GEOPAVE-B1.DWG
SCALE	NTS	SHEET	2



PRESTO PRODUCTS CO.

670 NORTH PERKINS STREET
APPLETON, WI 54914
920-738-1342
WWW.PRESTOGEOPAVE.COM

GEOPAVE POROUS PAVEMENT SYSTEM

PRESTO, GEOSYSTEMS® AND GEOLOCK® ARE REGISTERED TRADEMARKS OF PRESTO PRODUCTS.

DATE	NOVEMBER 2013	FILE NAME	GEOPAVE-A1.DWG
SCALE	NTS	SHEET	1

DATE	REVISIONS

DAVID D. GARDNER

No. 809

PROFESSIONAL LAND SURVEYOR

DAVID D. GARDNER & ASSOCIATES, INC.

200 METRO CENTER BOULEVARD
WARWICK, RHODE ISLAND 02886
(401) 738-3200 / FAX: (401) 738-4740

ENGINEERS • SURVEYORS • PLANNERS

RIDEM WETLAND SUBMISSION

GEOPAVE DETAILS
KNOWLES WAY
NARRAGANSETT, R.I.
FOR
ESTATE OF LUCY D. EROLE
C/O CHERYL MUOIO
A.P. K LOT 2B

DATE ISSUED:	9/18/18
SCALE:	1"=10'
DESIGNED BY:	D.D.G.
DRAWN BY:	C.G.P.
CHECKED BY:	D.D.G.
JOB NO.:	16-046
DWG NO.:	16-046WETLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER DIVISION
AS SPECIFIED IN THE STATE OF RHODE ISLAND
DATED NOV 21 2018 18-0256
NO CHANGES ALLOWED TO BE MADE TO ANY APPROVED APPROVED PLANS MUST BE AT CONSTRUCTION SITE
David D. Gardner

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