

PERMIT SITE PLAN

for

BRUSH HILL HOMES

at

34 Brush Hill Road in Sherborn, MA

GENERAL NOTES

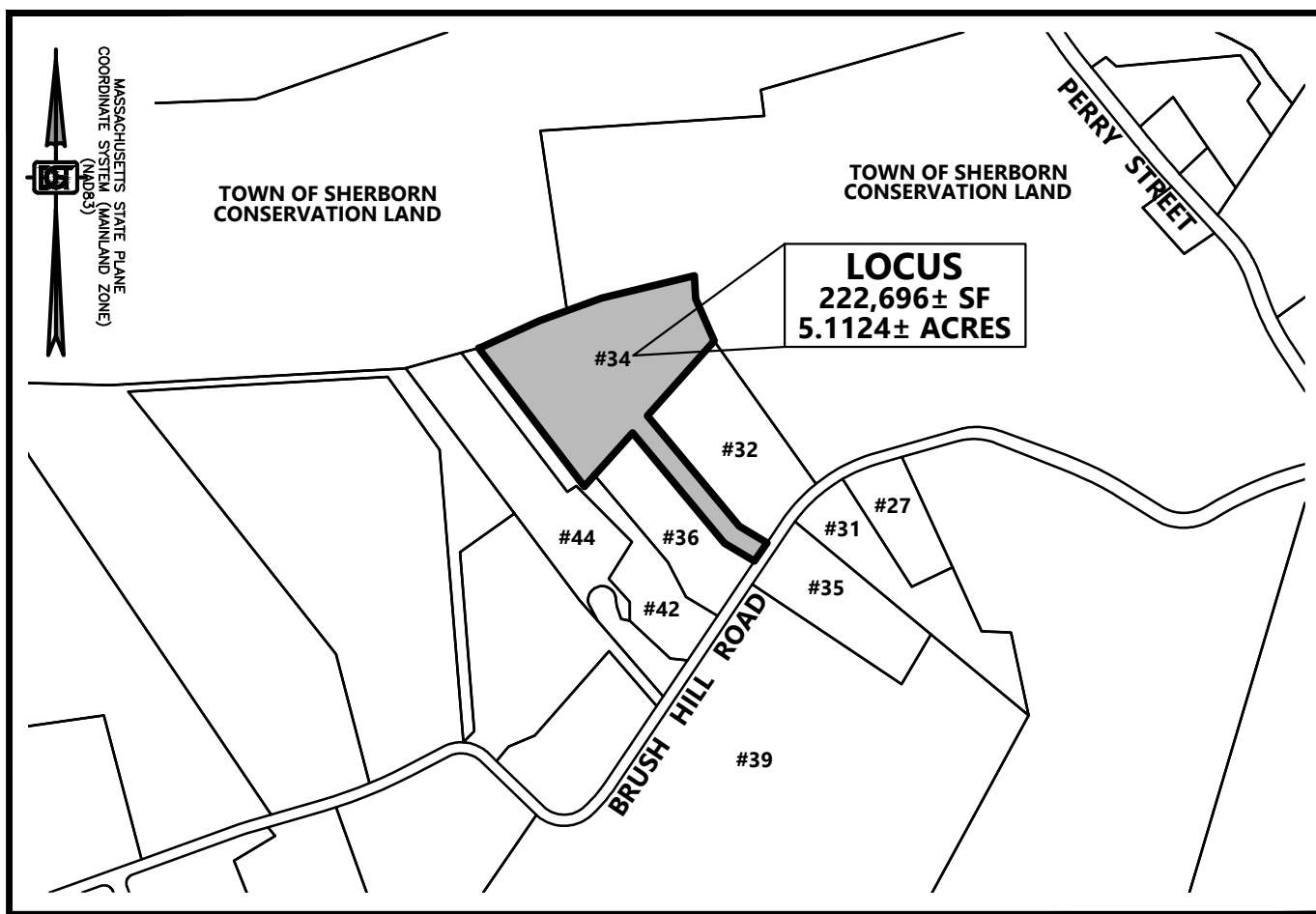
- ELEVATIONS SHOWN HEREON REFER TO NAVD88.
- PROPERTY LINE AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS FROM DGT ASSOCIATES.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCHMARKS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
- ALL SITE CONSTRUCTION SHALL COMPLY WITH THE TOWN OF SHERBORN DEPARTMENT OF PUBLIC WORKS.
- IN CASES WHERE LEDGE, BURIED FOUNDATIONS OR BOULDERS ARE PRESENT, DGT ASSOCIATES SHALL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK OR CONCRETE ENCOUNTERED.
- DGT ASSOCIATES SHALL BE NOTIFIED OF ANY SIGNIFICANT DIFFERENCES IN THE EXISTING CONDITIONS OR UTILITIES THAT MAY AFFECT THE CONSTRUCTION SHOWN ON THIS PLAN FOR ANY NECESSARY PLAN REVISIONS.
- 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.
- THE PROPOSED BUILDING CONFIGURATION AS SHOWN HEREON SHALL BE CONSIDERED CONCEPTUAL AND SHALL BE VERIFIED WITH THE FINAL ARCHITECTURAL PLANS AND THE CURRENT ZONING ORDINANCES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION THAT ARE NOT INTENDED FOR DEMOLITION AND/OR REMOVAL HEREON.
- SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

GRADING AND UTILITY PLAN NOTES

- LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES, OBSTRUCTIONS AND/OR SYSTEMS MAY NOT BE SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR LOCATING AND PROTECTING ALL EXISTING UNDERGROUND UTILITIES AND/OR SYSTEMS WHETHER OR NOT SHOWN HEREON.
- UNLESS OTHERWISE SHOWN HEREON, ALL NEW UTILITIES SHALL BE UNDERGROUND.
- RIM ELEVATIONS SHOWN HEREON FOR NEW STRUCTURES ARE PROVIDED TO ASSIST THE CONTRACTOR WITH MATERIAL TAKEOFFS. FINAL RIM ELEVATIONS SHALL MATCH PAVEMENT, GRADING, LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- WHERE CONNECTIONS AND STRUCTURES ARE TO BE INSTALLED AT EXISTING UTILITIES, THE CONTRACTOR SHALL CONFIRM THE LOCATION AND ELEVATION PRIOR TO INSTALLATION AND SHALL REPORT ANY SIGNIFICANT DISCREPANCY FROM THE PLAN INFORMATION TO THE ENGINEER.
- CURB RADII AND DIMENSIONS SHOWN HEREON ARE AT THE FACE OF CURB.
- WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING.
- AT LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN AND SMOOTH EDGE.
- PERIMETER EROSION CONTROLS SHOWN HEREON SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE AND SHALL SERVE AS A LIMIT OF WORK, UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR CONSTRUCTION OPERATIONS AS APPROVED BY THE ENGINEER.
- ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT THE TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS.

REGULATORY NOTES

- THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES AND COMPILING INFORMATION FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENT AGENCIES. THE LOCATION SHOWN HEREON SHALL BE CONSIDERED APPROXIMATE. BEFORE ANY CONSTRUCTION, DEMOLITION OR SITE WORK, 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 WORK OUTSIDE OF THE BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF THE BUILDING FOUNDATIONS 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).



SITE LOCUS MAP

1" = 500'

SHEET INDEX

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TOPOGRAPHIC PLAN OF LAND IN SHERBORN MASSACHUSETTS
BY DGT ASSOCIATES, DATED 06-25-2024

Table 1. Summary of Project Site Conditions

General Site Conditions	Land Condition	Land Breakdown	Acres	Square Feet	Coverage (%)
Existing Conditions	Unusable Land	Wetlands	0.0000	0	0.0%
	Usable Land	Upland	5.1124	222,696	100.0%
	Disturbed	Total	0.0924	4,025	1.8%
		Building	0.0000	0	0.0%
		Pavement	0.0000	0	0.0%
	Impervious	Sidewalk	0.0000	0	0.0%
		Pervious	0.0924	4,025	1.8%
		Lawn (usable open space)	0.0924	4,025	1.8%
	Undisturbed	Total	5.0200	218,671	98.2%
		Usable Open Space	5.0200	218,671	98.2%
		Unusable Open Space	0.0000	0	0.0%
	Total Usable Open Space	Lawn / Woods	5.1124	222,696	100.0%
Proposed Conditions	Disturbed	Total	4.3945	191,423	86.0%
		Building	0.3818	16,630	7.5%
		Pavement	0.7520	32,756	14.7%
	Impervious	Sidewalk	0.0000	0	0.0%
		Pervious	3.2607	142,037	63.8%
		Lawn (usable open space)	3.2607	142,037	63.8%
	Undisturbed	Total	0.7466	32,520	14.6%
		Usable Open Space	0.7466	32,520	14.6%
		Unusable Open Space	0.0000	0	0.0%
	Total Usable Open Space	Lawn / Woods	4.0073	174,557	78.4%

Table 2. Summary of Proposed Buildings

Item	Total	2 Bedroom
Units	8	8
Bedrooms	16	16

Table 3. Zoning Summary Table (Sherborn Residential B District)

Item	Required		Proposed Conditions		Waiver Required
Minimum Lot Area	2	acres	5.1124	acres	No
Minimum Frontage	200	feet	50.02	feet	Yes
Minimum Lot Width	200	feet	50.02	feet	Yes
Minimum Lot Depth	N/A		N/A		N/A
Minimum Front Setback	60	feet	513.5	feet	No
Minimum Side Setback	40	feet	50.8	feet	No
Minimum Rear Setback	30	feet	51.5	feet	No
Maximum Height (stories)	2.5	stories	2	stories	No
Maximum Height (feet)	35	feet	> 35	feet	No
Maximum Lot Coverage	N/A		N/A		N/A

Lot Coverage	
Building	7.5%
Parking / Paved Areas	14.7%
Usable Open Space	78.4%
Unusable Open Space (wetlands)	0.0%
Lot Coverage	22.2%

APPLICANT:

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

OWNER:

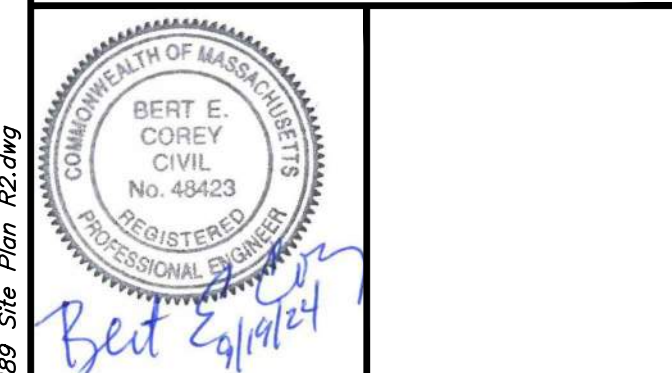
FENIX PARTNERS BRUSH HILL, LLC
ref.
MIDDLESEX REGISTRY OF DEEDS
BOOK: 81892 PAGE: 265

PARCEL ID:

MAP 1, LOT 0, BLOCK 18

ISSUED FOR:

**COMPREHENSIVE
PERMIT APPLICATION**



F:\F-25889\F-25889 Fenix 34 Brush Hill Rd Sherborn MA\Correspondence\Sent\2024-09-19 to Client (Comp Permit Rev 1)\F-25889 Site Plan R2.dwg

2	BEC	9/19/24	PER BOH REVIEW COMMENTS
1	BEC	6/26/24	DESIGN DEVELOPMENT
NO.	APP	DATE	DESCRIPTION

DATE: **JUNE 4, 2024**

SCALE: **AS NOTED**

DESIGN:	DRAFTED:	CHECKED:
KMR/BEC	KMR	BEC

PROJECT TITLE:

**BRUSH HILL
HOMES**

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

SHEET TITLE:

TITLE SHEET

SHEET:

1 OF 17

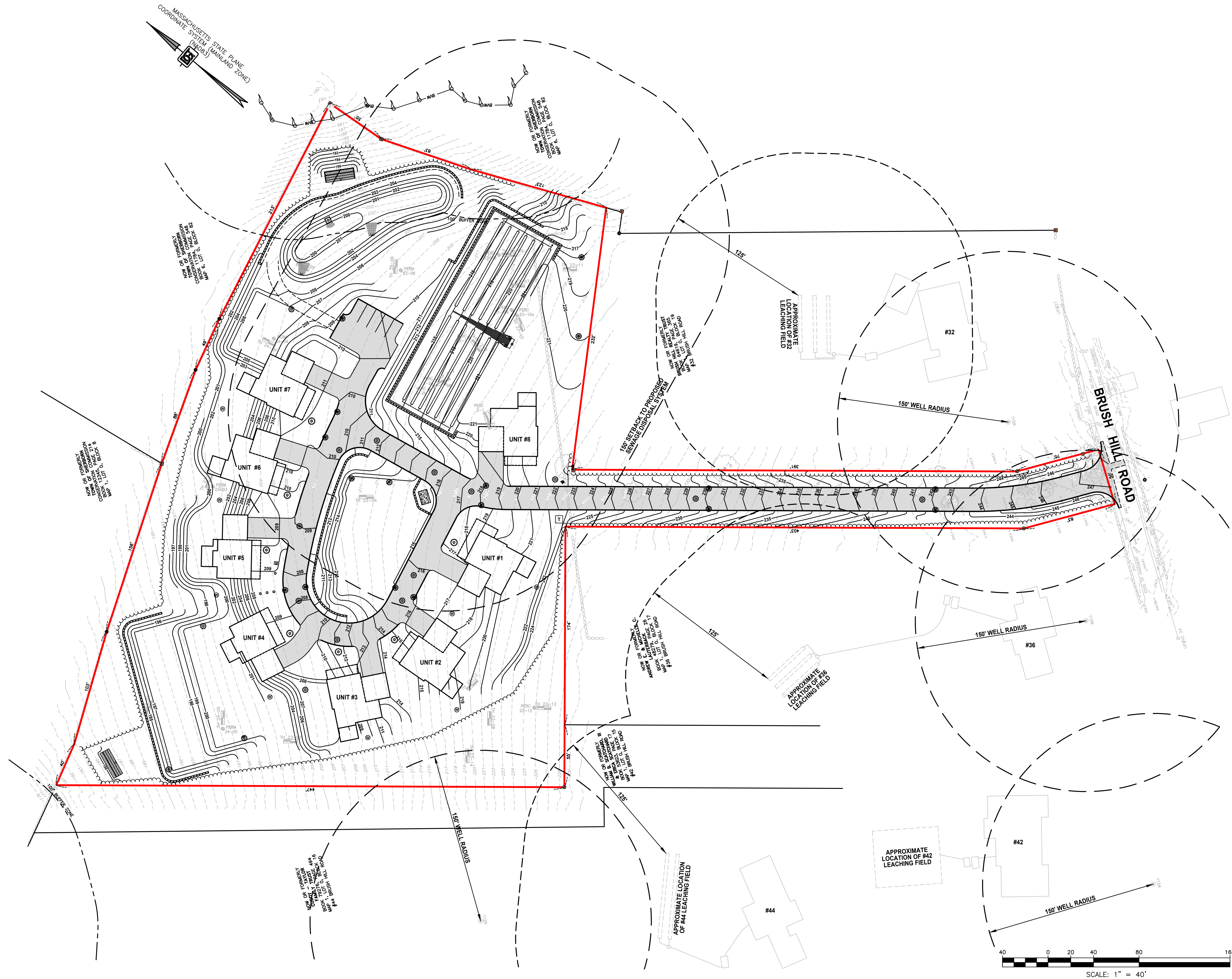
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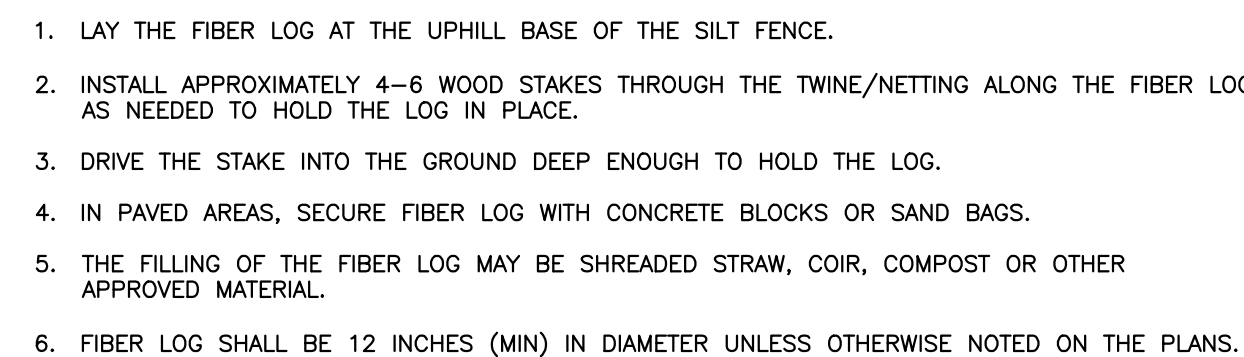
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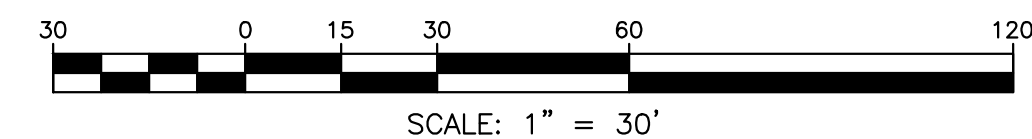
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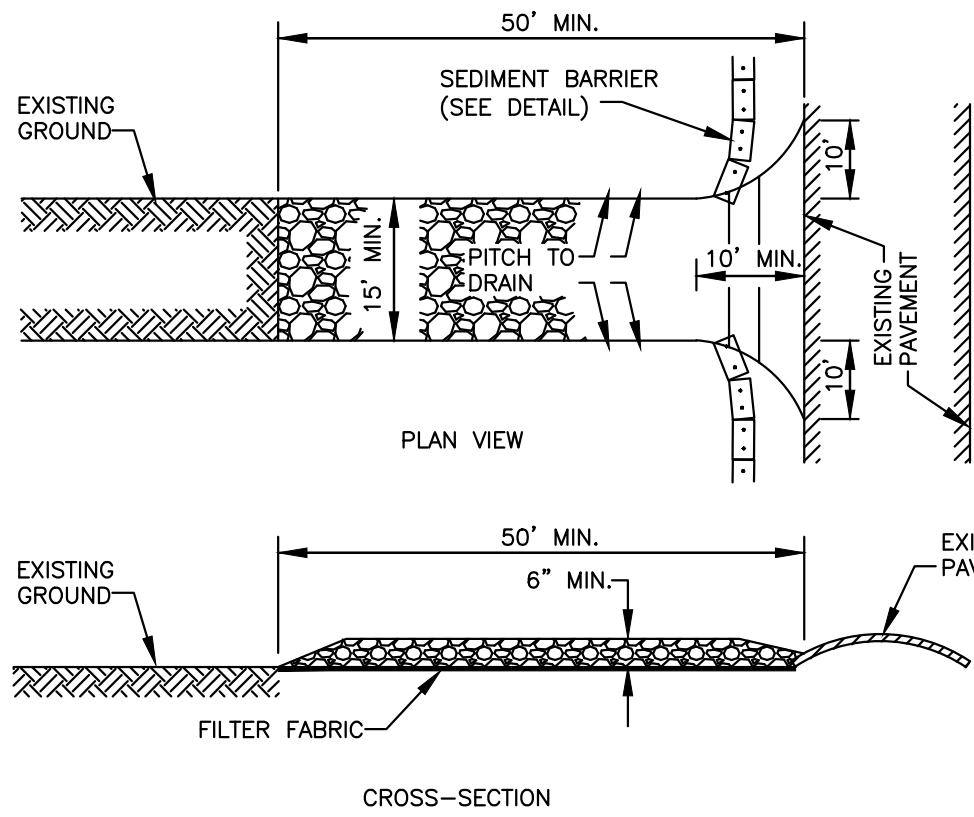
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1. AREAS DESIGNATED FOR PROPOSED STORMWATER MANAGEMENT FACILITIES AND SOIL ABSORPTION SYSTEM ARE TO BE PROTECTED FROM COMPACTION, STOCKPILING, TEMPORARY STORMWATER SEDIMENT BASINS OR DEWATERING BASINS ARE NOT TO BE PLACED IN THESE AREAS.
2. SEE SHEET C-4 FOR ADDITIONAL NOTES REGARDING THE EROSION AND SEDIMENT CONTROLS, DETAILS AND PERFORMANCE STANDARDS.
3. THE SITE CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENT BASINS AND BEST MANAGEMENT PRACTICES AS NECESSARY TO PROTECT THE WETLAND RESOURCE AREAS, ADJUTING PROPERTIES AND DRAIN SYSTEMS TO COMPLY WITH THE FEDERAL NPDES CONSTRUCTION GENERAL PERMIT AND OTHER APPLICABLE PERMITS AND REGULATIONS.
4. SNOW REMOVAL: NO SNOW FROM SNOW REMOVAL OPERATIONS SHALL BE DEPOSITED BEYOND THE LIMIT OF WORK NOR IN THOSE AREAS IDENTIFIED AS TO NOT BE DISTURBED.
5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT TO THE ARCHITECT AND/OR ENGINEER PRIOR TO BEGINNING ANY WORK ANY DISCREPANCIES BETWEEN THE PLANS AND THE ACTUAL SITE CONDITIONS.
6. CONTRACTOR SHALL OBTAIN TRENCHING AND ROAD OPENING PERMIT FROM THE SHERBORN PUBLIC WORKS DEPARTMENT AS NECESSARY FOR ANY WORK WITHIN THE PUBLIC ROAD RIGHT-OF-WAY.
7. THE DESIGNATED STOCKPILE AREA SHOWN ON THIS PLAN IS AN EXAMPLE OF A SUITABLE AREA FOR STOCKPILING OF SOIL MATERIALS. OTHER AREAS MAY BE SELECTED BY THE CONTRACTOR FOR STOCKPILE AREAS WITH PRIOR APPROVAL OF THE ENGINEER.
8. THIS PROJECT IS SUBJECT TO AN ORDER OF CONDITIONS ISSUED BY THE SHERBORN CONSERVATION COMMISSION. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH THAT ORDER AND ALL OTHER APPLICABLE PERMITS.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THIS DOCUMENT SHALL BE PREPARED AND SUBMITTED TO THE SHERBORN CONSERVATION COMMISSION, OWNER, AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY SITE DISTURBANCE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF EXISTING ON-SITE AND OFF-SITE UTILITIES AND OTHER FEATURES DAMAGED BY THE WORK THAT ARE IDENTIFIED AS "TO BE PROTECTED AND TO REMAIN" OR ARE NOT SPECIFICALLY INTENDED FOR DEMOLITION AND/OR REMOVAL.



COMPREHENSIVE PERMIT APPLICATION

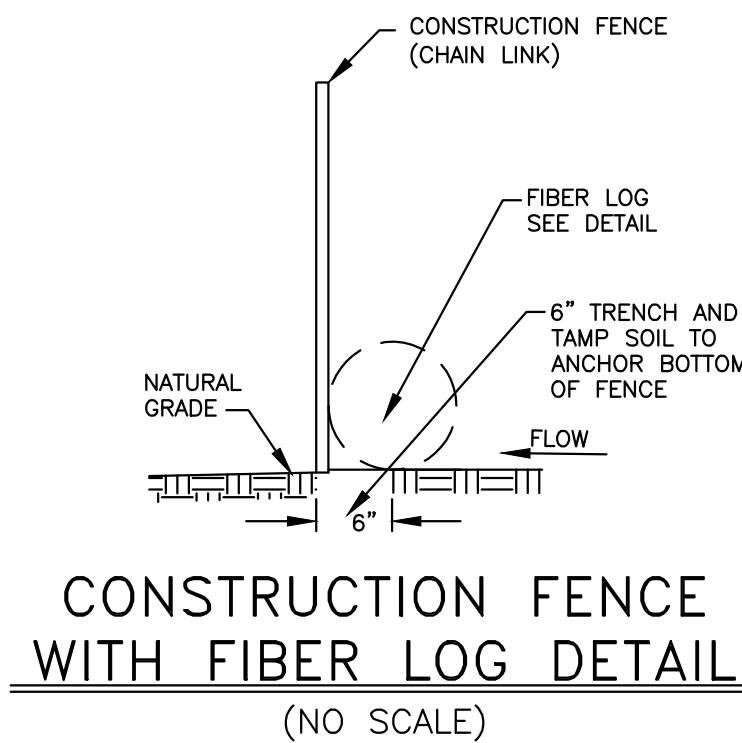




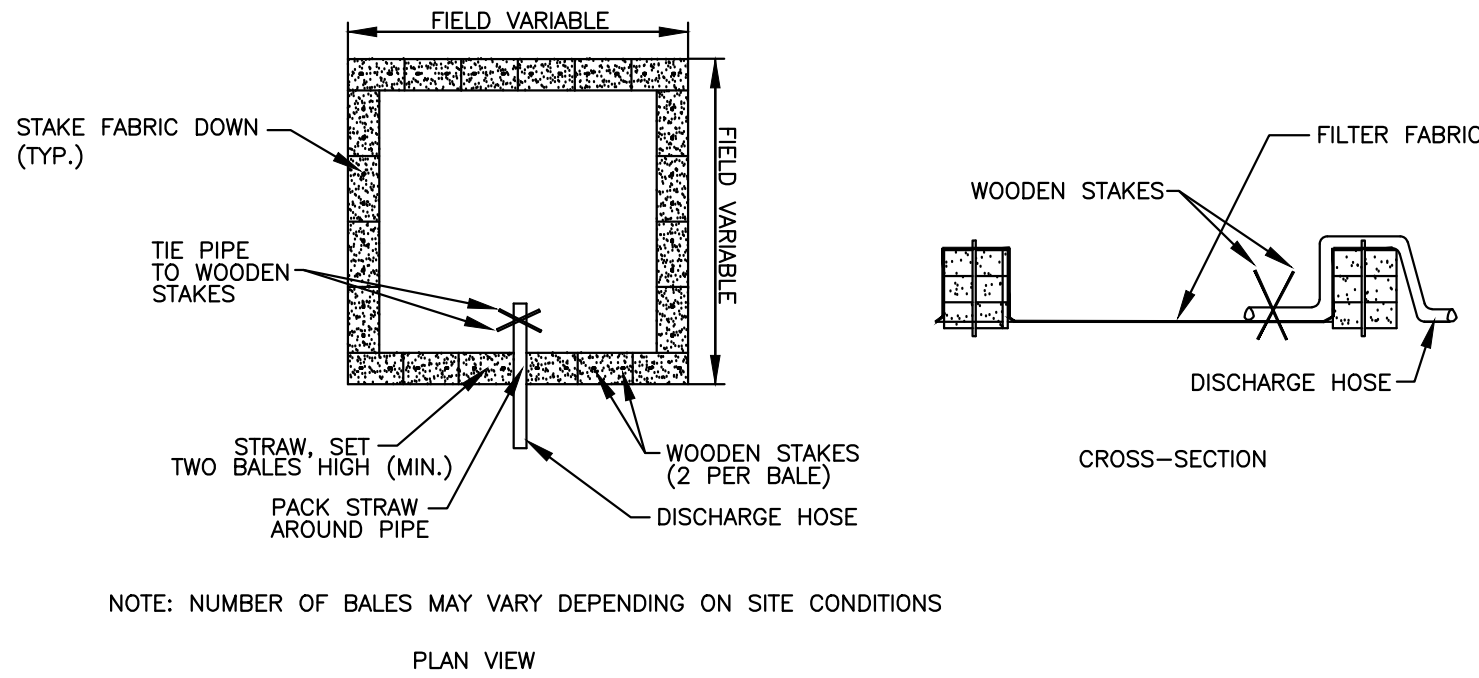
CONSTRUCTION SPECIFICATIONS:

- STONE SIZE – USE 1 1/2" TO 3 1/2" WASHED, ANGULAR STONE.
- THICKNESS – NOT LESS THAN SIX (6) INCHES.
- WIDTH – FIFTEEN (15) FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER FABRIC – SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. USE MIRAFI HP-370 OR EQUAL.
- MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF WAY MUST BE REMOVED IMMEDIATELY.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

STONE TRACKING PAD (CONSTRUCTION ENTRANCE)
(NO SCALE)



CONSTRUCTION FENCE
WITH FIBER LOG DETAIL
(NO SCALE)



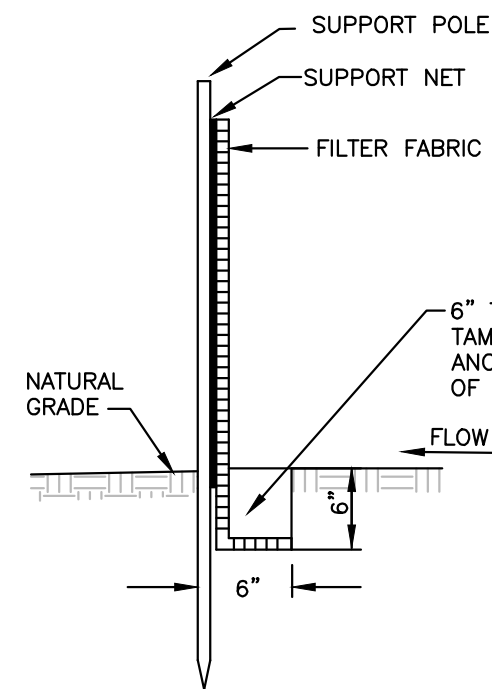
NOTE: NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS

PLAN VIEW

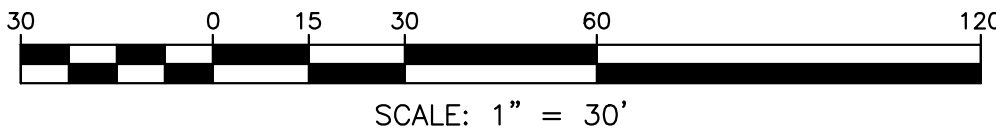
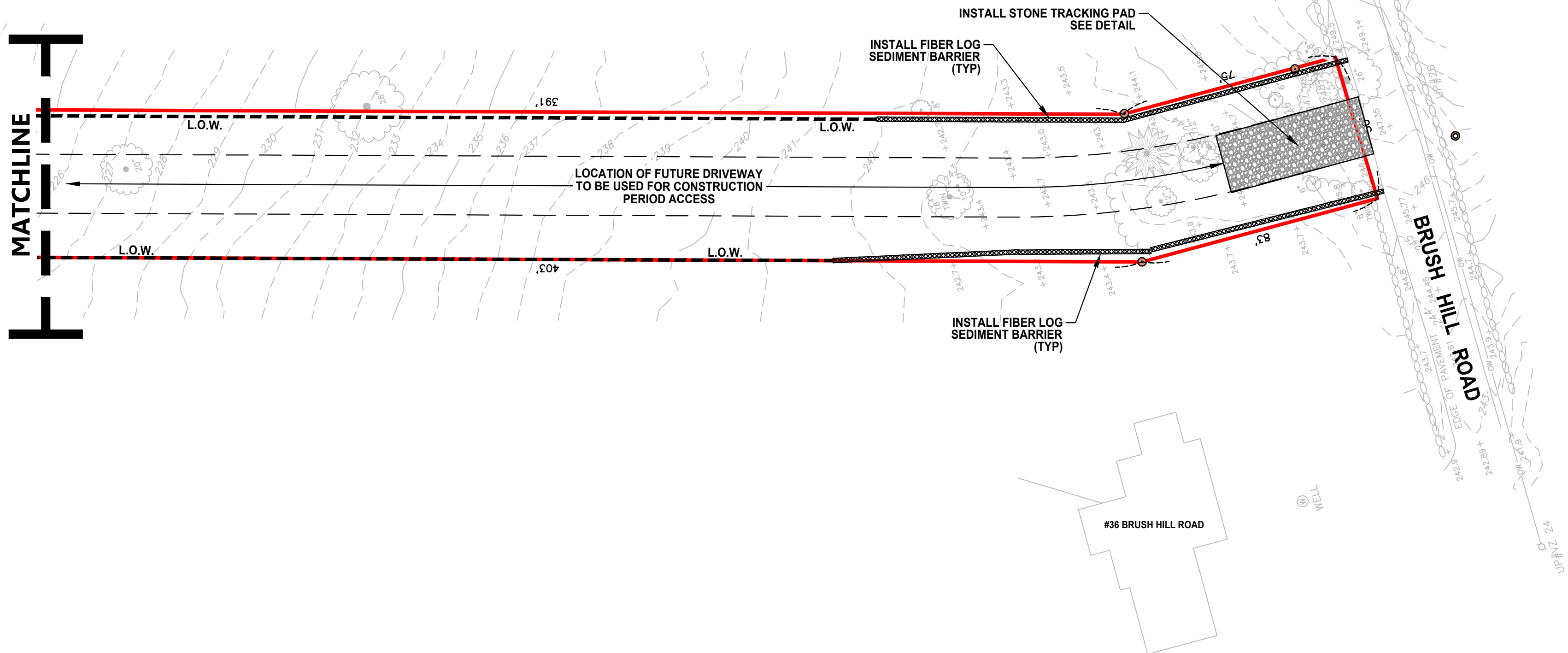
DEWATERING OF EXCAVATIONS NOTES:

- DISCHARGE FROM DEWATERING PUMPS OR TEMPORARY TRENCH OR EXCAVATION DRAINS SHALL NOT DISCHARGE DIRECTLY TO WETLAND RESOURCE AREAS, ON-SITE SUBSURFACE SEWAGE DISPOSAL SYSTEM, OR EXISTING/PROPOSED DRAINAGE SYSTEMS. THE DISCHARGES SHALL BE DIRECTED INTO A CONSTRUCTED SEDIMENT BASIN OR A STRAW BALE SETTLING BASIN.

STRAW BALE SETTLING BASIN
(NO SCALE)



SILT FENCE INSTALLATION
(NO SCALE)



EROSION AND SEDIMENT CONTROL NOTES

1. CONSTRUCTION PERIOD EROSION AND SEDIMENT CONTROL

1.1 THE PURPOSE OF THE CONSTRUCTION PERIOD EROSION AND SEDIMENT CONTROL PLAN IS TO MINIMIZE THE INTRODUCTION OF SEDIMENTS ONTO PUBLIC RIGHT OF WAYS, ABUTTING PROPERTIES, AND TO POST-DEVELOPMENT STORMWATER BMP'S RESULTING FROM THE LAND DISTURBANCE ACTIVITIES DURING CONSTRUCTION.

1.2 INSPECTIONS SHALL BE CONDUCTED BY THE GENERAL CONTRACTOR ON A BI-WEEKLY BASIS (EVERY TWO WEEKS), OR FOLLOWING SIGNIFICANT STORM EVENTS (RAINFALL OF 0.5 OR MORE) THAT CAN AFFECT THE SEDIMENT AND EROSION CONTROL PRACTICES IMPLEMENTED AT THE SITE. THE PURPOSE OF THE INSPECTIONS IS TO EVALUATE THE EFFECTIVENESS OF THE CONTROLS AND ANY REQUIRED MAINTENANCE ACTIVITIES. IF AN EROSION/SEDIMENTATION CONTROL MEASURE IS FOUND TO BE INADEQUATE FOR PROPERLY CONTROLLING SEDIMENT, AN ADEQUATE MEASURE SHALL BE DESIGNED AND IMPLEMENTED. A COPY OF THE WRITTEN INSPECTION SHALL BE KEPT ON FILE AT THE CONSTRUCTION SITE.

1.3 DURING CONSTRUCTION, PROPOSED STORMWATER MANAGEMENT STRUCTURES SHALL BE PROTECTED FROM SEDIMENT. ALL PROPOSED NEW STORMWATER MANAGEMENT STRUCTURES THAT INFILTRATE RUNOFF ARE PARTICULARLY SENSITIVE TO DAMAGE BY SEDIMENT. INFILTRATION TECHNOLOGIES ARE NOT DESIGNED TO HANDLE THE HIGH CONCENTRATIONS OF SEDIMENTS TYPICALLY FOUND IN CONSTRUCTION RUNOFF, AND MUST BE PROTECTED FROM CONSTRUCTION RELATED SEDIMENT LOADINGS. SITE RUNOFF FROM UNSTABILIZED AREAS SHALL NOT BE DISCHARGED INTO THE PROPOSED INFILTRATION SYSTEMS, TRENCH DRAIN, AND CATCH BASINS UNTIL THE TRIBUTARY DRAINAGE AREA IS STABLE OR THE RUNOFF IS TREATED TO BE ESSENTIALLY FREE FROM SEDIMENT TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE TEMPORARY BY-PASS SYSTEMS AS NECESSARY TO PREVENT CONSTRUCTION SITE RUNOFF FROM ENTERING THE INFILTRATION SYSTEMS. THE INFILTRATION SYSTEMS SHALL REMAIN OFF-LINE AND PROTECTED. CLEAN ROOF RUNOFF MAY DISCHARGE INTO THE INFILTRATION SYSTEMS IF IT IS PIPED DIRECTLY TO THE SYSTEMS AND NOT DIRECTED OVER DISTURBED AREAS.

1.4 NO STOCKPILING IS ALLOWED WITHIN THE FOOTPRINT OF THE PROPOSED INFILTRATION SYSTEMS OR THE FOOTPRINT OF THE PROPOSED SOIL ABSORPTION FIELD. CONTRACTOR IS TO LOCATE THE PROPOSED AREAS FOR THESE SYSTEMS PRIOR TO THE START OF CONSTRUCTION.

1.5 DURING THE INSTALLATION OF THE INFILTRATION SYSTEMS, NO PARKING WILL BE PERMITTED OVER THE SYSTEM UNTIL IT HAS BEEN PROPERLY BACKFILLED AND PROTECTED FROM SEDIMENT AND VEHICULAR LOADS.

1.6 NO PARKING IS ALLOWED OVER THE FOOTPRINT OF THE PROPOSED SOIL ABSORPTION SYSTEM AT ANYTIME DURING THE CONSTRUCTION PROCESS.

2. GENERAL PERFORMANCE STANDARDS:

2.1 THE CONTRACTOR SHALL INSTALL, ROUTINELY INSPECT AND MAINTAIN ALL SEDIMENT AND EROSION CONTROLS SUCH THAT THEY ARE IN PROPER WORKING ORDER AT ALL TIMES DURING THE CONSTRUCTION PROJECT UNTIL SUCH TIME AS ALL AREAS OF THE SITE TRIBUTARY TO THOSE EROSION CONTROLS ARE IN A PERMANENTLY STABILIZED CONDITION.

2.2 THE CONTRACTOR SHALL MANAGE THE SITE SUCH THAT EROSION AND SEDIMENT FROM RUNOFF AND WIND BLOWN DUST ARE CONTROLLED AND MINIMIZED AT ALL TIMES. THE EROSION CONTROLS SHOWN ON THIS PLAN INCLUDE THE INITIAL SETUP OF EROSION CONTROLS AND BASIC INFORMATION. TO MEET THE REQUIREMENT OF BEST MANAGEMENT PRACTICES, THE CONTRACTOR MUST MANAGE THE SITE PROPERLY WHICH MAY INCLUDE, BUT NOT BE LIMITED TO: MINIMIZING AREAS OF EXPOSED SOIL; USING TEMPORARY COVER; MAKE NECESSARY ADJUSTMENTS TO THE EROSION CONTROL WITH THESE INSTALLATIONS TO IMPROVE FUNCTION; PROVIDE TEMPORARY SEDIMENT BASINS; INSTALL ADDITIONAL EROSION CONTROL WHERE NECESSARY.

2.3 THE EROSION CONTROL WORK SHOWN ON THIS PLAN ARE ALSO SUBJECT TO OTHER STATE AND LOCAL APPROVALS. THE CONTRACTOR SHALL OBTAIN AND BE RESPONSIBLE FOR COMPLIANCE WITH THE CONDITIONS AND REQUIREMENTS OF THOSE PERMITS.

2.4 DESIGN, INSTALLATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROLS SHALL BE IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES FOLLOWING THE GUIDELINES INCLUDE IN THE FOLLOWING:
- "STORMWATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES, DEVELOPING POLLUTION PREVENTION PLANS AND BEST MANAGEMENT PRACTICES" U.S. ENVIRONMENTAL PROTECTION AGENCY, OCTOBER 1992.
- "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, A GUIDE FOR PLANNERS, DESIGNERS AND MUNICIPAL OFFICIALS", MASS. EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS, MAY 2003.
- U.S.D.A. NATURAL RESOURCES AND CONSERVATION SERVICES (NRCS) GUIDELINES.

3. FEDERAL NPDES PHASE II COMPLIANCE:

3.1 THIS PROJECT IS SUBJECT TO THE FEDERAL CLEAN WATER ACT REQUIREMENTS FOR CONSTRUCTION SITES ADMINISTERED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA). THIS PROGRAM IS THE "NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)" – PHASE II FOR CONSTRUCTION SITES. FOR COMPLIANCE WITH THIS PROGRAM, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A COMPLETE "STORMWATER POLLUTION PREVENTION PLAN" (SWPPP) IN CONFORMANCE WITH THE CURRENT CONSTRUCTION GENERAL PERMIT AND FILING A NOTICE OF INTENT WITH THE EPA UNDER THE NPDES PROGRAM. THE CONTRACTOR SHALL THEN MANAGE THE SITE IN COMPLIANCE WITH THE SWPPP AND IN COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT. NOTE THAT THE SWPPP IS TO BE CONSISTENT WITH THIS EROSION AND SEDIMENT CONTROL PLAN AND OTHER APPLICABLE APPROVALS. THE EROSION AND SEDIMENT CONTROL PLAN INCLUDED IN THIS PLAN SET MAY BE USED AS PART OF THE DOCUMENTATION REQUIRED FOR THE PREPARATION OF A SWPPP, BUT IS NOT TO BE CONSIDERED AS MEETING THE FULL REQUIREMENTS OF A SWPPP PREPARED FOR COMPLIANCE WITH THE NPDES PROGRAM.

4. PERIMETER FIBER LOG / SILT FENCING AND LIMIT OF WORK:

4.1 PRIOR TO ANY DISTURBANCE OR ALTERATIONS OF ANY AREA ON THE SITE, AN EROSION CONTROL BARRIER AND CONSTRUCTION FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLAN.

4.2 INSTALL THE FIBER LOGS ON THE UPHILL SIDE OF THE SILT FENCE AS SHOWN. IN THOSE AREAS WHERE THE TOPOGRAPHY INDICATES THAT STORMWATER RUNOFF WILL BE CONCENTRATED (AT LOW POINTS), ADDITIONAL FIBER LOGS, AS NECESSARY, SHALL BE STAKED ON THE UPGRADE SIDE OF THE SEDIMENT BARRIER FOR ADDED FILTRATION AND PROTECTION. THE REQUIRED LOCATIONS FOR THE ADDED FIBER LOG INSTALLATION WILL BE SELECTED BY THE ENGINEER AND / OR THE AUTHORIZED INSPECTOR / SWPPP COORDINATOR UPON COMPLETION OF THE SEDIMENT BARRIER INSTALLATION. (SEE DETAIL).

4.3 ONCE INSTALLED, THE STAKED FIBER LOGS AND CONSTRUCTION FENCE SHALL BE MAINTAINED IN PLACE UNTIL ALL AREAS UPGRADE FROM THE BARRIERS HAVE BEEN PERMANENTLY STABILIZED.

4.4 ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED OR WHERE SPECIAL STABILIZATION MEASURES OR LANDSCAPE PLANTINGS ARE PROPOSED SHALL BE LOAMED AND SEEDED OR SODDED. SIX INCHES OF LOAM TOPSOIL (MIN. COMPACTED DEPTH) SHALL BE APPLIED UNLESS, OTHERWISE SPECIFIED. (SEE LANDSCAPE PLAN AND OTHER PLANS AS APPLICABLE).

4.5 THE PERIMETER FIBER LOGS AND CONSTRUCTION FENCE ARE ALSO LIMITS OF WORK. ALL AREAS OUTSIDE THE LIMIT ARE TO BE LEFT UNDISTURBED. DURING THE SITE WORK, ALL PERSONS AND EQUIPMENT SHALL STAY OUT OF THESE AREAS TO PRESERVE THE EXISTING VEGETATION AND SOIL COVER.

5. CONSTRUCTION ENTRANCE:

5.1 AT THE START OF SITE WORK, A STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE ACCESS TO THE SITE FROM THE ACCESS EASEMENT DRIVEWAY TO CONTROL THE TRACKING OF MUD OFF THE SITE. THE ENTRANCE SHALL BE MAINTAINED UNTIL THE SITE IS IN A STABILIZED CONDITION WHEN THE POSSIBILITY OF VEHICLES TRACKING MUD OFF SITE HAS BEEN ELIMINATED.

5.2 THE CONTRACTOR SHALL SWEEP THE ADJACENT ROADWAYS WHEN MUD, DUST, DIRT, DEBRIS, ETC. HAS SHOWN SIGNS OF BUILDUP ON THE ROADWAYS EXITING THE SITE. THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THIS MATTER AND IMMEDIATE ATTENTION IS ALWAYS REQUIRED.

6. DEWATERING OF EXCAVATIONS:

6.1 DISCHARGE FROM DEWATERING PUMPS OR TEMPORARY TRENCH OR EXCAVATION DRAINS SHALL NOT BE DISCHARGED DIRECTLY TO THE ON-SITE DRAINAGE SYSTEM, WETLANDS, OR SEWAGE DISPOSAL SYSTEM. DISCHARGES SHALL BE DIRECTED TO A TREATMENT SYSTEM CONSISTING OF A SEDIMENT BASIN, STRAW BALE SEDIMENT BASIN, FILTER BAG SYSTEM OR OTHER APPROVED METHOD TO FILTER THE DISCHARGE WATER AND PREVENT EROSION.

6.2 ALL DEWATERING DRAINAGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE TOWN OF SHERBORN REQUIREMENTS, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, MASSACHUSETTS DEP AND OTHER APPROPRIATE AGENCIES. UNDER NO CIRCUMSTANCE SHALL DEWATERING DRAINAGE BE DISCHARGED INTO SANITARY SEWER.

7. SOIL STOCKPILES:

7.1 STOCKPILES OF SOIL MATERIALS SHALL BE PLACED WITHIN AREAS THAT ARE PROTECTED BY PERIMETER EROSION CONTROLS, OR SHALL BE SURROUNDED BY PROPER SILT FENCE OR FIBER LOGS.

7.2 STOCKPILES THAT ARE TO BE IN PLACE FOR EXTENDED PERIODS OF TIME (MORE THAN 30 DAYS) SHALL BE COVERED OR OTHERWISE TEMPORARILY STABILIZED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

8. CATCH BASIN INLET PROTECTION

8.1 CATCH BASINS AND TRENCH DRAINS WITHIN THE WORK AREA OR THAT WILL RECEIVE RUNOFF FROM THE WORK AREA SHALL BE PROTECTED WITH A SILT SACK AND OR OTHER APPROVED INSTALLATION TO MINIMIZE THE SEDIMENT LOAD TO THE CATCH BASIN

9. DUST CONTROL:

9.1 THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES DURING SITE WORK TO MINIMIZE WIND BLOWN DUST FROM EXPOSED SOIL SURFACES. MEASURES INCLUDE BUT ARE NOT LIMITED TO:
- SPRINKLING WATER ON EXPOSED SURFACES
- APPLICATION OF TEMPORARY COVER SUCH AS HYDRO MULCH AND TACKIFIER, STRAW MATTING, JUTE NETTING ETC.

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

ISSUED FOR:

COMPREHENSIVE
PERMIT APPLICATION



NO.	APP	DATE	DESCRIPTION
2	BEC	9/19/24	PER BOH REVIEW COMMENTS
1	BEC	6/26/24	DESIGN DEVELOPMENT

DATE: JUNE 4, 2024

SCALE: 1" = 30'

DESIGN:	DRAFTED:	CHECKED:
KMR/BEC	KMR	BEC

PROJECT TITLE:

BRUSH HILL
HOMES

34 BRUSH HILL ROAD
SHERBORN, MA 01770

SHEET TITLE:

EROSION & SEDIMENT
CONTROL PLAN &
DETAILS - 02

SHEET:

4 OF 17


PROJECT NO.:

F-25889

C-4

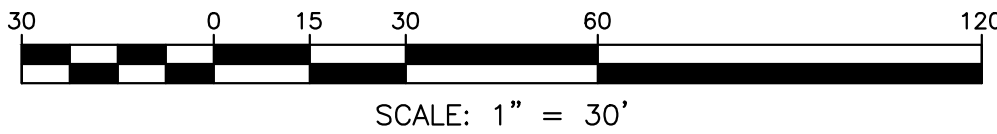


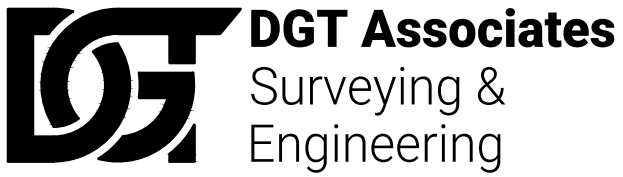
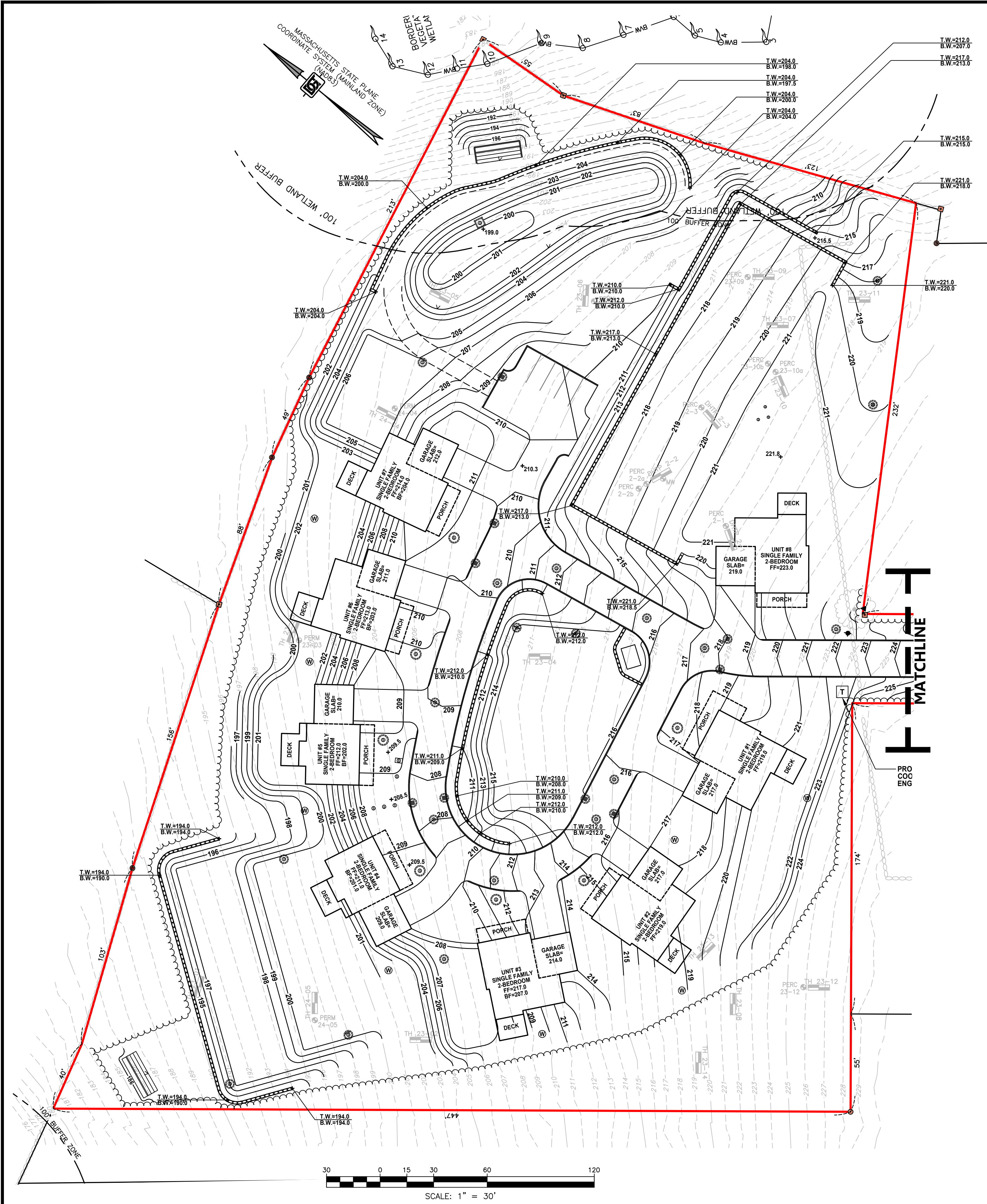
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Framingham
Boston • Worcester • Preston, CT

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

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**BRUSH HILL
HOMES**

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

SHEET TITLE:

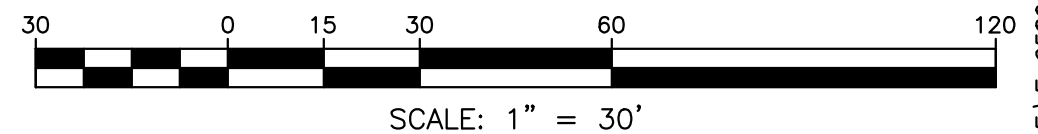
**SITE GRADING
PLAN - 01**

SHEET: 7 OF 17	C-7
PROJECT NO.: F-25889	

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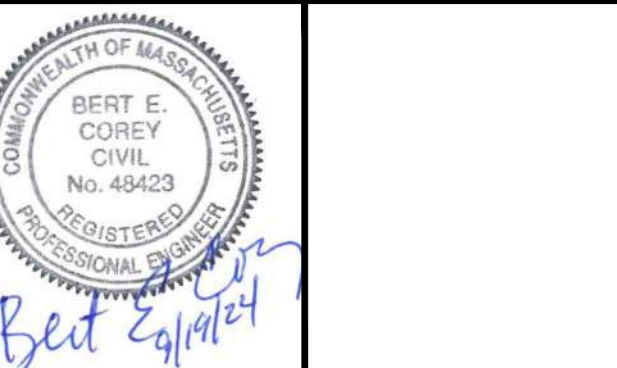
OWNER:
FENIX PARTNERS BRUSH HILL, LLC
ref.
MIDDLESEX REGISTRY OF DEEDS
BOOK: 81892 PAGE: 265

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HOMES**

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

SHEET TITLE:

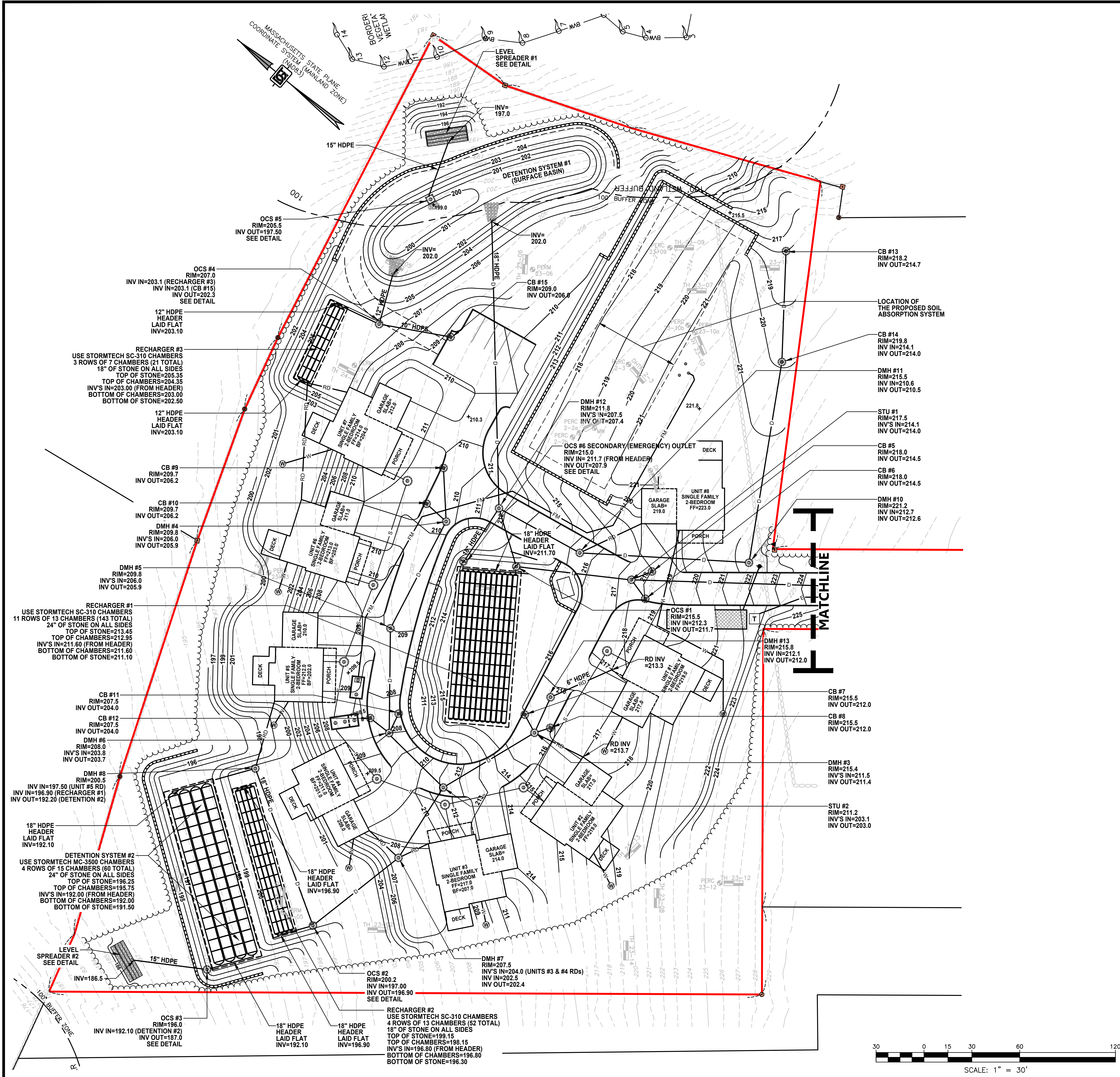
DRAINAGE PLAN - 01

SHEET:
9 OF 17

PROJECT NO.:
F-25889

C-9

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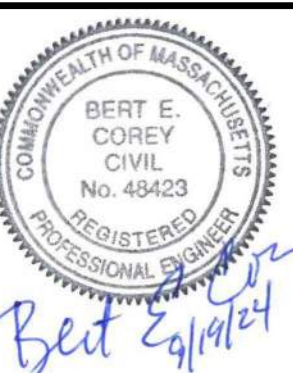


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SHERBORN, MA 01770

OWNER:
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ref.
MIDDLESEX REGISTRY OF DEEDS
BOOK: 81892 PAGE: 265

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HOMES**

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SHERBORN, MA 01770**

SHEET TITLE:

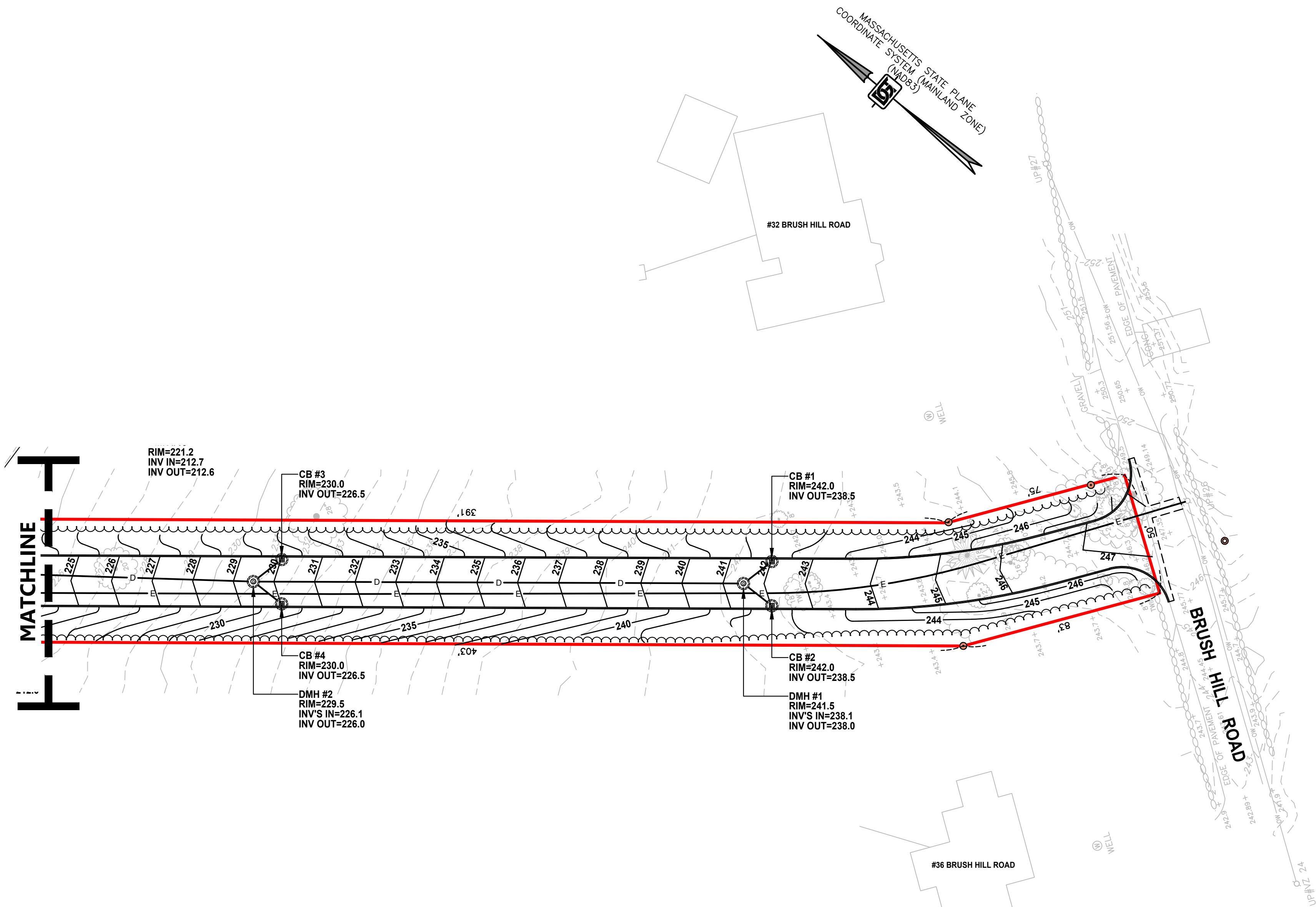
DRAINAGE PLAN - 02

SHEET:
10 OF 17

PROJECT NO.:
F-25889

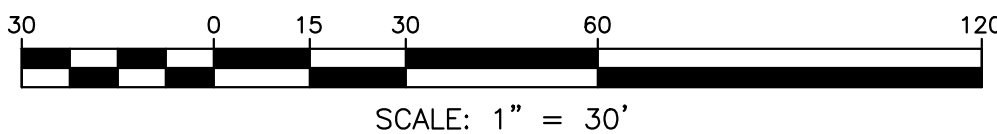
C-10

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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



SCHEDULE OF SEWER MANHOLES

SMH #1 RIM=217.5 INV IN=214.10 INV OUT=214.00	SMH #5 RIM=209.2 INV'S IN=205.75 INV OUT=205.65
SMH #2 RIM=214.8 INV'S IN=211.30 INV OUT=211.20	SMH #6 RIM=209.8 INV'S IN=206.35 INV OUT=206.25
SMH #3 RIM=211.5 INV'S IN=208.10 INV OUT=208.00	SMH #7 RIM=210.8 INV'S IN=207.10 INV OUT=207.00
SMH #4 RIM=209.5 INV'S IN=206.10 INV OUT=206.00	SMH #8 RIM=210.8 INV'S IN=207.80 INV OUT=207.70

SCHEDULE OF ELEVATIONS

FIRST FLOOR ELEVATIONS	=	SEE PLAN
PIPE 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

DESIGN DATA

FLOW CALCULATIONS	
1. BUILDING USE:	SINGLE FAMILY RESIDENTIAL DWELLINGS
2. DESIGN FLOW - TITLE 5:	110 GPD/BEDROOM
3. EIGHT (8) 2-BEDROOM DWELLINGS:	1,760 GPD
4. TOTAL DAILY FLOW - TITLE 5:	1,760 GALLONS
SYSTEM REQUIREMENTS	
1. DESIGN PERCOLATION RATE:	39 MINUTES PER INCH
2. SOIL CLASS:	CLASS III
3. LONG TERM ACCEPTANCE RATE (LTAR):	0.25 GAL/SF
4. GARBAGE GRINDER:	NO - DEED RESTRICTION REQUIRED
5. TOTAL AREA REQUIRED - TITLE 5:	7,040 SF
6. TOTAL AREA PROVIDED:	7,056 SF (14 TRENCHES @ 84' LONG)
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 #1 (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	

PRIMARY TRENCH DESIGN DATA

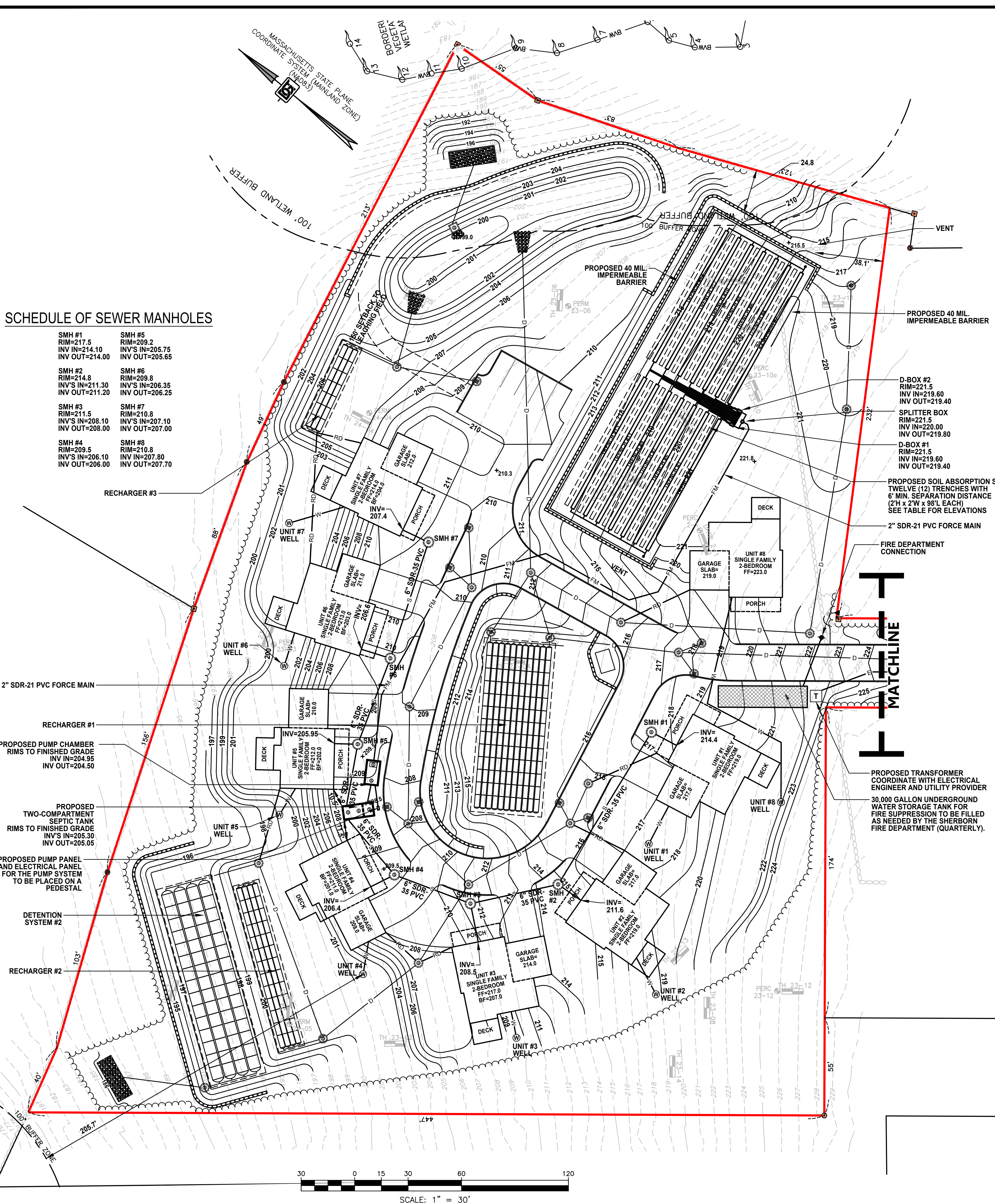
TRENCH NO.	1 & 2	3 & 4	5 & 6	7 & 8	9 & 10	11 & 12	13 & 14
BREAKOUT ELEVATION AT BEGINNING	219.80	219.30	218.80	218.30	217.80	217.30	216.80
BREAKOUT ELEVATION AT END	219.30	218.80	218.30	217.80	217.30	216.80	216.30
INVERT ELEVATION AT BEGINNING	219.30	218.80	218.30	217.80	217.30	216.80	216.30
INVERT ELEVATION 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

GENERAL NOTES

- SEE SHEET C-2 FOR SETBACK DISTANCES TO ABUTTING WELLS AND LEACHING AREAS.
- SEE SUBSURFACE SEWAGE DISPOSAL PLANS BY DGT ASSOCIATES FOR ALL SEWAGE DISPOSAL SYSTEM PERFORMANCE STANDARDS, NOTES AND DETAILS FILED WITH THE SHERBORN BOARD OF HEALTH.



LEGEND

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BRUSH HILL HOMES

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

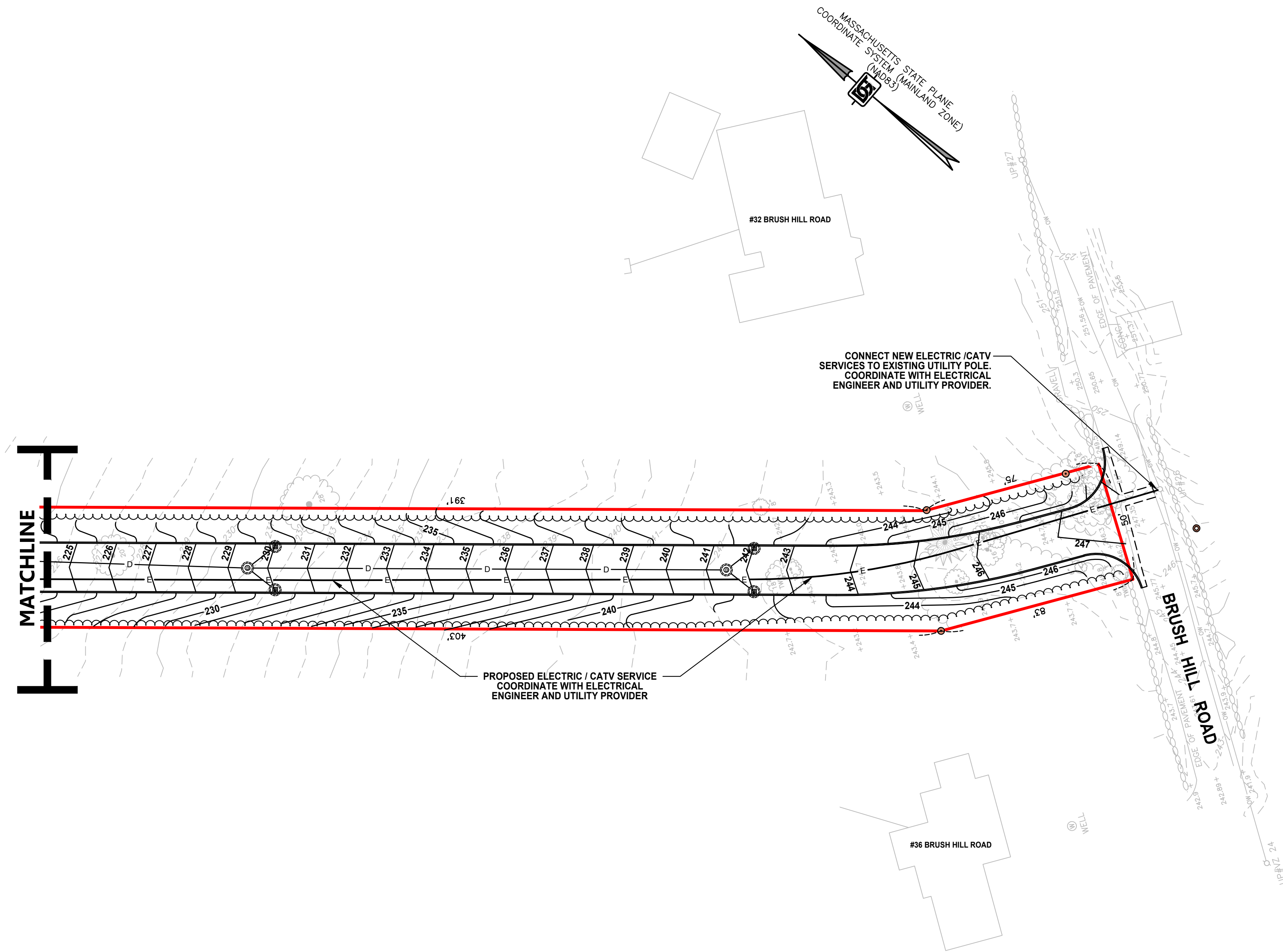
SHEET TITLE:

SITE UTILITIES PLAN - 02

SHEET:
12 OF 17

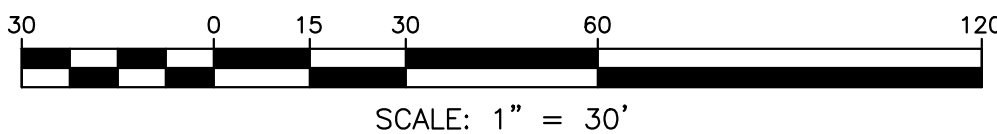
PROJECT NO.:
F-25889

C-12



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F:\F-25889\F-25889 Fenix 34 Brush Hill Rd Sherborn MA Correspondence\Sent\2024-09-19 to Client (Comp Permit Rev 1)\F-25889 Site Plan R2.dwg

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HOMES**

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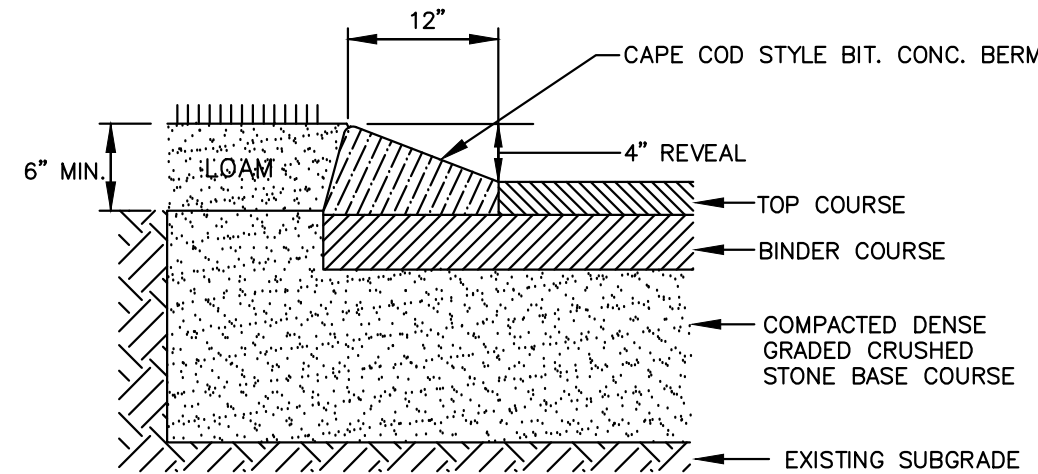
SHEET TITLE:

SITE DETAILS - 01

SHEET:
13 OF 17

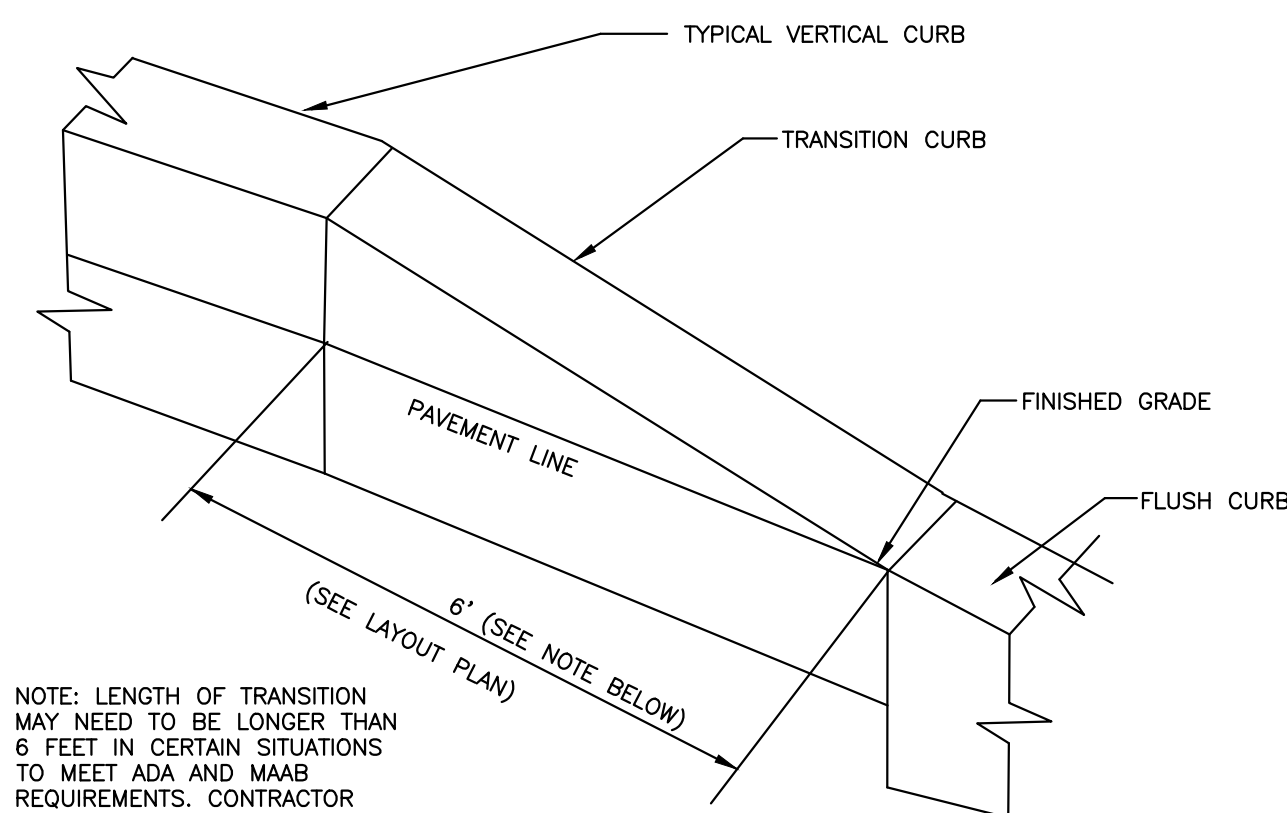
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F-25889

C-13

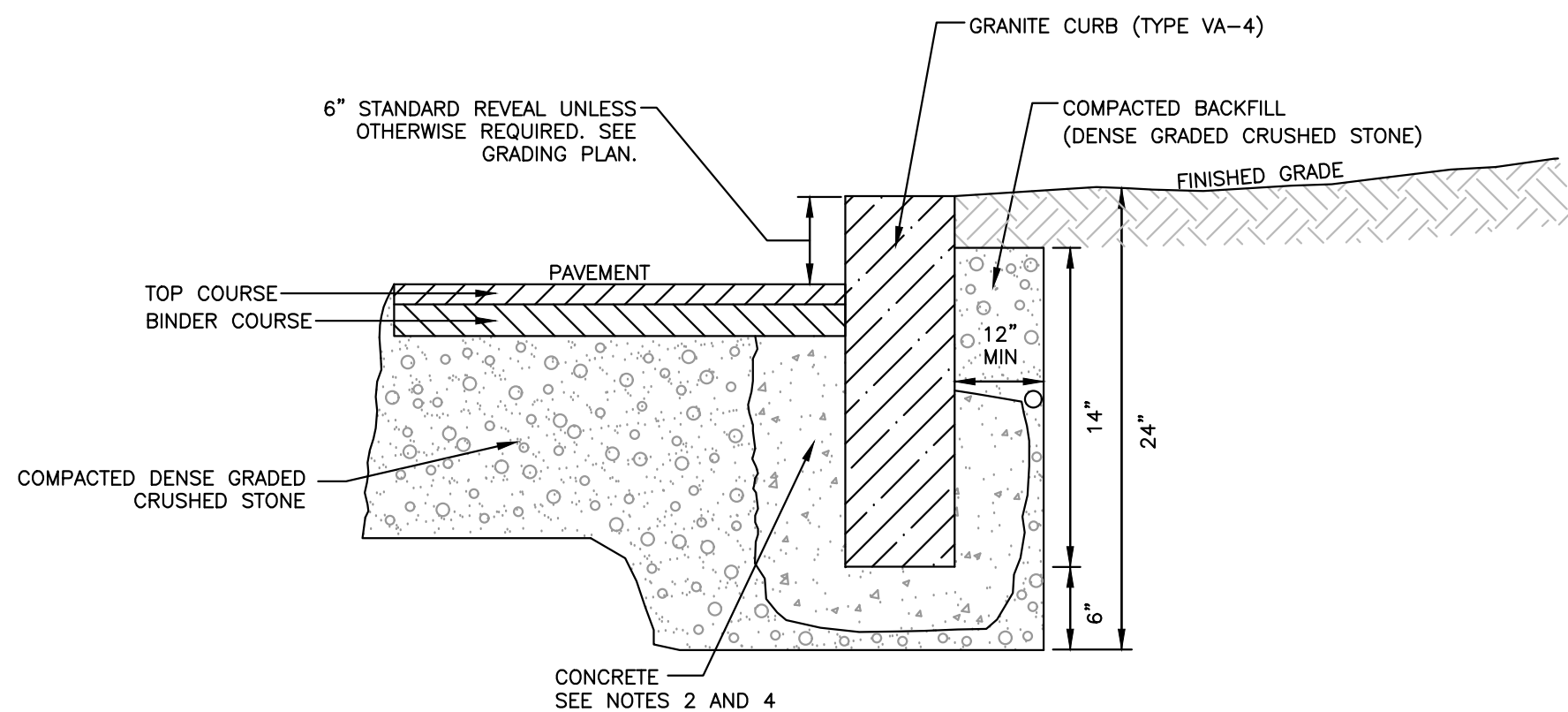


NOTES:
1. BITUMINOUS CONCRETE SHALL BE CLASS 1, TYPE 1-1.

CAPE COD BERM
(NO SCALE)



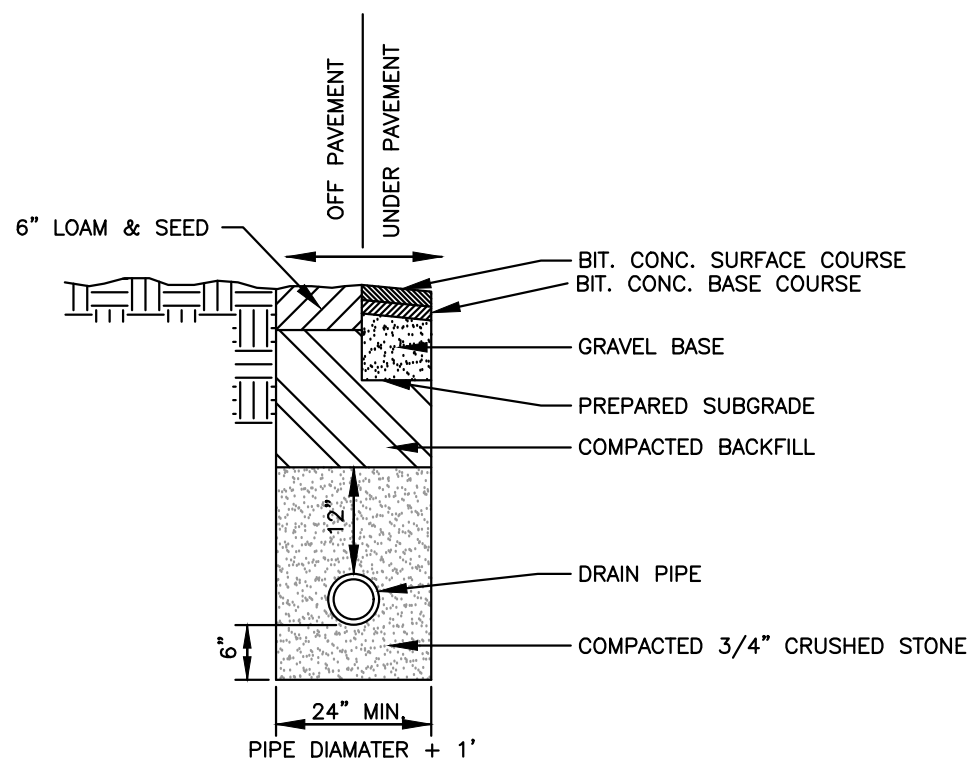
TRANSITIONAL CURB
(NO SCALE)



NOTES:

- CURB INSTALLATION ALONG EXISTING ROAD PAVEMENT SHALL BE SAW CUT AND PATCHED WITH A 24\"/>
- AT ALL LOCATIONS WHERE GRANITE CURBING IS PROPOSED, INCLUDING REPLACEMENT, THE CURB IS TO BE SET IN 6\"/>
- GRANITE CURB INSTALLATION TO BE PER MHD SECTION 501 AND THE LATEST MUNICIPAL STANDARDS.
- CONCRETE TO BE AIR ENTRAINED CLASS D CONFORMING TO MHD M4.02.00.
- GROUTING OF CURB JOINTS TO BE NON-SHRINK GROUTING CONFORMING TO ASTM C-827.

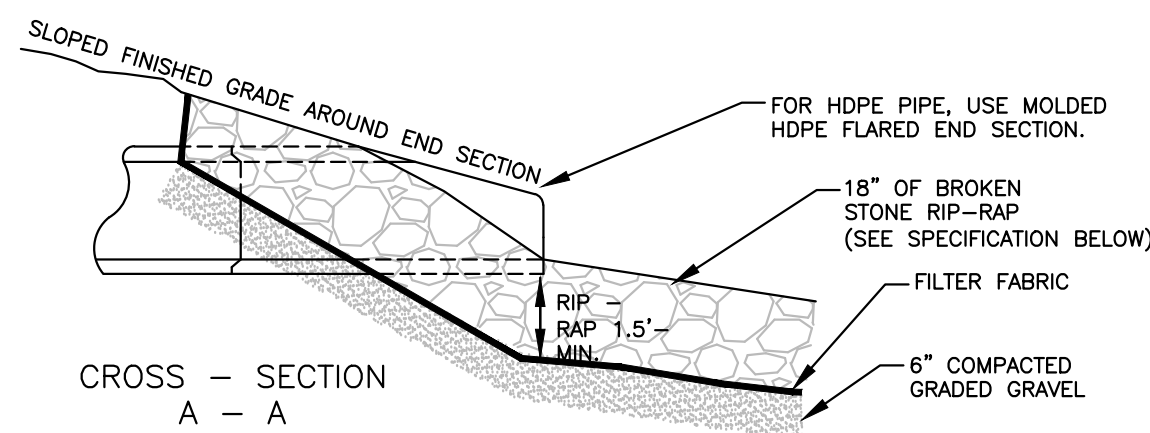
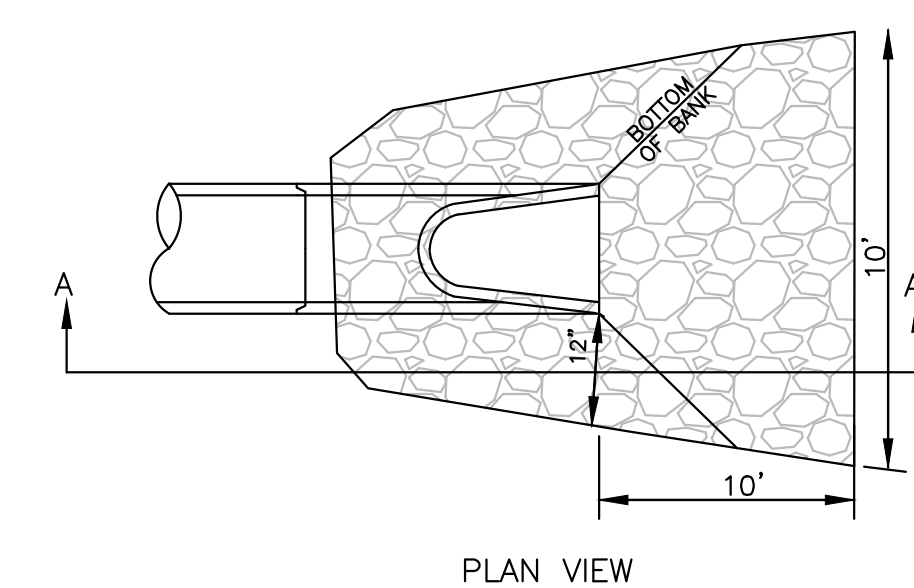
GRANITE CURB
(NO SCALE)



NOTES:

- TRENCH BACKFILL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS CONTAINED IN MASSACHUSETTS HIGHWAY DEPARTMENT STANDARDS AND SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1986.

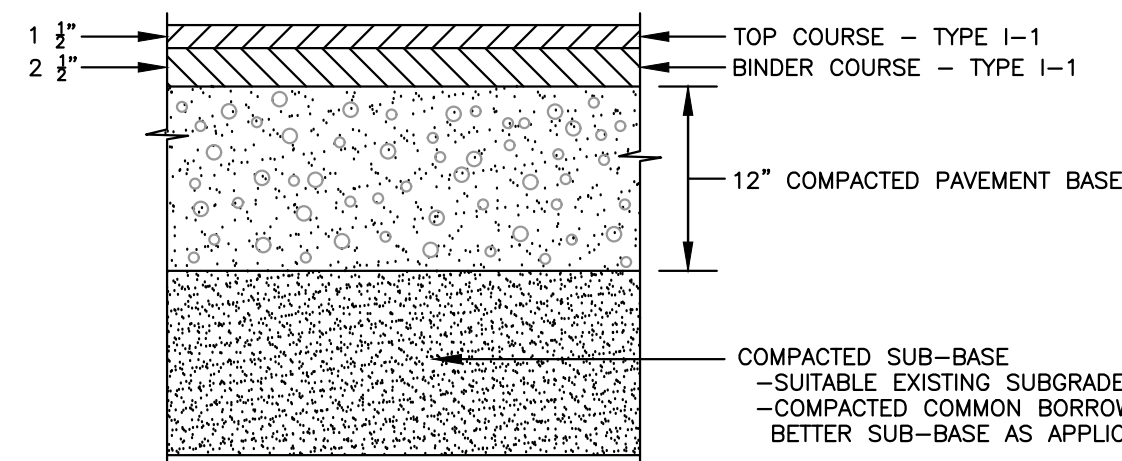
**TYPICAL DRAIN
PIPE BEDDING**
(NO SCALE)



NOTES:

- RIP-RAP SHALL CONSIST OF EVENLY GRADED 6\"/>
- SIZE DESIGNATION REFERS TO MEAN SPHERICAL DIAMETER.
- LENGTH OF RIP-RAP TO BE PER THIS DETAIL.

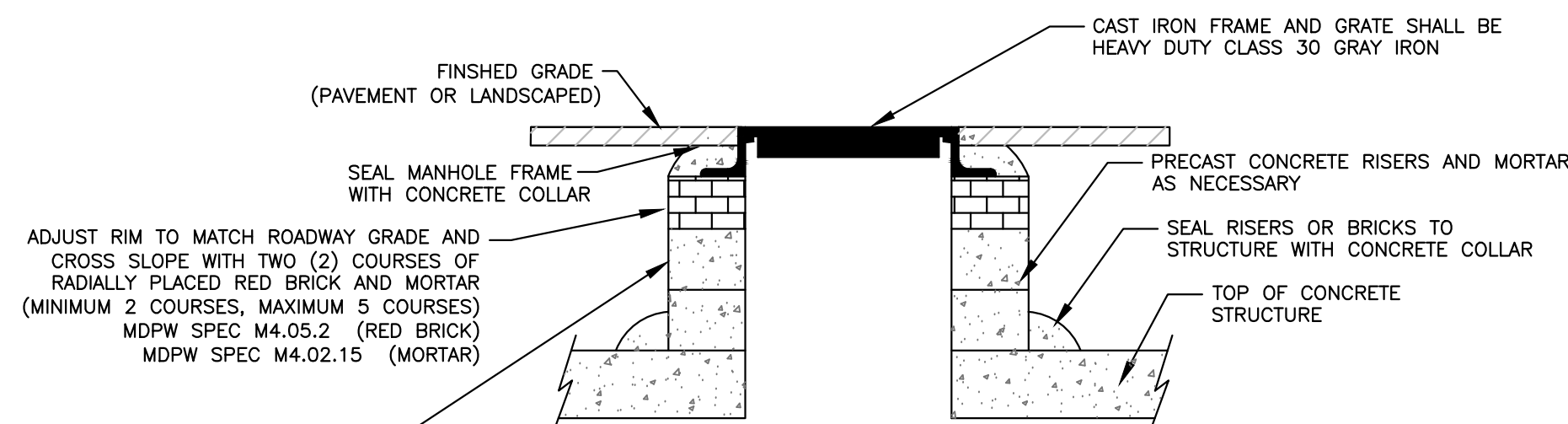
**PIPE END SECTION
WITH RIP - RAP APRON**
(NO SCALE)



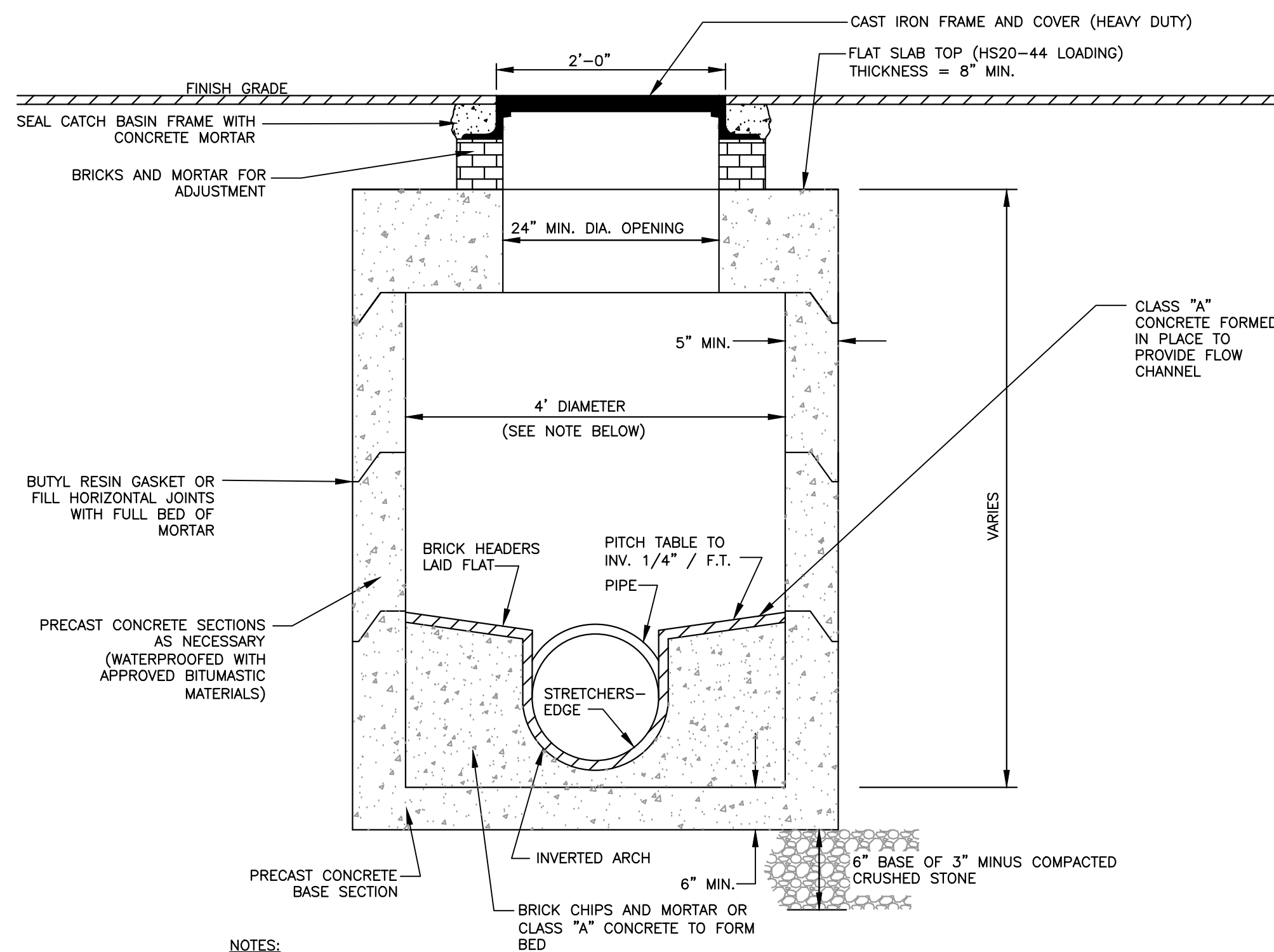
NOTES:

- COMPACTED PAVEMENT BASE TO CONFORM TO MASS. HIGHWAY DEPT. SPEC. M 2.01.7.
- COMPACTED COMMON BORROW. NO STONES LARGER THAN 6 INCHES.
- BITUMINOUS CONCRETE SHALL BE CLASS 1, TYPE 1-1.
- AT AREAS OF LEDGE/BEDROCK, REMOVE LEDGE TO A DEPTH OF 18 INCHES MINIMUM BELOW PAVEMENT COURSE.
- COMPACTED PAVEMENT BASE TO EXTEND 12 INCHES MINIMUM BEYOND THE EDGE OF PAVEMENT.

BITUMINOUS CONCRETE PAVEMENT
(NO SCALE)



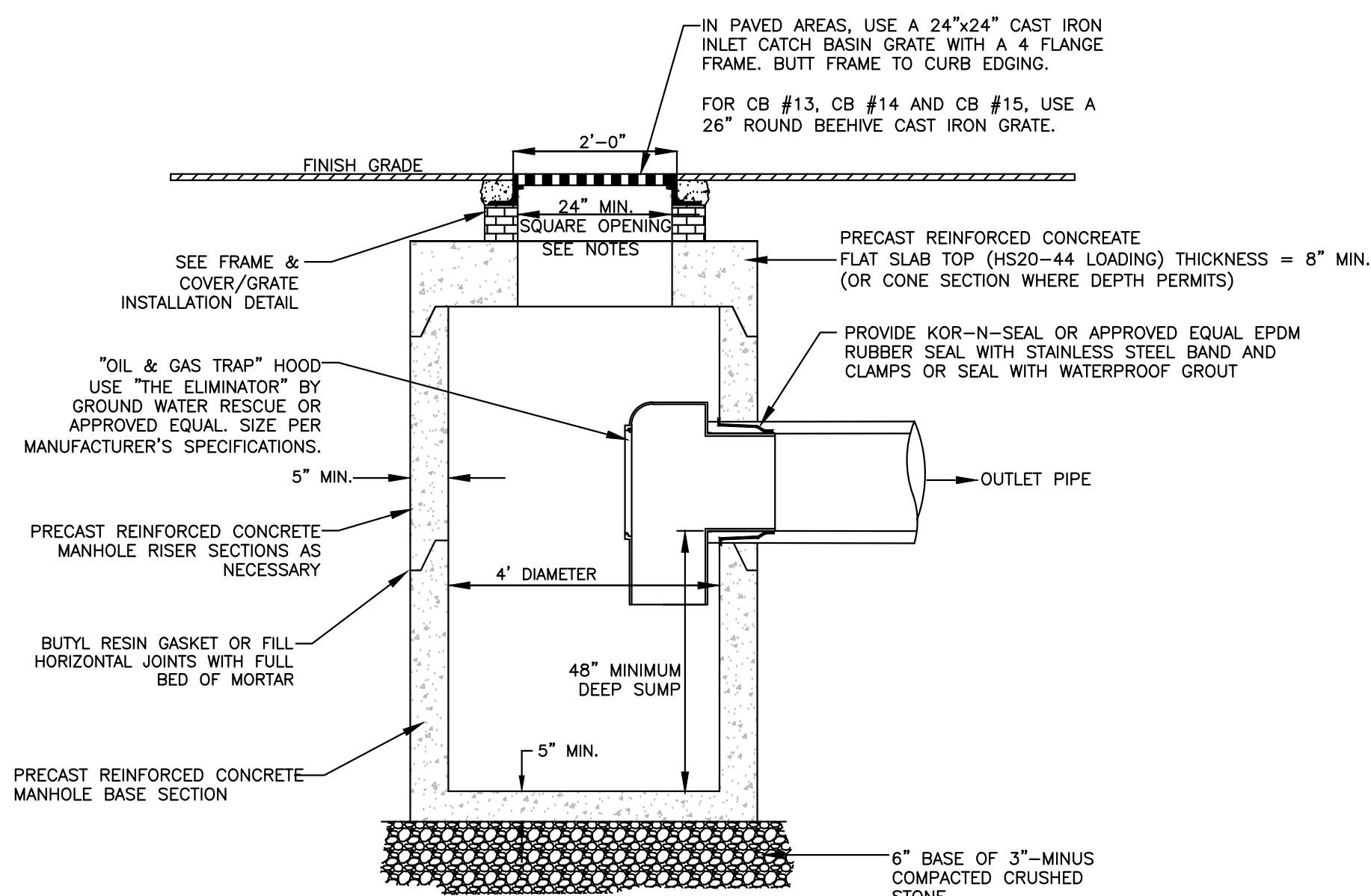
**FRAME & COVER/GRATE
INSTALLATION DETAIL**
(NO SCALE)



NOTES:

- USE 5 FT. DIAMETER (OR LARGER WHERE NECESSARY) WHEN TOTAL INSIDE DEPTH EXCEEDS 12 FT. OR WHERE PIPE ARRANGEMENT WILL DAMAGE THE INTEGRITY OF THE MANHOLE SECTIONS.
- MANHOLE CONNECTION TO PIPE SHALL BE BY MEANS OF A FLEXIBLE RUBBER SLEEVE OR MORTAR. PROJECT PIPE 1\"/>

DRAIN MANHOLE DETAIL
(NO SCALE)



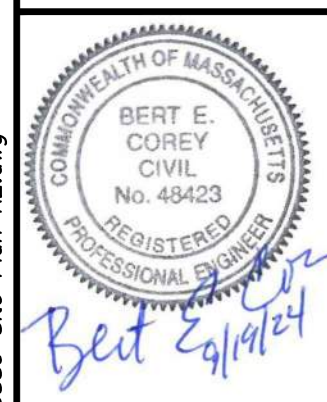
DEEP SUMP CATCH BASIN
(NO SCALE)

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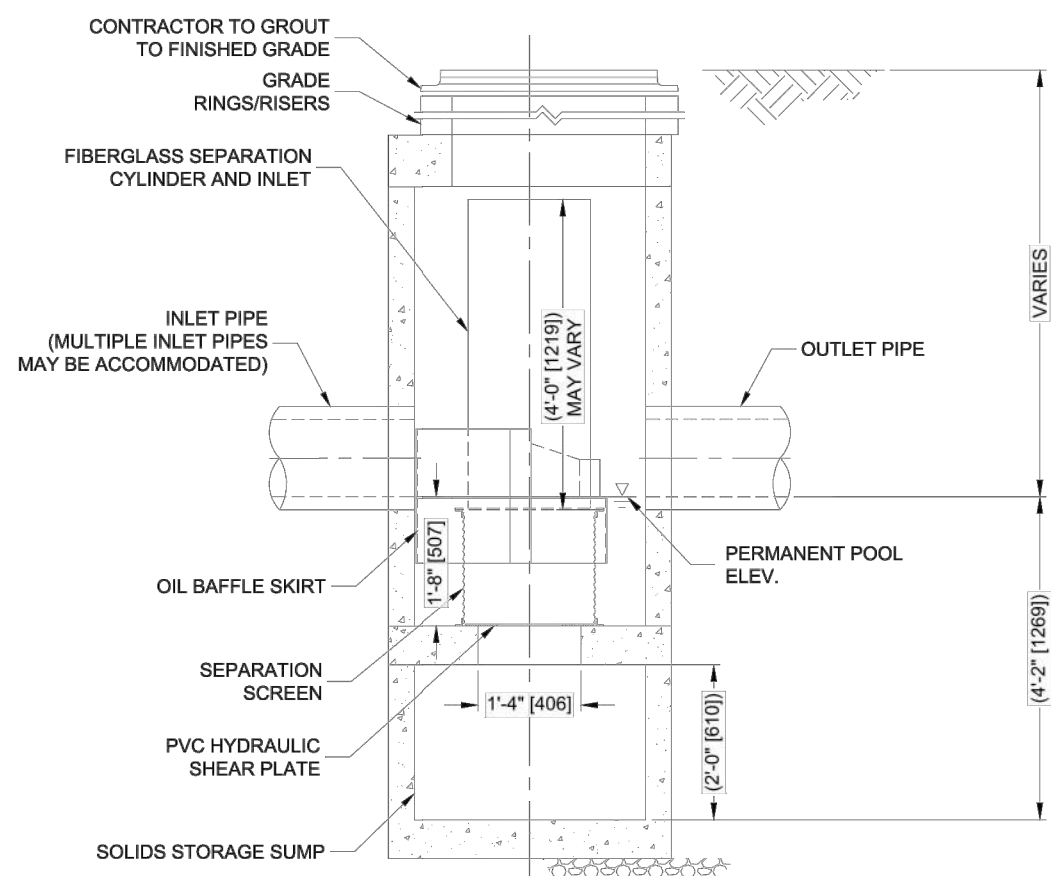
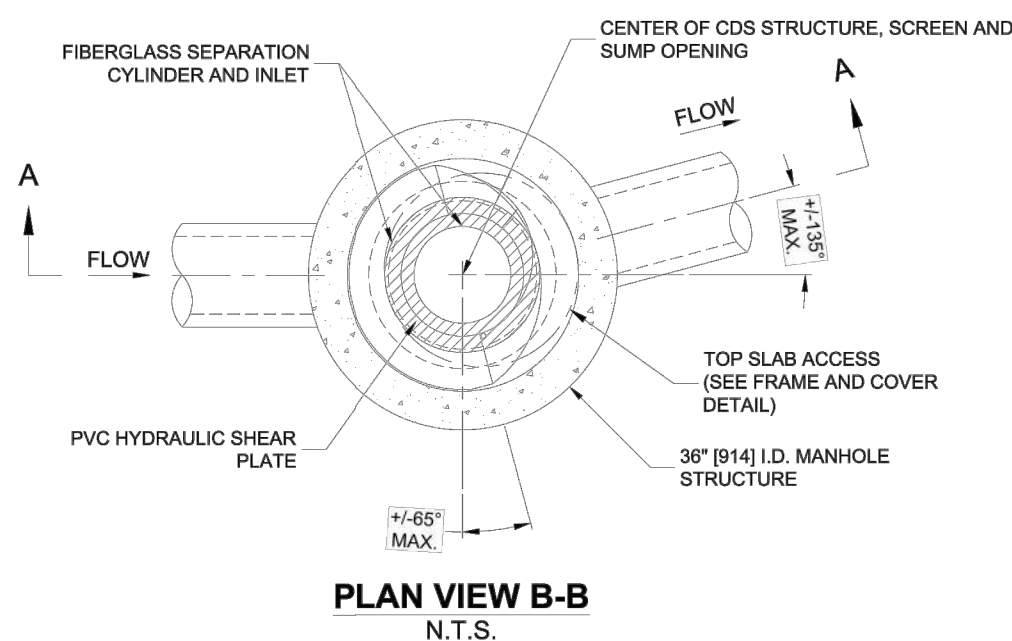
SITE DETAILS - 02

SHEET:
14 OF 17

PROJECT NO.:
F-25889

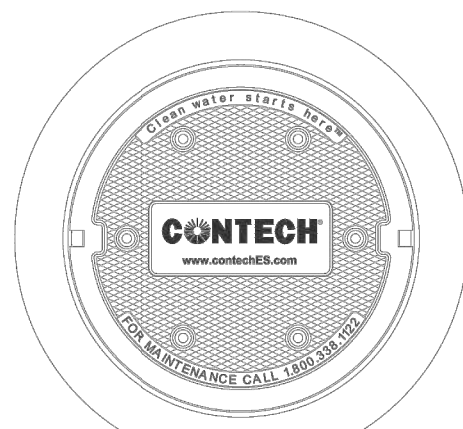
C-14

\\AD\CONTECH\CD\CONDUCT\STORMWATER\SUBSTRUCTURE\STANDARD DETAIL\CDS1515-3-C\CDL.DWG 8/8/2016 4:16 PM



CDS1515-3-C DESIGN NOTES

CDS1515-3-C RATED TREATMENT CAPACITY IS 1.0 CFS, OR PER LOCAL REGULATIONS.
THE STANDARD CDS1515-3-C CONFIGURATION IS SHOWN.



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)	*		
PEAK FLOW RATE (CFS OR L/s)	*		
RETURN PERIOD OF PEAK FLOW (YRS)	*		
SCREEN APERTURE (2400 OR 4700)	*		
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION	*		
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
NOTES/SPECIAL REQUIREMENTS:			
* PER ENGINEER OF RECORD			

- GENERAL NOTES
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
 - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 - STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M208 AND BE CAST WITH THE CONTECH LOGO.
 - IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
 - CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
- INSTALLATION NOTES
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
 - CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
 - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
 - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

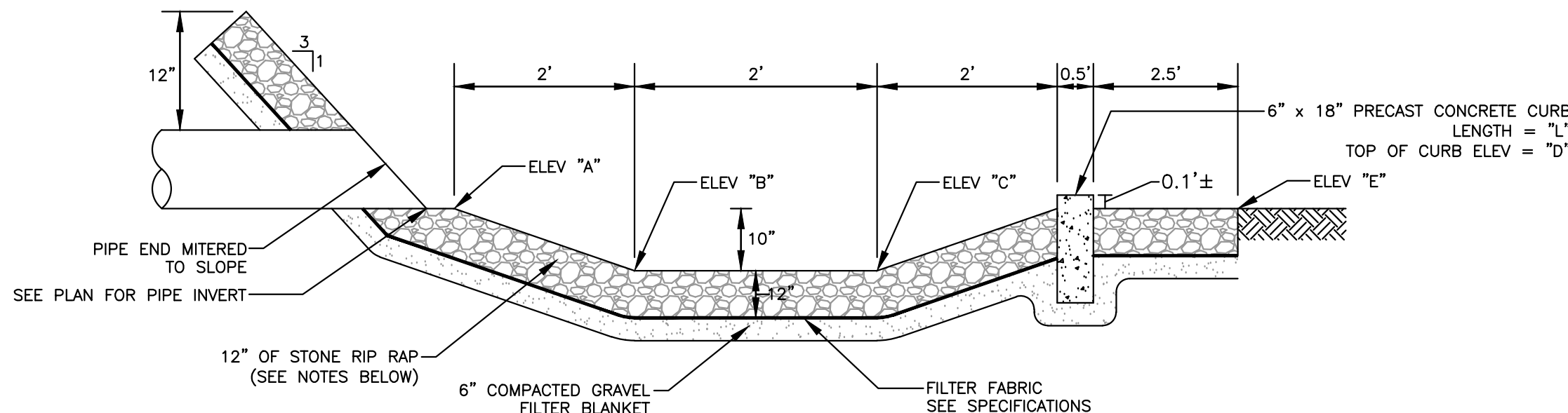


CDS1515-3-C
ONLINE CDS
STANDARD DETAIL

THE DESIGN OF STU #1 AND STU #2 IS BASED ON THE USE OF A CDS1515-3-C ONLINE CDS UNIT BY CONTECH ENGINEERED SOLUTIONS LLC IN THIS DETAIL. IF A DIFFERENT UNIT IS TO BE PROPOSED BY THE CONTRACTOR, THEN SAID CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE UNIT PROPOSED WITH WATER QUALITY SIZING CALCULATIONS SHOWING CONFORMANCE WITH THE DESIGN REQUIREMENTS. THE SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL.

STORMWATER TREATMENT UNIT (STU #1 and STU #2) DETAIL

(NO SCALE)



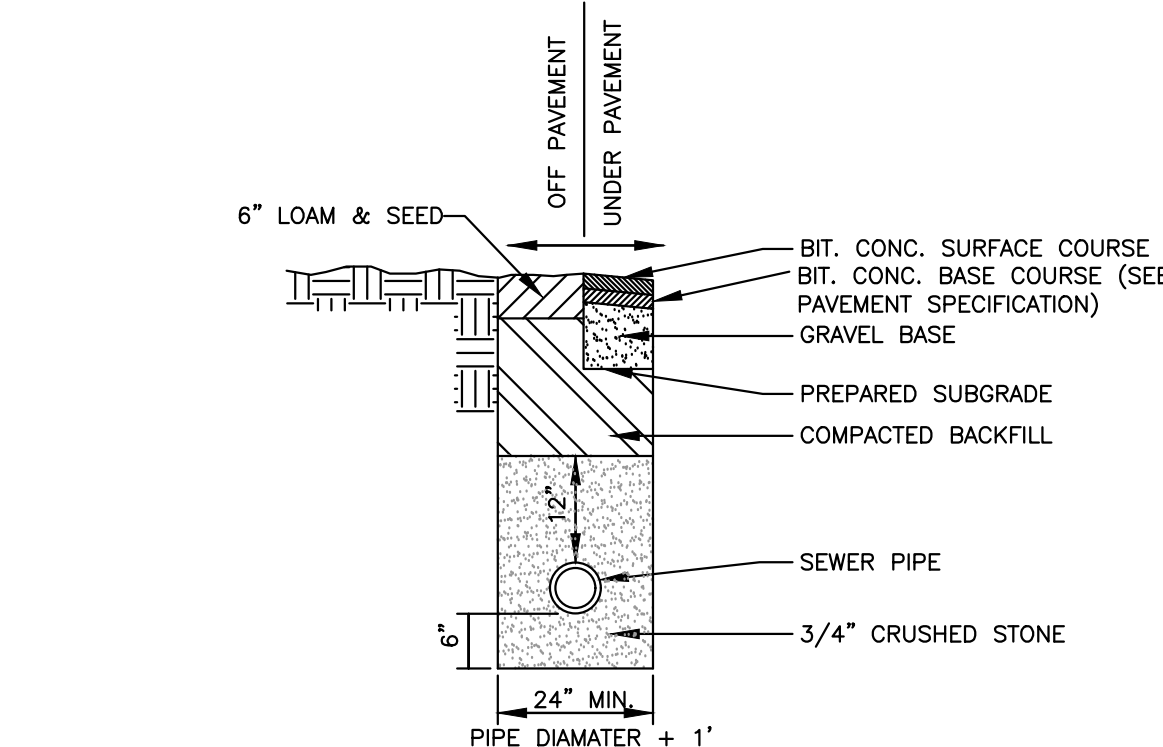
NOTES:

- RIP-RAP SHALL CONSIST OF EVENLY GRADED 6" TO 12" ANGULAR BROKEN STONE, (AVG. STONE SIZE = 9") WITH A THICKNESS OF 18 INCHES. NOT MORE THAN 15 PERCENT OF THE STONE MAY BE SCATTERED SPALLS AND STONES LESS THAN 4" IN SIZE.
- SIZE DESIGNATION REFERS TO MEAN SPHERICAL DIAMETER.
- MORTAR JOINTS BETWEEN CURB SECTIONS OF SPILLWAY.

STRUCTURE	L	ELEVATIONS				
		A	B	C	D	E
LEVEL SPREADER #1	25'	197.0	196.2	196.2	197.1	197.0
LEVEL SPREADER #2	25'	186.5	185.7	185.7	186.6	186.5

LEVEL SPREADER DETAIL

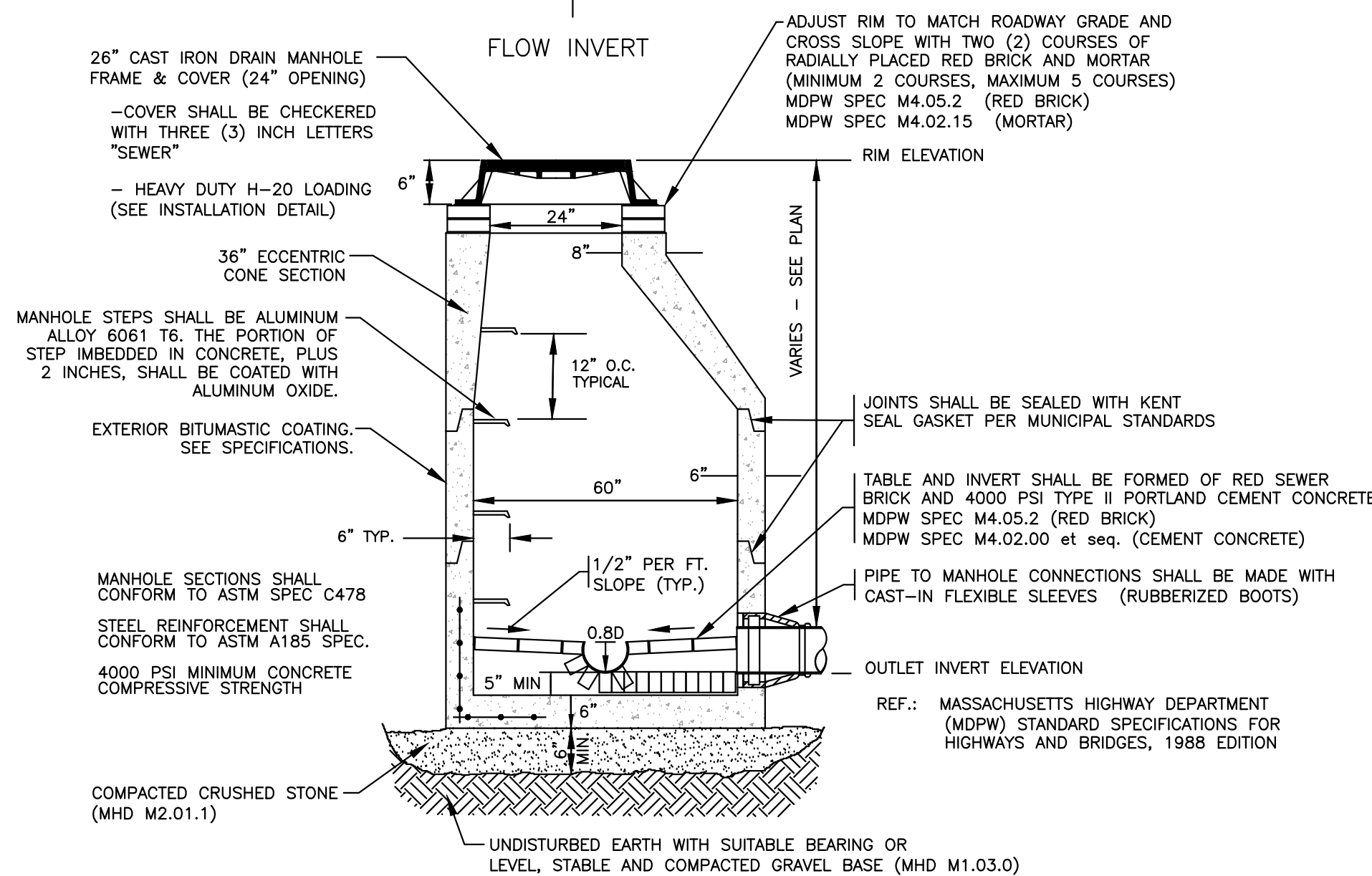
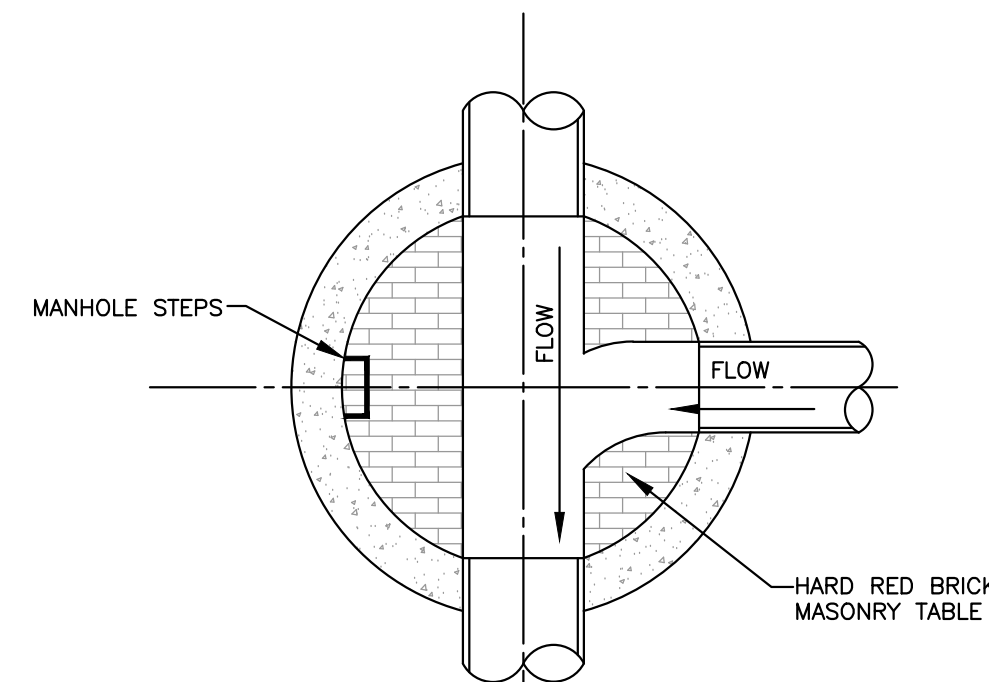
(NO SCALE)



NOTES:
1. TRENCH BACKFILL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS CONTAINED IN MASSACHUSETTS HIGHWAY DEPARTMENT, STANDARDS AND SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988.

TYPICAL SEWER PIPE BEDDING

(NO SCALE)



TYPICAL SEWER MANHOLE DETAIL

(NO SCALE)

APPLICANT:

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

OWNER:

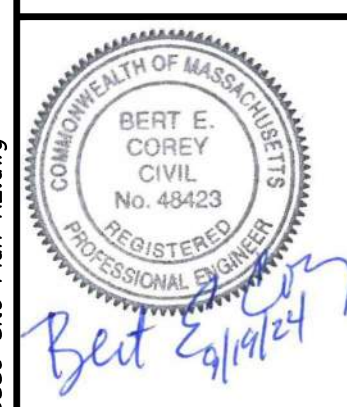
FENIX PARTNERS BRUSH HILL, LLC
ref.
MIDDLESEX REGISTRY OF DEEDS
BOOK: 81892 PAGE: 265

PARCEL ID:

MAP 1, LOT 0, BLOCK 18

ISSUED FOR:

COMPREHENSIVE
PERMIT APPLICATION



2	BEC	9/19/24	PER BOH REVIEW COMMENTS
1	BEC	6/26/24	DESIGN DEVELOPMENT
NO.	APP	DATE	DESCRIPTION

DATE: JUNE 4, 2024

SCALE: AS NOTED

DESIGN: KMR/BEC
DRAFTED: KMR
CHECKED: BEC

PROJECT TITLE:

BRUSH HILL
HOMES

34 BRUSH HILL ROAD
SHERBORN, MA 01770

SHEET TITLE:

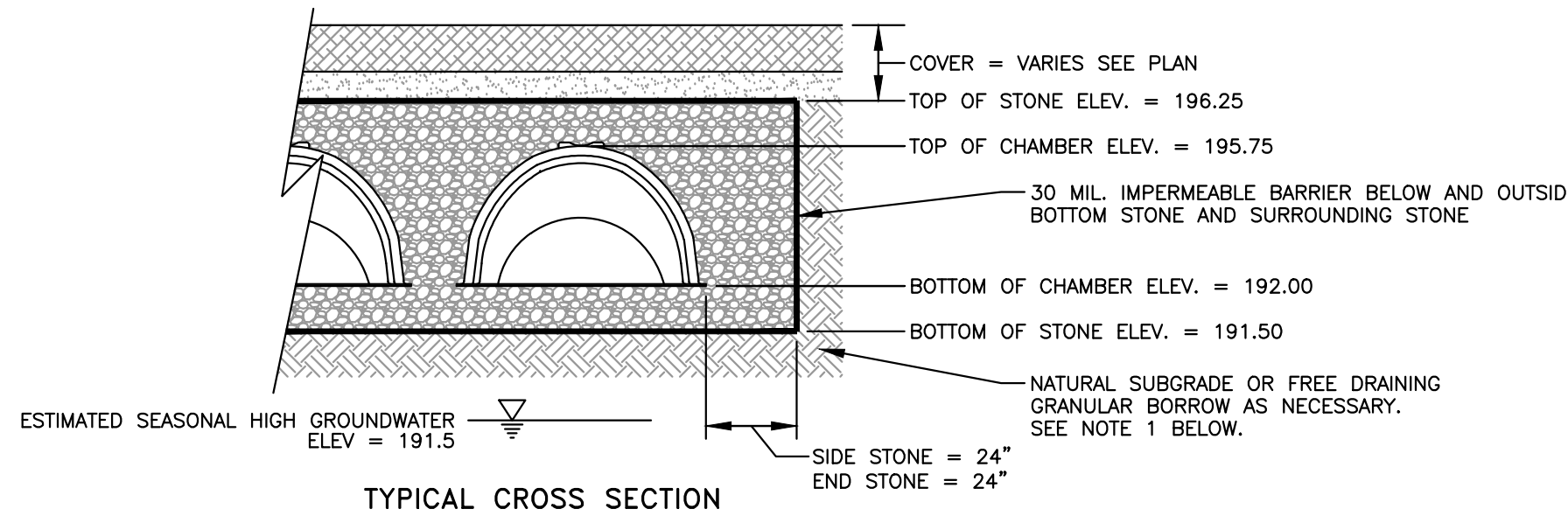
SITE DETAILS - 04

SHEET:
16 OF 17

PROJECT NO.:
F-25889

C-16

THE DESIGN OF DETENTION SYSTEM #2 IS BASED ON THE USE OF MC-3500 CHAMBERS BY ADVANCED DRAINAGE SYSTEMS (ADS) AS SHOWN IN THESE DETAILS. IF OTHER UNITS/CHAMBERS AND/OR CONFIGURATION IS TO BE PROPOSED BY THE CONTRACTOR, THEN SAID CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE CHAMBER UNITS PROPOSED, THE CONFIGURATION AND SYSTEM LAYOUT AND CALCULATIONS SHOWING CONFORMANCE WITH THE STORAGE REQUIREMENTS SHOWN BELOW. THE SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL.

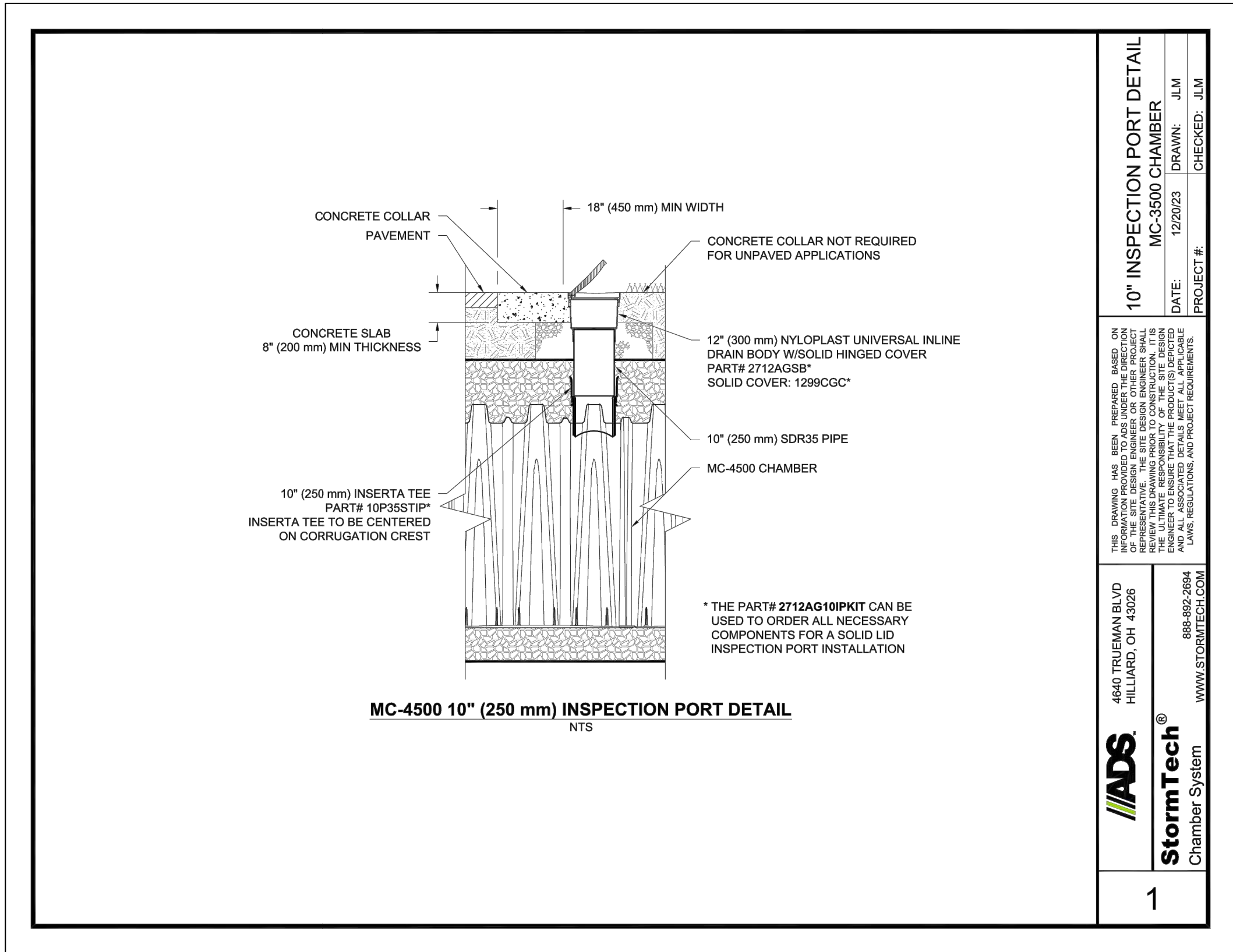
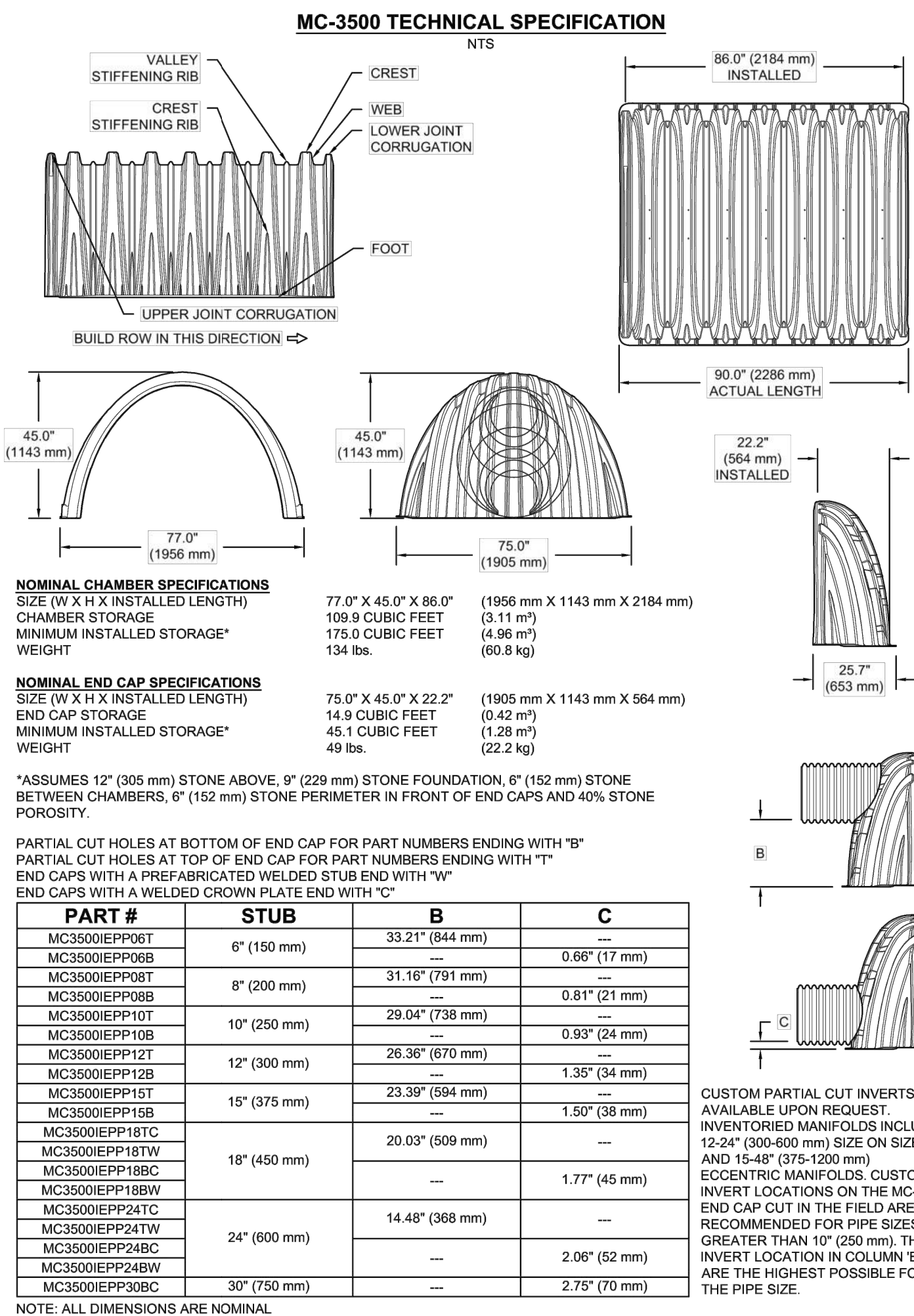


DETENTION SYSTEM #2 = 4 ROWS OF 15 CHAMBERS (60 TOTAL)
SEE PLAN FOR LAYOUT

GENERAL NOTES:

- ALL TOPSOIL, SUBSOIL AND DELETERIOUS MATERIAL, IF ANY, MUST BE EXCAVATED AND REMOVED TO THE HORIZONTAL AND VERTICAL (BOTTOM OF STONE ELEVATION) LIMITS OF THE DETENTION FACILITY.
- ALL WASHED STONE MUST HAVE LESS THAN 0.2 PERCENT MATERIAL FINER THAN A NUMBER 200 SIEVE AS DETERMINED BY THE A.A.S.H.T.O. TEST METHODS T-11 AND T-27 (LATEST EDITION).
- CLEANOUT ACCESS COVERS TO BE BROUGHT TO FINISH GRADE IN THE LOCATIONS SHOWN ON THE PLAN. INSTALLATION OF CLEANOUT ACCESS COVERS PER THE MANUFACTURER'S DETAILS.

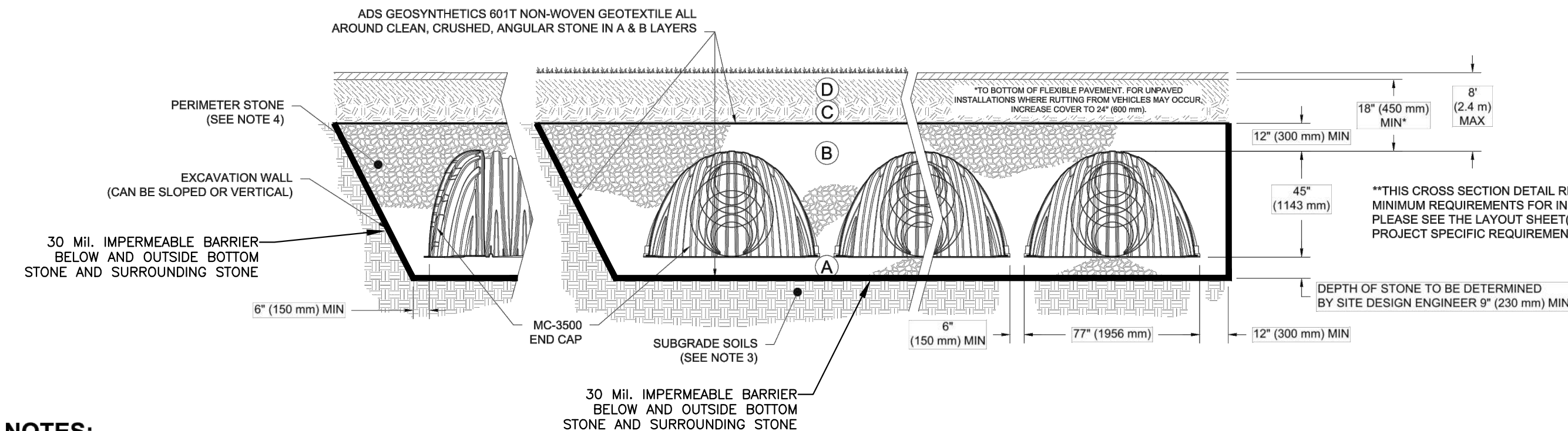
DETAIL OF SITE SPECIFIC REQUIREMENTS



ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. OR MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	BEGIN COMPACTIONS AFTER 18" (450 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
 - WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT² AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

DETENTION SYSTEM #2 DETAILS

(NO SCALE)

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

ISSUED FOR:
**COMPREHENSIVE
PERMIT APPLICATION**



2	BEC	9/19/24	PER BOH REVIEW COMMENTS
1	BEC	6/26/24	DESIGN DEVELOPMENT
NO.	APP	DATE	DESCRIPTION

DATE: **JUNE 4, 2024**

SCALE: **AS NOTED**

DESIGN:	DRAFTED:	CHECKED:
KMR/BEC	KMR	BEC

PROJECT TITLE:

**BRUSH HILL
HOMES**

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

SHEET TITLE:

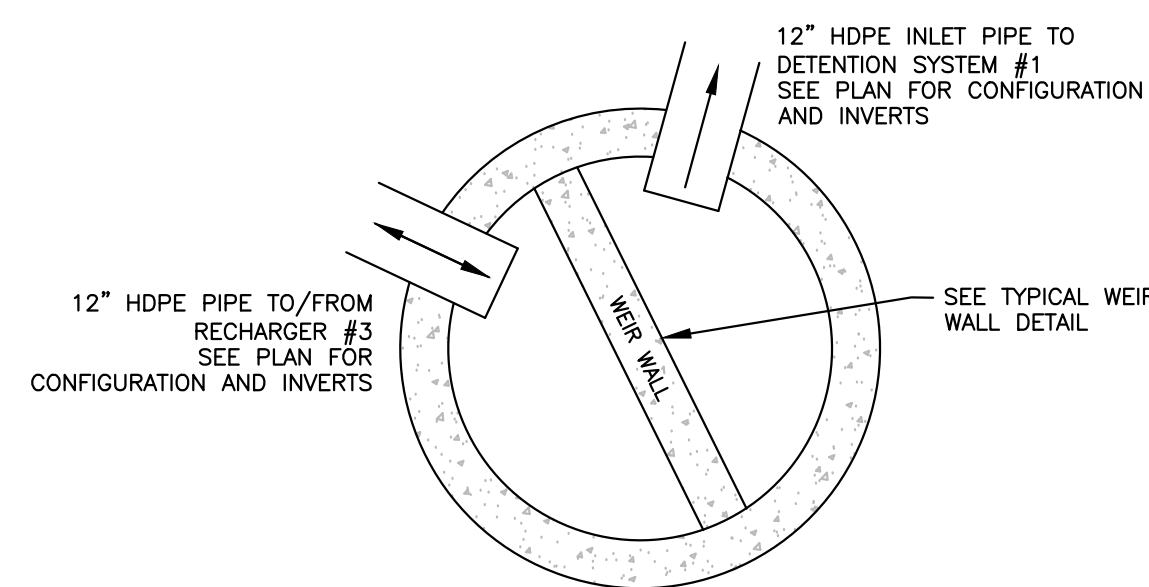
SITE DETAILS - 05

SHEET:
17 OF 17

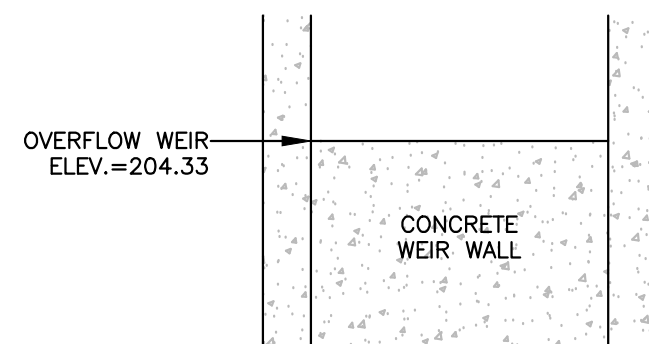
PROJECT NO.:
F-25889

C-17

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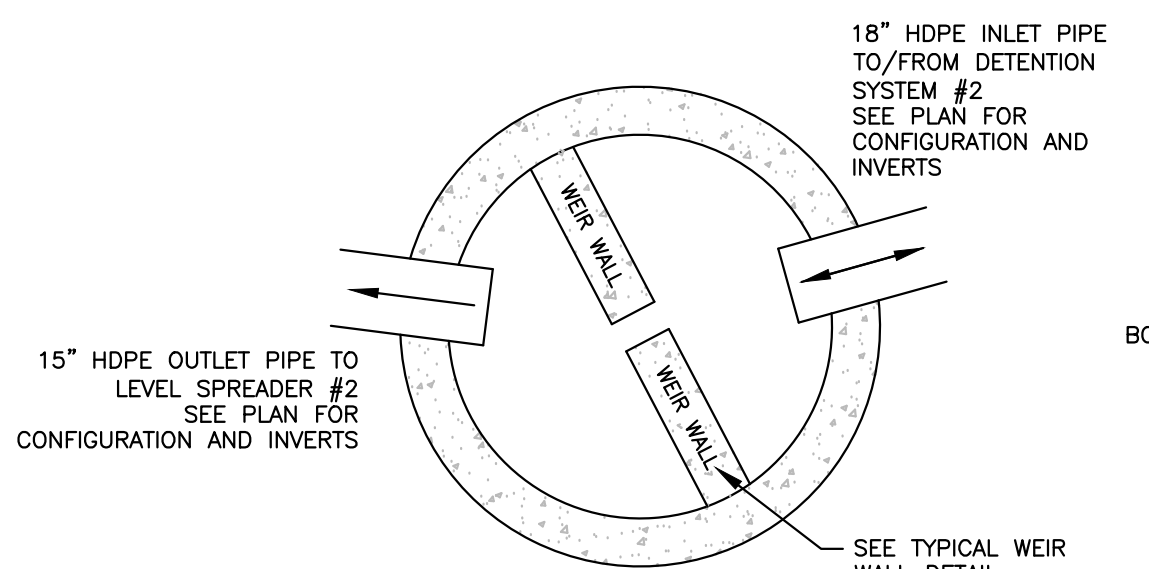


OCS #4
TYPICAL PLAN VIEW

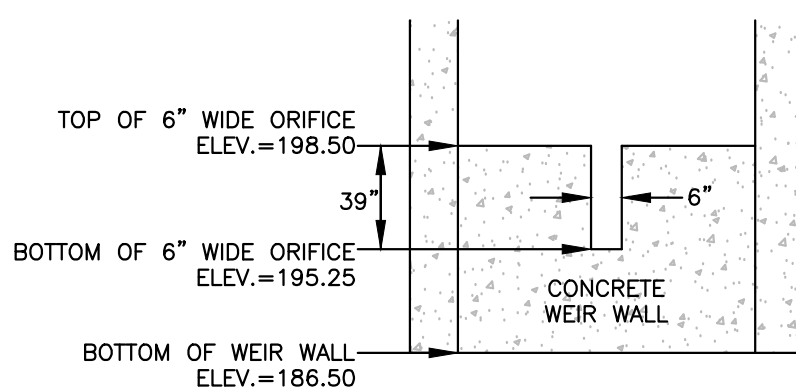


OCS #4
TYPICAL WEIR WALL DETAIL

- NOTES
- WEIR WALL TO BE CAST IN PLACE BY THE MANUFACTURER.
 - WEIR WALL TO BE SEALED TO THE SIDE WALLS OF THE STRUCTURE TO CREATE TWO SEPARATE AND WATER TIGHT SIDES OF THE STRUCTURE.

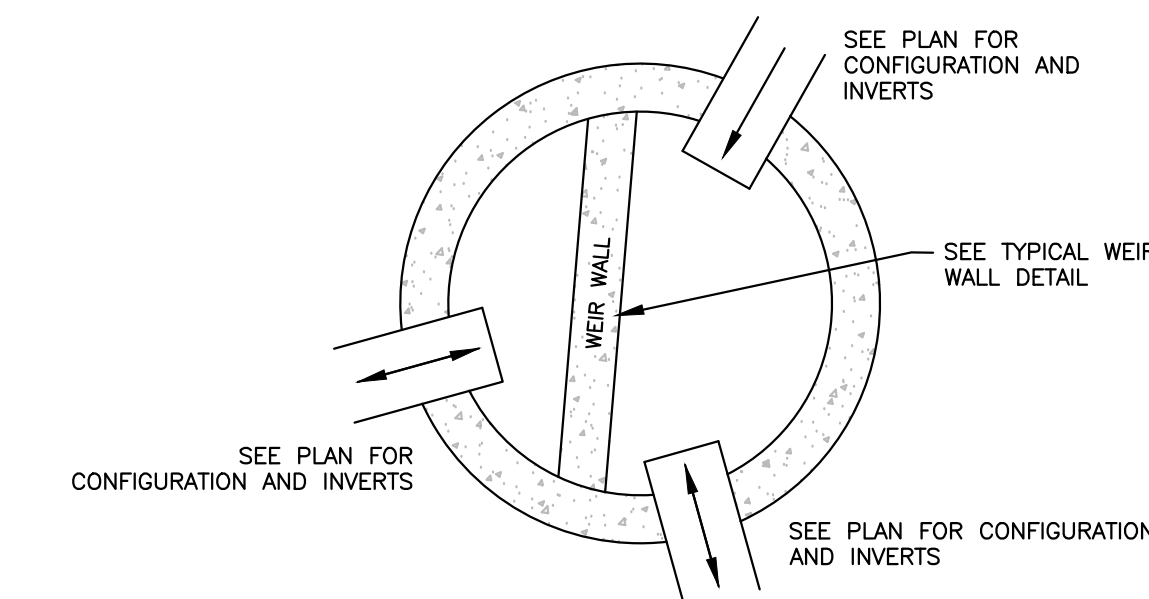


OCS #3
TYPICAL PLAN VIEW

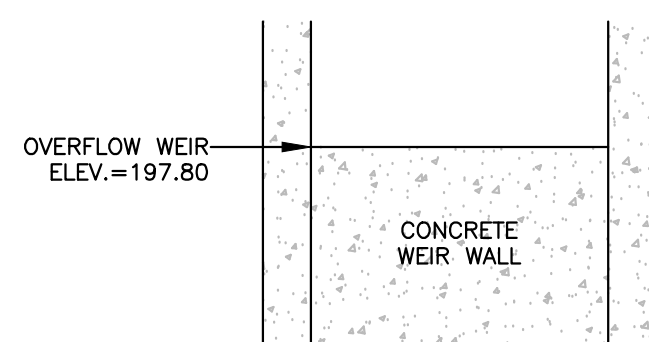


OCS #3
TYPICAL WEIR WALL DETAIL

- NOTES
- WEIR WALL TO BE CAST IN PLACE BY THE MANUFACTURER.
 - WEIR WALL TO BE SEALED TO THE SIDE WALLS OF THE STRUCTURE TO CREATE TWO SEPARATE AND WATER TIGHT SIDES OF THE STRUCTURE.

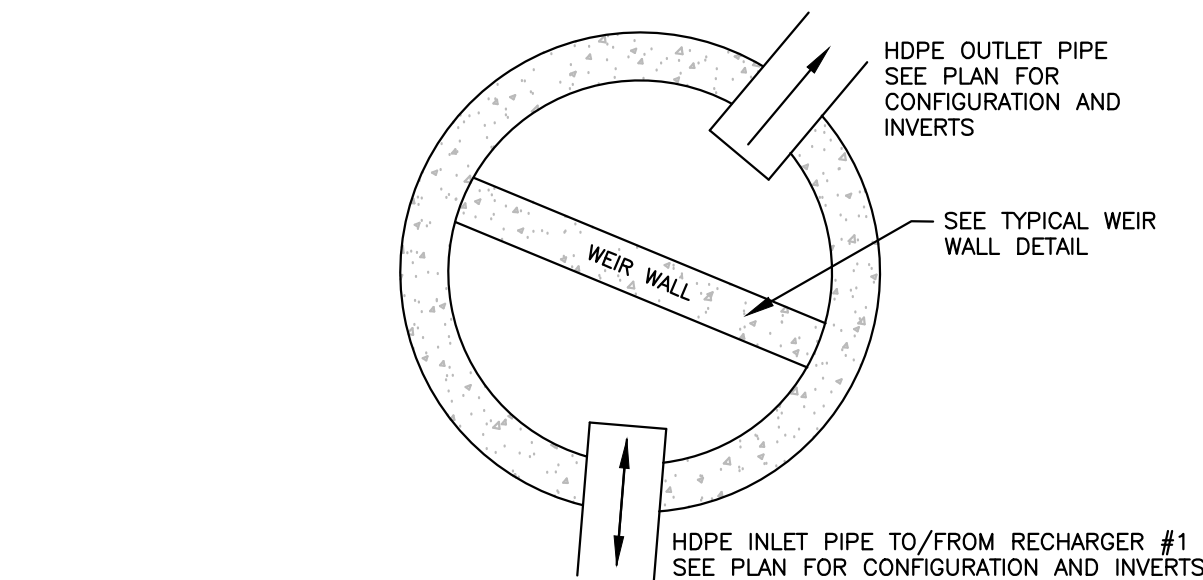


OCS #2
TYPICAL PLAN VIEW

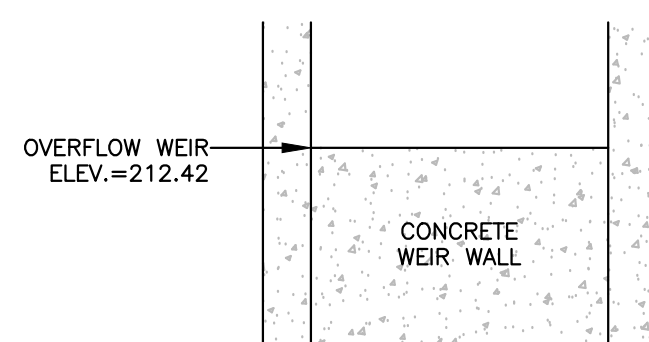


OCS #2
TYPICAL WEIR WALL DETAIL

- NOTES
- WEIR WALL TO BE CAST IN PLACE BY THE MANUFACTURER.
 - WEIR WALL TO BE SEALED TO THE SIDE WALLS OF THE STRUCTURE TO CREATE TWO SEPARATE AND WATER TIGHT SIDES OF THE STRUCTURE.

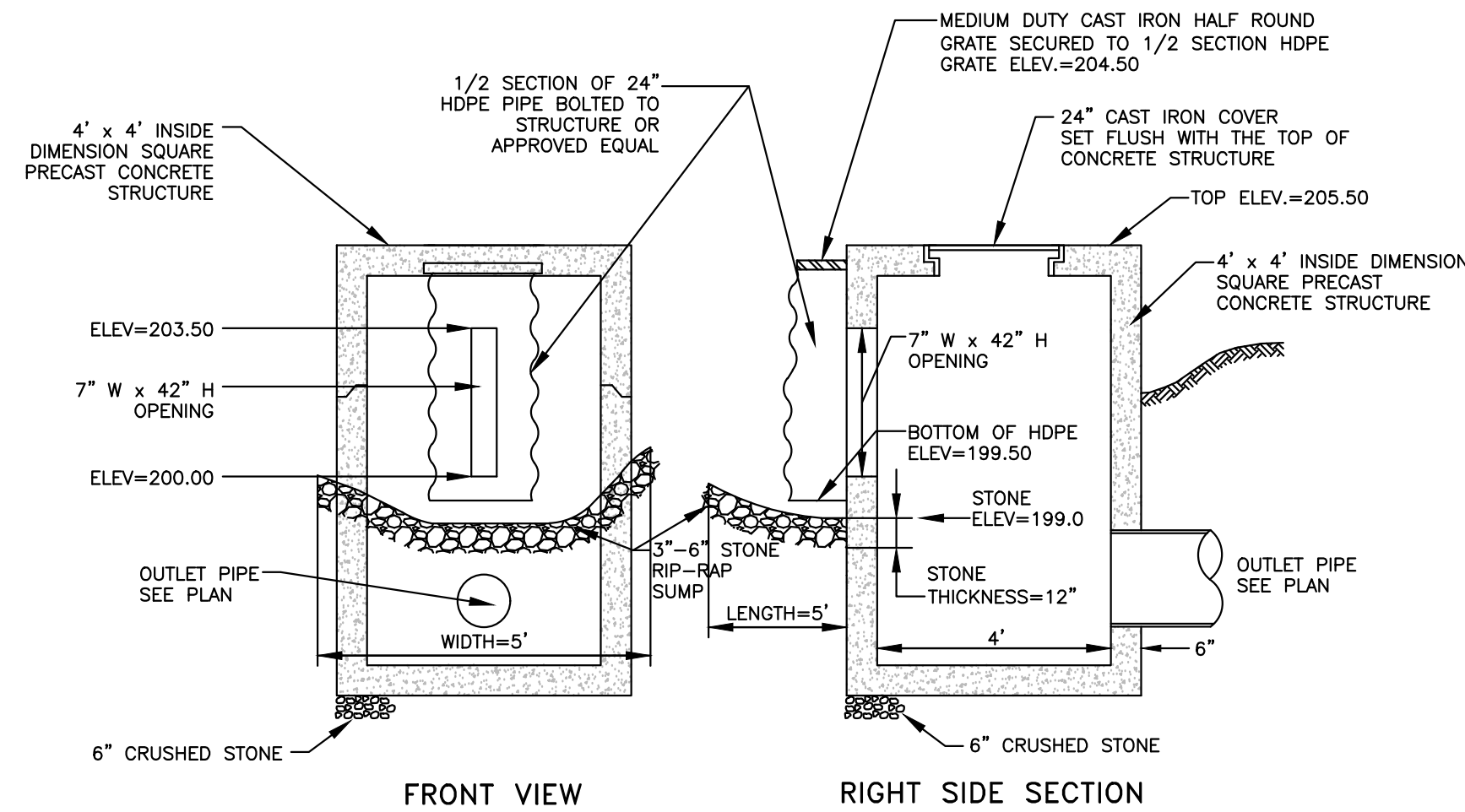


OCS #1 & #6
TYPICAL PLAN VIEW

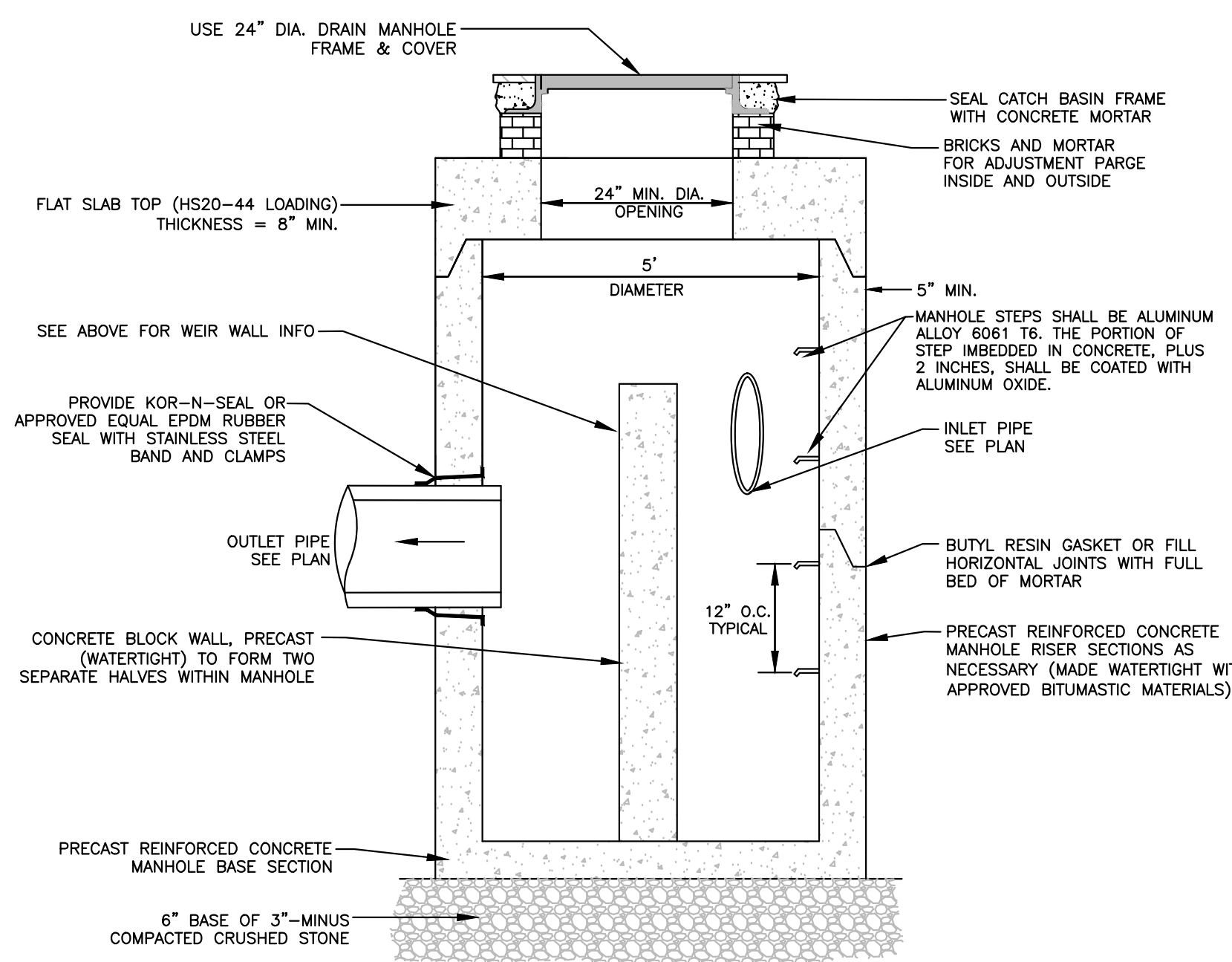


OCS #1 & #6
TYPICAL WEIR WALL DETAIL

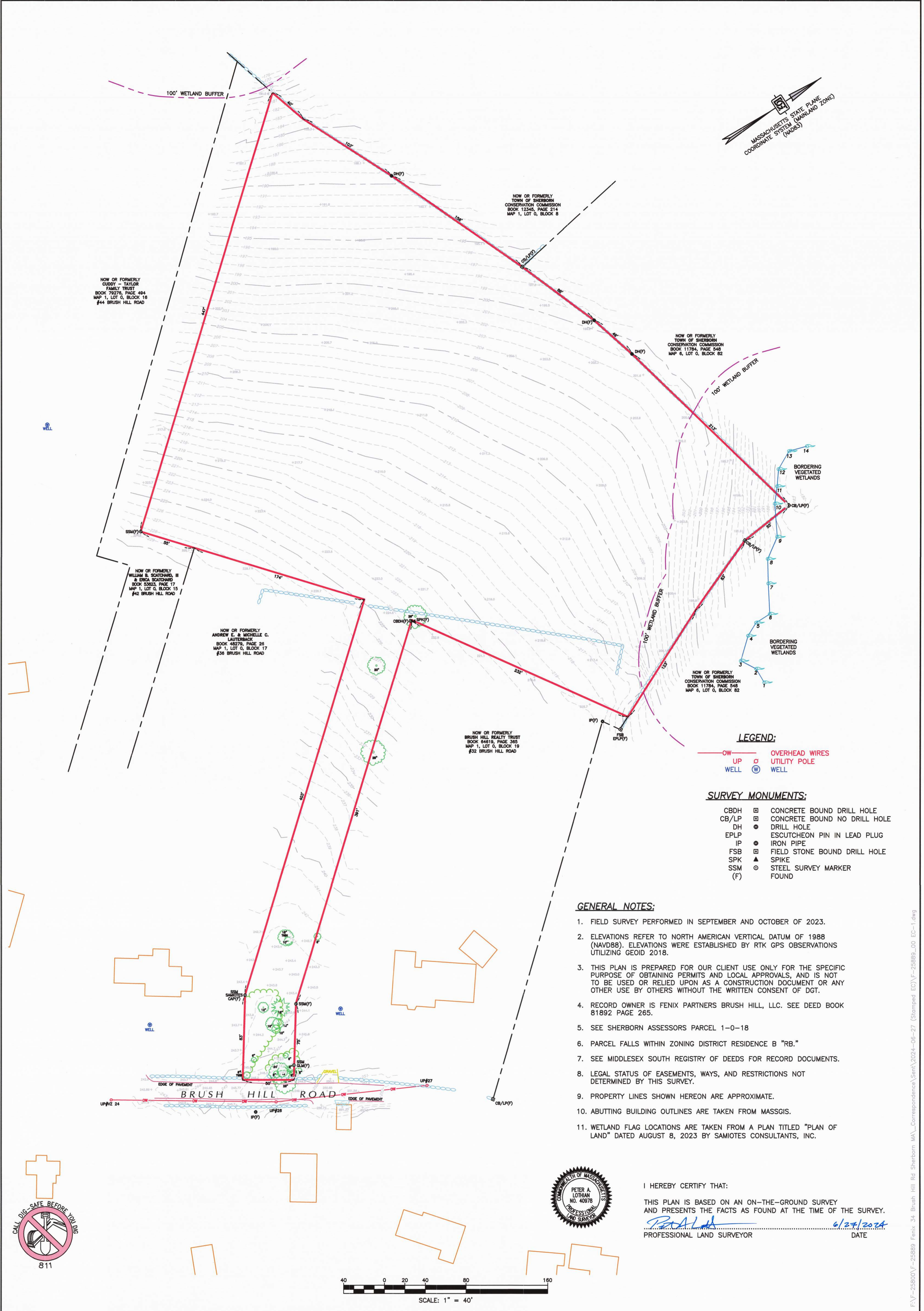
- NOTES
- WEIR WALL TO BE CAST IN PLACE BY THE MANUFACTURER.
 - WEIR WALL TO BE SEALED TO THE SIDE WALLS OF THE STRUCTURE TO CREATE TWO SEPARATE AND WATER TIGHT SIDES OF THE STRUCTURE.



OUTLET CONTROL STRUCTURE DETAIL for OCS #5
(NO SCALE)



OUTLET CONTROL STRUCTURE DETAILS for OCS #1, #2, #3, #4 and #6
(NO SCALE)



RESEARCH: DGT	TOPOGRAPHIC PLAN OF LAND IN SHERBORN, MASSACHUSETTS MIDDLESEX COUNTY - SOUTH DISTRICT	34 BRUSH HILL ROAD SHERBORN, MA 01770 PREPARED FOR: FENIX PARTNERS BRUSH HILL, LLC 177 LAKE STREET SHERBORN, MA 01770	CALCULATIONS: DGT	PREPARED BY:  DGT Associates Surveying & Engineering Framingham • Boston • Worcester Mystic, CT 1071 Worcester Road, Framingham, MA 01701 508-879-0030 www.DGTAssociates.com	DATE: 06-27-2024
FIELD: RAM/JNT			DRAFTING: RAM		PROJECT NO.: F-25889_00 EC
SCALE: 1"=40'			CHECK: PAL		CRD FILE: F-25889_MASTER
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