

LOCAL UPGRADE APPROVALS & VARIANCE REQUESTS
 IN ACCORDANCE WITH MA 310 15.00 (TITLE 5) AND LOCAL BOURNE BOARD OF HEALTH REGULATIONS, THE FOLLOWING VARIANCES ARE REQUESTED:

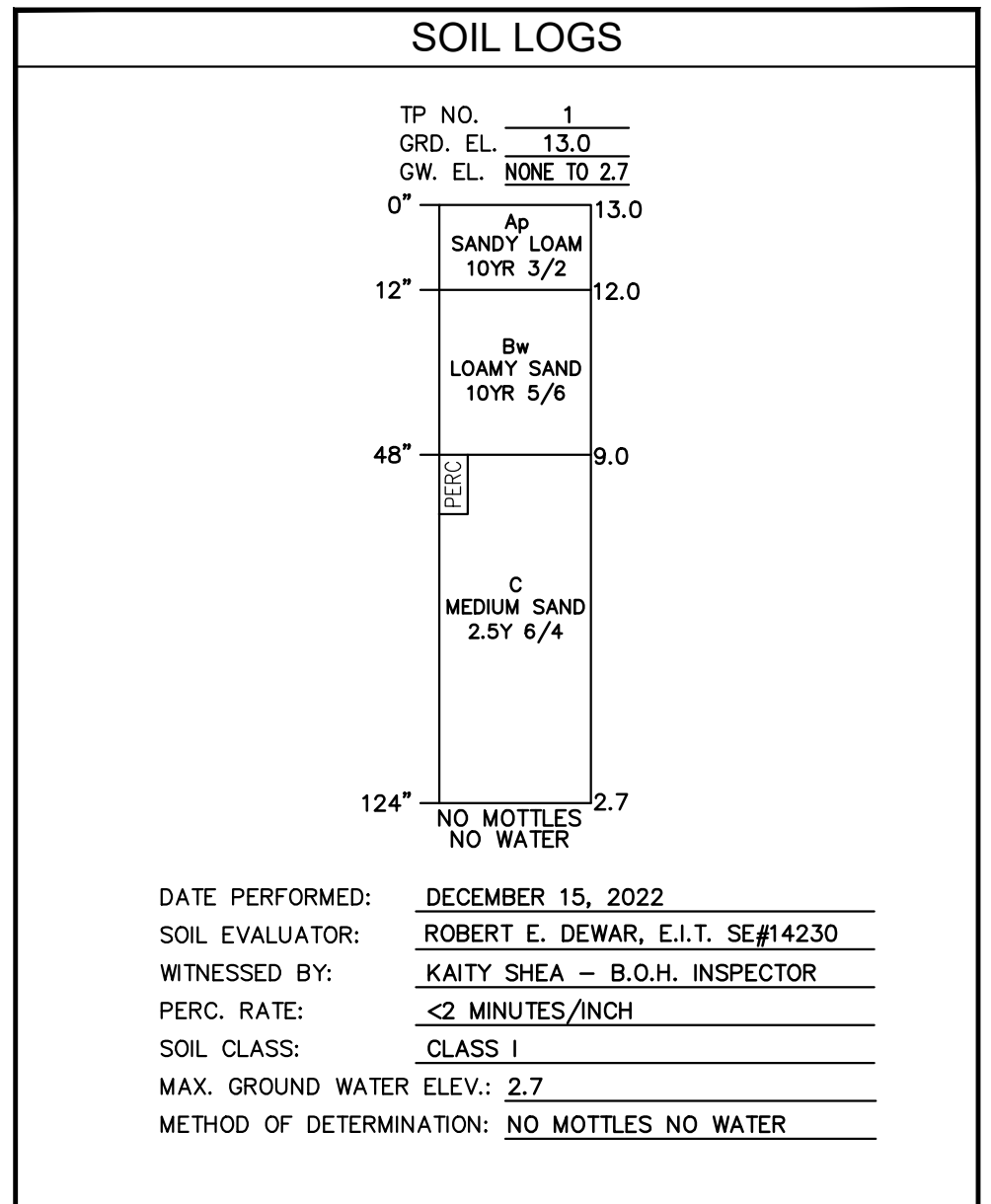
- A 76"± VARIANCE IS REQUESTED FROM THE BOURNE BOARD OF HEALTH REGULATIONS FOR A 74"± SETBACK FROM A PROPOSED SOIL ABSORPTION SYSTEM TO THE TOP OF A COASTAL BANK.
- 15.405(1)(c) - A 5"± DIVERGENCE FROM FULL COMPLIANCE IS REQUESTED FOR A 5"± SETBACK FROM A PROPERTY LINE (PEQUOT AVENUE) TO A SOIL ABSORPTION SYSTEM.
- 15.405(1)(a) - A 2"± DIVERGENCE FROM FULL COMPLIANCE IS REQUESTED FOR A 8"± SETBACK FROM A PROPERTY LINE (#425 CIRCUIT AVENUE) TO A SOIL ABSORPTION SYSTEM.
- 15.405(1)(a) - A 2"± DIVERGENCE FROM FULL COMPLIANCE IS REQUESTED FOR A 8"± SETBACK FROM A PROPERTY LINE (#425 CIRCUIT AVENUE) TO SEPTIC TANK.
- 15.405(1)(b) - A 3"± DIVERGENCE FROM FULL COMPLIANCE IS REQUESTED FOR A 7"± SETBACK FROM A FOUNDATION WALL (#435 CIRCUIT AVENUE) TO A SOIL ABSORPTION SYSTEM.

ZONING REQUIREMENTS

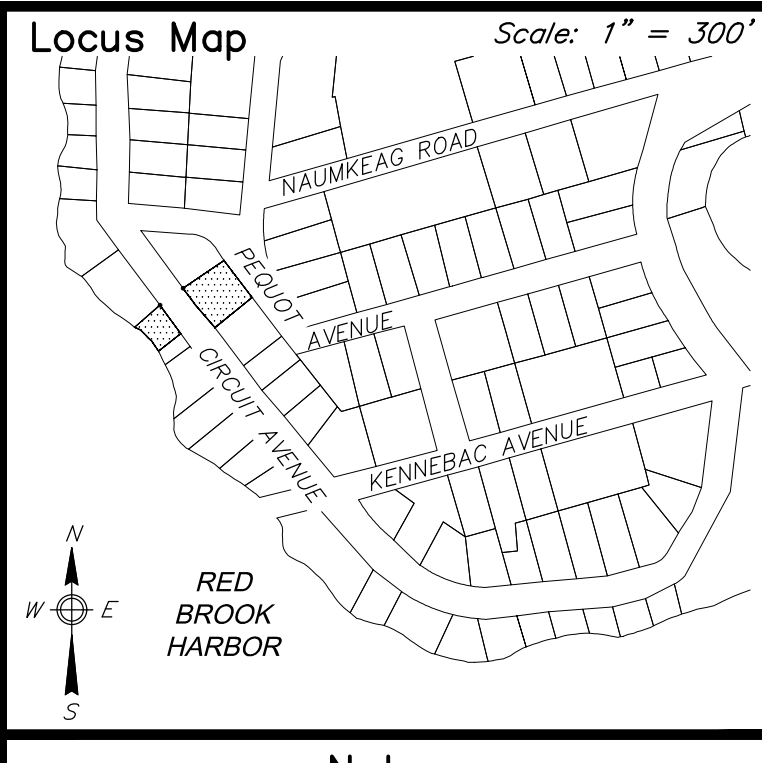
ZONE: R-40
 PRE-EXISTING NON-CONFORMING
 SEE TABLE 2456 FOR NON-CONFORMING LOTS IN BOURNE ZONING BY LAWS.

ZONE: R-40	REQUIRED	EXISTING	PROPOSED
LOT AREA:	40,000 s.f.	9,372± s.f. (a)	9,372± s.f. (a)
FRONTAGE:	125'	SEE PLAN	SEE PLAN
FRONT YARD:	20'	SEE PLAN	SEE PLAN
SIDE YARD:	12'	1.7'± (96%)	13.0'±
REAR YARD:	12'	SEE PLAN	SEE PLAN
LOT COVERAGE:	25%	20.4% (2,343 s.f.)	22.9% (2,656 s.f.)
GROSS FLOOR AREA:	23%	30.2% (2,858 s.f.)	30.1% (2,828 s.f.)
BUILDING HEIGHT:	29' (b)	25.8'±	<34'±

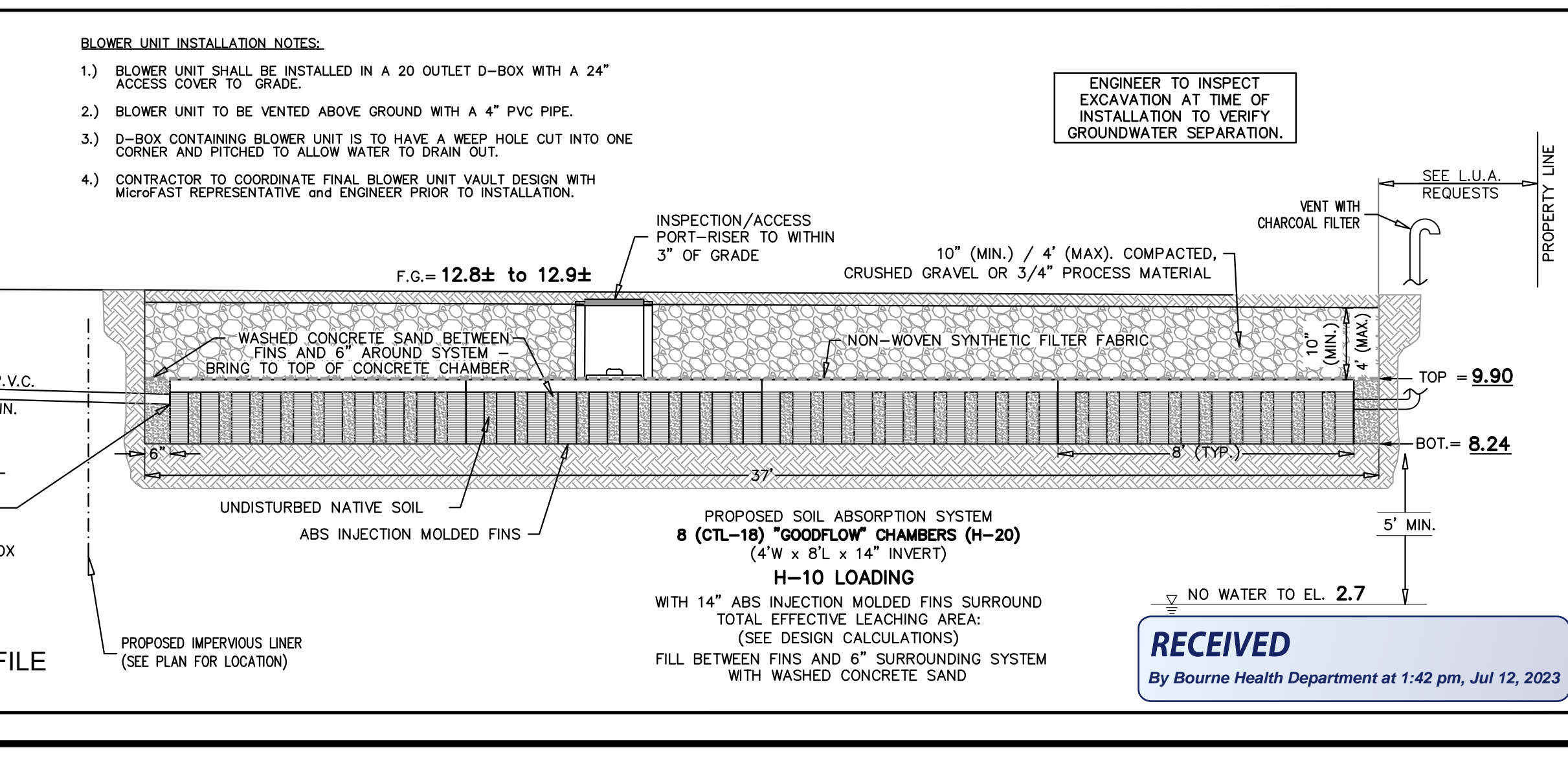
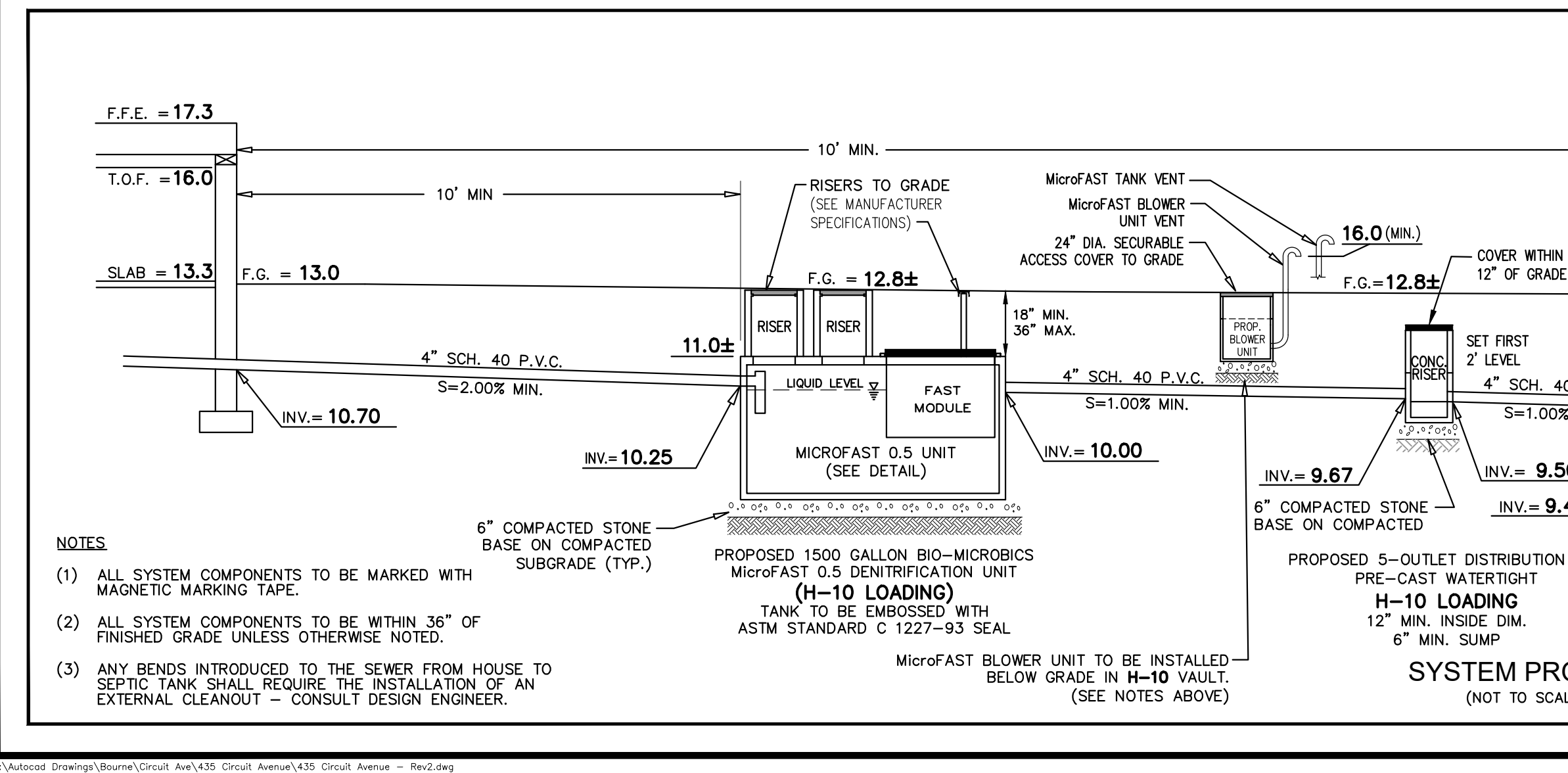
Notes:
 (a) LOT AREA INCLUDES PARCELS 168 & 168.1
 (b) INCREASE ALLOWABLE HEIGHT BY 5' FOR ROOF ELEMENTS HAVING A SLOPE OF 4" OR MORE PER FOOT (SEE SECTION 2500 FOOTNOTE (c))



EXCAVATION NOTE
 THIS SYSTEM REQUIRES THE EXCAVATION OF ALL UNSUITABLE SOIL WITHIN 5' OF THE SOIL ABSORPTION SYSTEM. SOIL SHALL BE EXCAVATED TO THE EXISTING C MEDIUM SAND LAYER, APPROXIMATELY 48" ENGINEER TO CONFIRM SOIL DEPTH PRIOR TO INSTALLATION. THE EXCAVATION SHALL BE INSPECTED BY THE DESIGN ENGINEER PRIOR TO BACKFILLING. SOIL IS TO BE REPLACED WITH SAND CONFORMING TO 310 CMR SECTION 15.255. CONSTRUCTION IN FILL. CONTRACTOR IS RESPONSIBLE TO PROVIDE ENGINEER WITH SAND SAMPLE FOR SIEVE ANALYSIS.



- Notes**
- BENCHMARK: ELEVATION = 12.09 (NAVD88) CONCRETE BOUND
 - ALL CONSTRUCTION METHODS AND MATERIALS TO CONFORM TO TITLE 5 AND THE TOWN OF BOURNE BOARD OF HEALTH REGULATIONS.
 - ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
 - NO FIELD MODIFICATION TO THE SYSTEM SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER AND BOARD OF HEALTH.
 - ALL JOINTS AND COVERS TO BE WATERTIGHT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES.
 - A CERTIFICATE OF COMPLIANCE MUST BE OBTAINED PRIOR TO BACKFILLING SYSTEM.
 - OWNER: PAUL H. STENBERG, Jr. Trustee
 MADALINE K. STENBERG, Trustee
 THE SEVEN STENS TRUST
 435 CIRCUIT AVENUE
 BOURNE, MA 02559
 - DEED REFERENCE: Deed Bk: 35689 Pg: 73
 - PLAN REFERENCE: Plan Bk: 28 Pg: 1
 Plan Bk: 40 Pg: 113
 L.C. Plan #42838-A
 - THE DESIGN IS INTENDED TO MEET TITLE 5 AND OTHER APPLICABLE REQUIREMENTS. THIS PLAN DOES NOT GUARANTEE THAT THE SYSTEM WILL BE INSTALLED AS DESIGNED, NOR DOES THIS PLAN GUARANTEE THE OPERATION OF THE SYSTEM.
 - THIS SYSTEM IS NOT DESIGNED NOR INTENDED FOR USE WITH A GARBAGE BIN.
 - THE SYSTEM OWNER SHALL BE RESPONSIBLE TO PUMP THE SEPTIC TANK AT LEAST ONCE EVERY THREE YEARS.
 - LOCUS DOES NOT FALL WITHIN A ZONE II WELHEAD PROTECTION AREA OR BOURNE WATER RESOURCE DISTRICT.
 - LOCUS DOES NOT FALL WITHIN AN NHESP ESTIMATED HABITAT OF RARE WILDLIFE AND PRIORITY HABITAT OF RARE SPECIES.
 - LOCUS DOES FALL WITHIN A SPECIAL FLOOD HAZARD ZONE "AE" (EL. 15) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25001C-0492-J, dated 7/16/2014.
 - CONTRACTOR TO REFER TO ALL MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS FOR INSTALLATION OF THE MICROFAST UNIT AND GOOD-FLOW SOIL ABSORPTION SYSTEM.
 - RECORD PROPERTY OWNER IS TO FILE A NOTICE OF DEED RESTRICTION AT THE BARNSTABLE COUNTY REGISTRY OF DEEDS PRIOR TO THE INSTALLATION OF THE SYSTEM, INDICATING THE USE OF AN INNOVATIVE/ALTERNATIVE SEPTIC SYSTEM ON THE PROPERTY.
 - HOMEOWNER IS TO ESTABLISH AN OPERATION & MAINTENANCE PLAN WITH A COMPANY CERTIFIED SYSTEM OPERATOR FOR THE MICROFAST UNIT. ALL SYSTEM TESTING, MONITORING & REPORTING IS TO BE CONDUCTED IN ACCORDANCE TO THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) REMEDIAL USE PERMITS.
 - CONTRACTOR TO COORDINATE PLACEMENT OF ALL ALARM/CONTROL PANELS WITH THE HOMEOWNER & SYSTEM MANUFACTURERS PRIOR TO INSTALLATION.
 - CONTRACTOR TO COORDINATE FINAL LOCATION OF MicroFAST BLOWER UNIT AND VENT WITH OWNER. VENTS SHALL BE ELEVATED ABOVE DESIGN FLOOD ELEVATION.
 - SOIL CONDITIONS ENCOUNTERED DURING THE INSTALLATION OF THE PROPOSED SEPTIC SYSTEM MAY VARY FROM PREVIOUSLY OBSERVED CONDITIONS AT TEST PIT LOCATION. DESIGN ENGINEER SHALL BE CONTACTED IF DISCREPANCIES ARE FOUND.



DESIGN CALCULATIONS

SOIL TEXTURAL CLASS: CLASS I
 PERC. RATE: <2 MINUTES/INCH
 NO. OF BEDROOMS: 4
 DESIGN FLOW REQUIRED: 440 GPD
 SEPTIC TANK REQUIRED: 1500 GALLONS
 SEPTIC TANK PROVIDED: 1500 GALLON

LEACHING SYSTEM:
 USE GOODFLOW CTL-18 CHAMBERS *GENERAL USE APPROVAL
 (8) CTL-18 CONCRETE LEACHING CHAMBERS IN A (13.67') WIDE x (34') LONG BED

EFFECTIVE LEACHING: (BASED ON GENERAL USE APPROVAL)
 (8 UNITS)(8 L.F./UNIT) = 64 L.F.

(10.57 S.F./L.F.)(64 L.F.) = 676 S.F. EFFECTIVE LEACHING RATE = 0.74 GPD/SF
 FLOW PROVIDED: 500 GPD > 440 GPD REQUIRED

Prepared By:

BRACKEN ENGINEERING, INC.

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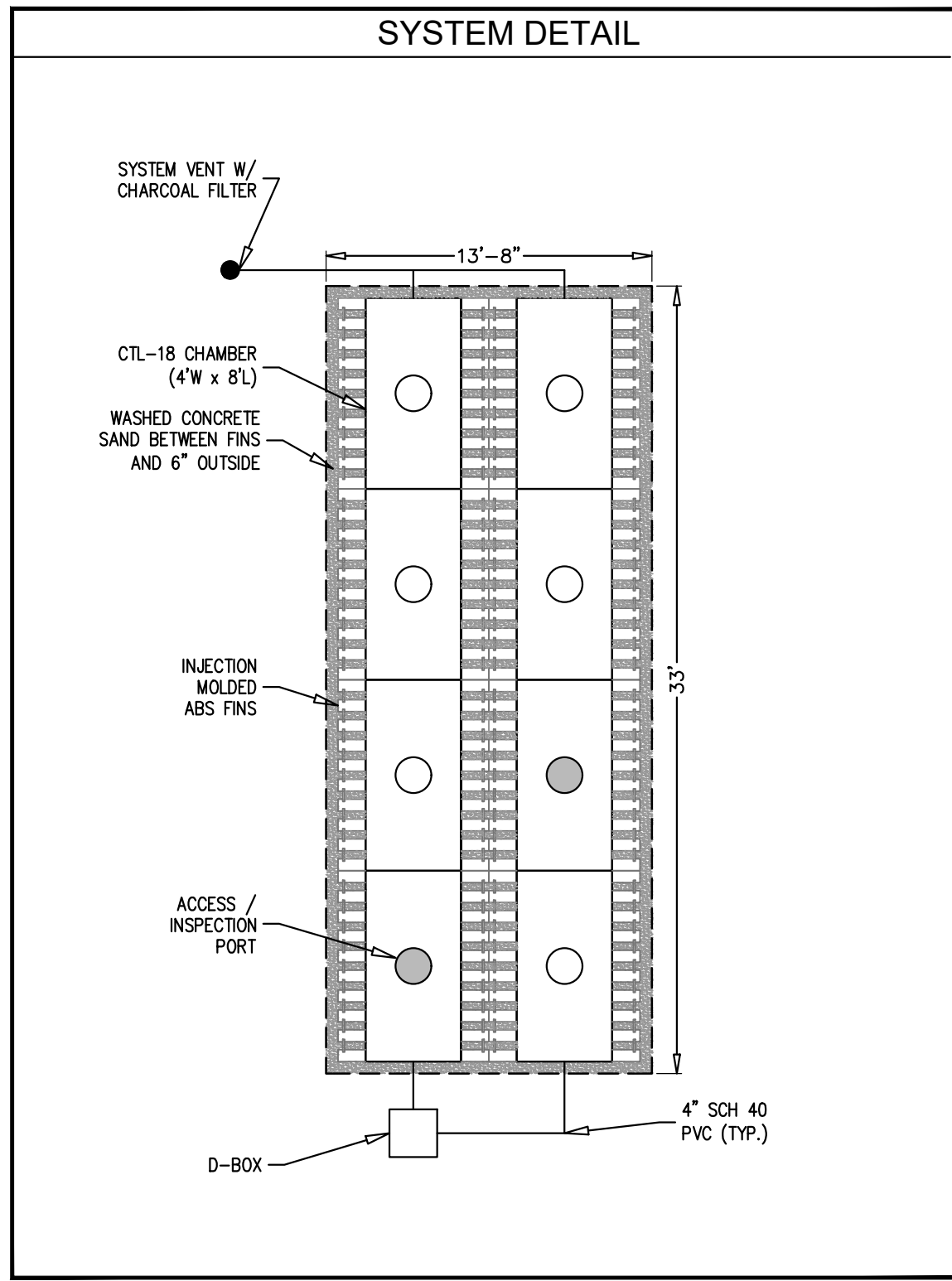
19 OLD SOUTH ROAD NAUTUCKET, MA 02554
 (tel) 508.325.0044 (www.brackeneng.com)

PROPOSED SITE PLAN IN BOURNE, MASSACHUSETTS
 Prepared For:
THE SEVEN STENS TRUST
 #435 CIRCUIT AVENUE
 MAP 43.3 PARCEL 168

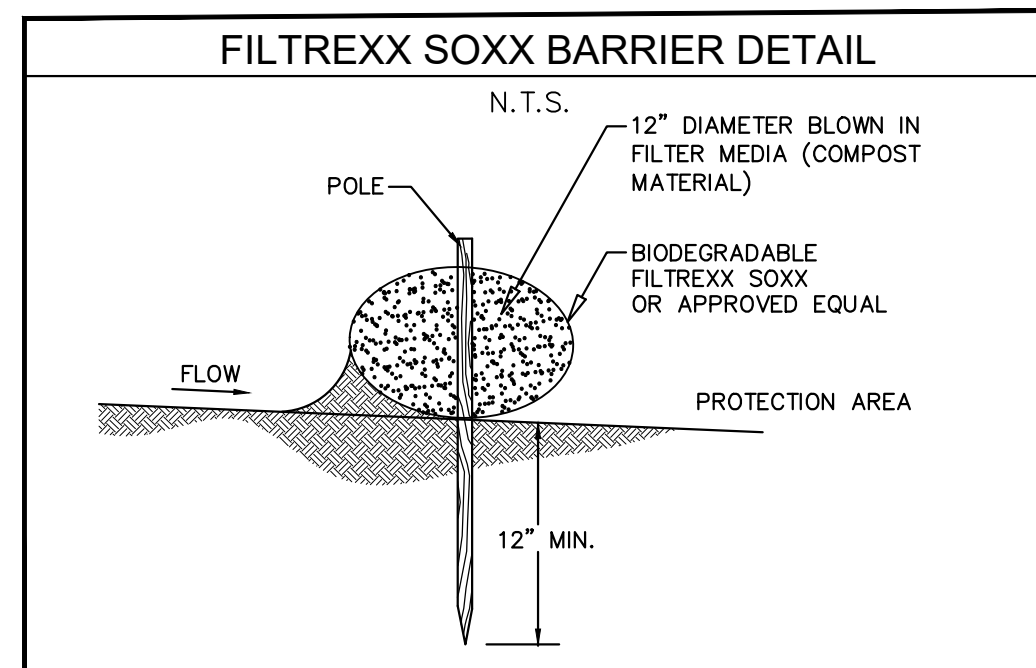
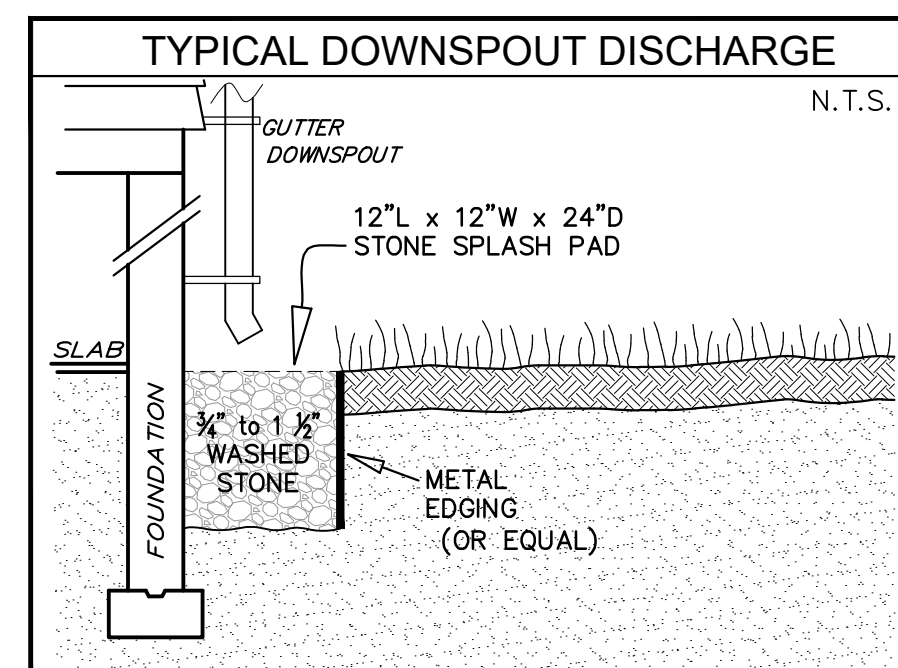
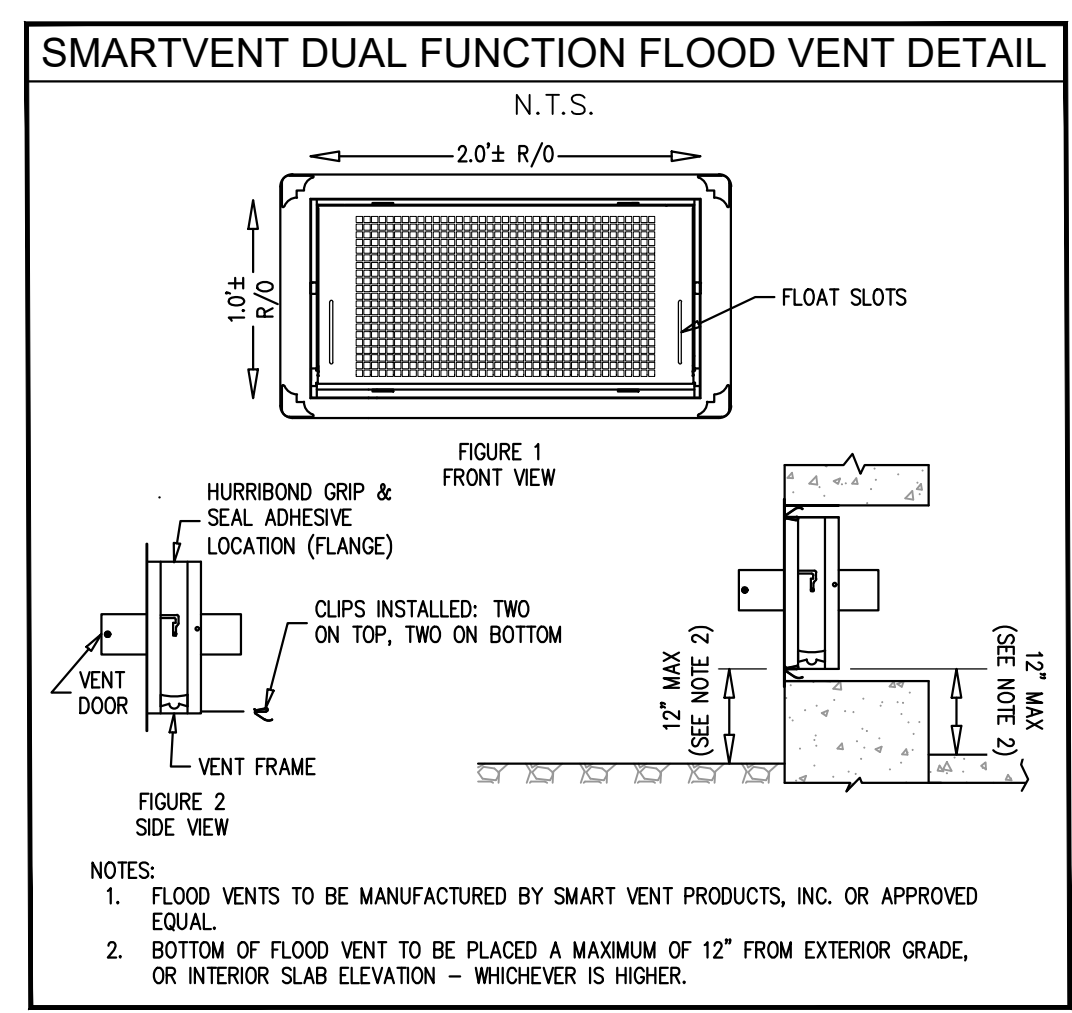
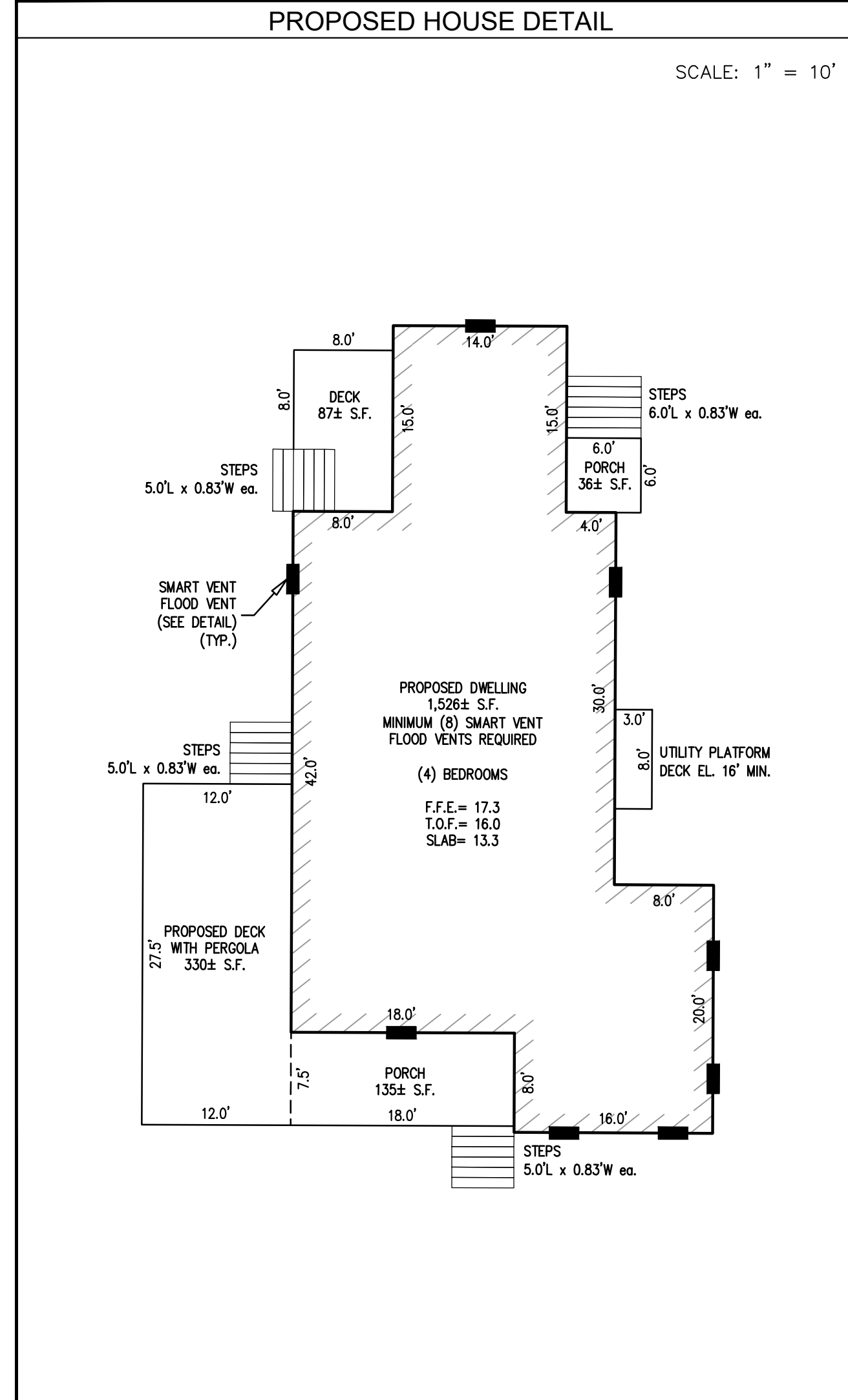
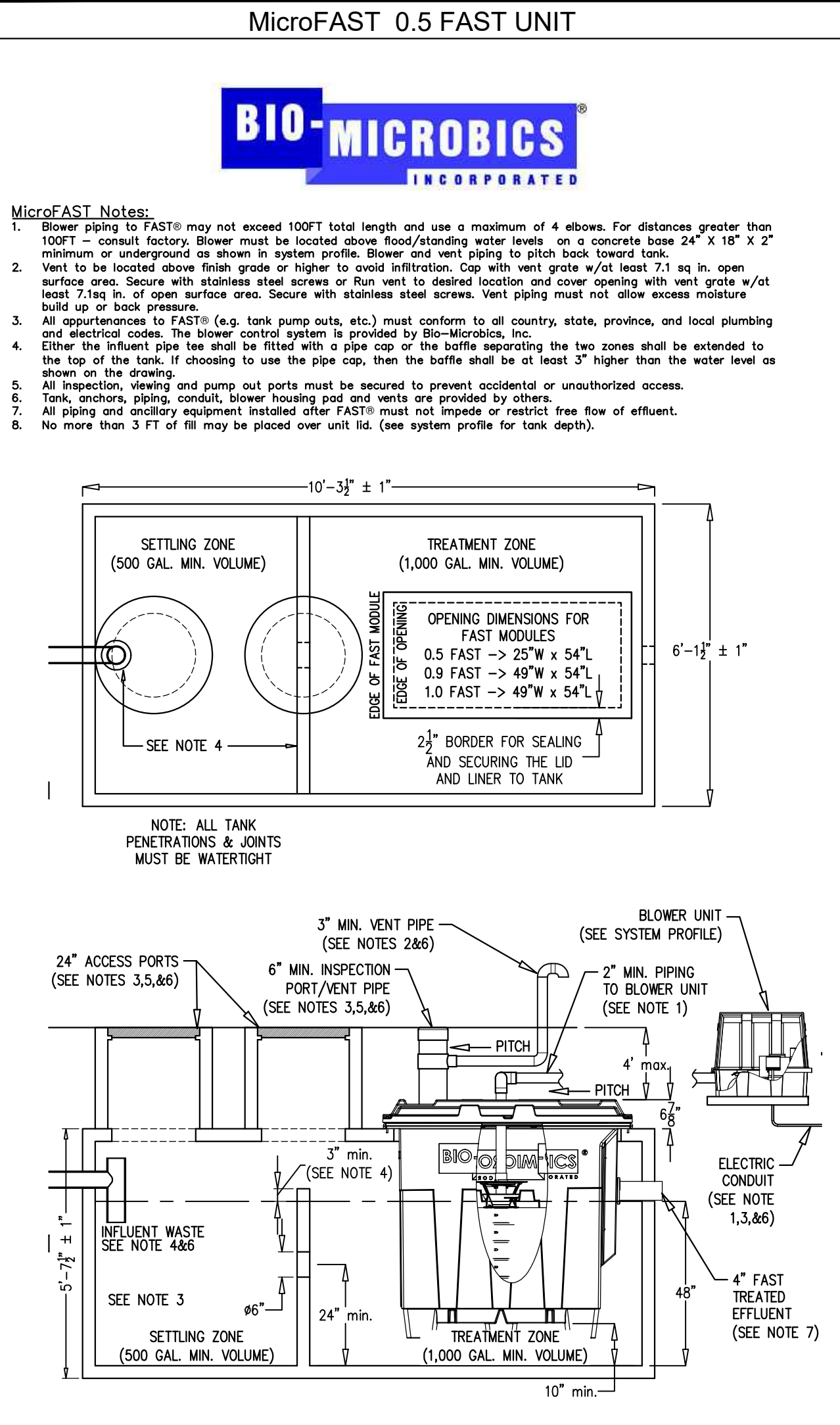
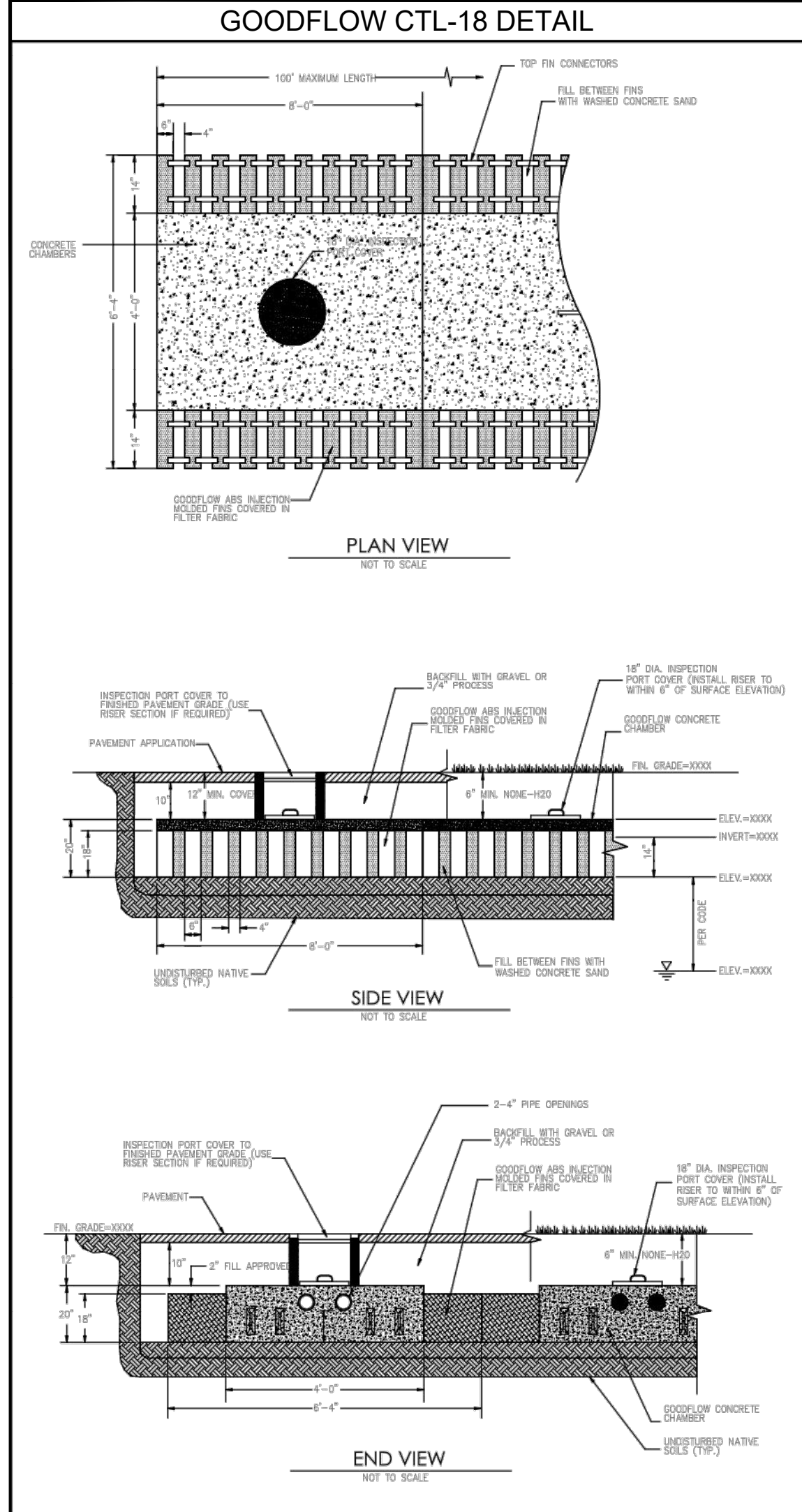
No.	Date	Revision Description	By
1	7/11/23	REVISE PER BOARD OF HEALTH COMMENTS	JPH
2	6/6/23	REVISE FOR ZBA & BOH SUBMISSIONS	JPH

Date: MAY 31, 2023 Drawn: JPH/BE Checked: ZLB/AMG Sheet: 1 of 2

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 By Bourne Health Department at 1:42 pm, Jul 12, 2023



- ### GOODFLOW INSTALLATION NOTES
1. FINS COME PREPARED WITH FILTER FABRIC ON ALL SIDES EXCEPT BOTTOM - THIS IS SEPARATE FROM THE FILTER FABRIC ON TOP OF THE SYSTEM PROVIDED BY THE INSTALLER.
 2. MINIMUM OF 2" TITLE 5 SAND FROM THE TOP OF THE FINS TO THE TOP OF THE CHAMBER - CREATING A FLUSH SURFACE.
 3. FILTER FABRIC IS PLACED ACROSS THE CONCRETE CHAMBER AND ON TOP OF THE 2" OF TITLE 5 SAND ATOP THE FINS. THE NON-WOVEN SYNTHETIC FILTER FABRIC SHALL HAVE ADEQUATE TENSILE STRENGTH TO PREVENT RIPPING DURING INSTALLATION AND BACKFILLING, ADEQUATE AIR PERMEABILITY TO ALLOW FREE PASSAGE OF GASES, AND ADEQUATE PARTICLE RETENTION TO PREVENT DOWNWARD MIGRATION OF SOIL PARTICLES.
 4. MINIMUM OF 10" / MAXIMUM 4' BACKFILL WITH COMPACTED GRAVEL OR 3" PROCESS MATERIAL WITH 2" OF FINISH SURFACE (PAVED) OR 4" OF LOAM & SEED.
 5. FOR ORDERING, CONTACT GOODFLOW SOLUTIONS AT 203-869-2969.



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PROPOSED SITE PLAN
IN BOURNE, MASSACHUSETTS
Prepared For:
THE SEVEN STENS TRUST
#435 CIRCUIT AVENUE
MAP 43.3 PARCEL 168

No.	Date	Revision Description	By
1	6/6/23	NO CHANGES	JPH
2	7/11/23	NO CHANGES	JPH

Date: MAY 31, 2023 Drawn: JPH/BEI Checked: ZLB/AMG Sheet: 2 of 2