MAJOR LAND DEVELOPMENT FINAL PLAN APPLICATION

1200 & 1202 HOPE STREET

Assessors Map 103, Parcel 2 & 14

Bristol, Rhode Island

MARCH 6, 2023 REVISED: AUGUST 11, 2023

CIVIL ENGINEER

LAND DEVELOPMENT ENGINEERING & CONSULTING, LLC. 680 AQUIDNECK AVENUE MIDDLETOWN, RI 02842 (401) 354-2050

LAND SURVEYOR

LAND DEVELOPMENT ENGINEERING & CONSULTING, LLC. 680 AQUIDNECK AVENUE MIDDLETOWN, RI 02842 (401) 354-2050

LANDSCAPE ARCHITECT

VERDE DESIGN + HORTICULTURE 6 DEBLOIS STREET NEWPORT, RI 02840 (401) 619-0562

CURRENT OWNER

M1 1200 HOPE ST., LLC

133 TOWERHILL RD. SUITE 1, WAKEFIELD RI 02879
&

1202 HOPE ST. INVESTMENTS, LLC.
P.O. BOX 246, WARREN RI 02885

PERMIT REFERENCES

DOT APPROVAL:

PHYSICAL ALTERATIONS PERMIT APPLICATION# 190510

RIDEM APPROVAS:

WGC 19-100, FWW# 19-0149

UIC# 001920, RIR# 101910

ALL WORK WITHIN THE STATE'S ROW WILL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, Amended August 2013 and STANDARD DETAILS, June 15, 1998, as amended by revision.



LOCUS MAP

<u>PLAN INDEX</u>

<u>TITLE</u>	SHEET NO.
COVER SHEET	1
SITE LAYOUT PLAN	2
GRADING & DRAINAGE PLAN	3
UTILITY PLAN	4
EROSION CONTROL PLAN	5
LANDSCAPING PLAN	6
CONSTRUCTION DETAILS	7

MEMBER DATE

PLANNING BOARD SIGNATURES

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						MER	MER	MER	MER	APPROVED

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							MER	MER	MER	MER	APPROVED
							GENERAL REVISIONS PER TOWN REQUEST	MODIFICATIONS PER PRELIMINARY PLAN APPROVAL	GENERAL REVISIONS PER TOWN COMMENTS	MODIFIED DRIVEWAY LOCATIONS	DESCRIPTION
							8/11/2023	6/2/2023	4/5/2023	3/15/2023	DATE
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EVELOPMENT
PPLICATION
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ODE ISLAND
3, PARCEL 2 & 14

1200 & 1202 HOPE S BRISTOL, RHODE IS ASSESSORS MAP 103, PAF

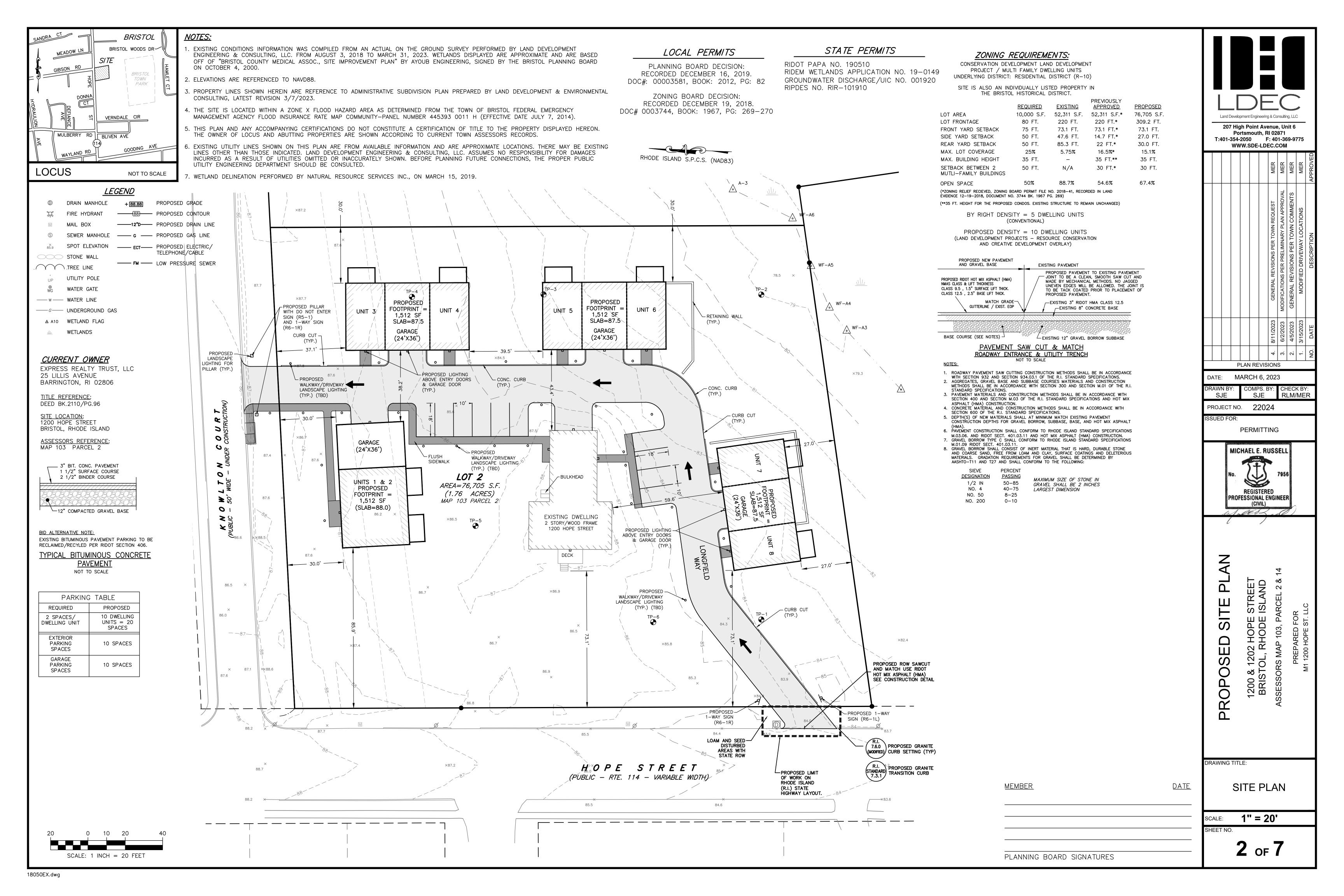
DRAWING TITLE:

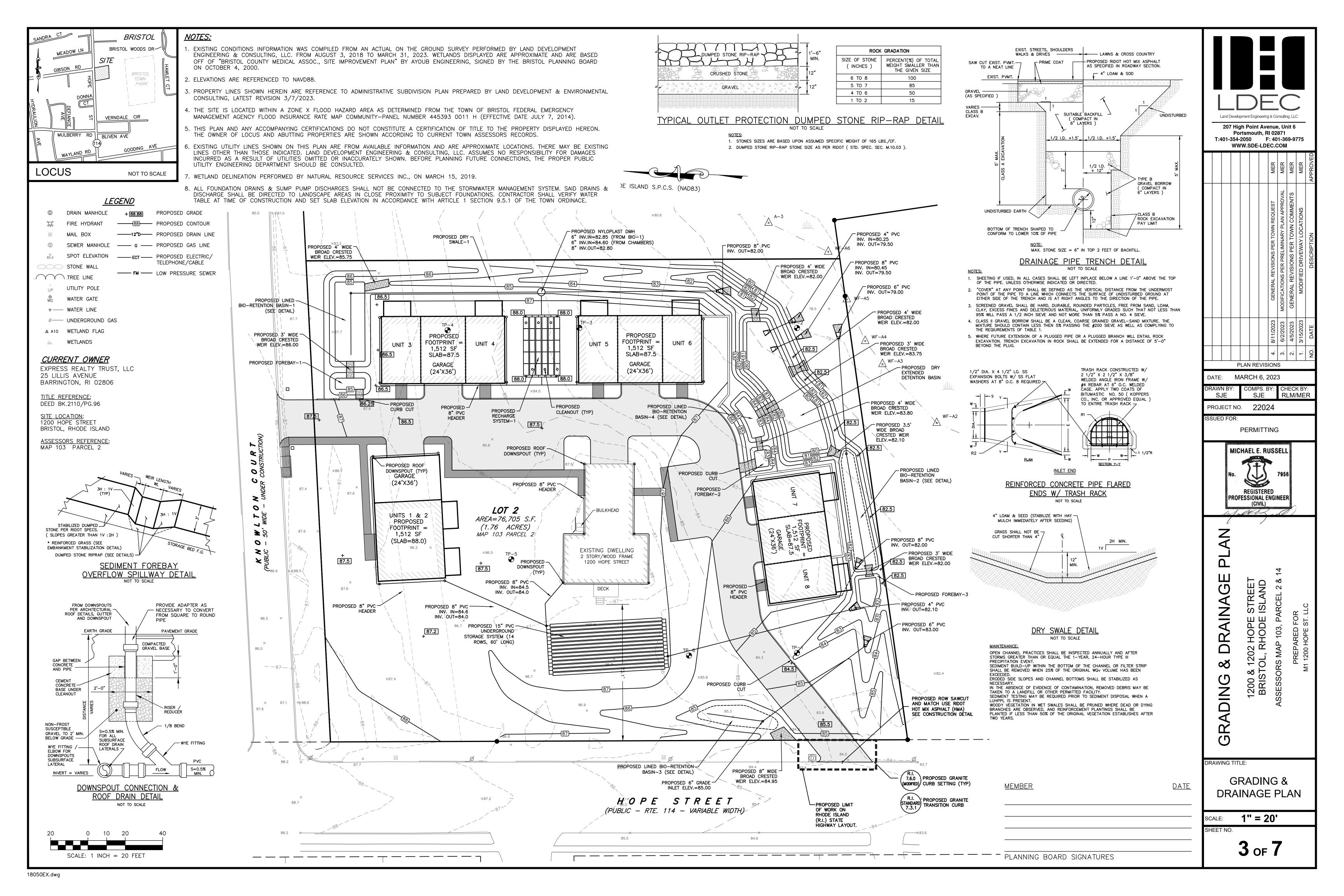
LAND

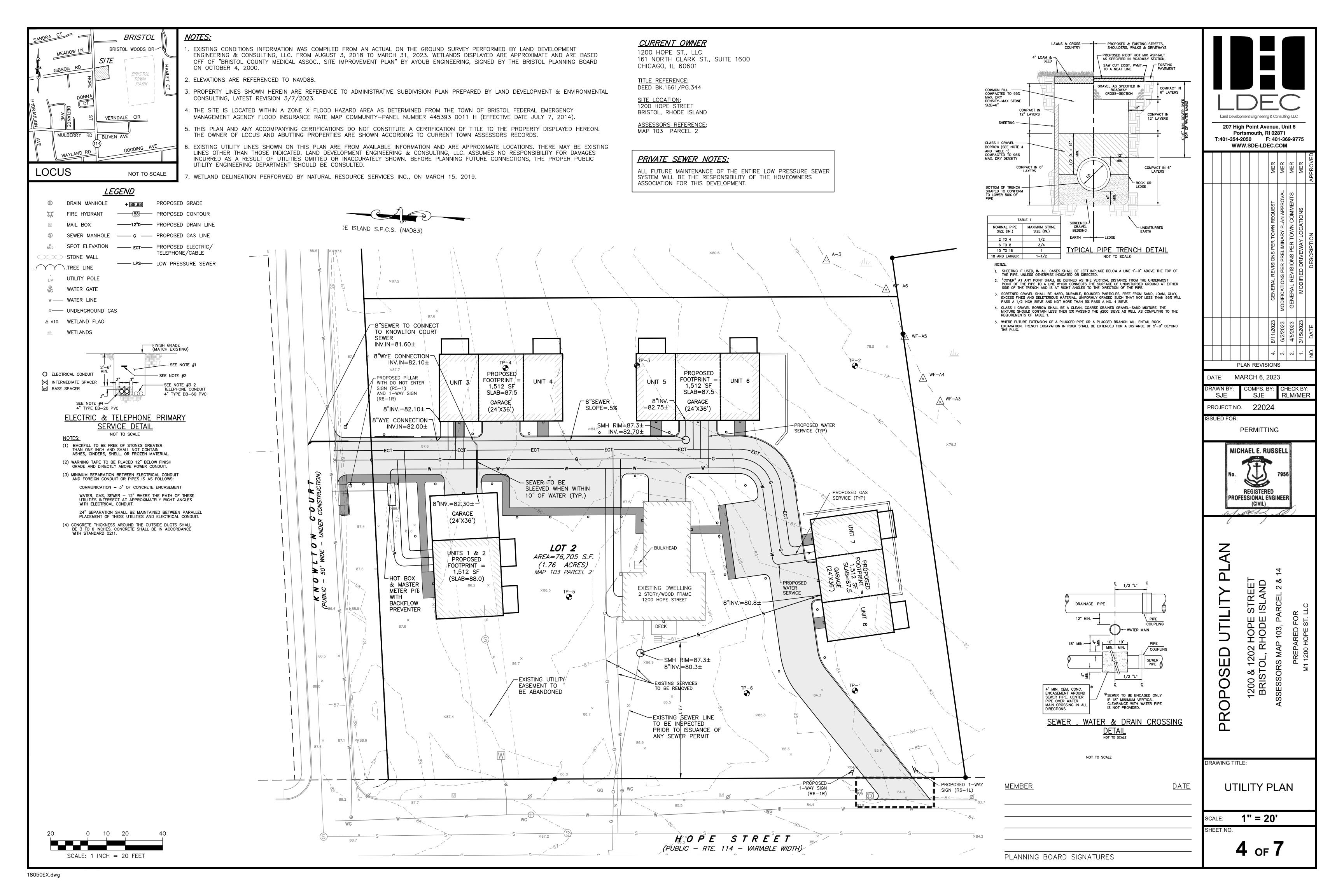
COVER

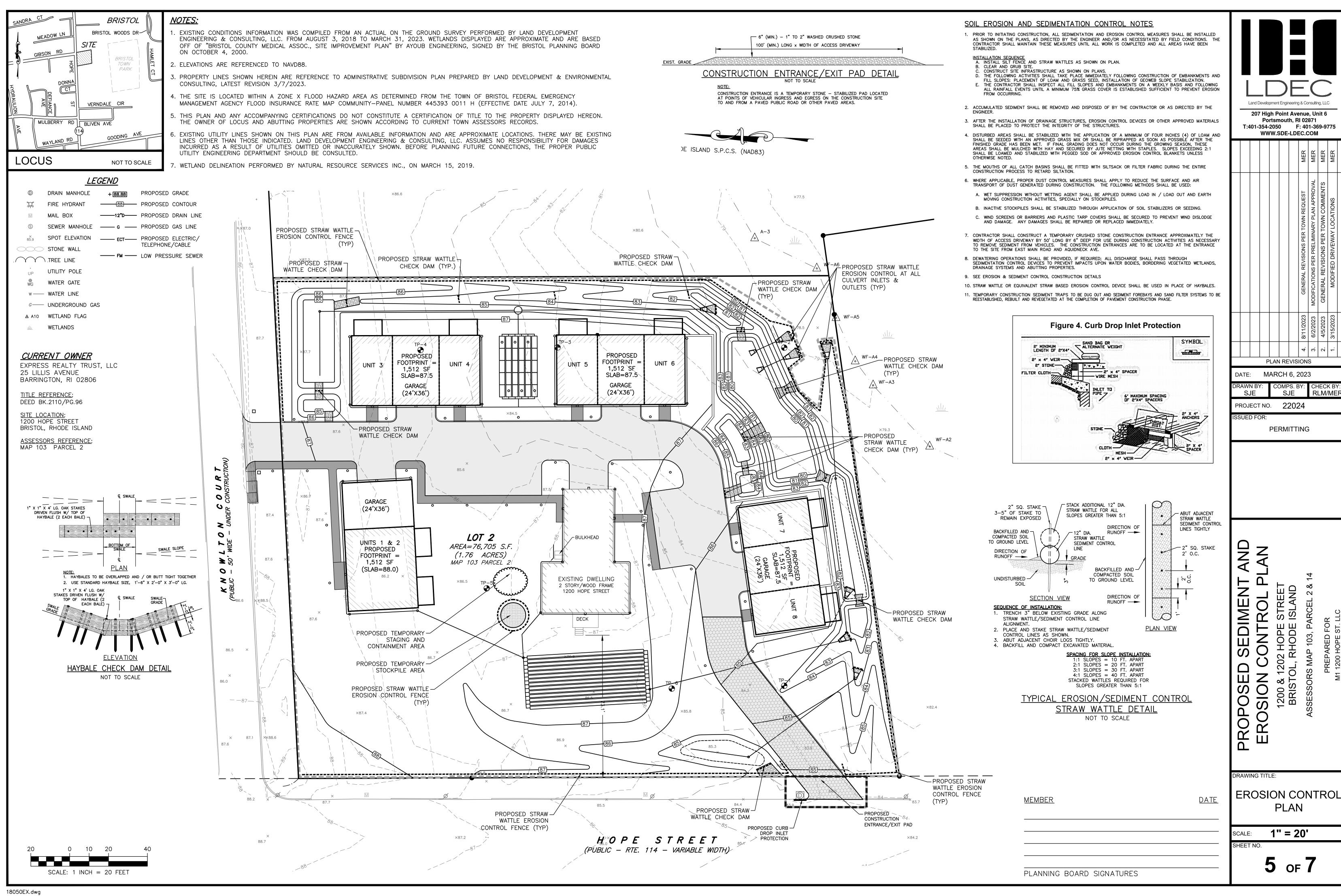
SCALE: NTS

1 of 7

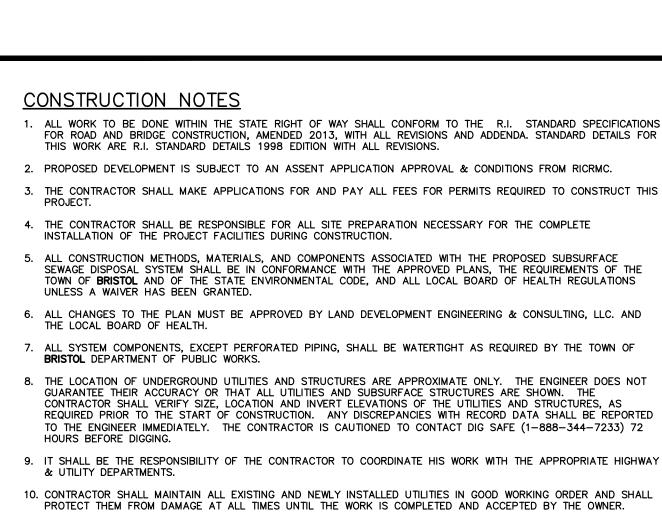












11. ELECTRIC, GAS, TELEPHONE, AND CABLE TELEVISION UTILITY CONNECTIONS AND SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITY.

PERSONS AND PROPERTIES AT THE SITE DURING CONSTRUCTION. ALL EXCAVATIONS SHALL CONFORM TO CURRENT

ENCASED IN CONCRETE FOR A MINIMUM OF TEN (10) FEET FROM THE CROSSING POINT. WHERE SEWER LINES PASS

13. A MINIMUM OF 18" VERTICAL CLEARANCE SHALL BE MAINTAINED WHENEVER SANITARY SEWERS PASS BELOW WATER

. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER FACILITIES UNTIL SUCH TIME AS THE DEVELOPMENT AND ASSOCIATED UTILITIES ARE

2. ALL STORMWATER FACILITIES SHOULD BE INSPECTED AFTER EVERY MAJOR RAINFALL EVENT FOR THE

FIRST 3 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND CONSTRUCTION.

3. THE CONTRACTOR SHALL INSPECT AND CLEAN ALL FACILITIES OF SEDIMENT AND DEBRIS PRIOR TO

4. ACCUMULATED SILT AND SEDIMENT SHOULD BE REMOVED FROM ALL FACILITIES AT LEAST ONCE A

YEAR OR MORE FREQUENTLY IF ACCUMULATED DEPTH OF SEDIMENT EXCEEDS THREE INCHES.

5. THE SIDE SLOPES AND BOTTOMS OF ALL DRAINAGE SWALES SHOULD BE MOWED TO A MINIMUM

SHOULD BE REMOVED FROM ALL DRAINAGE WAYS AND WETLAND BUFFER ZONES.

APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.

HEIGHT OF FOUR INCHES AT LEAST TWICE A YEAR. ALL GRASS CLIPPINGS AND ORGANIC MATTER

6. ALL REMOVED SEDIMENTS ARE TO BE PROPERLY DISPOSED AT A LOCATION TO BE APPROVED BY THE

ANY DEFICIENCIES NOTED DURING MAINTENANCE SHALL BE REPORTED TO THE OWNER AND CORRECTED

BOARD OF HEALTH. TRANSPORTATION AND DISPOSAL OF SEDIMENTS SHALL COMPLY WITH ALL

B. FOLLOW MANDATE PROGRAM AND SCHEDULE FOR EXISTING STORMWATER MANAGEMENT SYSTEM AS

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND

INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION. 2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION

3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN

4. <u>FILTER FABRIC:</u> A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.

. <u>FOUNDATION:</u> 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

BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS

INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II 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.

GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE

AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE

REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE

MINIMUM COVER: MINIMUM COVER OVER ALL RETNETION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS

SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

APPROVED BY THE TOWN OF BRISTOL AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL

MAINS OR DRAIN LINES. OTHERWISE, WATER SERVICE, DRAIN LINES AND SEWER LINES SHALL BE CAREFULLY

ABOVE WATER OR DRAIN LINES, THEY SHALL ALL BÉ ENCASED IN CONCRETE REGARDLESS OF CLEARANCE.

STORMWATER FACILITY OPERATION AND MAINTENANCE

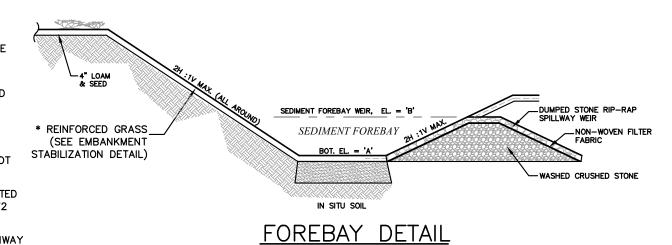
ACCEPTED BY THE OWNER.

THE OWNER'S ACCEPTANCE.

IMMEDIATELY.

MANAGEMENT.

12. THE CONTRACTOR SHALL UTILIZE ALL MEASURES AND MATERIALS NECESSARY TO ENSURE THE SAFETY OF ALL



NOT TO SCALE

87.5

82.0

TH-1 82.3 80.3

8" PVC OUTLET EL. T =80.45 (VOL.=699 CF , AREA=1,640 SF)

30T. EL. = 80.00 (AREA=1,465 SF)

TH-2

ELEVATION TABLE

TH-# | EXISTING | SHGW | BOTTOM OF OUTLET WEIR

OUTLET WEIR / SPILLWAY EL. T =82.00 (VOL.=3,721 CF , AREA=2,270 SF) —

85.5

81.0

| ELEV. | BASIN 'A' | ELEV. 'B'

83.8

82.0

& SEED

85.0

83.0

80.5

ALL WORK WITHIN THE STATE'S RIGHT-OF-WAY (ROW) SHALL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED AUGUST 2013 AND STANDARD DETAILS, JUNE 15, 1988, AS 2. UTILITY WORK SHOWN IS FOR REFERENCE. THIS WORK NEEDS TO BE PERMITTED THROUGH A UTILITY PHYSICAL UTILITY PERMIT (PUP) WITH RIDOT'S DIVISION OF MAINTENANCE. 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 4. CONTRACTOR TO PROVIDE TEMPORARY EROSION CONTROLS TO PROTECT THE STATE ROW DURING THE DEMOLITION OF EXISTING DRIVEWAY AND CONSTRUCTION OF NEW DRIVEWAY. FULL-DEPTH SAWCUT =3" CLASS 9.5 HMA SURFACE COURSE TO MATC TACK COAT VERT. FACE OF EXISTING (PLACED IN TWO 1.5" LIFTS) SAWCUT PRIOR TO PAVEMENT 3" BITUMINOUS CONCRETE S = 2% TYP. DRIVEWAY ∠1.5" CLASS 9.5 HMA SURFACE COURSE, TYPE 1-EXISTING SLOPE EXISTING/ AND THE PROPERTY OF THE PARTY O 8" CONCRETE BASE EXISTING ROADWAY. -2.25" CLASS 12.5 HM 12" GRAVEL BORROW 8" GRAVEL BORROW 8" REINFORCED CONCRETE BASE TO MATCH EXISTING COMPACTED 12" GRAVEL BORROW SUBBASE TO SAWCUT LINE 2'-0" 5'-0" UNDISTURBED SUBGRADE COMPACTED OR . 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.

ROW SAWCUT AND MATCH DETAIL

- MATCH EXISTING GRADE

BOTTOM OF

BASIN

NOT TO SCALE

DUMPED STONE RIP-RAP

ELEV.

80.0

CHECKDAM SEE DETAIL

GROUND WATER ELEVATION

ELEV.

81.0

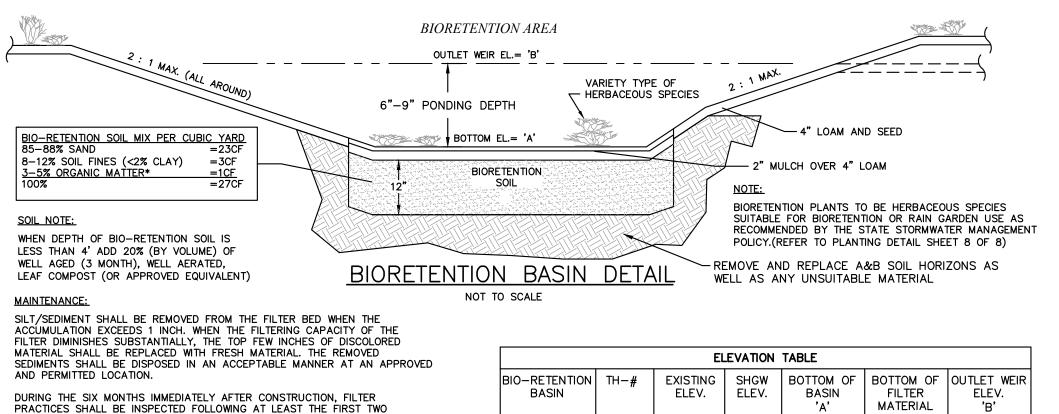
- OUTLET WEIR/SPILLWAY

- 30MIL IMPERVIOUS BARRIER/LINER

(TO CONFORM TO RISDISM

APPENDIX F TABLE F-16)

WEIR LENGTH WL = 2-FT.

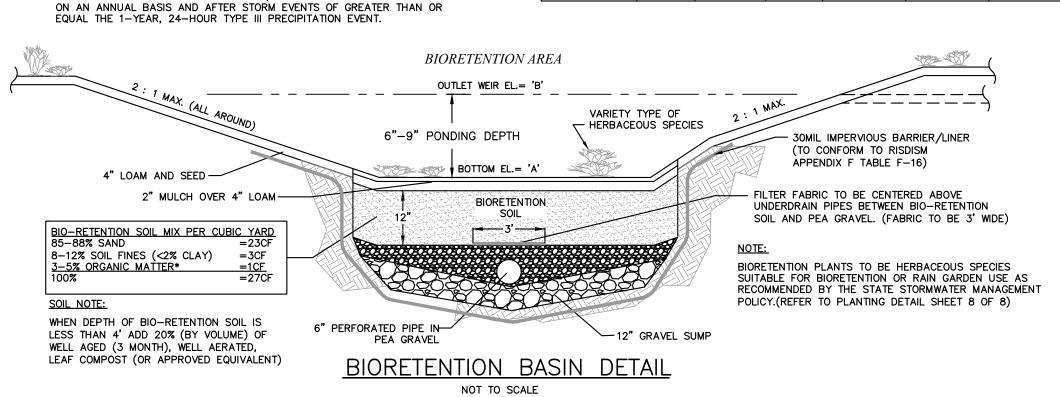


TH-2

82.0

81.0

83.0



MAINTENANCE:	
SILT/SEDIMENT SHALL BE REMOVED FROM THE FILTER BED WHEN THE	
ACCÚMULATION EXCEEDS 1 INCH. WHEN THE FILTERING CAPACITY OF THE FILTER DIMINISHES SUBSTANTIALLY, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. THE REMOVED SEDIMENTS SHALL BE DISPOSED IN AN ACCEPTABLE MANNER AT AN APPROVED	BIO-RE
AND PERMITTED LOCATION.	
DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION. FILTER	

BIO-RETENTION FILTER BED SIZING CALCULATIONS: (SECTION 8.23.D.6 OF RISDISM)

Af = MIN SURFACE AREA OF FILTER BED (SF) df = FILTER BED DEPTH

k = COEFFICIENT OF PERMEABILITY (1.0 FOR BIO-RETENTION)

tf = DESIGN FILTER BED DRAIN TIME (2-DAYS MAX)

f = AVERAGE HEIGHT OF WATER ABOVE SURFACE OF PRACTICE

Af = (WQv)(df) / [(k)(hf+df)(tf)]

Af = (WQv)(1) / [(1)(hf+1)(2)]

PRACTICES SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO

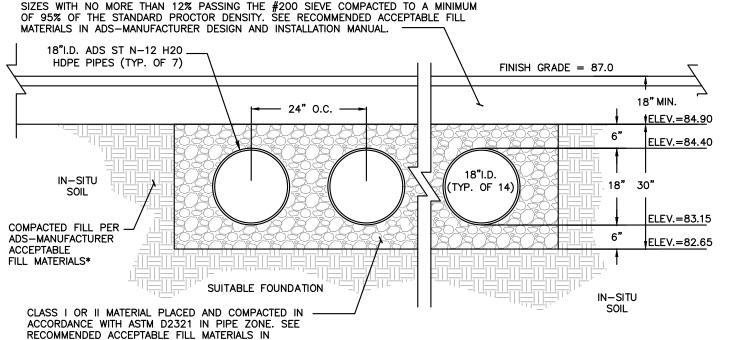
PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM

IS FUNCTIONING PROPERLY. THEREAFTER, INSPECTIONS SHALL BE CONDUCTED

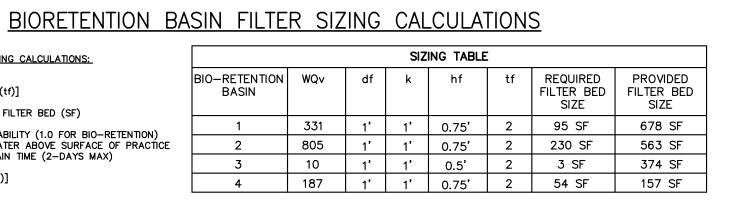
			ELE'	VATION TABLE			
RETENTION BASIN	TH-#	EXISTING ELEV.	SHGW ELEV.	BOTTOM OF BASIN 'A'	BOTTOM OF FILTER MATERIAL	OUTLET WEIR ELEV. 'B'	UNDERDRAIN PIPE ELEV.
1	TH-4	87.5	85.5	85.0	83.0	85.75	83.75
2	TH-2	82.0	81.0	81.35	80.35	82.10	80.60
3	TH-6	85.3	82.7	84.4	83.4	84.90	83.65

MATERIAL WITH CLEAN FILL DRY EXTENDED DETENTION BASIN TH-2 NOT TO SCALE 1. REFER TO PROJECT DRAINAGE REPORT HYDROCAD® CALCULATIONS FOR ADDITIONAL INFORMATION. WELL GRADED GRANULAR BACKFILL WHICH CONTAIN AN EVEN DISTRIBUTION OF PARTICLE SIZES WITH NO MORE THAN 12% PASSING THE #200 SIEVE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR DENSITY. SEE RECOMMENDED ACCEPTABLE FILL MATERIALS IN ADS-MANUFACTURER DESIGN AND INSTALLATION MANUAL. 18"I.D. ADS ST N-12 H20 ____ HDPE PIPES (TYP. OF 7) FINISH GRADE = 87.0 **▼ELEV.=84.9**0 6" ELEV.=84.40 IN-SITU 18" 30" SOIL

REMOVE AND REPLACE EXISTING UNSUITABLE



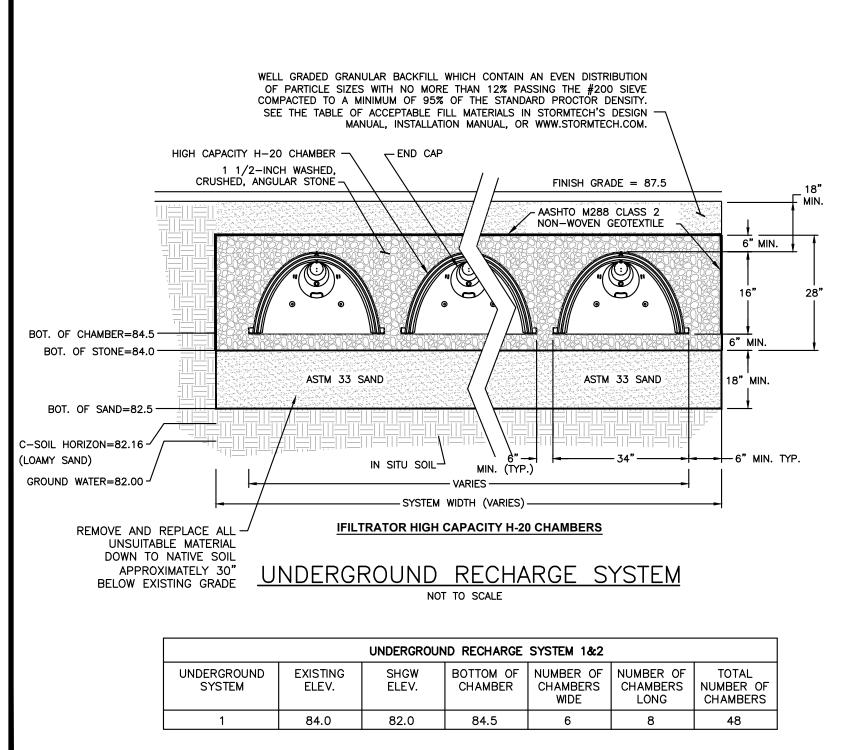
PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, INSPECTIONS SHALL BE CONDUCTED ON AN ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT.

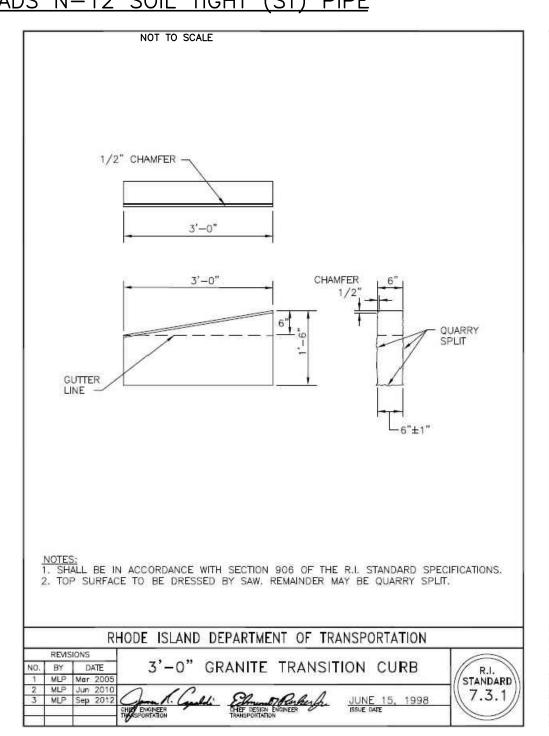


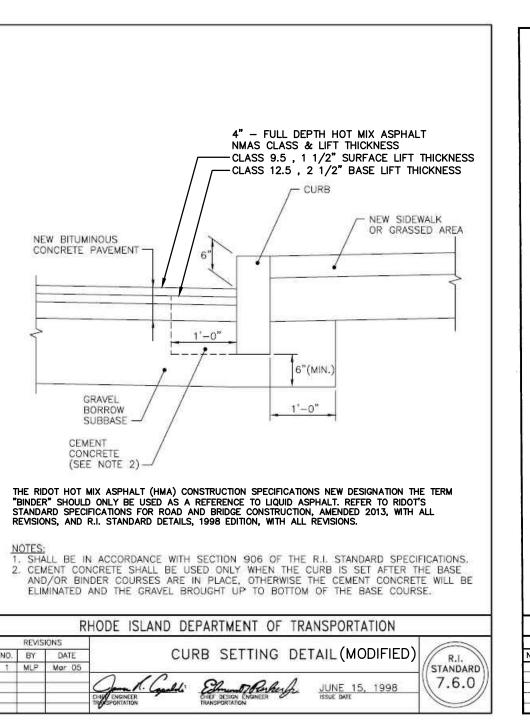
PLASTIC UNDERGROUND STORAGE SYSTEM ADS N-12 SOIL TIGHT (ST) PIPE

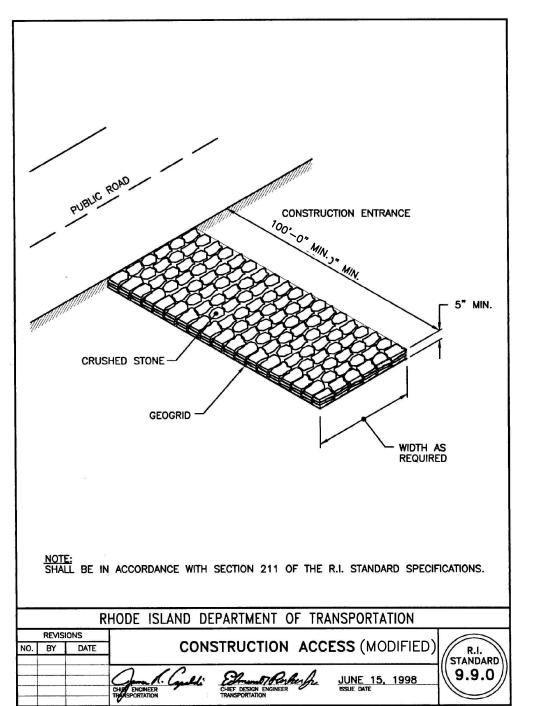
SECTION A-A

ADS-MANUFACTURER DESIGN AND INSTALLATION MANUAL.









DRAW		
	MEMBER DATE	
SCALE		
SHEET		

PLANNING BOARD SIGNATURES

Land Development Engineering & Consulting, LLC 207 High Point Avenue, Unit 6 Portsmouth, RI 02871

T:401-354-2050 F: 401-369-9775

GENERAL REVISIONS PER TOWN REQUEST MODIFICATIONS PER PRELIMINARY PLAN APPROVAL GENERAL REVISIONS PER TOWN COMMENTS MODIFIED DRIVEWAY LOCATIONS MER
ENERAL REVISIONS PER TOWN REQUEST CATIONS PER PRELIMINARY PLAN APPROVAL ERAL REVISIONS PER TOWN COMMENTS MODIFIED DRIVEWAY LOCATIONS
MODIFI
8/11/2023 6/2/2023 4/5/2023 3/15/2023
4 8 2 -
PLAN REVISIONS
DATE: MARCH 6, 2023

83.75

82.0

PERMITTING MICHAEL E. RUSSELL REGISTERED ROFESSIONAL ENGINEER (CIVIL)

RAWN BY: 📕 COMPS. BY: 🖟 CHECK BY: SJE

PROJECT NO. 22024

SSUED FOR:

RLM/MER

1.0882 LOPMEN

0 E

DE

LAND

REET-AND 20, S

WING TITLE: CONSTRUCTION **DETAILS**

1" = 20'

OF