

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: JUL 13 2023 FILE #: 22-0291
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 NO. PER DEM:
 Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

ZONING DISTRICT DIMENSIONAL REGULATIONS
 EXISTING ZONE: NB- NEIGHBORHOOD BUSINESS

	REQUIRED DIMENSIONS	EXISTING DIMENSIONS
	NB_ZONE	EXISTING
MINIMUM LOT AREA (SF.)	1 ACRE	4.36 ACRES
MINIMUM LOT FRONTAGE:	150'	300'
MINIMUM YARD SETBACKS:		
FRONT	20'	20'
SIDE	35'	35'
REAR	60'	60'
MAXIMUM BUILDING COVERAGE:	25%	4%
MAXIMUM BUILDING HEIGHT:	40'	25'
MAXIMUM FLOOR AREA:	10,000 S.F.	7,500 S.F.

GENERAL NOTES:

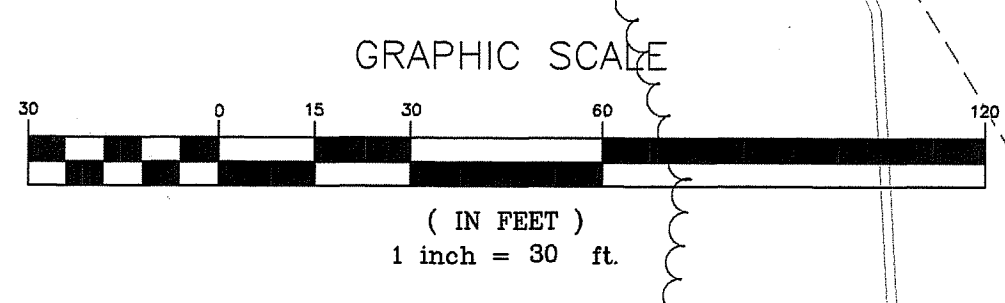
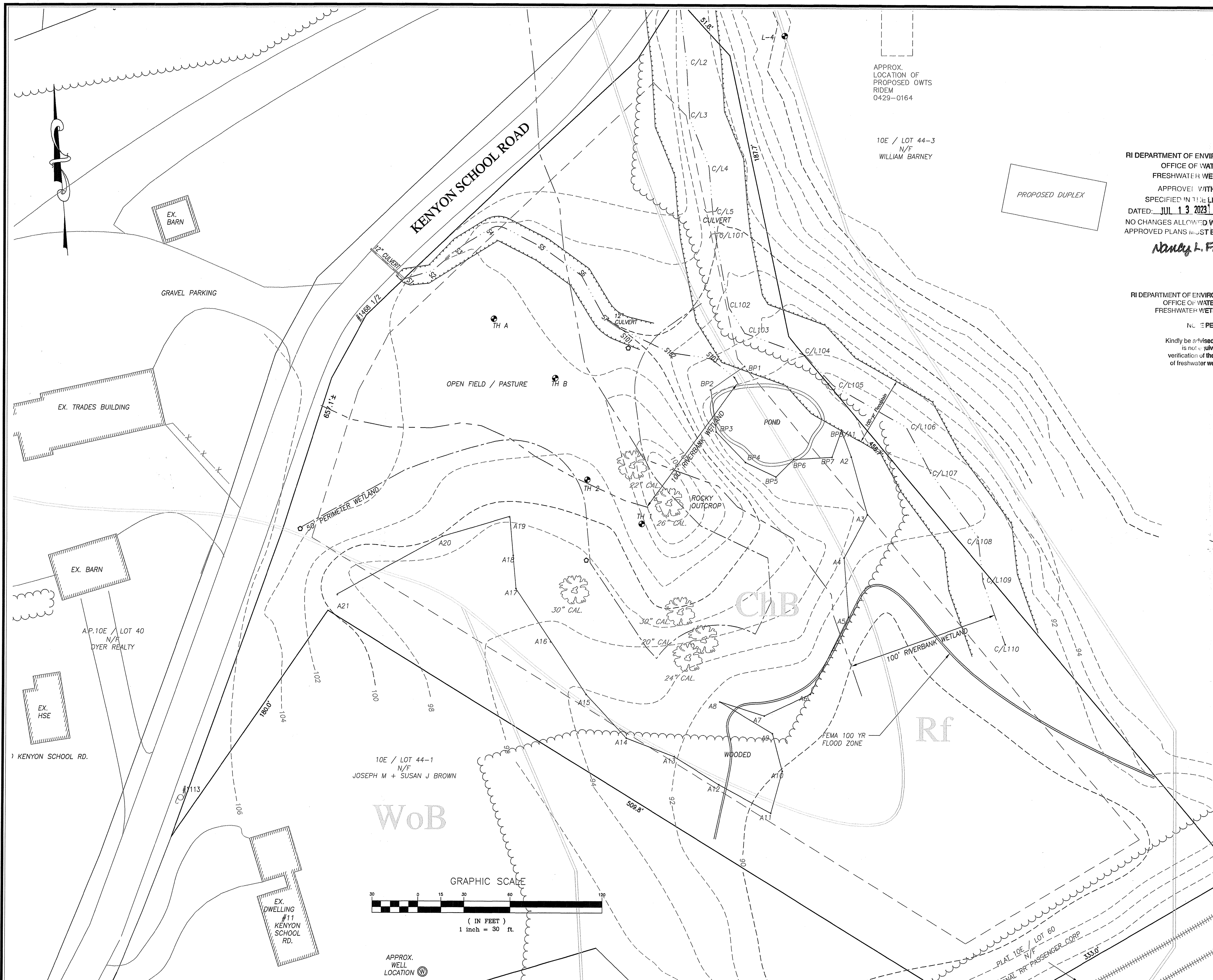
- THIS SITE IS NOT LOCATED WITHIN A NATURAL HERITAGE AREA.
- THE SITE IS NOT LOCATED WITHIN A CRITICAL RESOURCE AREA.
- THIS PARCEL IS LOCATED WITHIN THE TOWN OF RICHMOND'S AQUIFER OVERLAY DISTRICT. THE 1750' RADIUS ASSOCIATED WITH THE COMMUNITY WELL ENCOMPASSES A PORTION OF THE NORTHWEST CORNER OF THE SITE.
- THE SITE IS LOCATED WITHIN A GROUNDWATER RECHARGE ZONE, BUT DOES NOT FALL WITHIN THE LIMITS OF THE GROUNDWATER RESERVOIR OR RECHARGE ZONE AS DEFINED BY RIDEM.
- NEITHER THIS SITE NOR ADJACENT PROPERTIES ARE LOCATED ON THE NATIONAL OR RHODE ISLAND REGISTER OF HISTORIC PLACES. THERE ARE NO KNOWN HISTORIC CEMETRIES ON THE SITE.
- ACCORDING TO FEMA FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 44090C0178J REVISED 4/3/2020, THE DEVELOPABLE PORTION OF THIS PARCEL IS LOCATED IN ZONE X, AREAS OF MINIMAL FLOODING. THE LOW LYING WETLANDS ALONG THE SOUTHERN LIMITS OF THE PARCEL ARE LOCATED IN ZONE AE, (AREAS WITH A 1% ANNUAL CHANCE OF FLOODING AND A 26% CHANCE OF FLOODING OVER A 30 YEAR MORTGAGE) WITH AN EXTRAPOLATED ELEVATION OF APPROXIMATELY 90.7.
- THE 100-YEAR FLOODPLAIN ASSOCIATED WITH THE UN-NAMED STREAM WAS DETERMINED BY JEFFREY J. CAMPOPIANO, PE; SEE REPORT ENTITLED "FLOODPLAIN DETERMINATION, KENYON SCHOOL ROAD, PLAT 10E LOT 44-2, RICHMOND RHODE ISLAND."
- THE SITE IS NOT CURRENTLY USED FOR AGRICULTURAL PURPOSES. THE SITE IS NOT LOCATED WITHIN THE TOWN OF RICHMOND AGRICULTURAL OVERLAY DISTRICT.
- PREVIOUS STATE APPROVALS FOR THE DEVELOPMENT OF TWO FOUR BEDROOM DUPLEX STRUCTURES ON LOT 44-2 & 44-3. RIDEM WETLANDS APPROVAL (APP #14-0057) AND OWTS APPROVAL (#1329-1576).
- WETLANDS DELINEATION BY ECOSYSTEMS SOLUTIONS INC., JUNE 2021

USDA - SOIL SURVEY OF RHODE ISLAND

ABBREV.	SOILS NAME	SOIL CATEGORY	USDA SOIL DESCRIPTION
ChB	CANTON AND CHARLTON VERY STONY FINE SANDY LOAMS, 3 TO 8 PERCENT SLOPES.	B	THESE GENTLY SLOPING, WELL DRAINED SOILS ARE ON SIDE SLOPES AND CRESTS OF GLACIAL UPLAND HILLS AND RIDGES. STONES AND BOULDERS CONSPICUOUS TO 10 PERCENT OF THE SURFACE. SOILS ARE SUITABLE FOR COMMUNITY DEVELOPMENT.
Rf	RIDGEBURY, WHITMAN, AND LEICESTER EXTREMELY STONY FINE SANDY LOAMS	D	NEARLY LEVEL, POORLY DRAINED SOILS IN DEPRESSIONS AND DRAINAGE WAYS OF GLACIAL UPLAND HILLS AND DRUMLINS.

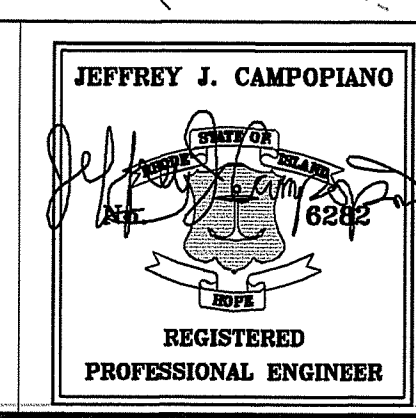
LEGEND

— (dashed)	EXISTING CONTOURS	— (dashed)	PROPOSED CONTOUR
— (solid)	EXISTING SITE CONDITIONS	— (dashed)	PROPOSED SITE CONDITIONS
— (solid)	EXISTING PROPERTY LINE	— (dashed)	PROPOSED PROPERTY LINE
— (solid)	BUILDING SETBACKS	— (dashed)	BUILDING SETBACKS
— (dashed)	EXISTING FIELD STONEWALLS	— (dashed)	PROPOSED RETAINING WALLS
— (dashed)	EXISTING FENCE	— (dashed)	PROPOSED FENCE
— (dashed)	EXISTING WATERLINE	— (dashed)	PROPOSED WATERLINE
— (dashed)	EXISTING DRAINAGE	— (dashed)	PROPOSED DRAINAGE
— (dashed)	EXISTING ROOF DRAIN	— (dashed)	PROPOSED ROOF DRAIN
— (dashed)	EXISTING UTILITY POLE	— (dashed)	PROPOSED UTILITY POLE
— (dashed)	TEST HOLES/LEDGE PROBES	— (dashed)	WOOD OR BRUSH LINE
— (dashed)	WELL HEAD RADIUS	— (dashed)	LIMIT OF DISTURBANCE
— (dashed)	USDA SOIL BOUNDARIES	— (dashed)	EROSION CONTROL
— (dashed)	BIOLOGICAL WETLANDS	— (dashed)	R.I.D.C.T. STANDARD DETAIL
— (dashed)	50' PERIMETER WETLAND		
— (dashed)	100' RIVERBANK WETLAND		



EXISTING CONDITIONS
 Environmental Management
 JAN 31 2023
 Office of Water Resources
COMMERCIAL TRADE BUILDING
KENYON SCHOOL ROAD
 A.P. 10 E / LOT 44/2
 RICHMOND, RHODE ISLAND

PREPARED BY:
JEFFREY J. CAMPOPIANO, P.E.
 16 WEST MAIN STREET
 WICKFORD, RHODE ISLAND 02852
 PHONE: 401-295-3037
 jeff@campopiano-eng.com

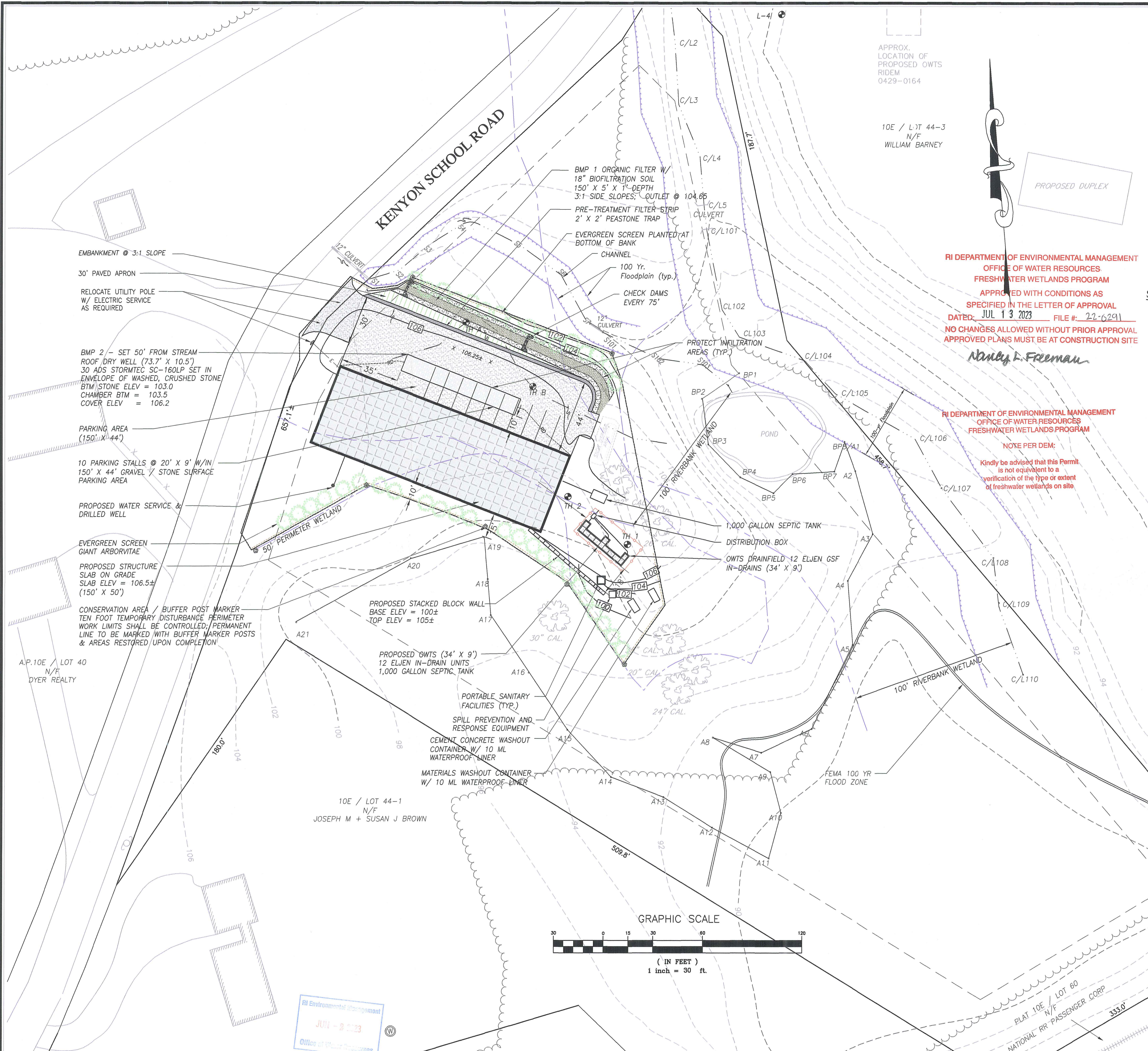


PREPARED FOR:
VISION LANDSCAPING, LLC
 P.O. BOX 780
 CHARLESTOWN, RHODE ISLAND 02813
 PHONE: 401-954-6464

DATE: 6/24/2022

NO.	DATE	DESCRIPTION
1	1/23	ASSF TO STREAM

SCALE: 1" = 30'
SHEET NUMBER
1



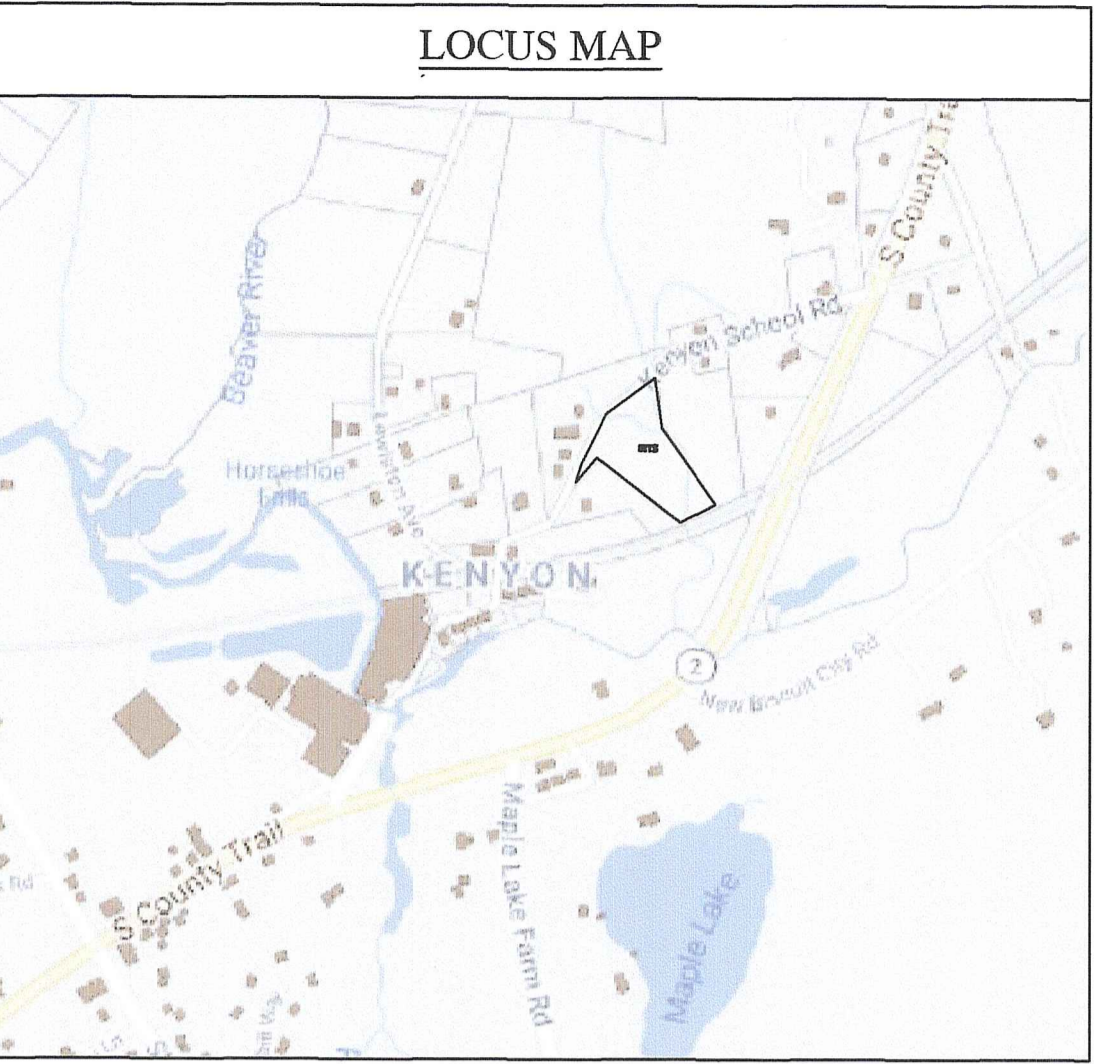
GENERAL NOTES:

1. THIS SITE IS NOT LOCATED WITHIN A NATURAL HERITAGE AREA. & CRITICAL RESOURCE AREA.
2. THIS PARCEL IS LOCATED WITHIN THE TOWN OF RICHMOND'S AQUIFER OVERLAY DISTRICT. THE 1750' RADIUS ASSOCIATED WITH THE COMMUNITY WELL ENCOMPASSES A PORTION OF THE NORTHWEST CORNER OF THE SITE.
3. THE SITE IS LOCATED WITHIN A GROUNDWATER RECHARGE ZONE, BUT DOES NOT FALL WITHIN THE LIMITS OF THE GROUNDWATER RESERVOIR OR RECHARGE ZONE AS DEFINED BY RIDEM.
4. NEITHER THIS SITE NOR ADJACENT PROPERTIES ARE LOCATED ON THE NATIONAL OR RHODE ISLAND REGISTER OF HISTORIC PLACES. THERE ARE NO KNOWN HISTORIC CEMETERIES ON THE SITE.
5. THE SITE IS NOT CURRENTLY USED FOR AGRICULTURAL PURPOSES. THE SITE IS NOT LOCATED WITHIN THE TOWN OF RICHMOND AGRICULTURAL OVERLAY DISTRICT.
6. INFORMATION TAKEN FROM STATE APPROVALS FOR THE DEVELOPMENT OF TWO FOUR BEDROOM DUPLEX STRUCTURES ON LOT 44-2 & 44-3. RIDEM WETLANDS APPROVAL (APP #14-0057) AND OWTS APPROVAL (#1329-1576).
7. SITE LAYOUT BASED UPON PROTECTION OF LARGE SPECIMEN TREES IN REAR OF PROPERTY. SELECTED LAYOUT PLACES DEVELOPMENT FEATURES WITHIN OPEN FIELD, MINIMAL EARTHWORK REQUIRED. ANY WORK OUTSIDE JURISDICTIONAL AREAS WOULD REQUIRE EXTENSIVE CUTTING, FILLING AND TREE REMOVAL.
8. A.S.S.F. FROM 12" CULVERT UNDER ROADWAY HAS BEEN IDENTIFIED AS BOTH AN A.S.S.F. WHILE RIDEM LABELS STREAM.

STORMWATER BMPs

BMP #1 ORGANIC FILTER
 BOTTOM AREA: 750 S.F.
 1' DEEP BASIN, SIDE SLOPES: 3:1
 18" MEDIA BELOW BASIN
 VOLUME PROVIDED = 1,089 C.F.
 DESIGN ELEVATION = 103.0; SHGW @ 100.0 (36")
 STM FILTER BED = 102.0
 TOP FILTER (18") = 104.0
 TOP RIM = 105.0

BMP #2 DRY WELL
 30 LANDSCAPE 1603 DRAINAGE CHAMBERS
 6" STONE STONE BED AND ENVELOPE [80.8' x 12.0']
 DESIGN ELEVATION = 102.0; SHGW = 24"
 STONE BED INVERT = 103.0
 CHAMBER BASE = 103.5
 CHAMBER TOP = 104.83
 TOP STONE = 105.33
 DRIVEWAY SURFACE = 106.2



ZONING DISTRICT DIMENSIONAL REGULATIONS
 EXISTING ZONE: NB; NEIGHBORHOOD BUSINESS

EXISTING DIMENSIONS	REQUIRED DIMENSIONS
MINIMUM LOT AREA (SF.)	NB_ZONE 1 ACRE 4.36 ACRES
MINIMUM LOT FRONTAGE:	150'
MINIMUM YARD SETBACKS:	
FRONT	20'
SIDE	35'
REAR	60'
MAXIMUM BUILDING COVERAGE:	25%
MAXIMUM BUILDING HEIGHT:	40'
MAXIMUM FLOOR AREA:	10,000 S.F.

TEST HOLE DATA

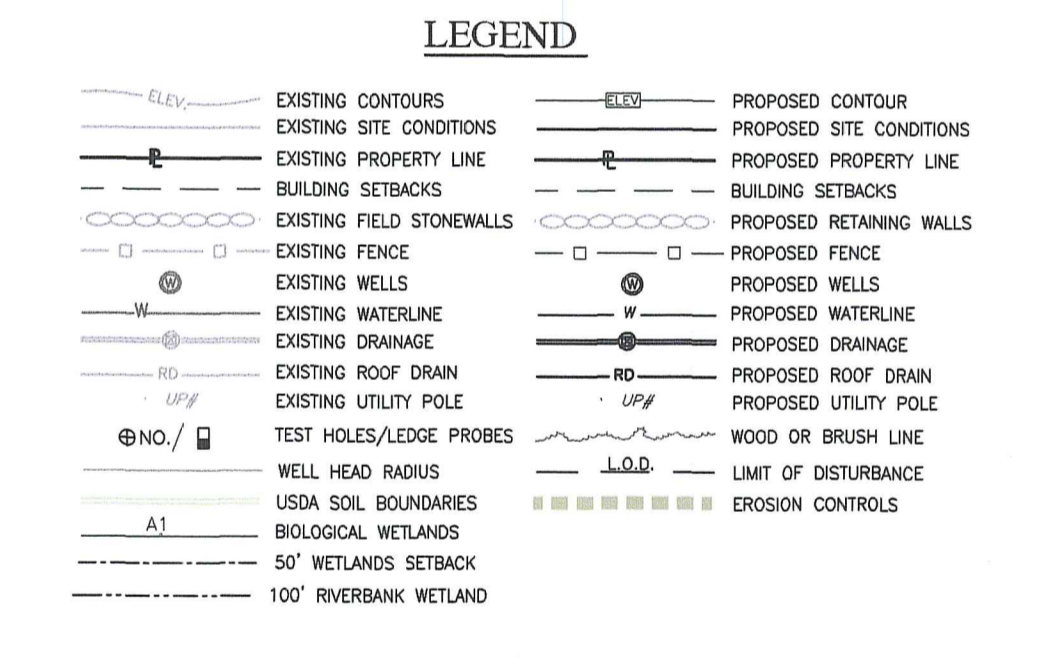
TEST HOLE	DESIGN SOIL CAT.	DEPTH	ESTIMATED GWT	COMMENTS
A	1st over Fine Sand CAT. 1	60"	36%	GWT INCLUDES 12" FILL
B	1st over Fine Sand CAT. 1	60"	36%	GWT INCLUDES 12" FILL

PARKING & LANDSCAPING

PARKING REQUIREMENTS
 PER RICHMOND ZONING
 REQUIRED: 1 PER 750 S.F. WAREHOUSE or 1 PER EMPLOYEE (ALT DEF)
 PROVIDED: 10 STALLS

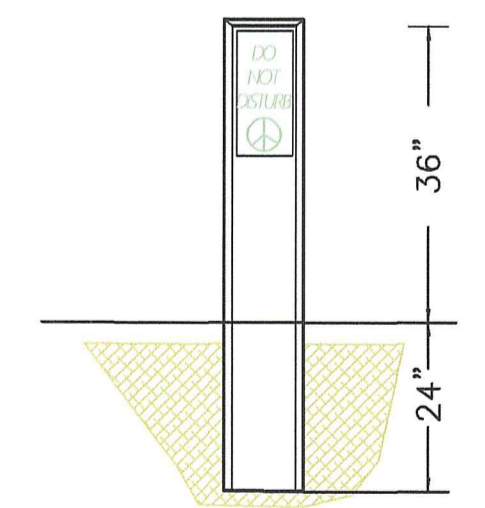
MUNICIPAL LANDSCAPING:
 EVERGREEN SCREEN, W/ PLANTS STAGGERED AT 7' O.C.

LEGEND:
 EVERGREEN TREES:
 5' TALL BALLED AND BURLAPPED TREES
 THUJA (STANDISHII X PLUCATA) "GREEN GIANT"
 SHRUBS:
 3' TALL BALLED AND BURLAPPED
 MYRTICA PENNSYLVANICA - NORTHERN BAYBERRY
 VACCINIUM CORYMBOSUM - HIGH BUSH BLUEBERRY
 ILEX VERTICILLATA - WINTERBERRY
 VIBURNUM DENTATUM - SOUTHERN ARROWWOOD



GENERAL CONSTRUCTION NOTES

1. ALL ELEMENTS OF CONSTRUCTION WILL BE FIELD SUPERVISED BY THE OWNER, OR OWNER'S REPRESENTATIVE. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL AGREEMENT WITH THE APPROVED FINAL CONSTRUCTION DRAWINGS AND SPECIFICATIONS.
2. THE ENGINEER OF RECORD SHALL BE UNDER SEPARATE CONTRACT TO CERTIFY ALL SITE IMPROVEMENTS HAVE BEEN INSTALLED IN CONFORMANCE TO THE APPROVED PLANS.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE CONDITIONS OF APPROVAL LISTED BY THE TOWN AND LOCAL UTILITY AUTHORITY(S).
4. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN ANY AND ALL FEDERAL, STATE, AND LOCAL PERMITS PRIOR TO COMMENCING ANY WORK.
5. A PRE-CONSTRUCTION MEETING AT THE SITE WILL BE REQUIRED A MINIMUM OF FIVE DAYS PRIOR TO INITIATING CONSTRUCTION. ATTENDEES WILL INCLUDE THE OWNER'S REPRESENTATIVES (CONTRACTOR & PROJECT ENGINEER) & ANY ADDITIONAL REPRESENTATIVES FROM THE OWNER.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS, OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS, AND FEDERAL, STATE, AND LOCAL REGULATIONS ARE STRICTLY ENFORCED.
7. THE CONTRACTOR SHALL PROVIDE BARRIERS TO PREVENT UNAUTHORIZED ENTRY TO CONSTRUCTION AREAS, AND TO PREVENT EXISTING FACILITIES AND ADJACENT PROPERTIES FROM DAMAGE FROM CONSTRUCTION OPERATIONS AND DEMOLITION. PROTECTIVE BARRICADES SHALL BE PROVIDED TO SEPARATE PUBLIC RIGHTS-OF-WAY AND ACCESS AND TO PROTECT VEHICULAR TRAFFIC, STORED MATERIALS, SITE, AND STRUCTURES FROM DAMAGE.
8. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ANY EQUIPMENT NECESSARY TO CONTROL ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE PROJECT.
9. THE SITE PLAN REPRESENTS THE GENERAL SITE LAYOUT AND CONSTRUCTION REQUIREMENTS AND DOES NOT REPRESENT ALL WORK ITEMS, DETAILS, AND SPECIFICATIONS NECESSARY FOR CONSTRUCTION.
10. CONSTRUCTION STAKEOUT SHALL REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ACTUAL SIZE OF THE PROPOSED BUILDING.
11. ALL PROPOSED WORK SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION. ELEVATIONS AND PLACEMENT OF ALL ASSOCIATED SITE AMENITIES, UTILITIES, AND STRUCTURES SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY POTENTIAL CONFLICTS WITH THE DESIGN PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER.



CONSERVATION AREA MARKER

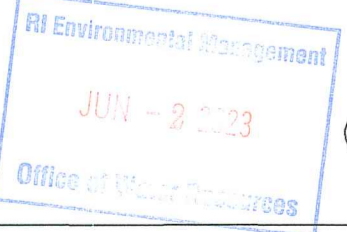
60" x 4" x 4" GRANITE OR P.T. POST SET 24" INTO COMPACTED EARTH PROVIDE PLAQUE STATING "CONSERVATION AREA" OR SIMILAR ICON TO KEEP AREA IN NATURAL STATE

APPROX. LOCATION OF PROPOSED OWTS
 RIDEM
 0429-0164

10E / LOT 44-3
 N/F
 WILLIAM BARNEY

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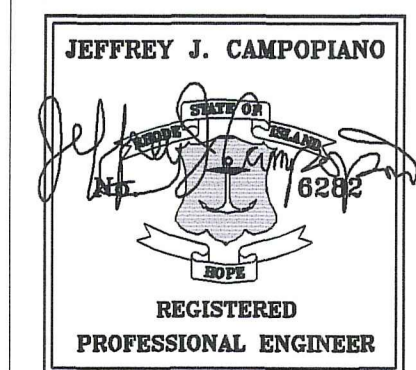
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PROPOSED CONDITIONS

COMMERCIAL TRADE BUILDING
 KENYON SCHOOL ROAD
 A.P. 10E / LOT 44/2
 RICHMOND, RHODE ISLAND

PREPARED BY:
 JEFFREY J. CAMPOPIANO, P.E.
 16 WEST MAIN STREET
 WICKFORD, RHODE ISLAND 02852
 PHONE: 401-295-3037
 jeff@campopiano-eng.com



PREPARED FOR:
 VISION LANDSCAPING, LLC
 P.O. BOX 780
 CHARLESTOWN, RHODE ISLAND 02813
 PHONE: 401-954-6464

REVISIONS:

NO.	DATE	DESCRIPTION
1	1/23	REALIGNED SITE TO AVOID STREAM
2	5/23	REALIGNED ROOF BMP2 TO 50' FROM STREAM CHECK DAMS, SLAB ON GRADE NOTES

DATE: 6/24/2022
 SCALE: 1" = 30'

SHEET NUMBER
2

GENERAL PROJECT SEQUENCING

1. SCHEDULE A RECONSTRUCTION MEETING WITH SELECTED SITE CONTRACTOR, REVIEW OF SHORT TERM OPERATIONS AND MAINTENANCE OPERATIONS APPROVED FOR THE SITE. ESTABLISH WORK PARAMETERS, CLARIFY REGULATORY REQUIREMENTS AND IDENTIFY KEY CHALLENGES OF THE WORK.
2. SURVEY LOCATE AND ESTABLISH THE WORK ZONE, PROTECT AND LOCATE INTERNAL SPOTLIGHT TRIPS AND CHANGES TO REMAIN AT DRIP LINES. IDENTIFY AND RESTRICT ACCESS TO INFILTRATION AREAS WITH THE INSTALLATION OF EROSION AND ACCESS CONTROL MEASURES SIGNS AND SNOW/CONSTRUCTION FENCING. REMOVE SELECTIVE VEGETATION TO INSTALL CONTROL MEASURES.
3. INSTALL WASHTRAIL, CRUSHED STONE CONSTRUCTION ENTRANCE.
4. INSTALLATION OF ALL EROSION, RUNOFF, AND SEDIMENT CONTROLS AND TEMPORARY POLLUTION PREVENTION MEASURES INCLUDING TEMPORARY BASINS UPON ACCEPTANCE OF COMPLETION OF SITE PREPARATION AND INSTALLATION OF EROSION, RUNOFF AND SEDIMENT CONTROLS AND TEMPORARY POLLUTION PREVENTION MEASURES. SITE CONSTRUCTION ACTIVITIES SHALL COMMENCE.
5. SITE CONSTRUCTION ACTIVITIES INCLUDE SELECTIVE VEGETATION REMOVAL, STRIPPING AND STOCKPILING TO SOIL EXHAUSTING FOR FOUNDATION, CURB & STORM WATER CONTROL FACILITIES, FINISHING AND COMPACTION OF SOIL AND AGGREGATE FOR PROPOSED GRADES AND PARKING FACILITIES, WELL AND WATER SERVICE INSTALLATION, CONSTRUCTING ROCK LAND EXHAUSTION, TRILING AND FACE GRADING, AND INSTALLATION OF LANDSCAPING.
6. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, THE OPERATOR SHALL INITIATE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE ACTIVITY ON THAT LOT AREA HAS TEMPORARILY CEASED.
7. ESTABLISH DELIVERY AND MATERIAL STAGING AREAS OUTSIDE OF PROTECTED AREAS. STAGING AREAS FOR AGGREGATE AND UTILITY INSTALLATION COMPONENTS SHALL BE LOCATED WITHIN A FLAT, EASILY ACCESSIBLE, CLEAR-AREA OFF THE PUBLIC RIGHT OF WAY.
8. RESTORE DISTURBED STAGING AREAS WHEN STAGE HAS BEEN COMPLETED.
9. CONTRACTOR SHALL PERFORM REQUIRED ROUTINE INSPECTIONS AND MAINTENANCE AND/OR MODIFICATION OF EROSION, RUNOFF, AND SEDIMENT CONTROLS AND TEMPORARY POLLUTION PREVENTION MEASURES WHILE CONSTRUCTION IS ONGOING.
10. ELIMINATE ANY TEMPORARY CONSTRUCTION BASINS, COMPLETE FINE GRADING OF DETENTION BASINS AND COMPLETE MICROGRADING AND VEGETATIVE PLANTING OF PERMANENT STORMWATER MANAGEMENT SYSTEM.
11. FINAL SITE STABILIZATION OF ANY DISTURBED AREAS WITHIN SEVEN DAYS AFTER EARTHWORK HAS BEEN COMPLETED AND REMOVAL OF TEMPORARY EROSION, RUNOFF, AND SEDIMENT CONTROLS AND TEMPORARY POLLUTION PREVENTION MEASURES.
12. ACTIVATION OF POST-CONSTRUCTION STORMWATER TREATMENT CONTINGENCIES AND PRACTICES.

PHASED CLEARING AND GRUBBING

1. ONLY AREAS THAT CAN BE REASONABLY EXPECTED TO HAVE ACTIVE CONSTRUCTION WORK PERFORMED WITHIN 14-DAYS OF DISTURBANCE WILL BE CLEARED/GRUBBED AT ANY ONE TIME. THIS SMALL SCALE PROJECT IS TO BE COMPLETED IN ONE PHASE.
2. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR WILL BE SEEDED OR PROTECTED BY THAT DATE.
3. ANY SUCH AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION BY NOVEMBER 15, AS DETERMINED BY THE ENGINEER, ENVIRONMENTAL INSPECTOR, MUST BE STABILIZED BY EROSION CONTROL MATING OR MULCH. IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE RI SOIL EROSION AND SEDIMENT CONTROL HANDBOOK AND AS DETAILED ON THIS PLAN SET.
4. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL EXPOSED SOIL MUST BE STABILIZED WITHIN 3 WORKING DAYS.
5. AFTER CLEARING, AND BY THE END OF EACH DAY'S GRUBBING OPERATION, THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES THAT ARE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SUCH EROSION CONTROL MEASURES WILL BE INSTALLED IN STRICT ACCORDANCE WITH THE PLANS.

VEGETATIVE STABILIZATION & PLANTING REQUIREMENTS:

TOPSOIL REQUIREMENTS

1. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 6" OF SCREENED TOPSOIL. TOPSOIL SHALL CONSIST OF LOOSE, FRABLE TOPSOIL FREE OF REFUSE, BRUSH, STUMPS, ROOTS, ROCKS, COBBLES, STONES, NOXIOUS WEEDS, LITTER, AND OTHER MATERIALS WHICH ARE LARGER THAN 1-INCH IN ANY DIMENSION AND WHICH WILL PREVENT THE FORMATION OF A SUITABLE SEEDBED. ORGANIC CONTENT SHALL CONSTITUTE NO LESS THAN 5-PERCENT AND NO GREATER THAN 20-PERCENT (LOSS BY IGNITION).
2. TOPSOIL SHALL BE AMENDED, IF REQUIRED, IN ACCORDANCE WITH THE RI SESC HANDBOOK, SECTION 4. IF THE PH OF THE SOIL IS LESS THAN 6.0, AGRICULTURAL LIMESTONE SHALL BE SPREAD IN ACCORDANCE WITH RECOMMENDATIONS TO ATTAIN A PH AS REQUIRED BY SELECTED VEGETATION.
3. TOPSOIL SHALL NOT BE PLACED WHILE IN A FROZEN OR MUDDY CONDITION, OR WHEN THE SUBGRADE IS EXCESSIVELY WET. PRIOR TO THE PLACEMENT OF TOPSOIL, THE SURFACE SHALL BE GRADED FREE OF ROOTS, STUMPS, COBBLES OR STONES GREATER THAN 1-INCH. IMMEDIATELY PRIOR TO SPREADING THE TOPSOIL, THE SUBGRADE SHOULD BE LOOSENED BY SCRAPING OR TRACKING TO A DEPTH OF AT LEAST 2 INCHES. FOR SLOPES 2:1 THROUGH 5:1, SLOPE TRACKING (SURFACE ROUGHENING) IS REQUIRED PRIOR TO THE PLACEMENT OF TOPSOIL TO IMPROVE BONDING.

TEMPORARY VEGETATIVE CONTROL MEASURES

- ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER (GRASS AND/OR LEGUMES) SHALL BE REQUIRED ON DISTURBED ROADWAY SHOULDERS, PORTIONS OF DISTURBED HOUSE LOTS AND DESIGNATED STORMWATER AREAS ON SOILS EXPOSED FOR A PERIOD GREATER THAN ONE MONTH BUT LESS THAN 12 MONTHS.
- FOR TEMPORARY SEEDING, FERTILIZER WITH THE FOLLOWING PERCENTAGES BY WEIGHT MAY BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE.
 - 10% NITROGEN (N)
 - 10% PHOSPHORIC ACID (P)
 - 10% POTASSIUM (K)
- APPLY SEED UNIFORMLY BY HAND, CIRCONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (QUIRY INCLUDING SEED AND FERTILIZER) ACHIEVING GOOD SEED TO SOIL CONTACT. HYDROSEEDINGS, WHICH INCLUDES MULCH, MAY BE LEFT ON THE SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10 PERCENT WHEN HYDROSEEDING. IRRIGATION MAY BE NECESSARY TO ESTABLISH NEWLY SEEDD AREAS SHOULD DROUGHT CONDITIONS OCCUR AFTER THE EMERGENCE OF SEED.
- SEED SHALL CONSIST OF RIOT TEMPORARY SEED MIX.

NO.	SEED MIXTURE (VARIETY)	LBS / ACRES	LBS / 1000 SQ. FT.
1	KENTUCKY BLUEGRASS	22.5	0.5
2	CREeping RED FESCUE	105	2.6
3	PERENNIAL RYEGRASS	22.5	0.5

TEMPORARY NON-VEGETATIVE CONTROL MEASURES

- IF THE GROWING SEASON HAS PASSED, BIODEGRADABLE MULCH SHALL BE APPLIED TO AREAS WITH SOILS EXPOSED FOR A PERIOD GREATER THAN FOURTEEN (14) DAYS BUT LESS THAN 5 MONTHS. BIODEGRADABLE MULCH MAY CONSIST OF ONE OF THE FOLLOWING:
 1. EROSION CONTROL MIX: ACCEPTABLE EROSION CONTROL MIX INCLUDES SHEDDED OR COMPOSTED BARK, STRIP GRINDINGS, OR OTHER COMPOSTED WOOD PRODUCTS WHICH WILL EVENTUALLY ALLOW THE GROWTH OF VEGETATION. IF DESIRED, GROUND CONSTRUCTION DEBRIS, OR PROCESSED WOOD ARE NOT ACCEPTABLE. THE EROSION CONTROL MIX SHALL BE APPLIED AS A LAYER AT LEAST THREE INCHES THICK, WHICH PROVIDES MADE TO ENSURE THE MIX IS NOT COMPACTED.
 2. WOOD MULCH: FOLLOW GUIDELINES IN THE RI SESC HANDBOOK, SECTION 4. FOR TEMPORARY MULCHING, HOOKED BARK SHALL BE APPLIED @ 5 CUBIC YARDS PER 1,000 S.F. AND SHALL BE FREE FROM WEEDS AND ANCHORED WITH MULCH NETTING.
 3. HAY MULCH: USE HAY MULCH AS A TEMPORARY MEASURE TO PROTECT BARE SOILS OR TO COVER NEWLY SEEDD AREAS. APPLY AT A RATE OF TWO SQUARE BALES (70-80 POUNDS) PER 1000 SQ. FT. OR 3 TONS (90-100 BALES) PER ACRE. ANCHOR THE HAY MULCH USING ONE OF THE FOLLOWING METHODS:
 - STAPLE JUTE OR PLASTIC NETTING OVER THE MULCH ACCORDING TO THE NET OR JUTE MANUFACTURER'S RECOMMENDATIONS.
 - STRETCH TWINE BETWEEN PEGS IN A CRISSCROSS PATTERN OVER THE MULCH (4-6 PEGS PER SQUARE YARD).

EROSION & SEDIMENT CONTROL NOTES:

1. EXTREME CARE SHALL BE EXERCISED TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING A PROTECTED AREA, STREET, OR NEIGHBORING PROPERTY. THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE ANY DISTURBED AREA.
2. ALL EROSION CONTROL METHODS, MATERIALS, AND MAINTENANCE SHALL BE ACCOMPLISHED ACCORDING TO THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL (SESC) HANDBOOK, PREPARED BY THE RHODE ISLAND STATE CONSERVATION COMMITTEE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL TEMPORARY EROSION AND SEDIMENT CONTROLS, AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER. ALL RUNOFF SHALL BE CONTROLLED. IN NO CASE SHALL ANY DIRECT RUNOFF BE ALLOWED TO ENTER ONTO ADJUTING PROPERTIES OF OTHER CRITICAL AREAS.
4. SILT FENCING/COMPOST FILTER SOCKS OR MATS SHALL BE PLACED IMMEDIATELY DOWN SLOPE OF SOIL DISTURBANCE AREAS AS SHOWN ON THE PLANS. ADDITIONAL MATS AND/OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS UNTIL ALL AREAS ARE STABILIZED AND A GOOD STAND OF VEGETATION IS ESTABLISHED. EROSION CONTROLS SHALL BE REMOVED UPON PERMANENT EROSION CONTROL MEASURES ARE IN PLACE AND FUNCTIONING UNLESS DEVICES ARE DESIGNED TO REMAIN IN PLACE (I.E. COMPOST FILTER SOCKS WITH SEED).
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF LONG-TERM STORM WATER CONTROLS AND TREATMENT MEASURES:
 - a. CONTRACTOR MUST PROTECT ALL INFILTRATION FACILITIES FROM SEDIMENTATION AND COMPACTION BY CIRCUMFERRING OFF THESE AREAS PROHIBITING CONSTRUCTION EQUIPMENT OVER THE PROPOSED SYSTEMS.
 - b. CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY RESTORING THE FACILITIES TO THEIR FULLY FUNCTIONING CONDITION IF THEY ACCUMULATE SEDIMENT DURING CONSTRUCTION. RESTORING THE FACILITY MUST INCLUDE REMOVAL OF SEDIMENT AND ANY UNDERLYING SEDIMENT-LAEN SOILS, AND REPLACING THE REMOVED SOILS WITH SOILS MEETING THE DESIGN SPECIFICATION.
 - c. DRAINAGE FACILITIES SHALL NOT BE CONSTRUCTED OR BROUGHT ONLINE UNTIL THE CONTRIBUTING AREA IS STABILIZED. CONTRACTOR SHALL NOT ALLOW SEDIMENT-LAEN RUNOFF INTO ORGANIC FILTER.
 - d. SOIL COMPACTION MUST BE MINIMIZED BY MAINTAINING LIMITS OF DISTURBANCE THROUGHOUT CONSTRUCTION. IN INSTANCES WHERE SOILS ARE COMPACTED, THE SITE OWNER AND OPERATOR MUST RESTORE INFILTRATION CAPACITY OF THE COMPACTED SOILS BY TILLING OR SCRAPING COMPACTED SOILS AND AMENDING SOILS AS NECESSARY TO ENSURE A MINIMUM DEPTH OF TOPSOIL IS AVAILABLE IN THESE AREAS.
7. TOPSOIL SHALL BE PRESERVED WHERE POSSIBLE, IN ACCORDANCE WITH STOCKPILE MANAGEMENT SPECIFICATIONS. AS FAR AS IS PRACTICABLE, EXISTING VEGETATION SHALL BE PROTECTED AND LEFT IN PLACE IN ACCORDANCE WITH THE CLEARING LIMITS SHOWN ON THE PLANS.
8. SOIL AND STOCKPILE MATERIALS REMAINING EXPOSED FOR LONGER THAN 30 DAYS SHALL BE ENCIRCLED WITH EROSION CONTROLS AND COVERED WITH AN ACCEPTABLE EROSION CONTROL MIX.
9. ANY SLOPE PROTECTION BLANKETS USED AT THIS PROJECT SHALL BE THE 100% BIODEGRADABLE STRAW AND COCONUT FIBER BLANKETS WHICH SHALL DISINTEGRATE IN-PLACE, NOT REQUIRING FUTURE MAINTENANCE.

VEGETATIVE STABILIZATION & PLANTING REQUIREMENTS:

PERMANENT VEGETATIVE CONTROL MEASURES

- SINCE FINE GRADING IS COMPLETE, THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER SHALL BE UNDERTAKEN DURING THE GROWING SEASON IN ACCORDANCE WITH THE REQUIREMENTS OF THE RI SESC HANDBOOK, SECTION 4.
- FOR NON-NATIVE SPECIES THE RECOMMENDED SEEDING DATES ARE: APRIL 1 THROUGH JUNE 10 AND AUGUST 15 THROUGH SEPTEMBER 30. FOR NATIVE SPECIES SEEDING DATES FOR BEST RESULTS ARE AUGUST TO SEPTEMBER. SELECTING SEED MATERIALS AND TIMING OF SEEDING IS CRITICAL. IF NATIVE SEEDS ARE TO BE SELECTED AND TIME OF SEEDING IS NOT IDEAL FOR SEEDING, THEN TEMPORARY SEEDING MAY BE DONE TO PROTECT THE SITE UNTIL OPTIMUM SEEDING DATES CAN BE REACHED.
- SEEDBEDS SHALL BE PREPARED BY LOOSEN THE SOIL TO A DEPTH OF THREE TO FOUR INCHES WITH A SLIGHTLY ROUGH SURFACE. SOIL AMENDMENTS (LIME AND FERTILIZER) SHALL BE APPLIED BASED UPON SOIL REQUIREMENTS. FOR TEMPORARY SEEDING, FERTILIZER WITH THE FOLLOWING PERCENTAGES BY WEIGHT MAY BE APPLIED AT THE RATE OF 1,500 POUNDS PER ACRE.
 - 10% NITROGEN (N)
 - 20% PHOSPHORIC ACID (P)
 - 20% POTASSIUM (K)
- SEED MIXTURES SHALL CONSIST OF THE FOLLOWING:

NO.	SEED MIXTURE (VARIETY)	LBS / ACRES	LBS / 1000 SQ. FT.
1	KENTUCKY BLUEGRASS	22.5	0.5
2	CREeping RED FESCUE	105	2.6
3	PERENNIAL RYEGRASS	22.5	0.5
- SURFACE ROUGHENING WILL BE EMPLOYED ON SLOPES GREATER THAN 2:1 TO AID IN THE ESTABLISHMENT OF VEGETATIVE COVER, REDUCE RUNOFF VELOCITY, INCREASE INFILTRATION, AND PROVIDE FOR SEDIMENT TRAPPING THROUGH THE PROVISION OF A ROUGH SOIL SURFACE. HORIZONTAL DEPRESSIONS ARE CREATED BY OPERATING A TILLER OR OTHER SUITABLE EQUIPMENT ON THE CONTOUR OR BY LEAVING SLOPES IN A ROUGHENED CONDITION BY NOT FINE GRADING THEM.
 - ALL SLOPES STEEPER THAN 2:1 AND GREATER THAN 5 VERTICAL FEET REQUIRE SURFACE ROUGHENING TO A DEPTH OF 2 TO 4 INCHES PRIOR TO SEEDING.
 - AREAS THAT WILL NOT BE STABILIZED IMMEDIATELY MAY BE ROUGHENED TO REDUCE RUNOFF VELOCITY UNTIL SEEDING TAKES PLACE.
 - SLOPES WITH A STABLE ROCK FACE DO NOT REQUIRE ROUGHENING.
 - SLOPES WHERE MOVING IS PLANNED SHOULD NOT BE EXCESSIVELY ROUGHENED.

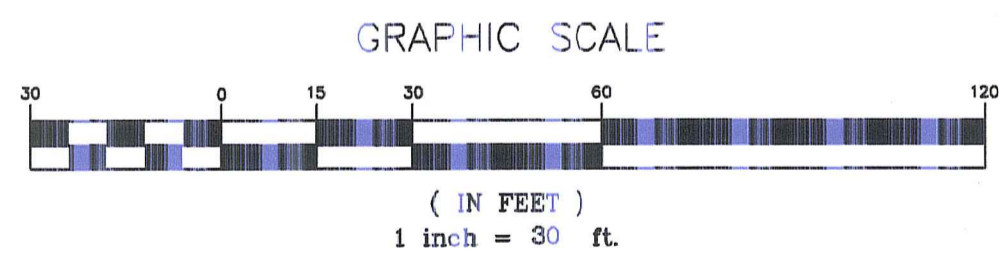
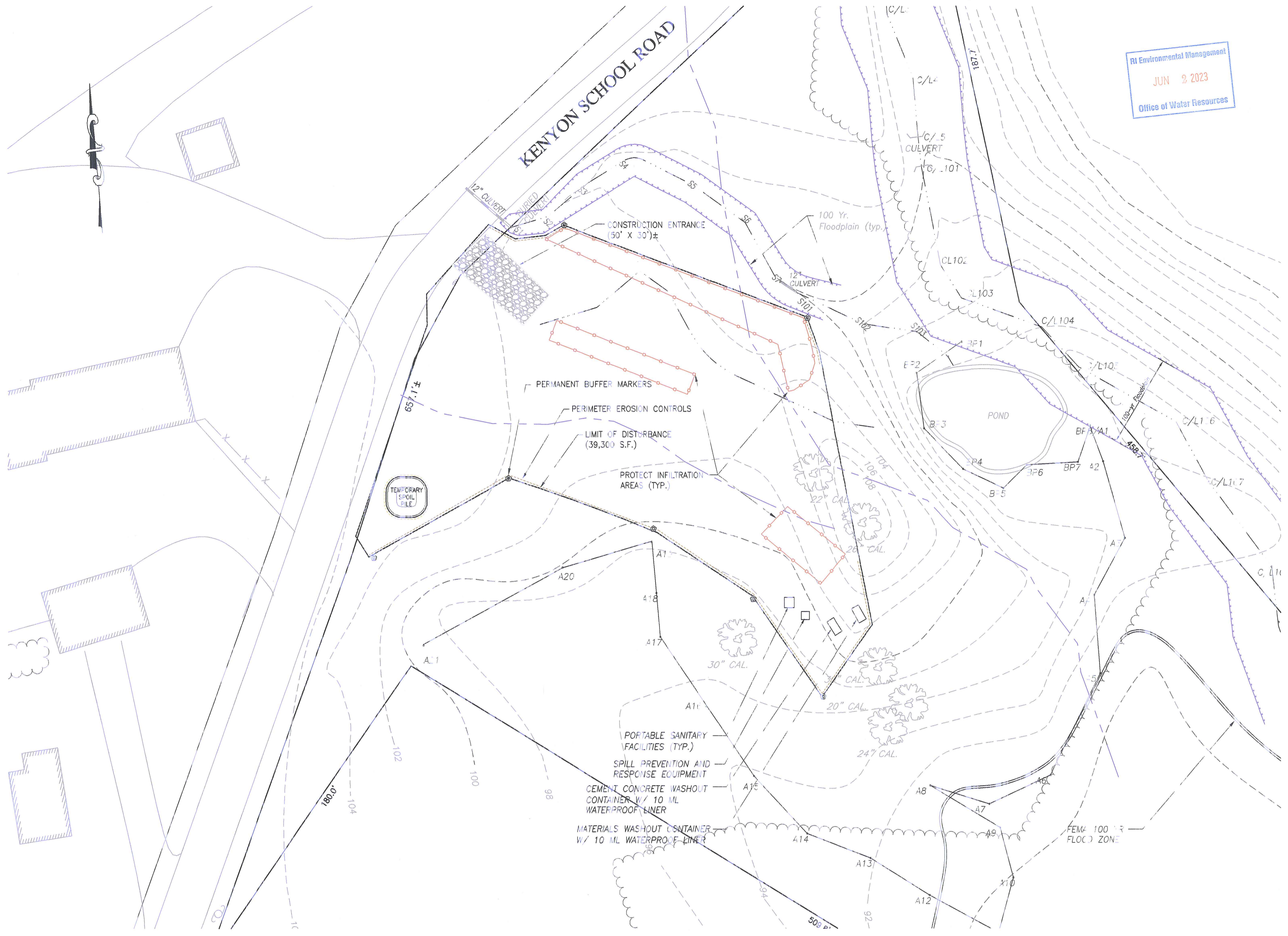
GENERAL PURPOSE LAWNS AND MOWED DRAINAGE DITCHES

NO.	SEED MIXTURE (VARIETY)	LBS / ACRES	LBS / 1000 SQ. FT.
1	KENTUCKY BLUEGRASS	22.5	0.5
2	CREeping RED FESCUE	105	2.6
3	PERENNIAL RYEGRASS	22.5	0.5

DETENTION BASINS

NO.	SEED MIXTURE (VARIETY)	LBS / ACRES	LBS / 1000 SQ. FT.
1	CREeping RED FESCUE	20	0.45
2	REDTOP	2	0.05
3	TALL FESCUE (KENTUCKY 31)	20	0.45

- SURFACE ROUGHENING WILL BE EMPLOYED ON SLOPES GREATER THAN 2:1 TO AID IN THE ESTABLISHMENT OF VEGETATIVE COVER, REDUCE RUNOFF VELOCITY, INCREASE INFILTRATION, AND PROVIDE FOR SEDIMENT TRAPPING THROUGH THE PROVISION OF A ROUGH SOIL SURFACE. HORIZONTAL DEPRESSIONS ARE CREATED BY OPERATING A TILLER OR OTHER SUITABLE EQUIPMENT ON THE CONTOUR OR BY LEAVING SLOPES IN A ROUGHENED CONDITION BY NOT FINE GRADING THEM.
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- SLOPES WITH A STABLE ROCK FACE DO NOT REQUIRE ROUGHENING.
- SLOPES WHERE MOVING IS PLANNED SHOULD NOT BE EXCESSIVELY ROUGHENED.



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: JUL 13 2023 FILE #: 22-0291
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 NOTED PER DEM: [Signature]

MAINTENANCE REQUIREMENTS

1. THE CONSTRUCTION SUPERINTENDENT, OPERATOR, AND OWNER SHALL FOLLOW ALL REQUIREMENTS SET FORTH IN THE APPROVED "SOIL EROSION AND SEDIMENT CONTROL (SESD) PLAN FOR VISION LANDSCAPING, INC. - KENTON SCHOOL ROAD - RICHMOND, RHODE ISLAND" AND THE REQUIREMENTS OF THE RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (PDES) GENERAL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY (CONSTRUCTION GENERAL PERMIT).
2. ALL EROSION CONTROLS SHALL BE MAINTAINED IN WORKING ORDER BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL REMAIN IN-PLACE UNTIL AN APPROVED GROUND COVER IS ESTABLISHED.
3. ALL DISTURBED AREAS SHALL BE RESEEDED OR PROTECTED PRIOR TO OCTOBER 15, IN ACCORDANCE WITH THE PHASED CLEARING AND GRUBBING REQUIREMENTS OF THE SESC AND THIS PLAN. AFTER THIS DATE, WINTER MULCHING SHALL BE PROVIDED IN AREAS WHERE VEGETATION HAS NOT BEEN ESTABLISHED.
4. SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A DAILY BASIS AND AFTER EVERY RAINFALL EVENT FOR EFFECTIVENESS. THE CONTRACTOR SHALL REPAIR OR REPLACE THE CONTROLS AS REQUIRED AND SHALL ALSO REMOVE ANY SEDIMENT WHICH ACCUMULATES UP TO ONE-HALF THE HEIGHT OF THE BALE/FENCE.
5. ALL EROSION CONTROLS SHALL BE MAINTAINED IN WORKING ORDER BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL REMAIN IN-PLACE UNTIL AN APPROVED GROUND COVER IS ESTABLISHED.
6. SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY, AND BEFORE AND AFTER EACH 1" RAIN EVENT; SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATIONS REACH 18" CONSTRUCTION SUPERINTENDENT SHALL INSPECT OUTLET AND ENSURE STRUCTURAL INTEGRITY OF REST. TWELVE (12%) OF FREEDOM ABOVE WEIR SHALL BE MAINTAINED.

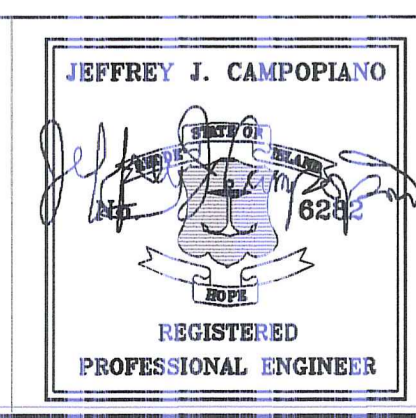
7. CONSTRUCTION ENTRANCES PROTECTED BY STONE STABILIZATION PADS SHALL BE DRESSED WITH ADDITIONAL STONE FOR THICKNESS OR LENGTH AS CONDITIONS WARRANT. PADS WITH ALL EROSION CONTROL; THE PAD SHALL BE INSPECTED EITHER PRIOR TO, OR FOLLOWING ALL RAINFALL EVENTS. SEDIMENTS TRACKED OR CARRIED ONTO THE PUBLIC RIGHT OF WAY SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER GROWTH OF ALL VEGETATIVE FEATURES FOR A PERIOD OF ONE YEAR FOLLOWING CONSTRUCTION. ALL AREAS UNDEVELOPED SHALL BE TOPSOILED, PLANTED, SEEDED, OR SOODED AT NO ADDITIONAL COST TO THE OWNER.
9. AT THE COMPLETION OF THIS PROJECT, ACCUMULATED SEDIMENTS IN CATCH BASINS, PIPES, AND ALL BRUSH COMPONENTS SHALL BE REMOVED BY THE CONTRACTOR. ACCUMULATED SILTS OR SEDIMENTS SHALL BE REMOVED FROM THE GRASSED AREAS. ANY MECHANICAL MAINTENANCE SHALL BE DONE SO AS TO NOT COMPACT LOAM WITHIN LANDSCAPED AREAS.
10. ANY SLOPE PROTECTION BLANKETS USED AT THIS PROJECT SHALL BE THE 100% BIODEGRADABLE STRAW AND COCONUT FIBER BLANKETS WHICH SHALL DISINTEGRATE IN-PLACE, NOT REQUIRING FUTURE MAINTENANCE.

LONG TERM - OPERATIONAL NOTES / MAINTENANCE

1. ALL POST-CONSTRUCTION OPERATION AND MAINTENANCE ACTIVITIES LOCATED ON PRIVATE PROPERTY SHALL BE THE RESPONSIBILITY OF THE OWNER. THIS SHALL INCLUDE MAINTENANCE OF STRUCTURAL EMPS LISTED AND AS SHOWN ON THE PROJECT PLANS. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR POLLUTANT SOURCE CONTROL FROM PRIVATE PROPERTY.
2. VEGETATION SHALL BE PRESENT IN ALL REQUIRED AREAS. GRASSES SHALL BE RE-SEEDD AND PLANTINGS REPLANTED AS REQUIRED TO THE INTENT OF THESE PROVISIONS.
3. ANY SEDIMENTS OR DEPOSITED MATERIAL SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
4. ALL LONG-TERM REQUIREMENTS OF THE STORMWATER MANAGEMENT SYSTEM OPERATION, MAINTENANCE AND POLLUTION PREVENTION PLAN FOR VISION LANDSCAPING SHALL BE ADHERED TO. THE STORMWATER FACILITIES MAINTENANCE AGREEMENT SHALL BE SIGNED BY THE LAND EVIDENCE RECORDS PRIOR TO FINAL PROJECT APPROVAL OUTLining THE MAINTENANCE PROCEDURES THE DRAINAGE SYSTEM.

SITE PREPARATION PLAN
 COMMERCIAL TRADE BUILDING
 KENTON SCHOOL ROAD
 A.P. 10 E / LOT 44/2
 RICHMOND, RHODE ISLAND

PREPARED BY:
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 16 WEST MAIN STREET
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 PHONE: 401-295-3037
 jeff@campopiano-eng.com

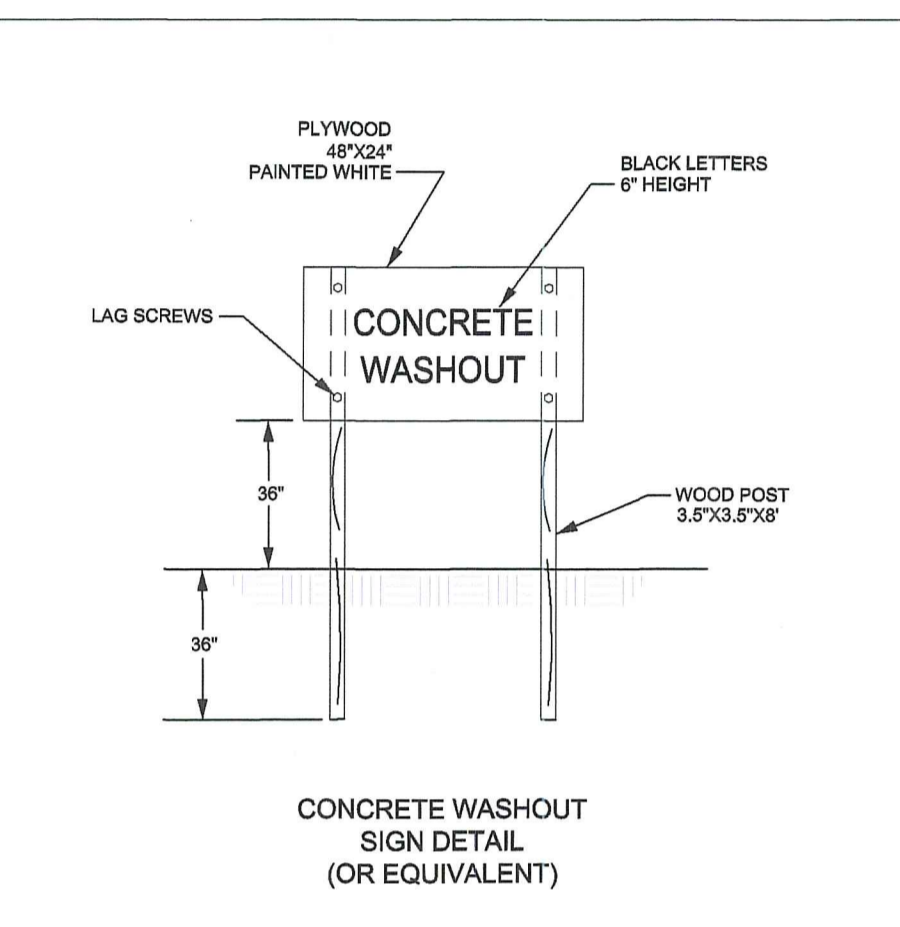
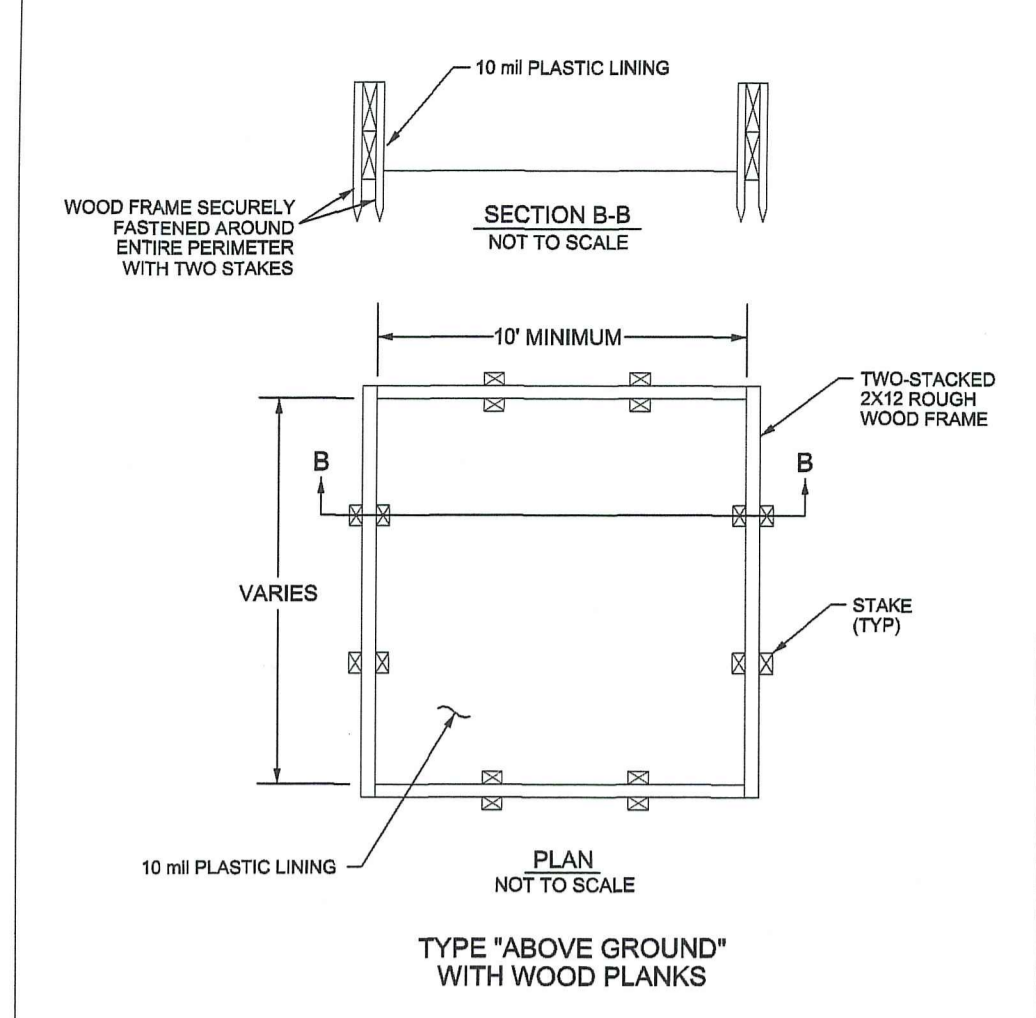
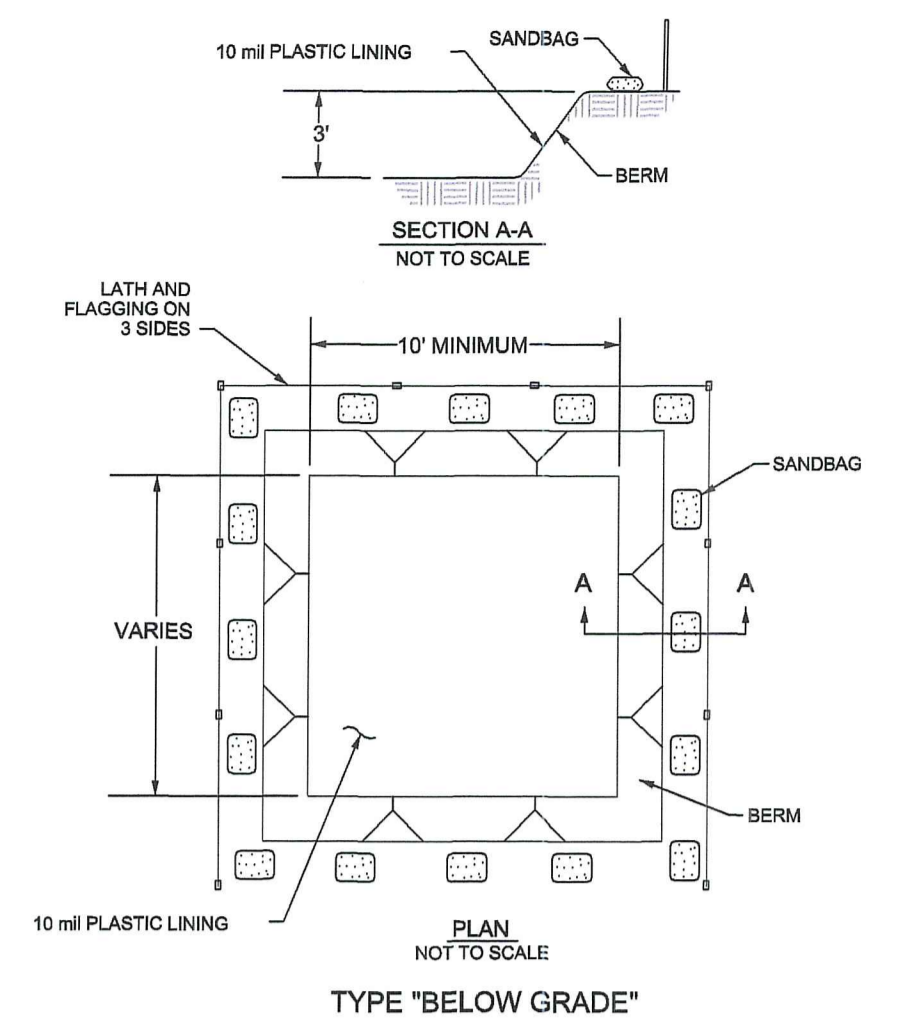


PREPARED FOR:
VISION LANDSCAPING, LLC
 P.O. BOX 780
 CHARLESTOWN, RHODE ISLAND 02813
 PHONE: 401-934-6464

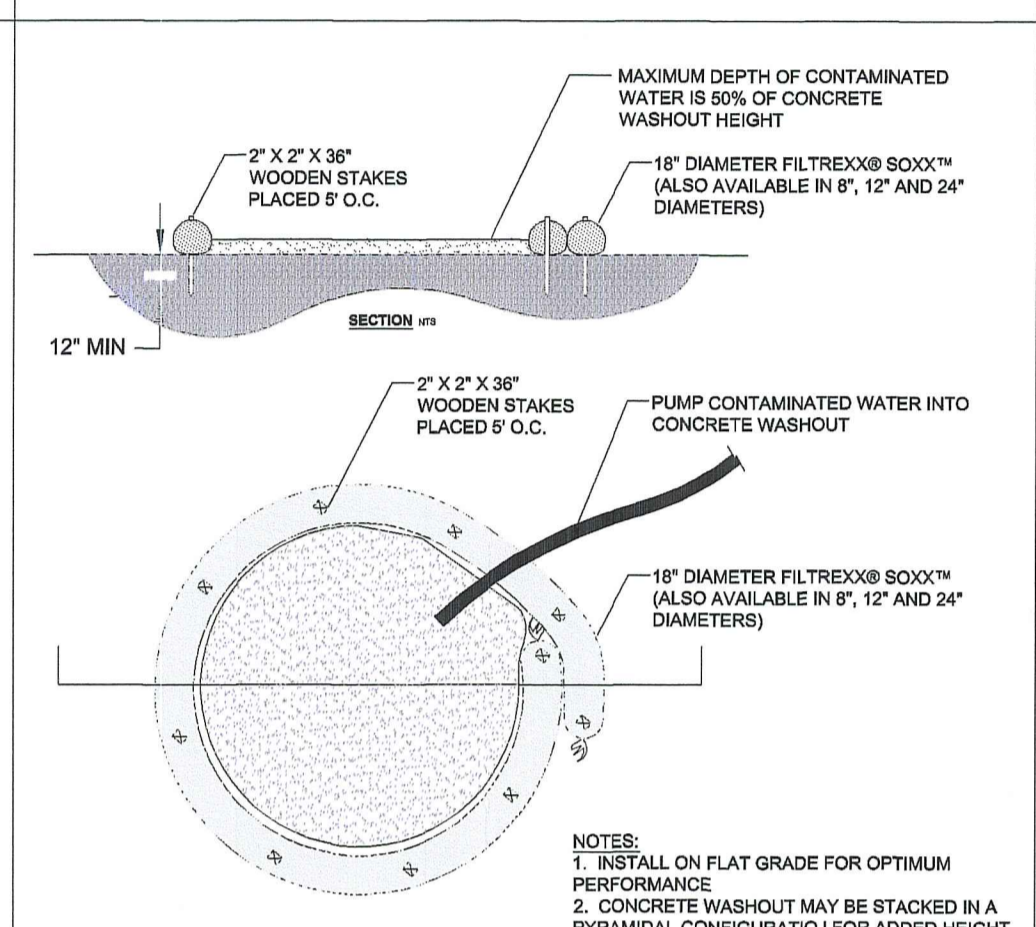
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 NOTE PER DEM:
 Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

REVISIONS:		
NO.	DATE	DESCRIPTION
1	1/23	REALIGNED SITE TO AVOID STREAM
2	5/23	INFILTRATION AREA PROTECTION

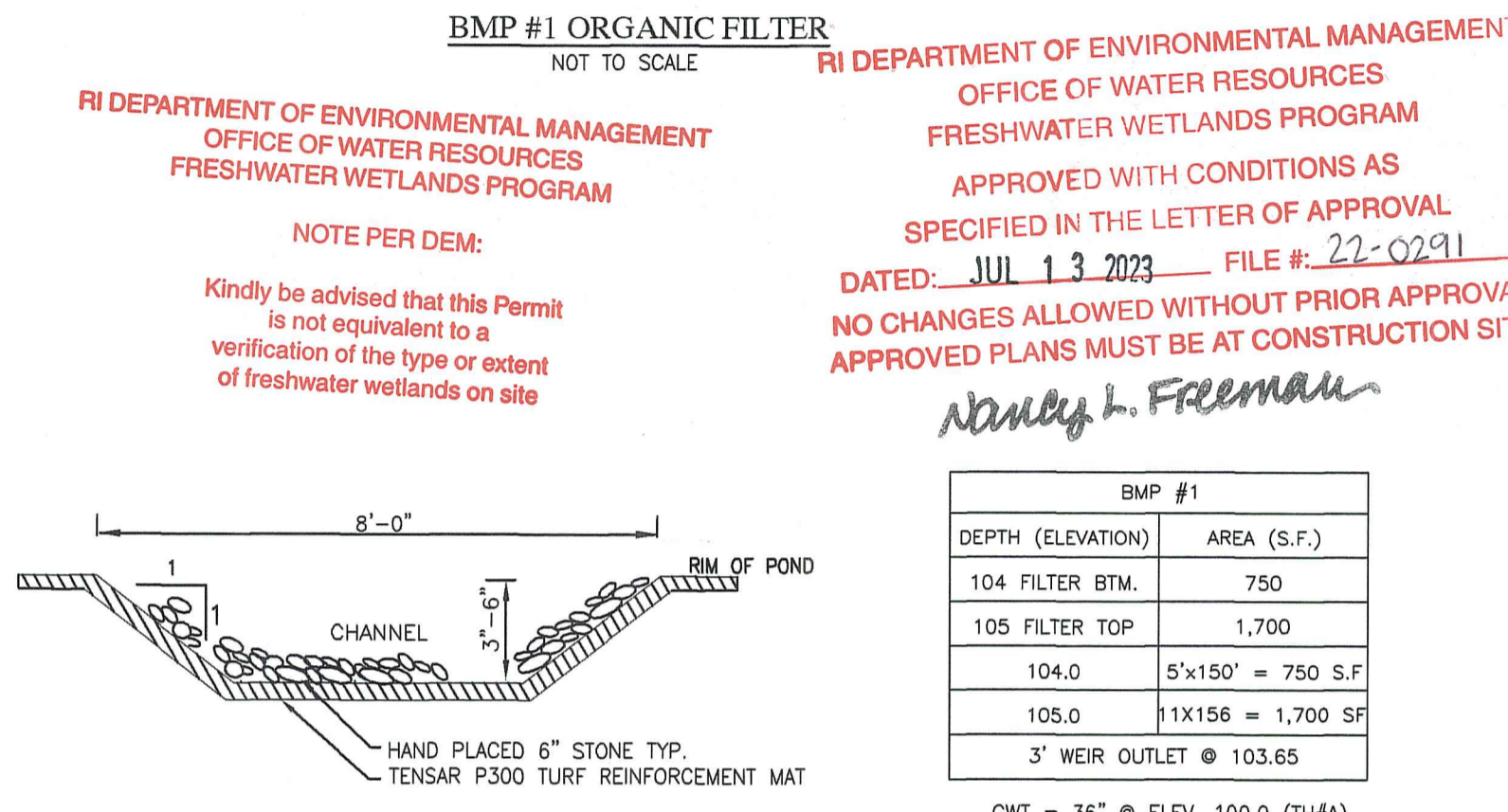
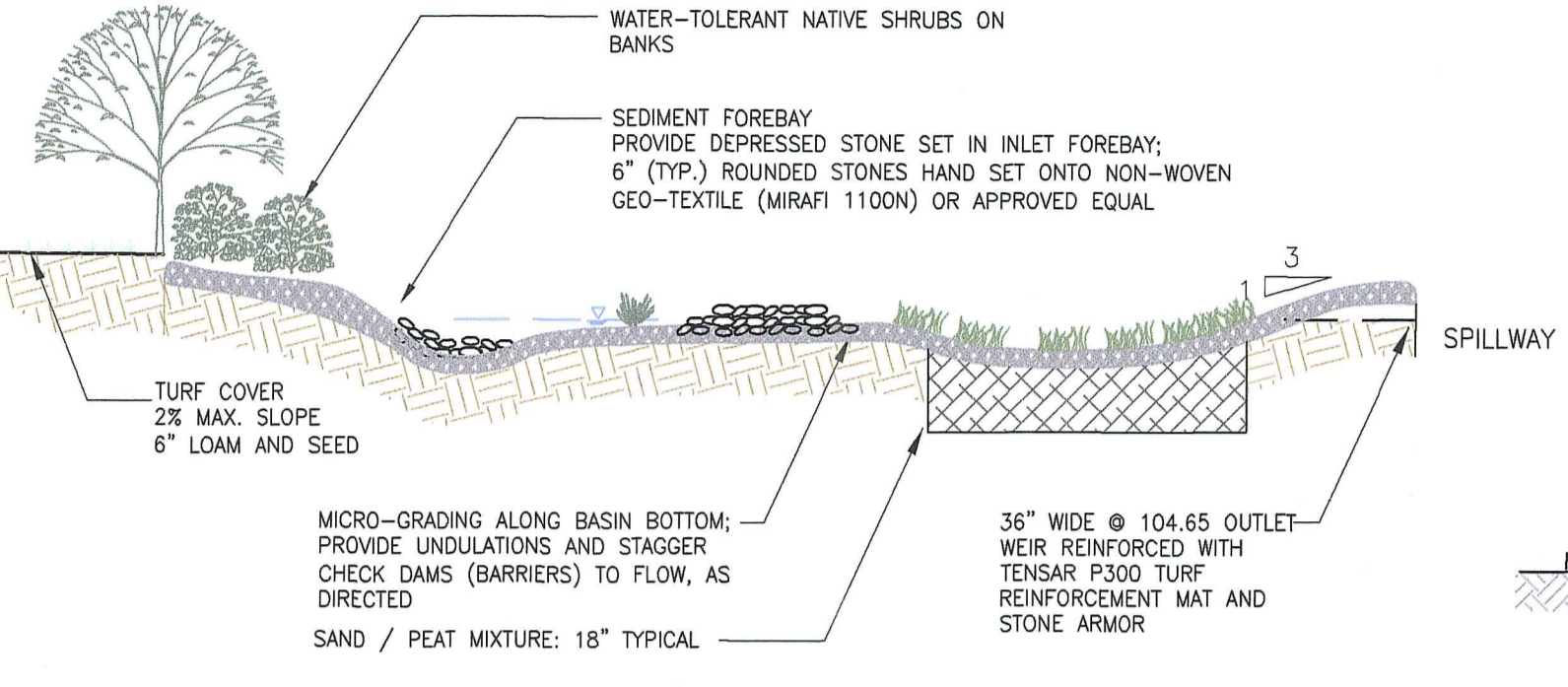
SCALE: 1" = 30'
 SHEET NUMBER
3



- NOTES:**
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
 2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
 4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.
 5. MUST BE LOCATED >50 FT AWAY FROM INLETS/WATERWAYS UNLESS THERE IS NO OTHER PRACTICAL ALTERNATIVE.



- NOTES:**
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
 2. CONCRETE WASHOUT MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY.
 3. CONCRETE WASHOUT MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION.



BMP #1

DEPTH (ELEVATION)	AREA (S.F.)
104 FILTER BTM.	750
105 FILTER TOP	1,700
104.0	5'x150' = 750 S.F.
105.0	11x156 = 1,700 SF
3" WEIR OUTLET @ 103.65	

GWT = 36' @ ELEV. 100.0 (TH#A)

NOTE TO OWNER AND CONTRACTOR
THE ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ALL DRAINAGE WORK.

BMP 1: ORGANIC FILTER

1. ALL ORGANIC FILTERS AREAS SHALL BE CONSTRUCTED FOLLOWING THE COMPLETION AND STABILIZATION OF OTHER SITE WORK. COMPACTION OF THE AREA PRIOR TO AND DURING CONSTRUCTION MUST BE AVOIDED. EXCAVATION SHALL BE COMPLETED USING LIGHT EQUIPMENT WITH WIDE TRACKS. IF THE AREA DOES BECOMES COMPACTED, SOIL MUST BE TILLED TO A MINIMUM DEPTH OF 12".

INSTALLATION

1. IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BMP AREA AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF BMP AREA IS EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF-TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH PRESSURE TIRES ARE NOT ACCEPTABLE.
2. COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BMP FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHESEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE PERFORMED TO RESTRUCTURE THE SOIL PROFILE THROUGH THE 12-IN COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
3. WHEN BACKFILLING THE FILTER FACILITIES, PLACE SOIL IN LIFTS 12". DO NOT USE HEAVY EQUIPMENT WITHIN THE FILTER BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.
4. FINAL GRADING SHALL BE COMPLETED WITH THE USE OF HAND TOOLS TO SATISFY STORM WATER MANAGEMENT REQUIREMENTS, AS DIRECTED BY THE ENGINEER.
5. FILTERS SHALL HAVE A 4" TOPSOIL LAYER AND VEGETATED WITH TURF.

MATERIALS

ORGANIC FILTER MEDIA - ORGANIC FILTER MEDIA SHALL CONSIST OF A 50% SAND AND 50% REED-SEDGE HEMIC PEAT. SAND SHALL BE CLEAN AASHTO M-6 OR ASTM C-33 CONCRETE SAND 0.02" TO 0.04 IN PARTICLE SIZE. SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATE OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO ROCK DUST CAN BE USED FOR SAND.

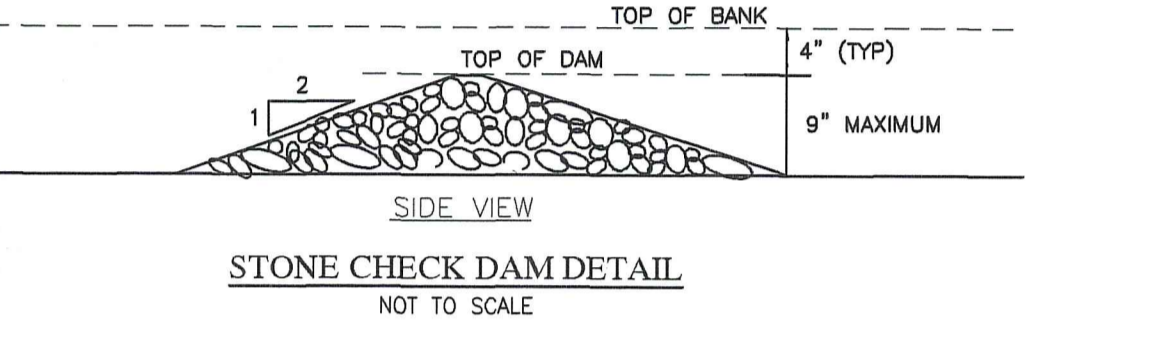
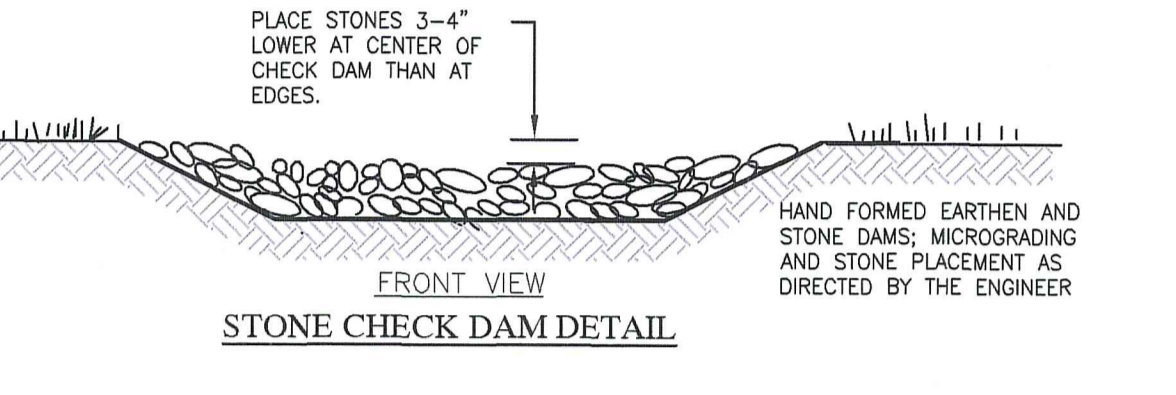
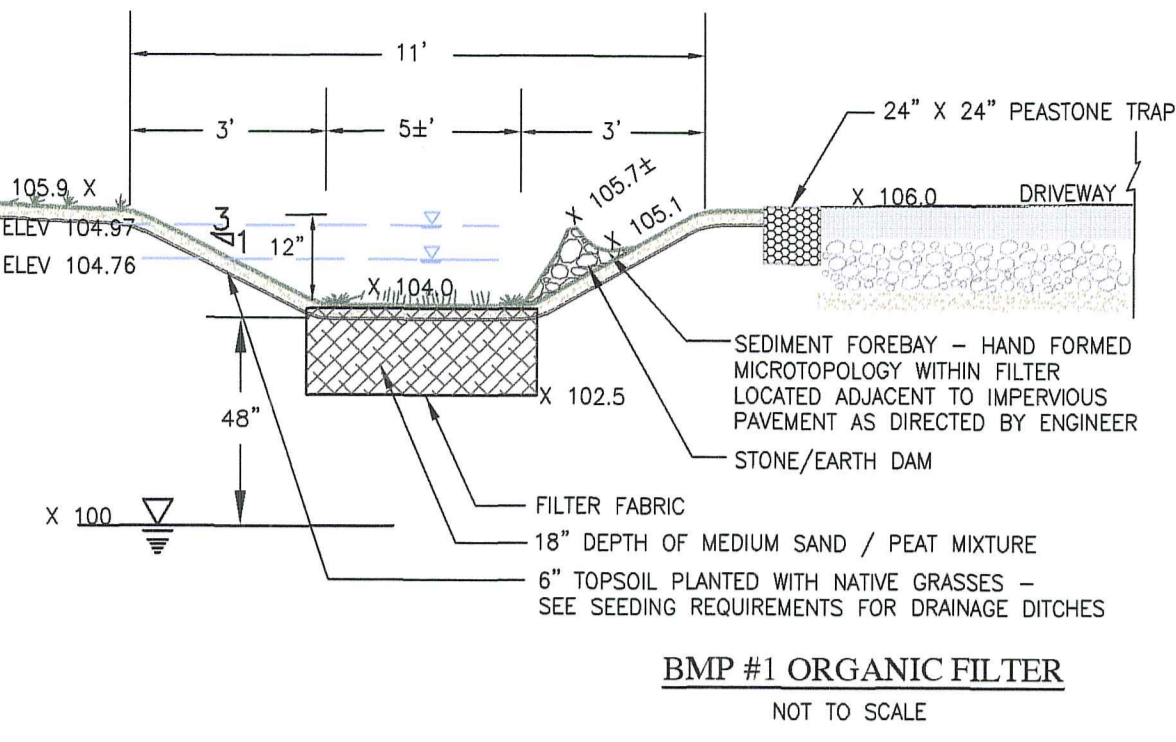
PEAT MATERIAL: PEAT SHALL BE REED-SEDGE HEMIC PEAT, SHREDDED, UNCOMPACTED, UNIFORM, AND CLEAN; MEETING THE FOLLOWING:

- PEAT ASH CONTENT: < 15%
- PH RANGE: 5.2 TO 4.9
- LOOSE BULK DENSITY 0.12 TO 0.15 G/CC

• SEED MIXTURES SHALL CONSISTS OF THE FOLLOWING:

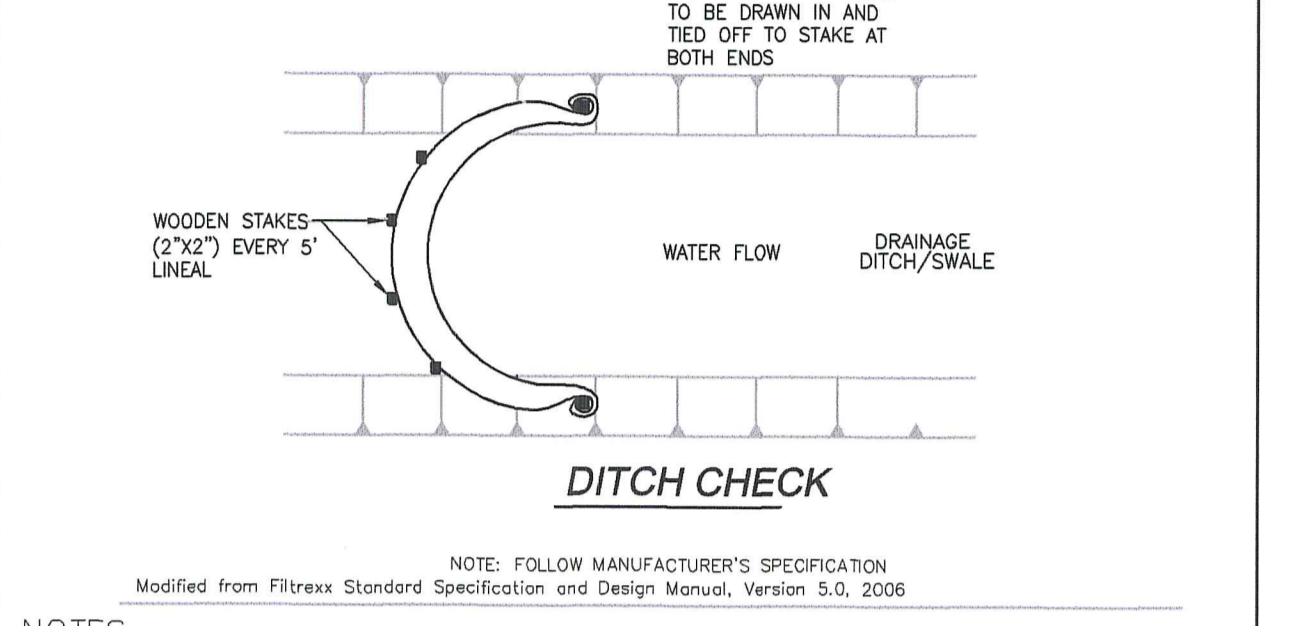
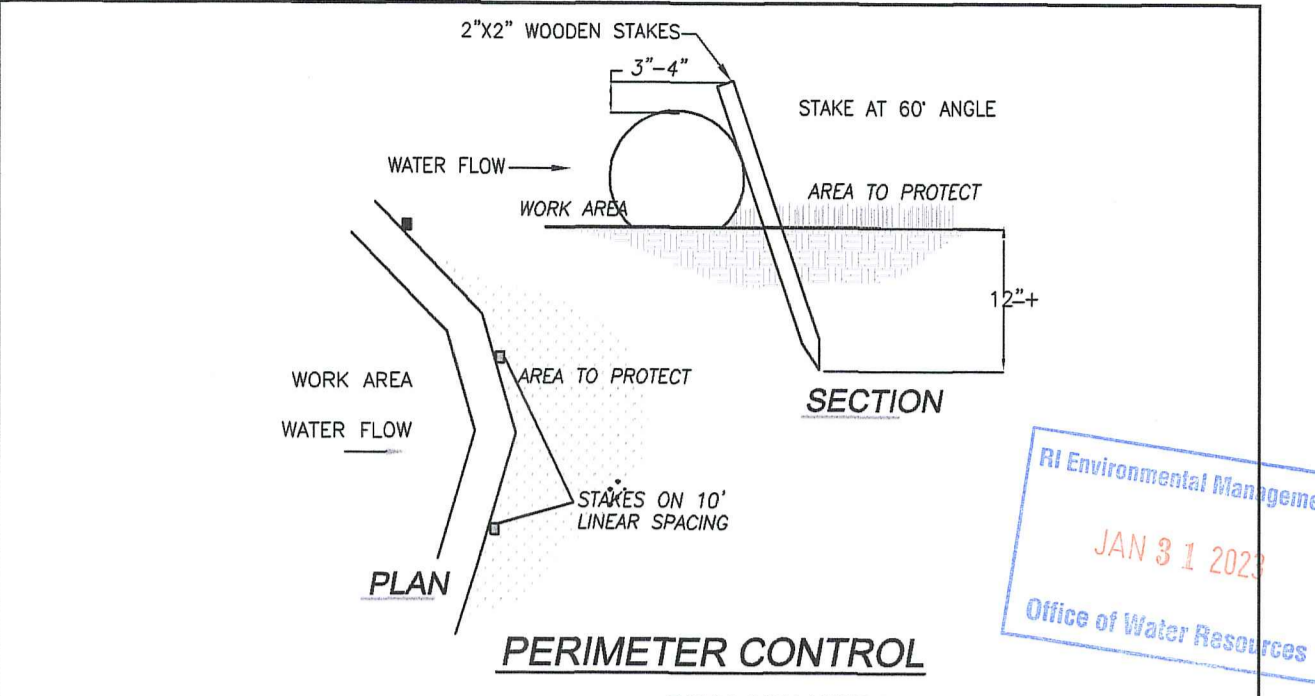
ORGANIC BASINS

SEED MIXTURE (VARIETY)	LBS / ACRES	LBS / 1000 SQ. FT
CREeping RED FESCUE	20	0.45
RETOP	2	0.05
TALL FESCUE (KENTUCKY 31)	20	0.45

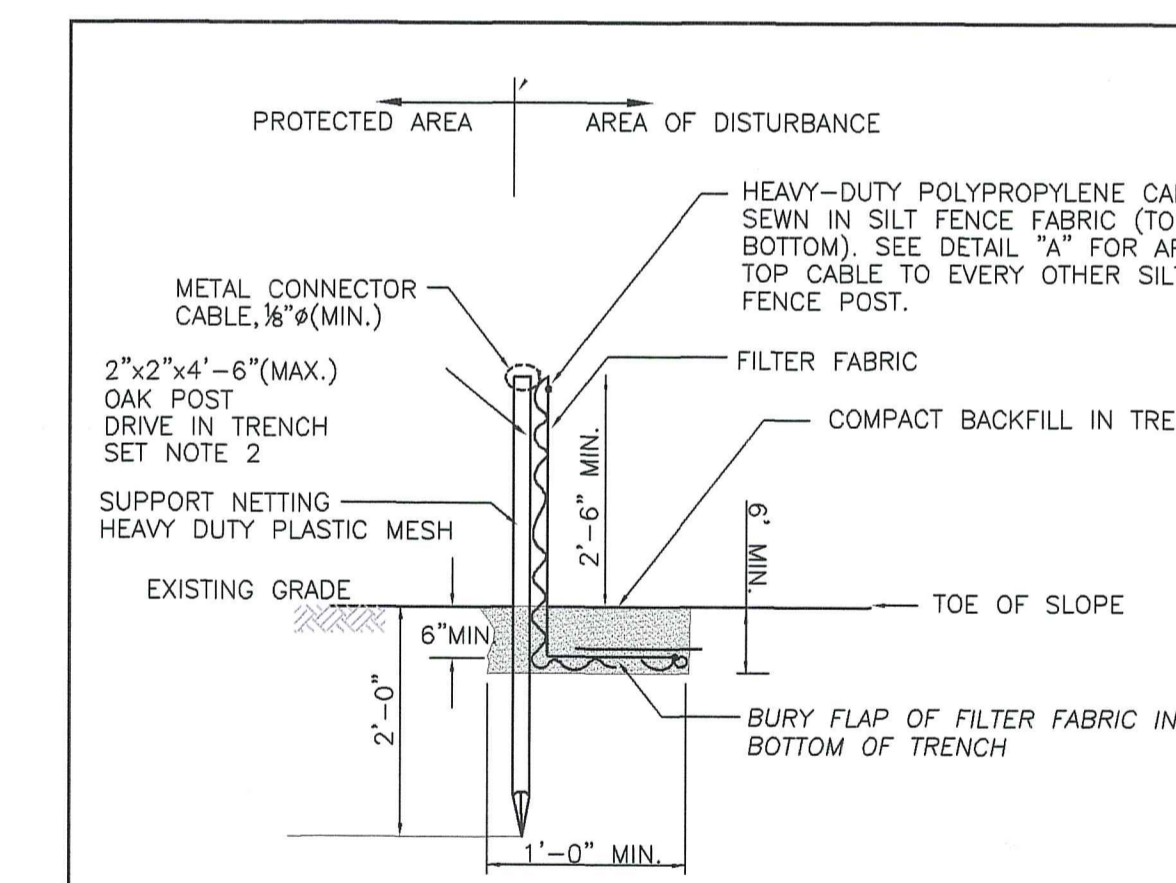
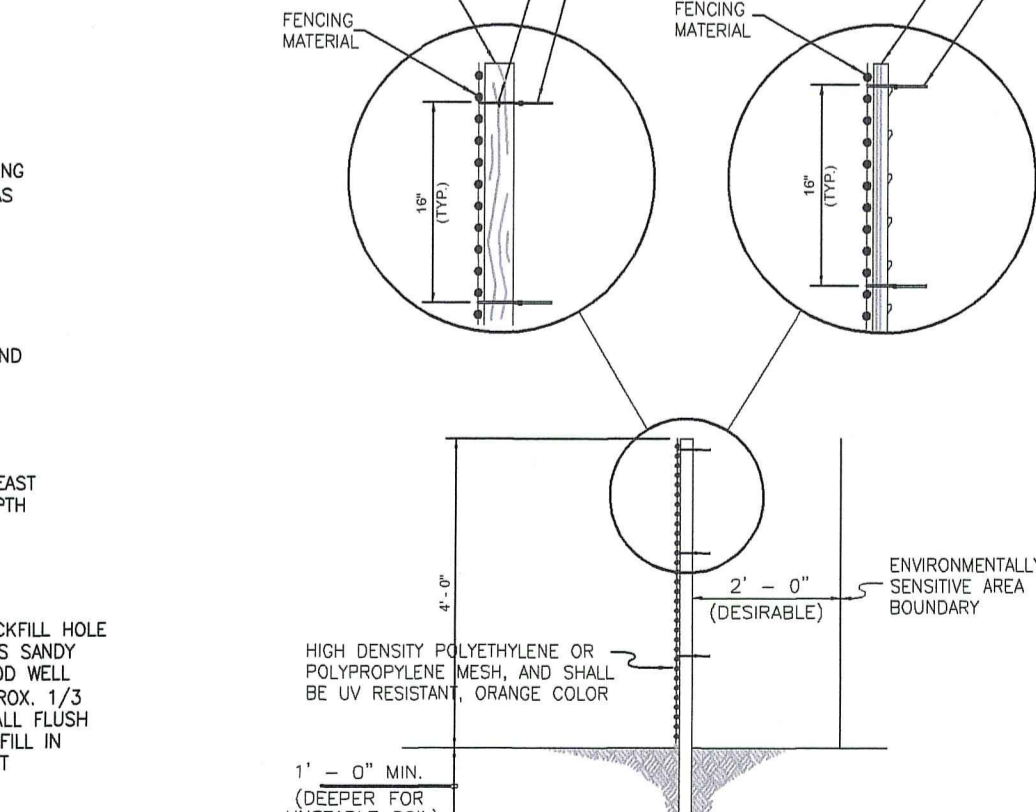
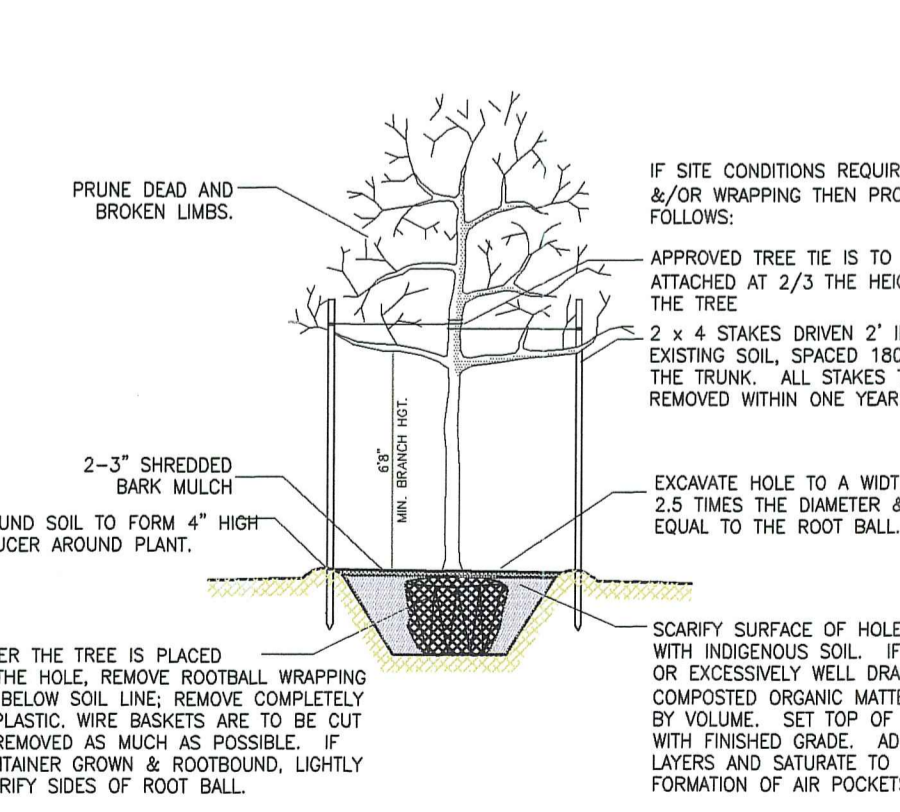
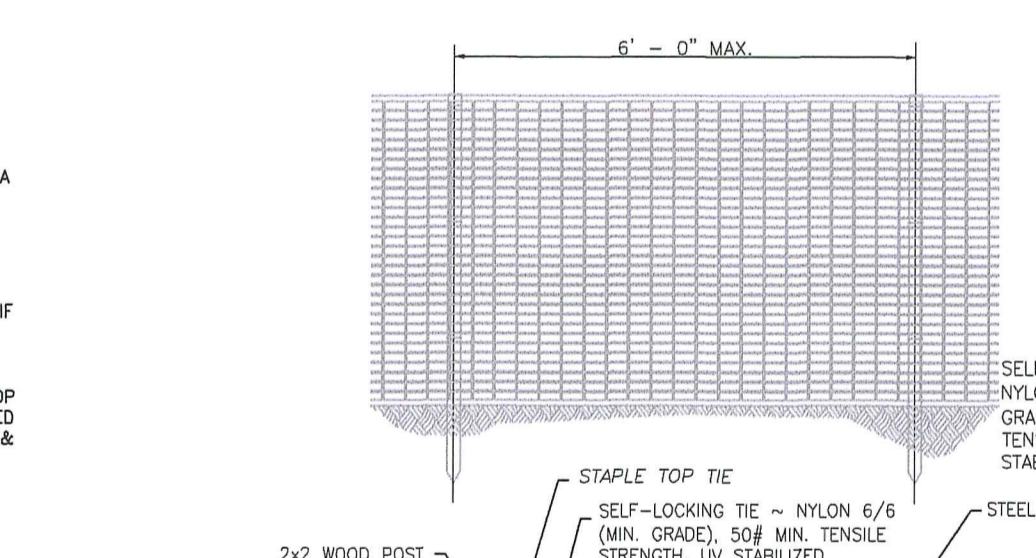
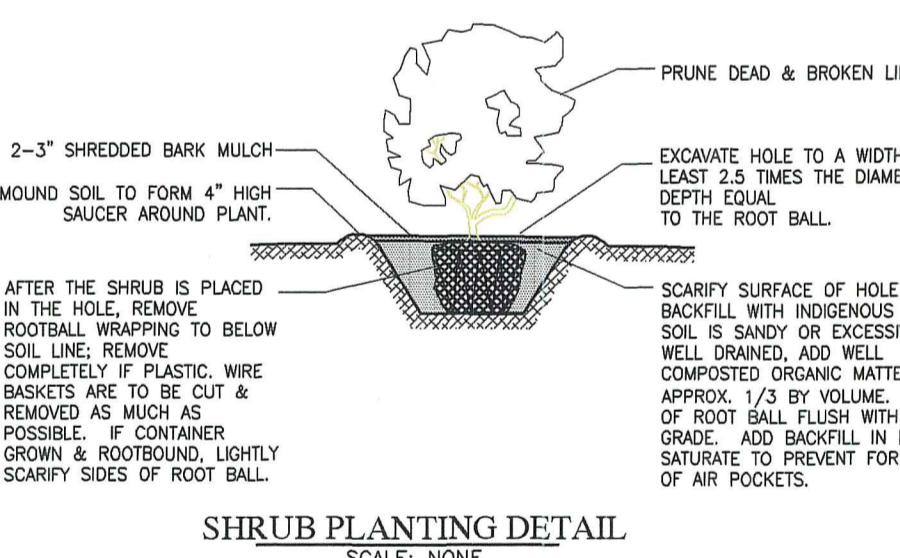


MINIMUM STONE GRADATION USED FOR CHECK DAMS

US STANDARD SIEVE SIZE	SIEVE SIZE (IN.)
24"	100
2"	90-100
1 1/2"	30-55
1 1/4"	0-25
1"	0-5



- NOTES:**
1. SEDIMENT CONTROL SHOULD BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER DISTURBED AREA IN EXTREME CONDITIONS (I.E., 2:1 SLOPES). A SECOND SEDIMENT CONTROL SHALL BE CONSTRUCTED AT THE TOP OF THE SLOPE.
 2. EFFECTIVE SOX HEIGHT IN THE FIELD SHOULD BE AS FOLLOWS:
6" DIAMETER SEDIMENT CONTROL = 6.5" HIGH
12" DIAMETER SEDIMENT CONTROL = 8.5" HIGH
18" DIAMETER SEDIMENT CONTROL = 14.5" HIGH
24" DIAMETER SEDIMENT CONTROL = 19" HIGH
 3. STAKES SHALL BE INSTALLED THROUGH THE MIDDLE OF THE SEDIMENT CONTROL ON 10 FT (3M) CENTERS, USING 2 IN (50MM) BY 2 IN (50MM) BY 3 FT (1M) HARDWOOD STAKES. IN THE EVENT STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.
 4. STAKING DEPTH FOR SAND AND SILT LOAM SOILS SHALL BE 12 IN (300MM), AND 8 IN (200MM) FOR CLAY SOILS.
 5. SOCK IS TYPICALLY FILLED WITH 100% INERT, WEED/SEED/DISEASE FREE RECYCLED KILN-DRIED INDUSTRIAL WOOD WASTE BUT CAN ALSO BE FILLED WITH LOCALLY PRODUCED COMPOST OR CHIPPED TIMBER DEBRIS. FOLLOW MANUFACTURER'S INSTRUCTIONS.
- COMPOST FILTER SOCK (OPTIONAL EROSION CONTROL)**

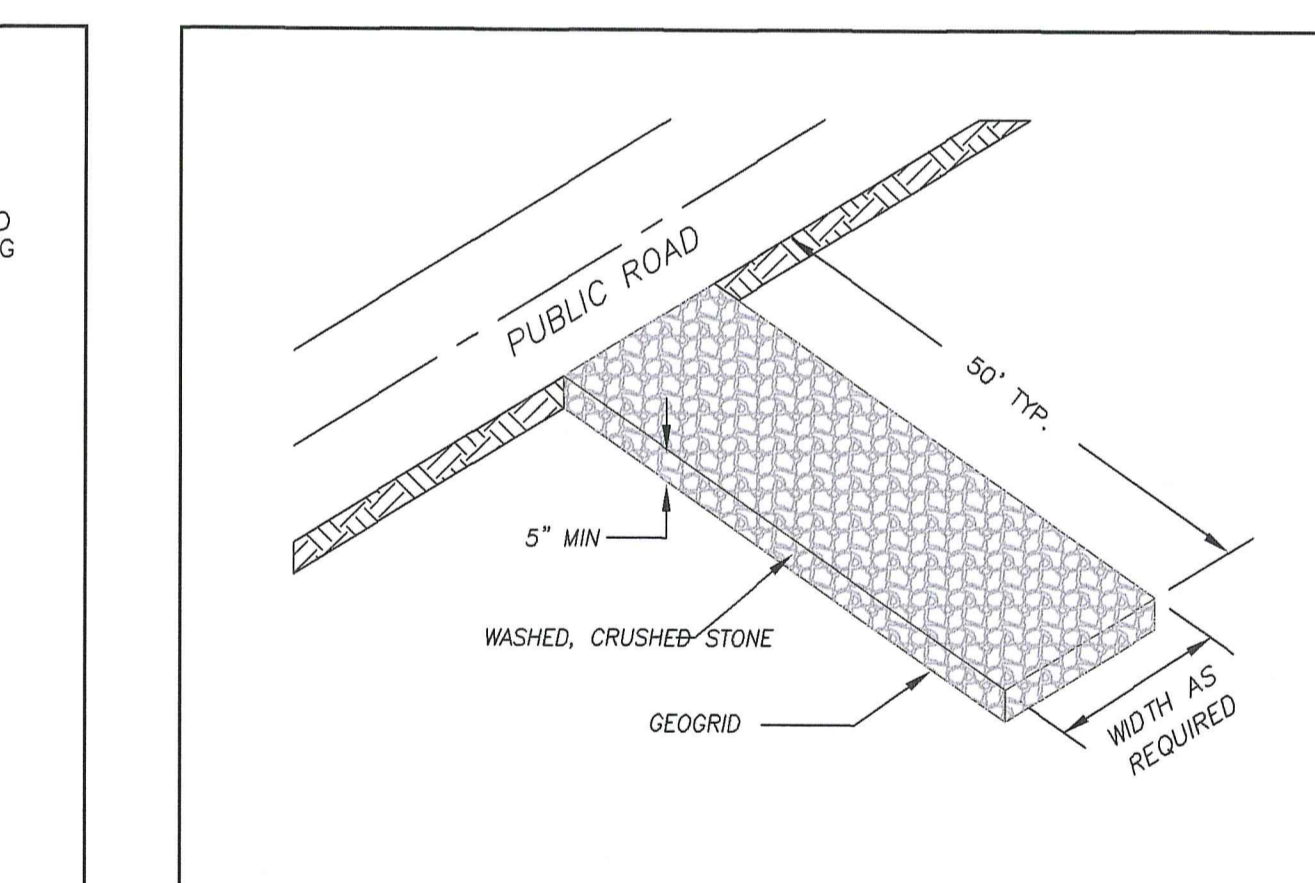


RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

NO.	BY	DATE
1		JUNE 15, 1998

R.I. STANDARD 9.2.0



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

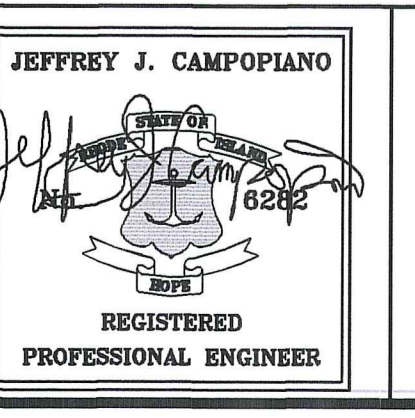
NO.	BY	DATE
1		JUNE 15, 1998

R.I. STANDARD 9.9.0

EROSION CONTROL DETAILS

COMMERCIAL TRADE BUILDING
KENYON SCHOOL ROAD
A.P. 10 E / LOT 44/2
RICHMOND, RHODE ISLAND

PREPARED BY:
JEFFREY J. CAMPOPIANO, P.E.
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jeff@campopiano-eng.com



PREPARED FOR:
VISION LANDSCAPING, LLC
P.O. BOX 780
CHARLESTOWN, RHODE ISLAND 02813
PHONE: 401-954-6464

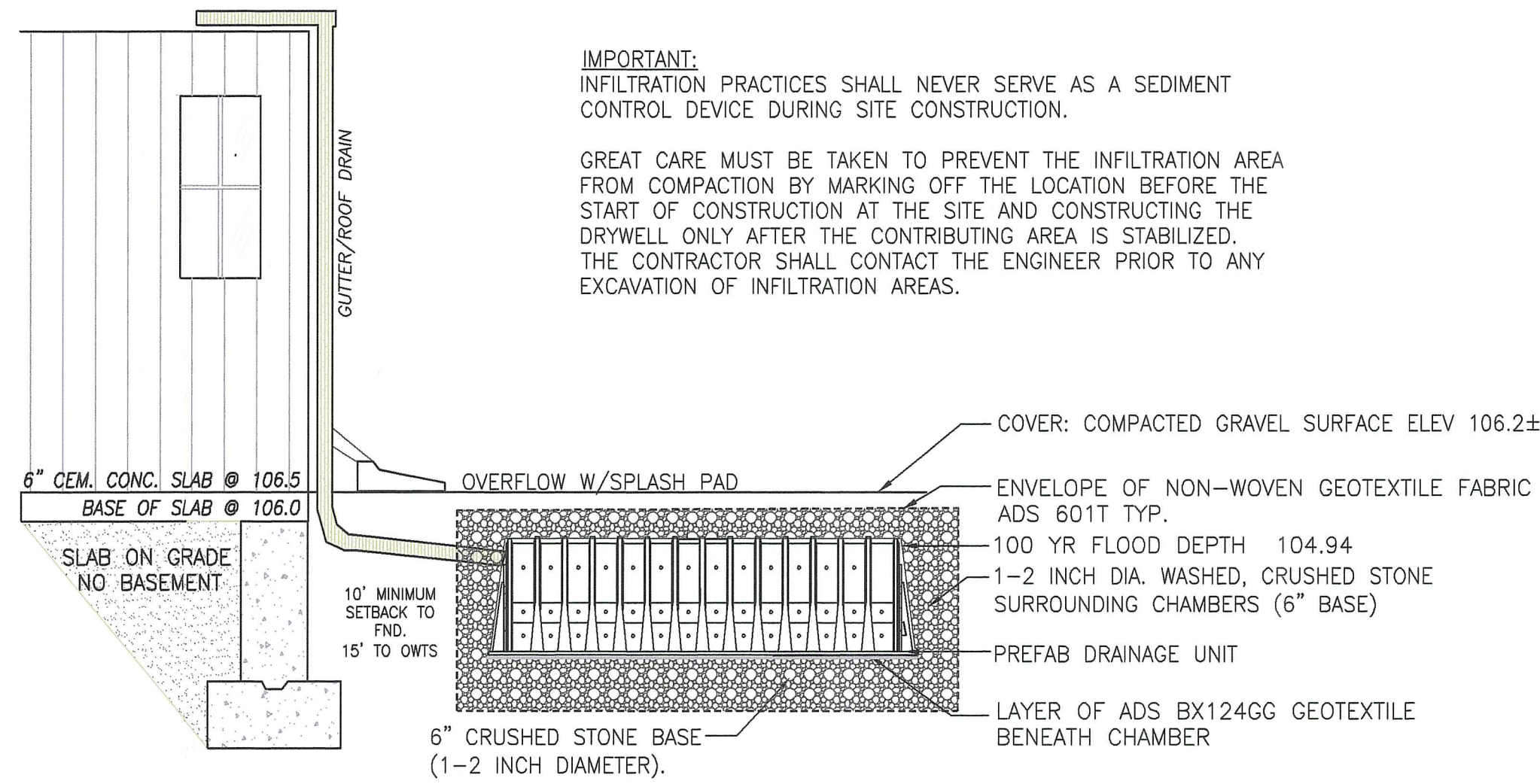
REVISIONS:

NO.	DATE	DESCRIPTION
1	1/23	REALIGNED SITE TO AVOID STREAM

DATE: 6/21/22
SCALE: NTS
SHEET NUMBER
4

**BMP #2 DRY WELL
DRYWELL INSTALLATION**

- INFILTRATION TRENCH OR CHAMBER SYSTEMS MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE DRYWELL HAS RECEIVED FINAL STABILIZATION. CONSTRUCTION EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE INFILTRATION TRENCH OR CHAMBER AREAS TO MINIMIZE COMPACTION OF THE SOIL.
- EXCAVATE THE INFILTRATION CHAMBER TO THE DESIGN DIMENSIONS. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE TRENCH/CHAMBER SIDES TO ENHANCE TRENCH WALL STABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE TRENCH/CHAMBER SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.
- INFILTRATION CHAMBERS SHALL CONSIST OF CHAMBERS AS SHOWN OR ANY SUBSTITUTIONS MUST BE OF EQUAL SIZE AND COMPRISED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HDPE) AND MEET AASHTO H10 AND H20 STANDARDS.
- THE STONE AGGREGATE **SHALL** BE PLACED IN LIFTS AND COMPACTED USING PLATE COMPACTORS. A MAXIMUM LOOSE LIFT THICKNESS OF 8 INCHES IS RECOMMENDED. THE GRAVEL STONE FOR THE INFILTRATION TRENCH/CHAMBER SHALL BE WASHED AND MEET ONE OF THE FOLLOWING AASHTO STD. M-43; SIZE NO. 2 OR NO. 3.
- VOIDS CAN BE CREATED BETWEEN THE FABRIC AND THE EXCAVATION SIDES AND SHALL BE AVOIDED. REMOVING BOULDERS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOID; THEREFORE, NATURAL SOILS **SHOULD** BE PLACED IN THESE VOIDS AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES. **SHALL**
- PVC PIPES SHALL BE SCHEDULE 40 AND MEET ASTM STD. D 1784.



**BMP #2 DRY WELL TYPICAL SECTION VIEW
SC-160LP**

IMPORTANT:
INFILTRATION PRACTICES SHALL NEVER SERVE AS A SEDIMENT CONTROL DEVICE DURING SITE CONSTRUCTION.

GREAT CARE MUST BE TAKEN TO PREVENT THE INFILTRATION AREA FROM COMPACTION BY MARKING OFF THE LOCATION BEFORE THE START OF CONSTRUCTION AT THE SITE AND CONSTRUCTING THE DRYWELL ONLY AFTER THE CONTRIBUTING AREA IS STABILIZED. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO ANY EXCAVATION OF INFILTRATION AREAS.

SC-160LP STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-160LP.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS 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 BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1.5".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT². THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-160LP SYSTEM

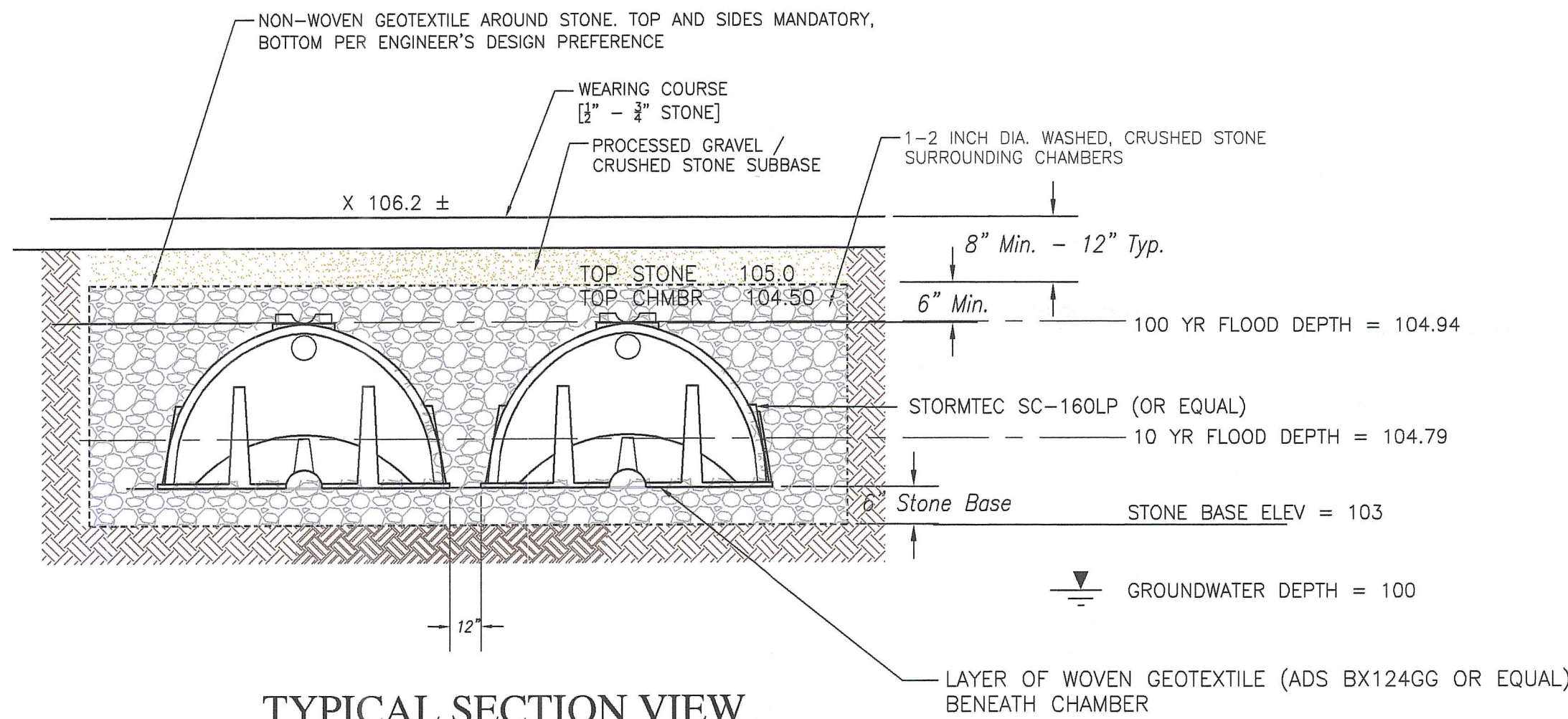
- STORMTECH SC-160LP CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-160LP CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
- FOUNDATION STONE AND EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE, AASHTO M43 #3,357, 4, 467, 5, 56, OR 57.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- THE DEPTH OF FOUNDATION STONE SHALL BE DETERMINED BASED ON THE SUBGRADE BEARING CAPACITY PROVIDED BY THE SITE DESIGN ENGINEER.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES CONCERNING CHAMBER FOUNDATION DESIGN AND SUBGRADE BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- CHAMBERS SHALL BE INSTALLED "TOE TO TOE". NO ADDITIONAL SPACING BETWEEN ROWS IS REQUIRED.
- 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.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-160LP CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRE LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATE: JUL 13 2023 FILE # 22-0291
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

CONTACT STORMTECH AT 1-888-982-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



TYPICAL SECTION VIEW

NON-WOVEN GEOTEXTILE AROUND STONE, TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE

WEARING COURSE (1/2" - 3/4" STONE)

PROCESSED GRAVEL / CRUSHED STONE SUBBASE

1-2 INCH DIA WASHED, CRUSHED STONE SURROUNDING CHAMBERS

8" Min. - 12" Typ.

100 YR FLOOD DEPTH = 104.94

10 YR FLOOD DEPTH = 104.79

Stone Base

STONE BASE ELEV = 103

GROUNDWATER DEPTH = 100

LAYER OF WOVEN GEOTEXTILE (ADS BX124GG OR EQUAL) BENEATH CHAMBER

ACCEPTABLE FILL MATERIALS: STORMTECH SC-160LP 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 SUBBASE 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 ('B' LAYER) TO 14" (355 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE ^{2,3}

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 COMPACTED IN 6" (150 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.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

ADS GEOSYNTHETICS 801T NON-WOVEN GEOTEXTILE ALL AROUND CLEAN CRUSHED, ANGULAR STONE IN A & B LAYERS

PERIMETER STONE (SEE NOTE 4)

EXCAVATION WALL (CAN BE SLOPED OR VERTICAL)

CONCRETE COLLAR GRADE

CONCRETE COLLAR NOT REQUIRED FOR UNPAVED APPLICATION

12" (300 mm) NYLOPLAST INLINE DRAIN BODY W/ SOLID HINGED COVER PART# 2712AG6PKIT

SOLID COVER: 1299CGC*

6" (150 mm) SDR35 PIPE

SC-160LP CHAMBER

6" (150 mm) INSERTA TEE PART# 69298BSTIP

INSERTA TEE TO BE CENTERED ON CORRUGATION CREST

* THE PART# 2712AG6PKIT CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

PAVEMENT LAYER (DESIGNED BY SITE DESIGN ENGINEER)

6" (150 mm) MIN

14" (350 mm) MIN

10" (300 mm) MAX

12" (305 mm)

12" (300 mm) MIN

DEPTH OF BASE STONE TO BE DETERMINED BY SITE DESIGN ENGINEER 6" (150 mm) MIN

NO SPACING REQUIRED BETWEEN CHAMBERS

SUBGRADE SOILS (SEE NOTE 3)

SC-160LP END CAP

NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
3. 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.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:

- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS
- TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1.5"
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT². AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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

Storm Tech Chamber System
888-982-2694 | WWW.STORMTECH.COM

4800 TRUMAN BLVD
HILLIARD, OH 43026

STANDARD CROSS SECTION
DATE: 9/1/2022
DRAWN: RLJ
CHECKED: RLJ
PROJECT #:
SCALE: AS SHOWN

1 SHEET OF 1

NOMINAL CHAMBER SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH) 25.0" X 12.0" X 85.4"
CHAMBER STORAGE 6.85 CUBIC FEET
MINIMUM INSTALLED STORAGE* 16.0 CUBIC FEET
WEIGHT 24.0 lbs.

*ASSUMES 6" ABOVE, 6" BELOW, AND STONE BETWEEN CHAMBERS WITH 40% STONE POROSITY.

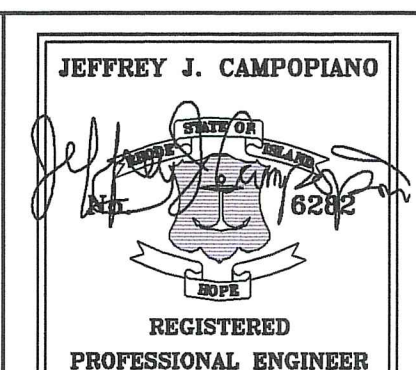
CHAMBER SC-160LP

**SC-160LP 6" INSPECTION PORT DETAIL
NTS**

RI Environmental Management
JUN 26 2023

STORMWATER DETAILS
COMMERCIAL TRADE BUILDING
KENYON SCHOOL ROAD
A.P. 10 E / LOT 44/2
RICHMOND, RHODE ISLAND

PREPARED BY:
JEFFREY J. CAMPOPIANO, P.E.
16 WEST MAIN STREET
WICKFORD, RHODE ISLAND 02852
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jeff@campopiano-eng.com



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VISION LANDSCAPING, LLC
P.O. BOX 780
CHARLESTOWN, RHODE ISLAND 02813
PHONE: 401-954-6464

REVISIONS:		
NO.	DATE	DESCRIPTION
1	1/23	CHAMBER REFERENCE
2	6/23	SLAB & BMP ELEV. & SEPARATION

DATE: 6/21/22
SCALE: NTS
SHEET NUMBER
5