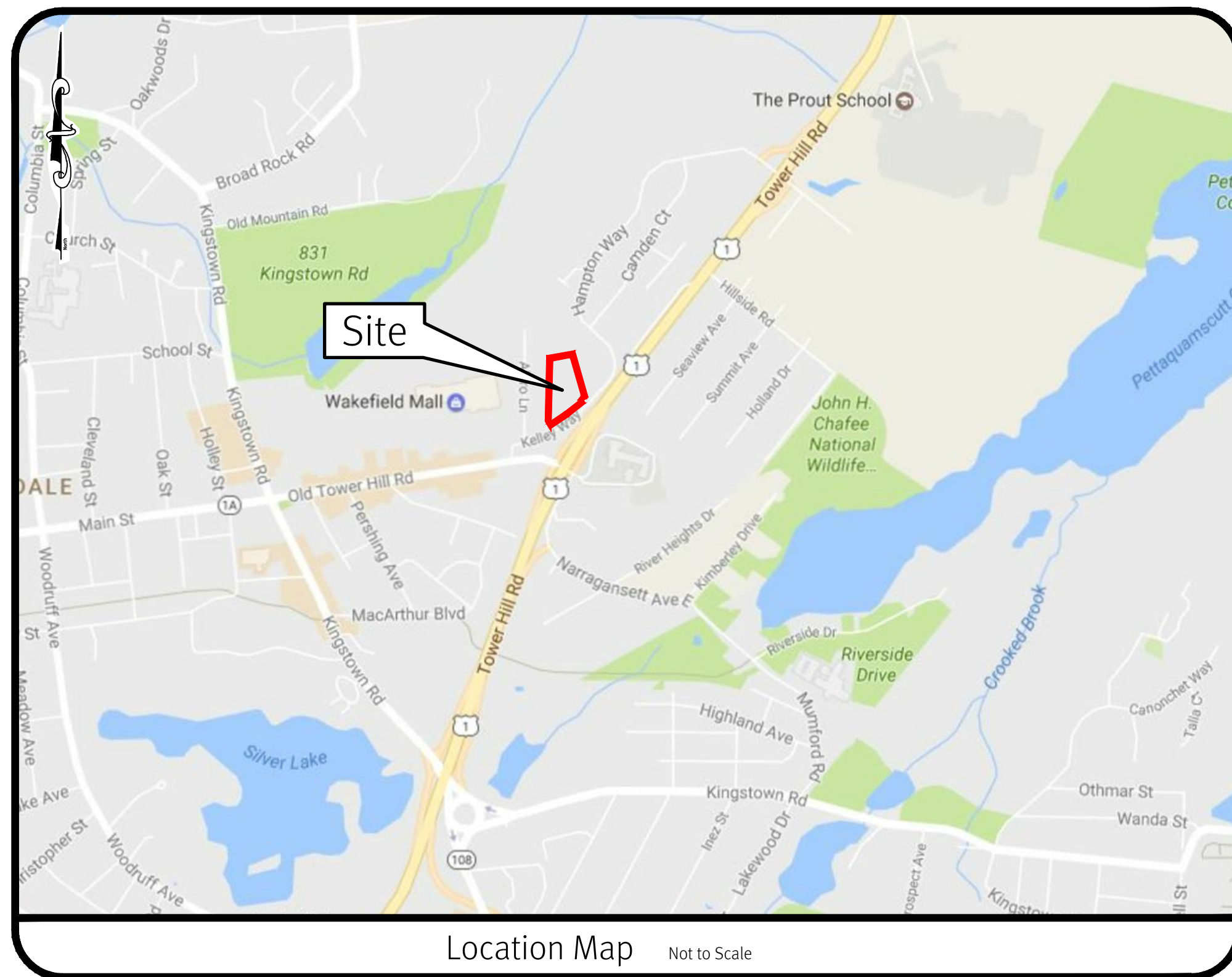


# Preliminary Plan Submission

# Hillside Commons

76 Kelley Way  
South Kingstown, Rhode Island  
Assessor's Plat 57-2 Lot 59



## Sheet Index

1. Cover Sheet
2. Aerial Half Mile Radius
3. General Notes & Legend
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5. Existing Conditions Plan
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10. Detail Sheet - 1
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**SESC / O&M**  
The Soil Erosion and Sediment Control Plan (SESC) and Operations and Maintenance Plan (O&M) are required documents with this plan set and must be maintained by the contractor and owner onsite.

**RIDOT**  
The Proposed Improvements Will Not Increase the Rate of Stormwater Runoff Onto the State Highway. All Work Within the State Right of Way Must Conform to the RI Standard Specifications, Details, and Addendums.

**DiPrete Engineering**

Two Stafford Court Cranston, RI 02920  
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Boston • Providence • Newport

BRIAN C. GROUX  
3341  
2/24/2019  
REGISTERED  
PROFESSIONAL ENGINEER  
CIVIL

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The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.

No.	Date	Description	By	Design By: M.I.D.
0	3/28/2019	Preliminary Plan Submission		

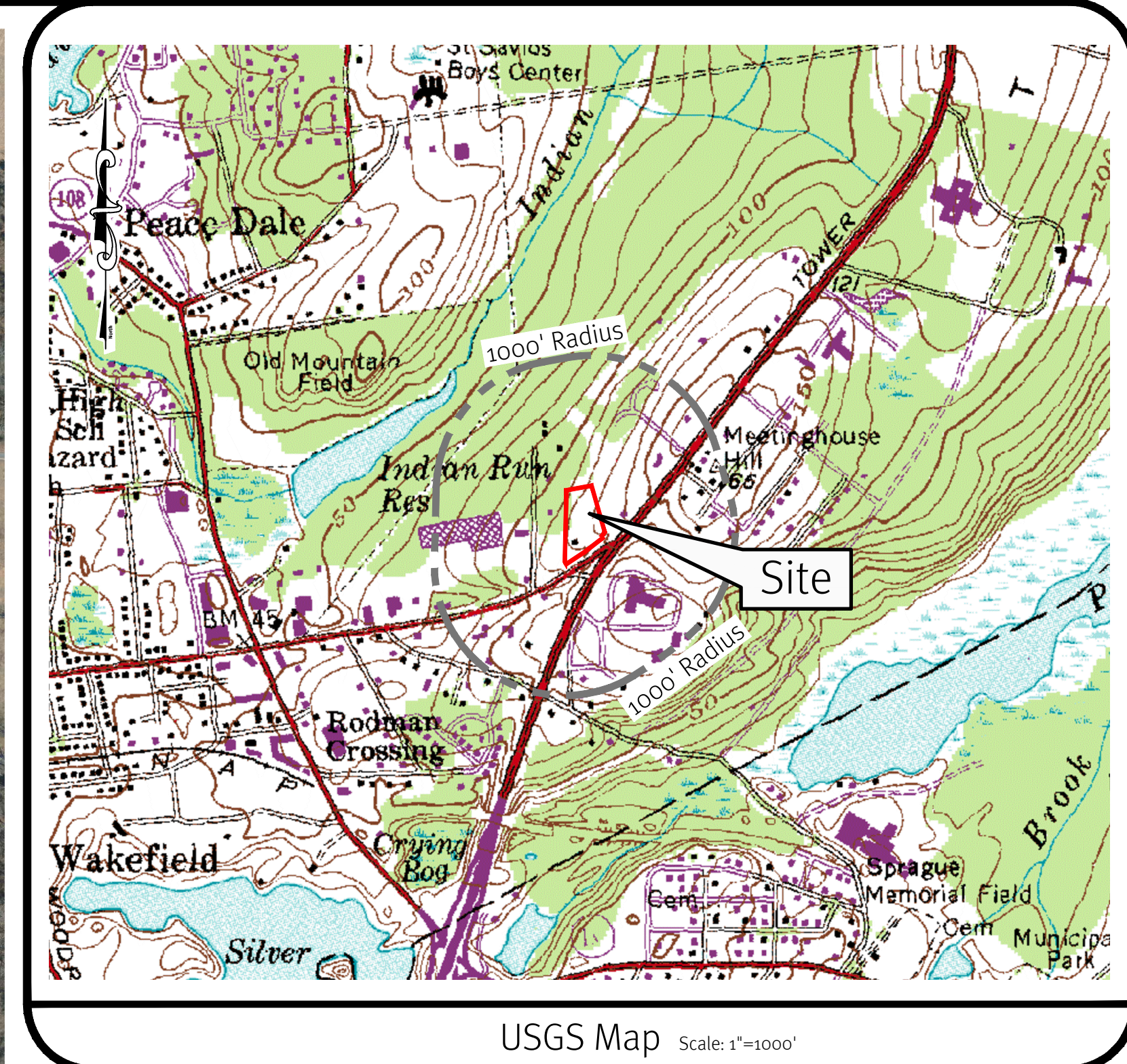
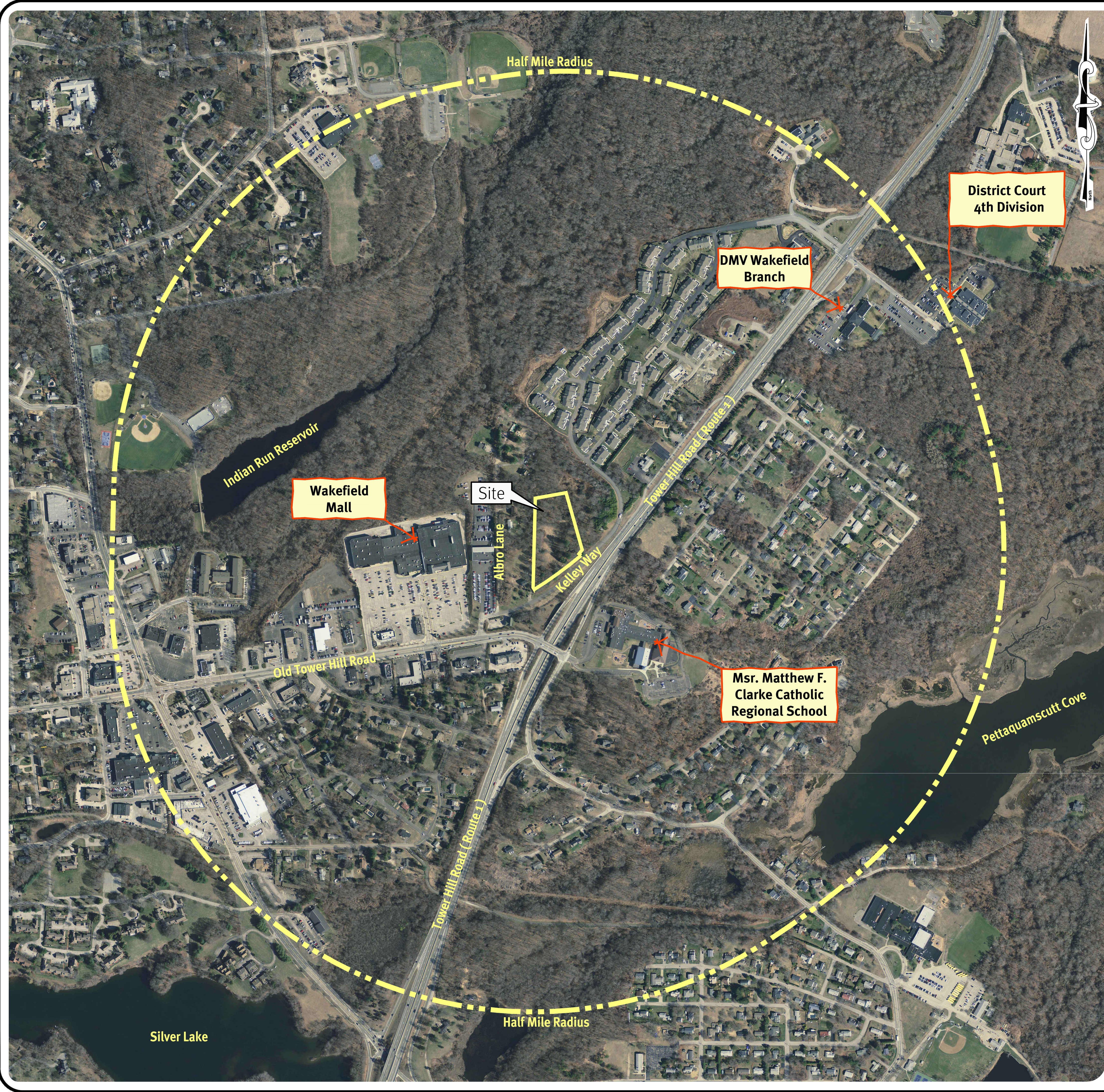
**Cover Sheet**  
**Hillside Commons**

Assessor's Plat 57-2 Lot 59  
South Kingstown, Rhode Island

**Scott V. Hallberg**  
57 Edgewood Farm Road  
Wakefield, RI 02879

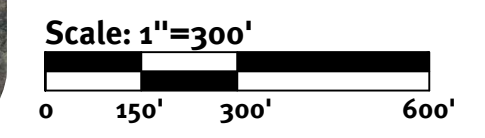
SHEET **1** OF 11

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USGS Map Scale: 1"=1000'

Photo Obtained from RIGIS.



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 2/23/2018  
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0	3/28/2019	Preparation, 2nd Submission	By:	Design By: M.L.D.
1		Description		

**Aerial Half Mile Radius**  
**Hillside Commons**  
 Assessors Plat 57-3 Lot 50  
 South Kingstown, Rhode Island  
 Applicant  
**Scot V. Hallberg**  
 57 Edgewood Farm Road  
 Wakefield, RI 02879

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General Notes:

- 1. THE SITE IS LOCATED ON THE TOWN OF SOUTH KINGSTOWN, RHODE ISLAND ASSESSOR'S PLAT 57-2 LOT 59.
2. THE SITE IS APPROXIMATELY 2.97± ACRES AND IS ZONED SMD.
3. THE OWNER OF AP 57-2 LOT 59 IS: SCOT V. HALLBERG 235 MAIN STREET WAKEFIELD, RI 02879
4. THIS SITE IS LOCATED IN FEMA FLOOD ZONES X OF MINIMAL FLOOD HAZARD. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44099C0203J, MAP REVISED OCTOBER 16, 2013.
5. THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS THE RESULTS OF A CLASS I BOUNDARY RETRACEMENT SURVEY AS PERFORMED BY DIPRETE ENGINEERING. THIS PLAN SET IS NOT TO BE CONSTRUED AS A CLASS I BOUNDARY RETRACEMENT SURVEY PLAN AND IS NOT SUITABLE FOR RECORDING AS A CLASS I STANDARD SURVEY PLAN.
6. ALL WORK PERFORMED HEREIN IS TO BE GOVERNED BY CURRENT EDITIONS OF THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, TOWN OF SOUTH KINGSTOWN STANDARD SPECIFICATIONS AND DETAILS AND SPECIFICATIONS INCLUDED AS PART OF THE DRAWINGS. IN AREAS OF CONFLICT BETWEEN THE DIFFERENT SPECIFICATIONS, THE DESIGN PLANS AND PROJECT SPECIFICATIONS WILL TAKE PRECEDENCE OVER THE GENERAL SPECIFICATIONS AND THE DESIGN ENGINEER WILL INTERPRET THE CONSTRUCTION REQUIREMENT. THE CONTRACTOR IS ADVISED TO SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ANY AREAS OF CONFLICT BEFORE COMMITTING TO CONSTRUCTION.
7. THE SITE IS NOT WITHIN A: GROUNDWATER PROTECTION AREA (RIDEM) NATURAL HERITAGE AREAS (RIDEM) DRINKING WATER SUPPLY WATERSHED (RIDEM) OWTS CRITICAL RESOURCE AREA (RIDEM) NARROW RIVER SPECIAL AREA MANAGEMENT PLAN (CRMC) SALT PONDS SPECIAL AREA MANAGEMENT PLAN (CRMC) GROUNDWATER PROTECTION OVERLAY DISTRICT (TOWN)
8. THE SITE IS WITHIN THE INDIAN RUN BROOK WATERSHED, WHICH HAS A TMDL. THE ON-SITE BMP'S HAVE BEEN APPROVED BY RIDEM (RIDDES NO. RI0101821) AND WILL INFILTRATE THE ENTIRE WATER QUALITY STORM. THIS WILL MEET THE REQUIREMENTS OF THE TMDL.
9. THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/ OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
• SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
o EROSION CONTROL MEASURES
o SHORT TERM MAINTENANCE
o ESTABLISHMENT OF VEGETATIVE COVER
o CONSTRUCTION POLLUTION PREVENTION
o SEQUENCE OF CONSTRUCTION
• OPERATION AND MAINTENANCE PLAN (OMM). THE OMM CONTAINS:
o LONG TERM MAINTENANCE
o LONG TERM POLLUTION PREVENTION

- 10. THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP.
11. THE SITE IS TO BE SERVICED BY PUBLIC WATER, SEWER, NATURAL GAS AND UNDERGROUND UTILITIES.
12. NO COMMON REFUSE STORAGE, COLLECTION OR RECYCLING AREAS ARE PROPOSED. INDIVIDUAL UNITS ARE PROPOSED TO UTILIZE CURBSIDE ROLL OUT BINS.
13. PROPOSED ROADWAY IS TO BE 22' WIDE PERMEABLE PAVEMENT (10' TRAVEL LANES AND 1' BERM/CURB ON EACH SIDE).
14. THE DRAINAGE SYSTEM WILL MEET THE SOUTH KINGSTOWN SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF PERMEABLE PAVEMENT. THE STORMWATER MANAGEMENT SYSTEM WILL MEET THE RIDEM BEST MANAGEMENT PRACTICES.
15. THE SITE IS PROPOSED TO BE BUILT IN 1 PHASE AND HOMES ARE PROPOSED TO BE 2 BEDROOMS OR LESS.
16. TEST PITS WERE COMPLETED BY DIPRETE ENGINEERING ON MAY 12, 2017.
17. ANY PROPRIETARY PRODUCTS REFERENCED IN THIS PLAN SET ARE REPRESENTATIVE OF THE MINIMUM DESIGN REQUIREMENTS FOR THE PURPOSE IT PROPOSES TO SERVE. ALTERNATIVES TO ANY PROPRIETARY PRODUCT MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR CONSIDERATION, WHICH MUST BE ACCOMPANIED BY APPROPRIATE SPECIFICATION SHEETS/ DESIGN CALCULATIONS THAT DEMONSTRATE THE ALTERNATIVE(S) MEET THE MINIMUM DESIGN PARAMETERS OF THE PRODUCT SHOWN ON THE PLANS. NO ALTERNATIVES MAY BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.

Soil Information:

Table with 2 columns: SOIL NAME, DESCRIPTION. Rows include BrB Broadbrook silt loam, 3 to 8 percent slopes; prime farmland and RoB Rainbow silt loam, 3 to 8 percent slopes; prime farmland.

UIC Notes:

PROPOSED UNDERGROUND DRAINAGE SYSTEM MEETS ALL THE FOLLOWING UIC MINIMUM SETBACK REQUIREMENTS:
1. 400 FEET FROM ALL PUBLIC WATER WELLS (SAND & GRAVEL)
2. 200 FEET FROM ALL PUBLIC WATER WELLS (BEDROCK)
3. 200 FEET FROM ALL SURFACE DRINKING WATER SUPPLY IMPOUNDMENTS
4. 100 FEET FROM ALL PRIVATE DRINKING WATER WELLS
5. 100 FEET FROM ALL OTHER SURFACE WATERS
6. 25 FEET FROM ALL OWTS & OTHER GROUNDWATER DISCHARGE SYSTEMS
7. 25 FEET FROM ALL BUILDING(S) FOUNDATIONS IF SYSTEM IS ABOVE SLAB ELEVATION, 10 FEET FROM ALL BUILDING(S) IF SYSTEM IS BELOW SLAB ELEVATION
8. 10 FEET FROM ALL PROPERTY LINES
9. 10 FEET FROM ALL BUILDING FOOTINGS

Soil Erosion and Sedimentation Control Notes:

- 1. THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE WHICH MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS AND AUTHORITY HAVING JURISDICTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER, THE DIRECTOR OF PUBLIC WORKS, THE TOWN ENGINEER, AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. ALL EROSION CONTROL & TEMPORARY SWALES. TO BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL LATEST EDITION AND THE SOIL EROSION SEDIMENTATION CONTROL PLAN (SESC).
3. TEMPORARY SWALES ARE TO BE USED TO CONTROL RUNOFF DURING CONSTRUCTION OF THE PROPOSED ROADWAY. TEMPORARY SWALES TO BE VEGETATED AFTER CONSTRUCTION. EROSION CONTROL MATS ARE TO BE INSTALLED, IF NECESSARY, TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES ARE TO BE CLEARED AND FINAL DESIGN, INCLUDING INSTALLATION OF THE GRASS SWALE TO BE PER THE DESIGN PLANS.
4. FOR SEQUENCE OF CONSTRUCTION, PROJECT PHASING AND CONSTRUCTION PHASING SEE SESC PLAN.
5. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER AND OWNER.
6. IF CONCRETE TRUCKS ARE WASHED OUT ON SITE, ALL WASHOUT MUST BE COMPLETED IN THE DESIGNATED CONCRETE WASHOUT AREA.

Demolition Notes:

- 1. ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, PLANS OF RECORD, DRAWINGS FROM OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM AFOREMENTIONED SOURCES AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE PROPER UTILITY ENGINEERING DEPARTMENTS MUST BE CONTACTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES MUST BE DETERMINED IN THE FIELD BY THE CONTRACTOR. CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233 72 HOURS PRIOR TO EXCAVATION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES WHICH ARE SHOWN ON THE PLANS OR DETAILED BY DIG SAFE ARE THE SITE CONTRACTORS' RESPONSIBILITY.
2. CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR TO PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON EXTERNAL STREETS.
4. ANY EXISTING BUILDING(S) AND PROPERTY PROPOSED TO REMAIN WHICH ARE DAMAGED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HERE IN. R&D MATERIALS MUST INCLUDE BUT ARE NOT LIMITED TO PAVEMENT, GRAVEL, CATCH BASINS, MANHOLES, GRATES/FRAMES/COVERS, AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
6. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK MUST BE RESTORED TO MATCH THE DESIGN PLANS.

Traffic Notes:

- 1. ALL TRAFFIC CONTROL MUST CONFORM TO THE MUTCD CONTROL DEVICES CURRENT EDITION.
2. DURING CONSTRUCTION, TRAFFIC CONES ARE TO BE USED FOR SEPARATION OF ACTIVE TRAFFIC FROM WORK ZONE PER MUTCD REQUIREMENTS.
3. DURING CONSTRUCTION FLAGGERS MUST BE EMPLOYED TO ENSURE SAFETY FOR INTERACTION OF CONSTRUCTION VEHICLES AND ACTIVE TRAFFIC.
4. ALL SIGNS, FLAGGERS, TRAFFIC CONTROL DEVICES, AND TEMPORARY TRAFFIC ZONE ACTIVITIES MUST MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC (MUTCD) LATEST EDITION AND SUBSEQUENT ADDENDA.
5. TEMPORARY CONSTRUCTION SIGNS MUST BE MOUNTED ON RIDOT APPROVED SUPPORTS AND MUST BE REMOVED OR COVERED WHEN NOT APPLICABLE.

As-Built Notes:

ALL COMPONENTS OF THE DRAINAGE, SEWER, AND WATER SYSTEMS MUST BE ASBUILT PRIOR TO COVERING. ENGINEER TO BE NOTIFIED PRIOR TO COVERING TO SURVEY ASBUILT LOCATIONS. ENGINEER WILL NOT ACCEPT FIELD MEASUREMENTS FROM THE SITE CONTRACTOR.

Layout and Materials:

- 1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURBING TO BE BITUMINOUS BERM OR AS LABELED ON THE PLANS.
3. SIDEWALK TO BE PERMEABLE PAVEMENT OR AS LABELED ON THE PLANS.
4. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALD TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR MUST REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
5. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
6. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION MUST BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
7. CONTRACTOR MUST NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNER. CONTRACTOR MUST VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE STAMPED PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

RIDOT Notes:

- 1. ALL WORK TO BE DONE WITHIN THE STATE RIGHT OF WAY MUST CONFORM TO RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AMENDED AUGUST 2013 WITH ALL REVISIONS AND ADDENDA. STANDARD DETAILS FOR THIS WORK ARE RI STANDARD DETAILS 1998 EDITIONS WITH ALL REVISIONS.
2. ALL TRAFFIC CONTROL MUST CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, INCLUDING ALL REVISIONS.
3. NO LANE OR SHOULDER CLOSURES MUST BE PERFORMED WITHIN THE STATE'S RIGHT OF WAY DURING PEAK TRAFFIC HOURS.
4. SEWER AND WATER CONNECTIONS WITHIN THE STATE RIGHT OF WAY WILL REQUIRE A SEPARATE RIDOT UTILITY PERMIT. CONTRACTOR TO OBTAIN BEFORE CONSTRUCTION.
5. THE DRAINAGE SYSTEM IS DESIGNED TO DECREASE BOTH STORMWATER RUNOFF RATE DISCHARGE, AND STORMWATER RUNOFF VOLUME TO THE STATE RIGHT OF WAY FROM PRE-DEVELOPMENT TO POST-DEVELOPMENT. THERE WILL BE NO INCREASE IN RUNOFF TO THE STATE RIGHT OF WAY FROM THE PROPOSED DEVELOPMENT.

Grading and Utility Notes:

- 1. CONSTRUCTION TO COMMENCE UPON RECEIPT OF ALL NECESSARY APPROVALS.
2. THE CONTRACTOR MUST COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED BUILDING. THIS MUST BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.
3. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINISH GRADING AND DRAINAGE AROUND THE BUILDING TO ENSURE SURFACE WATER AND/OR GROUNDWATER ARE DIRECTED AWAY FROM THE STRUCTURE.
4. PRIOR TO START OF CONSTRUCTION, CONTRACTOR MUST VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES. CONTRACTOR MUST NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
5. ALL PROPOSED UNDERGROUND UTILITIES SERVING THE SITE AND BUILDINGS TO BE COORDINATED WITH OWNER, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION.
6. ALL DOWNSPOUTS TO BE DIRECTED TOWARDS ROADWAY.
7. ALL RETAINING WALLS AND STEEP SLOPES ARE SUBJECT TO FINAL STRUCTURAL DESIGN. DIPRETE ENGINEERING IS NOT PROVIDING THE STRUCTURAL DESIGN OF THESE ITEMS. ALL WALLS AND STEEP SLOPES ARE TO BE DESIGNED AND BUILT UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT. SHOP DRAWINGS TO BE SUBMITTED PRIOR TO CONSTRUCTION. FINAL STRUCTURAL DESIGN MUST INCORPORATE THE INTENT OF THE GRADING SHOWN ON THESE PLANS AND ALL WORK MUST BE WITHIN THE LIMIT OF DISTURBANCE SHOWN ON THE PLANS.
8. ALL CUT AND FILL AREAS ARE TO BE DONE UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER WITH TESTING AND CERTIFICATION TO BE PROVIDED TO THE APPLICANT AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING IS NOT PROVIDING THE FILL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.
9. NO STOCKPILING OF MATERIAL TO BE LOCATED IN THE RIGHT OF WAY AND NO OPEN TRENCHES ARE TO BE LEFT OVERNIGHT.
10. ALL LOAM IN DISTURBED AREAS TO BE STOCKPILED FOR FUTURE USE.
11. ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, MUST BE DISCARDED OFF SITE IN AN ACCEPTABLE MANNER AT AN APPROVED LOCATION. STUMPS MUST BE GROUND ON SITE OR REMOVED.
12. NO STUMP DUMPS ARE PROPOSED ON SITE.

Drainage:

ALL DRAINAGE PIPING TO BE HIGH-DENSITY POLYETHYLENE (HDPE) WITH WATERTIGHT JOINTS WHERE INSTALLED WITHIN THE SEASONAL HIGH GROUNDWATER, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. ALL STORMWATER PIPE WITHIN THE STATE'S RIGHT OF WAY TO BE REINFORCED CONCRETE PIPE (RCP) PIPE.

ALL DRAINAGE STRUCTURES MUST BE WATERTIGHT.

DRAINAGE CONNECTIONS FROM ALL YARD DRAINS AND DOWNSPOUTS (DS) ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. THE LEVEL OF DETAIL SHOWN DOES NOT INCLUDE ALL JOINTS THAT MAY BE REQUIRED FOR CONSTRUCTION. ALL FITTINGS & PIPE SLOPES TO TIE INTO MAIN TRUNK LINE TO BE FIELD FIT BY CONTRACTOR.

Sanitary Sewer:

ALL SANITARY SEWER PIPING TO BE SDR 35 UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. ALL SEWER IMPROVEMENTS MUST COMPLY WITH THE TOWN OF SOUTH KINGSTOWN WASTEWATER DIVISION'S RULES AND REGULATIONS. CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR APPROVAL BY ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

Water:

ALL WATER MAINS TO BE CONCRETE LINED DUCTILE IRON PIPE (CLDIP). ALL WATER MAIN IMPROVEMENTS MUST COMPLY WITH SUEZ WATER REGULATIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND SUBMITTALS TO THE ENGINEER OF RECORD FOR APPROVAL FOR ALL WATER IMPROVEMENTS AND APPURTENANCES INCLUDING BUT NOT LIMITED TO PIPES, VALVES, FITTINGS, HEAT ENCLOSURES, AND BACKFLOWS. ALL COMPONENTS OF THE WATER SYSTEM TO BE ASBUILT PER SUEZ WATER REQUIREMENTS. ALL COMPONENTS OF THE WATER SYSTEM TO BE INSPECTED BY SUEZ WATER. CONTRACTOR TO COORDINATE ALL IMPROVEMENTS WITH SUEZ WATER TO ENSURE INSPECTOR IS ON SITE.

Electric/Telecom/Gas:

PROPOSED GAS, ELECTRIC, CABLE AND DATA UTILITIES ARE SHOWN SCHEMATICALLY AND ARE PROPOSED TO BE UNDERGROUND. OWNER & CONTRACTOR TO COORDINATE FINAL DESIGN WITH APPROPRIATE UTILITY COMPANIES. ALL WORK TO BE IN ACCORDANCE WITH EACH UTILITY COMPANY'S STANDARDS AND DETAILS AS WELL AS LOCAL AND FEDERAL REGULATIONS. THIS INCLUDES BUT IS NOT LIMITED TO, POLES, TRANSFORMERS, PULL BOXES, CONCRETE PADS, CONCRETE ENCASEMENTS AND CONDUITS. CONNECTION POINTS FOR ELECTRIC AND TELECOM UTILITIES, AT THE EXISTING INFRASTRUCTURE, ARE CURRENTLY SHOWN AS UNDERGROUND UTILITIES. THESE UTILITIES MAY BE UNDERGROUND OR OVERHEAD AND WILL BE COORDINATED WITH NATIONAL GRID PRIOR TO CONSTRUCTION.

Site Lighting:

SITE LIGHTING (TEMPORARY AND PERMANENT) MUST BE DIRECTED AWAY FROM AND SHIELDED FROM ENVIRONMENTALLY SENSITIVE AREAS AND ADJUTING LANDS. EXACT LOCATIONS OF LIGHT POLE TO BE COORDINATED WITH OTHER UTILITIES AND TO BE LOCATED WITHIN THE STREET RIGHTS OF WAY. FINAL LIGHTING AND CONDUIT LOCATIONS BY OTHERS.

ADA Notes:

- 1. ALL IMPROVEMENTS MUST COMPLY WITH THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)" BY THE DEPARTMENT OF JUSTICE.
2. MAXIMUM RUNNING SLOPE ALONG ALL ACCESSIBLE PATHS OF TRAVEL MUST BE 4.5% OR 0.045 '/, AND MAXIMUM CROSS SLOPE ALONG ALL ACCESSIBLE PATHS OF TRAVEL MUST BE 0.015'/-.
3. MAXIMUM SLOPE IN ALL DIRECTIONS FOR ALL ACCESSIBLE PARKING SPACES AND LOADING AREAS MUST BE 0.015'/-.
4. PLEASE NOTE THAT THE GRADING AND PLAN VIEWS AS WELL AS THE STANDARD DETAILS MAY NOT SHOW THE DETAIL NECESSARY TO CONSTRUCT WALKWAYS AND RAMPS TO ADA STANDARDS. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LEVEL OF CARE NECESSARY TO BE CERTAIN THAT THE CONSTRUCTED PRODUCT MEETS ADA STANDARDS. IN THE EVENT OF ANY CONFLICTS THE CONTRACTOR MUST NOTIFY THE DESIGNER BEFORE CONSTRUCTION FOR ADVICE IN FINDING A RESOLUTION.

Abbreviations Legend:

Table listing abbreviations for ADA, Assessors, Curbs, Testholes, Bituminous, Bioretention, Basements, Finished Grade, Catch Basins, Calculated, Centerline, Chord Angle, CLDIP, Clean Out, Concrete, Deed, Double Catch Basin, Drop Inlet, Drainage Manhole, Detention Pond, Elevation, Edge of Pavement, Erosion and Sediment Control, Existing, Flared End Section, Finish Floor Elevation, Garage Slab Elevation, Ground Water Table, Headwall, High Capacity Catch Basin Grate, High Density Polyethylene, Inland Drain, Invert, Infiltration Pond, Linear Feet, Light Pole, Measured, Now or Formerly, etc.

Site Callouts Legend:

Table showing site callouts: 2.3.0 RIDOT STD PRECAST CONCRETE FLARED END SECTION.

Existing Legend:

Table listing existing features: Property Line, Assessors Line, Building, Brushline, Tree Line, Guardrail, Fence, Retaining Wall, Stone Wall, Minor Contour Line, Major Contour Line, Water Line, Sewer Line, Sewer Force Main, Gas Line, Electric Line, Overhead Wires, Drainage Line, Soils Lines, 50' Perimeter Wetland, 100' Riverbank Wetland, 200' Riverbank Wetland, FEMA Boundary, Stream, Wetland Line & Flag, Underground, Infiltration System, Utility Pole, Walkout Elevation, Water Quality, etc.

Proposed Legend:

Table listing proposed features: Property Line, Building Setbacks, Chainlink Fence, Guardrail, Spot Elevation, Edge of Pavement, Bituminous Berm, Concrete Curb, Building Footprint, Building Overhang, Permeable Asphalt Pavement, Permeable Asphalt Sidewalk, Sawcut Line, Sign, Single Light, Double Light, Overhanging Light, Accessible Parking Space Symbols, Building Ingress/Egress, Drainage Line, Perforated Subdrain, Swale, Sewer Force Main, Gas Line, Water Line, Hydrant Assembly, Water Shut Off, Water Valve, Thrust Block, Sewer Line, Overhead Wire, Electric, Telephone, Cable Line, Limit of Disturbance/Limit of Clearing, Sedimentation Barrier, Silt Fence, Compost Sock, Steep Slopes, Underground Infiltration Outline, Pond Access, Rip Rap, Sand Filter, Bio Retention, Catch Basin, Double Catch Basin, Manhole, Flared End Section, Head Wall.

Diprete Engineering logo and contact information: Two Stafford Court Cranston, RI 02920, Tel: 401-943-1000, Fax: 401-641-6006, www.diprete-eng.com. Also includes Boston, Providence, Newport locations.

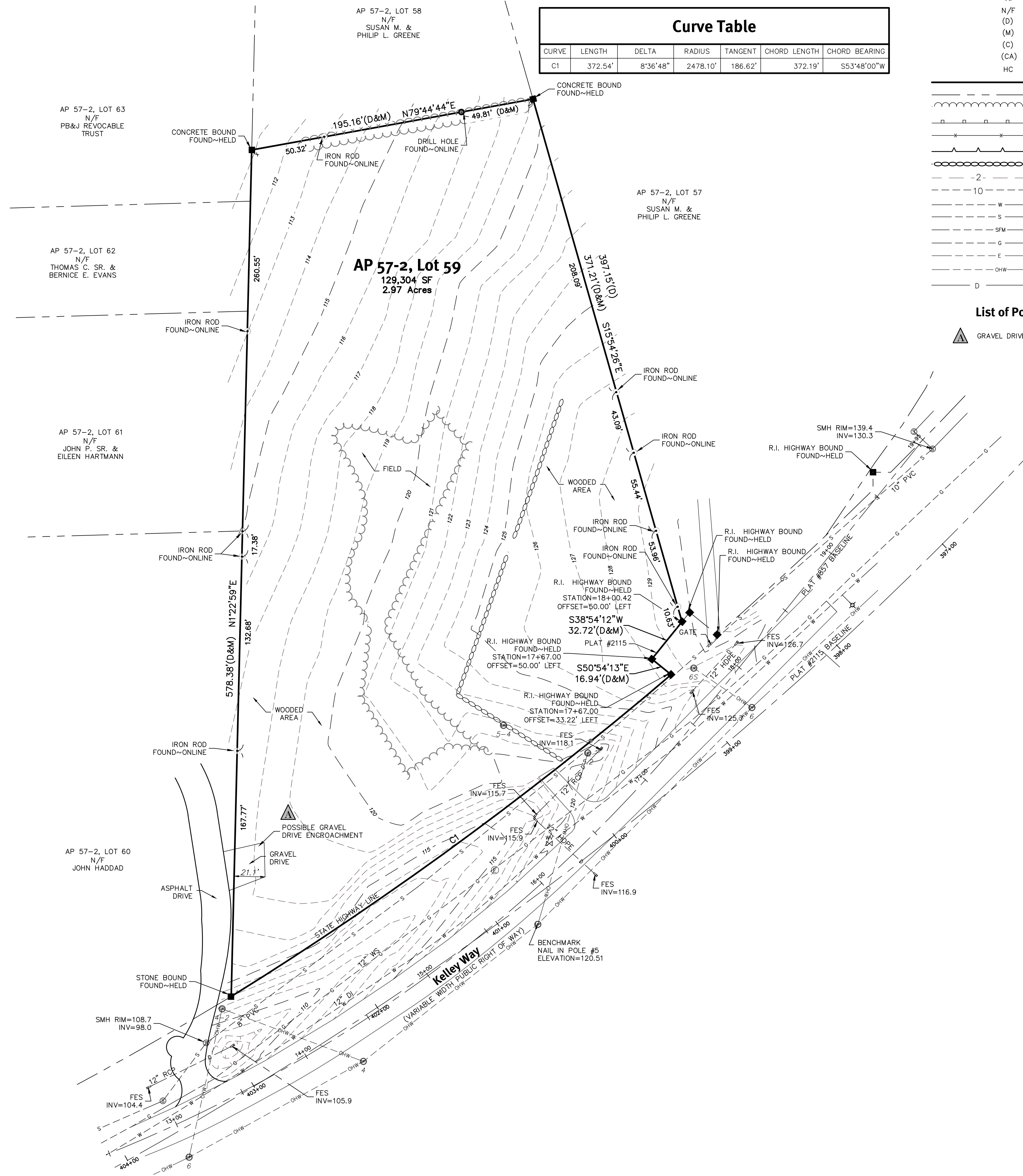
Professional Engineer seal for Brian C. Groux, Registered Professional Engineer Civil, No. 9341, expires 12/31/2020.

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a Diprete Engineering representative. The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.

Table with columns: No., Date, Description, Drawn By, M.I.D., Design By, M.I.D., B.D., etc.

General Notes & Legend Hillside Commons project information: Assessor's Plat 57-2 Lot 59, South Kingstown, Rhode Island. Applicant: Scot V. Hallberg, 57 Edgewood Farm Road, Wakefield, RI 02879. DE Job No. 1864-003-801. Copyright 2018 by Diprete Engineering Associates, Inc.

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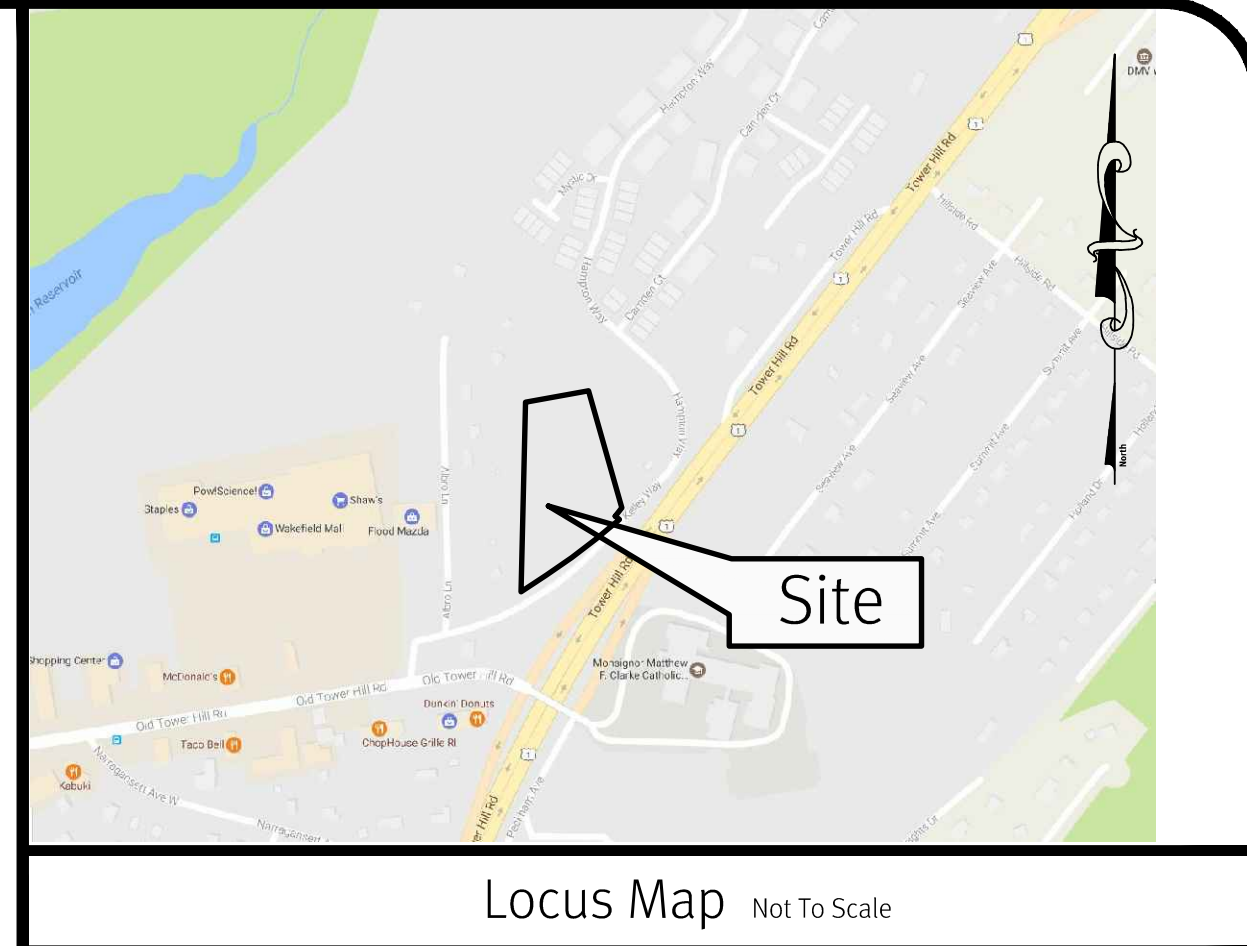


CURVE	LENGTH	DELTA	RADIUS	TANGENT	CHORD LENGTH	CHORD BEARING
C1	372.54'	8°36'48"	2478.10'	186.62'	372.19'	S53°48'00"W

**Legend**  
NOT ALL ITEMS SHOWN WILL APPEAR ON THE SURVEY

BUILDING		NAIL FOUND/SET	
ASPHALT		DRILL HOLE FOUND/SET	
ASSESSOR'S PLAT		IRON ROD/PIPE FOUND/SET	
N/F		BOUND FOUND/SET	
(D)		SIGN	
(M)		SOIL EVALUATION	
(C)		CATCH BASIN	
(CA)		DOUBLE CATCH BASIN	
HC		DRAINAGE MANHOLE	
PROPERTY LINE		FLARED END SECTION	
ASSESSORS LINE		GUY POLE	
TREELINE		ELECTRIC MANHOLE/HANDHOLE	
GUARDRAIL		UTILITY/POWER POLE	
FENCE		LIGHTPOST	
RETAINING WALL		SEWER/SEPTIC MANHOLE	
STONE WALL		SEWER VALVE	
MINOR CONTOUR LINE		CLEANOUT	
MAJOR CONTOUR LINE		HYDRANT	
WATER LINE		IRRIGATION VALVE	
SEWER LINE		WATER VALVE	
SEWER FORCE MAIN		WELL	
GAS LINE		MONITORING WELL	
ELECTRIC LINE		UNKNOWN MANHOLE	
OVERHEAD WIRES		GAS VALVE	
DRAINAGE LINE		WETLAND FLAG	
		BENCH MARK	
		BUSH	
		TREE	

**List of Possible Encroachments:**  
 GRAVEL DRIVE OVER PROPERTY LINE



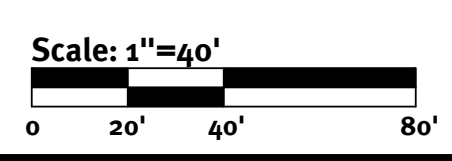
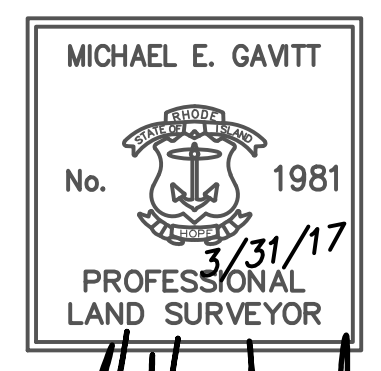
- General Notes**
1. THE PARCEL IS FOUND ON ASSESSOR'S PLAT 57-2, LOT 59 IN THE TOWN OF SOUTH KINGSTOWN, WASHINGTON COUNTY, RHODE ISLAND.
  2. THE OWNER PER DEED BOOK 1613, PAGE 235 IS SCOT V. HALLBERG.
  3. BASED ON GRAPHICAL PLOTTING ONLY, THE PARCEL IS LOCATED IN X PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 44090203J, DATED OCTOBER 16, 2013. THIS DESIGNATION MAY CHANGE BASED UPON REVIEW BY A FLOOD ZONE SPECIALIST OR BY THE RESULTS OF A COMPREHENSIVE FLOOD STUDY.
  4. THE PARCEL IS ZONED SMD BASED ON TOWN OF SOUTH KINGSTOWN WEB GIS. ANY OVERLAY DISTRICTS, SPECIAL PERMITS OR VARIANCES SPECIFIC TO THIS SITE ARE NOT TAKEN INTO CONSIDERATION. PLEASE CONTACT THE ZONING DEPARTMENT FOR ANY ADDITIONAL INFORMATION OR FOR A CERTIFICATE OF ZONING.
  5. THERE WERE NO CEMETERIES, GRAVE SITES AND OR BURIAL GROUNDS OBSERVED WITHIN THE LIMITS OF THE SURVEY.
  6. FIELD SURVEY PERFORMED BY DIPRETE ENGINEERING ON MARCH 6 & 7, 2017. THIS PLAN REFLECTS ON THE GROUND CONDITIONS AS OF THAT DATE.
  7. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR ANY UNKNOWN OR UNRECORDED EASEMENTS, DEEDS OR CLAIMS THAT A TITLE REPORT WOULD DISCLOSE.

- Plan References:**
1. "ADMINISTRATIVE SUBDIVISION ASSESSOR'S MAP 50-4, LOT 17 AND MAP 57-2, LOT 57 TOWER HILL ROAD (ROUTE 1)" PREPARED FOR JOHN HADDAD DATED 11/19/03, SCALE 1"=50' BY CROSSMAN ENGINEERING, INC.
  2. "PLAT OF LAND AT TOWER HILL IN THE TOWN OF SOUTH KINGSTOWN, R.I., SURVEYED FOR PEACE DALE OFFICES, INC., MAY 1949, LEON L. HOLLAND, CIVIL ENGINEER."
  3. "TRACT OF LAND AT TOWER HILL IN THE TOWN OF SOUTH KINGSTOWN, R.I., TO BE CONVEYED BY JOHN S. & RUBY B. MACKENZIE TO PHILIP M. GREENE. SURVEYED AND PLATTED NOV., 1963, A.J. EASTERBROOKS, CIVIL ENGINEER."
  4. "THORP PLAT PLAT OF LAND AT TOWER HILL IN THE TOWN OF SOUTH KINGSTOWN, R.I., SHOWING SUBDIVISION OF LOT 'C' FOR JESSE A. THORP, JANUARY 1948, LEON L. HOLLAND, CIVIL ENGINEER."
  5. RHODE ISLAND STATE HIGHWAY PLAT #857, DATED JULY 18, 1952.
  6. RHODE ISLAND STATE HIGHWAY PLAT #2115, DATED SEPTEMBER 16, 1988.

**Datum Note:**  
 1. ELEVATIONS SHOWN HEREON, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), AS DETERMINED BY DIPRETE ENGINEERING USING REAL TIME KINEMATIC G.P.S. OBSERVATIONS.

- Utility Notes**
1. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN WERE PROVIDED BY OTHERS AND ARE APPROXIMATE ONLY. LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE DESIGNING, EXCAVATION, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAIRING. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS SURVEY. (PLEASE CONTACT DIGSAFE 72 WORKING HOURS PRIOR TO ANY CONSTRUCTION AT 1-888-344-7233). DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR MISSING UNDERGROUND UTILITIES, EITHER IN SERVICE OR ABANDONED, NOT OBSERVED AT THE TIME OF THE SURVEY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
  2. UNDERGROUND WATER INFORMATION OBTAINED FROM "WATER LINE COMPILATION PLAN PREPARED FOR UNITED WATER RHODE ISLAND 17 ARNOLD STREET, WAKEFIELD R.I. 02879.
  3. UNDERGROUND SEWER INFORMATION OBTAINED FROM TOWN OF SOUTH KINGSTOWN WEB GIS.
  4. UNDERGROUND GAS INFORMATION OBTAINED FROM NATIONAL GRID DATED MARCH 3, 2017.
  5. UNDERGROUND DRAINAGE INFORMATION OBTAINED ON THE GROUND BY DIPRETE ENGINEERING. (SEE GENERAL NOTES FOR DATE OF FIELD SURVEY)

**Certification**  
 THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON JANUARY 1, 2016, AS FOLLOWS:  
 TYPE OF SURVEY: COMPREHENSIVE BOUNDARY SURVEY  
 MEASUREMENT SPECIFICATION: CLASS I  
 DATA ACCUMULATION SURVEY (LIMITED): CLASS T-2  
 THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS:  
 PERIMETER RETRACEMENT PERFORMED BY DIPRETE ENGINEERING FOR THE PURPOSE OF SITE ENGINEERING AND PERMITTING.



BY MICHAEL E. GAWITT, R.I.P.L.S. #1981  
 C.O.A. NO. LS-A160

**Diprete Engineering**  
 Two Stafford Court Cranston, RI 02920  
 tel 401-943-1000 fax 401-641-6006 www.diprete-eng.com

**Boston • Providence • Newport**

**Boundary & Topographic Survey**  
**76 Kelley Way**  
 South Kingstown, Rhode Island

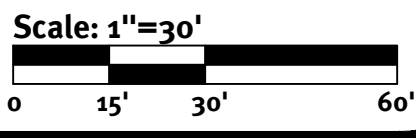
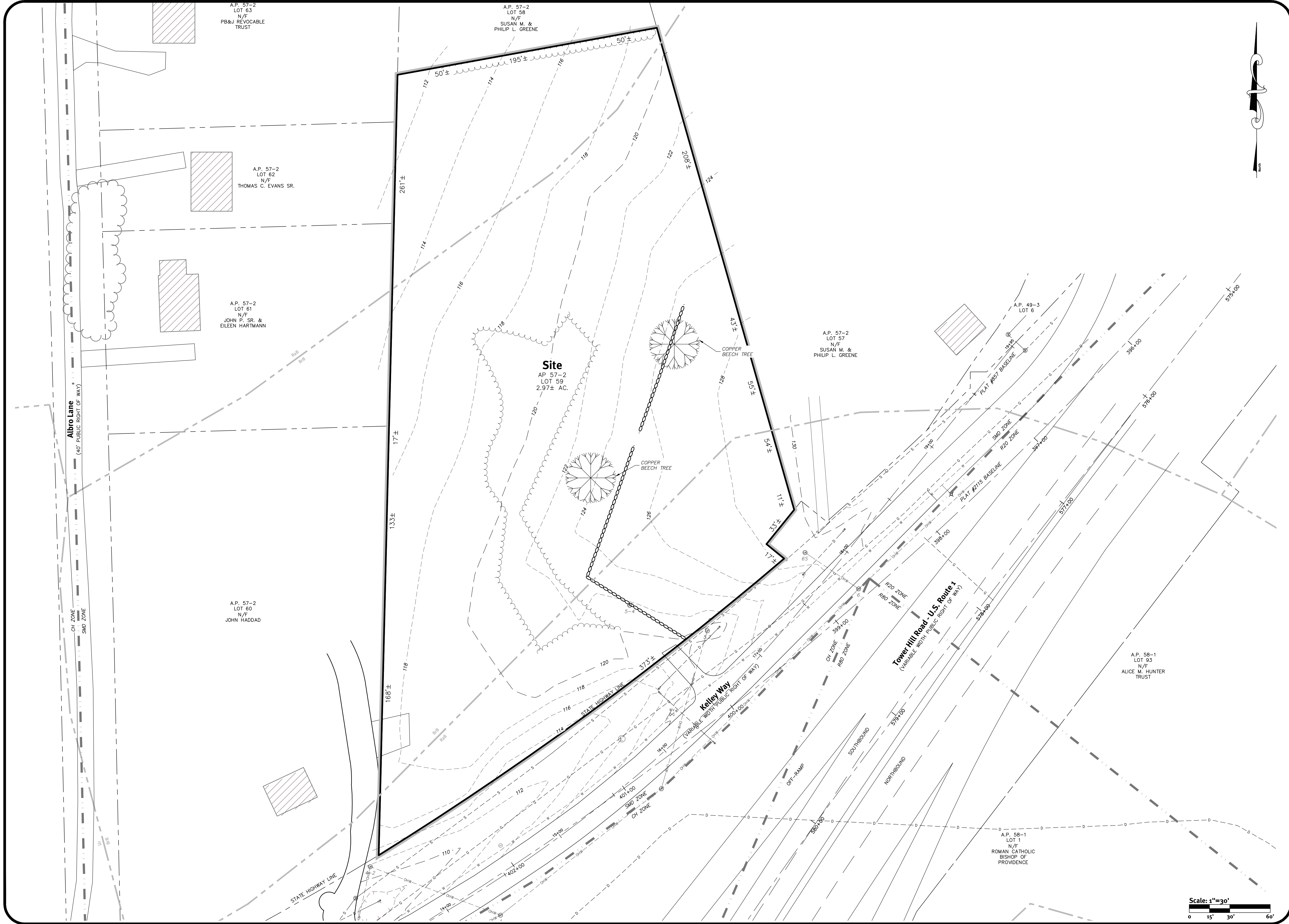
**CLIENT**  
**Hallberg Ltd. Realtors**  
 57 Edgewood Farm Road, Wakefield, Rhode Island 02879  
 tel 401-783-3799 fax 401-783-4014

Drawn By: E.L.T.

0	3-29-2017	Boundary/Topographic Survey	E.L.T.
0	1/20	Date	Dr:

SHEET **4** OF 11

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**Existing Conditions Plan**  
**Hillside Commons**

Assessors Plat 57-2, Lot 59  
 South Kingstown, Rhode Island  
 Applicant  
**Scot V. Hallberg**  
 57 Edgewood Farm Road  
 Wakefield, RI 02879

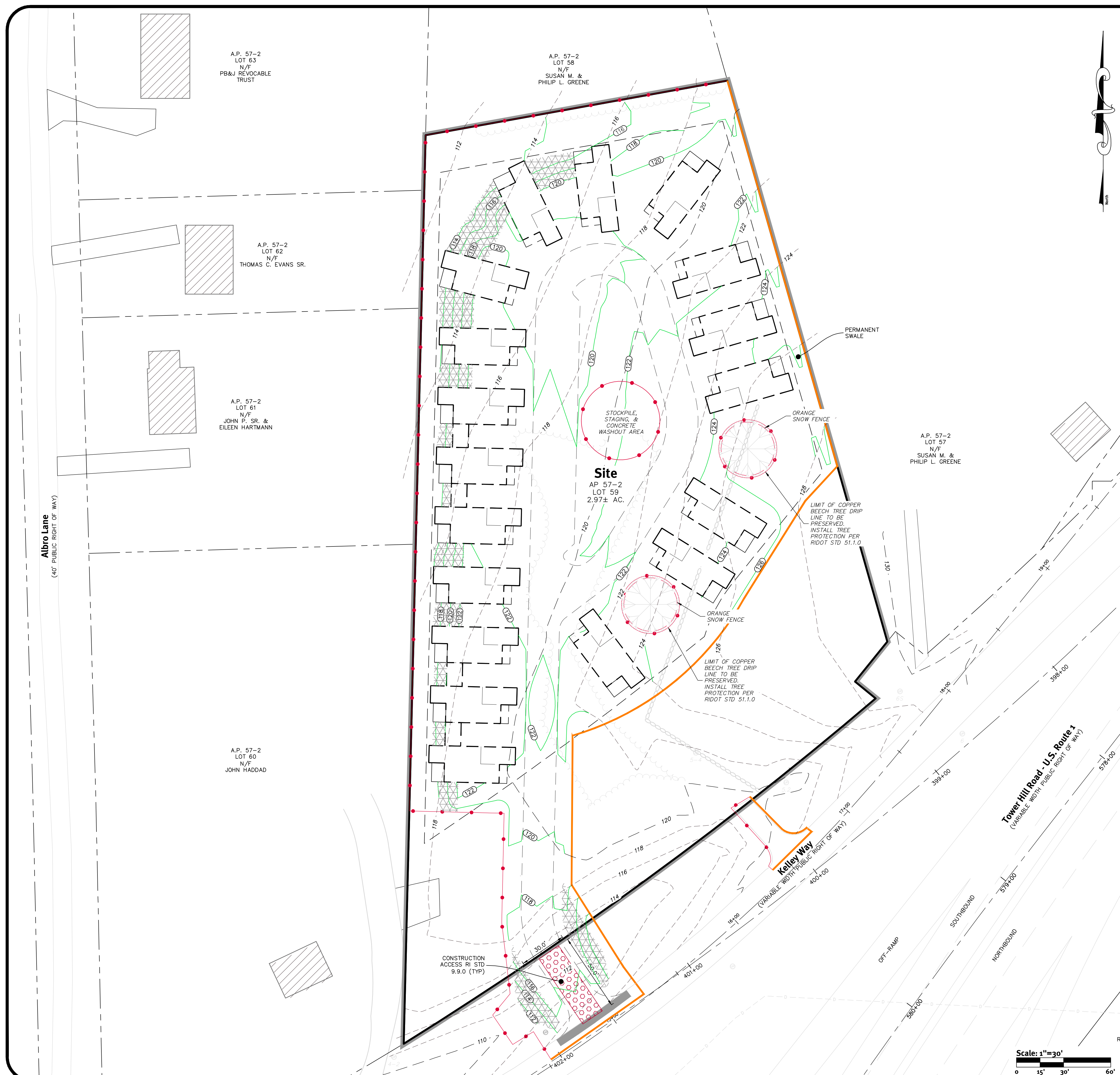
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**BRIAN C. GROUX**  
 3341  
 3/28/2019  
 REGISTERED  
 PROFESSIONAL ENGINEER  
 CIVIL

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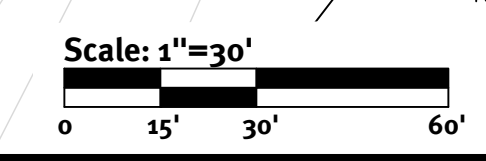


**Soil Erosion Control Legend:**

- DIVERSION RUNOFF CONVEYANCE MEASURE (SWALE AND/OR BERM)
- TEMPORARY SEDIMENT TRAP
- LIMIT OF DISTURBANCE (NO EROSION CONTROL)
- LIMIT OF DISTURBANCE W/ EROSION CONTROL (COMPOST SOCK, SILT FENCE (RI STD 9.2.0) OR APPROVED EQUAL)
- CONSTRUCTION ENTRANCE (RIDOT STD 9.9.0)
- PR CONTOUR

**Soil Erosion Control Implementation Phasing**

1. INSTALL EROSION CONTROL SILT FENCE & STONE CONSTRUCTION ENTRANCE.
2. CLEAR AND GRUB PERMEABLE PAVEMENT & BUILDING AREAS.
3. CONSTRUCT PROPOSED SWALE.
4. ROUGH GRADE LOT.
5. INSTALL UTILITIES AND PROPOSED PERMEABLE PAVEMENT ROADWAY & SIDEWALK. LIMIT ACCESS ON PERMEABLE PAVEMENT SURFACES.
6. CONSTRUCT BUILDINGS AND INDIVIDUAL PERMEABLE PAVEMENT DRIVEWAYS.
7. VACUUM PERMEABLE PAVEMENT AREAS TO REMOVE ALL SEDIMENTS.
8. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING FINAL VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS.



Note: This Plan Must Be Reproduced In Color

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**BRIAN C. GROUX**  
 9341  
 3/28/2019  
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No.	Date	Description	By	MLD
0	3-28-2019	Preliminary Plan Submission	By:	Design By: M.L.D.
1				

**Erosion Control Plan**  
**Hillside Commons**  
 Accession Plat 57-2, Lot 59  
 South Kingstown, Rhode Island  
 Applicant: **Scot V. Hallberg**  
 57 Edgewood Farm Road  
 Wakefield, RI 02879

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SHEET **6** OF 11



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Albro Lane  
(40' PUBLIC RIGHT OF WAY)

CH ZONE  
SMD ZONE

A.P. 57-2  
LOT 63  
N/F  
PB&J REVOCABLE  
TRUST

A.P. 57-2  
LOT 62  
N/F  
THOMAS C. EVANS SR.

A.P. 57-2  
LOT 61  
N/F  
JOHN P. SR. &  
EILEEN HARTMANN

A.P. 57-2  
LOT 60  
N/F  
JOHN HADDAD

A.P. 57-2  
LOT 58  
N/F  
SUSAN M. &  
PHILIP L. GREENE

A.P. 57-2  
LOT 57  
N/F  
SUSAN M. &  
PHILIP L. GREENE

A.P. 58-1  
LOT 93  
N/F  
ROMAN CATHOLIC  
BISHOP OF  
PROVIDENCE

A.P. 58-1  
LOT 93  
N/F  
ALICE M. HUNTER  
TRUST

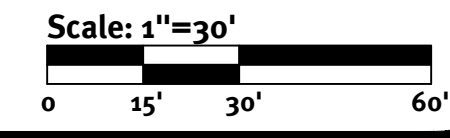
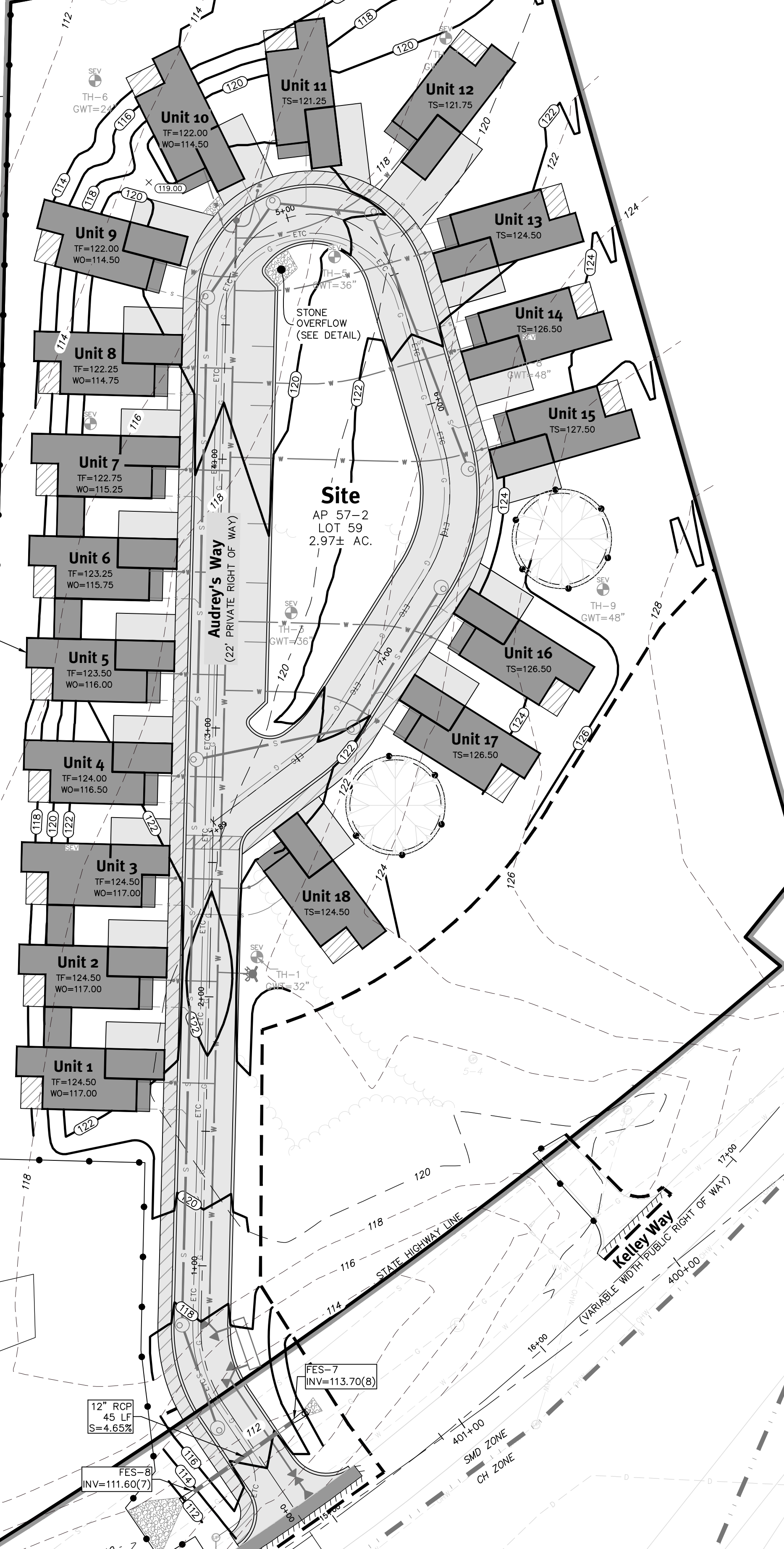
A.P. 49-3  
LOT 6

ALL DOWNSPOUTS  
TO BE DIRECTED  
TOWARDS ROADWAY

Audrey's Way  
(22' PRIVATE RIGHT OF WAY)

Kelley Way  
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

Tower Hill Road - U.S. Route 1  
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)



### Grading Plan Hillside Commons

Assessors Plat 57-3, Lot 59  
South Kingstown, Rhode Island  
As of 1/1/2018  
**Scot V. Hallberg**  
BISHOP OF  
PROVIDENCE

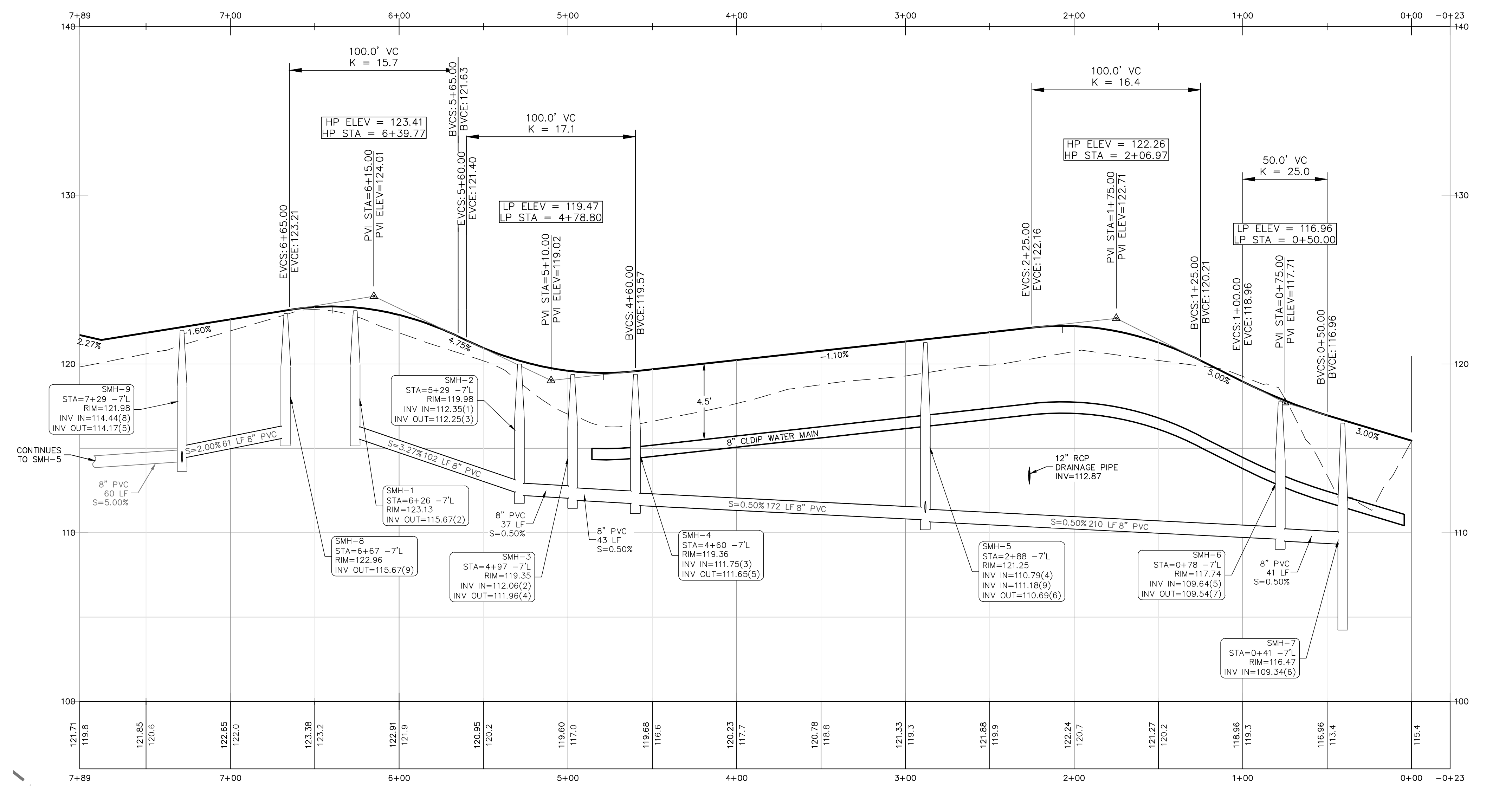
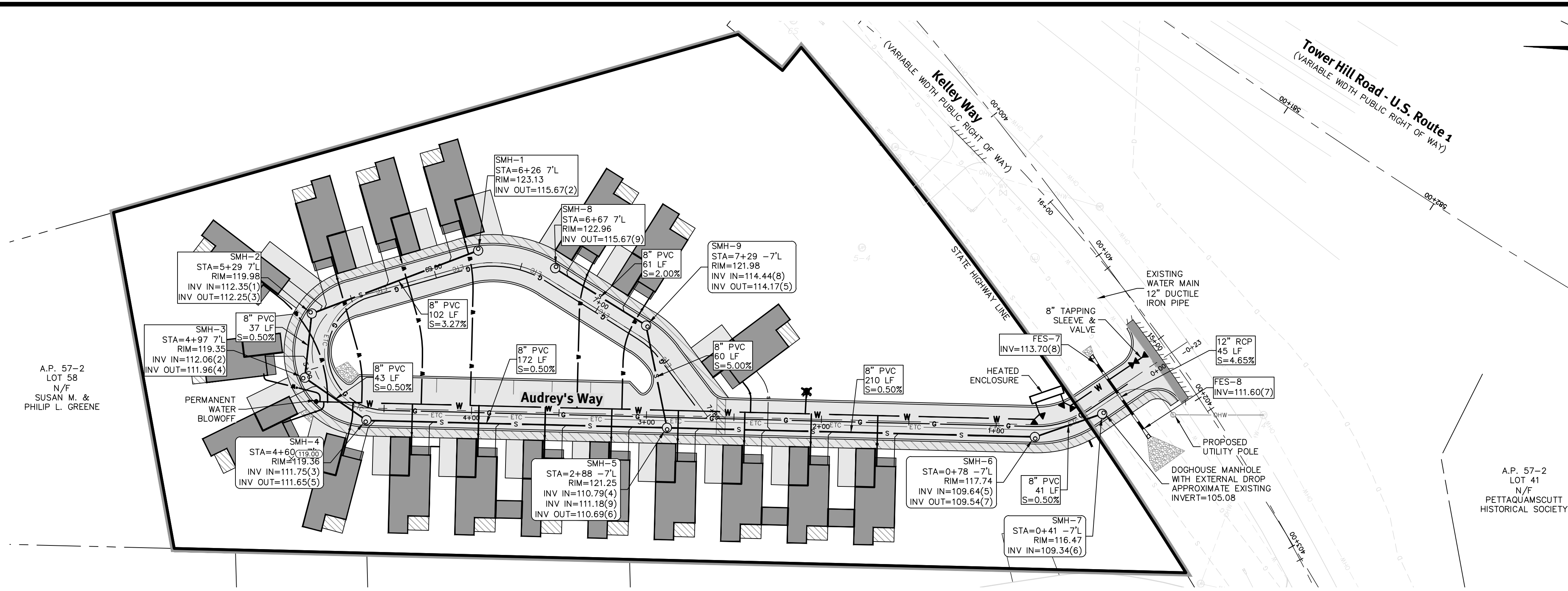
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0	3/28/2019	Final/Map, Plan Submission	By:	M.I.D.
1		Description	By:	
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3			By:	
4			By:	
5			By:	
6			By:	
7			By:	
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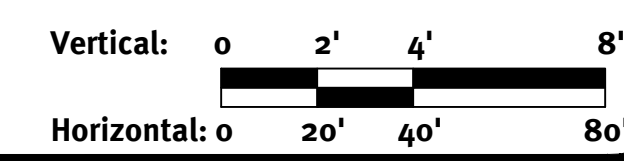
**BRIAN C. GROUX**  
  
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 PROFESSIONAL ENGINEER  
 CIVIL

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1		Description	By:	

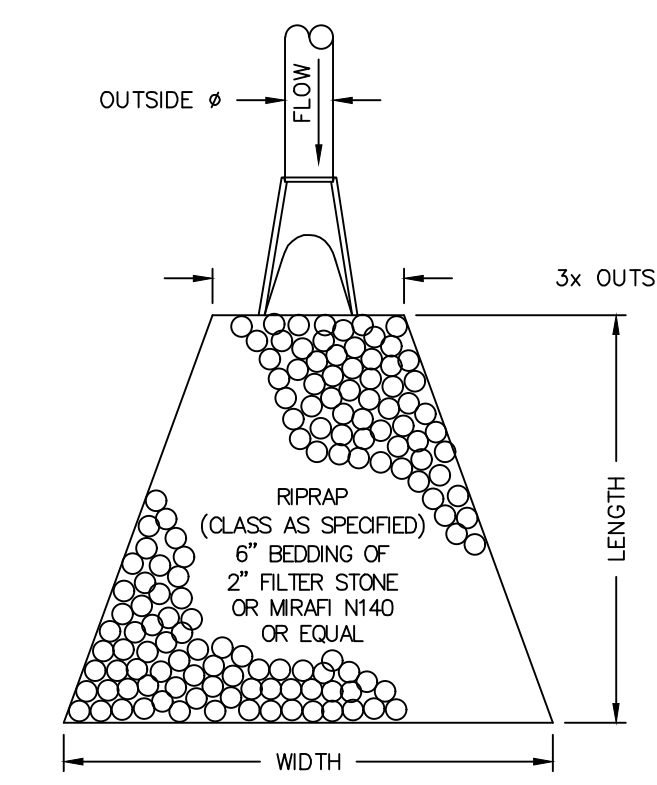
**Plan & Profile**  
**Hillside Commons**  
 Assessors Plat 57-2, Lot 59  
 South Kingstown, Rhode Island  
 Applicant  
**Scot V. Hallberg**  
 57 Edgewood Farm Road  
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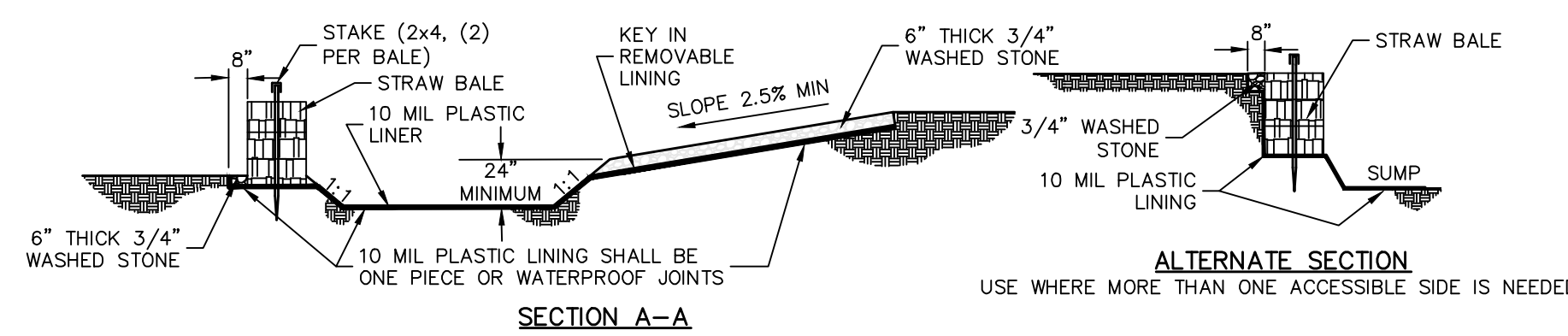
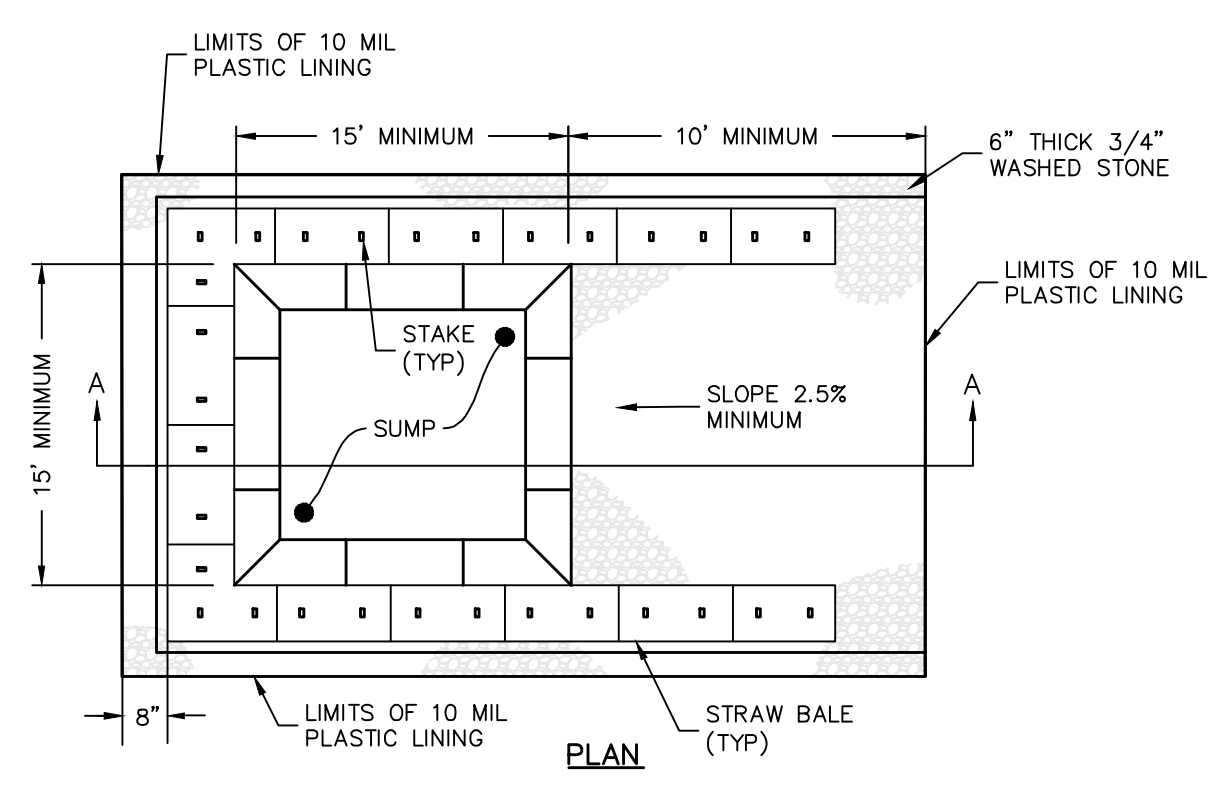
SHEET **9** OF 11

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FLARED END	LENGTH	WIDTH	CLASS
FLARED END 8	18.00	24.00	R-3

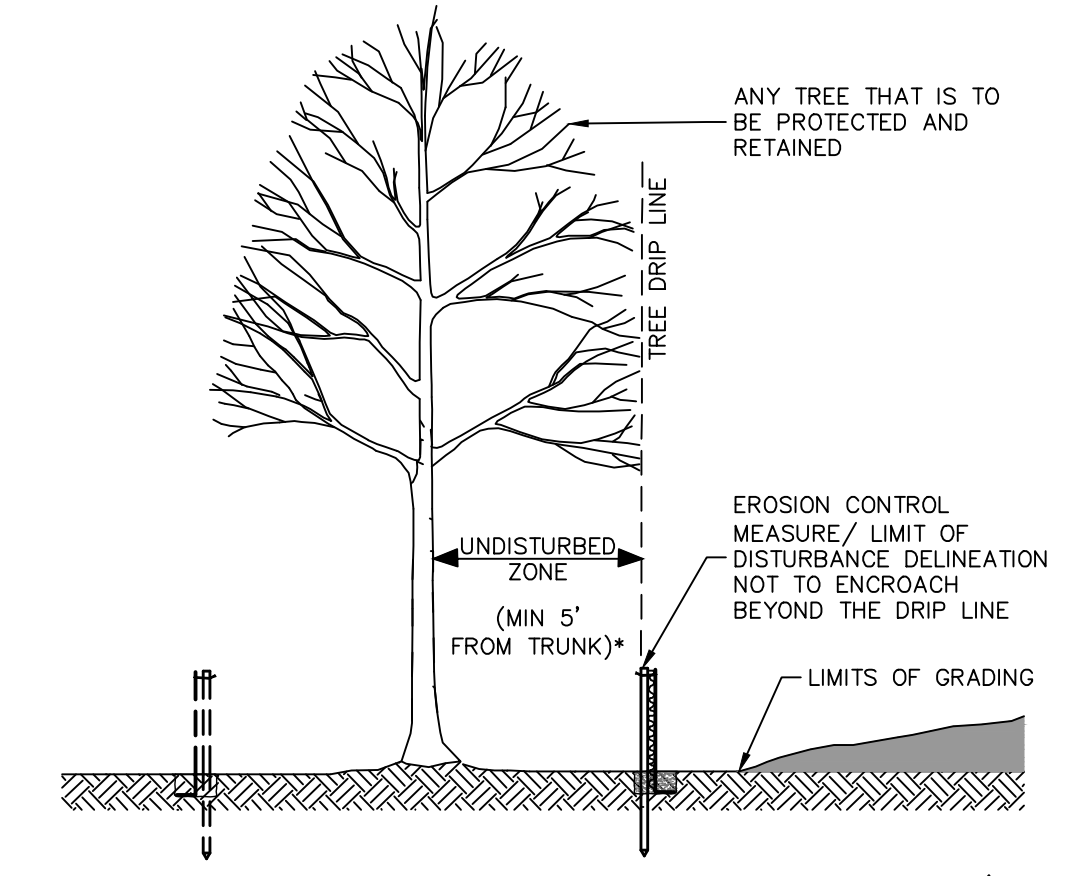


**Riprap Apron / FE Detail**  
NOT TO SCALE

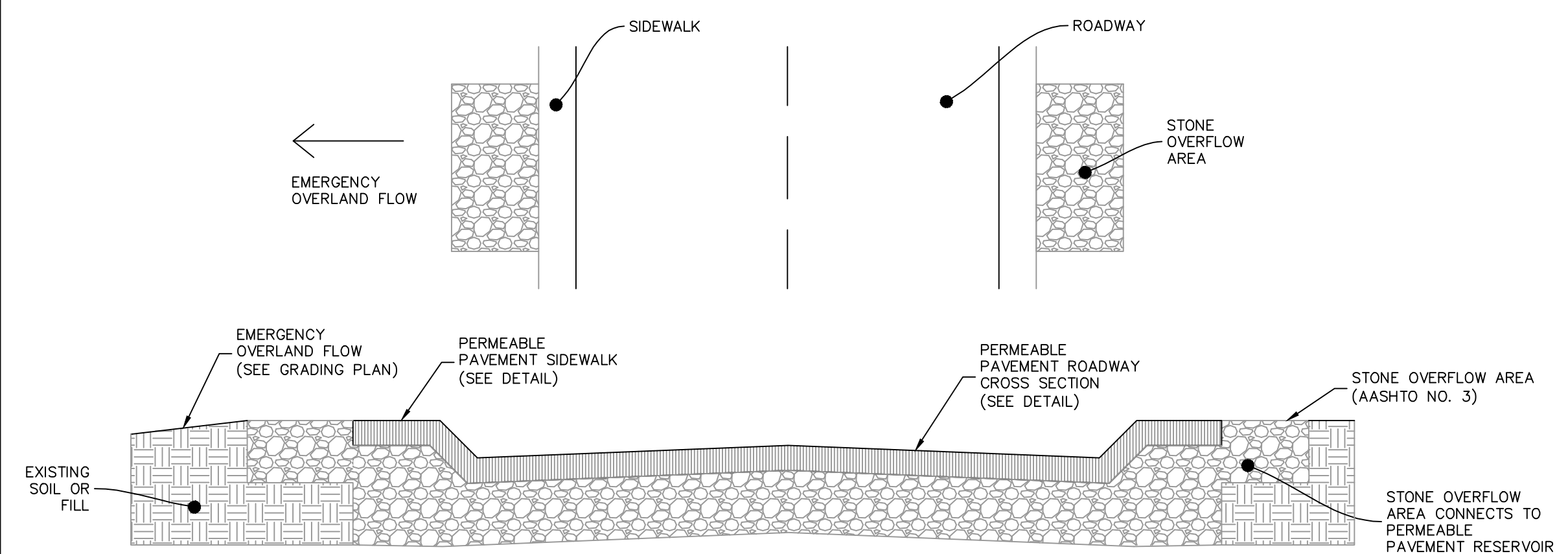


**Concrete Washout Area**  
NOT TO SCALE

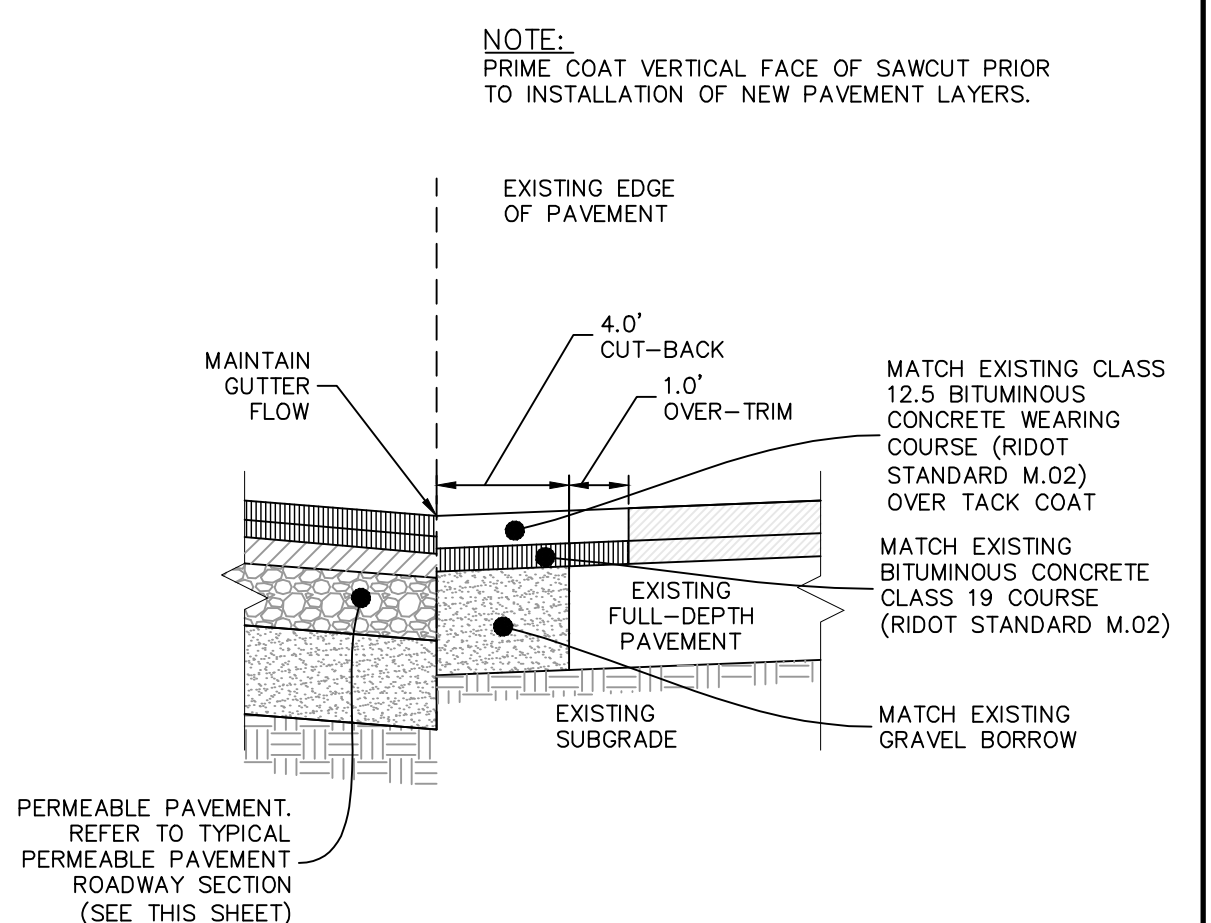
- NOTES:**
- PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPEROUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
  - WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
  - FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12."
  - FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
  - SAWCUT PORTLAND CEMENT CONCRETE, RESIDUE FROM SAWCUT AND GRINDING TO BE DISPOSED OF IN THE PIT.
  - CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, AND SURFACE WATERS.
  - MANUFACTURED CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.



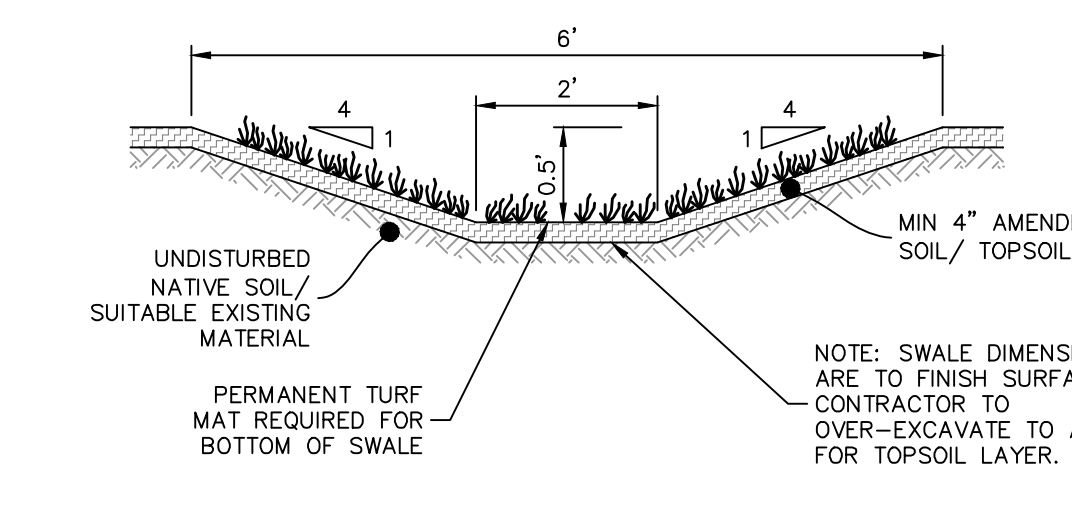
**Tree Protection Detail**  
NOT TO SCALE



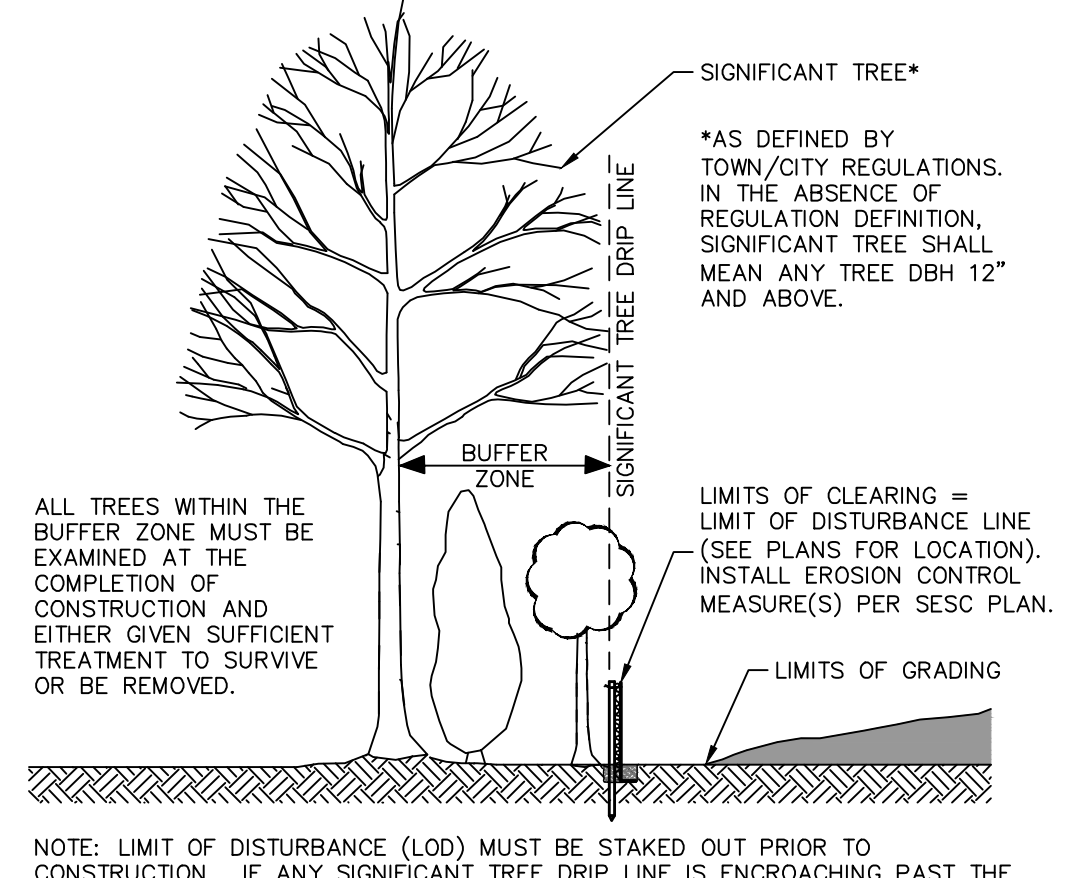
**Stone Overflow Detail**  
NOT TO SCALE



**Pavement Tie-In Detail**  
NOT TO SCALE



**Grass Swale Cross Section**  
NOT TO SCALE



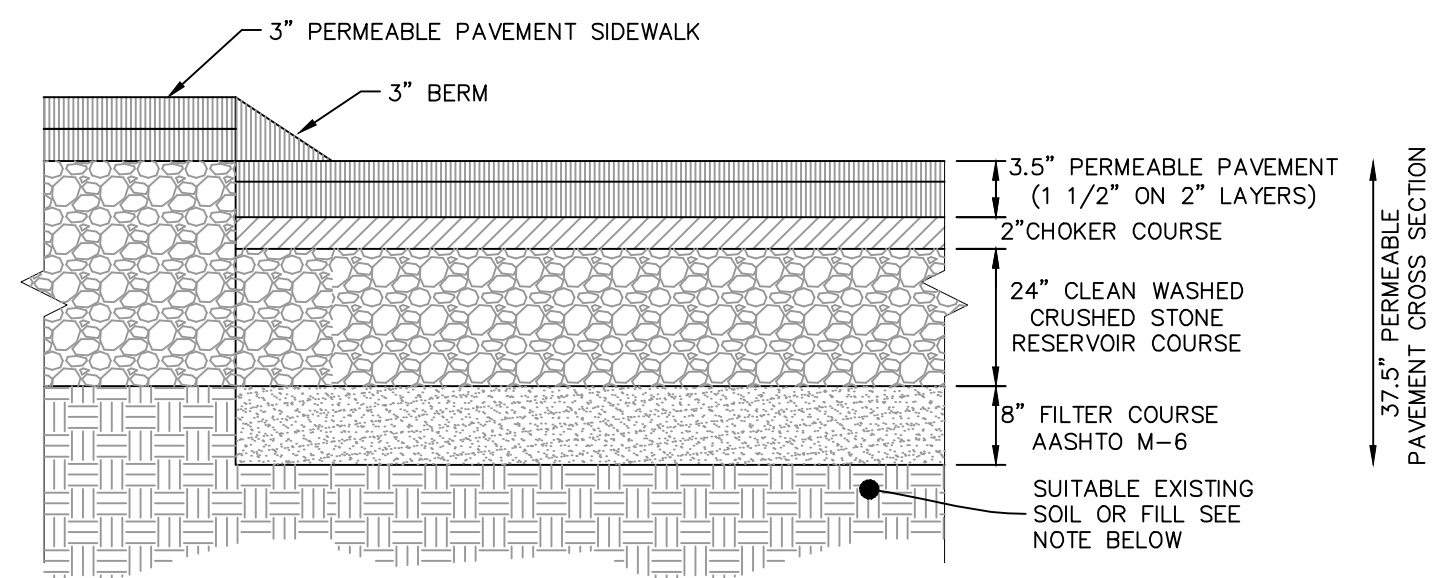
**Limit of Disturbance at Vegetation**  
NOT TO SCALE

STANDARD SIEVE SIZE (INCHES)	CHOKER COURSE (AASHTO NO. 57)	FILTER COURSE (AASHTO NO. M-6)	RESERVOIR COURSE (AASHTO NO. 3)	PERMEABLE PAVEMENT
6				
2 1/2			100	
2			90-100	
1 1/2	100		35-70	
1	95-100		0-15	
3/4				100
1/2	25-60		0-5	85-100
3/8		100		55-75
#4	0-10	70-100		10-25
#8	0-5			5-10
#200	0	0-4		2-4

**PERMEABLE PAVEMENT MATERIAL GRADATION (% PASSING)**

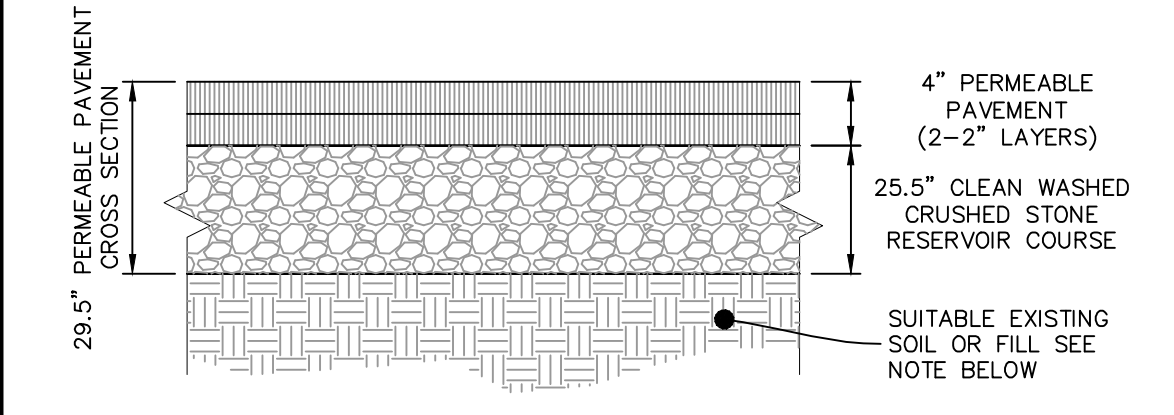
- NOTES:**
- ALL MATERIALS, METHODS OF CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO APPLICABLE REQUIREMENTS OF AASHTO, ASTM STANDARDS, AND RIDOT STANDARDS.
  - ALL AREAS WHICH DRAIN TO PERMEABLE SURFACES SHALL BE COMPLETELY STABILIZED, INCLUDING LANDSCAPED AREAS, OR EROSION CONTROL MEASURES SHALL BE INSTALLED UPGRADIENT OF THE PERMEABLE SURFACE BEFORE PLACEMENT OF PERMEABLE SURFACE.
  - PERMEABLE SURFACE SHALL NOT BE PLACED IN THE RAIN OR WHEN TEMPERATURES ARE BELOW 60°.
  - CHOKER COURSE, FILTER COURSE, AND RESERVOIR COURSE SHALL BE COMPACTED TO 95% COMPACTION PER ASTM D698.
  - CONTRACTOR SHALL SUBMIT ALL MIX DESIGNS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
  - ALL STONE AND GRAVEL MATERIAL BELOW THE PERMEABLE PAVEMENT SHALL BE WASHED.
  - STRIPING PAINT SHALL BE LATEX, WATER-BASE EMULSION, READY-MIXED AND COMPLYING WITH PAVEMENT MARKING SPECIFICATIONS PS TT-P-1952.

**Permeable Pavement Notes**



**Typical Permeable Pavement Cross Section (Roadway)**  
NOT TO SCALE

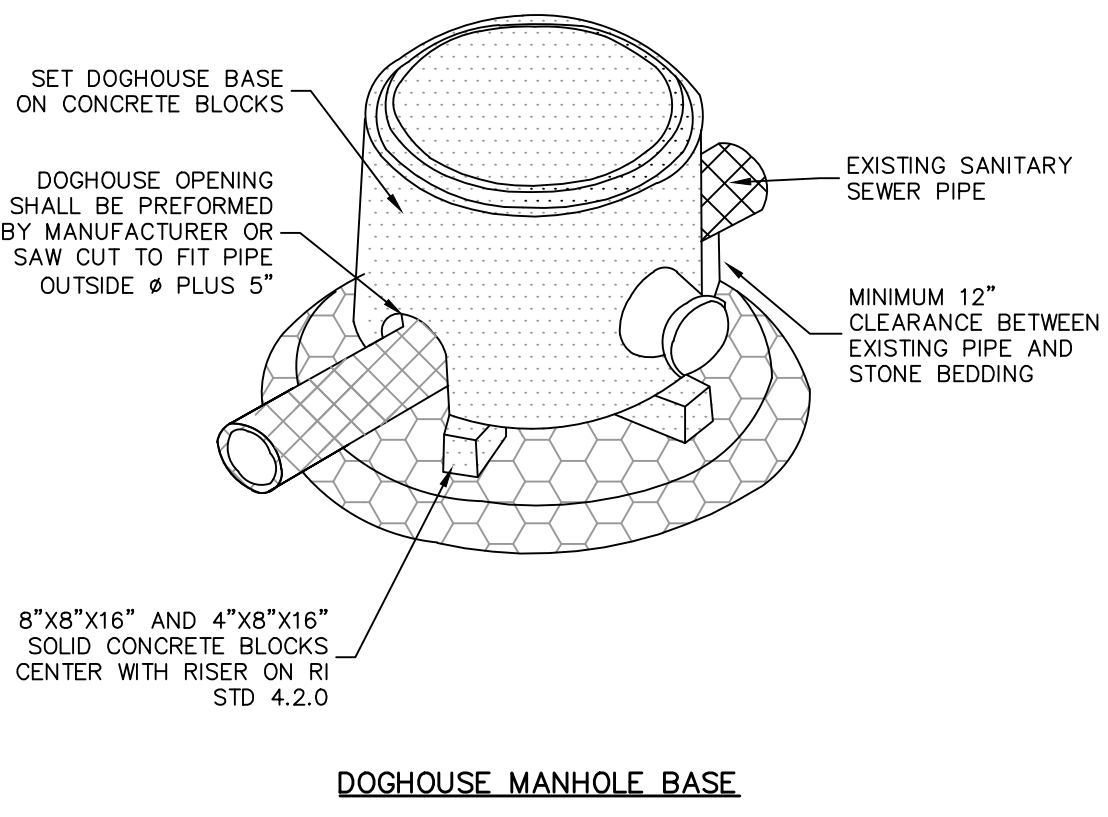
- NOTE:**  
IF FILL IS REQUIRED FOR THE ROADWAY BEYOND THE FILTER COURSE, ASTM C-33 SAND MAY BE IMPORTED. ALTERNATIVELY, ON SITE SANDY LOAM OR LOAMY SAND MAY BE USED WITH APPROVAL FROM DESIGN ENGINEER.



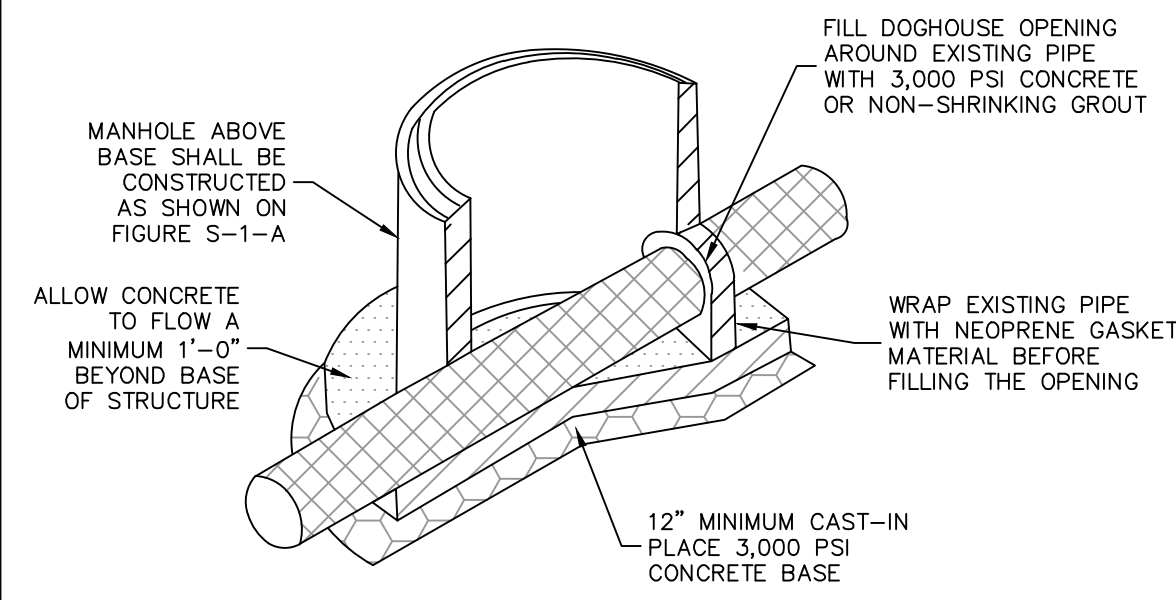
**Typical Permeable Pavement Cross Section (Driveway)**  
NOT TO SCALE

- NOTE:**  
IF FILL IS REQUIRED FOR THE ROADWAY BEYOND THE FILTER COURSE, ASTM C-33 SAND MAY BE IMPORTED. ALTERNATIVELY, ON SITE SANDY LOAM OR LOAMY SAND MAY BE USED WITH APPROVAL FROM DESIGN ENGINEER.

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**DOGHOUSE MANHOLE BASE**



**FOUNDATION SECTION VIEW**

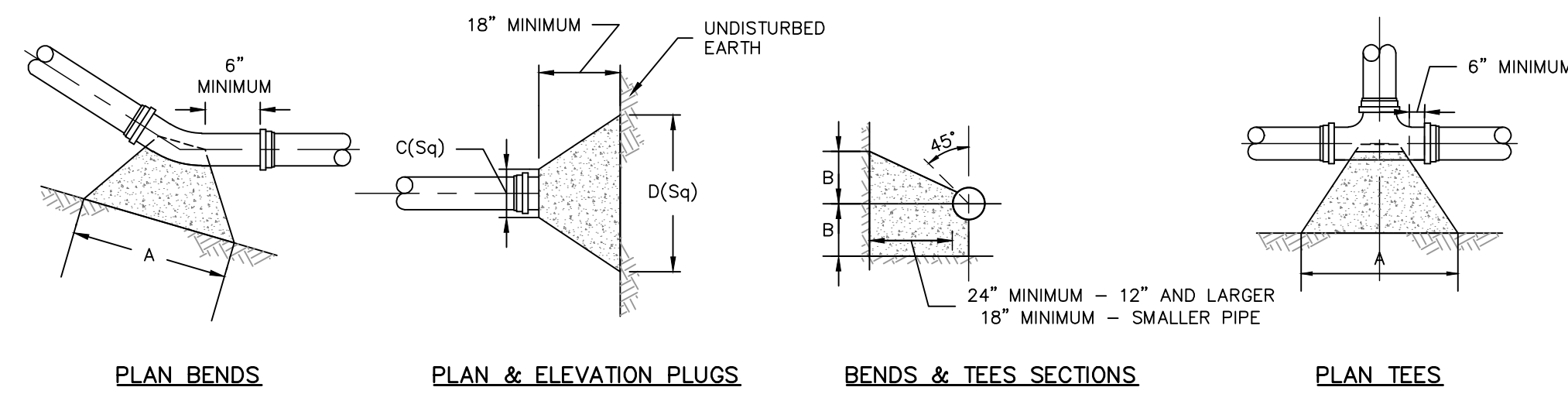
- NOTES:**
1. CONSTRUCT A FORMED INVERT FROM NEW SEWER LINE TO ALLOW FLOW TO THE EXISTING PIPE.
  2. POUR A SHELF TO THE LOWER HALF OF THE EXISTING PIPE.
  3. CUT AND REMOVE THE TOP HALF OF EXISTING PIPE TO WITHIN 6" OF THE MANHOLE WALLS AFTER THE INVERT AND SHELF HAVE BEEN FORMED AND THE MANHOLE HAS BEEN FULLY TESTED IN ACCORDANCE WITH THE SEWER AUTHORITY SPECIFICATIONS.

**Typical Manhole Base (Doghouse Installation)**

NOT TO SCALE

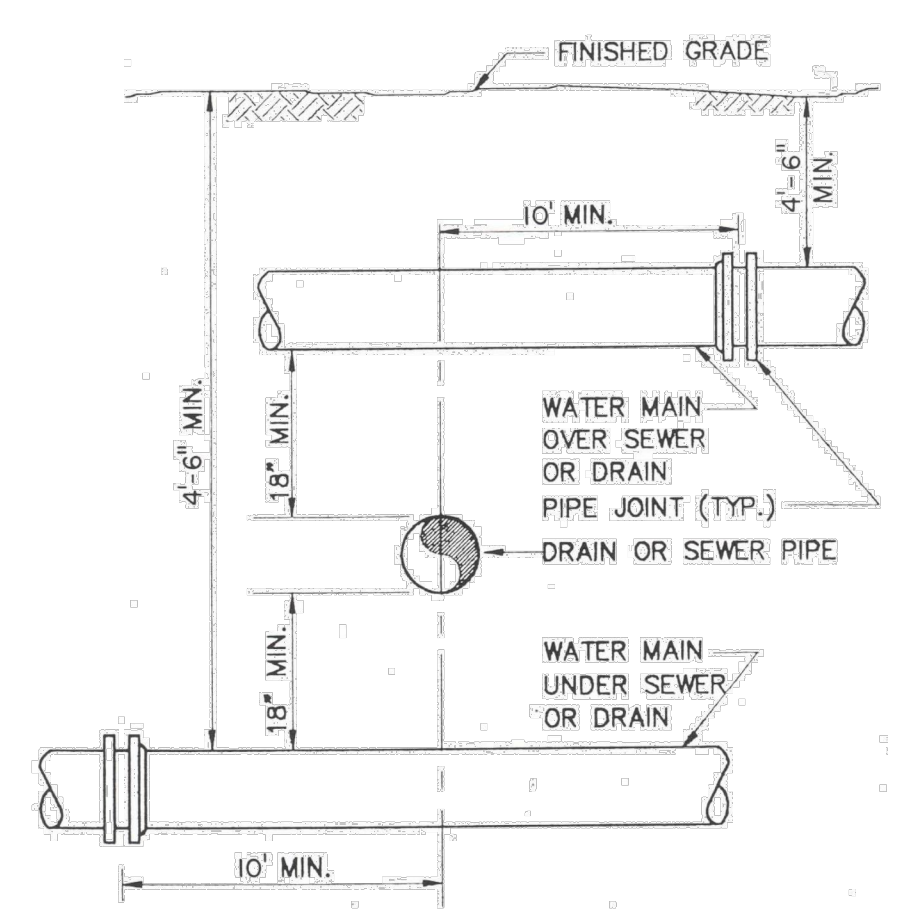
- NOTES:**
1. ALL CONCRETE SHALL BE 4,000 P.S.I. @ 28 DAYS
  2. CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH
  3. FORMS TO BE USED AS NECESSARY
  4. ALL BOLTS AND NUTS TO BE PROTECTED FROM CONCRETE AND EASILY ACCESSIBLE WHEN THRUST BLOCK INSTALLED
  5. REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF RHODE ISLAND SHALL VERIFY CALCULATIONS DURING DESIGN TO MEET CONDITIONS OF PROJECT.

SIZE	TEES				90° BEND		45° BEND		22.5° BEND		11.25° BEND	
	A	B	C	D	A	B	A	B	A	B	A	B
6"	20"	10"	10"	21"	24"	12"	18"	9"	13"	7"	9"	5"
8"	26"	13"	12"	26"	32"	16"	24"	12"	17"	9"	12"	6"
10"	34"	17"	14"	34"	40"	20"	30"	15"	22"	11"	15"	8"
12"	41"	20"	16"	41"	48"	24"	35"	18"	25"	13"	18"	9"
16"	54"	27"	20"	54"	64"	32"	47"	23"	34"	17"	24"	12"



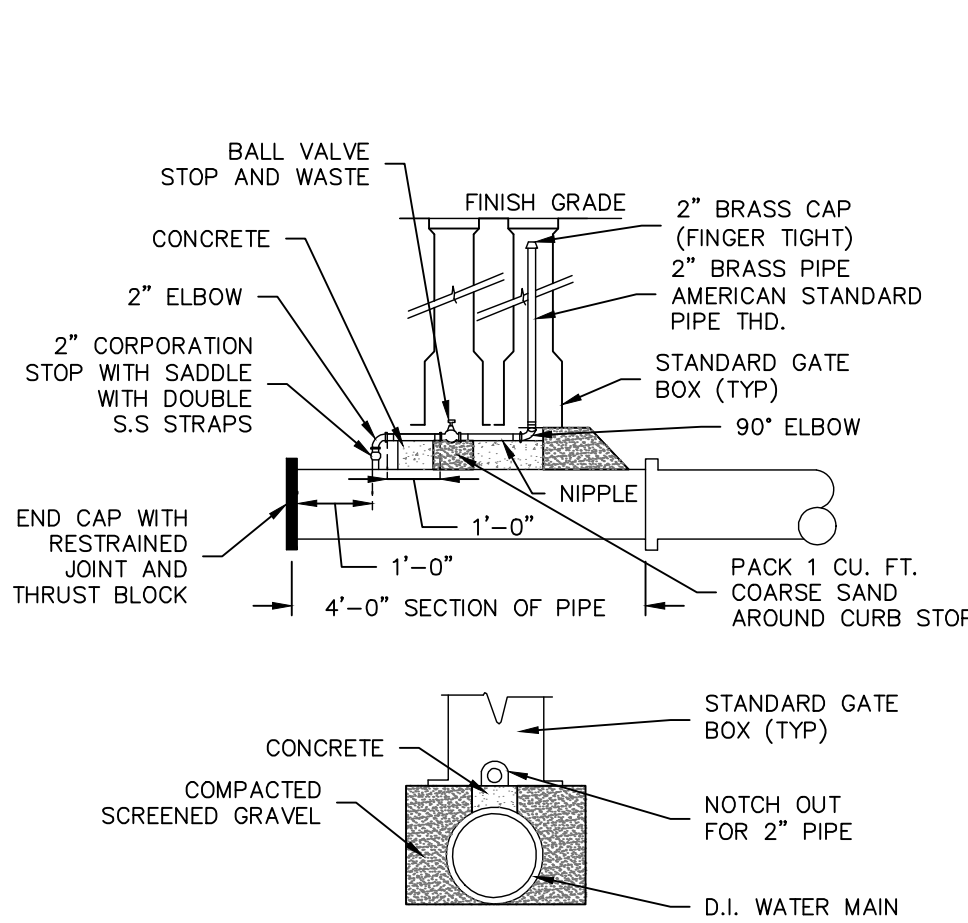
**Thrust Block**

NOT TO SCALE



**Sewer or Drain Crossing Detail**

NOT TO SCALE



**Permanent Blowoff Assembly**

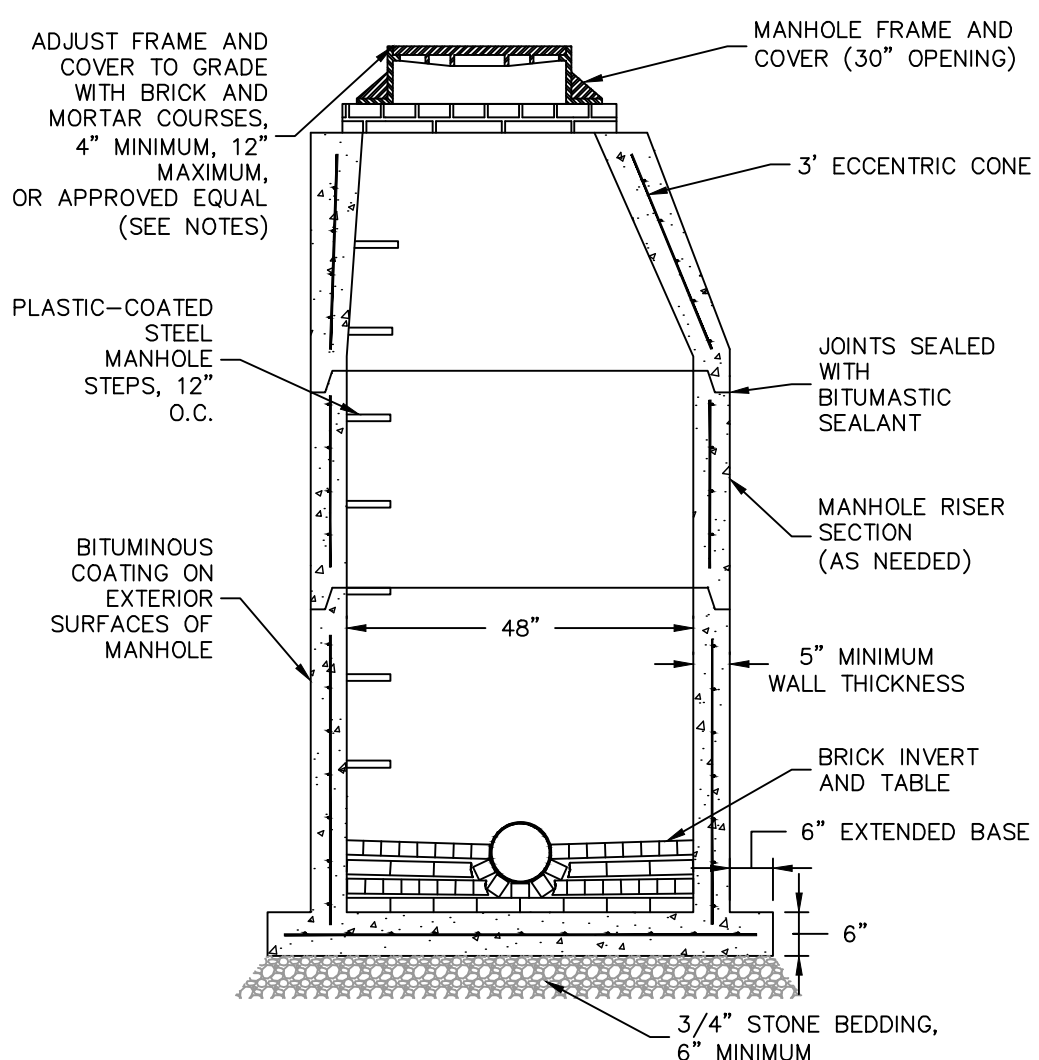
NOT TO SCALE

**Sewer Line/Water Main Separation Policy For Design Of Sanitary Sewers**

- A. LATERAL PLACEMENT OF SEWERS AND WATER MAINS**
- SEWERS SHALL BE LAID AT LEAST 10' HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED OUTSIDE EDGE-TO-OUTSIDE EDGE. THERE IS NO MINIMUM VERTICAL SEPARATION REQUIRED PROVIDED THE 10' HORIZONTAL SEPARATION IS MAINTAINED.
- IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10' HORIZONTAL SEPARATION, THE DIVISION MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT:
1. THE SEWER AND WATER MAIN ARE LAID IN SEPARATE TRENCHES, OR
  2. THE SEWER AND WATER MAIN MAY BE INSTALLED IN THE SAME TRENCH WITH THE WATER MAIN PLACED ON A BENCH OF UNDISTURBED EARTH, AND
  3. IN EITHER CASE, THE CROWN OF THE SEWER SHALL BE AT LEAST 18" BELOW THE INVERT OF THE WATER MAIN.
- IN SITUATIONS WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING PROTECTION SHALL BE PROVIDED:
4. ENCASEMENT OF THE SEWER PIPE IN CONCRETE (MINIMUM 6" THICKNESS) OR A CARRIER PIPE FOR AT LEAST 10' EITHER SIDE OF THE AREA NOT COMPLYING WITH THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION, OR
  5. DESIGN AND CONSTRUCTION OF THE SEWER EQUAL TO WATER MAIN PIPE (CEMENT-LINED DUCTILE IRON OR OTHER AWWA-APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE), AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS.

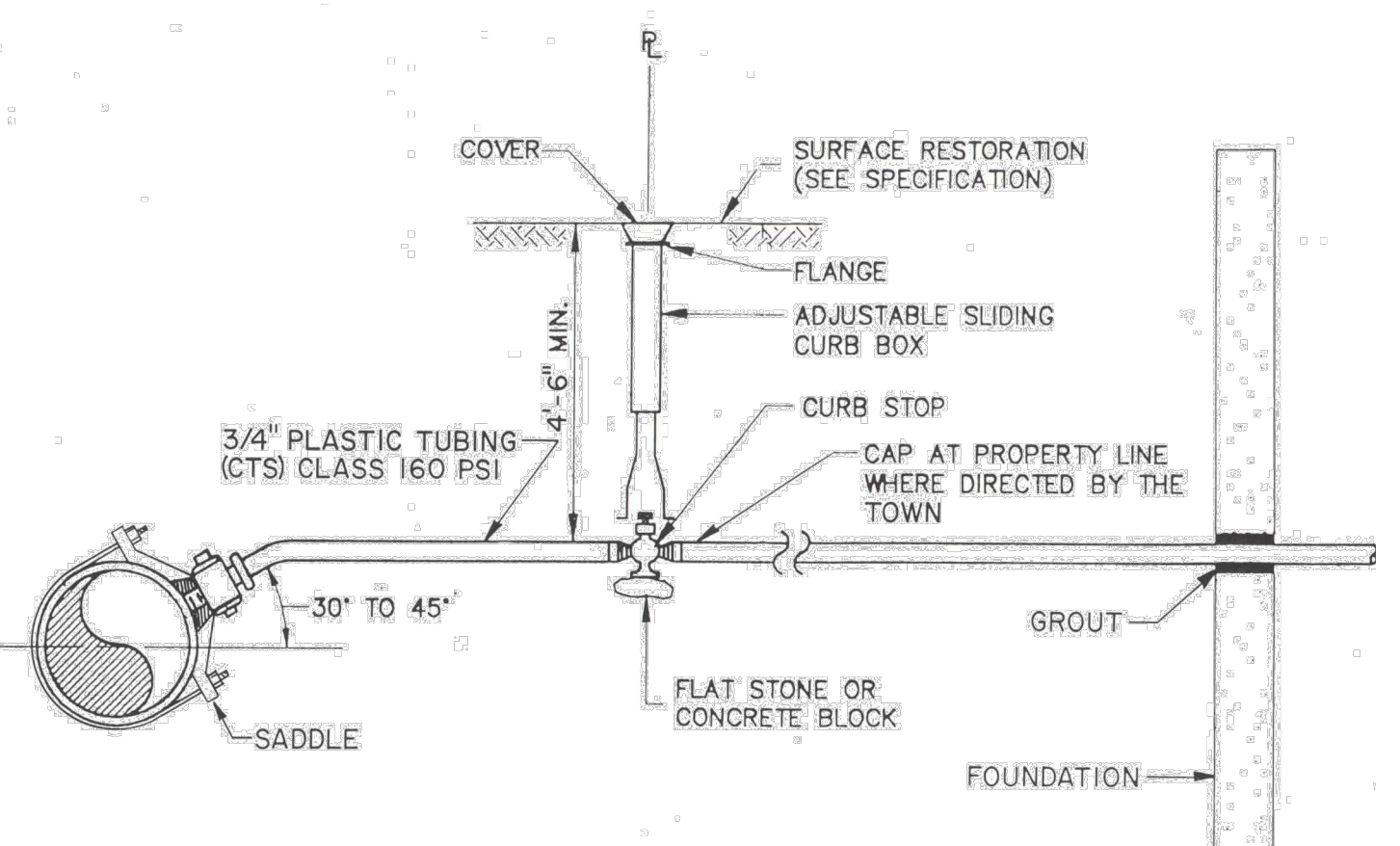
- B. SEWERS CROSSING WATER MAINS**
- SEWERS CROSSING OVER WATER MAINS SHOULD BE AVOIDED, BUT IF CONDITIONS WARRANT THIS SITUATION, THEN ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE. SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE INVERT OF THE WATER MAIN AND THE CROWN OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
- WHERE CONDITIONS PREVENT AN 18" VERTICAL SEPARATION FROM BEING MAINTAINED, THE FOLLOWING METHODS SHALL BE SPECIFIED:
- A. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER MAIN PIPE (CEMENT-LINED DUCTILE IRON PIPE, PVC OR OTHER AWWA APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE) FOR A DISTANCE OF 12' ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS, OR
  - B. EITHER THE WATER MAIN OR THE SEWER MAY BE ENCASED IN CONCRETE (MINIMUM 6" THICKNESS) OR A CARRIER PIPE FOR A DISTANCE OF 12' ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE DESIGNED AND CONSTRUCTED OF MATERIALS WHICH ARE SATISFACTORY TO THE DIVISION, OR
  - C. ANY OTHER METHODS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER, WHICH ENSURE ADEQUATE WATER TIGHTNESS AND ARE SATISFACTORY TO THE DIVISION.

- NOTES:**
1. MANHOLE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM-C478.
  2. INVERT AND TABLE SHALL CONSIST ENTIRELY OF BRICK AND MORTAR. NO SAND FILLER SHALL BE ALLOWED.
  3. MANHOLES SHALL BE VACUUM TESTED PRIOR TO ACCEPTANCE, IN ACCORDANCE WITH THE SEWER AUTHORITY SANITARY RULES AND REGULATIONS. UNDER NO CIRCUMSTANCES WILL EXFILTRATION TESTING BE ACCEPTED.
  4. BOLTED AND GASKETED COVERS SHALL BE USED ON MANHOLES IN OFF-ROAD AREAS.
  5. TAPPING OF MANHOLES MUST BE AUTHORIZED AND INSPECTED BY THE SEWER AUTHORITY. THE ONLY APPROVED METHOD FOR TAPPING MANHOLES SHALL BE BY CORE-DRILLING THE MANHOLE AND INSTALLING A "KOR-N-SEAL" BOOT.
  6. PRECAST CONCRETE GRADE RINGS, HOPE GRADE RINGS, OR OTHER RIM ADJUSTMENT PRODUCTS MAY BE USED IN LIEU OF BRICK AND MORTAR WITH THE PERMISSION OF THE SEWER AUTHORITY.



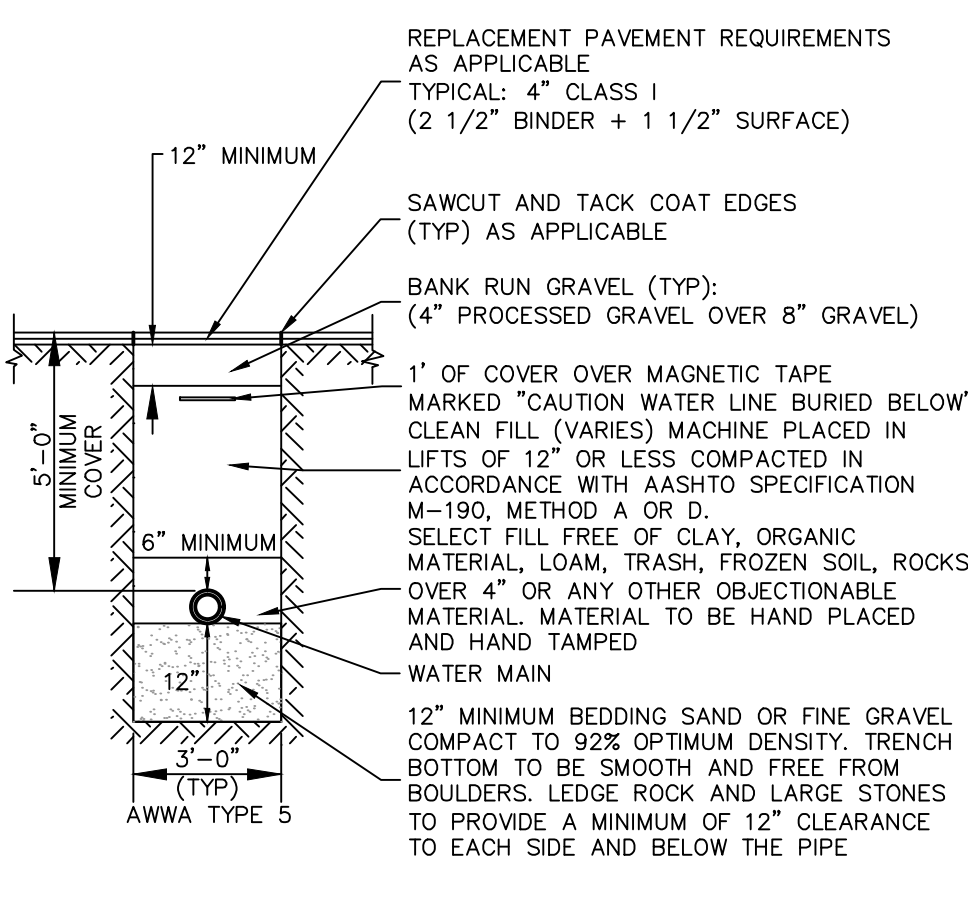
**Sewer Manhole**

NOT TO SCALE



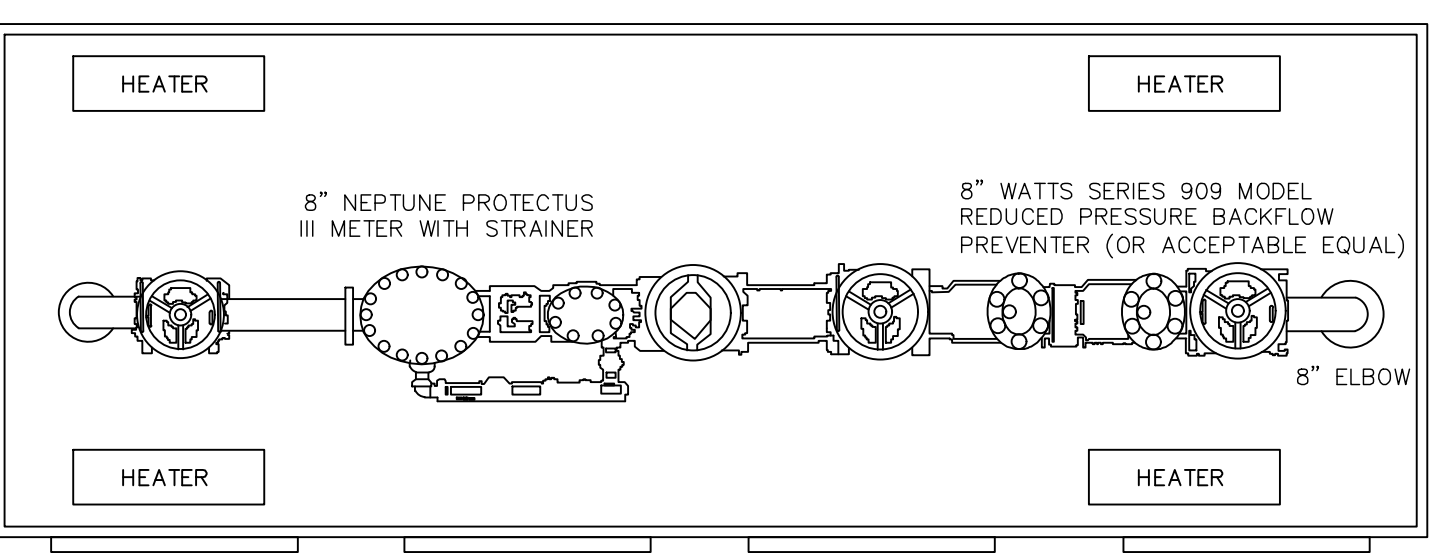
**Water Service Detail**

NOT TO SCALE



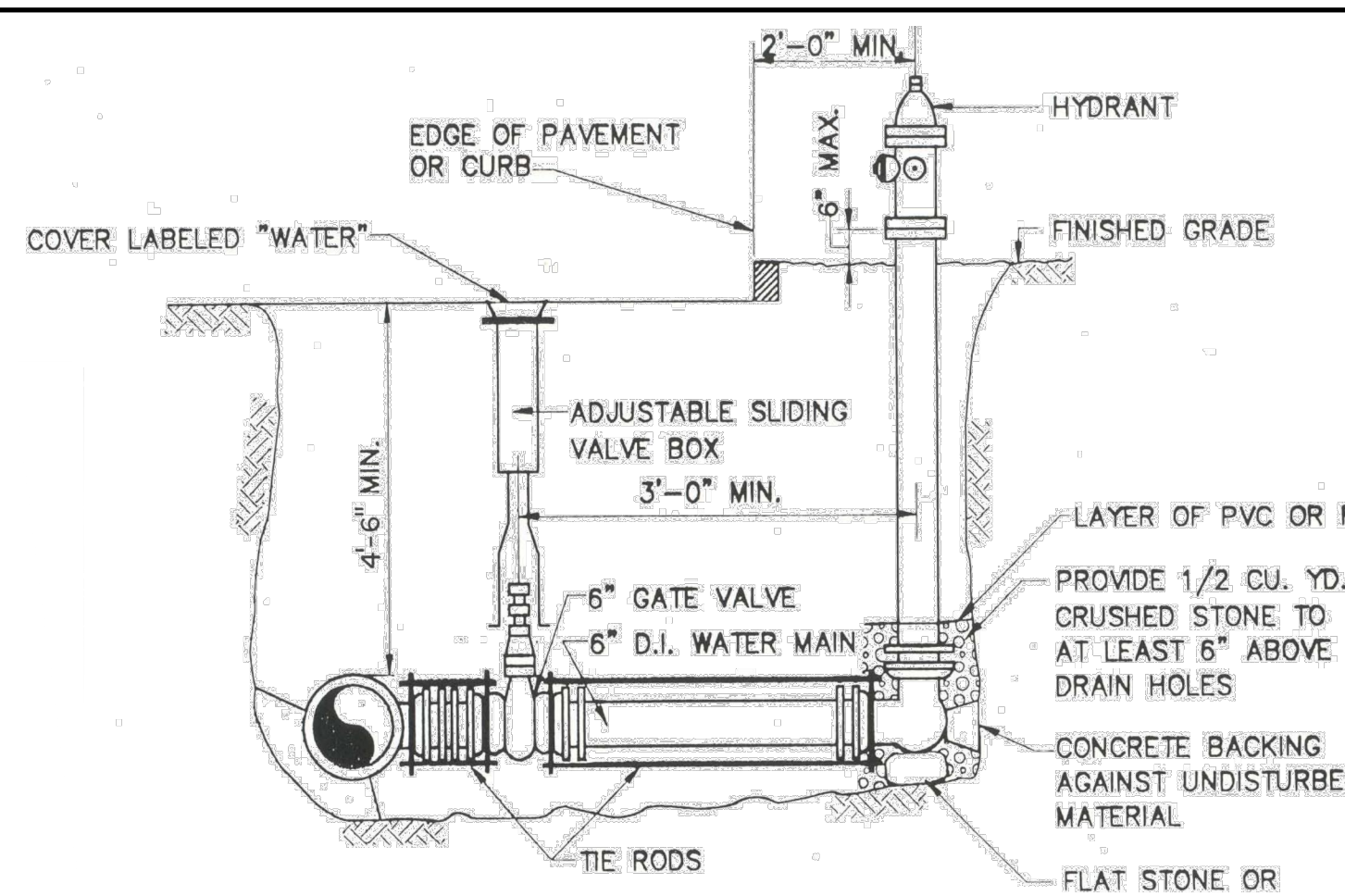
**Water Trench Detail**

NOT TO SCALE



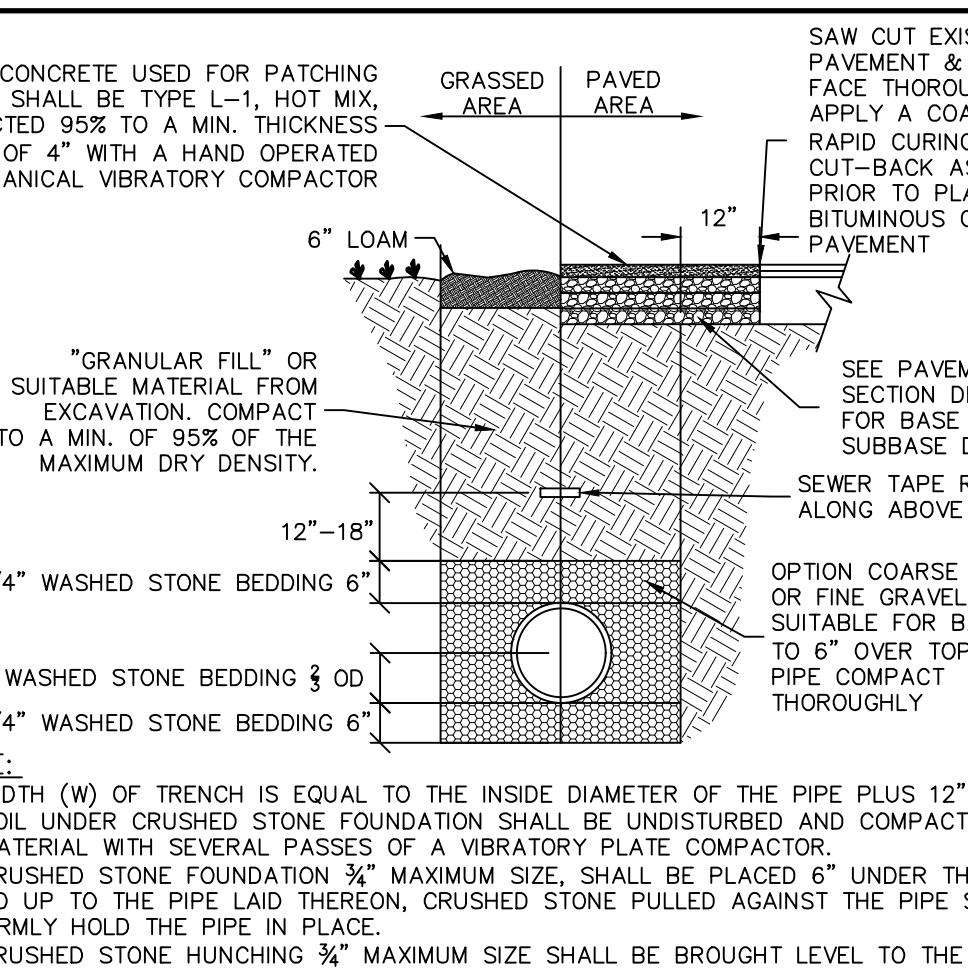
**Heated Water Enclosure Detail**

NOT TO SCALE



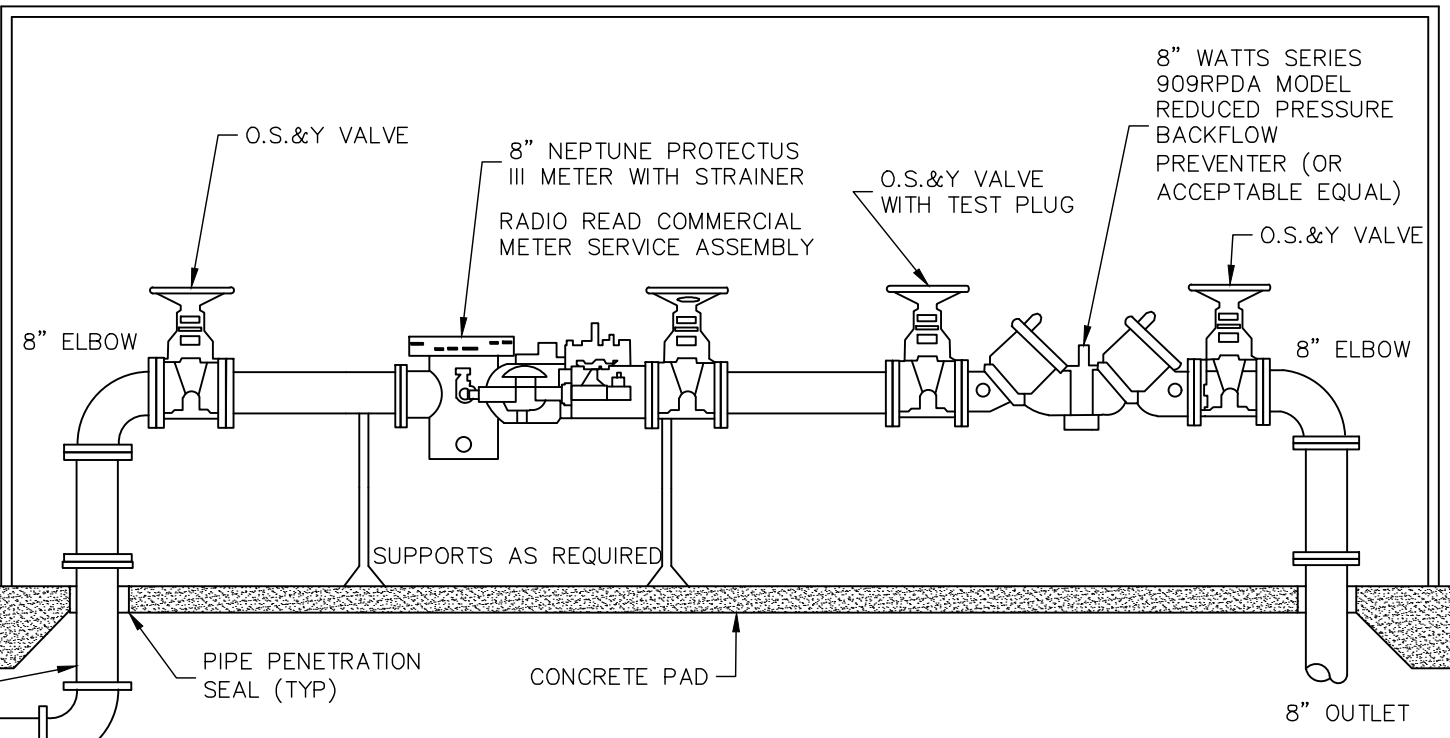
**Hydrant and Valve Detail**

NOT TO SCALE



**Sewer Line Trench Detail**

NOT TO SCALE



**Heated Water Enclosure Detail**

NOT TO SCALE

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**Boston • Providence • Newport**

**BRIAN C. GROUX**  
 REG. NO. 3341  
 REGISTERED PROFESSIONAL ENGINEER CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped, issued for construction and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions in the implementation of and OSHA compliance in the implementation of this plan and design.

0	3-28-2019	Drawn	By: MLD	Design	By: MLD
1		Date			
2		Description			
3		Drawn	By: MLD	Design	By: MLD

**Detail Sheet - 2**

**Hillside Commons**  
 Assessor's Plat 57-3 Lot 59  
 South Kingstown, Rhode Island

**Scot V. Hallberg**  
 57 Edgewood Farm Road  
 Wakefield, RI 02879

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