

## SCHEDULE OF ELEVATIONS

FIRST FLOOR ELEVATIONS	=	SEE PLAN
BUILDING SEWER INVERT AT FOUNDATIONS	=	SEE PLAN
SEPTIC TANK INLET INVERT	=	205.30
SEPTIC TANK OUTLET INVERT	=	205.05
PUMP CHAMBER INLET INVERT	=	204.95
PUMP CHAMBER OUTLET INVERT	=	204.50
SPLITTER BOX INLET INVERT	=	220.00
SPLITTER BOX OUTLET INVERT	=	219.80
DISTRIBUTION BOX #1 INLET INVERT	=	219.60
DISTRIBUTION BOX #1 OUTLET INVERT	=	219.40
DISTRIBUTION BOX #2 INLET INVERT	=	219.60
DISTRIBUTION BOX #2 OUTLET INVERT	=	219.40

## SCHEDULE OF SEWER MANHOLES

SMH #1 RIM=217.4 INV IN=214.10 INV OUT=214.00	SMH #5 RIM=209.6 INV IN=205.75 INV OUT=205.65
SMH #2 RIM=214.8 INV IN=211.30 INV OUT=211.20	SMH #6 RIM=209.8 INV IN=206.35 INV OUT=206.25
SMH #3 RIM=211.5 INV IN=208.10 INV OUT=208.00	SMH #7 RIM=211.0 INV IN=207.30 INV OUT=207.20
SMH #4 RIM=209.5 INV IN=206.10 INV OUT=206.00	SMH #8 RIM=217.5 INV IN=214.50 INV OUT=214.4

## LEGEND

123	PROPOSED CONTOUR ELEVATION
D	PROPOSED DRAIN LINE
RD	PROPOSED ROOF DRAIN
DMH	PROPOSED DRAIN MANHOLE
STU	PROPOSED STORMWATER TREATMENT UNIT
CB	PROPOSED DEEP SUMP CATCH BASIN
AD	PROPOSED AREA DRAIN
OCS	PROPOSED OUTLET CONTROL STRUCTURE
SMH	PROPOSED SEWER MANHOLE
HDPE	HIGH DENSITY POLYETHYLENE
+123.4	PROPOSED SPOT ELEVATION
T.C.=123.4	PROPOSED TOP OF CURB ELEVATION
B.C.=123.4	PROPOSED BOTTOM OF CURB ELEVATION
T.W.=123.4	PROPOSED TOP OF WALL ELEVATION
B.W.=123.4	PROPOSED BOTTOM OF WALL ELEVATION



## GENERAL NOTES

- PROPERTY LINE, LEGAL BOUNDARIES AND TOPOGRAPHIC INFORMATION SHOWN HEREON WAS OBTAINED FROM DGT ASSOCIATES. ELEVATIONS SHOWN HEREON REFER TO NAVD1988.
- THE PROPOSED BUILDINGS CONFIGURATION AS SHOWN HEREON SHALL BE CONSIDERED CONCEPTUAL AND SHALL BE VERIFIED WITH THE FINAL ARCHITECTURAL PLANS AND CURRENT ZONING ORDINANCES PRIOR TO CONSTRUCTION.
- IN CASES WHERE LEDGE OR BOULDERS ARE PRESENT, DGT ASSOCIATES WILL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK ENCOUNTERED.
- DGT ASSOCIATES WILL NOT BE RESPONSIBLE FOR THE PERFORMANCE OF THE SYSTEM UNLESS CONSTRUCTED AS SHOWN. ANY ALTERATIONS MUST BE APPROVED IN WRITING BY DGT ASSOCIATES.
- NO CONSTRUCTION SHALL TAKE PLACE UNTIL A DISPOSAL WORKS CONSTRUCTION PERMIT HAS BEEN ISSUED BY THE SHERBORN BOARD OF HEALTH.
- PURSUANT TO 310 CMR 246(2) THE PERIMETER OF THE SOIL ABSORPTION SYSTEM SHALL BE STAKED AND FLAGGED, FROM THE DATE OF INSTALLATION UNTIL THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE. VEHICULAR TRAFFIC AND PARKING, STOCKPILING OF MATERIALS AND STORAGE OF EQUIPMENT OVER THE SOIL ABSORPTION SYSTEM SHALL BE PROHIBITED AT ALL TIMES.
- THE SYSTEM INSTALLER IS RESPONSIBLE FOR NOTIFYING DGT ASSOCIATES AND THE SHERBORN BOARD OF HEALTH 48 HOURS BEFORE BEGINNING CONSTRUCTION AND 48 HOURS PRIOR TO SIGNIFICANT CONSTRUCTION EVENTS TO SCHEDULE NECESSARY INSPECTIONS.
- PURSUANT TO 310 CMR 15.021 (3) THE DISPOSAL SYSTEM INSTALLER IS REQUIRED TO CERTIFY IN WRITING, ON A FORM APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, THAT THE SYSTEM HAS BEEN CONSTRUCTED IN COMPLIANCE WITH 310 CMR 15.000, THE APPROVED DESIGN PLANS AND ALL LOCAL REQUIREMENTS, AND THAT ANY CHANGES TO THE DESIGN PLANS HAVE BEEN REFLECTED ON THE AS-BUILT PLANS PREPARED BY THE DESIGNER.
- SURFACE COMPONENTS OF A SYSTEM SHALL NOT BE BACKFILLED, OR OTHERWISE CONCEALED FROM VIEW UNTIL A FINAL INSPECTION HAS BEEN CONDUCTED BY THE APPROVING AUTHORITY AND PERMISSION HAS BEEN GRANTED BY THE APPROVING AUTHORITY TO BACKFILL THE SYSTEM.
- PRIOR TO COVERING ALL SYSTEM COMPONENTS AND THE SOIL ABSORPTION SYSTEM SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
- STRUCTURAL DETAILS FROM INDEPENDENT VENDORS ARE CONSTANTLY CHANGING, PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT DETAILS SHOWN HEREON MATCH THE CURRENT DETAILS AND SPECIFICATIONS FROM VENDORS.
- THIS PLAN IS NOT INTENDED TO SHOW AN ENGINEERED BUILDING FOUNDATION DESIGN WHICH WOULD INCLUDE DETAILS AND ELEVATIONS FOR FOOTINGS, FOUNDATION WALL DESIGN AND ANY SUBSURFACE DRAINAGE TO PREVENT FLOODING, COORDINATE WITH THE ARCHITECTURAL AND STRUCTURAL PLANS.
- SEE PERMIT SITE PLAN SET SHEET C-2 (INCLUDED HEREIN) FOR SETBACK DISTANCES FROM THE PROPOSED SOIL ABSORPTION SYSTEM TO ON-SITE AND ABUTTING WELLS. ALL SETBACKS EXCEED 150'.

## REGULATORY NOTES

- THE LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR BY CONTACTING "DIG-SAFE" AT 811.
- THE CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO THE COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
- ALL CONSTRUCTION SHALL CONFORM TO TITLE 5 OF THE MASSACHUSETTS STATE ENVIRONMENTAL CODE (310 CMR 15.000).
- ALL WORK OUTSIDE OF THE BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF THE BUILDING FOUNDATION SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR.
- CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- A PRECONSTRUCTION MEETING WITH THE BOARD OF HEALTH, CONSERVATION COMMISSION, DESIGN ENGINEER, AND SITE CONTRACTOR SHALL TAKE PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- THE SOIL ABSORPTION SYSTEM HAS BEEN DESIGNED WITHOUT THE ADDITIONAL 50% REQUIRED FOR THE USE OF A GARBAGE GRINDER. A GARBAGE GRINDER DEED RESTRICTION SHALL BE RECORDED AT THE REGISTRY OF DEEDS.

## SOIL SPECIFICATION NOTES

- BASE AGGREGATE FROM BELOW THE CROWN OF THE DISTRIBUTION LINES TO THE BOTTOM OF THE SOIL ABSORPTION SYSTEM SHALL CONSIST OF DOUBLE WASHED STONE RANGING FROM 3/4" TO 1-1/2" IN DIAMETER AND SHALL BE FREE OF IRON, FINES AND DUST.
- ALL TOPSOIL, SUBSOIL AND DELETERIOUS MATERIAL, IF ANY, MUST BE EXCAVATED AND REMOVED TO A DISTANCE OF FIVE (5) FEET FROM ALL SIDES OF THE LEACHING AREA AND TO A DEPTH OF SIX (6) INCHES BELOW THE SURFACE OF THE NATURAL PERMEABLE SOIL.
- FILL REQUIRED FOR THE LEACHING AREA AS SHOWN ON THE PLANS SHALL BE COMPOSED OF CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. MIXTURES AND LAYERS OF DIFFERENT MATERIALS SHALL NOT BE USED.
- A SIEVE ANALYSIS SHALL BE PERFORMED FROM THE FILL IN PLACE.
- THE FILL SHALL MEET THE GRADATION REQUIREMENTS OF 310 CMR 15.55(3).
- THE GRADATION PORTION OF THE FILL PASSING A NO. 4 SIEVE SHALL MEET THE FOLLOWING SPECIFICATIONS:

SIEVE SIZE	EFFECTIVE PARTICLE SIZE	PERCENT THAT MUST PASS SIEVE
#4	4.75mm	100%
#60	0.30mm	10%-100%
#100	0.15mm	0%-20%
#200	0.075mm	0%-5%

## SPECIAL NOTES

- THE SUBJECT PROPERTY IS WITHIN A NITROGEN SENSITIVE AREA AS DEFINED IN 310 CMR 15.215 DUE TO THE PRESENCE OF PRIVATE WELLS.
- STATEMENTS RELATIVE TO OTHER SETBACK REQUIREMENTS: TO OUR KNOWLEDGE THERE ARE: NO PUBLIC WELLS WITHIN 400 FT. OF THE PROPOSED SYSTEM. YES PRIVATE WELLS WITHIN 200 FT. OF THE PROPOSED SYSTEM. YES WETLAND RESOURCE AREAS AS DEFINED UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT REGULATIONS (310 CMR 10.00), INCLUDING VERNAL POOLS WITHIN 150 FT. OF THE SUBJECT LOT. (SEE PLAN) NO INLAND BANKS WITHIN 150 FT. OF THE PROJECT. NO WETLANDS BORDERING SURFACE WATER SUPPLY OR TRIBUTARIES ARE LOCATED ON THIS PROJECT. YES SURFACE WATERS ARE LOCATED WITHIN 150 FT. OF THE PROJECT. NO REGULATED FLOODPLAINS OR FLOODWAYS ARE LOCATED ON THE SUBJECT LOT. YES LEACHING CATCH BASINS OR DRYWELLS ARE LOCATED NEAR COMPONENTS OF THE PROPOSED SEWAGE DISPOSAL SYSTEM. NO OPEN SURFACE OR SUBSURFACE DRAINS, OR INTERCEPTOR DRAINS ARE PROPOSED FOR THIS PROJECT AND THERE ARE NO SUCH EXISTING DRAINS WITHIN 125' OF THE SOIL ABSORPTION SYSTEM. YES FOUNDATION DRAINS ARE PROPOSED FOR THE SUBJECT BUILDING. NO BOUNDARY OF REGULATORY FLOODWAYS. NO INDUSTRIAL CATEGORY OR PROHIBITED WASTEWATERS ARE PROPOSED FOR THIS PROJECT.

## SOIL TESTING & ESHGWT NOTES

- SOIL TESTING COMPLETED WITHIN THE LIMIT OF THE PROPOSED SOIL ABSORPTION SYSTEM WAS COMPLETED BY DGT ASSOCIATES AND WITNESSED BY MARK ORAM OF THE SHERBORN BOARD OF HEALTH ON OCTOBER 25 AND 26, 2023. ADDITIONAL SOIL TESTING WAS COMPLETED BY CREATIVE LAND & WATER ENGINEERING AND WITNESSED BY MARK ORAM OF THE SHERBORN BOARD OF HEALTH ON AUGUST 19, 2024.
- THE DESIGN ESTIMATED SEASONAL HIGH GROUNDWATER TABLE (ESHGWT) WAS DETERMINED BY SIGNS OF REDOXIMORPHIC FEATURES OBSERVED IN EACH TEST HOLE. ADDITIONAL SOIL TESTING SHOULD BE CONDUCTED AT THE WEST SIDE OF THE PROPOSED SOIL ABSORPTION SYSTEM TO CONFIRM THE SOILS ARE CONSISTENT WITH THE EAST SIDE.
- SOIL TESTING WAS COMPLETED BY DGT ASSOCIATES FOR THE DESIGN OF THE PROPOSED STORMWATER MANAGEMENT FACILITIES. SEE THE PERMIT SITE PLAN SET PREPARED BY DGT ASSOCIATES LATEST REVISION DATE SEPTEMBER 19, 2024 FOR DEEP TEST HOLE INFORMATION OUTSIDE OF THE LIMIT OF THE SAs.

## DESIGN DATA

### FLOW CALCULATIONS

- BUILDING USE: SINGLE FAMILY RESIDENTIAL DWELLINGS
- DESIGN FLOW - TITLE 5: 110 GPD/BEDROOM
- EIGHT (8) 2-BEDROOM DWELLINGS: 1,760 GPD
- TOTAL DAILY FLOW - TITLE 5: 1,760 GALLONS

### SYSTEM REQUIREMENTS

- DESIGN PERCOLATION RATE: 39 MINUTES PER INCH
- SOIL CLASS: CLASS 5:
- LONG TERM ACCEPTANCE RATE (LTAR): 0.25 GAL/SF
- GARBAGE GRINDER: NO - DEED RESTRICTION REQUIRED
- TOTAL AREA REQUIRED - TITLE 5: 7,040 SF
- TOTAL AREA PROVIDED: (14 TRENCHES @ 84' LONG) 7,056 SF

### SEPTIC TANK CALCULATIONS

- VOLUME COMPARTMENT #1 (200% DAILY FLOW): 3,520 GALLONS
- VOLUME COMPARTMENT #2 (100% DAILY FLOW): 1,760 GALLONS
- MINIMUM REQUIRED SEPTIC TANK VOLUME: 5,280 GALLONS
- PROVIDED SEPTIC TANK (2 COMPARTMENT): 6,000 GALLONS

### NITROGEN LOADING LIMITATIONS (310 CMR 15.214)

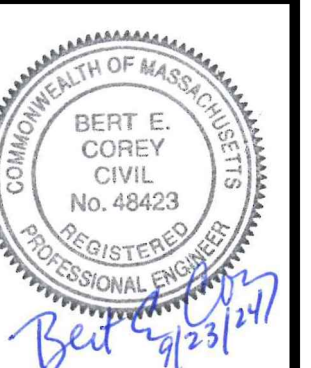
- 222,696 SF / 40,000 SF = 5.5674 ACRES
- 5.5674 ACRES x 440 GPD PER ACRE = 2,450 GPD
- 2,450 GPD > 1,760 GPD <-- OKAY

APPLICANT:  
**FENIX PARTNERS BRUSH HILL, LLC**  
177 LAKE STREET  
SHERBORN, MA 01770

OWNER:  
**FENIX PARTNERS BRUSH HILL, LLC**  
of  
**MIDDLESEX REGISTRY OF DEEDS**  
BOOK: 81892 PAGE: 265

PARCEL ID:

MAP 1, LOT 0, BLOCK 18



NO.	APP	DATE	DESCRIPTION
1	BEC	9/23/24	PER BOH REVIEW COMMENTS

DATE: **JUNE 26, 2024**

SCALE: **1" = 30'**

DESIGN:	DRAFTED:	CHECKED:
JAL/KMR	KMR	BEC

PROJECT TITLE:

## BRUSH HILL HOMES

34 BRUSH HILL ROAD  
SHERBORN, MA 01770

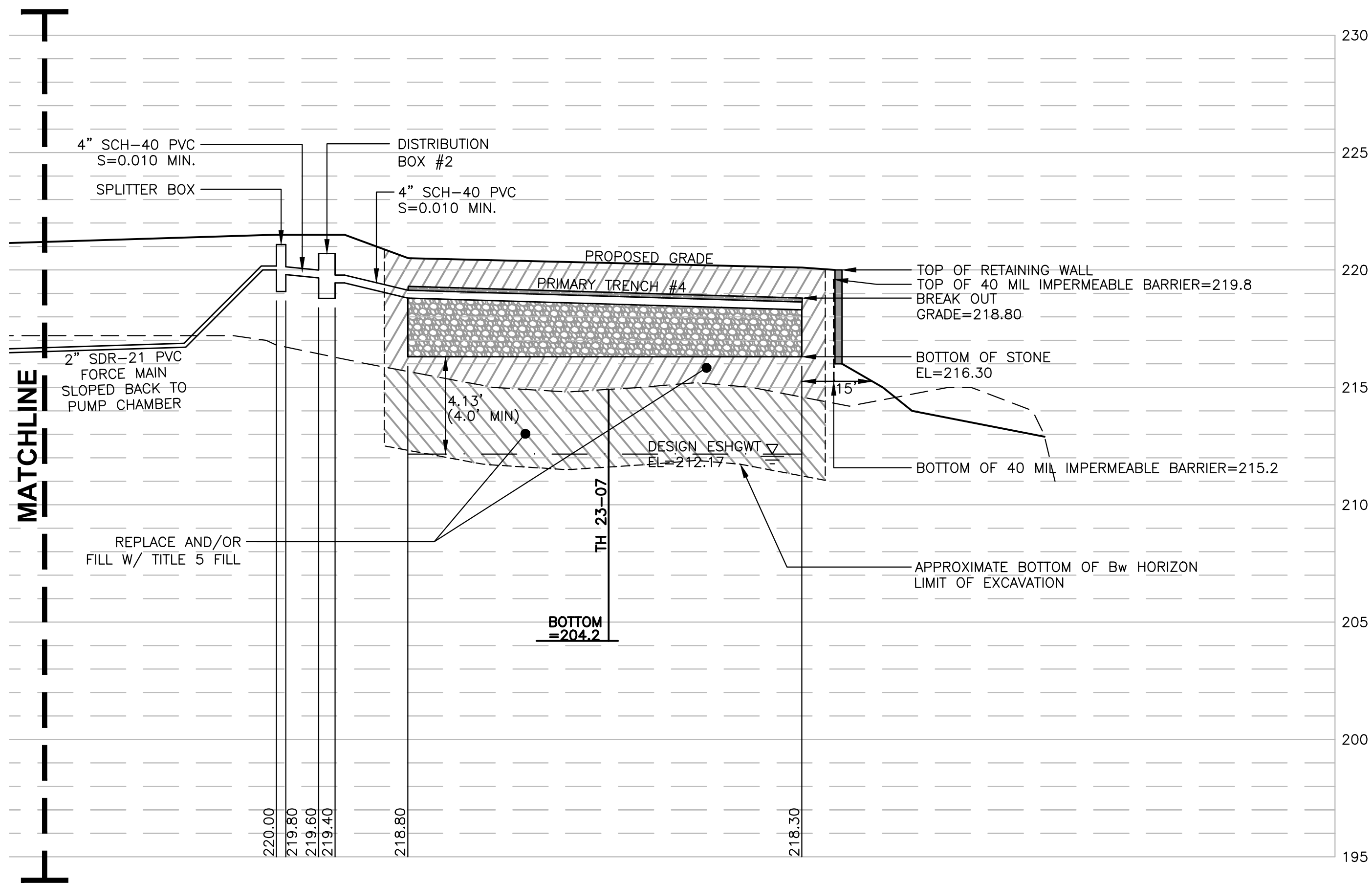
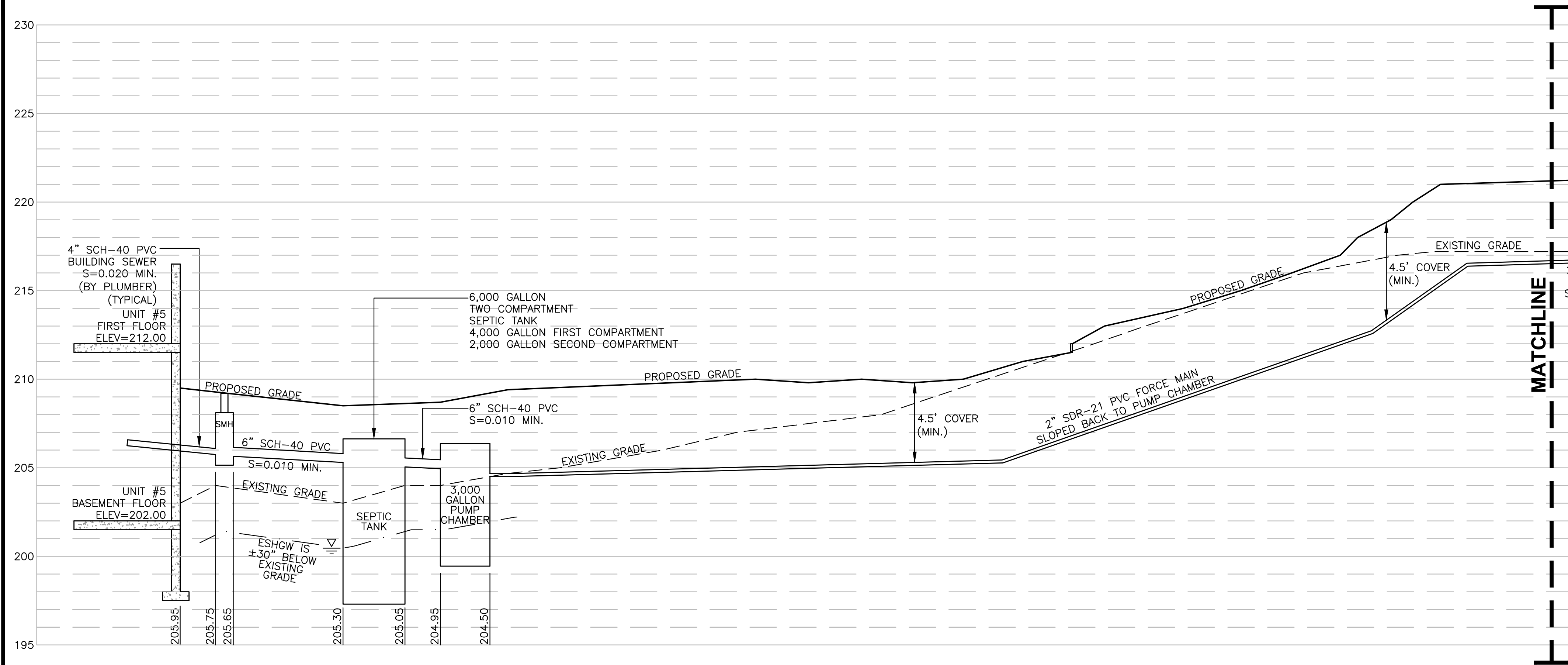
SHEET TITLE:

## SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN

SHEET:  
**1 OF 5**  
PROJECT NO.:  
**F-25889**

**BOH-1**





SUBSURFACE SEWAGE DISPOSAL SYSTEM PROFILE

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1" = 4'



Framingham  
Boston • Worcester • Preston, CT

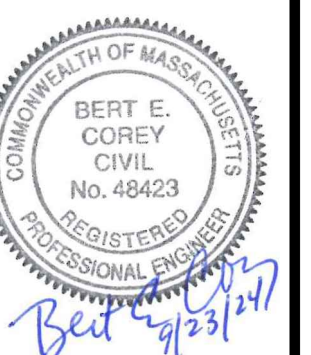
1071 Worcester Road  
Framingham, MA 01701  
508-879-0030

www.DGTassociates.com

APPLICANT:  
**FENIX PARTNERS BRUSH HILL, LLC**  
177 LAKE STREET  
SHERBORN, MA 01770

OWNER:  
**FENIX PARTNERS BRUSH HILL, LLC**  
ref.  
**MIDDLESEX REGISTRY OF DEEDS**  
BOOK: 81892 PAGE: 265

PARCEL ID:  
**MAP 1, LOT 0, BLOCK 18**



1	BEC	9/23/24	PER BOH REVIEW COMMENTS
NO.	APP	DATE	DESCRIPTION

DATE: **JUNE 26, 2024**

SCALE: **AS NOTED**

DESIGN:	DRAFTED:	CHECKED:
<b>JAL/KMR</b>	<b>KMR</b>	<b>BEC</b>

PROJECT TITLE:

**BRUSH HILL HOMES**

**34 BRUSH HILL ROAD  
SHERBORN, MA 01770**

SHEET TITLE:

**SEWAGE DISPOSAL  
SYSTEM PROFILE**

SHEET: <b>2 OF 5</b>	<b>BOH-2</b>
PROJECT NO.: <b>F-25889</b>	

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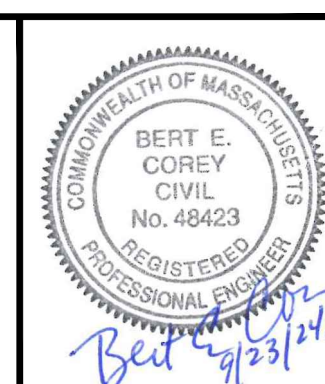




APPLICANT:  
**FENIX PARTNERS BRUSH HILL, LLC**  
SHERBORN, MA 01770

OWNER:  
**FENIX PARTNERS BRUSH HILL, LLC**  
ref.  
**MIDDLESEX REGISTRY OF DEEDS**  
BOOK: 81892 PAGE: 265

PARCEL ID:  
**MAP 1, LOT 0, BLOCK 18**



1	BEC	9/23/24	PER BOH REVIEW COMMENTS
NO.	APP	DATE	DESCRIPTION

DATE: **JUNE 26, 2024**

SCALE: **AS NOTED**

DESIGN:	DRAFTED:	CHECKED:
<b>JAL/KMR</b>	<b>KMR</b>	<b>BEC</b>

PROJECT TITLE:

## BRUSH HILL HOMES

**34 BRUSH HILL ROAD**  
**SHERBORN, MA 01770**

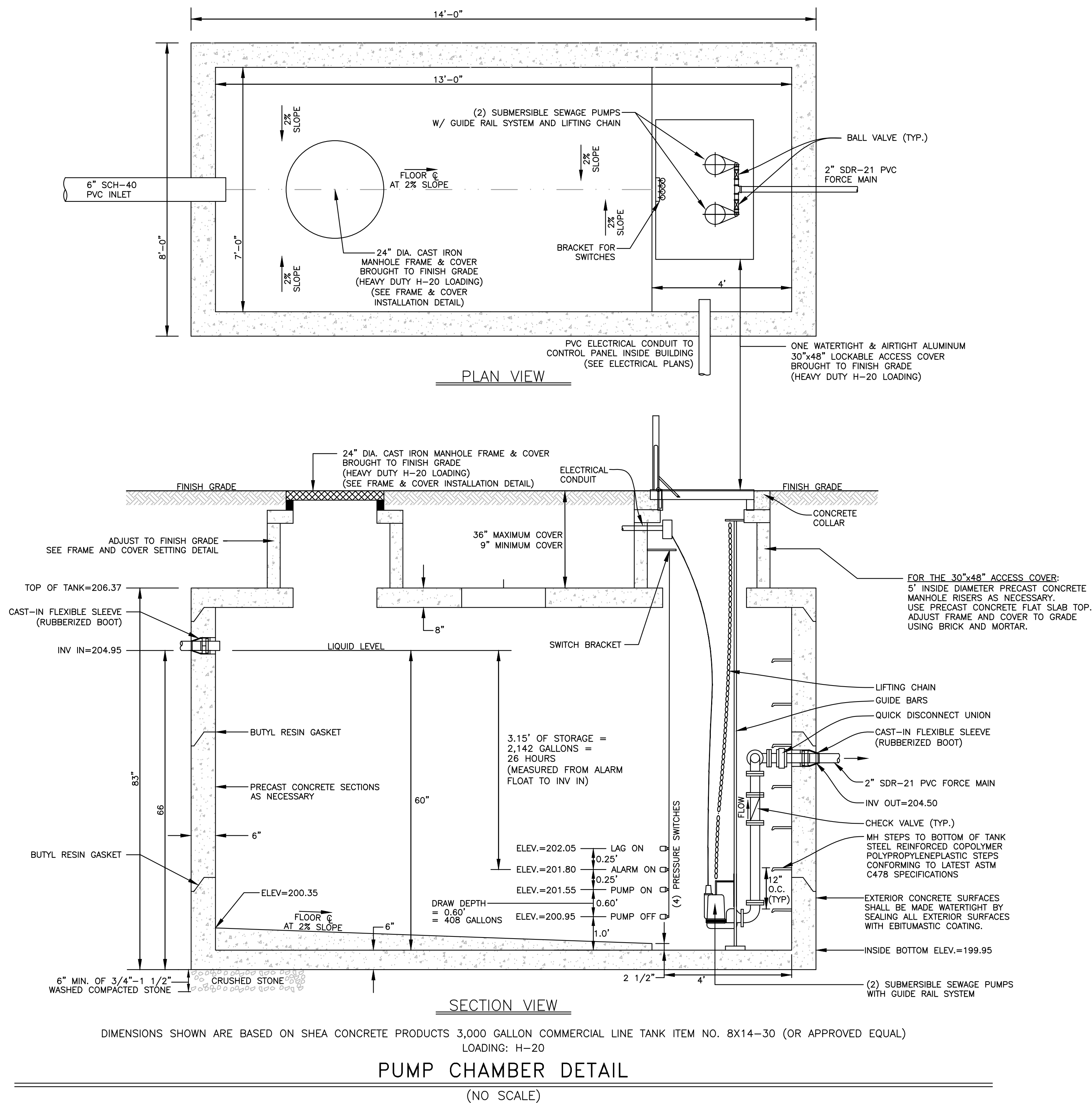
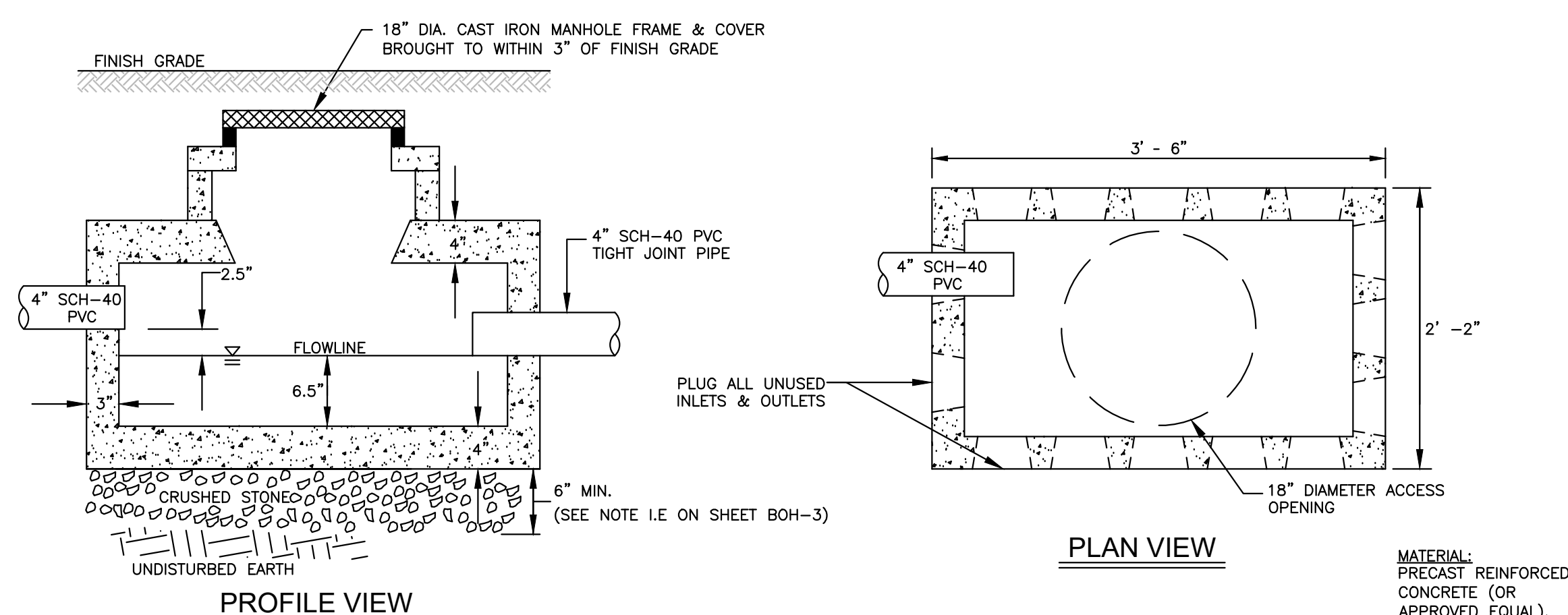
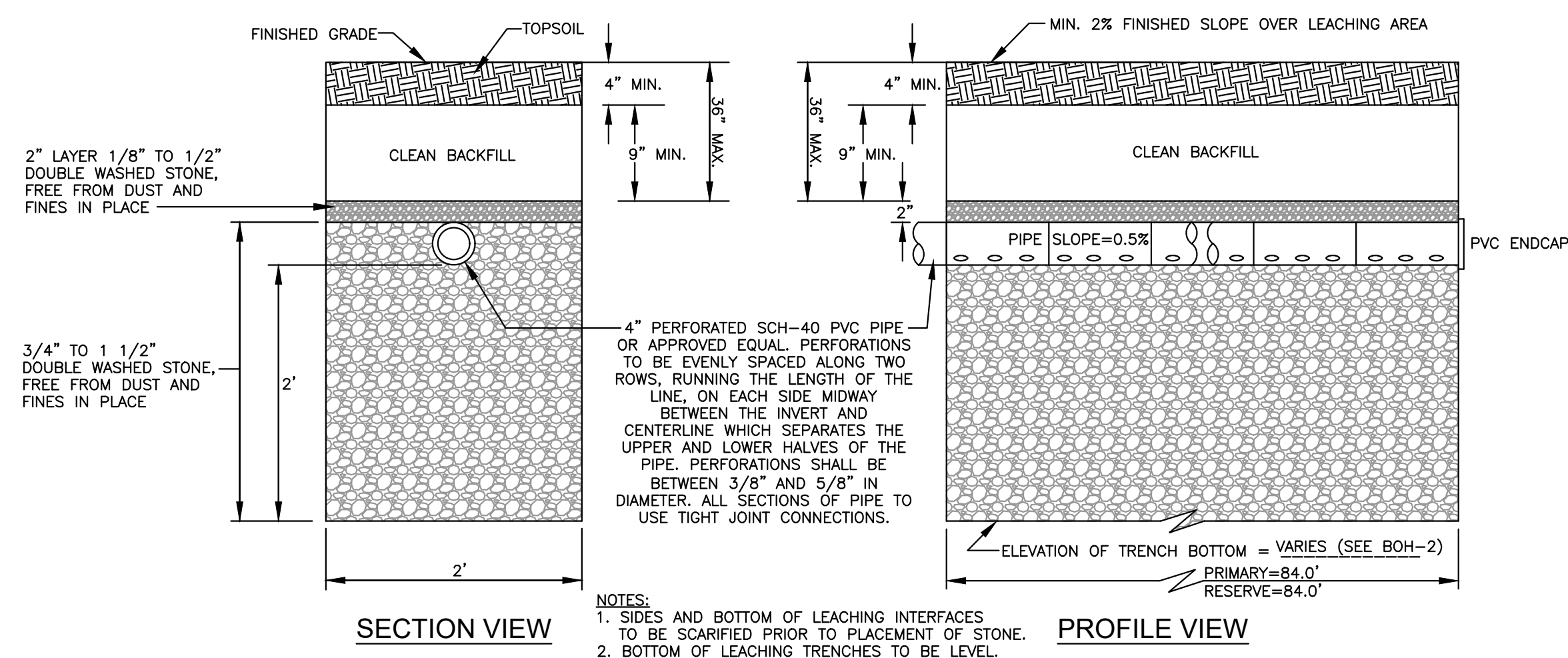
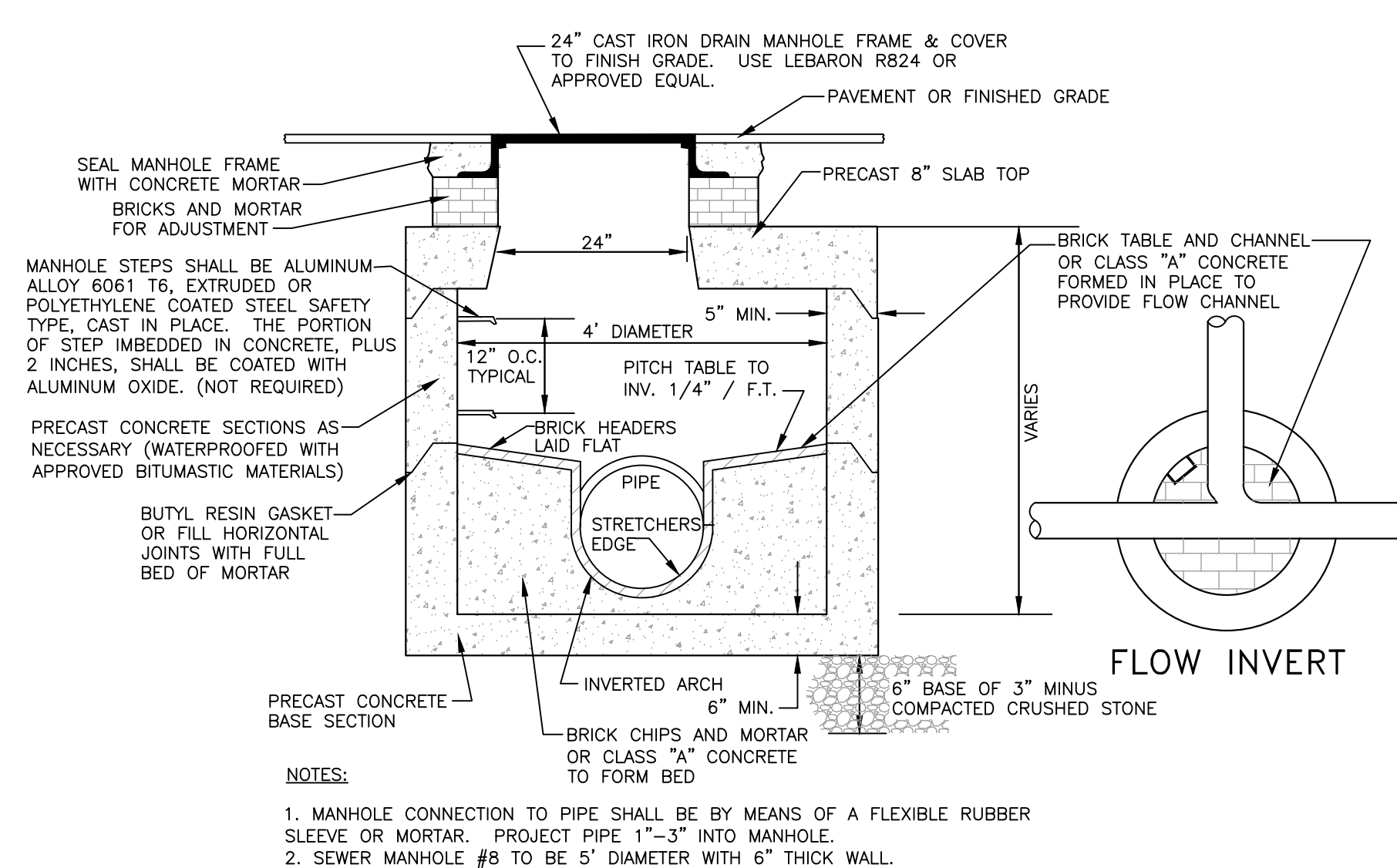
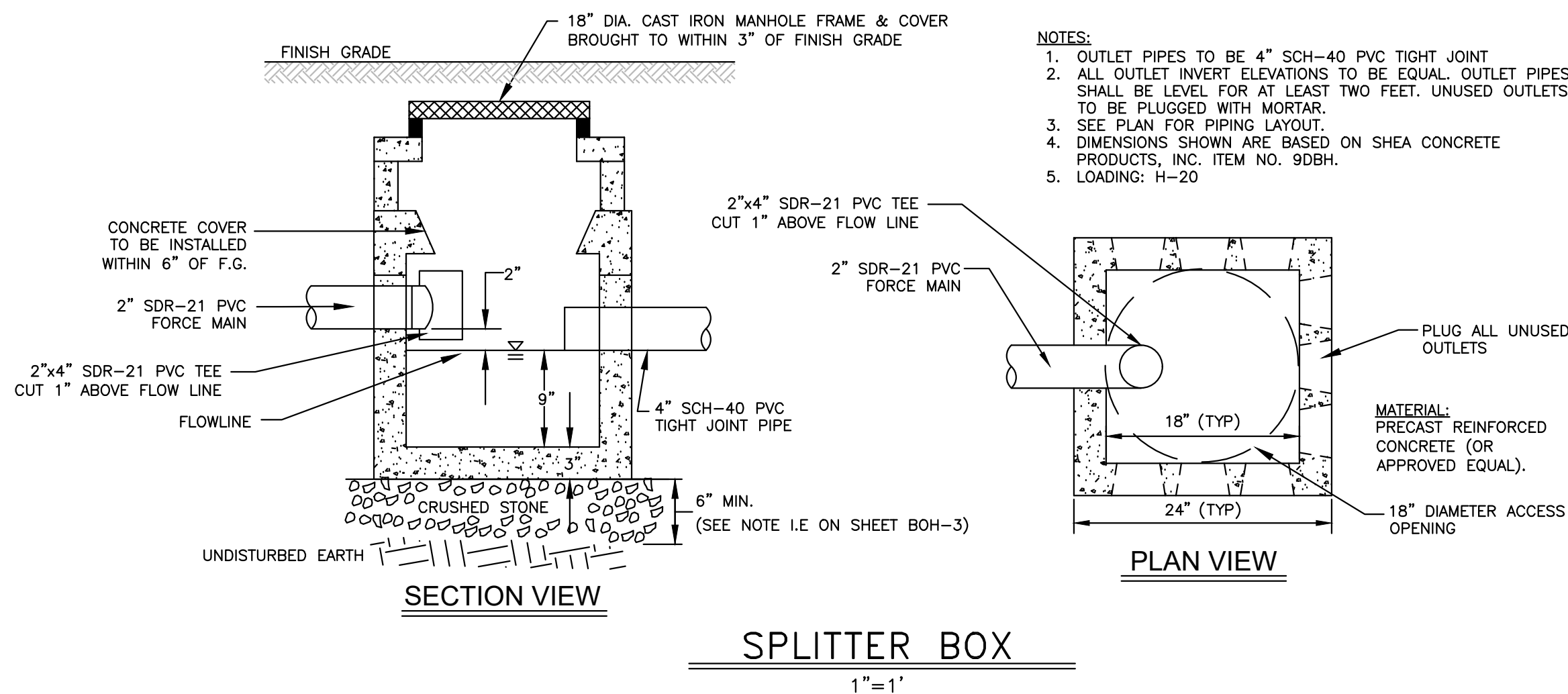
SHEET TITLE:

## SEWAGE DISPOSAL SYSTEM DETAILS

SHEET:  
**4 OF 5**

PROJECT NO.:  
**F-25889**

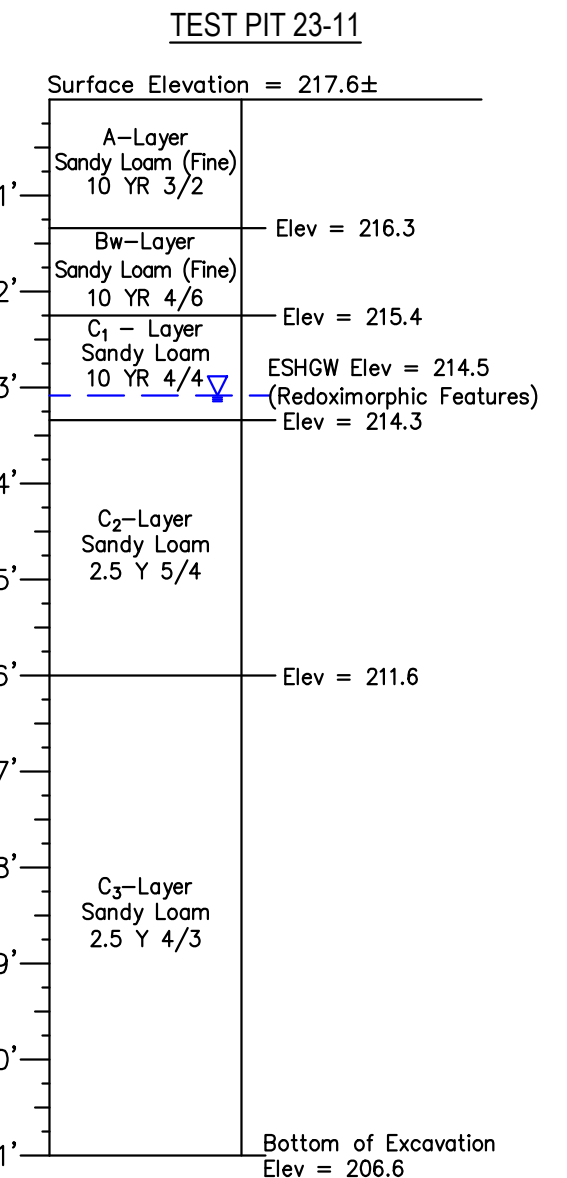
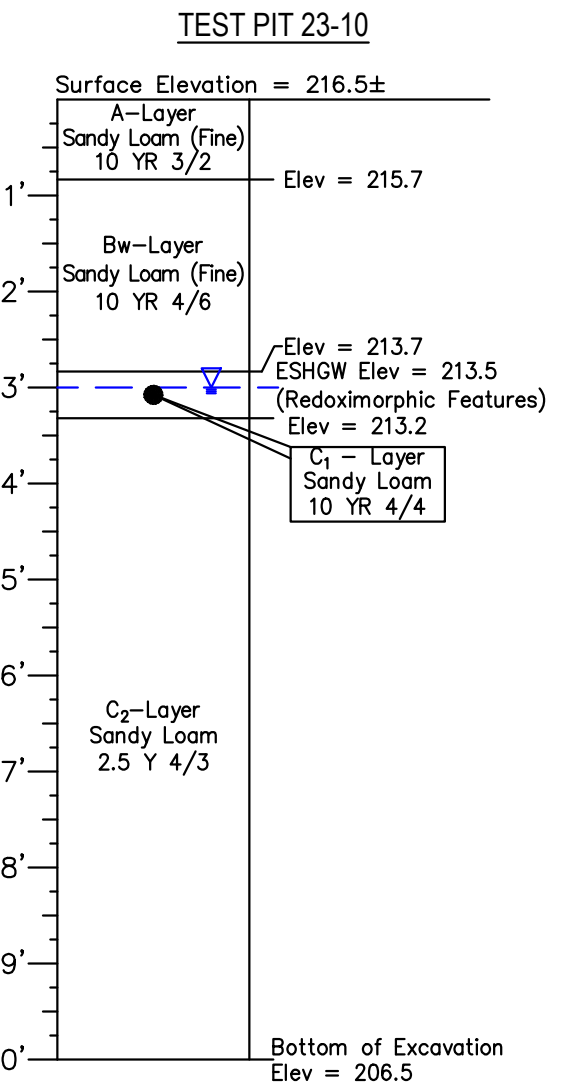
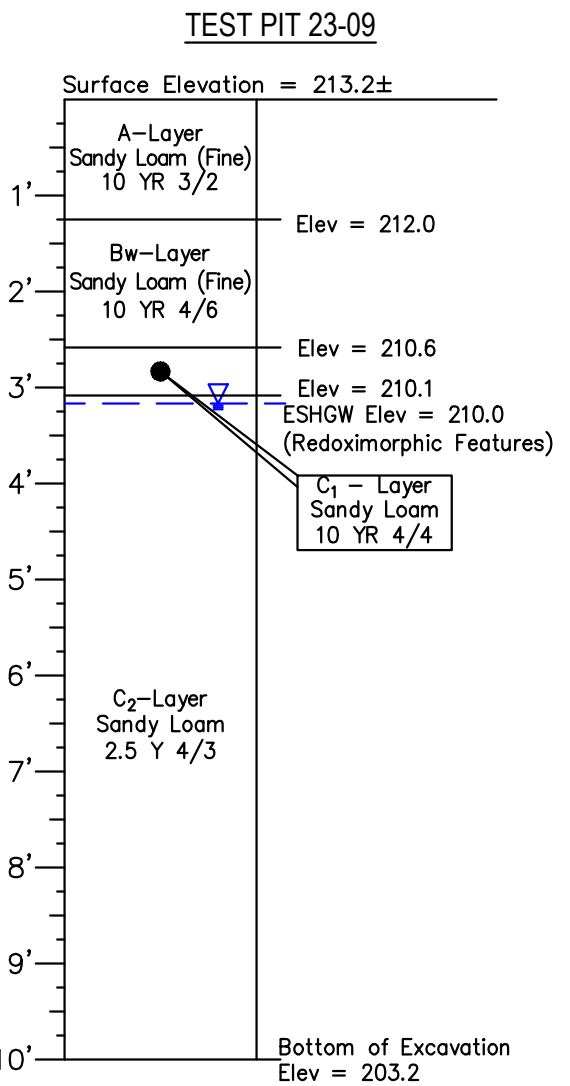
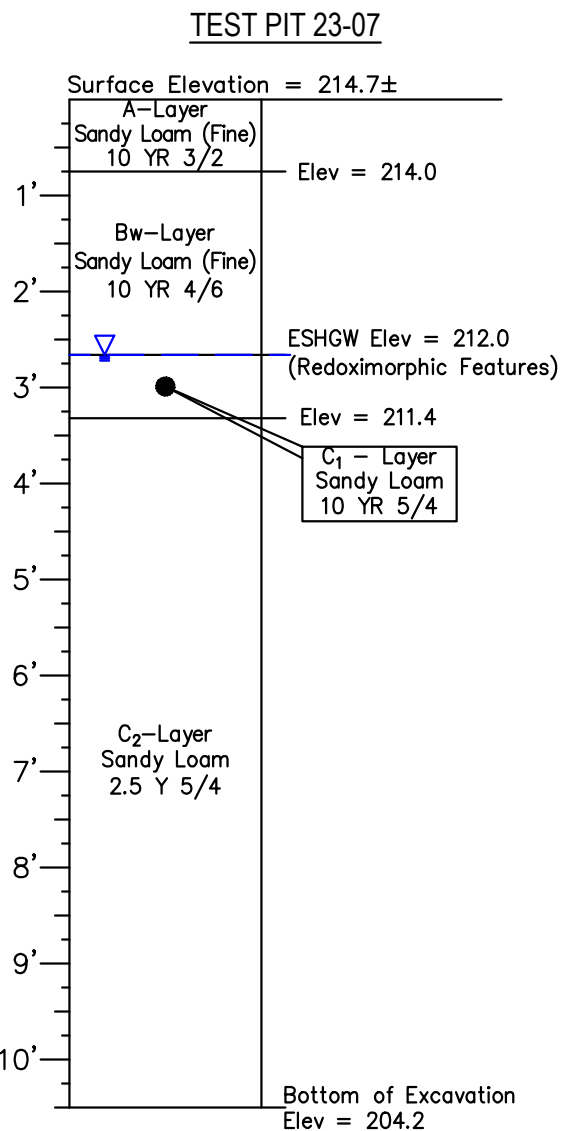
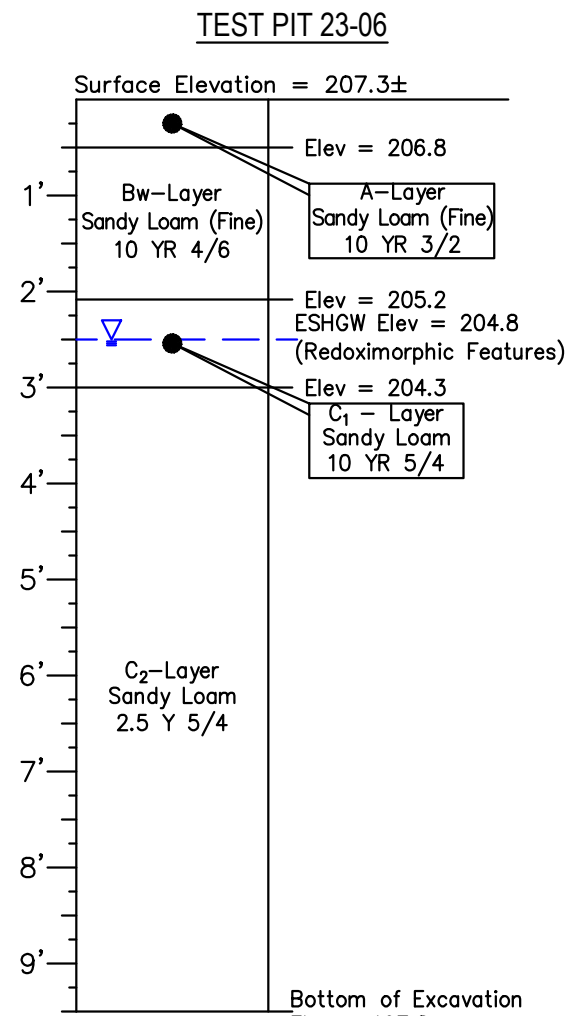
**BOH-4**





SOIL TEST DATA

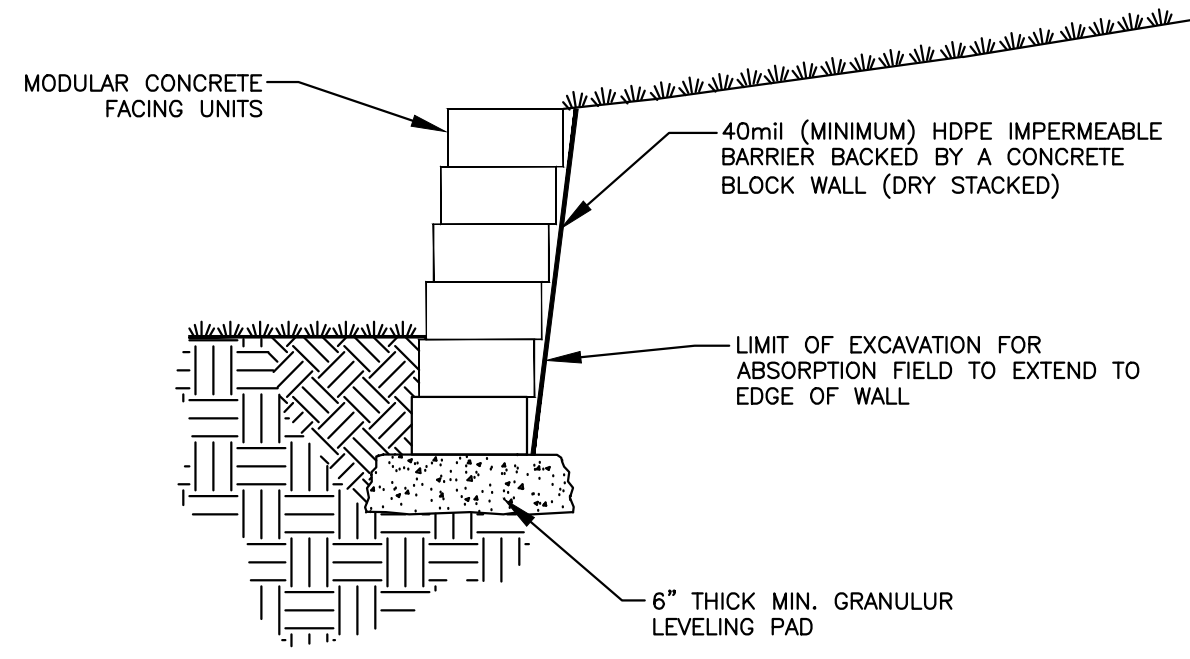
DATE: OCTOBER 25 & 26, 2023  
WITNESSED BY: MARK ORAM  
OF THE SHERBORN BOARD OF HEALTH  
SOIL EVALUATOR: FREDERICK J. SCHOBEL III, E.I.T.  
SE 14561



PERCOLATION TEST DATA

TEST PIT NO.	DATE	SURFACE ELEVATION	TOP OF 12" OF WATER		INTERVAL TIME (MINUTES)		RATE: MINUTES/INCH
			DEPTH FROM TOP OF PIT	ELEVATION	12" - 9"	9" - 6"	
TH 23-09	10/26/2023	213.2	54"	208.7	41	60	20 MPI
TH 23-10a	10/26/2023	216.5	53"	212.1	TEST ABANDONED DUE TO GW INTRUSION		
TH 23-10b	10/26/2023	216.5	30"	214.0	23	42	14 MPI
TH 23-11	10/26/2023	217.6	52"	213.3	120	141	47 MPI

OUTSIDE OF SYSTEM. NOT USED IN DESIGN.



TYPICAL SECTION-RETAINING WALL WITH IMPERMEABLE BARRIER (NO SCALE)

PRIMARY TRENCH DESIGN DATA

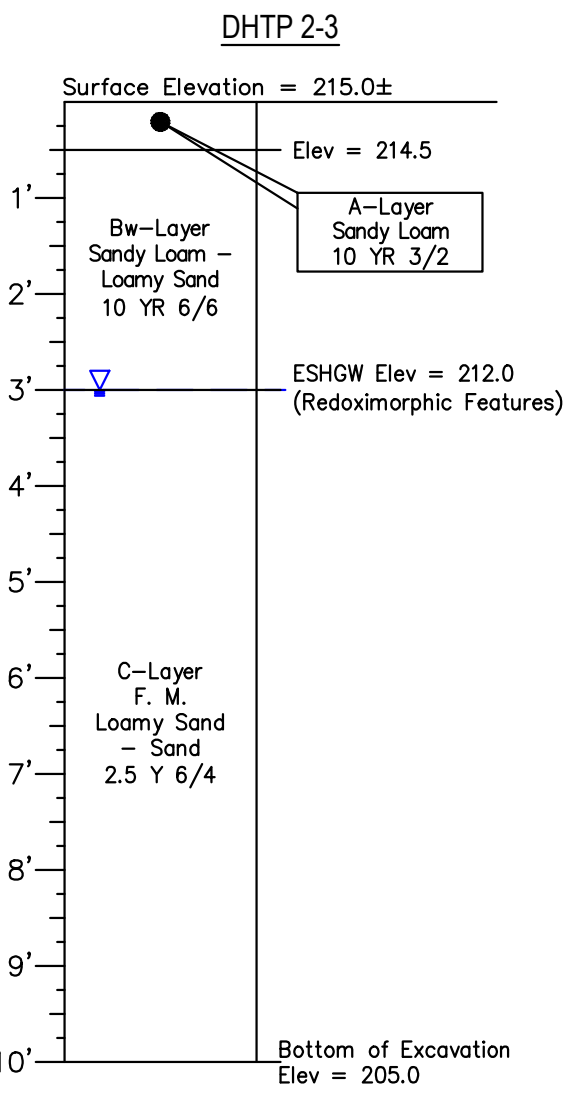
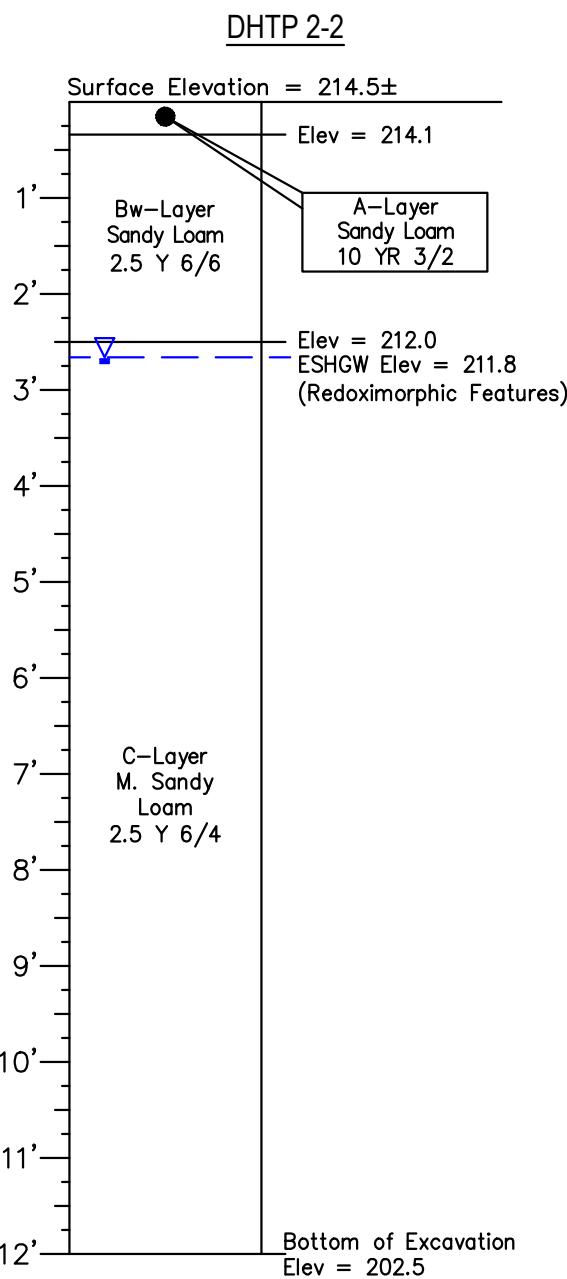
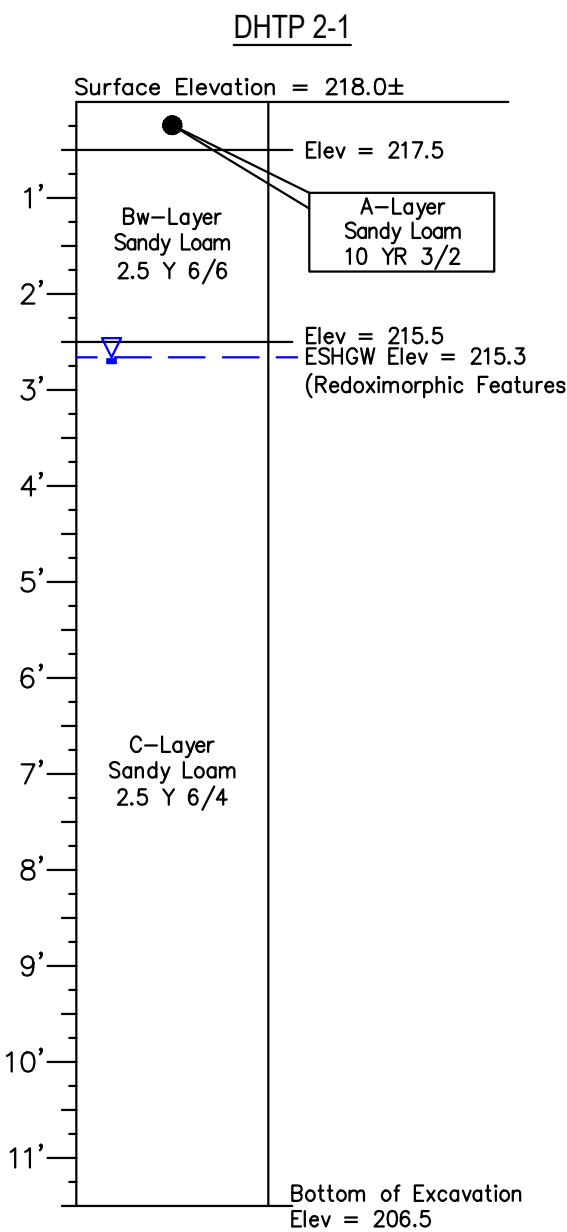
TRENCH NO.	1 & 2	3 & 4	5 & 6	7 & 8	9 & 10	11 & 12	13 & 14
BREAKOUT ELEVATION AT BEGINNING	219.80	219.30	218.80	218.30	217.80	217.30	216.80
BREAKOUT ELEVATION AT END	219.30	218.80	218.30	217.80	217.30	216.80	216.30
INVERT ELEVATION AT BEGINNING	219.30	218.80	218.30	217.80	217.30	216.80	216.30
INVERT ELEVATION AT END	218.80	218.30	217.80	217.30	216.80	216.30	215.80
BOTTOM OF STONE ELEVATION	216.80	216.30	215.80	215.30	214.80	214.30	213.80
DESIGN GROUNDWATER ELEVATION	212.80	212.17	211.42	210.62	209.89	209.38	208.87

RESERVE TRENCH DESIGN DATA

TRENCH NO.	1 & 2	3 & 4	5 & 6	7 & 8	9 & 10	11 & 12	13 & 14
BOTTOM OF STONE ELEVATION	216.56	216.06	215.56	215.06	214.56	214.06	213.56
DESIGN GROUNDWATER ELEVATION	212.49	211.82	211.02	210.22	209.63	209.12	208.66

SOIL TEST DATA

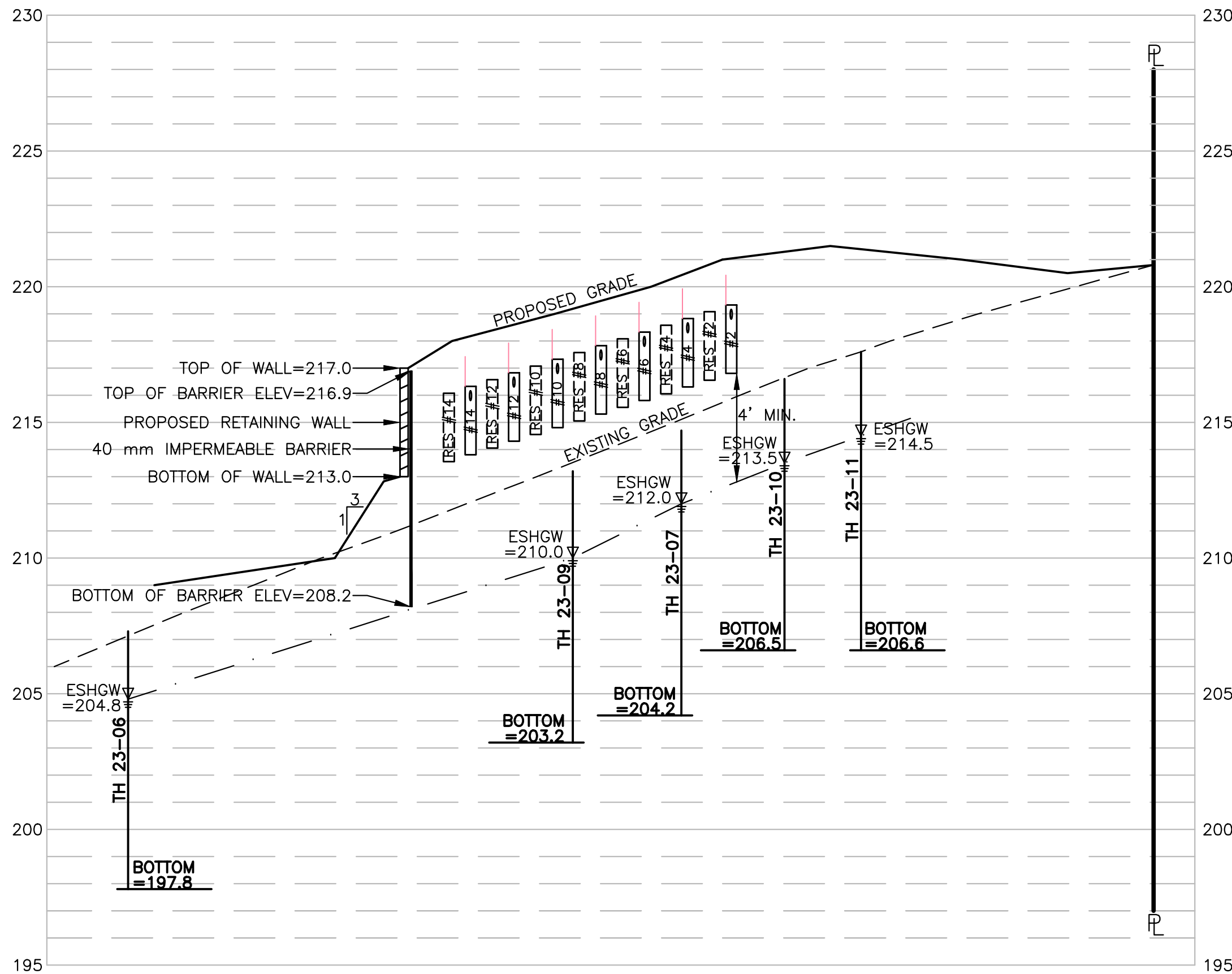
DATE: AUGUST 19, 2024  
WITNESSED BY: MARK ORAM  
OF THE SHERBORN BOARD OF HEALTH  
SOIL EVALUATOR: DESHENG WANG, PE  
SE 2545



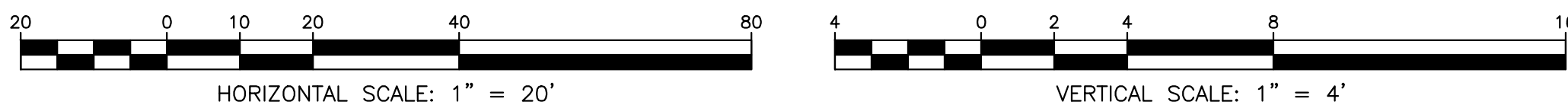
PERCOLATION TEST DATA

TEST PIT NO.	DATE	SURFACE ELEVATION	TOP OF 12" OF WATER		INTERVAL TIME (MINUTES)		RATE: MINUTES/INCH
			DEPTH FROM TOP OF PIT	ELEVATION	12" - 9"	9" - 6"	
DHTP 2-1	8/19/2024	217.5	54"	213.9	98	199	67 MPI
DHTP 2-3	8/19/2024	214.5	50"	210.3	43	115	39 MPI
DHTP 2-2a	8/19/2024	214.0	72"	208.0	11	18	6 MPI
DHTP 2-2b	8/19/2024	214.0	30"	211.5	4	7	3 MPI

OUTSIDE OF SYSTEM. NOT USED IN DESIGN.



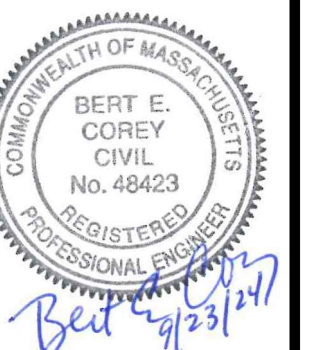
CROSS SECTION A-A



APPLICANT:  
**FENIX PARTNERS BRUSH HILL, LLC**  
177 LAKE STREET  
SHERBORN, MA 01770

OWNER:  
**FENIX PARTNERS BRUSH HILL, LLC**  
ref.  
**MIDDLESEX REGISTRY OF DEEDS**  
**BOOK: 81892 PAGE: 265**

PARCEL ID:  
**MAP 1, LOT 0, BLOCK 18**



NO.	APP	DATE	DESCRIPTION
1	BEC	9/23/24	PER BOH REVIEW COMMENTS

DATE: **JUNE 26, 2024**

SCALE: **AS NOTED**

DESIGN:	DRAFTED:	CHECKED:
JAL/KMR	KMR	BEC

PROJECT TITLE:

**BRUSH HILL HOMES**

**34 BRUSH HILL ROAD**  
**SHERBORN, MA 01770**

SHEET TITLE:

**SOILS INFORMATION**  
**& CROSS SECTION**

SHEET:  
**5 OF 5**  
PROJECT NO.:  
**F-25889**

**BOH-5**