SLATER VILLAGE

120-UNIT ASSISTED LIVING / AGE-RESTRICTED (55+) ADULT ACTIVE COMMUNITY

1118 - 1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
AP 1; LOTS 127, 134 & 330

ZONING DISTRICT: RESIDENTIAL - URBAN (RU - 20)

RENDERING PREPARED BY: O'HEARNE ARCHITECTS

APPROVALS:

TOWN OF NORTH SMITHFIELD PLANNING BOARD - MASTER PLAN APPROVAL (MARCH 12, 2015)
TOWN OF NORTH SMITHFIELD ZONING BOARD OF REVIEW - SPECIAL USE PERMIT & DIMENSIONAL VARIANCES APPROVED (FEBRUARY 25, 2020)
TOWN OF NORTH SMITHFIELD PLANNING BOARD - PRELIMINARY PLAN APPROVAL (SEPTEMBER 5, 2019)
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - INSIGNIFICANT ALTERATION PERMIT (SEPTEMBER 26, 2019)
RHODE ISLAND DEPARTMENT OF TRANSPORTATION - PHYSICAL ALTERATION PERMIT NO. 181220 (SEPTEMBER 11, 2019)

PROJECT TEAM

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SURVEYOR: NATIONAL LAND SURVEYORS, INC.
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WOONSOCKET, RI 02895
PHONE: 401-769-7779

LANDSCAPE ARCHITECT: THE GIFFORD DESIGN GROUP, INC.
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CUMBERLAND, RI 02864
PHONE: 401-671-6336
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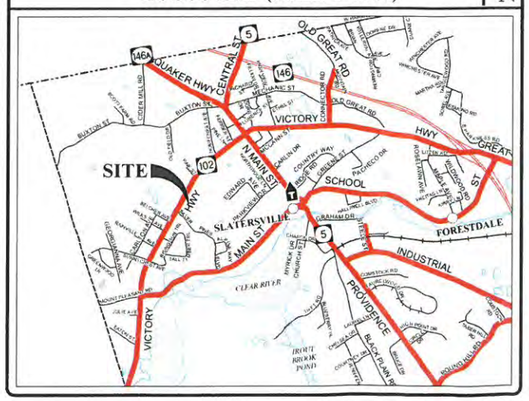
LOCUS MAP (SCALE: 1"=2000') ↑N



STATE WIDE MAP

INDEX OF DRAWINGS

JCE
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9.3.2020

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

REVISIONS:

NO.	DATE:	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO.	16-39a

FINAL PLAN

COVER SHEET

SHEET 1 OF 16

GENERAL NOTES:
1. CONTRACTOR SHALL NOTIFY "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CLASS I PROPERTY LINE AND CLASS III TOPOGRAPHIC SURVEY PROVIDED BY NATIONAL SURVEYORS-DEVELOPERS INC., 42 HAMLET AVENUE, WOONSOCKET, RI 02895 IN DECEMBER 2012.
3. 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 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.
4. THE ENTIRE PROJECT SITE LIES WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FIRM MAP FOR PROVIDENCE COUNTY, RHODE ISLAND, MAP NUMBER 44007C0065G, EFFECTIVE DATE MARCH 2, 2009 (NO MAP AVAILABLE).
5. THE SITE IS LOCATED WITHIN DEM GROUNDWATER CLASSIFICATION GAA - "GROUNDWATER RESOURCES KNOWN OR PRESUMED TO BE SUITABLE FOR DRINKING WITHOUT TREATMENT." THIS DESIGNATION PLACES THE PROPOSED SITE WITHIN THE NORTH SMITHFIELD GROUNDWATER AQUIFER OVERLAY DISTRICT.
6. BASED ON RIDEM MAPPING, THE SITE IS LOCATED WITHIN A NON-COMMUNITY WELLHEAD PROTECTION AREA.
7. THERE ARE NO HIGH HAZARD AREAS ON THE PROJECT SITE.
8. FRESHWATER WETLANDS SHOWN HEREIN WERE DELINEATED ON NOVEMBER 11, 2004 BY THE GIFFORD DESIGN GROUP, INC., OF CUMBERLAND, RI AND REESTABLISHED ON MARCH 8, 2017.
9. SOILS EXISTING ON THE SITE CONSIST OF CANTON-CHARLTON ROCK OUTCROP COMPLEX, 15 TO 35% SLOPES (CaD), CANTON-URBAN LAND COMPLEX (CB), CANTON AND CHARLTON FINE SANDY LOAMS, VERY ROCKY, 3 TO 8% SLOPES (ChB), AND RIDGEBURY, WHITMAN, AND LEICESTER EXTREMELY STONY FINE SANDY LOAMS (Rf). THERE ARE NO KNOWN PRIME FARMLAND SOILS, NOR IS ANY LAND ON THE PROPOSED SITE IN ACTIVE AGRICULTURAL USE.
10. TEST PIT EVALUATIONS WERE CONDUCTED BY INTERNATIONAL MAPPING AND SURVEYING, CORP., INC., IN JUNE 2013 AND ARE AVAILABLE TO THE CONTRACTOR UPON REQUEST. ESTIMATED SEASONAL HIGH GROUND WATER ELEVATIONS ARE PROVIDED ON THE DETAIL SHEETS.
11. SOIL BORINGS WERE CONDUCTED BY NEW ENGLAND GEOTECH, INC., IN MARCH 2013 AND ARE AVAILABLE TO THE CONTRACTOR UPON REQUEST.
12. THERE ARE NO KNOWN EASEMENTS WITHIN THE PROJECT AREA.
13. TELEPHONE, ELECTRIC, SEWER, GAS, AND WATER SERVICES ARE ALL AVAILABLE FROM WITHIN VICTORY HIGHWAY (ROUTE 102).

CULTURAL RESOURCE INVENTORY:
1. THERE ARE NO KNOWN HISTORICALLY SIGNIFICANT SITE OR STRUCTURES ON THE PROPOSED SITE.
2. THERE ARE NO KNOWN STATE OR LOCALLY DESIGNATED HISTORIC SITES, DISTRICTS, OR CEMETERIES ON THE PROJECT SITE.
3. THERE ARE STONE WALLS LOCATED ON THE PROPOSED PROJECT SITE AS NOTED ON THIS PLAN.
4. THERE ARE NO KNOWN ARCHAEOLOGICAL SITES ON THE PROJECT SITE.
5. THERE ARE NO KNOWN SCENIC ROAD CORRIDORS OR STATE-DESIGNATED SCENIC AREAS WITHIN OR ADJACENT TO THE PROJECT SITE.

RECREATIONAL RESOURCE INVENTORY:
1. THERE ARE NO KNOWN HIKING, BIKING, OR BRIDLE PATHS WITHIN OR ADJACENT TO THE PROJECT SITE.
2. THERE ARE NO BOAT LAUNCHES, LAKE OR STREAM ACCESS POINTS, BEACHES, OR WATER TRAILS ON THE PROPOSED PROJECT SITE.
3. THERE ARE NO PLAY FIELDS OR PLAYGROUNDS ON OR ADJACENT TO THE PROJECT SITE.

SITE NOTES:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2. 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.
3. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
4. ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
5. 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.
6. 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.
7. 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.
8. 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.
9. WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE TOWN OF NORTH SMITHFIELD AT NO ADDITIONAL COST TO THE OWNER.
10. ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. 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.
12. THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
13. ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
14. WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
15. ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS TO THE MAXIMUM EXTENT PRACTICABLE. SHOULD CONTRACTORS PROPOSE TO BLAST LEDGE, A PERMIT MUST BE OBTAINED BY THE STATE FIRE MARSHAL'S OFFICE. PRE-BLAST SURVEYS MAY BE REQUIRED TO ENSURE NO ADVERSE EFFECTS TO ABUTTING PROPERTIES.
16. 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.
17. REFER TO PLUMBING PLANS FOR CONTINUATION OF ALL UTILITIES WITHIN 5' (FIVE) FEET OF THE BUILDING.
18. ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:
1. 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.
2. 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.
3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR TOWN RIGHT-OF-WAY.
4. 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.
5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

DRAINAGE SYSTEM NOTES:
1. THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HDPE PIPE OR AN APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE SITE PLANS.
2. ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES
1. THE SILT FENCE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
2. 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.
3. 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.
4. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED. STEEP SLOPE PROTECTION IS TO BE UTILIZED ON ALL SLOPES GREATER THAN 15% IN ACCORDANCE WITH THE PRACTICES LISTED IN THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION HANDBOOK" (UPDATED 2016): SECTION FOUR: EROSION CONTROL MEASURES: SLOPE PROTECTION.
5. 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.
6. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
7. THE SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE AS NEEDED. THE CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE DEVICE.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (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.
9. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION HANDBOOK", UPDATED 2016.

MISCELLANEOUS UTILITY NOTES:
1. 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.
2. OVERHEAD ELECTRIC AND TELEPHONE SERVICES ARE TO BE REMOVED BY THE APPROPRIATE UTILITY COMPANY AND COORDINATED BY THE CONTRACTOR.
3. 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.
4. 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.
5. 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.
6. ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF NORTH SMITHFIELD'S "SEWER ORDINANCE" AND "STANDARD SANITARY SEWER REQUIREMENTS".
7. ALL NEW SEWER PIPES AND MANHOLES SHALL BE CLEANED AND TESTED PRIOR TO ACCEPTANCE. GRAVITY SEWER PIPES SHALL BE REQUIRED TO PASS BOTH LOW PRESSURE AIR AND DEFLECTION (IE., MANDREL) TESTING. LOW PRESSURE SEWER PIPING SHALL BE REQUIRED TO PASS A LOW PRESSURE (IE., HYDROSTATIC) TEST.
8. A BACKFLOW PREVENTION DEVICE MUST BE INSTALLED AT EACH SEWER SERVICE BUILDING CONNECTION THAT IS BELOW THE RIM ELEVATION OF THE NEAREST SEWER MANHOLE, AS REQUIRED BY THE INTERNATIONAL PLUMBING CODE AND THE TOWN OF NORTH SMITHFIELD.
9. APPLICANT IS REQUIRED TO PROVIDE A COMPLETE SET OF FINAL AS-BUILT PLANS TO THE NORTH SMITHFIELD SEWER DEPARTMENT UPON COMPLETION OF CONSTRUCTION, PRIOR TO FINAL ACCEPTANCE. AS-BUILT PLANS SHALL BE PREPARED IN ACCORDANCE WITH THE SEWER DEPARTMENT'S POLICY.
10. INSPECTION OF ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY THE SUPERINTENDENT, PRETREATMENT COORDINATOR OR OTHER DULY AUTHORIZED EMPLOYEES OF THE TOWN OF NORTH SMITHFIELD OR CITY OF WOONSOCKET. APPLICANT SHALL PROVIDE SCHEDULE FOR CONSTRUCTION AS SOON AS POSSIBLE TO ALLOW FOR DEVELOPMENT OF INSPECTION FEE, TO BE PAID BY APPLICANT DIRECTLY TO TOWN OF NORTH SMITHFIELD. UPON PAYMENT OF FEE, COMMENCEMENT OF CONSTRUCTION INSPECTION REQUIRES MINIMUM NOTIFICATION OF 48-HOURS.
11. APPLICANT IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM LOCAL, STATE, AND/OR FEDERAL AGENCIES WITH REGULATORY JURISDICTION OVER THE PROPOSED WORK. COPIES OF ALL PERMITS SHALL BE PROVIDED TO NORTH SMITHFIELD SEWER DEPARTMENT PRIOR TO CONSTRUCTION. ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY A DRAIN LAYER LICENSED IN THE STATE OF RHODE ISLAND AND THE TOWN OF NORTH SMITHFIELD.
12. NO FLOW WILL BE ACCEPTED UNTIL ALL TERMS, CONDITIONS AND REQUIREMENTS HAVE BEEN COMPLETED WITH, ANY FEES DUE ARE PAID IN FULL, AND THE APPLICANT RECEIVES FINAL ACCEPTANCE FROM THE NORTH SMITHFIELD SEWER DEPARTMENT.
13. THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS AND ACTIVITIES TO WITHIN THE STREET LINES, EASEMENT AND/OR RIGHT-OF-WAY, AS SHOWN ON THE DRAWINGS.
14. FOUR (4) COMPLETE SETS OF SHOP DRAWINGS WITH MANUFACTURER'S CERTIFICATION THAT ALL MATERIALS TO BE USED FOR CONSTRUCTION OF THE PROJECT / SYSTEM COMPLY WITH THE APPROVED PLANS AND SPECIFICATIONS. THE SEWER DEPARTMENT WILL REVIEW SHOP DRAWINGS FOR COMPLIANCE WITH THE APPROVE PLANS.
15. PRIOR TO CONSTRUCTION OF THE RELOCATION OF ALL WATER MAINS, THE CONTRACTOR SHALL COORDINATE WITH NORTH SMITHFIELD WATER DEPARTMENT FOR INSPECTION AND CHLORINATION OF NEW PIPING, FITTINGS AND VALVES.

SEQUENCE & STAGING OF PROPOSED CONSTRUCTION ACTIVITIES:
THIS IS A GENERAL SEQUENCE AND STAGING OF CONSTRUCTION ACTIVITIES. A DETAILED SEQUENCE WITH TIME LINES SHALL BE ESTABLISHED BY THE CONTRACTOR IN COORDINATION WITH THE OWNER, ENGINEER AND SITE CONTRACTORS PRIOR TO THE START OF CONSTRUCTION.
1. SURVEY AND STAKE THE PROPOSED DRAINAGE BMP'S (SEDIMENT FOREBAY, INFILTRATION BASIN, TREE FILTERS,AND GRASS SWALES), ROADWAY CENTERLINE, WATER LINE, OWTS LOCATIONS AND LIMIT OF DISTURBANCE. THE CONTRACTOR SHALL NOT COMPACT THE AREAS OF THE DRAINAGE BMPS DURING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE TO PROTECT BMPS.
2. PLACE SEDIMENTATION BARRIERS (HAY BALES OR SILT FENCE) AS SHOWN ON THE PLANS AND AS STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
3. BEGIN SITE WORK (CLEARING AND GRUBBING, EXCAVATING AND GRADING ETC.)TOPSOIL IS TO STRIPPED AND STOCKPILED WITHIN DISTURBANCE LIMITS. THE STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION BARRIERS. STOCKPILES TO BE COVERED OR TEMPORARILY SEEDED.
4. EXCAVATE AND CONSTRUCT STORMWATER MANAGEMENT AREAS AS SHOWN ON PLAN. DIVERT ALL THE RUNOFF FROM DISTURBED AREAS TO THE PROPOSED STORMWATER STORAGE AREA.DIVERT ALL THE RUHOFF FROM DISTURBED AREAS TO THE PROPOSED STORMWATER STORAGE AREA.
5. INSTALL UTILITIES AND DRAINAGE INCLUDING DRAINAGE PIPE. IMMEDIATELY PLACE THE RIP-RAP AT THE DISCHARGE POINTS. SEED ALL DISTURBED AREAS.
6. BEGIN BUILDING CONSTRUCTION.
7. BEGIN PAVEMENT AND PROPOSED GRADING. BRING ROADWAY TO SUBBASE GRADE WITH GRAVEL. SEED ALL DISTURBED AREAS.
8. FINISH PAVEMENT CONSTRUCTION.
9. MAINTAIN SEDIMENT AND EROSIONS CONTROLS WHILE BUILDING ARE CONSTRUCTED.
10. FINISH LANDSCAPING AND PERMANENT STABILIZATION.
11. INSPECT AND REPAIR ALL DRAINAGE STRUCTURES INCLUDING DISCHARGE POINTS. REMOVE ANY DEBRIS (LEAVES, TREE LIMBS, BOULDERS, ETC.) FROM DRAINAGE INLETS AND OUTLETS. FLUSH ALL SEDIMENTS FROM DRAINAGE PIPES AND APPLY TOPSOIL TO PONDS.
12. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE VEGETATION HAS BEEN ESTABLISHED TO ALL DISTURBED AREAS.

BMP MAINTENANCE SCHEDULE:
1. ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:

   A. 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.

   B. 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.
2. 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.
3. ALL INSTALLATION, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE INSTALLATION, CLEANING, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, AMENDED 2015).
4. AFTER CONSTRUCTION, STORMWATER BMPS SHALL BE INSPECTED AND MAINTAINED BY THE OWNER AS FOLLOWS:

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

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

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

SAND FILTER SYSTEMS
- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE SAND FILTERS SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER INSPECTIONS SHALL BE CONDUCTED ON AN ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL TO 2 INCHES.
- SILT AND SEDIMENT SHALL BE REMOVED FROM THE FILTER BED WHEN THE ACCUMULATION EXCEEDS ONE INCH. WHEN THE FILTERING CAPACITY OF THE SAND FILTER DIMINISHES SUBSTANTIALLY (I.E. WHEN WATER PONDS ON THE SURFACE OF THE THE FILTER BED FOR MORE THAN 48 HOURS), THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED AND REPLACED SHALL BE REPLACED WITH FRESH MATERIAL. THE REMOVED SEDIMENTS SHALL BE DISPOSED IN AN ACCEPTABLE MANNER AT AN APPROVED AND PERMITTED LOCATION.

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

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

SEDIMENTATION CONTROL PROGRAM:
1. 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.
2. ALL DISTURBED AREAS SUBJECT TO EROSIVE TENDENCIES WHETHER THEY ARE NEWLY FILLED OR EXCAVATED, SHALL RECEIVE SUITABLE SLOPE PROTECTION.
3. ALL UPSLOPED AREAS ARE TO BE STABILIZED PRIOR TO CONNECTING TO THE STORMWATER FACILITIES
4. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF DURING STORMS AND PERIODS OF RAINFALL.
5. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER PERIODS OF RAINFALL. SUCH DEVICES SHALL BE REPAIRED OR REPLACED AS NEEDED.
6. 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).

ORDER OF PROCEDURE:
1. SEDIMENT CONTROL DEVICES SHALL SET IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION.
2. ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY CLEANED AND MAINTAINED DURING THE CONSTRUCTION.
3. IF WORK PROGRESS IS INTERRUPTED AT ANY TIME, REFERENCE EROSION & SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
4. SPECIFIED PLANTINGS ARE TO TAKE PLACE IN EARLY SPRING (APRIL 1 THRU MAY 30) OR EARLY FALL (SEPTEMBER 1 THRU 30) AND ARE TO BE MAINTAINED FOR A PERIOD OF ONE GROWING SEASON AND SHALL BE REPLACED IF NECESSARY.

LOAMING & SEEDING
SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLL

EXISTING STRUCTURE(S) DEMOLITION NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL DEBRIS/WASTE MATERIALS AT AN OFF-SITE LOCATION IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
2. CONTRACTOR TO SAMPLE AND TEST ANY MATERIALS DISCOVERED THAT COULD BE CONTAMINATED/HAZARDOUS, AND TO HANDLE AND DISPOSE OF SAME IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.

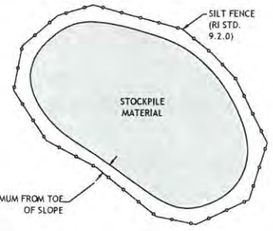
UTILITY ABANDONMENT NOTES:

1. CONTRACTOR TO COORDINATE WITH NATIONAL GRID TO DISCONNECT AND REMOVE EXISTING ELECTRICAL SERVICE.
2. CONTRACTOR TO COORDINATE WITH SEWER DEPARTMENT TO DISCONNECT AND ABANDON EXISTING SEWER SERVICE.
3. CONTRACTOR TO COORDINATE WITH WATER DEPARTMENT TO DISCONNECT AND ABANDON EXISTING WATER SERVICE.

PERMANENT WELL ABANDONMENT PROCEDURE:

1. THE WELL SHALL BE PLUGGED TO PREVENT THE ENTRANCE OF SURFACE WATER, CIRCULATION OF WATER BETWEEN OR AMONG PRODUCING ZONES, OR ANY OTHER PROCESS RESULTING IN THE CONTAMINATION OR POLLUTION OF GROUNDWATER RESOURCES.
2. THE WELL SHALL BE SEALED WITH A WATERTIGHT CAP OR SEAL.
3. THE WELL SHALL BE CHLORINATED PRIOR TO ABANDONMENT USING A CHLORINE SOLUTION WITH A MINIMUM CONCENTRATION OF ONE HUNDRED FIFTY PARTS PER MILLION (150 PPM) OF RESIDUAL CHLORINE.
4. THE WELL SHALL BE CHECKED FROM LAND SURFACE TO THE ENTIRE DEPTH OF THE WELL BEFORE IT IS SEALED, TO ENSURE AGAINST THE PRESENCE OF ANY OBSTRUCTION THAT WILL INTERFERE WITH SEALING OPERATIONS.
5. ALL CASING AND SCREEN MATERIALS THAT HAVE SALVAGE VALUE MAY BE REMOVED BY THE CONTRACTOR.
6. THE WELL BORE SHALL BE FILLED AND SEALED WITH ANY OF THE FOLLOWING MATERIALS: NEAT CEMENT GROUT, OR SAND CLAY OR BENTONITE CEMENT GROUT.
7. THE GROUT MATERIAL SHALL BE PLACED THROUGH A PIPE EXTENDING TO THE BOTTOM OF THE WELL, WHICH SHALL BE RAISED AS THE WELL IS FILLED.
8. ANY WELL CONSTRUCTED IN A CONSOLIDATED ROCK FORMATION, MAY BE FILLED WITHIN FINE SAND IN THE ZONE OR ZONES OF CONSOLIDATED ROCK BUT CANNOT ALLOW THE CIRCULATION OF WATER BETWEEN OR AMONG PRODUCING ZONES. THE TOP OF THE SAND FILL SHALL BE AT LEAST TEN(10) FEET BELOW THE TOP OF THE CONSOLIDATED ROCK, AND THE REMAINING SPACE WITH THE MATERIALS SPECIFIED IN SUBSECTION F (F) OF THE RULES AND REGULATIONS GOVERNING THE ENFORCEMENT OF CHAPTER 46-13.2 RELATING TO THE DRILLING OF DRINKING WATER WELLS.
9. ANY TEST WELL OR BORE SHALL BE ABANDONED IN SUCH A MANNER THAT IT DOES NOT BECOME A CHANNEL FOR THE VERTICAL MOVEMENT OF WATER OR OTHER SUBSTANCE TO THE POTABLE GROUNDWATER RESOURCE.
10. UPON COMPLETION OF ABANDONMENT OF THE WELL, THE TOP OF THE CASING OR GROUT MATERIAL SHALL BE TERMINATED AT LEAST FOR (4) FEET BELOW THE GROUND SURFACE.
11. PLUGGING AND ABANDONING OF A WELL TO BE ABANDONED SHALL BE PERFORMED ONLY BY A LICENSED WELL DRILLER.

NOTE TO CONTRACTOR:
CONTRACTOR TO COORDINATE WITH OWNER ON LOCATION OF CONSTRUCTION TRAILER AND STAGING AREAS



1 STOCKPILE DETAIL
NOT TO SCALE

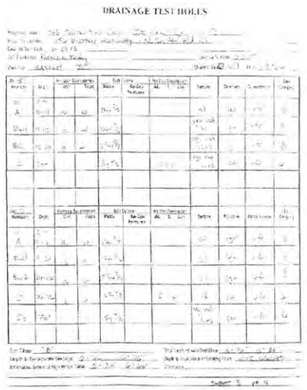
TEST PIT DATA		
	SURFACE EL.	SHWT / EL.
TH-1	270.00	36" / 267.00
TH-2	268.00	44"/ 264.33
TH-3	276.00	72" / 270.00
TH-4	268.00	60" / 263.00
TH-5	266.00	66" / 260.5
TH-6	268.00	76" / 261.67
TH-7	270.00	77" / 263.58

NOTE:
TEST HOLE LOCATIONS ARE APPROXIMATE. TEST HOLES WERE PERFORMED BY INTERNATIONAL MAPPING AND SURVEYING, CORP., INC., IN JUNE 2013.

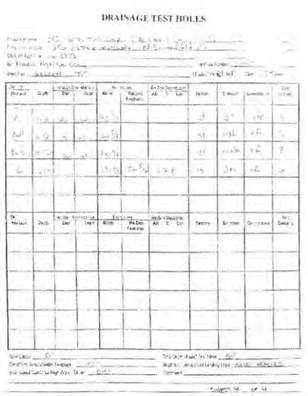
DRAINAGE TEST HOLES

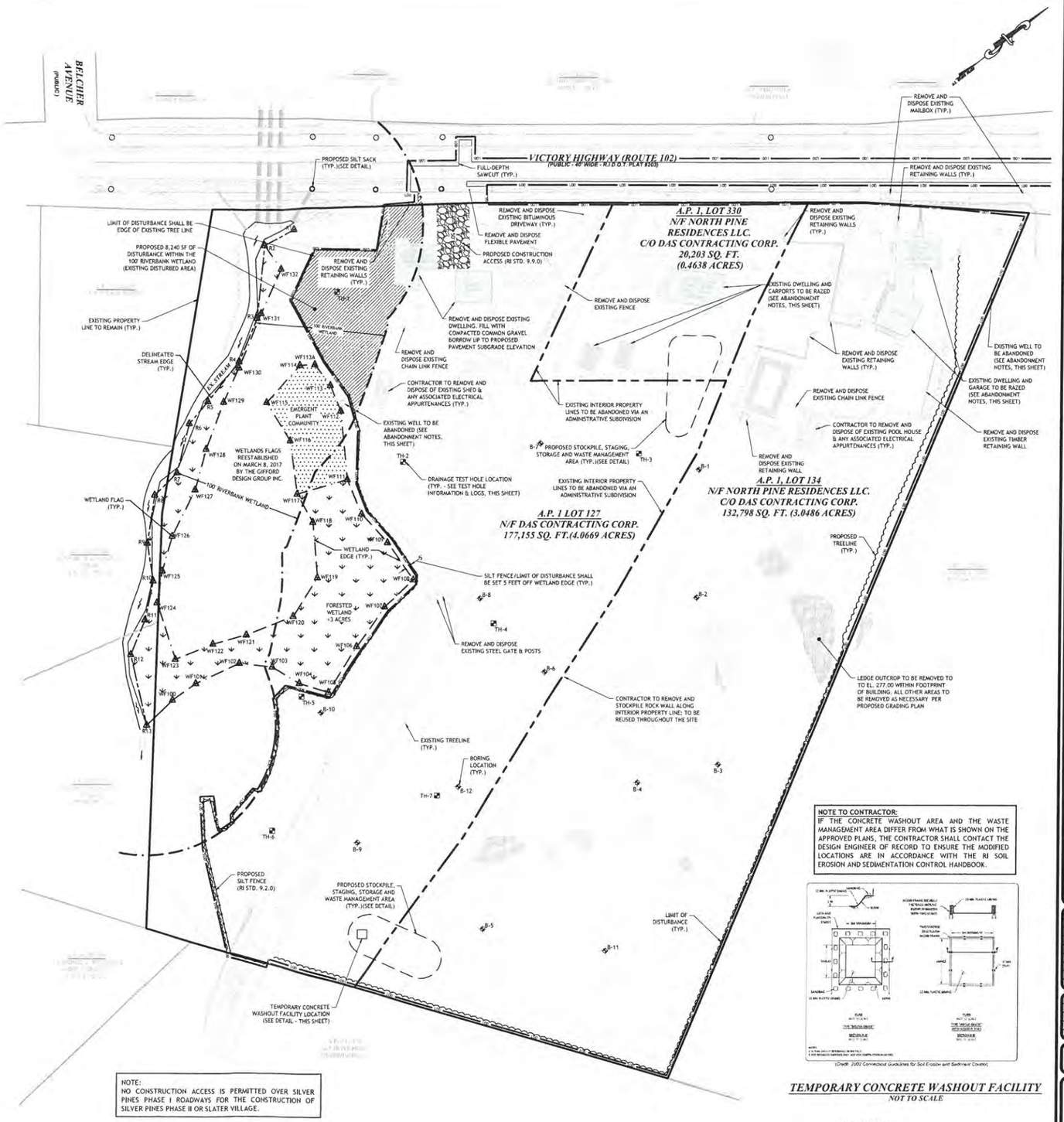
DRAINAGE TEST HOLES

DRAINAGE TEST HOLES



DRAINAGE TEST HOLES





NOTE:
NO CONSTRUCTION ACCESS IS PERMITTED OVER SILVER PINES PHASE I ROADWAYS FOR THE CONSTRUCTION OF SILVER PINES PHASE II OR SLATER VILLAGE.

NOTE TO CONTRACTOR:
IF THE CONCRETE WASHOUT AREA AND THE WASTE MANAGEMENT AREA DIFFER FROM WHAT IS SHOWN ON THE APPROVED PLANS, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER OF RECORD TO ENSURE THE MODIFIED LOCATIONS ARE IN ACCORDANCE WITH THE RI SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK.

(Credit: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control)

TEMPORARY CONCRETE WASHOUT FACILITY
NOT TO SCALE

SCALE (FEET)
0 20 40 80 160
1 INCH = 40 FT

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CIVIL · SITE DEVELOPMENT · TRANSPORTATION
WATER RESOURCES · ENVIRONMENTAL
DRAINAGE · WASTEWATER DISPOSAL
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JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
3.2020

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

REVISIONS:		
NO	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM.
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC 2018
PROJECT NO:	10-39a

FINAL PLAN

EXISTING CONDITIONS & SITE PREP. PLAN

SHEET 3 OF 16

ZONING CRITERIA	REQUIRED	PROPOSED
ZONING DISTRICT	RU-20*	RU-20
MAXIMUM # OF UNITS	120 UNITS**	120 UNITS
MINIMUM LOT WIDTH	200 FT	FT
MINIMUM FRONT YARD	25 FT	82± FT
MINIMUM SIDE YARD SETBACK	20 FT	30± FT
MINIMUM REAR YARD SETBACK	40 FT	71± FT
MAXIMUM BUILDING HEIGHT	30 FT	36 FT*
MAXIMUM BUILDING COVERAGE	20%	15%
MAXIMUM BUILDING LENGTH	150 FT	253± FT*
MINIMUM PARKING SETBACK	25 FT	25 FT

* RU-20 WITH THE FOLLOWING APRIL 2, 2012 TOWN COUNCIL CONDITIONS:

1. PROPERTY TO BE RESTRICTED TO ASSISTED LIVING FACILITIES, NURSING FACILITIES AND/OR 55 PLUS ACTIVE HOUSING FACILITIES.
2. THE HAUL ROAD FROM VICTORY HIGHWAY (RT. 102) TO MAIN STREET WILL BE TURNED INTO A PERMANENT, PRIVATE MEANS OF INGRESS/EGRESS FOR EMERGENCY ACCESS ONLY.

** 120 UNITS ALLOWED THROUGH PRIOR ZONE CHANGE AGREEMENT

***ZONING VARIANCE GRANTED FROM THE ZONING BOARD

SPECIAL USE PERMITS OBTAINED:
PER SECTION 5.4.2 (5) A SPECIAL USE PERMIT IS REQUIRED TO PROPOSE MULTI-FAMILY & APARTMENTS WITH 7 OR MORE UNITS WITH GREATER THAN 12 BEDROOMS.

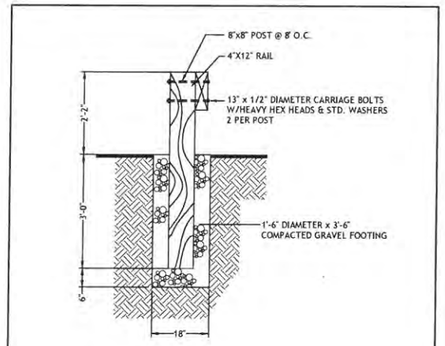
PER SECTION 6.19 SPECIAL PERMIT REQUIRED FOR DEVELOPMENT WITHIN THE WATER SUPPLY PROTECTION OVERLAY DISTRICT.
NOTE A:
PER SECTION 6.10 HEIGHT MODIFICATIONS: STRUCTURES PERMITTED ABOVE THE MAXIMUM HEIGHT REQUIREMENTS SHALL BE SET BACK FROM ANY LOT LINE ONE ADDITIONAL FOOT BY WHICH IT EXCEEDS THE MAXIMUM HEIGHT LIMIT OF THE DISTRICT.

OWNERSHIP NOTE:

ALL PROPOSED SITE IMPROVEMENTS WITHIN THE SUBJECT PROPERTY AND ASSOCIATED SITE FEATURES TO THE RIGHT-OF-WAY OF ROUTE 102 SHALL BE PRIVATELY OWNED, OPERATED AND MAINTAINED BY THE DEVELOPMENT OWNER, ITS HEIRS AND ASSIGNS. THESE IMPROVEMENTS INCLUDE BUT ARE NOT LIMITED TO:

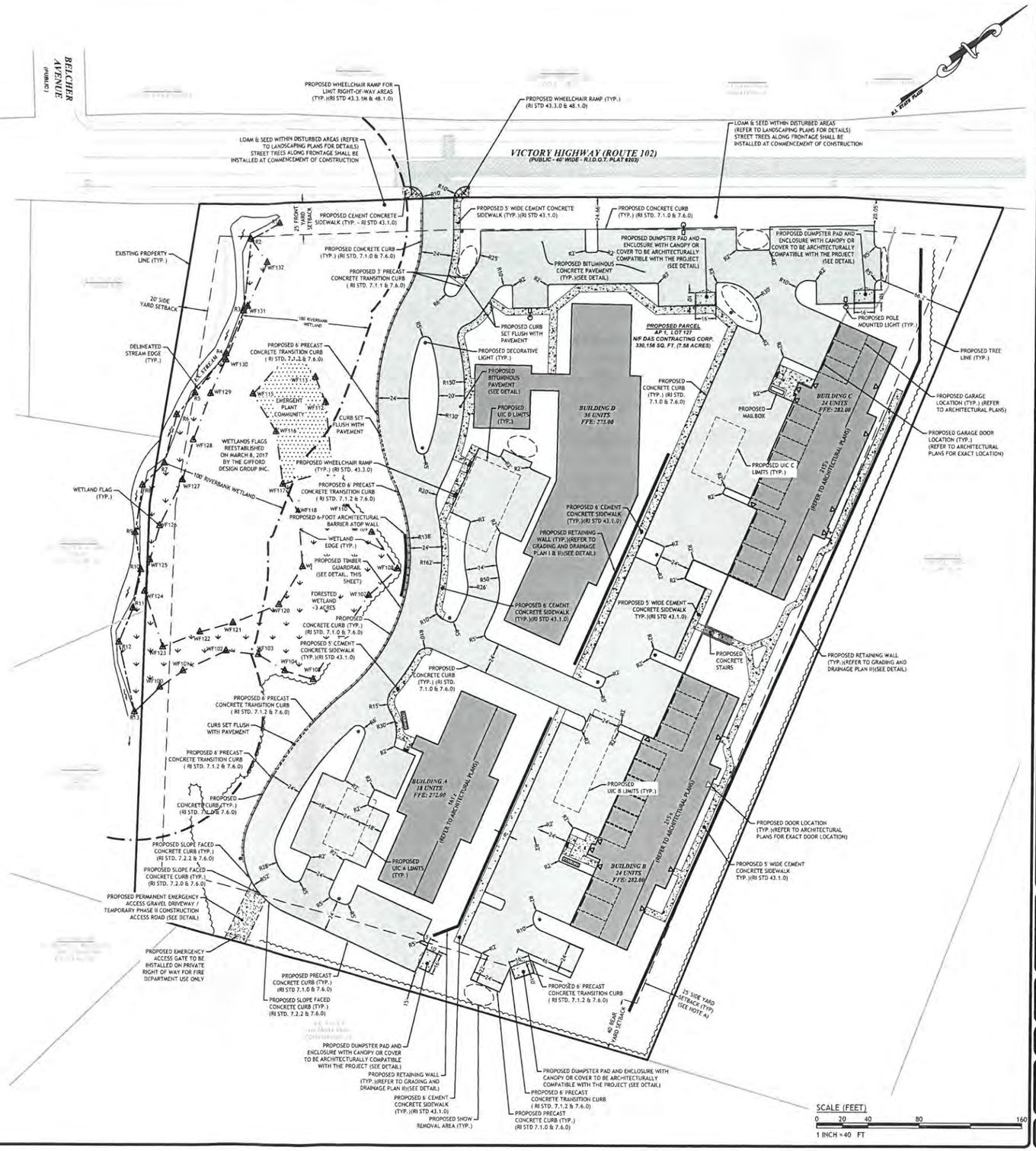
- DRIVEWAYS
- PARKING AREAS
- PRIVATE STORMWATER DRAINAGE SYSTEM
- PRIVATE WATER LINES
- PRIVATE SANITARY SEWER SYSTEM

THE TOWN OF NORTH SMITHFIELD SHALL NOT BE RESPONSIBLE FOR ANY PORTION OF THE PRIVATE DEVELOPMENT.



NOTES:
1. ALL WOOD SHALL BE PRESSURE TREATED.

2 TIMBER GUARDRAIL DETAIL
NOT TO SCALE



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JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

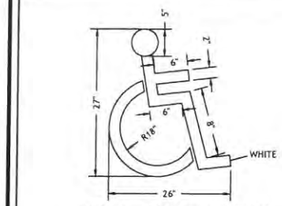
REVISIONS:		
NO.	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM.
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO.	16-39a

FINAL PLAN

SITE PLAN

SHEET 4 OF 16



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

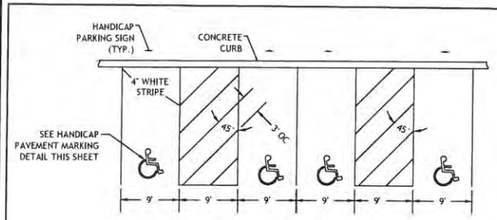
3 HANDICAP PAVEMENT MARKING
NOT TO SCALE

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

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

SIGN NOTES:
1. SIGN POSTS SHALL BE GALVANIZED STEEL U-CHANNEL (3 1/2" WIDE-MIN) AND INSTALLED IN CONFORMANCE TO M.U.T.C.D. AND RHODE ISLAND STANDARD SPECIFICATIONS.
2. POSTS SHALL BE DRIVEN TO A DEPTH OF 4 FEET (MIN).
3. THE EDGE OF THE SIGN SHALL BE 18" FROM THE FACE OF THE CURB.
4. WITHIN SIDEWALK LOCATIONS THE SIGN POST WILL BE INSTALLED WITHIN A 8"X8"X6" SQUARE BOX FORM.

4 HANDICAP PARKING SIGN
NOT TO SCALE



5 HANDICAP PARKING STALLS DETAIL
NOT TO SCALE

OFF-STREET PARKING SPACE REQUIREMENTS:

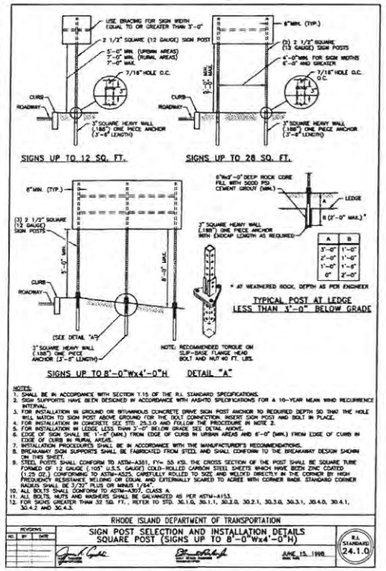
MULTIFAMILY DWELLINGS
ELDERLY & ASSISTED LIVING
0.5 SPACES PER UNIT

120 UNITS x 0.5 SPACES = 60 SPACES

REQUIRED: 60 SPACES
PROVIDED: 177 SPACES

ACCESSIBLE PARKING SPACES
TOTAL PARKING 151-200 SPACES
= 6 ACCESSIBLE SPACES (1 VAN)

PROPOSED 9 ACCESSIBLE SPACES (9 VAN)



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 7.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SUPPORTS HAVE BEEN DESIGNED IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR A 10-YEAR MEAN WIND RECURRENCE INTERVAL.
3. FOR INSTALLATION IN GROUND OR BITUMINOUS CONCRETE DRIVE SIGN POST ANCHOR TO REQUIRED DEPTH SO THAT THE HOLE WILL MATCH TO SIGN POST ABOVE GROUND FOR THE BOLT CONNECTION. INSERT SIGN POST AND BOLT IN PLACE.
4. FOR INSTALLATION IN CONCRETE SEE STD. 25.3.0 AND FOLLOW THE PROCEDURE IN NOTE 2.
5. FOR INSTALLATION IN LEDGE LESS THAN 3'-0" BELOW GRADE SEE DETAIL ABOVE.
6. EDGE OF SIGN SHALL BE 1'-0" (MIN.) FROM EDGE OF CURB IN URBAN AREAS AND 6'-0" (MIN.) FROM EDGE OF CURB IN RURAL AREAS.
7. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. BREAKAWAY SIGN SUPPORTS SHALL BE FABRICATED FROM STEEL AND SHALL CONFORM TO THE BREAKAWAY DESIGN SHOWN ON THIS SHEET.
9. STEEL POSTS SHALL CONFORM TO ASTM-A36, Fy= 50 KSI. THE CROSS SECTION OF THE POST SHALL BE SQUARE TUBE (12 GA.) OR SQUARE TUBE WITH TWO FLUTES (12 GA.) CONFORMING TO ASTM-A500, GRADE B, Fy= 46 KSI. OR (12 GA.) CONFORMING TO ASTM-A570, CAREFULLY ROLLED TO SIZE AND HOLES DIRECTLY IN THE CORNER OF HIGH FREQUENCY RESISTANCE WELDING OR EQUAL AND EXTERNALLY SCARED TO AGREE WITH CORNER RADII. STANDARD CORNER RADIUS SHALL BE 7/32" PLUS OR MINUS 1/64".
10. ALL BOLTS SHALL CONFORM TO ASTM-A307, CLASS A.
11. ALL STEEL POSTS AND HARDWARE SHALL BE GALVANIZED AS PER ASTM-A153.
12. FOR SIGNS SMALLER THAN 32 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

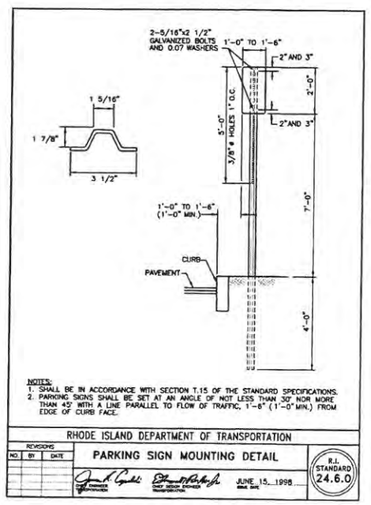
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

SIGN POST SELECTION AND INSTALLATION DETAILS
SQUARE POST (SIGNS UP TO 8'-0"Wx4'-0"H)

JUNE 15, 1998

R.I. STANDARD 24.1.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 7.15 OF THE STANDARD SPECIFICATIONS.
2. PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° WITH A LINE PARALLEL TO FLOW OF TRAFFIC, 1'-6" (1'-0" MIN.) FROM EDGE OF CURB FACE.

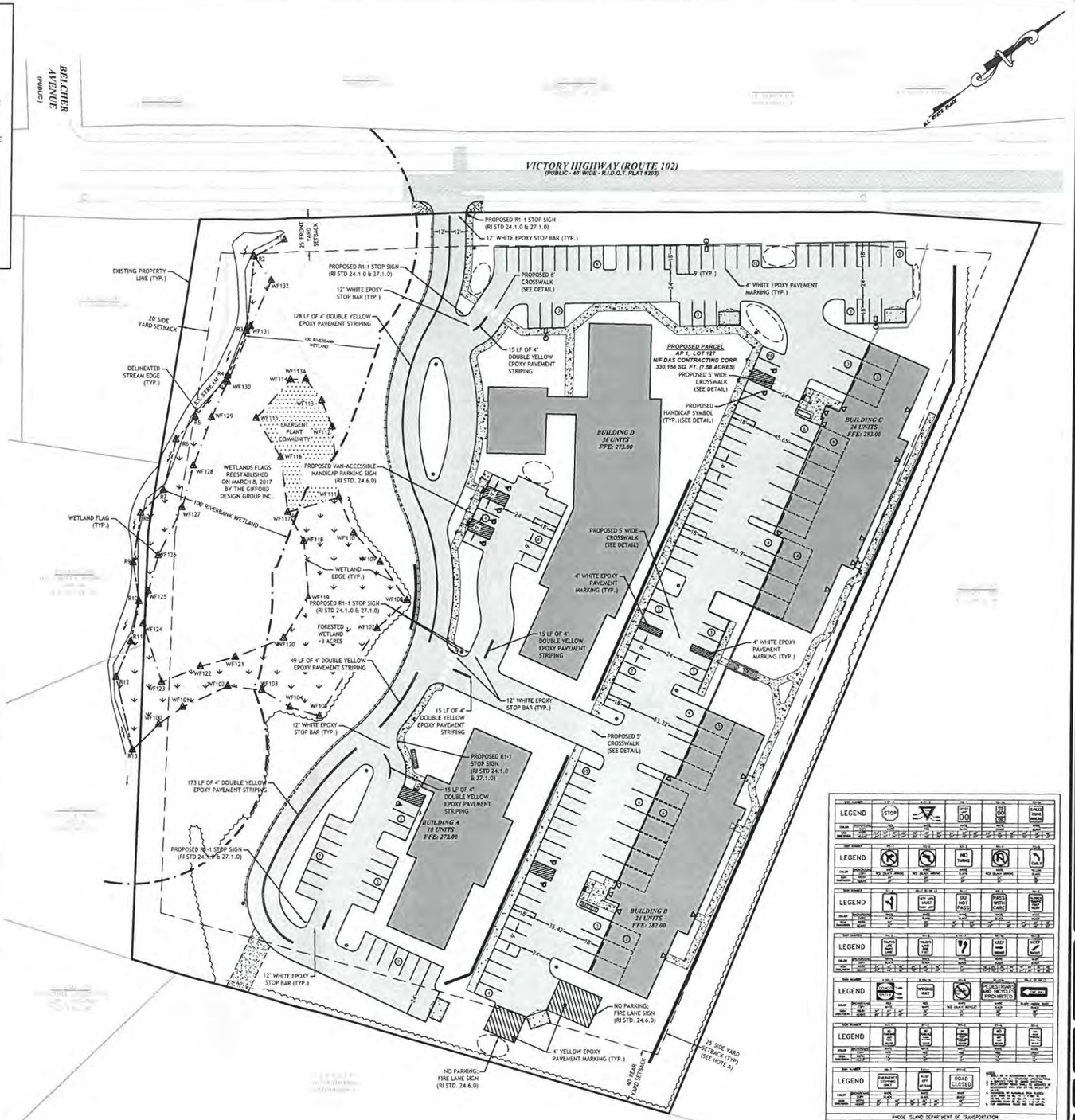
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

PARKING SIGN MOUNTING DETAIL

JUNE 15, 1998

R.I. STANDARD 24.6.0



SCALE (FEET)
0 20 40 80 160
1 INCH = 40 FT

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3.2020

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
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MAP 1; LOTS 127, 134 & 330

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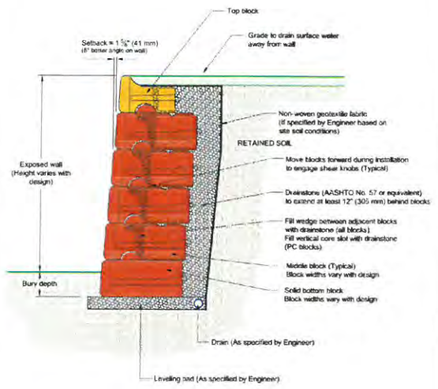
DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO.	16-39a

FINAL PLAN

SIGNAGE & STRIPING PLAN

SHEET 5 OF 16

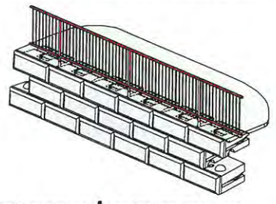
Typical Gravity Wall Section

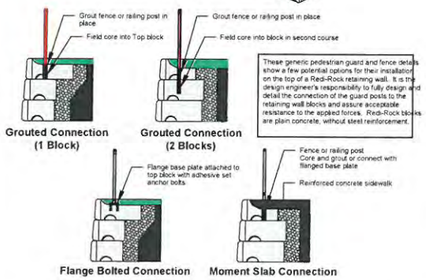


This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ	TITLE: Typical Gravity Wall Detail	REDI-ROCK 8481 US 31 SOUTH, CHARLEVOIX, MI 49720 (800) 878-4470 www.redi-rock.com
APPROVED BY:	JRJ		
DATE:	17MAR2016		
SHEET:	1 of 1	FILE: 1 Typical Gravity Wall Detail 031716.dwg	

Fence or Pedestrian Guard Connection Options





These generic pedestrian guard and fence details show a few potential options for their installation on the top of a Redi-Rock retaining wall. It is the design engineer's responsibility to fully design and detail the connection of the guard posts to the retaining wall blocks and assure acceptable resistance to the applied forces. Redi-Rock blocks are plain concrete, without steel reinforcement.

This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ	TITLE: Fence or Pedestrian Guard Connection Options	REDI-ROCK 8481 US 31 SOUTH, CHARLEVOIX, MI 49720 (800) 878-4470 www.redi-rock.com
APPROVED BY:	JRJ		
DATE:	06-22-2015		
SHEET:	1 of 1	FILE: S Fence or Pedestrian Guard Connection Options 062215.dwg	

NOTE TO CONTRACTOR:

1. THE PROPOSED SAND FILTERS AND INFILTRATION BASIN SHALL NOT BE USED AS SEDIMENT BASINS DURING CONSTRUCTION.
2. THE PROPOSED AREAS FOR INFILTRATION BASIN A AND SAND FILTERS B1 & B2 SHALL BE PROTECTED WITH TEMPORARY CONSTRUCTION FENCING TO PREVENT COMPACTION OF UNDERLYING SOILS. THE CONTRACTOR SHALL DIVERT CONSTRUCTION RUNOFF AWAY FROM SAID AREAS UNTIL THE SITE IS STABILIZED AND THE INFILTRATION BASIN AND SAND FILTERS ARE COMPLETE.
3. CONTRACTOR TO UTILIZE THE SEDIMENT FOREBAYS AS A TEMPORARY SEDIMENT CONTROL BASIN DURING CONSTRUCTION.
4. WHEN THE ENTIRE SITE IS STABILIZED, THE CONTRACTOR IS TO REMOVE ALL SEDIMENT FROM THE SEDIMENT FOREBAYS, EXCAVATE 24" OF THE EXISTING SOIL, TEST EXISTING SOIL TO ENSURE PERMEABILITY RATES ARE AS DESIGNED AND COMPLETE FOREBAY CONSTRUCTION WITH 4" OF LOAM AND SEED.

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JOSEPH A. CASALI
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REGISTERED PROFESSIONAL ENGINEER
CIVIL

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

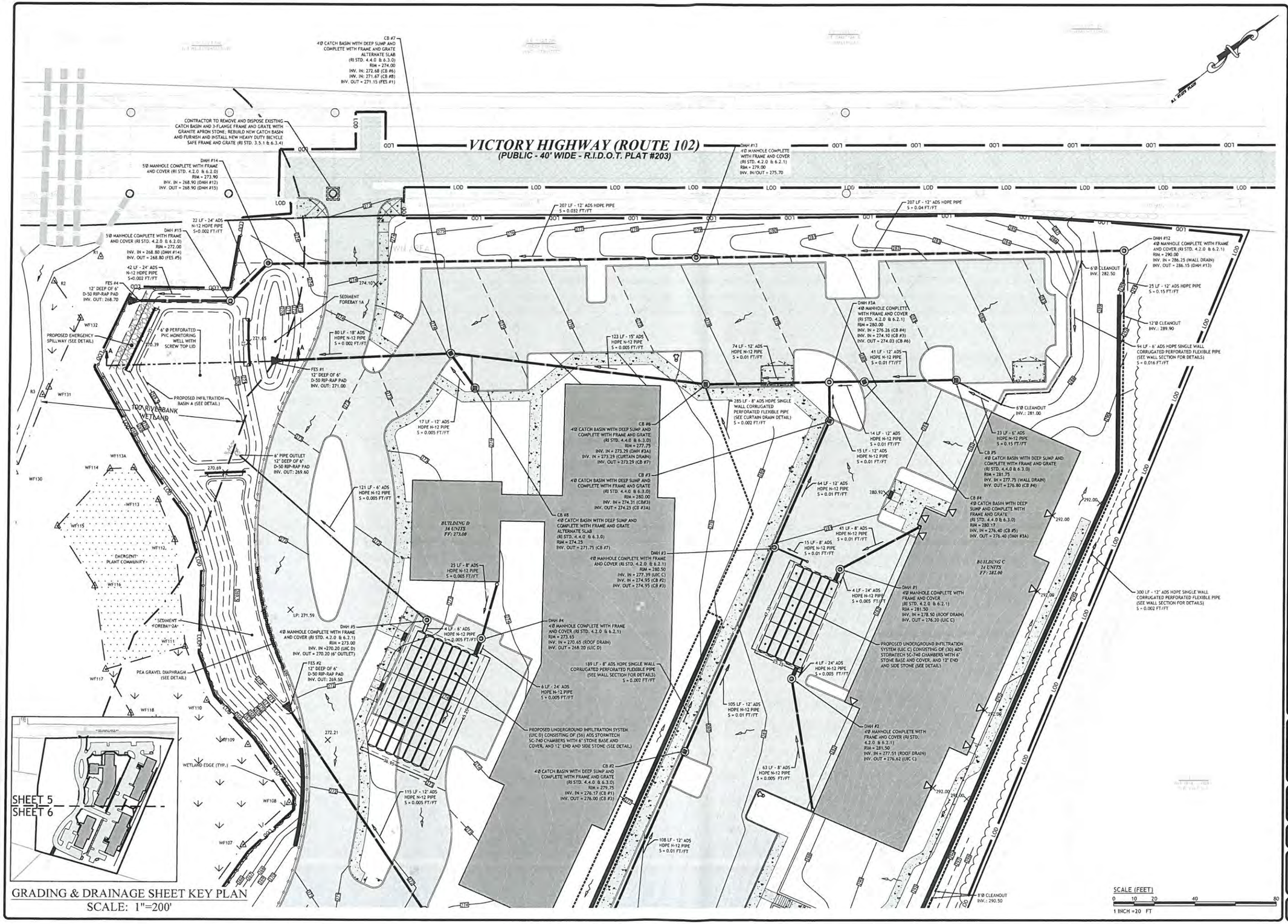
REVISIONS:		
NO.	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC 2018
PROJECT NO.	10-39a

FINAL PLAN

OVERALL SITE GRADING PLAN

SHEET 6 OF 16



GRADING & DRAINAGE SHEET KEY PLAN
SCALE: 1"=200'

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3.2020

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

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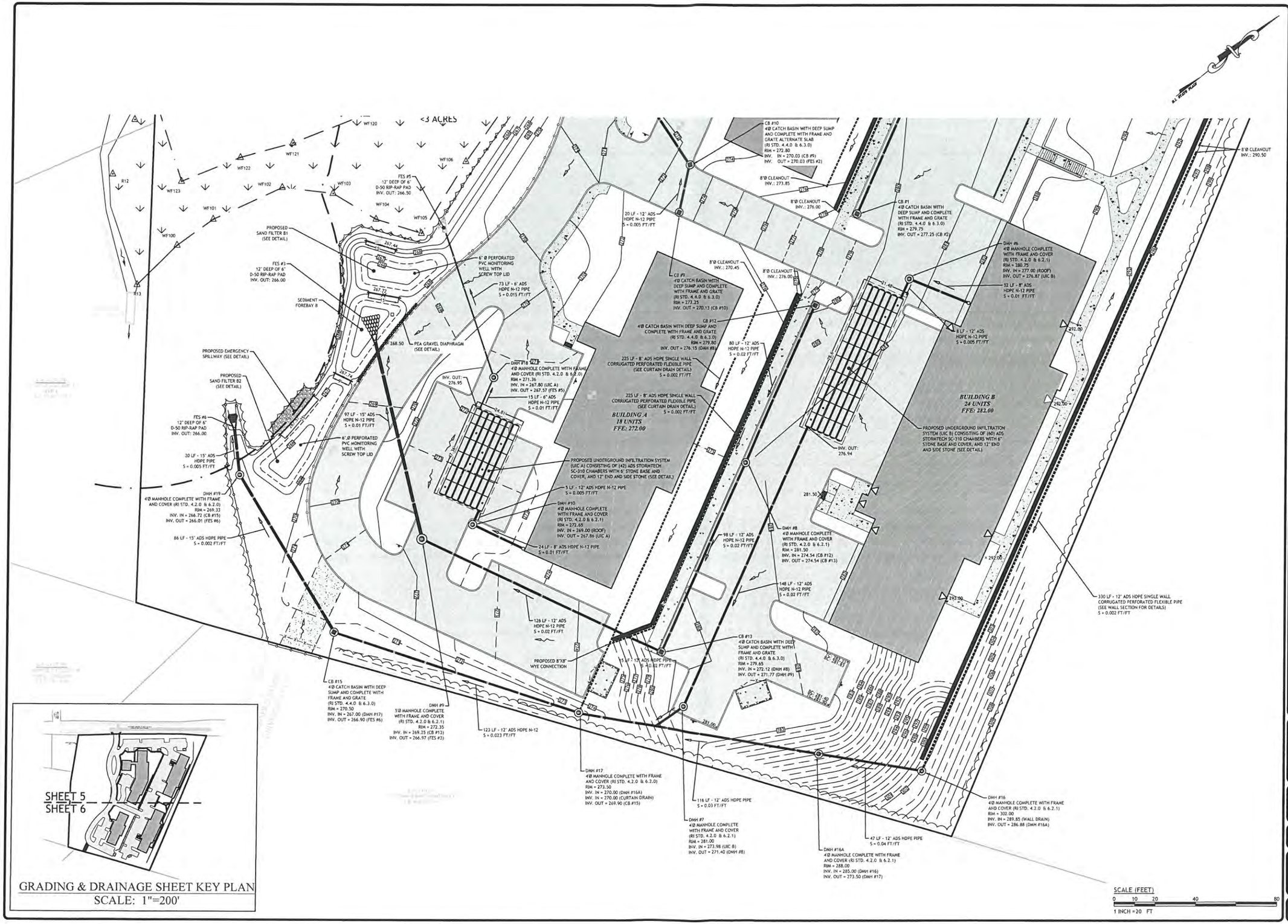
DESIGNED BY:	WMJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO.	10-39a

FINAL PLAN

GRADING & DRAINAGE PLAN I

SHEET 7 OF 16



GRADING & DRAINAGE SHEET KEY PLAN
SCALE: 1"=200'

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SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

REVISIONS:

NO	DATE	DESCRIPTION
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4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

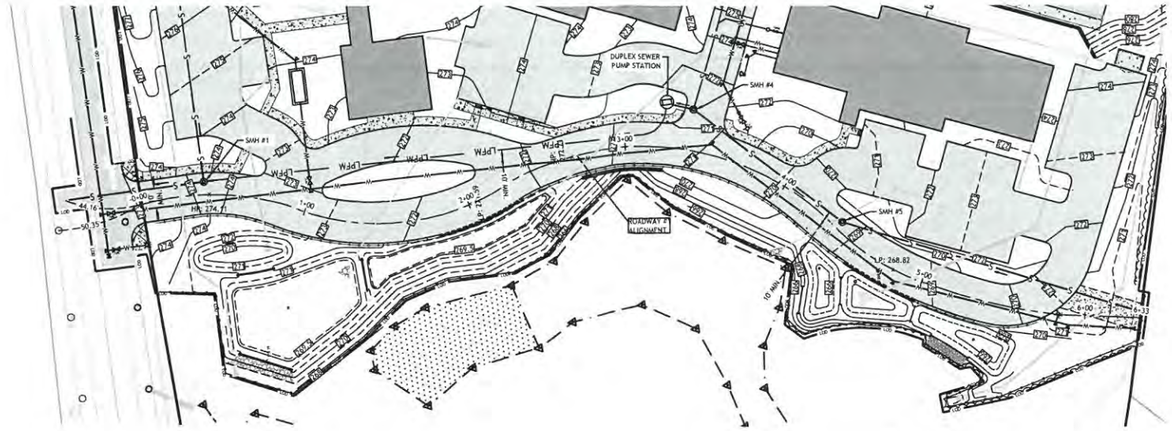
DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO:	16-396

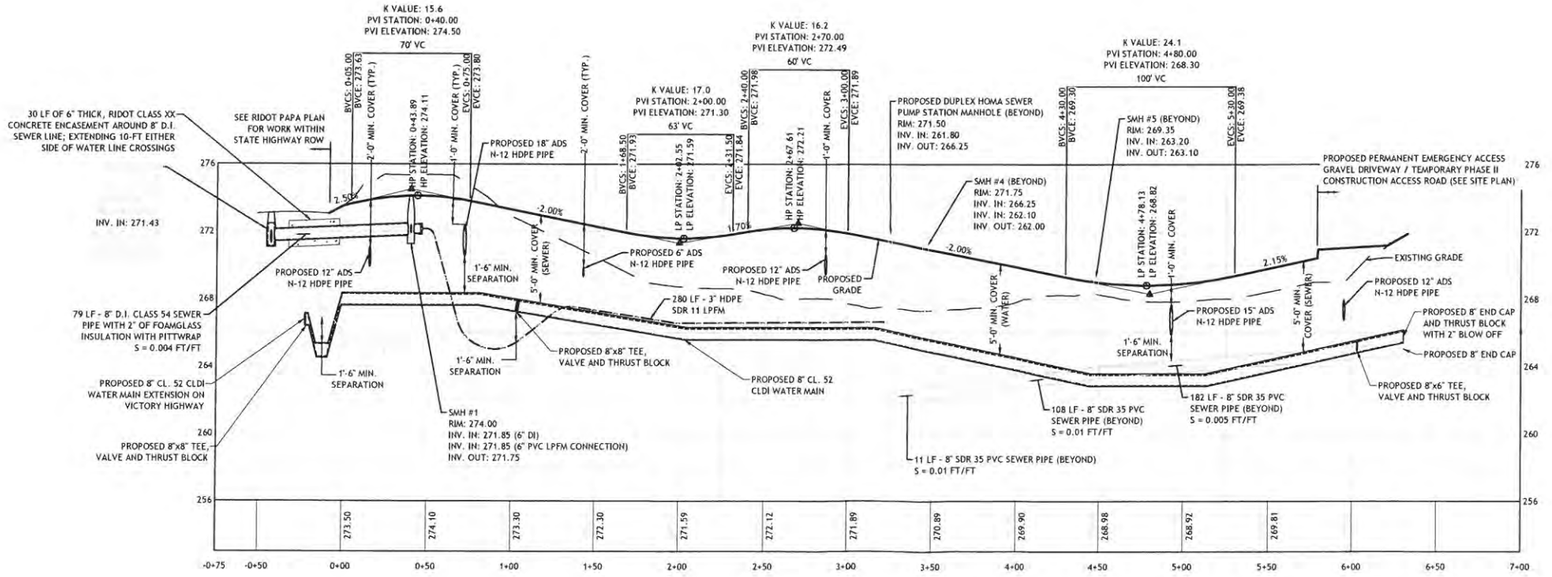
FINAL PLAN

GRADING & DRAINAGE PLAN II

SHEET 8 OF 16

NOTE:
NO CONSTRUCTION ACCESS IS PERMITTED OVER SILVER PINES PHASE I ROADWAYS FOR THE CONSTRUCTION OF SILVER PINES PHASE II OR SLATER VILLAGE.





ROADWAY #1 PROFILE VIEW
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

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SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

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DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
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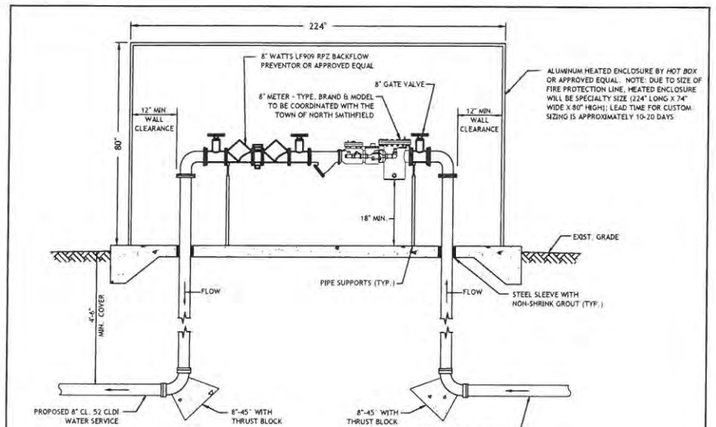
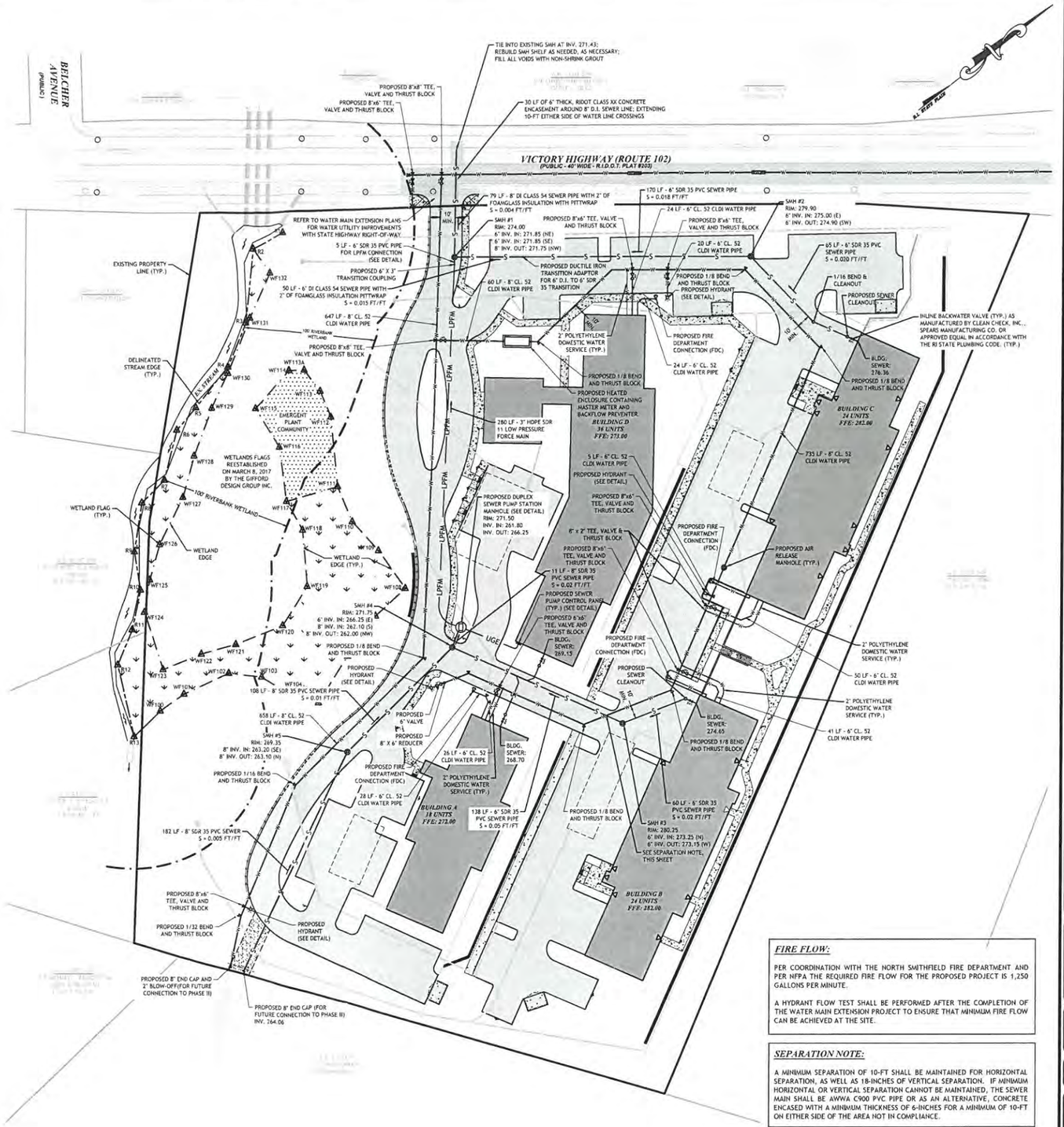
FINAL PLAN

ROADWAY PLAN & PROFILE

SHEET 9 OF 16



6 ABOVE GROUND HEATED WATER ENCLOSURE
NOT TO SCALE



FIRE FLOW:

PER COORDINATION WITH THE NORTH SMITHFIELD FIRE DEPARTMENT AND PER NFPA THE REQUIRED FIRE FLOW FOR THE PROPOSED PROJECT IS 1,250 GALLONS PER MINUTE.

A HYDRANT FLOW TEST SHALL BE PERFORMED AFTER THE COMPLETION OF THE WATER MAIN EXTENSION PROJECT TO ENSURE THAT MINIMUM FIRE FLOW CAN BE ACHIEVED AT THE SITE.

SEPARATION NOTE:

A MINIMUM SEPARATION OF 10-FT SHALL BE MAINTAINED FOR HORIZONTAL SEPARATION, AS WELL AS 18-INCHES OF VERTICAL SEPARATION. IF MINIMUM HORIZONTAL OR VERTICAL SEPARATION CANNOT BE MAINTAINED, THE SEWER MAIN SHALL BE AWWA C900 PVC PIPE OR AS AN ALTERNATIVE, CONCRETE ENCASED WITH A MINIMUM THICKNESS OF 6-INCHES FOR A MINIMUM OF 10-FT ON EITHER SIDE OF THE AREA NOT IN COMPLIANCE.

SCALE (FEET)
0 20 40 80 160
1 INCH = 40 FT

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SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

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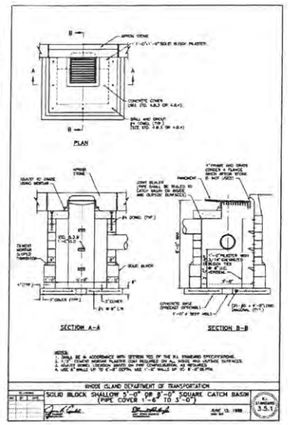
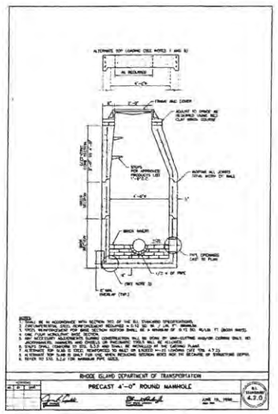
DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO:	16-39a

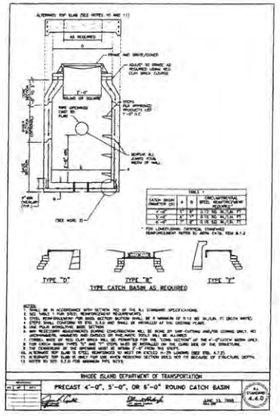
FINAL PLAN

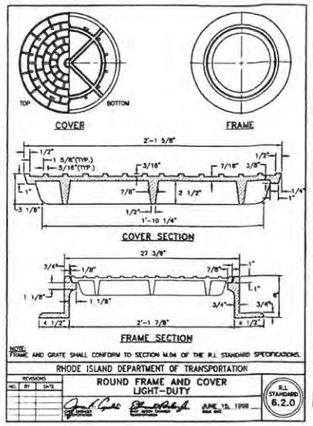
UTILITY PLAN

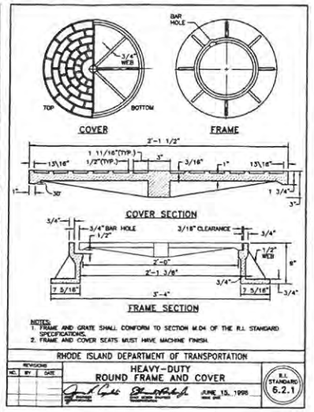
SHEET 10 OF 16

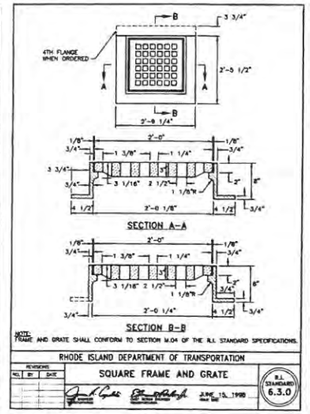


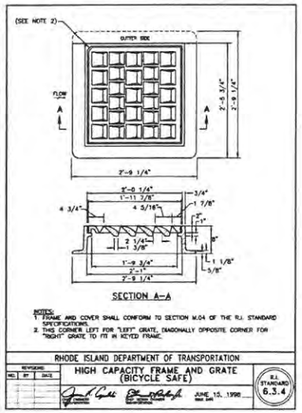


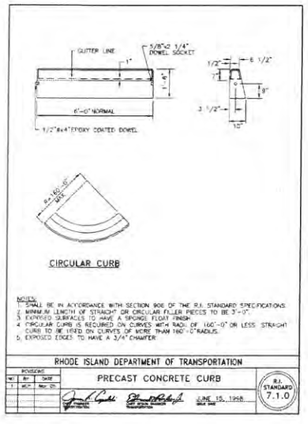


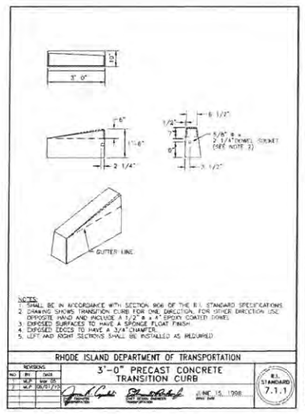


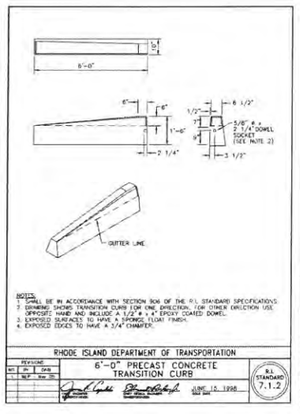


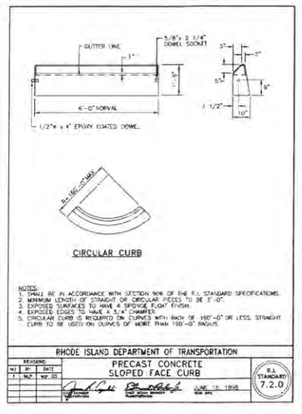


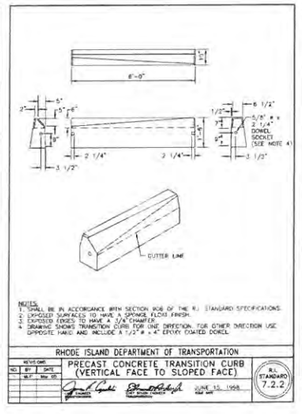


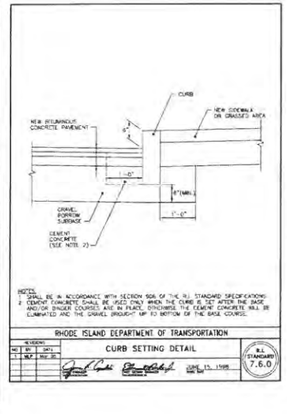


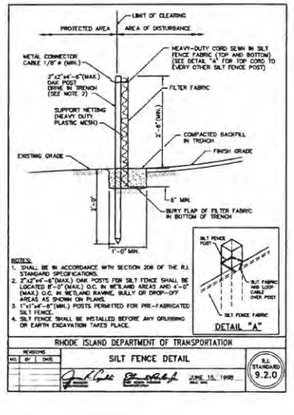


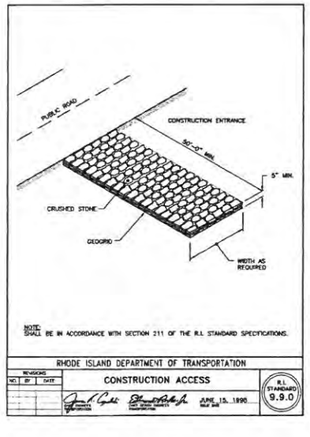


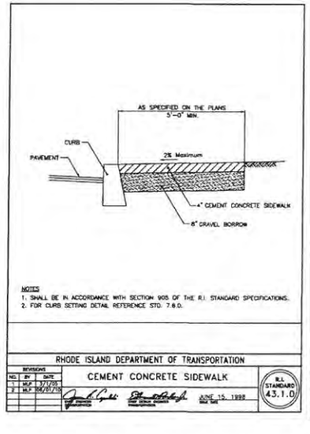


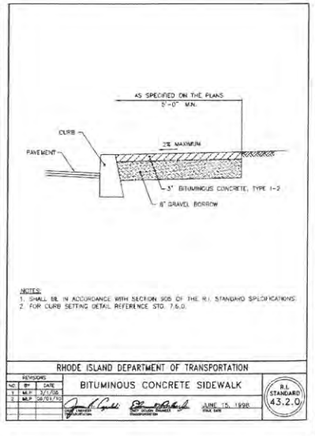


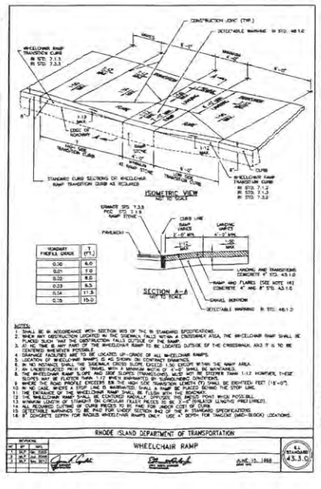


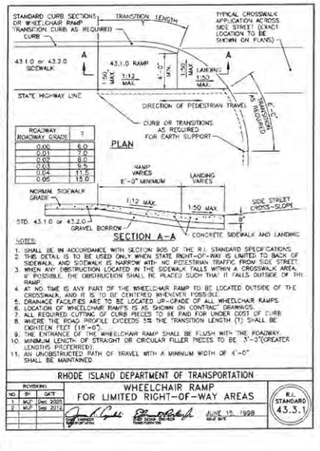


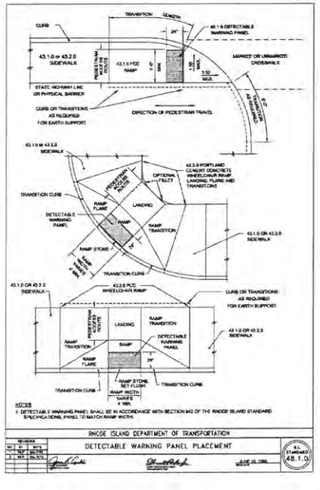












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11-20-19

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

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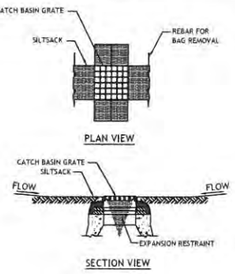
DESIGNED BY:	WMJR
DRAWN BY:	SD/SP
CHECKED BY	JAC
DATE:	DEC 2018
PROJECT NO	10-39a

FINAL PLAN

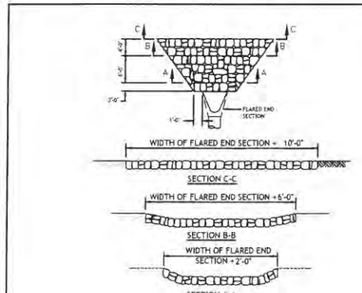
RHODE ISLAND STANDARD DETAILS

SHEET 11 OF 16



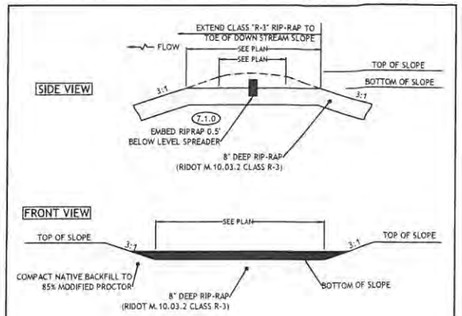
Notes:
1. INSTALL SILTSACKS IN DOWNSTREAM CATCH BASINS ALONG VICTORY HIGHWAY BEFORE COMMENCING WORK.
2. GRATE TO BE PLACED OVER SILTSACK. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED

7 SILTSACK SEDIMENT TRAP
NOT TO SCALE

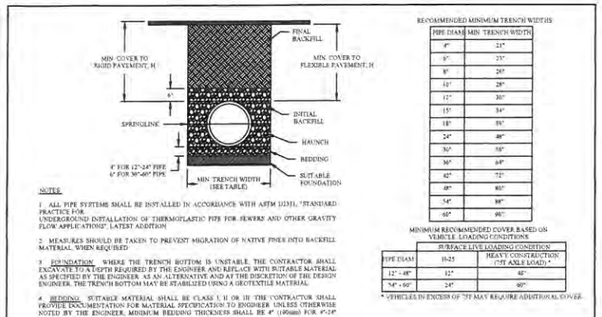


NOTES:
1. CLASS OF RIP-RAP AND BEDDING TO BE SPECIFIED IN CONTRACT DOCUMENTS. 2. DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS.
3. UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED.

8 ROCK FILL RIP-RAP AT FLARED END SECTIONS
NOT TO SCALE



9 EMERGENCY SPILLWAY
NOT TO SCALE



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL WHEN REQUIRED
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm), 6" (150mm) FOR 30"-60" (750mm-900mm)
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT

RECOMMENDED MINIMUM TRENCH WIDTHS

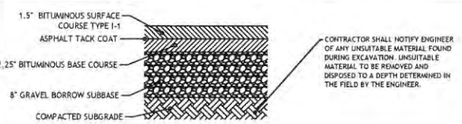
PIPE DIAM	MIN. TRENCH WIDTH
4"	22"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	46"
30"	58"
36"	69"
42"	72"
48"	80"
54"	88"
60"	98"

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

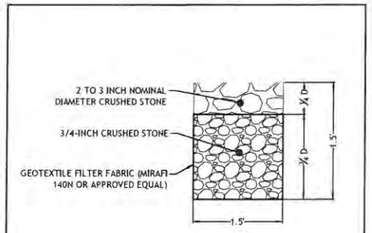
10 ADS PIPE TRENCH INSTALLATION DETAIL
NOT TO SCALE



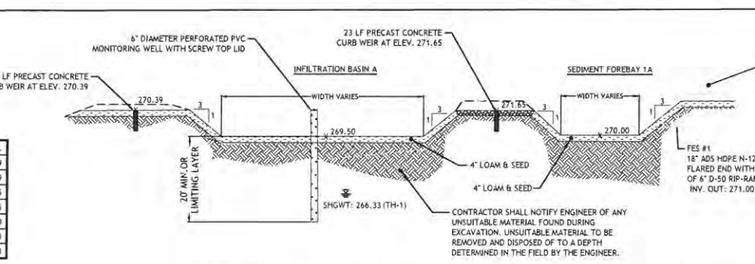
NOTE:

1. IN AREAS OF EARTH EXCAVATION FOR BITUMINOUS CONCRETE PAVEMENT, THE CONTRACTOR SHALL REMOVE 12 INCHES OF EXISTING MATERIAL. IF UNSUITABLE MATERIALS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE DEPTH OF UNSUITABLE MATERIAL TO BE REMOVED WILL BE DETERMINED IN THE FIELD. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE THE UNSUITABLE MATERIALS AND REPLACE WITH SUITABLE MATERIAL APPROVED BY THE ENGINEER.
2. PAVEMENT DETAIL IS FOR THE DRIVEWAY AND PRIVATE ROADWAYS ONLY.

11 BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE



12 PEA GRAVEL DIAPHRAGM
NOT TO SCALE



CONTRACTOR SHALL REMOVE ALL HUMAN TRANSPORTED MATERIAL (HTM) AND SANDY LOAM MATERIAL FROM WITHIN FOOTPRINT OF INFILTRATION BASIN. BASED ON SOIL EVALUATIONS, DEPTH WILL RANGE FROM 2 TO 10 -INCHES BELOW THE EXISTING GROUND SURFACE. UPON EXPOSURE OF NATIVE MATERIAL, CONTRACTOR SHALL NOTIFY DESIGN ENGINEER FOR REVIEW AND APPROVAL. BACKFILL VOID WITH BANK RUN GRAVEL IN MINIMUM 12-INCH-THICK LOOSE LIFTS, COMPACTED TO A MINIMUM OF 85% MODIFIED PROCTOR AND A MAXIMUM OF 92% MODIFIED PROCTOR. CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST RESULTS INDICATING THAT THE IMPORTED GRAVEL BORROW MATERIAL HAS AN INFILTRATION RATE GREATER THAN OR EQUAL TO THE DESIGN INFILTRATION RATE OF 2.41 INCHES/HOUR (4.82 FT/DAY).

INFILTRATION BASIN A

DESCRIPTION	ELEV.
100 YEAR STORM	270.69
25 YEAR STORM	270.59
10 YEAR STORM	270.55
2 YEAR STORM	270.45
1 YEAR STORM	270.40
TOP OF INFILT. BASIN	271.00
BOTTOM OF INFILT. BASIN	269.50

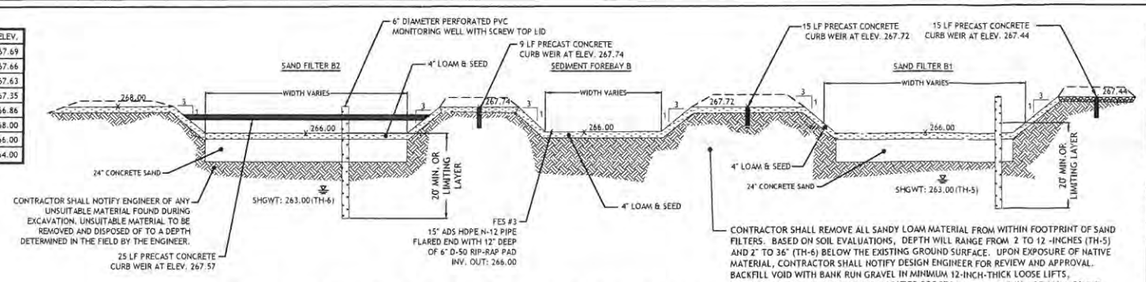
SEDIMENT FOREBAY 1A

DESCRIPTION	ELEV.
100 YEAR STORM	271.94
25 YEAR STORM	271.85
10 YEAR STORM	271.81
2 YEAR STORM	271.75
1 YEAR STORM	271.73
TOP OF SED. FOREBAY	272.00
BOTTOM OF SED. FOREBAY	270.00

SEDIMENT FOREBAY 2A

DESCRIPTION	ELEV.
100 YEAR STORM	270.97
25 YEAR STORM	270.89
10 YEAR STORM	270.85
2 YEAR STORM	270.78
1 YEAR STORM	270.75
TOP OF SED. FOREBAY	271.00
BOTTOM OF SED. FOREBAY	269.50

13 SEDIMENT FOREBAY 1A & INFILTRATION BASIN A DETAIL SECTION A-A
NOT TO SCALE



CONTRACTOR SHALL REMOVE ALL SANDY LOAM MATERIAL FROM WITHIN FOOTPRINT OF SAND FILTERS. BASED ON SOIL EVALUATIONS, DEPTH WILL RANGE FROM 2 TO 12 -INCHES (TH-5) AND 2" TO 36" (TH-6) BELOW THE EXISTING GROUND SURFACE. UPON EXPOSURE OF NATIVE MATERIAL, CONTRACTOR SHALL NOTIFY DESIGN ENGINEER FOR REVIEW AND APPROVAL. BACKFILL VOID WITH BANK RUN GRAVEL IN MINIMUM 12-INCH-THICK LOOSE LIFTS, COMPACTED TO A MINIMUM OF 85% MODIFIED PROCTOR AND A MAXIMUM OF 92% MODIFIED PROCTOR. CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST RESULTS INDICATING THAT THE IMPORTED GRAVEL BORROW MATERIAL HAS AN INFILTRATION RATE GREATER THAN OR EQUAL TO THE DESIGN INFILTRATION RATE OF 2.41 INCHES/HOUR (4.82 FT/DAY).

SAND FILTER B2

DESCRIPTION	ELEV.
100 YEAR STORM	267.69
25 YEAR STORM	267.66
10 YEAR STORM	267.63
2 YEAR STORM	267.35
1 YEAR STORM	266.86
TOP OF INFILT. BASIN	268.00
BOTTOM OF BASIN	266.00
BOTTOM OF SAND FILTER	264.00

SEDIMENT FOREBAY B

DESCRIPTION	ELEV.
100 YEAR STORM	267.99
25 YEAR STORM	267.92
10 YEAR STORM	267.88
2 YEAR STORM	267.83
1 YEAR STORM	267.81
TOP OF SED. FOREBAY	268.00
BOTTOM OF SED. FOREBAY	266.00

SAND FILTER B1

DESCRIPTION	ELEV.
100 YEAR STORM	267.71
25 YEAR STORM	267.64
10 YEAR STORM	267.60
2 YEAR STORM	267.55
1 YEAR STORM	267.50
TOP OF INFILT. BASIN	268.00
BOTTOM OF BASIN	266.00
BOTTOM OF SAND FILTER	264.00

14 SEDIMENT FOREBAY B & SAND FILTERS B1-B2 SECTION B-B
NOT TO SCALE

JCE
JOE CASALI ENGINEERING, INC.
CIVIL • LAND DEVELOPMENT • TRANSPORTATION
DRAINAGE • WETLANDS • ISDS • TRAFFIC
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC 2018
PROJECT NO:	16-39a

FINAL PLAN

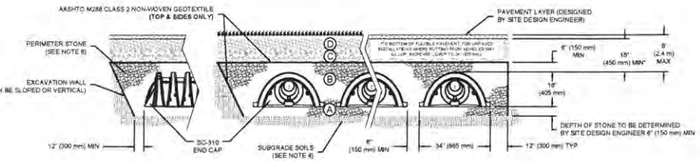
SITE DETAILS

SHEET 12 OF 16

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 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.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	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 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS 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.	CLEAN, CRUSHED, ANGULAR STONE[1]	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.	CLEAN, CRUSHED, ANGULAR STONE[1]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[1,2]

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.

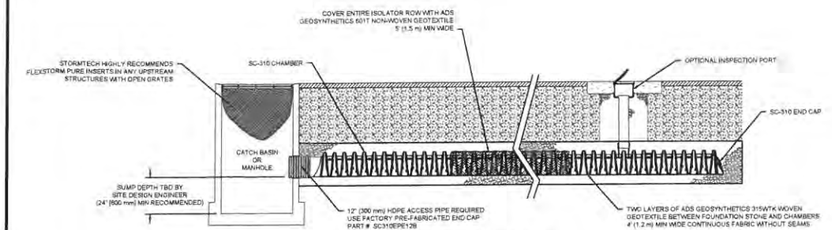


NOTES:

1. SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F3418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. 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.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. 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.

SC-310 STANDARD CROSS SECTION — DRAWN: JLM — CHECKED: JLM — DATE: 11/19/14 — PROJECT #:

15 STORMTECH SC-310 CROSS SECTION DETAIL
NOT TO SCALE



SC-310 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

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

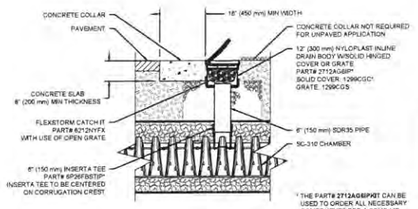
STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

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

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

NOTES

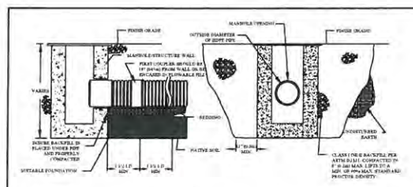
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



SC-310 6" INSPECTION PORT DETAIL
NTS

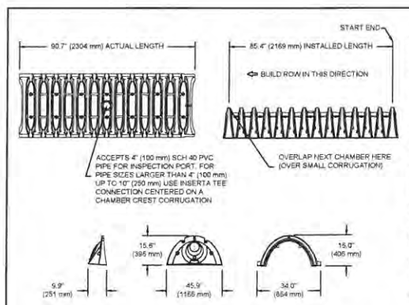
ISOLATOR ROW DETAILS SC-310 — DRAWN: AJM — CHECKED: — DATE: 03/05/17 — PROJECT #:

16 STORMTECH SC-310 ISOLATOR ROW DETAIL
NOT TO SCALE



NOTES:
1. MAXIMUM INSERTION ANGLE SHALL NOT EXCEED REQUIREMENTS AS SPECIFIED BY THE MANUFACTURER.
2. SEE STANDARD DETAILS STD-202 (A-B) THROUGH STD-204 (A-E) FOR STRUCTURE CONNECTIONS, PRODUCT INFORMATION AND DIMENSIONAL PIPE DATA. INSTALLATION RECOMMENDATIONS ARE ALSO SPECIFIED IN TECHNICAL NOTE 5.04: HDPE CONNECTIONS TO MANHOLES AND STRUCTURES.
3. PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST INSURE MANHOLE GASKET IS UNIFORMLY SEATED AROUND STRUCTURE ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

15 STRUCTURE CONNECTION INSTALLATION DETAIL
NOT TO SCALE



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m³)
WEIGHT	35.0 lbs.	(15.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

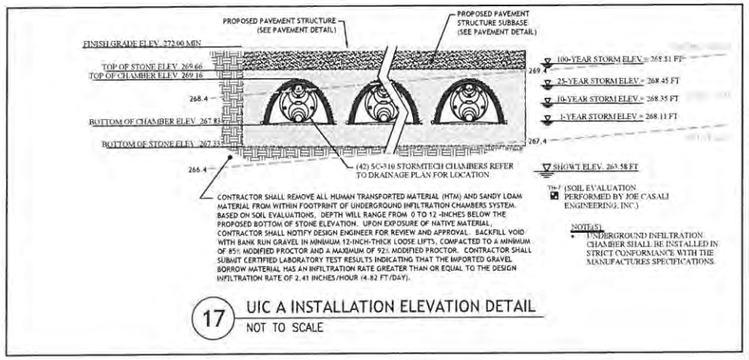
PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	—
SC310EPE06B / SC310EPE06BPC			—	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	—
SC310EPE08B / SC310EPE08BPC			—	0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	—
SC310EPE10B / SC310EPE10BPC			—	0.7" (18 mm)
SC310EPE12B	12" (300 mm)	13.5" (343 mm)	—	0.9" (23 mm)

ALL STUBS EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

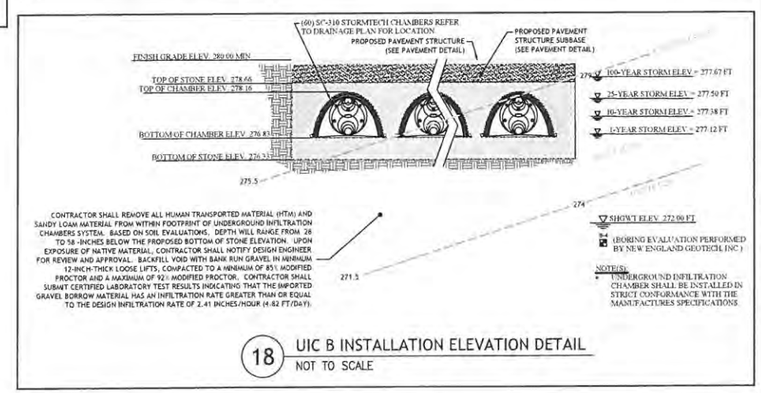
† FOR THE SC310EPE12B THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE 12" STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

16 SC-310 TECHNICAL SPECIFICATION
NOT TO SCALE



17 UIC A INSTALLATION ELEVATION DETAIL
NOT TO SCALE



18 UIC B INSTALLATION ELEVATION DETAIL
NOT TO SCALE

STORMTECH GENERAL NOTES

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

STORMWATER CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-310 OR SC-740.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. 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.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON A REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   a. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES 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 AASHTO FOR THERMOPLASTIC PIPE.
   b. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
   c. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

NOTES FOR THE INSTALLATION OF THE SC-310 SYSTEM

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 1/4-2".
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. 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

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

JCE
JOE CASALI ENGINEERING, INC.
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JOSEPH A. CASALI — No. 7250 — REGISTERED PROFESSIONAL ENGINEER CIVIL — 1-2020

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

REVISIONS:		
NO.	DATE:	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO.	10-39a

FINAL PLAN

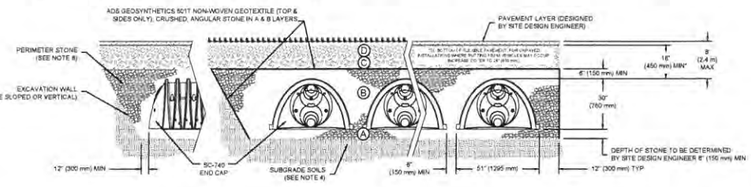
DRAINAGE DETAILS I

SHEET 13 OF 16

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 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.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS, CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	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 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS 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.	CLEAN, CRUSHED, ANGULAR STONE	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.	CLEAN, CRUSHED, ANGULAR STONE	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.



NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. 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.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. 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.

SC-740 STANDARD CROSS SECTION

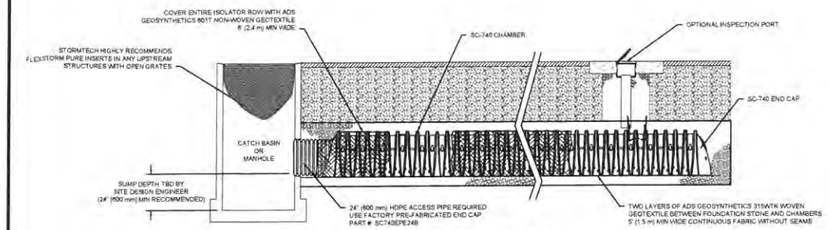
REV.	DRW	CHK	DESCRIPTION	DATE
				11/29/18

DRAWN: AJM
CHECKED: JAM
PROJECT #:

ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

SHEET 1 OF 1

21 STORMTECH SC-740 CROSS SECTION DETAIL
NOT TO SCALE



SC-740 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

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

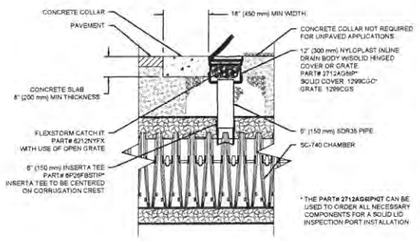
STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

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

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

NOTES

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



* THE PART# 2712AG66PKIT CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

SC-740 6" INSPECTION PORT DETAIL
NTS

ISOLATOR ROW DETAILS SC-740

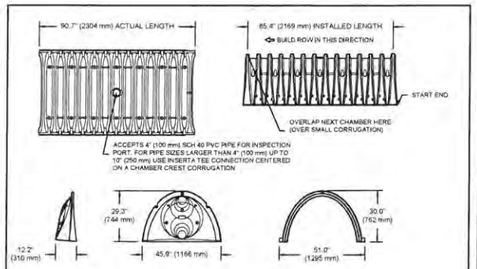
REV.	DRW	CHK	DESCRIPTION	DATE
				03/06/17

DRAWN: AJM
CHECKED:
PROJECT #:

ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

SHEET 1 OF 1

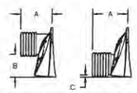
22 STORMTECH SC-740 ISOLATOR ROW DETAIL
NOT TO SCALE



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.8 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



STUB8 AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH '8'
STUB8 AT TOP OF END CAP FOR PART NUMBERS ENDING WITH 'T'

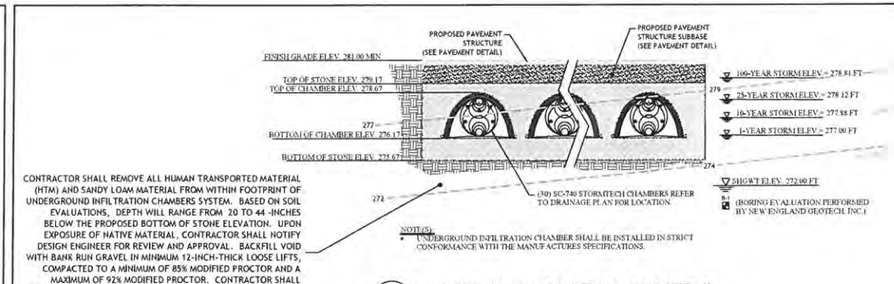
PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC			---	0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.8" (419 mm)	---
SC740EPE08B / SC740EPE08BPC			---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC			---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC			---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC			---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC			---	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

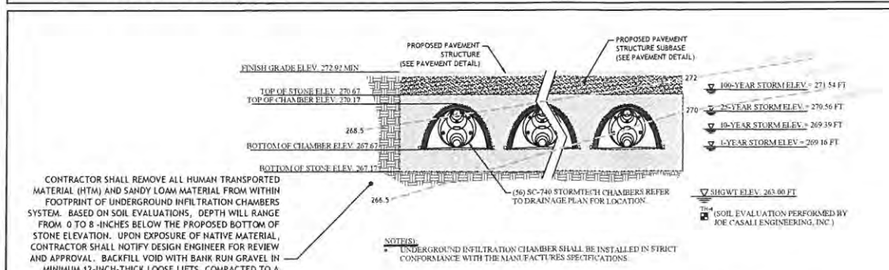
21 SC-740 TECHNICAL SPECIFICATION
NOT TO SCALE



CONTRACTOR SHALL REMOVE ALL HUMAN TRANSPORTED MATERIAL (HTM) AND SANDY LOAM MATERIAL FROM WITHIN FOOTPRINT OF UNDERGROUND INFILTRATION CHAMBERS SYSTEM. BASED ON SOIL EVALUATIONS, DEPTH WILL RANGE FROM 20 TO 44 -INCHES BELOW THE PROPOSED BOTTOM OF STONE ELEVATION. UPON EXPOSURE OF NATIVE MATERIAL, CONTRACTOR SHALL NOTIFY DESIGN ENGINEER FOR REVIEW AND APPROVAL. BACKFILL VOID WITH BANK RUN GRAVEL IN MINIMUM 12-INCH-THICK LOOSE LIFTS, COMPACTED TO A MINIMUM OF 85% MODIFIED PROCTOR AND A MAXIMUM OF 92% MODIFIED PROCTOR. CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST RESULTS INDICATING THAT THE IMPORTED GRAVEL BORROW MATERIAL HAS AN INFILTRATION RATE GREATER THAN OR EQUAL TO THE DESIGN INFILTRATION RATE OF 2.41 INCHES/HOUR (4.82 FT/DAY).

NOTES:
* UNDERGROUND INFILTRATION CHAMBER SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURES SPECIFICATIONS.

22 UIC C INSTALLATION ELEVATION DETAIL
NOT TO SCALE



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23 UIC D INSTALLATION ELEVATION DETAIL
NOT TO SCALE

NOTES FOR THE INSTALLATION OF THE SC-740 SYSTEM

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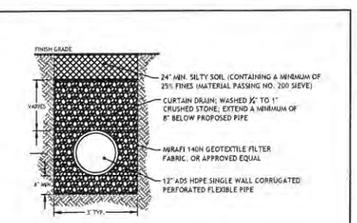


24 CURTAIN DRAIN DETAIL
NOT TO SCALE

JCE
JOE CASALI ENGINEERING, INC.
DRAINAGE · WETLANDS · SOILS · TRANSPORTATION
300 POST ROAD, WARWICK, RI 02888
(401) 942-3600 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
11-26-19

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

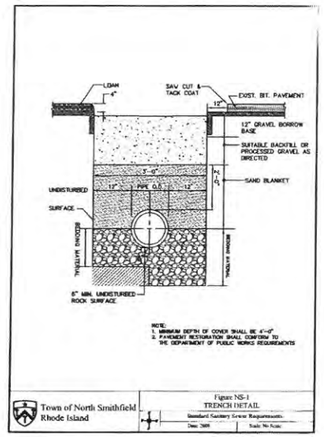
REVISIONS:		
NO.	DATE:	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

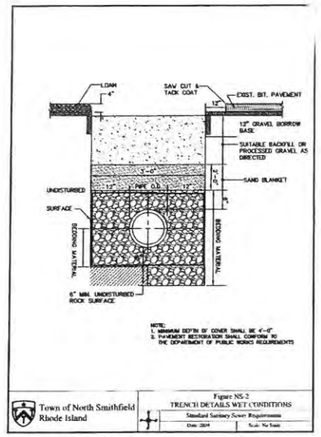
DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO:	10-39a

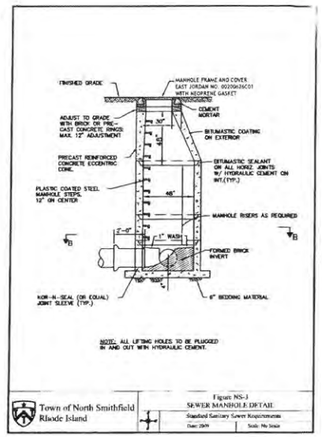
FINAL PLAN

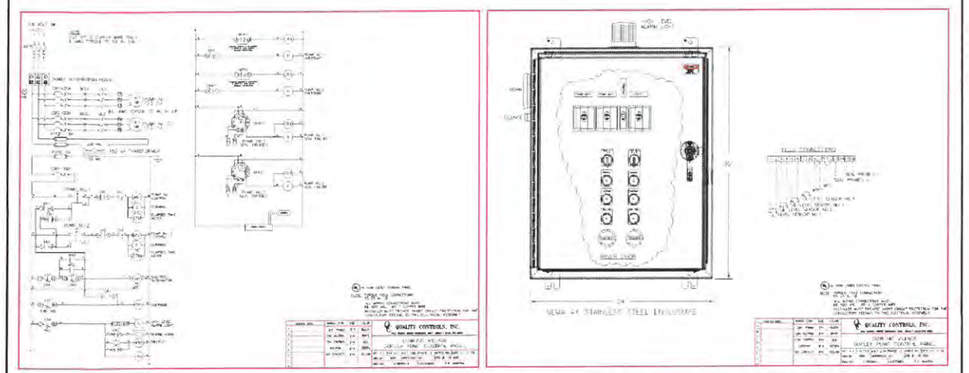
DRAINAGE DETAILS II

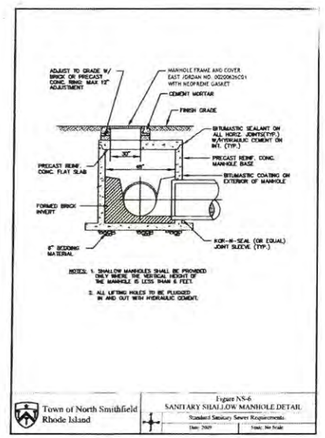
SHEET 14 OF 16

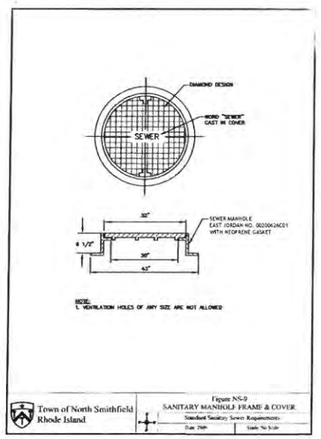


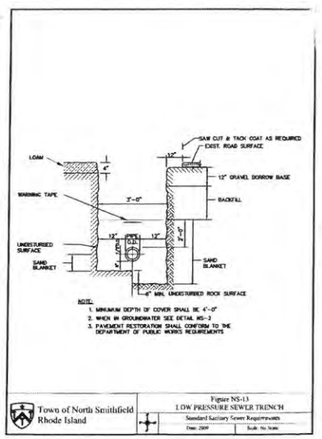


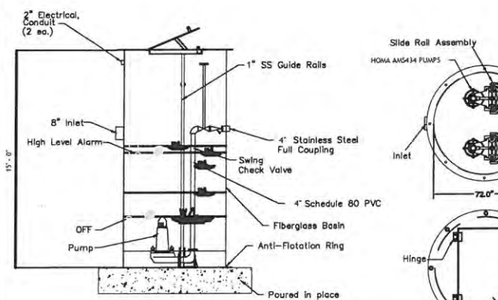


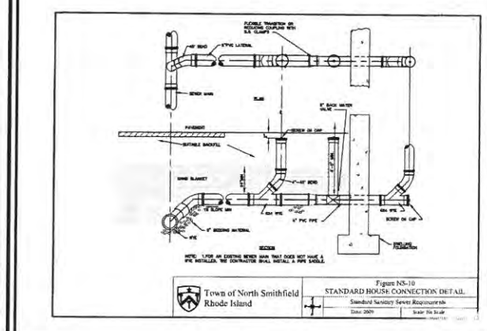


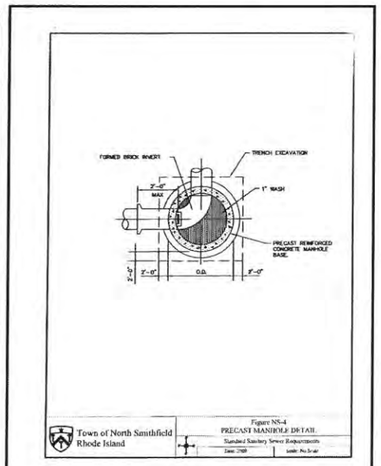


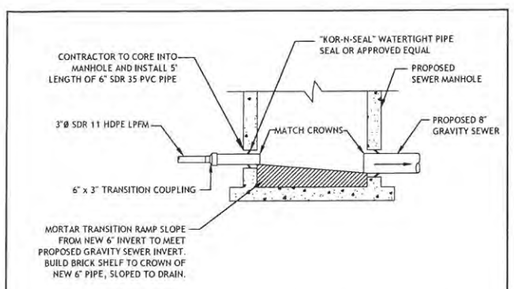












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JOSEPH A. CASALI
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REGISTERED PROFESSIONAL ENGINEER
CIVIL
11-20-20

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

REVISIONS:

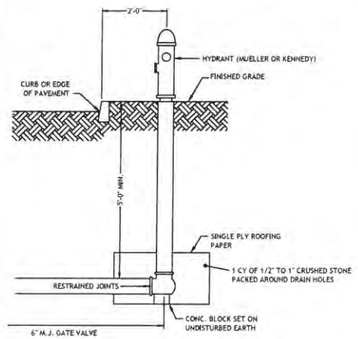
NO.	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM.
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO:	10-39a

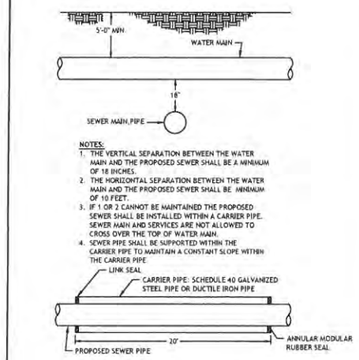
FINAL PLAN

SEWER DETAILS

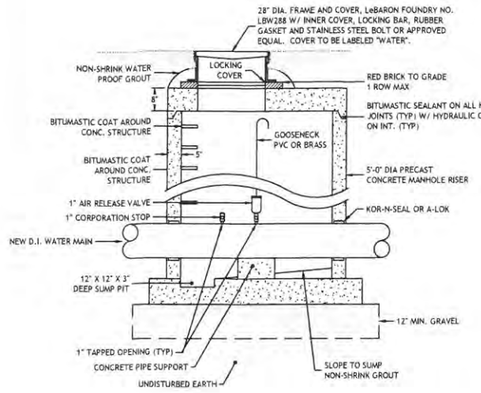
SHEET 15 OF 16



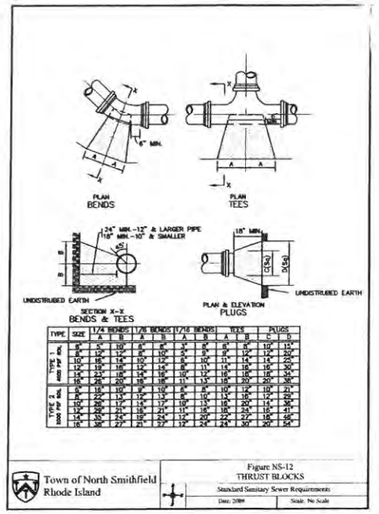
30 HYDRANT DETAIL
NOT TO SCALE



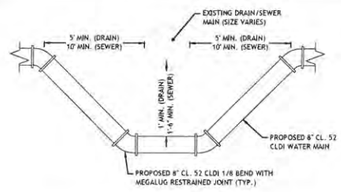
31 SEWER / WATER SEPARATION DETAIL
NOT TO SCALE



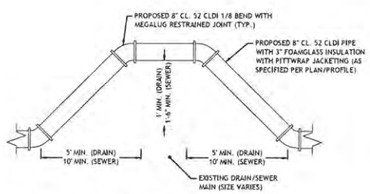
32 AUTOMATIC AIR RELEASE MANHOLE
NOT TO SCALE



TYPE	SIZE	1/4 BENDS A	1/4 BENDS B	1/8 BENDS A	1/8 BENDS B	TEES A	TEES B	PLUGS A	PLUGS B
TYPE 1 (100 PSI W.P.)	6"	2'-0"	1'-0"	1'-6"	1'-0"	2'-0"	2'-0"	1'-6"	1'-6"
	8"	2'-6"	1'-6"	2'-0"	1'-0"	2'-6"	2'-6"	2'-0"	2'-0"
	10"	3'-0"	2'-0"	2'-6"	1'-6"	3'-0"	3'-0"	2'-6"	2'-6"
	12"	3'-6"	2'-6"	3'-0"	2'-0"	3'-6"	3'-6"	3'-0"	3'-0"
	16"	4'-6"	3'-0"	4'-0"	2'-6"	4'-6"	4'-6"	4'-0"	4'-0"
	20"	5'-6"	3'-6"	5'-0"	3'-0"	5'-6"	5'-6"	5'-0"	5'-0"
TYPE 2 (200 PSI W.P.)	6"	2'-6"	1'-6"	2'-0"	1'-0"	2'-6"	2'-6"	2'-0"	2'-0"
	8"	3'-0"	2'-0"	2'-6"	1'-6"	3'-0"	3'-0"	2'-6"	2'-6"
	10"	3'-6"	2'-6"	3'-0"	2'-0"	3'-6"	3'-6"	3'-0"	3'-0"
	12"	4'-0"	3'-0"	3'-6"	2'-6"	4'-0"	4'-0"	3'-6"	3'-6"
	16"	5'-6"	4'-0"	4'-6"	3'-0"	5'-6"	5'-6"	4'-6"	4'-6"
	20"	6'-6"	4'-6"	5'-6"	3'-6"	6'-6"	6'-6"	5'-6"	5'-6"

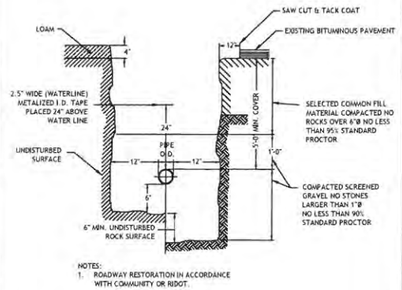


UTILITY MAIN CROSSING ATOP WATER MAIN

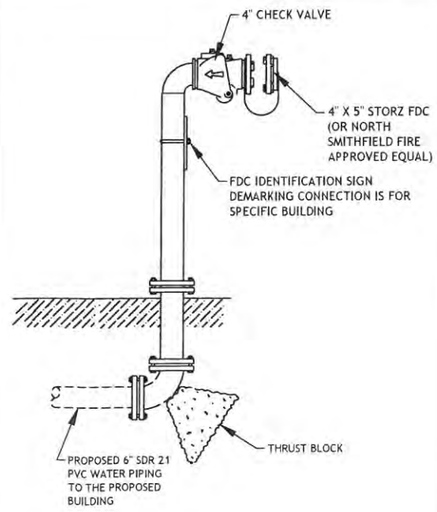


UTILITY MAIN CROSSING BELOW WATER MAIN

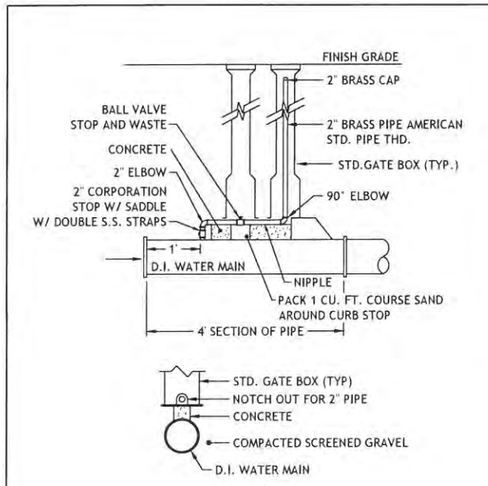
33 WATER MAIN CROSSING DETAIL
NOT TO SCALE



34 WATER TRENCH DETAIL
NOT TO SCALE



35 FIRE DEPARTMENT CONNECTION
NOT TO SCALE



36 PERMANENT BLOWOFF ASSEMBLY
NOT TO SCALE

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1-20-20

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1; LOTS 127, 134 & 330

REVISIONS:

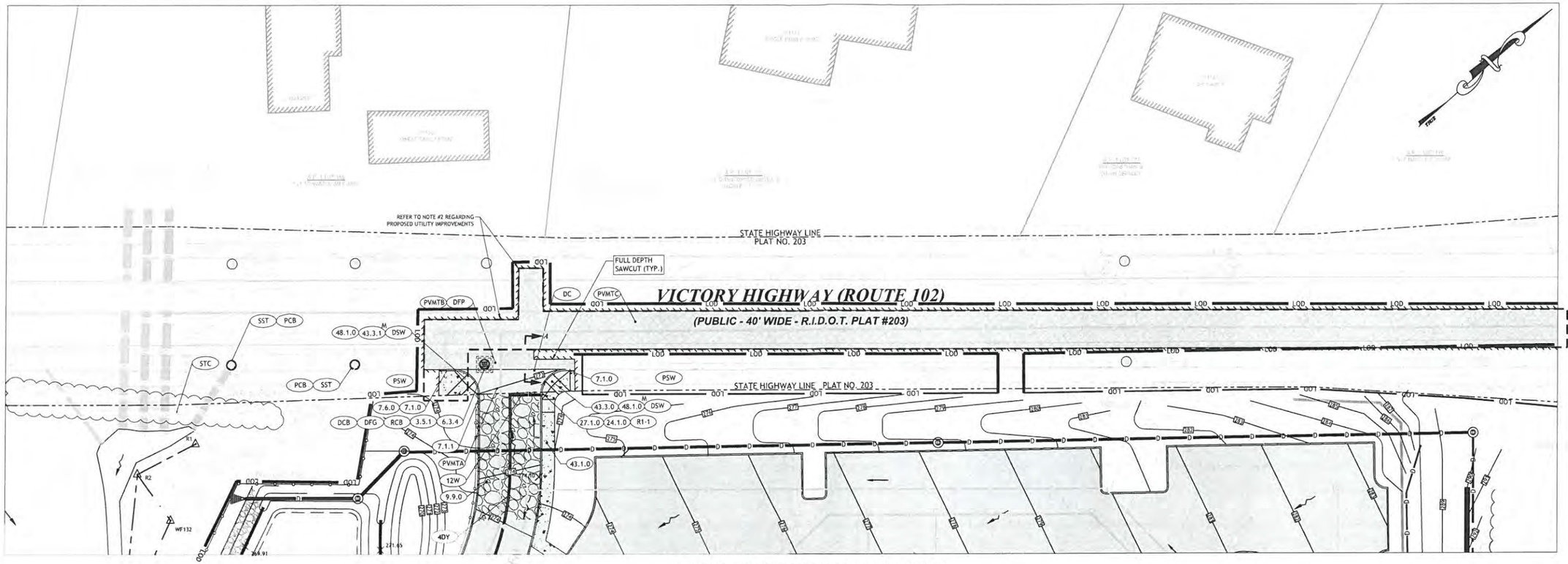
NO.	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	11/12/2019	TOWN SEWER COM.
4	5/20/2020	RIDEM COMMENTS
5	6/12/2020	FINAL PLAN

DESIGNED BY:	WMLJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	DEC. 2018
PROJECT NO:	10-39a

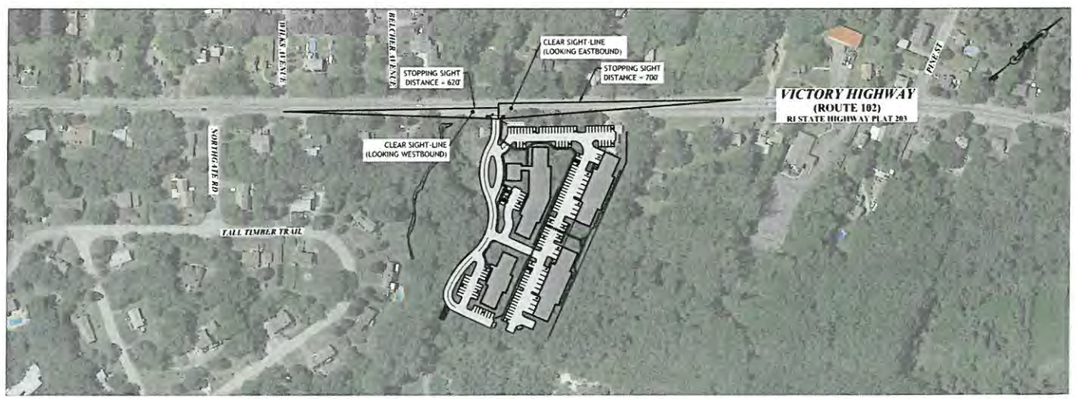
FINAL PLAN

WATER DETAILS

SHEET 16 OF 16



VICTORY HIGHWAY STATE RIGHT-OF-WAY PLAN
SCALE: 1" = 20'



LOCATION KEY PLAN
SCALE: 1" = 200'

RHODE ISLAND STANDARDS

DC	REMOVE AND DISPOSE CURB
DCB	REMOVE AND DISPOSE CATCH BASIN
DFP	REMOVE AND DISPOSE FLEXIBLE PAVEMENT
DFG	REMOVE AND DISPOSE FRAME AND GRATE
DSW	REMOVE AND DISPOSE SIDEWALK
LS	LOAM AND SEED
PCB	PROTECT CATCH BASIN
PSW	PROTECT SIDEWALK
RCB	REBUILD CATCH BASIN
SST	SILTSACK SEDIMENT TRAP
STC	SELECTIVE TREE CLEARING TO ENSURE SIGHT DISTANCE
4DY	4" DOUBLE YELLOW EPOXY PAVEMENT MARKING
12W	12" EPOXY RESIN PAVEMENT MARKINGS - WHITE
R1-1	STOP SIGN
3.5.1	SOLID BLOCK SHALLOW 5' SQUARE CATCH BASIN
6.3.4	HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)
7.1.0	PRECAST CONCRETE CURB
7.1.1	3'-0" PRECAST CONCRETE TRANSITION CURB
7.6.0	CURB SETTING DETAIL
9.9.0	CONSTRUCTION ACCESS
24.1.0	SIGN POST INSTALLATION SQUARE POST
27.1.0	REGULATORY SIGN
43.1.0	CEMENT CONCRETE SIDEWALK
43.2.0	BITUMINOUS CONCRETE SIDEWALK
43.3.0	WHEELCHAIR RAMP
43.3.1	WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS
48.1.0	DETECTABLE WARNING PANEL PLACEMENT

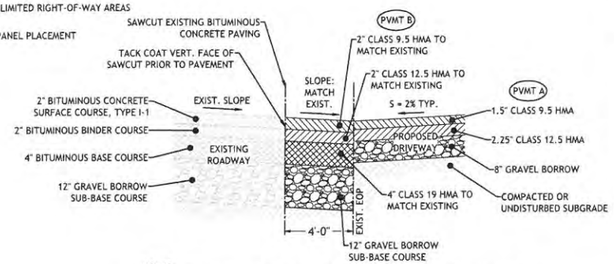
PVMT A PROPOSED DRIVEWAY ENTRANCE STRUCTURE:
1.5" CLASS 9.5 HOT MIX ASPHALT (HMA)
2.25" CLASS 12.5 HMA
8" GRAVEL BORROW SUBBASE COURSE (RIDOT M.01.09 TYPE I) PLACED AND COMPACTED IN 8-INCH THICK (MAX.) LOOSE LIFTS

PVMT B EXISTING STATE ROADWAY PAVEMENT STRUCTURE PER CONTRACT NO. 7410 / F.A. PROJ. NO. SU-0330(6):
2" BITUMINOUS CONCRETE SURFACE COURSE, TYPE I-1 (CLASS 9.5 HMA)
2" BITUMINOUS BINDER COURSE (CLASS 12.5 HMA)
4" BITUMINOUS BASE COURSE (CLASS 19.0 HMA)
12" GRAVEL BORROW SUB-BASE COURSE

PVMT C PERMANENT PAVEMENT PATCH STRUCTURE:
10" BITUMINOUS BASE COURSE (CLASS 19.0 HMA)
12" GRAVEL BORROW SUB-BASE COURSE

NOTES:

1. ALL WORK TO BE DONE WITHIN THE STATE RIGHT-OF-WAY (ROW) SHALL CONFORM TO RI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED 2013 WITH ALL REVISIONS AND ADDENDA. STANDARD DETAILS FOR THIS WORK ARE RI STANDARD DETAILS 1998 EDITION WITH ALL REVISIONS.
2. UTILITY WORK SHOWN FOR REFERENCE ONLY. ALL UTILITY WORK REQUIRES A PHYSICAL UTILITY PERMIT (PUP) WITH RIDOT'S DIVISION OF MAINTENANCE. APPROVAL OF THIS PAPA PLAN DOES NOT CONSTITUTE APPROVAL OF ANY UTILITY WORK, SHOWN OR UN-SHOWN, WITHIN THE STATE ROW.
3. 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 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. CONTRACTOR TO PROVIDE TEMPORARY EROSION CONTROLS TO PROTECT THE STATE ROW DURING THE DEMOLITION OF EXISTING DRIVEWAY AND CONSTRUCTION OF NEW DRIVEWAY.



NOTES:
1. MINIMUM COMPACTION FOR GRAVEL SUB-BASE OR SUBGRADE: 95% MODIFIED PROCTOR.
2. NO WORK SHOULD BE DONE OUTSIDE OF THE PROJECT SITE. PAVEMENT SHOULD MATCH WHERE NOTED ON THE SITE PLANS.
3. WHEN MATCHING EXISTING PAVEMENT, THE LONGITUDINAL CUT AND MATCH SECTION SHOULD NOT EXCEED PAST THE SHOULDER STRIPING.

SECTION A-A:ROW SAWCUT AND MATCH DETAIL
NOT TO SCALE

POSTED SPEED LIMIT ON VICTORY HIGHWAY: 35 MPH
AASHTO STOPPING SIGHT DISTANCE (SSD) REQUIREMENTS

SPEED	DISTANCE	
25	155 FT.	
30	200 FT.	
35	250 FT.	← POSTED
55	495 FT.	← OBSERVED

SITE MEETS REQUIREMENTS FOR THE POSTED SPEED LIMIT ON VICTORY HIGHWAY. IT SHOULD BE NOTED THAT THE STOPPING SIGHT DISTANCE MEASURED WILL ALLOW FOR SPEEDS UP TO 55 MPH.

1-888-DIG-SAFE

LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL DIGSAFE AT: 1-888-DIG-SAFE
1-888-344-7233

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CIVIL
12.3.2020

SLATER VILLAGE
1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1, LOTS 127, 134, & 330

REVISIONS:

NO.	DATE:	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	8/28/2019	RIDOT COMMENTS
3	6/12/2020	FINAL PLAN

DESIGNED BY:	WLM/JR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	NOV. 2018
PROJECT NO:	10-39a

FINAL PLAN

RIDOT PAP PLAN

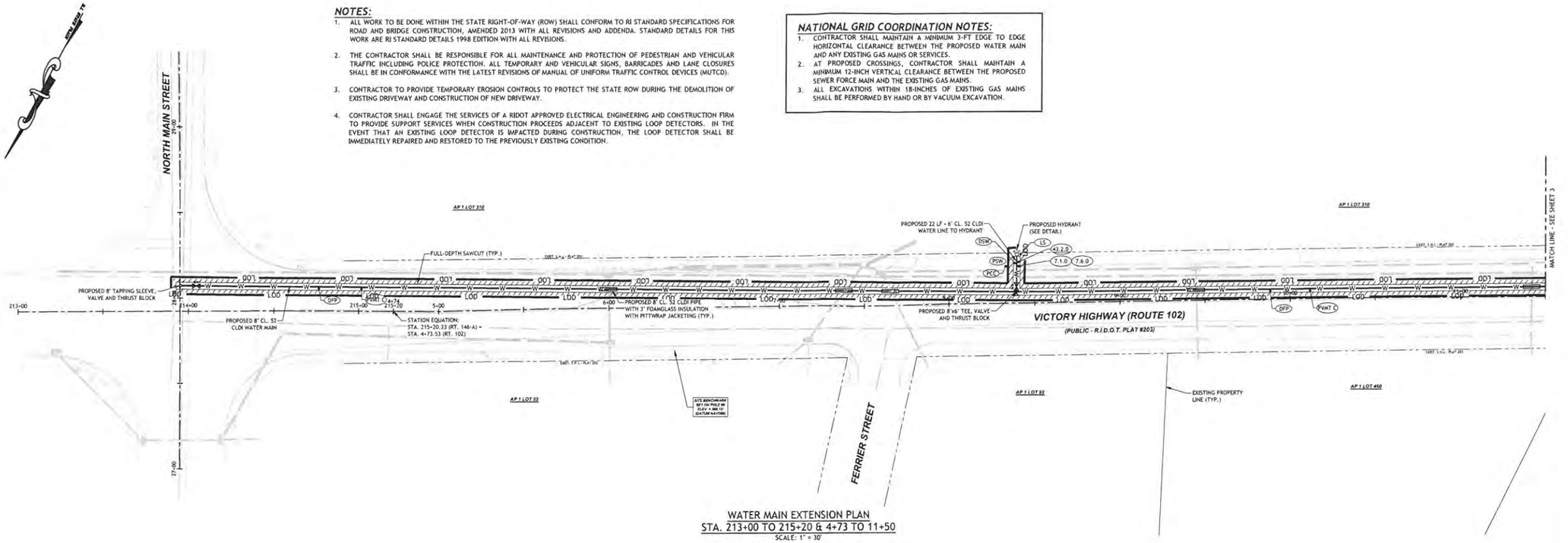
SHEET 1 OF 5

NOTES:

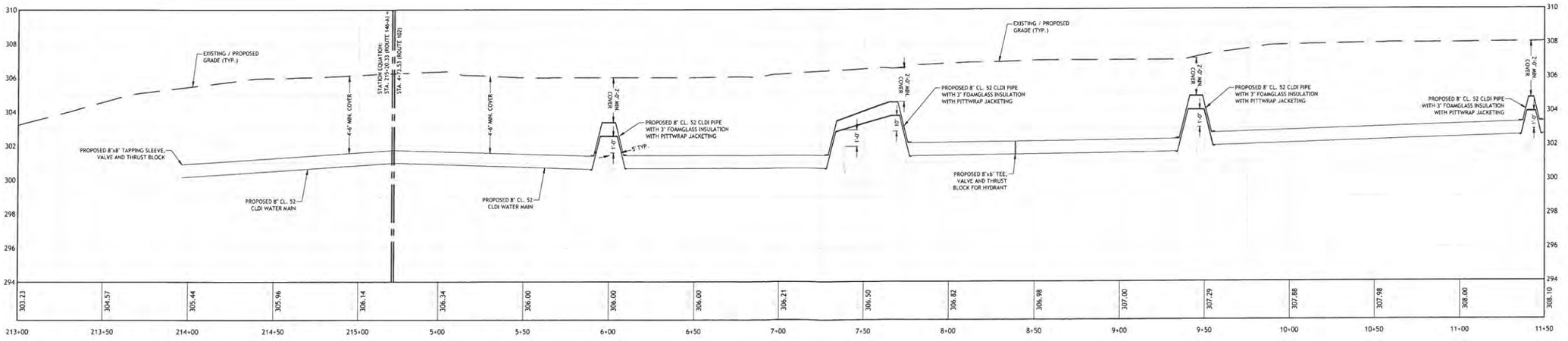
1. ALL WORK TO BE DONE WITHIN THE STATE RIGHT-OF-WAY (ROW) SHALL CONFORM TO RI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED 2013 WITH ALL REVISIONS AND ADDENDA. STANDARD DETAILS FOR THIS WORK ARE RI STANDARD DETAILS 1998 EDITION WITH ALL REVISIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE 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 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. CONTRACTOR TO PROVIDE TEMPORARY EROSION CONTROLS TO PROTECT THE STATE ROW DURING THE DEMOLITION OF EXISTING DRIVEWAY AND CONSTRUCTION OF NEW DRIVEWAY.
4. CONTRACTOR SHALL ENGAGE THE SERVICES OF A RIDOT APPROVED ELECTRICAL ENGINEERING AND CONSTRUCTION FIRM TO PROVIDE SUPPORT SERVICES WHEN CONSTRUCTION PROCEEDS ADJACENT TO EXISTING LOOP DETECTORS. IN THE EVENT THAT AN EXISTING LOOP DETECTOR IS IMPACTED DURING CONSTRUCTION, THE LOOP DETECTOR SHALL BE IMMEDIATELY REPAIRED AND RESTORED TO THE PREVIOUSLY EXISTING CONDITION.

NATIONAL GRID COORDINATION NOTES:

1. CONTRACTOR SHALL MAINTAIN A MINIMUM 3-FT EDGE TO EDGE HORIZONTAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND ANY EXISTING GAS MAINS OR SERVICES.
2. AT PROPOSED CROSSINGS, CONTRACTOR SHALL MAINTAIN A MINIMUM 12-INCH VERTICAL CLEARANCE BETWEEN THE PROPOSED SEWER FORCE MAIN AND THE EXISTING GAS MAINS.
3. ALL EXCAVATIONS WITHIN 18-INCHES OF EXISTING GAS MAINS SHALL BE PERFORMED BY HAND OR BY VACUUM EXCAVATION.



WATER MAIN EXTENSION PLAN
STA. 213+00 TO 215+20 & 4+73 TO 11+50
SCALE: 1" = 30'



WATER MAIN EXTENSION PROFILE
STA. 213+00 TO 215+20 & 4+73 TO 11+50
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

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3.20.20

1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1, LOTS 127, 134, & 330

REVISIONS:

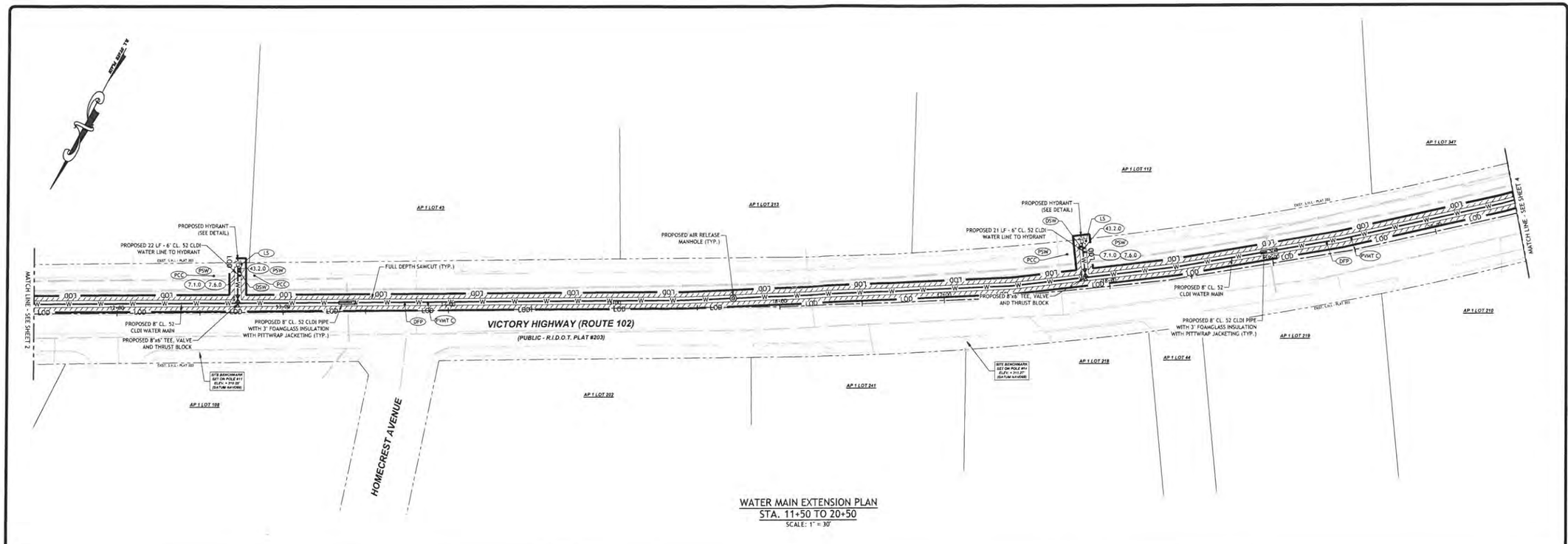
NO.	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	6/12/2020	FINAL PLAN

DESIGNED BY:	WLMJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	NOV. 2018
PROJECT NO:	10-39a

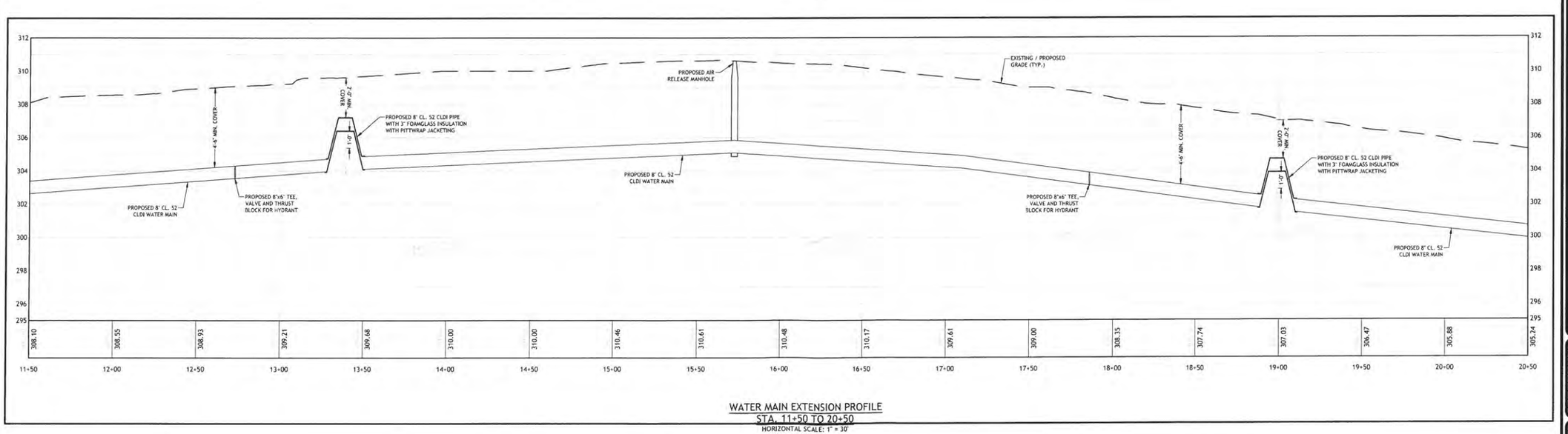
FINAL PLAN

WATER MAIN EXTENSION STA. 213+00 TO STA. 11+50

SHEET 2 OF 5



WATER MAIN EXTENSION PLAN
STA. 11+50 TO 20+50
SCALE: 1" = 30'



WATER MAIN EXTENSION PROFILE
STA. 11+50 TO 20+50
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

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CIVIL
7-13-2020

1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1, LOTS 127, 134, & 330

REVISIONS:

NO.	DATE	DESCRIPTION
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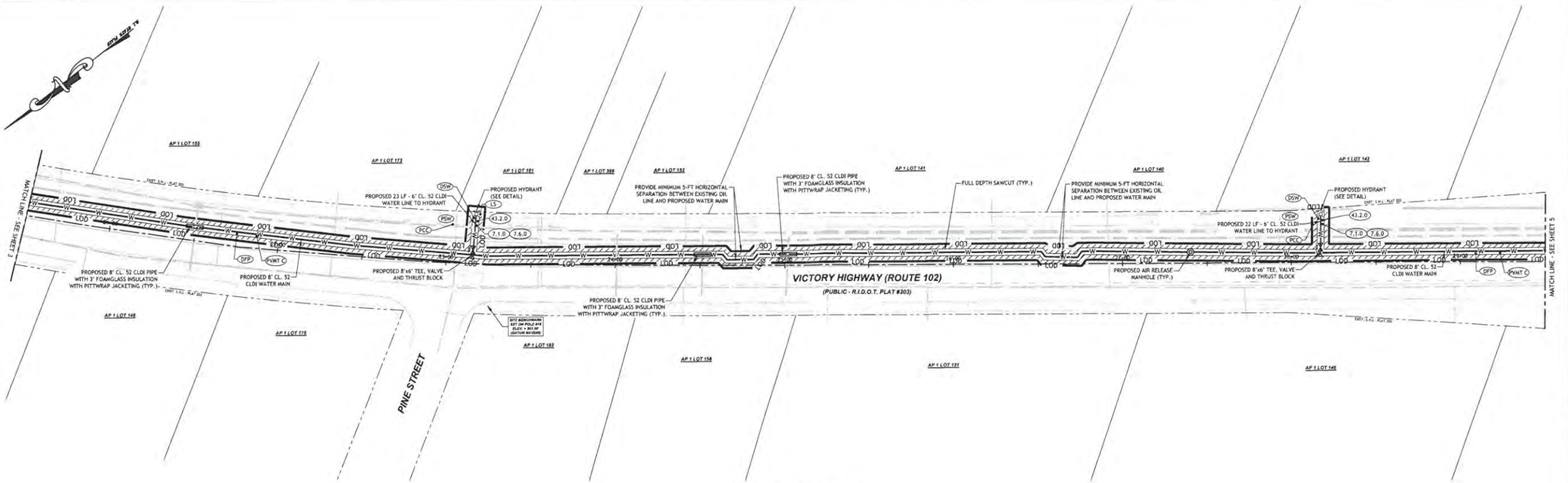
1	6/27/2019	TOWN/RIDEM/RIDOT
2	6/12/2020	FINAL PLAN

DESIGNED BY:	WLMJR
DRAWN BY:	SD/SFP
CHECKED BY	JAC
DATE:	NOV. 2018
PROJECT NO.	10-39a

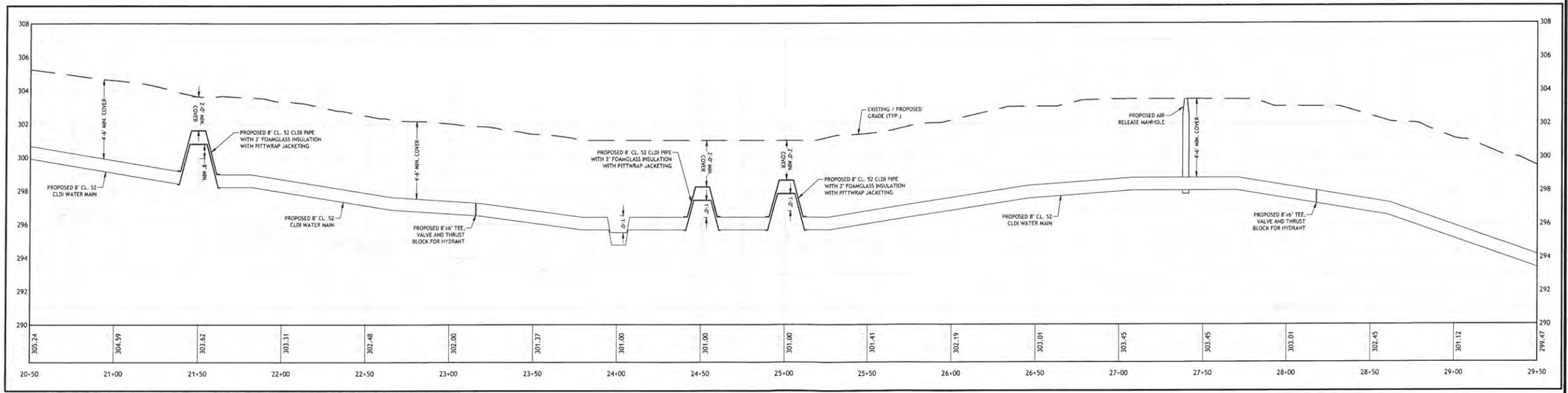
FINAL PLAN

WATER MAIN EXTENSION STA. 11+50 TO STA. 20+50

SHEET 3 OF 5



WATER MAIN EXTENSION PLAN
STA. 20+50 TO 29+50
SCALE: 1" = 30'



WATER MAIN EXTENSION PROFILE
STA. 20+50 TO 29+50
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

JCE
JOE CASALI ENGINEERING, INC.
CIVIL · SITE DEVELOPMENT · TRANSPORTATION
MUNICIPAL · WATER · WASTEWATER · FLOOD PLAIN
DRAINAGE · WETLANDS · PERMITTING
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
1-20-20

1118-1156 VICTORY HIGHWAY
NORTH SMITHFIELD, RHODE ISLAND
MAP 1, LOTS 127, 134, & 330

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/27/2019	TOWN/RIDEM/RIDOT COMMENTS
2	6/12/2020	FINAL PLAN

DESIGNED BY:	WLMJR
DRAWN BY:	SD/SEP
CHECKED BY:	JAC
DATE:	NOV. 2018
PROJECT NO:	10-39a

FINAL PLAN

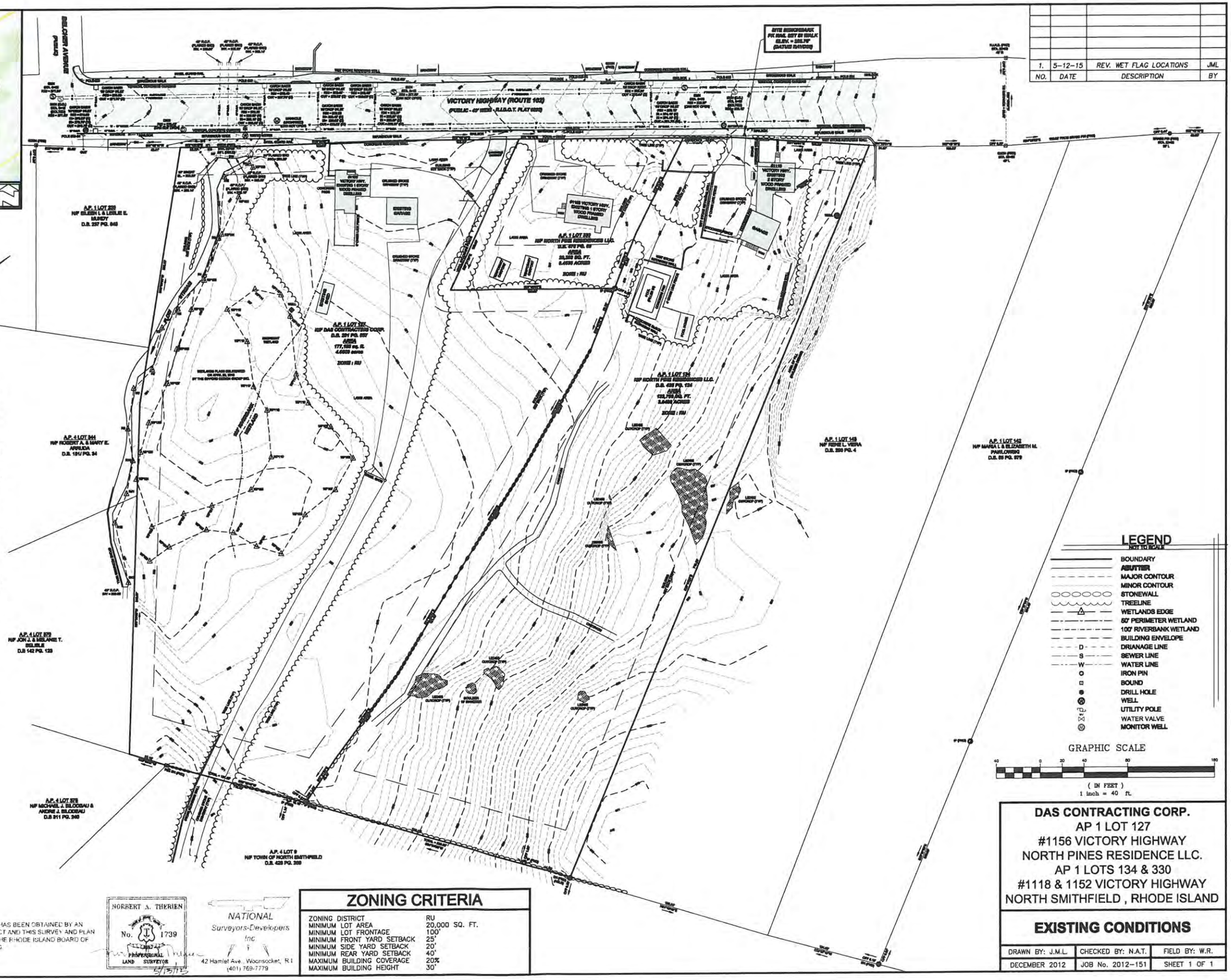
WATER MAIN EXTENSION STA. 20+50 TO STA. 29+50

LOCUS MAP

NOT TO SCALE

1-888-DIG-SAFE

PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE



GENERAL NOTES:

1. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR TOWN WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.

2. THIS SITE LIES IS ON THE FIRM MAP FOR PROVIDENCE COUNTY, RI COMMUNITY PANEL NO.44007C0158G, MAP REVISED MARCH 2, 2009. (NO MAP AVAILABLE)

3. WETLANDS SHOWN HEREIN WERE DELINEATED ON NOVEMBER 11, 2004 BY THE GIFFORD DESIGN GROUP INC. CUMBERLAND, RI.

4. THIS SITE DOES NOT LIE WITHIN ANY KNOWN AGRICULTURAL USE, SILVICULTURAL USE, NATURAL HERITAGE OR FARMLAND CONSERVATION AREAS.

5. THERE ARE NO KNOWN EASEMENTS OR RIGHTS OF WAY WITHIN OR ADJACENT TO THIS PARCEL.

6. THE CONTOURS SHOWN HEREIN ARE BASED UPON THE NAVD 88 DATUM.

7. THERE ARE UNDERGROUND UTILITIES LOCATED WITHIN VICTORY HIGHWAY ALONG THIS PARCELS FRONTAGE.

REFERENCES:

1. R.I.D.O.T. PLAT # 203

2. A CERTAIN PLAN ENTITLED "PHASE NO. 1 VICTORY HIGHWAY PLAN & PROFILE (SHEET 10 OF 66), PREPARED FOR NORTH SMITHFIELD SEWER AUTHORITY, BY SIEGMUND & ASSOCIATES INC., DATED JUNE 1994 " AND SUPPLIED BY NORTH SMITHFIELD SEWER DEPARTMENT

1.	5-12-15	REV. WET FLAG LOCATIONS	JML
NO.	DATE	DESCRIPTION	BY

LEGEND

NOT TO SCALE

———	BOUNDARY
———	ABUTTER
— — —	MAJOR CONTOUR
- - - -	MINOR CONTOUR
○○○○○○	STONEWALL
︶︶︶︶	TREELINE
— △ —	WETLANDS EDGE
—·—·—	50' PERIMETER WETLAND
—·-·-·—	100' RIVERBANK WETLAND
— — —	BUILDING ENVELOPE
- - D - -	DRIANAGE LINE
— S —	SEWER LINE
— W —	WATER LINE
○	IRON PIN
▫	BOUND
●	DRILL HOLE
Ⓦ	WELL
☌	UTILITY POLE
⋈	WATER VALVE
Ⓜ	MONITOR WELL

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

DAS CONTRACTING CORP.
AP 1 LOT 127
#1156 VICTORY HIGHWAY
NORTH PINES RESIDENCE LLC.
AP 1 LOTS 134 & 330
#1118 & 1152 VICTORY HIGHWAY
NORTH SMITHFIELD , RHODE ISLAND

EXISTING CONDITIONS

DRAWN BY: J.M.L.	CHECKED BY: N.A.T.	FIELD BY: W.R.
DECEMBER 2012	JOB No. 2012-151	SHEET 1 OF 1

ZONING CRITERIA

ZONING DISTRICT	RU
MINIMUM LOT AREA	20,000 SQ. FT.
MINIMUM LOT FRONTAGE	100'
MINIMUM FRONT YARD SETBACK	25'
MINIMUM SIDE YARD SETBACK	20'
MINIMUM REAR YARD SETBACK	40'
MAXIMUM BUILDING COVERAGE	20%
MAXIMUM BUILDING HEIGHT	30'

"I CERTIFY THAT THE INFORMATION SHOWN HEREON HAS BEEN OBTAINED BY AN ACTUAL SURVEY ON THE GROUND, THAT IT IS CORRECT AND THIS SURVEY AND PLAN CONFORM TO A CLASS I STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS

BY: Norbert A. Therien
NORBERT A. THERIEN P.L.S.

NORBERT A. THERIEN
No. 1739
PROFESSIONAL LAND SURVEYOR
5/13/15

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

\\Plot\C\NATIONAL 2015\2012-151\dwg\2012-151 SITE PLAN.dwg, EXISTING, 1:1