

Site Plans for a Proposed Pedestrian Sidewalk connecting
Route 7 to the Senior Housing Driveway

within

BRYANT UNIVERSITY

1150 DOUGLAS PIKE
SMITHFIELD, RHODE ISLAND
AP 49, LOT 125

PROJECT TEAM

OWNER / APPLICANT: BRYANT UNIVERSITY
1150 DOUGLAS PIKE
SMITHFIELD, RI 02903

LANDSCAPE ARCHITECT: AYERS SAINT GROSS
1940 HULL STREET, SUITE 100
BALTIMORE, MD 21230
PHONE: 410-347-8500

CIVIL ENGINEER: JOE CASALI ENGINEERING, INC.
300 POST ROAD
WARWICK, RI 02888
PHONE: 401-944-1300
FAX: 401-944-1313

SURVEYOR: DOUGLAS DESIGN GROUP
101 PLAIN STREET
LOWER LEVEL, SUITE C
PROVIDENCE, RI 02903
PHONE: 401-284-0085

BIOLOGIST: NATURAL RESOURCE SERVICES, INC.
180 TINKHAM LANE
HARRISVILLE, RI 02830
PHONE: 401-568-7390

GENERAL NOTES:

- THE APPLICANT AND OWNER IS BRYANT UNIVERSITY OF 1150 DOUGLAS PIKE, SMITHFIELD, RI 02917.
- PROJECT SITE IS LOCATED ENTIRELY WITHIN AP 49, LOT 125.
- CONTRACTOR SHALL NOTIFY 'DIGSAFE' (811) AT LEAST 72 HOURS BEFORE EXCAVATING.
- CLASS I COMPREHENSIVE BOUNDARY SURVEY AND CLASS III TOPOGRAPHIC SURVEY COMPLETED BY DOUGLAS DESIGN GROUP, 101 PLAIN STREET, LOWER LEVEL, SUITE C, PROVIDENCE, RI 02903 IN JULY AND OCTOBER 2023.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND 'DIG-SAFE' MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
- THIS SITE LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD), AS SHOWN ON THE FIRM MAPS FOR PROVIDENCE COUNTY, COMMUNITY PANEL NO. 44007C0166H, MAP EFFECTIVE MARCH 2, 2015.
- THERE ARE NO KNOWN HIGH HAZARD AREAS ON THE PROJECT SITE.
- SOILS EXISTING ON THE SITE CONSIST OF CANTON AND CHARLTON FINE SANDY LOAMS, 3-15% SLOPES, VERY ROCKY (CK), PAXTON FINE SANDY LOAM, 0-8% SLOPES, VERY STONY (P8), AND UDHORTMENTS-URBAN LAND COMPLEX (UD). THESE SOILS ARE NOT CONSIDERED PRIME FARMLAND.
- THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE WOONASQUATUCKET RIVER WATERSHED.
- FRESHWATER WETLANDS DELINEATED BY NATURAL RESOURCE SERVICES, INC. OF BURRILLVILLE, RI IN SEPTEMBER 2023.
- SOIL EVALUATIONS WERE CONDUCTED BY JOE CASALI ENGINEERING, INC. IN OCTOBER 2022. SOIL EVALUATION FORMS CONTAINING ESTIMATED SEASONAL HIGH GROUND WATER ELEVATIONS ARE PROVIDED ON THE DETAIL SHEETS AND ARE AVAILABLE TO THE CONTRACTOR UPON REQUEST. NORTHERN DRILL SERVICE, INC. PERFORMED SOIL BORINGS WITHIN THE PROJECT AREA IN SEPTEMBER 2023.
- TELEPHONE, ELECTRIC, SEWER, GAS, AND WATER SERVICES ARE ALL AVAILABLE FROM WITHIN THE BRYANT UNIVERSITY CAMPUS.
- ACCORDING TO AN OCTOBER 2023 CLASS III COMPREHENSIVE BOUNDARY, UTILITY AND TOPOGRAPHIC SURVEY PREPARED BY DOUGLAS DESIGN SERVICES, INC., THERE IS AN ELECTRICAL EASEMENT THAT RUNS ALONG JACOB DRIVE.
- TELEPHONE, ELECTRIC, SEWER, GAS, AND WATER SERVICES ARE ALL AVAILABLE TO THE PROJECT SITE.
- SPECIAL AREAS OF CONCERN AFFECTING THE DEVELOPMENT PARCEL (OR EXISTING STRUCTURES):
 - NATURAL HERITAGE AREA, AS DEFINED BY RIDEM: N/A
 - THE AREAS UNDER JURISDICTION OF ANY SPECIAL AREA MANAGEMENT PLAN (SAMP) OF RI CMR: N/A
 - A GROUNDWATER PROTECTION OVERLAY DISTRICT: N/A
 - A WELLHEAD PROTECTION AREA: N/A
 - GROUNDWATER RECHARGE AREA: N/A
 - AREAS WITHIN A TMDL WATERSHED, AS DEFINED BY RIDEM: N/A
 - OWTS CRITICAL RESOURCE AREA, AS DEFINED BY RIDEM: N/A
 - A DRINKING WATER SUPPLY WATERSHED, AS DEFINED BY RIDEM: N/A
 - NATIONAL REGISTER OF HISTORIC PLACES: N/A

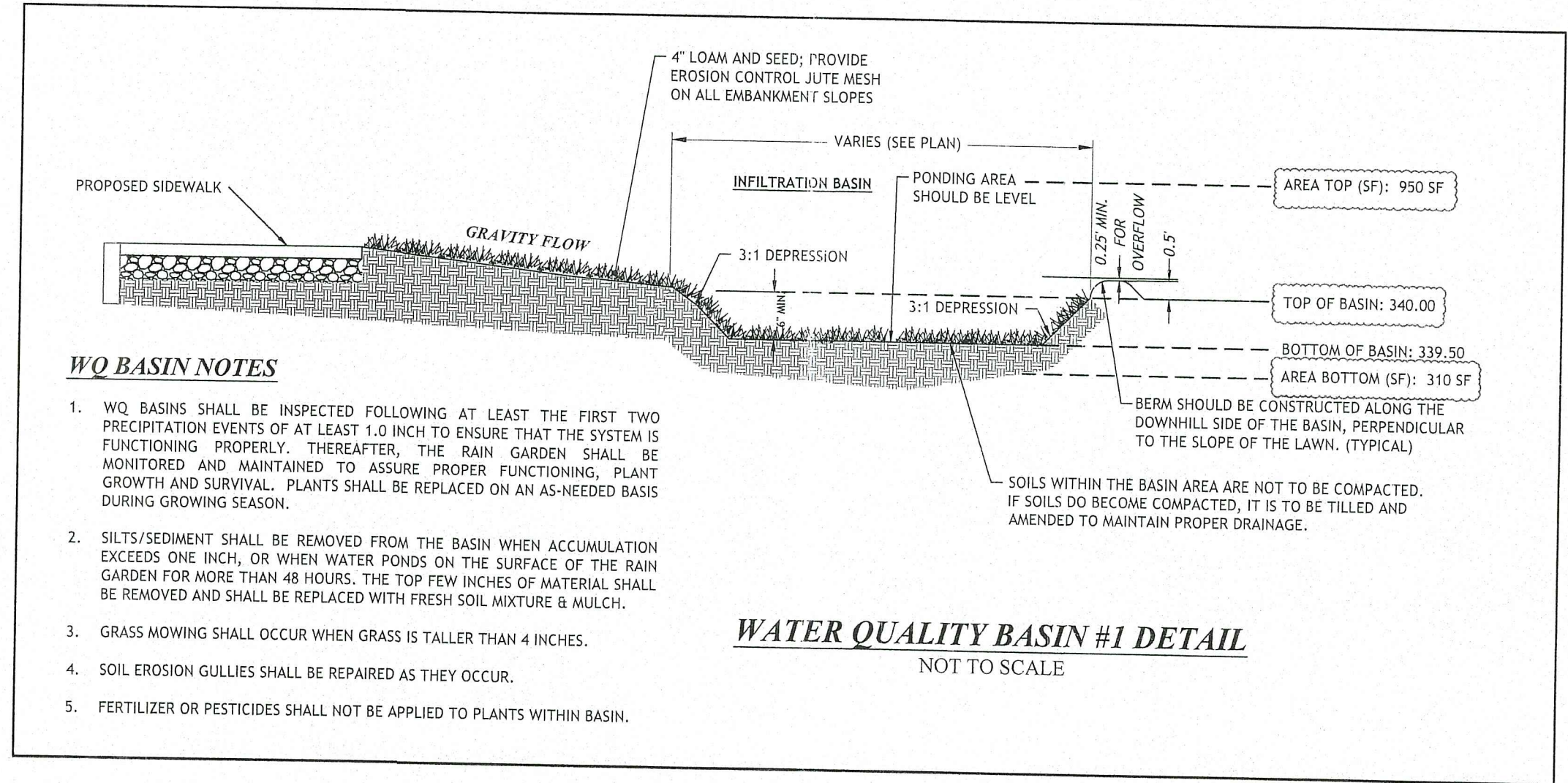
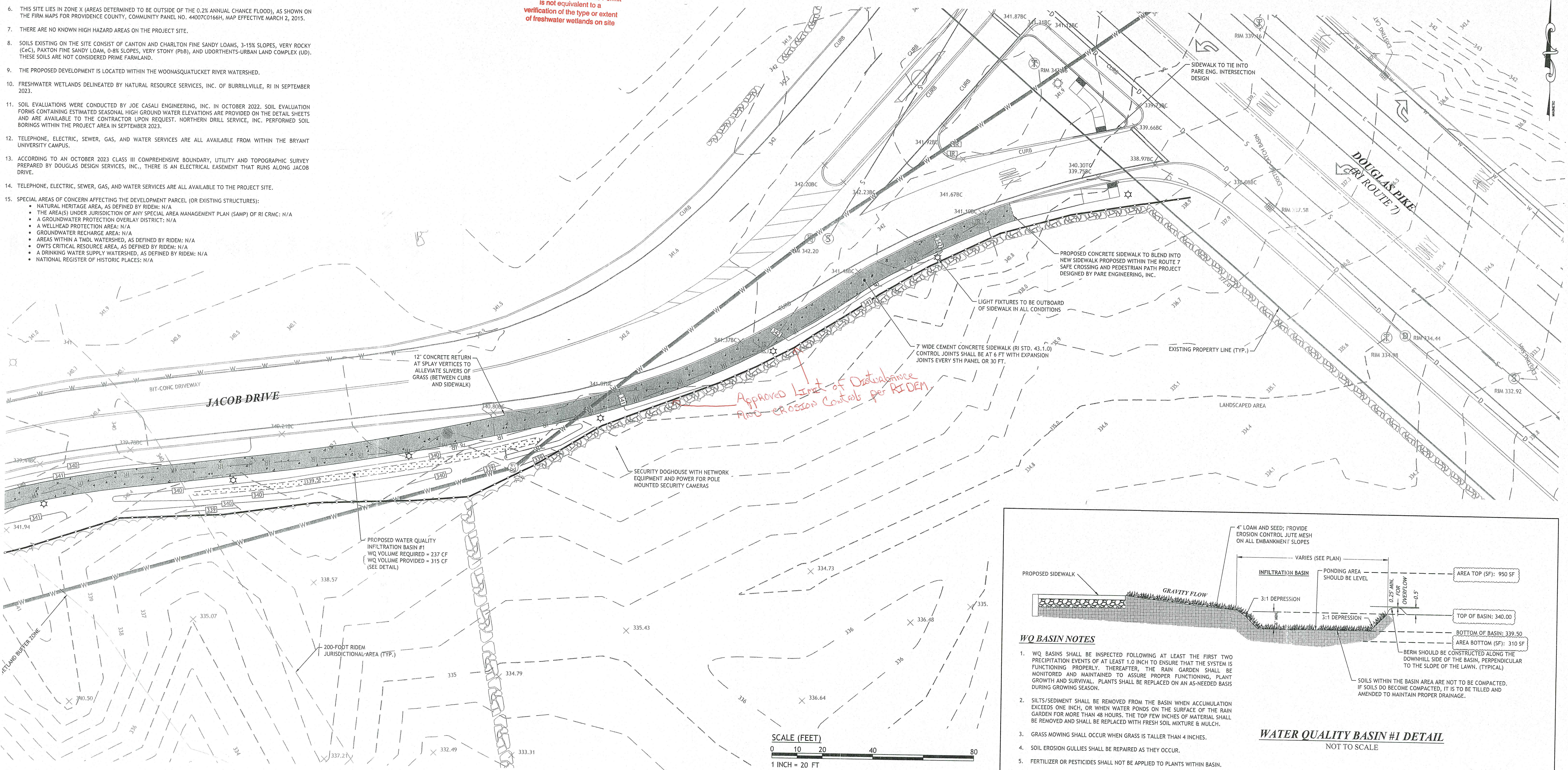
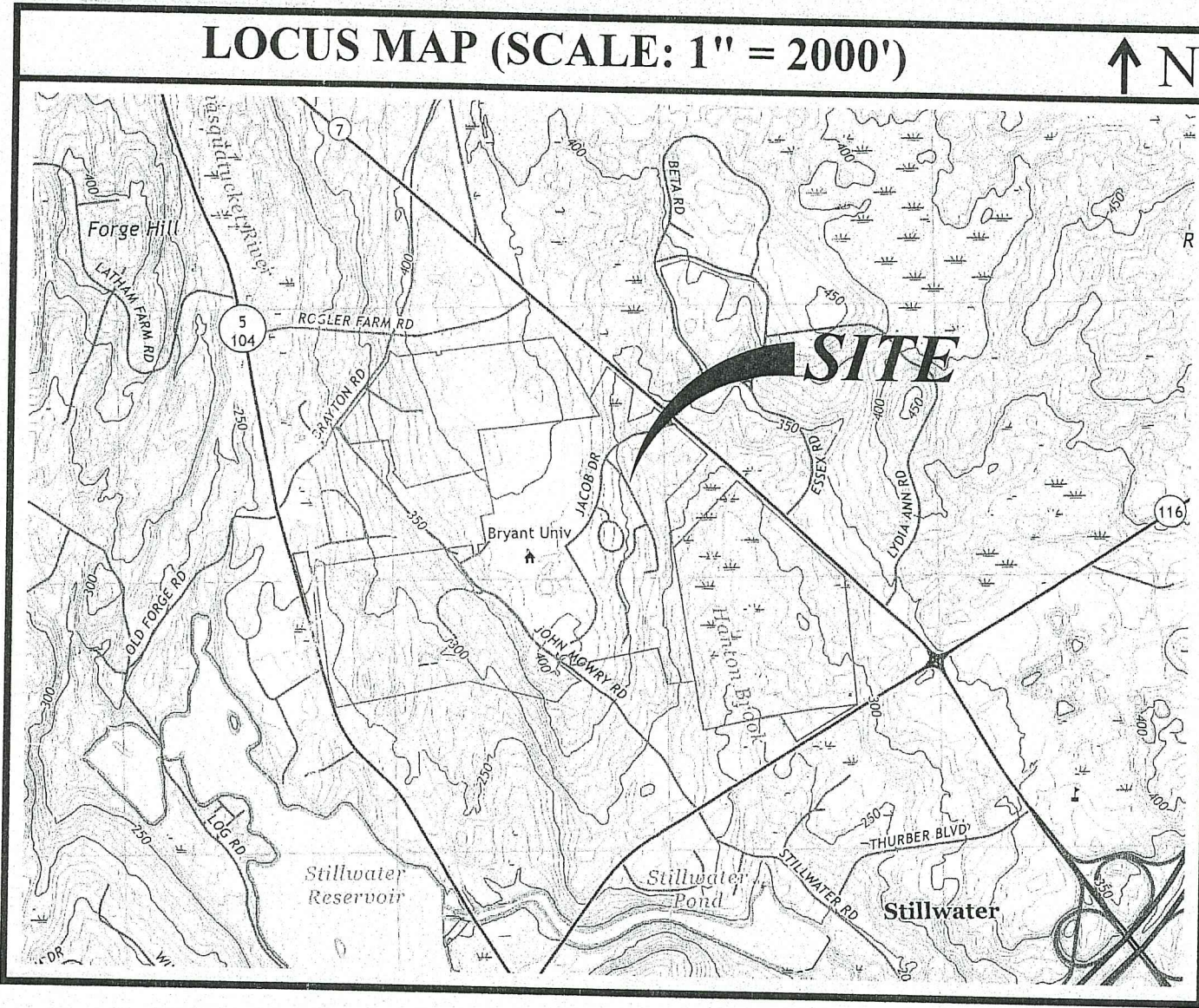
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:

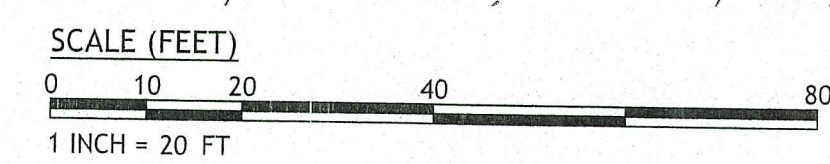
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: SEP 23 2024 FILE #: 24-0189
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Andy Clapton



- #### WQ BASIN NOTES
- WQ BASIN SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, THE RAIN GARDEN SHALL BE MONITORED AND MAINTAINED TO ASSURE PROPER FUNCTIONING, PLANT GROWTH AND SURVIVAL. PLANTS SHALL BE REPLACED ON AN AS-NEEDED BASIS DURING GROWING SEASON.
 - SILTS/SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN ACCUMULATION EXCEEDS ONE INCH, OR WHEN WATER POUNDS ON THE SURFACE OF THE RAIN GARDEN FOR MORE THAN 48 HOURS. THE TOP FEW INCHES OF MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH SOIL MIXTURE & MULCH.
 - GRASS MOWING SHALL OCCUR WHEN GRASS IS TALLER THAN 4 INCHES.
 - SOIL EROSION GULLIES SHALL BE REPAIRED AS THEY OCCUR.
 - FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN BASIN.



JCE
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CIVIL, SITE DEVELOPMENT, TRANSPORTATION
PLANNING, WATER RESOURCES
300 POST ROAD, WARWICK, RI 02888
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JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
8/28/2024

SIDEWALK IMPROVEMENT PROJECT
BRYANT UNIVERSITY
SMITHFIELD, RHODE ISLAND
AP 49, LOT 125

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AUG 9 9 2024
Office of Water Resources

NO.	DATE	DESCRIPTION
1	08/24	RIDEM RTC

DESIGNED BY: MM/WMLJR
DRAWN BY: MM/WMLJR
CHECKED BY: JAC/MM
DATE: JUNE 2024
PROJECT NO: 09-05hm

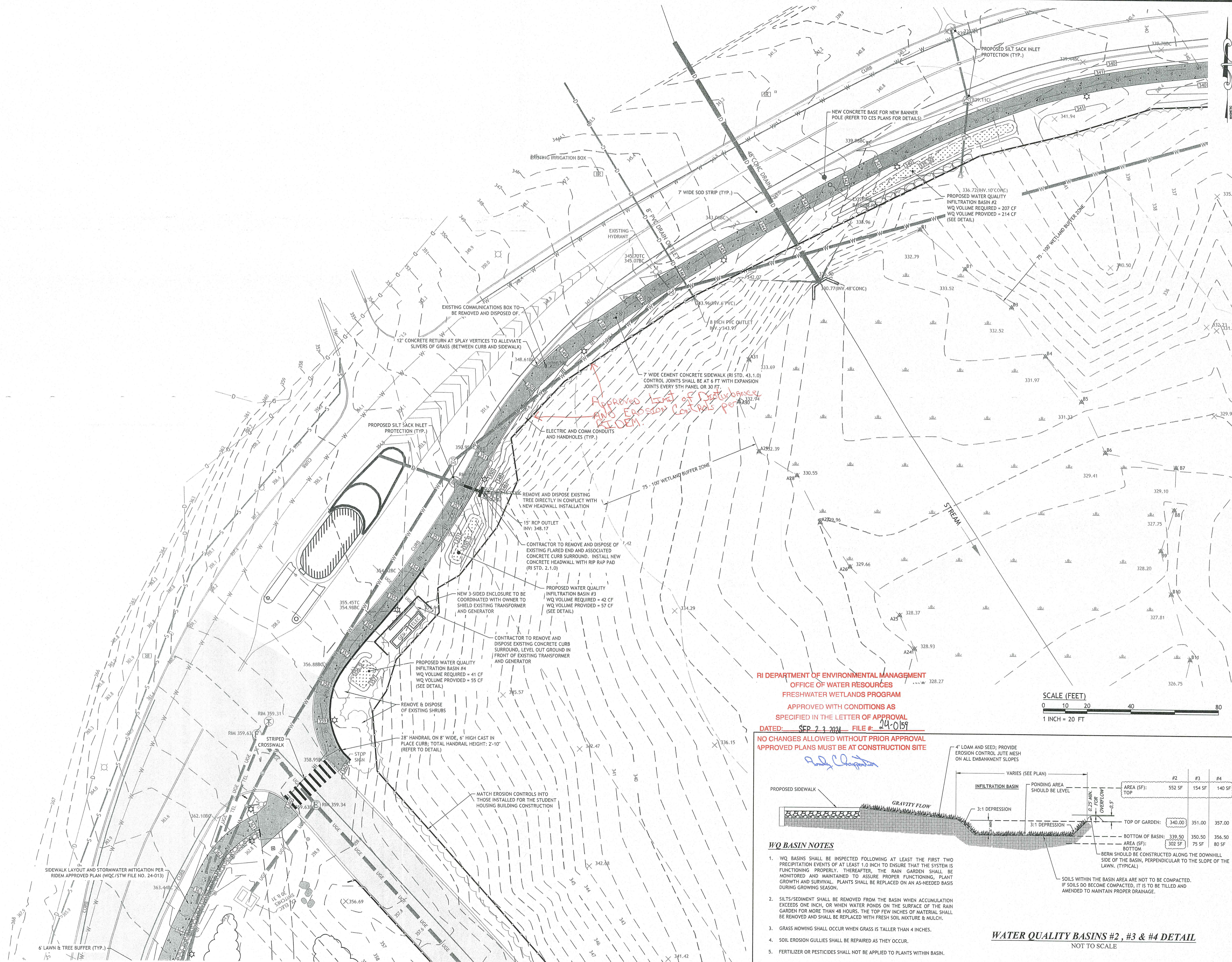
PRELIMINARY, NOT FOR CONSTRUCTION

SIDEWALK SEGMENT A

SHEET 1 OF 3

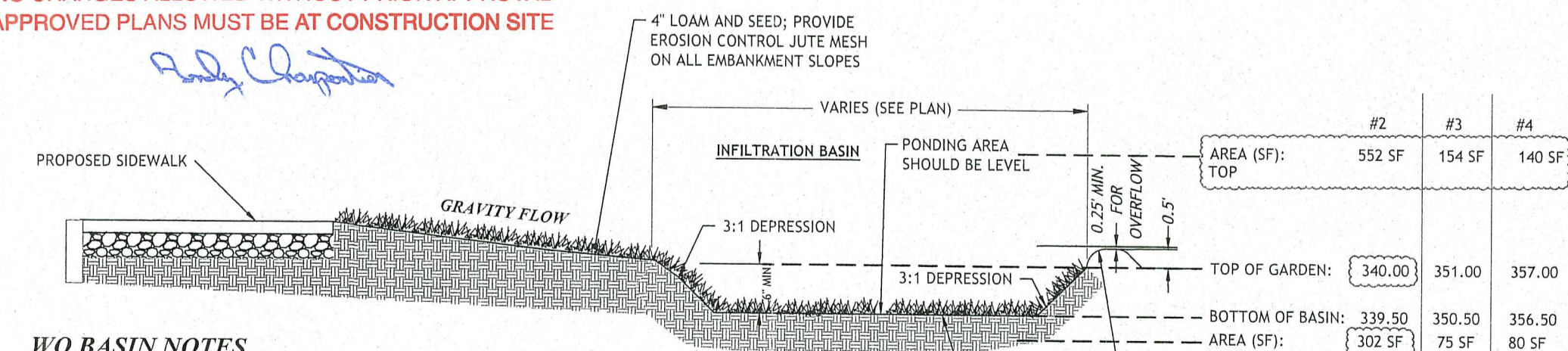
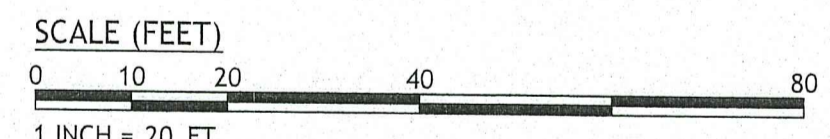
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Q:\09-05 Bryant University\09-05bim Student Housing\Sidewalks\Submissions\2024_08_02 RIDEM RTCS\Student Housing Sidewalks [RIDEM]_dwg Aug. 28, 2024 4:43pm



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: SEP 23 2024 FILE #: 24-0157

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



WQ BASIN NOTES

1. WQ BASINS SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, THE RAIN GARDEN SHALL BE MONITORED AND MAINTAINED TO ASSURE PROPER FUNCTIONING, PLANT GROWTH AND SURVIVAL. PLANTS SHALL BE REPLACED ON AN AS-NEEDED BASIS DURING GROWING SEASON.
2. SILTS/SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN ACCUMULATION EXCEEDS ONE INCH, OR WHEN WATER PONDS ON THE SURFACE OF THE RAIN GARDEN FOR MORE THAN 48 HOURS. THE TOP FEW INCHES OF MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH SOIL MIXTURE & MULCH.
3. GRASS MOWING SHALL OCCUR WHEN GRASS IS TALLER THAN 4 INCHES.
4. SOIL EROSION GULLIES SHALL BE REPAIRED AS THEY OCCUR.
5. FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN BASIN.

WATER QUALITY BASINS #2, #3 & #4 DETAIL
 NOT TO SCALE

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JOSEPH A. CASALI
 No. 7250
 REGISTERED PROFESSIONAL ENGINEER
 PWTIL
 8/28/2024

SIDEWALK IMPROVEMENT PROJECT
BRYANT UNIVERSITY
SMITHFIELD, RHODE ISLAND
AP 49, LOT 125

RI Environmental Management
 AUG 29 2024
 Office of Water Resources

REVISIONS:

NO.	DATE	DESCRIPTION
1	08/24	RIDEM RTC

DESIGNED BY: MM/WMLJR
 DRAWN BY: MM/WMLJR
 CHECKED BY: JAC/MM
 DATE: JUNE 2024
 PROJECT NO: 09-05bim

PRELIMINARY, NOT FOR CONSTRUCTION

SIDEWALK SEGMENT B

SITE NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
- ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT AND WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, WHICHEVER IS MORE STRINGENT.
- STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
- ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
- THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT AS-BUILT DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
- ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
- REFER TO ARCHITECTURAL PLANS, STRUCTURAL PLANS, PLUMBING PLANS, FIRE PROTECTION PLANS, AND ELECTRICAL PLANS, FOR ACTUAL SIZE OF THE PROPOSED BUILDING AND WORK WITHIN 5 FEET OF THE PROPOSED BUILDING.
- WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF BRYANT UNIVERSITY AT NO ADDITIONAL COST TO THE OWNER.
- ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
- THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
- ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
- WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
- ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
- REFER TO PLUMBING PLANS FOR CONTINUATION OF ALL UTILITIES WITHIN 5' (FIVE) FEET OF THE BUILDING.
- ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SUE CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

BMP MAINTENANCE SCHEDULE:

- ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
 - MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.
 - INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.
- UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
- ALL INSTALLATION, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE INSTALLATION, CLEANING, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRM, 2010).
- AFTER CONSTRUCTION, STORMWATER BMPs SHALL BE INSPECTED AND MAINTAINED BY THE UNIVERSITY AS FOLLOWS:
 - INFILTRATION TRENCHES**
 - AFTER CONSTRUCTION, THE INFILTRATION TRENCHES SHALL BE INSPECTED ON AN ANNUAL BASIS FOR SEDIMENT BUILDUP AND SEDIMENT SHALL BE REMOVED WHEN IT REACHES 25% OF THE TOTAL STORAGE VOLUME.
 - LITTER AND DEBRIS SHALL BE REMOVED AND PROPERLY DISPOSED OF.
 - VEGETATION ALONG THE SYSTEM SHOULD BE MOWED AS FREQUENTLY AS NEEDED TO MAINTAIN HEIGHTS BETWEEN 2 TO 3 INCHES.
 - SNOW STORAGE IS PROHIBITED WITHIN THE INFILTRATION TRENCHES.

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

LOADING & SEEDING NOTES:

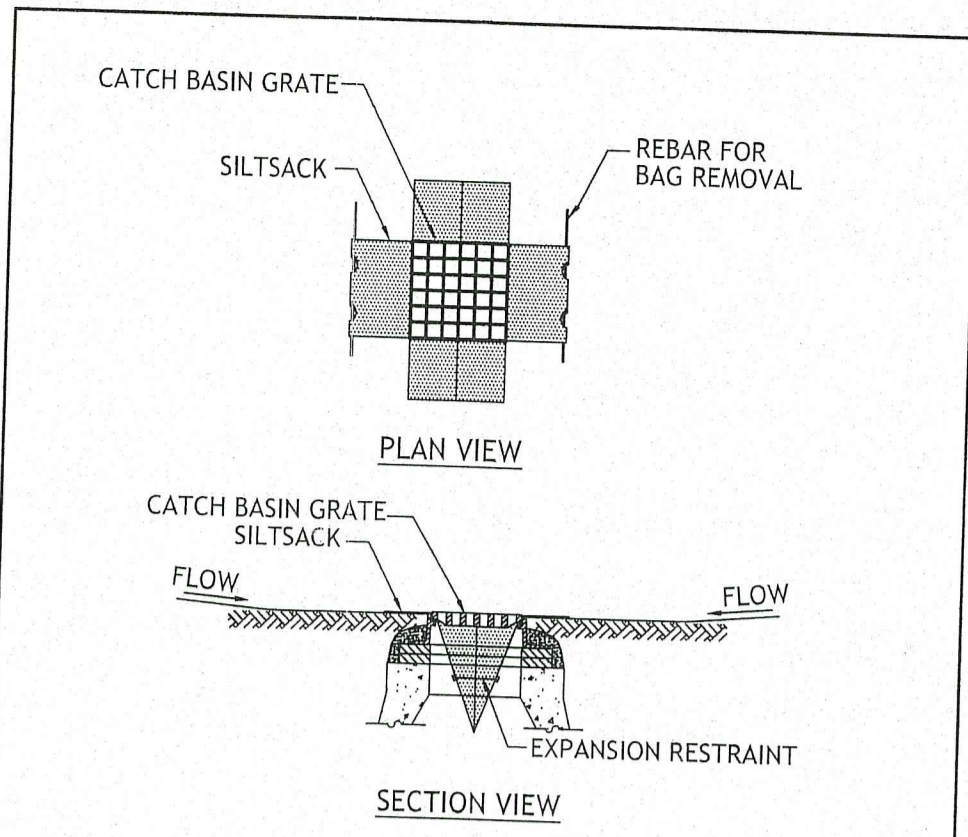
- SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:
- AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS "LOAM AND SEED" ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
 - THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
 - PRIOR TO SEEDING OR SODDING, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
 - APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
 - SEEDING**

AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

URI #2 IMPROVED SEED MIX, % BY WEIGHT:

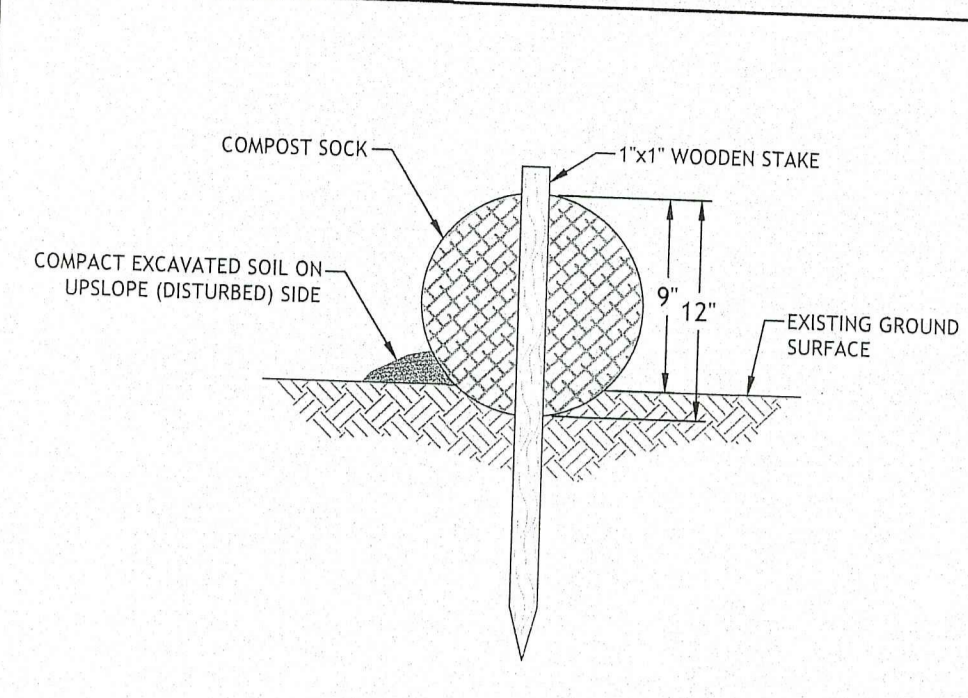
 - 40% CREEPING RED FESCUE
 - 20% IMPROVED PERENNIAL RYEGRASS
 - 20% IMPROVED KENTUCKY BLUEGRASS
 - 20% KENTUCKY BLUEGRASS

RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15. AT THE CONTRACTOR'S DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.



- NOTES:**
- INSTALL SILT SACK IN SELECTED CATCH BASINS IDENTIFIED ON THE SITE PREPARATION PLAN BEFORE COMMENCING WORK.
 - GRATE TO BE PLACED OVER SILT SACK. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

1 SILT SACK SEDIMENT TRAP
NOT TO SCALE



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

2 COMPOST FILTER SOCK
NOT TO SCALE

Slope %	Maximum slope length above compost filter sock in ft (m)			
	8-inch (200-mm)	12-inch (300-mm)	18-inch (450-mm)	24-inch (600-mm)
2 (or less)	900 (90)	375 (110)	600 (180)	600 (200)
5	200 (60)	200 (75)	375 (85)	325 (100)
10	100 (30)	125 (35)	180 (40)	200 (60)
15	70 (20)	85 (25)	100 (30)	100 (30)
20	50 (15)	65 (20)	70 (20)	100 (30)
25	40 (12)	50 (15)	55 (16)	100 (30)
30	30 (9)	40 (12)	45 (13)	65 (20)
35	30 (9)	40 (12)	45 (13)	65 (18)
40	30 (9)	40 (12)	45 (13)	60 (15)
45	20 (6)	25 (8)	30 (9)	40 (12)
50	20 (6)	25 (8)	30 (9)	35 (10)

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

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
- TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DIVIDES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR TOWN RIGHT-OF-WAY.
- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
- SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

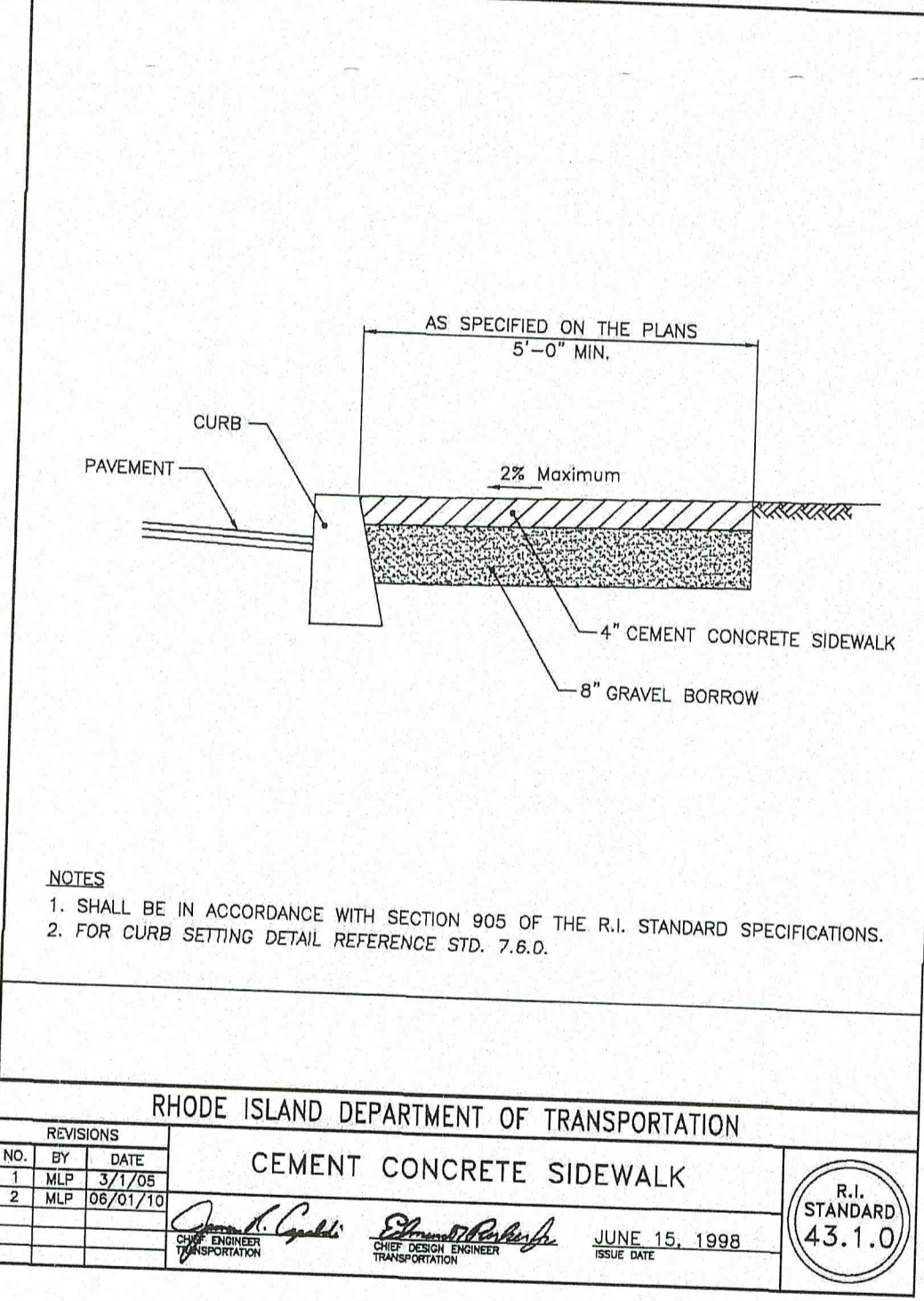
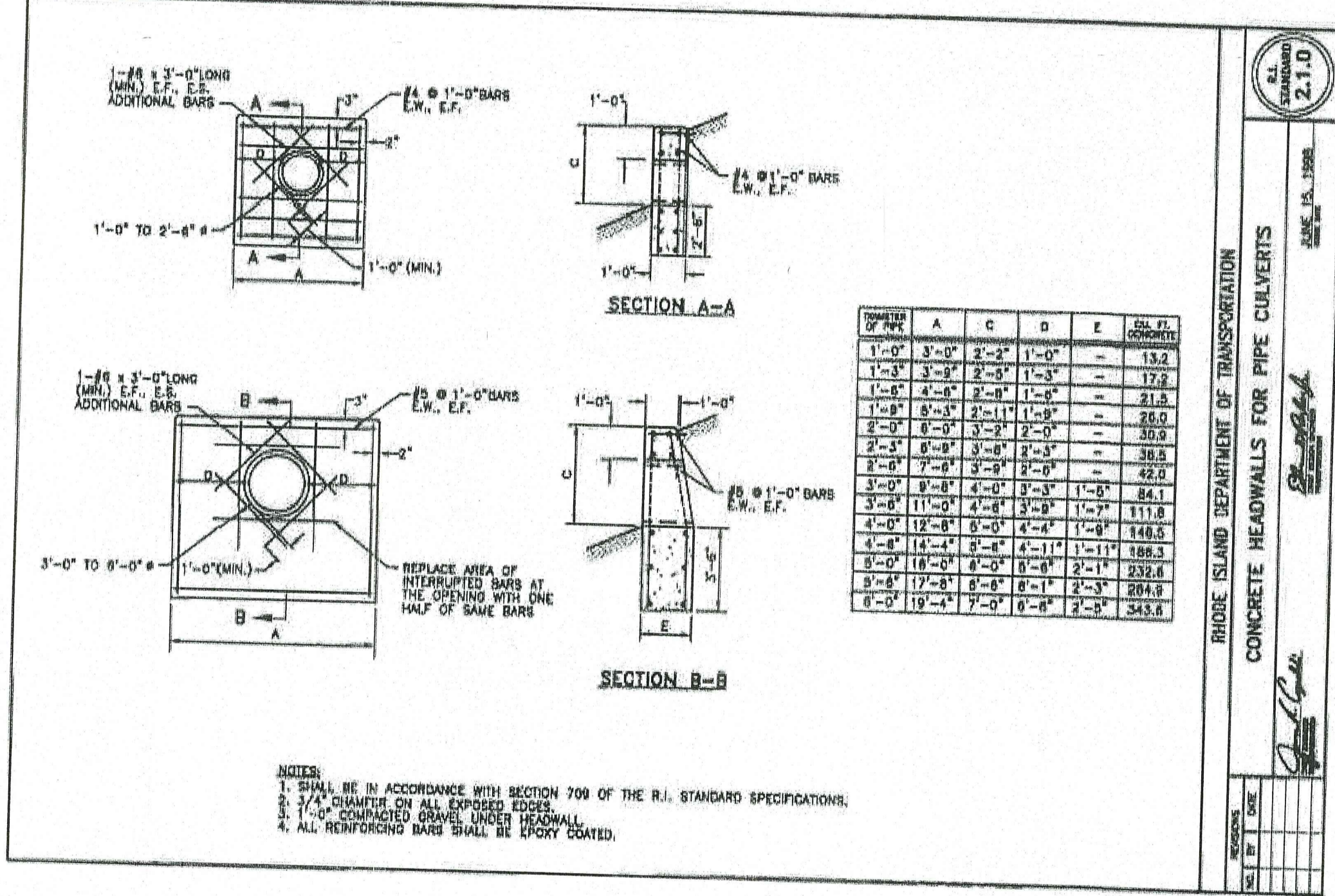
- THE SILT FENCE / HAY BALE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
- THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
- ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH STAKED HAYBALES (R.I. STD. 9.8.0) DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0), OR STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) OUTLET PROTECTION (STAKED HAYBALE OR STAKED HAYBALE WITH SILT FENCE) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
- ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
- THE SILT FENCE/HAYBALES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE/HAYBALES AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY-BALES BECOMES FILLED WITH SEDIMENTS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
- UPON FINAL STABILIZATION OF THE SITE, AS DETERMINED BY THE ENGINEER, CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES.
- ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993 AMENDED 2014.

MISCELLANEOUS UTILITY NOTES:

- PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- OVERHEAD ELECTRIC AND TELEPHONE SERVICES ARE TO BE REMOVED BY THE APPROPRIATE UTILITY COMPANY AND COORDINATED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT HIS OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER OR TOWN.
- EXISTING UTILITY FRAMES AND COVERS FOR SANITARY SEWER, WATER, GAS, STORM DRAINAGE AND OTHER UTILITIES SHALL BE ADJUSTED TO GRADE AS REQUIRED IN NEW PAVING AND PAVEMENT OVERLAY AREAS.

SEDIMENTATION CONTROL PROGRAM:

- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE STORMWATER MANAGEMENT AREAS. THESE AREAS CANNOT BE USED AS SEDIMENT CONTROL DEVICES.
- ALL DISTURBED AREAS SUBJECT TO EROSION TENDENCIES WHETHER THEY ARE NEWLY FILLED OR EXCAVATED, SHALL RECEIVE SUITABLE SLOPE PROTECTION.
- ALL UPSLOPE AREAS ARE TO BE STABILIZED PRIOR TO CONNECTING TO THE STORMWATER FACILITIES.
- DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF DURING STORMS AND PERIODS OF RAINFALL.
- SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER PERIODS OF RAINFALL. SUCH DEVICES SHALL BE REPAIRED OR REPLACED AS NEEDED.
- REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE 1989, AS A GUIDE (REVISED 2014).



JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRANSPORTATION
DRAINAGE, WEIR DESIGN, TRAFFIC-FLOODPLAIN
REGISTERED PROFESSIONAL ENGINEER
7250
8/28/2024

JOSEPH A. CASAU
REGISTERED PROFESSIONAL ENGINEER
8/28/2024

SIDEWALK IMPROVEMENT PROJECT
BRYANT UNIVERSITY
SMITHFIELD, RHODE ISLAND
AP 49, LOT 125

RI Environmental Management
AUG 29 2024
Office of Water Resources

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: SEP 23 2024 FILE # 24-0159
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO.	DATE	DESCRIPTION
1	08/24	RIDEM RTC

DESIGNED BY:	MM/WMLJR
DRAWN BY:	MM/WMLJR
CHECKED BY:	JAC/MM
DATE:	JUNE 2024
PROJECT NO.:	09-055m

PRELIMINARY, NOT FOR CONSTRUCTION

DETAILS

SHEET 3 OF 3