

SCHEDULE OF PLAN SET DRAWINGS:

- 
- ULES
- WETLAND (UPLAND)
- WETLAND (UPLAND)
- WETLAND (UPLAND)
- PROPOSED BUILDING (101,250 SQ FT)
- EXIST. BUILDING
- #401 GRIFFIN BROOK DR
- N/F  
CAP FEDERAL LLC  
C/O FARLEY WHITE MANAGEMENT CO.  
ASSESSOR'S MAP 220 LOT 9F
- GRIFFIN BROOK DRIVE
- N/F  
WALES BROOK D TR  
CAP FEDERAL LLC-PARD ROAD  
ASSESSOR'S MAP 220 LOT 9G
- N/F  
HICKORY HILL GOLF COURSE INC.  
ASSESSOR'S MAP 220 LOT 10A
- N/F  
ERIC R BROX  
ASSESSOR'S MAP 220 LOT 103
- LIMIT OF BORDERING VEGETATED WETLAND (BVW) (TYP.)
- 100' BUFFER ZONE TO BVW (TYP.)
- 50' BUFFER ZONE TO BVW (TYP.)
- 35' NO ALTERATION OR CONSTRUCTION SETBACK TO BVW (TYP.)
- START OF APPROX. OFFSITE RIVERFRONT AREA MEASUREMENT
- 200' RIVERFRONT AREA
- OFFSITE PERENNIAL STREAM (TYP.)
- PLAN
- SCALE: 1" = 100'
- 0 50 100 200

**GENERAL NOTE:**  
THESE PLANS ARE PREPARED FOR PERMITTING WITH THE CITY OF METHUEN. THE PLANS SHALL NOT BE USED FOR CONSTRUCTION OR FOR ANY OTHER PURPOSES WITHOUT WRITTEN PERMISSION FROM THE MORIN-CAMERON GROUP, INC.

R E V I S I O N S		
NO.	DESCRIPTION	DATE
1	REVISIONS PER PEER REVIEW AND NOI	05-20-2022

SURVEY BY: MCG  
DRAFTED BY: CM/LLO  
CHECKED BY: SPC  
APPROVED BY: SPC  
SCALE: AS NOTED  
DATE: APRIL 6, 2022

# COVER SHEET

DRAWING NO.  
  
**CS-1**



**RECORD OWNER:**  
501 & 600 GRIFFIN BROOK DRIVE  
ASSESSOR'S MAP 220 LOTS 9D & 9E  
GRIFFIN BROOK DRIVE OWNER LLC  
55 CAMBRIDGE STREET  
BURLINGTON, MA 01803  
BOOK 16943, PAGE 196

**GENERAL NOTES:**

- THESE PLANS ARE PREPARED FOR OUR CLIENT'S USE ONLY FOR THE PURPOSE OBTAINING PERMITS AND ARE NOT TO BE USED OR RELIED FOR CONSTRUCTION WITHOUT THE WRITTEN CONSENT OF THE MORIN-CAMERON GROUP, INC.
- EXISTING CONDITIONS, WETLAND AND BOUNDARY INFORMATION SHOWN HEREON LOCATED BY FIELD INSTRUMENT SURVEY PERFORMED BY THE MORIN-CAMERON GROUP, INC. IN JULY, 2021.

**FLOOD NOTE:**

THE SUBJECT PROPERTY IS MOSTLY LOCATED IN A ZONE 'X' AS ILLUSTRATED ON FLOOD INSURANCE RATE MAP #25009C0203F, WHICH HAS AN EFFECTIVE DATE OF JULY 3, 2012. A SMALL PORTION OF THE PROPERTY IS LOCATED IN A ZONE "AE" AS DEPICTED ON THE PLAN.

**ZONING DISTRICT:**

LIMITED INDUSTRIAL (IL) ZONING DISTRICT

**WETLAND NOTE:**

WETLAND RESOURCE AREA DELINEATED BY LEC ENVIRONMENTAL CONSULTANTS, INC. IN MAY 2021. APPROVED UNDER AN ORDER OF RESOURCE AREA DELINEATION DEP FILE #219-1265, DATED OCTOBER 6, 2021.

**GENERAL UTILITY NOTES:**

- THE GENERAL CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE GENERAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE GENERAL CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
- THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRIC, CABLE AND TELEPHONE COMPANIES, GAS PROVIDER AND METHUEN MUNICIPAL UTILITY DEPARTMENTS TO VERIFY THE LOCATION, SIZE AND TYPE OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE EXCAVATING OF TRENCHES, THE METHODS AND MATERIALS OF BACKFILLING, AND ALL OTHER MATTERS RELATING TO THE INSTALLATION OF WATER PIPES, SEWER LINES, STORM DRAINS, SUBSURFACE DRAINS, AND ALL OTHER UNDERGROUND UTILITIES SHALL BE CONSISTENT WITH GOOD CONSTRUCTION PRACTICES AND SHALL AT ALL TIMES BE SUBJECT TO THE INSPECTION BY THE APPLICABLE CITY DEPARTMENTS.
- ALL TRENCHES SHALL BE TAMPED WITH A POWER TAMPER AT INTERVALS NOT GREATER THAN ONE (1) FOOT.
- ALL UTILITY PENETRATIONS AT THE FOUNDATIONS SHALL BE ADJUSTED BASED ON THE FINAL CONSTRUCTION DRAWINGS.

**SITE PREPARATION NOTES:**

- ALL MATERIALS REMOVED FROM THE PREMISES SHALL BE DONE SO IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS FOR HAULING AND DISPOSAL.
- COORDINATE ANY UTILITY DIS-CONNECTIONS WITH APPROPRIATE SERVICE PROVIDERS.
- ALL TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES. AVOID HEAVY MACHINERY WITHIN ROOT BALL FOOTPRINT.
- COORDINATE WITH CITY OF METHUEN WATER AND SEWER DIVISION.

**CONSTRUCTION SEQUENCE:**

TO PREVENT EXCESSIVE EROSION AND SILTING, THE FOLLOWING CONSTRUCTION SEQUENCE COUPLED WITH OTHER WIDELY ACCEPTED PRINCIPALS FOR REDUCING EROSION AND SEDIMENTATION SHALL BE IMPLEMENTED IN THE DEVELOPMENT OF THE SITE.

- THE GENERAL CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY WITH THE OWNER (OWNER'S REPRESENTATIVE), PLANNING DEPARTMENT REPRESENTATIVE AND ANY OTHER INTERESTED CITY DEPARTMENT REPRESENTATIVES.
- STABILIZATION PRACTICES FOR EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. PLACE EROSION CONTROLS AT LOCATIONS INDICATED ON THE SITE DEVELOPMENT PLANS. AN EPA CONSTRUCTION GENERAL PERMIT AND STORMWATER POLLUTION PREVENTION PLAN MUST BE ACTIVATED PRIOR TO CONSTRUCTION ACTIVITIES.
- IN PREPARING TO REMOVE MATERIALS FROM THE WORK AREA ON THE SITE, CAREFUL CONSIDERATION SHOULD BE MADE TO THE EXTENT OF DISTURBANCE SO AS NOT TO DISTURB MORE OF THE SITE THAN WHAT IS INTENDED TO BE IMMEDIATELY DEVELOPED AND RE-STABILIZED.
- LOAM AND TOP SOIL EXCAVATED FROM THE WORK AREA SHALL BE STOCKPILED AT THE LOCATIONS SHOWN ON THE PLANS. IF MATERIALS ARE STOCKPILED ON THE SITE WHERE THEY WILL NOT INTERFERE WITH CONSTRUCTION ACTIVITIES, THEY SHALL BE LOCATED SO AS TO MINIMIZE THE POTENTIAL FOR EROSION INTO EXISTING DRAINAGE INFRASTRUCTURE OR WETLAND RESOURCE AREAS. STOCKPILES SHALL BE STABILIZED WITH STRAW BALES, SILT FENCING OR EQUIVALENT. STOCKPILES LEFT FOR GREATER THAN 14 DAYS SHALL BE SEEDED WITH AN EROSION CONTROL MIX. STOCKPILES SHALL BE SITUATED OUTSIDE THE WETLAND BUFFER ZONES WHEREVER POSSIBLE.
- REMOVAL OF ALL DEBRIS OR MATERIAL FROM THE WORK AREA SHALL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS UNDER THE OVERSIGHT OF A LICENSED SITE PROFESSIONAL (LSP) HIRED BY THE OWNER IF APPLICABLE.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES AT THE LOCATIONS NOTED.
- ALL CATCH BASINS SHALL BE PROTECTED WITH SILT SACK SEDIMENT TRAPS.
- REMOVAL OF ALL EXISTING UTILITIES TO BE CUT AND CAPPED, AND COORDINATED WITH APPROPRIATE UTILITY COMPANIES.

**CONSTRUCTION PRACTICES:**

ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:

- ALL REASONABLE ACTION SHALL BE TAKEN TO MINIMIZE THE NEGATIVE EFFECTS OF CONSTRUCTION ON ABUTTERS. ADVANCE NOTICE SHALL BE PROVIDED TO ALL ABUTTERS IN WRITING AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE PROJECT.
- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE COMMUNITY PLANNING COMMISSION, AND IN ACCORDANCE WITH ANY AND ALL RULES, REGULATIONS, AND ORDINANCES OF THE CITY OF METHUEN.
- THE OWNER SHALL PROMPTLY NOTIFY THE BOARD OF HEALTH OF ANY ENVIRONMENTAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION THAT MAY ADVERSELY IMPACT THE ABUTTERS TO THE SITE.
- ALL PROVISIONS IN THE MUNICIPAL CODE OF METHUEN, ARTICLE VI, SECTION 9-62, NOISE POLLUTION CONTROL ORDINANCE, SHALL BE STRICTLY ADHERED TO. IF STRICTER MEASURES ARE REQUIRED BY THIS DECISION, THE STRICTER MEASURES SHALL APPLY.
- WHERE PRACTICAL, ALL ONSITE MATERIAL SHALL BE USED AS BACK FILL AND FOR OTHER USES ON SITE.
- ALL CONSTRUCTION VEHICLES LEFT OVERNIGHT AT THE SITE MUST BE LOCATED COMPLETELY ON THE SITE.
- ALL CONSTRUCTION VEHICLES SHALL BE CLEANED PRIOR TO LEAVING THE SITE SO THAT THEY DO NOT LEAVE DIRT AND/OR DEBRIS ON SURROUNDING ROADWAYS.
- ALL CONSTRUCTION WILL OCCUR ON SITE; NO CONSTRUCTION WILL OCCUR OR BE STAGED WITHIN CITY RIGHT OF WAY. ANY DEVIATION FROM THIS SHALL BE APPROVED BY THE DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION.
- ANY ROADWAYS, DRIVEWAYS, SIDEWALKS, OR LANDSCAPING DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE OWNER. THE CITY ENGINEER, ALONG WITH THE CLERK OF THE WORKS SHALL DETERMINE THE CONDITION OF THE ROADWAYS DIRECTLY IMPACTED BY CONSTRUCTION AND RELATED TRAFFIC AND DETERMINE THE TYPES OF REPAIRS REQUIRED BY THE OWNER.

**EROSION AND SEDIMENTATION CONTROL:**

WIDELY ACCEPTED PRACTICES FOR REDUCING EROSION AND SEDIMENTATION WILL BE EMPLOYED IN THE DEVELOPMENT OF THIS SITE. REFER TO THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.

- THE DEVELOPMENT OF THE SITE HAS BEEN PLANNED TO MATCH EXISTING TOPOGRAPHY AND GROUND COVER. EXISTING DRAINAGE PATTERNS OF THE SITE HAVE BEEN MAINTAINED TO THE EXTENT PRACTICABLE.
- NATURAL WETLANDS WILL BE PRESERVED AND PROTECTED, AND EXISTING VEGETATION WILL BE RETAINED AND PROTECTED TO THE EXTENT POSSIBLE.
- STEEP SLOPES, WHERE POSSIBLE, WILL NOT BE DISTURBED.
- THE CONTRACTOR SHALL MINIMIZE THE AREA OF DISTURBED LAND TO THE EXTENT FEASIBLE.
- SEDIMENT CONTROL MEASURES WILL BE APPLIED TO CONTROL ANY SEDIMENTS THAT MAY BE PRODUCED AS A RESULT OF SITE CONSTRUCTION ACTIVITIES. EROSION AND DEPOSITION OF SEDIMENT WILL BE CLOSELY MONITORED DURING CONSTRUCTION.
- TEMPORARY EROSION CONTROL MEASURES WILL INCLUDE, BUT NOT BE LIMITED TO, FILTER FABRIC SILT FENCES, SEEDING AND MULCHING, SEEDED FILTER STRIPS AND SILT SACKS IN CATCH BASINS(EXISTING AND NEWLY INSTALLED).
- TOPSOIL STRIPPED FROM THE SITE WILL BE STOCKPILED FOR LOAMING AND SEEDING AT LATER CONSTRUCTION STAGES. THE STOCKPILES SHALL BE LOCATED SO AS TO ACT AS TEMPORARY DIVERSIONS, GENERALLY ON AN UPHILL SLOPE.
- SITE DEVELOPMENT WILL NOT COMMENCE UNTIL ALL TEMPORARY EROSION CONTROL MEASURES ARE IN PLACE. THESE MEASURES SHALL BE EMPLOYED UNTIL FINAL PAVING AND ADEQUATE VEGETATION HAS BEEN ESTABLISHED.
- THE CONSTRUCTION PHASE MUST COMPLY WITH THE ENVIRONMENTAL PROTECTION AGENCY(EPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PROTOCOLS. AN EPA NOTICE OF INTENT SHALL BE FILLED OUT AT LEAST 2 WEEKS PRIOR TO THE START OF CONSTRUCTION.
- NOTIFY THE CITY OF METHUEN AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

**STORM DRAIN NOTES:**

- STORMWATER CONVEYANCE PIPES SHALL BE HDPE (ADS N-12) UNLESS OTHERWISE NOTED.
- BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY BY AASHTO T-180D METHOD.
- SHEETING, IF USED, SHALL BE REMOVED PRIOR TO BACKFILLING TRENCH.
- UNSATURABLE SOIL BELOW THE INVERT (CLAY, ORGANICS, DEBRIS, ETC) SHALL BE REMOVED AND REPLACED WITH APPROVED MATERIAL AND SHALL NOT BE REUSED AS BACKFILL.
- ROOF DRAINS SHALL BE DIRECTED TO THE DRAINAGE SYSTEM IN THE LOCATIONS SHOWN. COORDINATE LOCATIONS WITH THE PROJECT ARCHITECT AND LANDSCAPE ARCHITECT.
- REPAIR BROKEN OR DAMAGED DRAIN PIPES IN KIND.

**RECORD KEEPING, AS-BUILTS & LAYOUT NOTES:**

- THE SITE CONTRACTOR SHALL MAINTAIN TIES AND EXTENSIVE PHOTOS OF ALL BURIED UTILITIES. WHENEVER POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEER OF INSPECTION MILESTONES SO UTILITIES CAN BE INSPECTED PRIOR TO BACKFILLING.
- ALL AS-BUILT SURVEYS AND LAYOUT NECESSARY DURING CONSTRUCTION SHALL BE COORDINATED WITH THE SURVEYOR. PROVIDE AT LEAST 72 HOURS ADVANCED NOTICE.

**SEWER NOTES:**

- A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN SANITARY SEWER PIPES AND WATER PIPES. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER PIPE, THE WATER PIPE SHALL BE SLEEVED FOR A DISTANCE OF AT LEAST 10' ON EACH SIDE.
- ALL GRAVITY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SDR-35 UNLESS OTHERWISE NOTED.
- WHERE SANITARY SEWERS CROSS WATER SERVICES, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER PIPE. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER PIPE SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER PIPE AND THE SEWER PIPE SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- SANITARY SEWER LINES WITH LESS THAN 4 FEET OF COVER SHALL BE INSULATED TO PREVENT FREEZING.

**DEMOLITION NOTES:**

- CONTRACTOR TO CUT AND CAP ALL EXISTING UTILITY SERVICES PROPOSED TO BE REMOVED AT THE MAIN, IN ACCORDANCE WITH CITY BUILDING DEMOLITION REGULATIONS, PRIOR TO CONSTRUCTION. TEE SERVICE CONNECTIONS SHALL BE REMOVED FROM THE MAIN AND REPLACED WITH A MINIMUM OF 4 FT. OF NEW CLDI PIPE.
- HYDRANT CONNECTIONS FOR WATER USE DURING DEMOLITION SHALL BE COORDINATED WITH THE CITY OF METHUEN ENGINEERING DEPARTMENT

**WATER NOTES:**

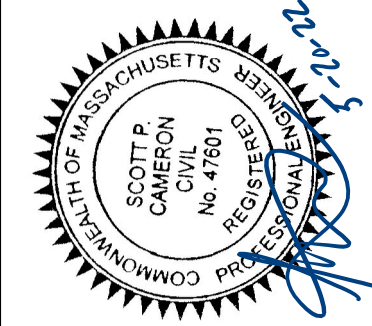
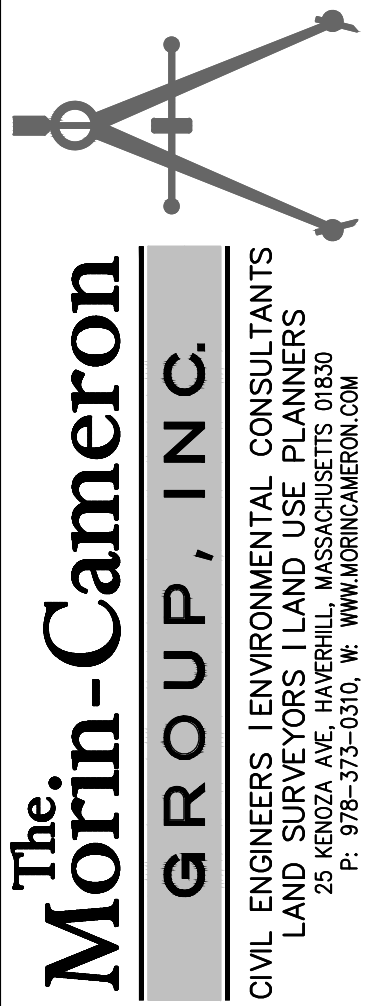
- WATER LINES WILL HAVE AT LEAST FIVE (5) FEET OF COVER.
- THERE MUST BE AT LEAST SIX (6) INCHES OF CLEARANCE BETWEEN A NEW WATER LINE AND ANY UNDERGROUND ROCK FORMATION.
- INSTALLATION IN CLAY/SILT SOILS: ALL WATER MAIN COMPONENTS SHALL MEET AWWA STANDARDS. "ALL DUCTILE IRON PIPE SHALL BE COATED WITH A LAYER OF ARC-SPRAYED ZINC PER ISO 8179. THE MASS OF THE ZINC APPLIED SHALL BE 200 G/M<sup>2</sup>. A FINISHING TOPCOAT SHALL BE APPLIED TO THE ZINC. INTERIOR LINING FOR POTABLE WATER MAIN SHALL HAVE AN INTERIOR PROTECTIVE LINING OF CEMENT-MORTAR IN ACCORDANCE WITH ANSI/AWWA A21.4/C104." WATER AND FIRE PROTECTION MAINS FOUR (4) INCH AND GREATER SHALL BE CLASS 52 DUCTILE IRON CEMENT LINED PIPE AND ZINC COATED. WHERE SOIL CONDITIONS ARE DETERMINED BY THE DEPARTMENT TO BE CORROSIVE, POLY WRAP WILL BE INSTALLED AS ADDITIONAL MEANS OF PROTECTION. "POLYETHYLENE ENCASEMENT: POLYETHYLENE ENCASEMENT SHALL BE POLYETHYLENE CONSISTING OF THREE LAYERS OF CO-EXTRUDED LINEAR LOW DENSITY POLYETHYLENE (LLDPE), FUSED INTO A SINGLE THICKNESS OF NOT LESS THAN 8 (EIGHT) MILS."
- ALL MECHANICAL JOINT COMPONENTS WILL BE INSTALLED USING RETAINING GLANDS, SUCH AS, GRIP RING, MEGA LUG OR STAR GRIP. METAL WEDGES MUST BE USED AT ALL BELL JOINTS TO ENSURE CONTINUITY FOR TRACING. ALL FITTINGS (TEES, BENDS, SOLID SLEEVE ETC.) WILL BE ZINC COATED AS WELL FOR PROTECTION PER ISO 8179-2. ZINC RICH PAINT SHALL HAVE A ZINC CONTENT OF AT LEAST 85% BY WEIGHT AND SHALL BE FINISHED WITH AN EXTERIOR BITUMINOUS COATING. A MINIMUM 307SS (STAINLESS STEEL) "T" BOLTS WILL BE USED TO CONNECT ANY APPURTENANCE THAT REQUIRES THE USE OF "T" BOLTS FOR ASSEMBLY.
- THE SERVICE CONNECTIONS SHALL BE PERPENDICULAR TO THE MAIN AND FOLLOW A STRAIGHT LINE INTO THE BUILDING.
- INSTALLATION IN CLAY/SILT SOILS: GATE VALVES WILL BE DUCTILE IRON EPOXY COATED (AWWA C550), WITH O-RING SEALS, URETHANE COATED WEDGE, STAINLESS STEEL NUTS AND BOLTS, AND ANTI-ROTATION SEATS TO PREVENT T-BOLTS FROM TURNING. VALVES WILL BE OPEN RIGHT USING A TWO (2) INCH OPERATING NUT WITH AN ARROW CAST IN THE METAL.
- ALL WATER VALVE BOX COVERS SHALL BE LABELED "WATER".
- ALL WATER METERS MUST BE PURCHASED FROM THE METHUEN WATER & SEWER DEPARTMENT. SHUT OFF VALVES ARE REQUIRED BOTH BEFORE AND AFTER THE METER. ALL METERS MUST BE INSTALLED OR REMOVED BY AN EMPLOYEE OF THE METHUEN WATER & SEWER DEPARTMENT ONLY. ALL METERS MUST BE LOCATED WITHIN THREE (3) FEET OF WHERE THE SERVICE ENTERS THE BUILDING AND SHALL BE ACCESSIBLE FOR READING, MAINTENANCE AND REPAIR.
- NO WATER WILL BE SUPPLIED TO ANY CONTRACTOR OR BUILDER THROUGH A WATER SERVICE WHICH HAS NOT BEEN PLACED "IN SERVICE" BY THE METHUEN WATER & SEWER DEPARTMENT. NO DISTRIBUTION SYSTEM COMPONENT WILL BE OPERATED BY ANYONE OTHER THAN METHUEN WATER & SEWER DEPARTMENT PERSONNEL.
- WATER LINES (MAINS AND SERVICE CONNECTIONS) SHALL BE PRESSURE TESTED TO 150 PSI AND HELD FOR ONE HOUR AND WITNESSED BY THE METHUEN WATER & SEWER DEPARTMENT CONSTRUCTION FOREMAN OR HIS DESIGNEE. ALL INSTALLATIONS MUST BE INSPECTED BY THE WATER CONSTRUCTION FOREMAN OR HIS DESIGNEE. PROVIDE THE METHUEN WATER & SEWER DEPARTMENT WITH AT LEAST 72 HOURS NOTICE FOR THE INSPECTION.
- AS-BUILT PLANS (HARD COPIES AND DIGITAL) ARE REQUIRED PRIOR TO PLACING A NEW WATER SYSTEM IN SERVICE. AS-BUILT PLANS (CORNER TIES) AND PAYMENTS ARE DUE PRIOR TO TURNING A WATER SERVICE ON. CONTACT THE SURVEYOR AT LEAST 72 HOURS PRIOR TO INSTALLATION TO COORDINATE AN AS-BUILT SURVEY.

**LEGEND:**

	CONTOUR
	SPOT GRADE
	DRAIN LINE
	GAS LINE
	SEWER LINE
	UNDERGROUND ELECTRIC LINE
	WATER LINE
	CHAIN LINK FENCE
	WOOD GUARD RAIL
	VERTICAL GRANITE CURB LINE
	CAPE COD BERM
	SNOW STORAGE AREA
	ACCESSIBLE PARKING SPACE
	PARKING SPACE QUANTITY
	SIGN
	LIGHT POLE
	HYDRANT
	WATER GATE
	SEWER MANHOLE (SMH)
	DRAIN MANHOLE (DMH)
	CATCH BASIN (CB)
	CDS HYDRODYNAMIC SEPARATOR (ST-2)
	TELEPHONE BOX
	TELEPHONE MANHOLE
	SUBSURFACE STRUCTURE
	SOIL TEST PIT

**ABBREVIATION:**

BVW	BORDER OF VEGETATED WETLANDS
BW	BOTTOM OF WALL
CCB	CAPE COD BERM
DCCS	DENSE GRADED CRUSHED STONE
EXIST.	EXISTING
DYLL	DOUBLE YELLOW LANE LINE
(M)	MEASURED
OCS	OUTLET CONTROL STRUCTURE
PROP.	PROPOSED
(R)	RECORD
#R	CURB RADIUS
DL	STOP LINE
SSA	SNOW STORAGE AREA
TYP	TYPICAL
TW	TOP OF WALL
VGC	VERTICAL GRANITE CURB

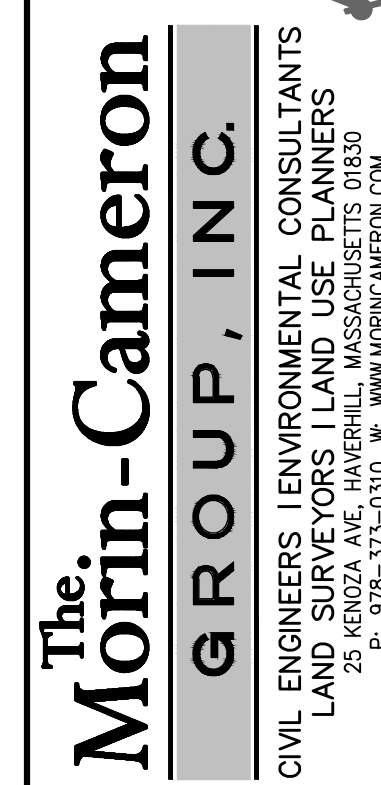
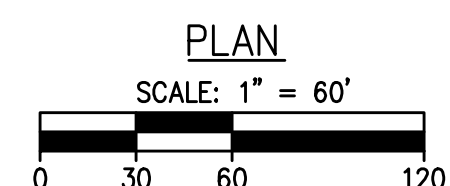


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**SITE DEVELOPMENT PLANS**  
IN  
**METHUEN, MASSACHUSETTS**  
**501 & 600 GRIFFIN BROOK DRIVE**  
(ASSESSOR'S MAP 220, LOTS 9D & 9E)  
PREPARED FOR:  
**GRIFFIN BROOK DRIVE OWNER LLC**

**GENERAL NOTES, LEGEND & ABBREVIATION**  
DRAWING NO. **C-1**





SURVEY BY: MCG  
DRAFTED BY: CEM/LNO  
CHECKED BY: SPC  
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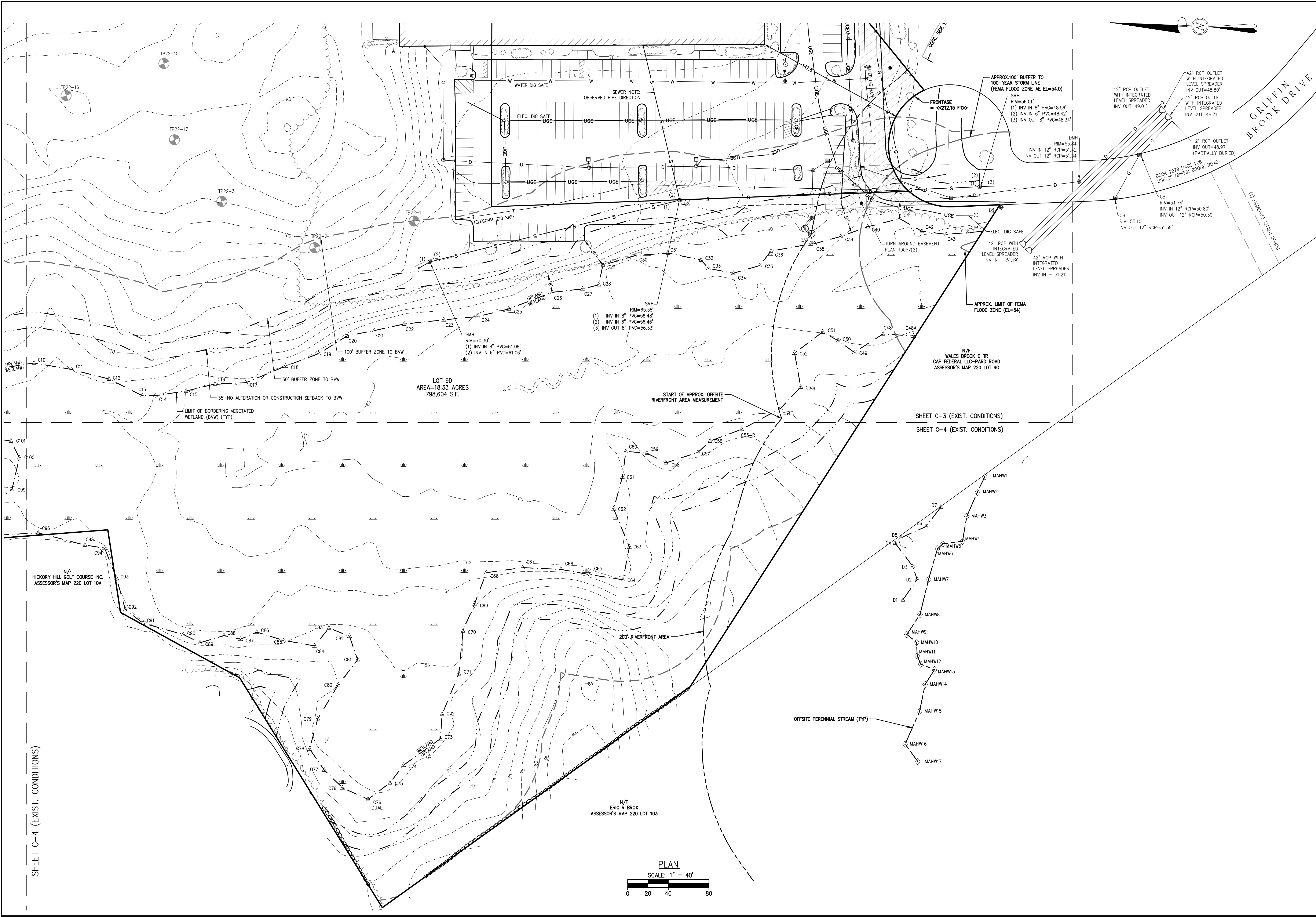
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**IN**  
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**501 & 600 GRIFFIN BROOK DRIVE**  
**(ASSESSOR'S MAP 220, LOTS 9D & 9E)**  
**PREPARED FOR:**  
**GRIFFIN BROOK DRIVE OWNER LLC**

SHEET INDEX  
& EROSION  
CONTROL

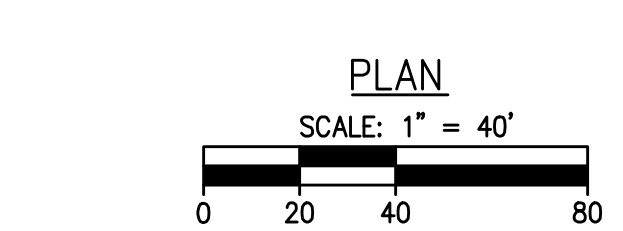








SHEET C-4 (EXIST. CONDITIONS)



EXISTING  
CONDITIONS  
PLAN

DRAWING NO.

C-4

SITE DEVELOPMENT PLANS  
IN  
METHUEN, MASSACHUSETTS  
501 & 600 GRIFFIN BROOK DRIVE  
(ASSESSOR'S MAP 220, LOTS 9D & 9E)  
PREPARED FOR:  
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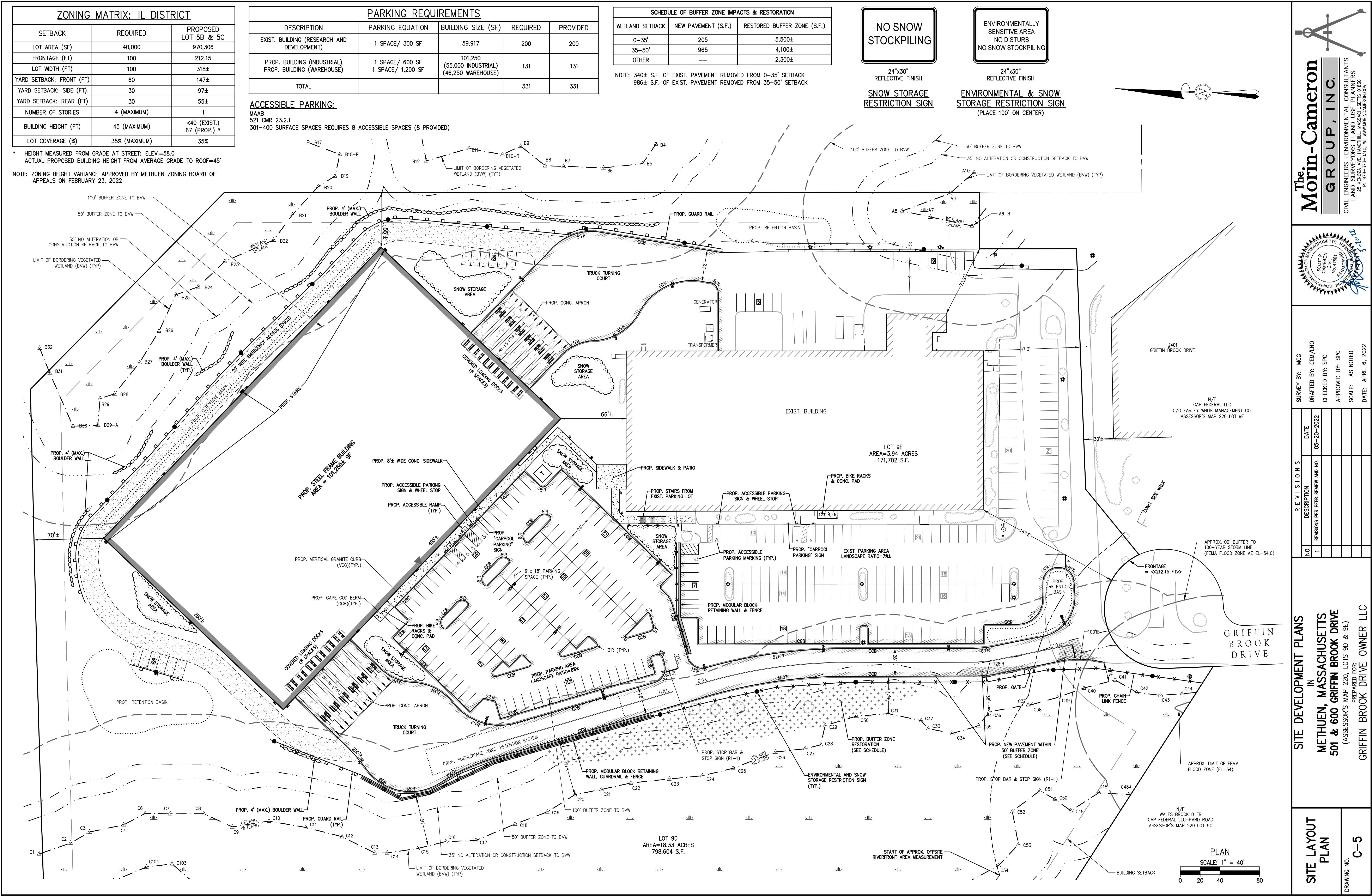
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The  
Morin-Cameron  
GROUP, INC.

CIVIL ENGINEERS/ENVIRONMENTAL CONSULTANTS  
LAND SURVEYORS/PLANNERS  
25 KENOA AVE. HAVERHILL, MASSACHUSETTS 01830  
P: 978-373-1010, W: WWW.MORINCAMERON.COM

DRAWING: Z:\A.B.O. Projects\4046\Engineer\Drawing\Current\4046 MAIN PROJ. #4046





**The Morin-Cameron GROUP, INC.**  
CIVIL ENGINEERS | ENVIRONMENTAL CONSULTANTS  
LAND SURVEYORS | LAND USE PLANNERS  
25 KENNA AVE., HAVERHILL, MASSACHUSETTS 01830  
P: 978-375-1010, W: WWW.MORINCAMERON.COM

STATE OF MASSACHUSETTS  
COMMONWEALTH OF MASSACHUSETTS  
NOTARY PUBLIC  
COSTA A. CAMERON  
CIVIL  
No. 47861  
EXPIRATION DATE 05/31/2025

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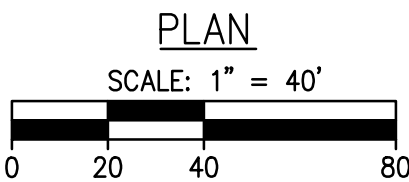
**SITE LAYOUT PLAN**  
DRAWING NO. **C-5**







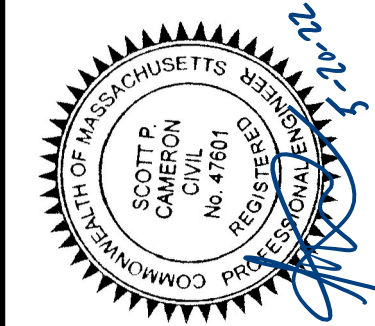
UPSTREAM			CONNECTING PIPE		DOWNSTREAM STRUCTURE	PIPE INFORMATION				
ID	RIM	SUMP	INV. START	INV. END		LENGTH	DIAMETER	SLOPE	TYPE	NOTES
CB-1	75.8	65	69.00	68.81	DMH-1	38	12	0.005	HDPE	DOUBLE RIM
DMH-1	76.3	63.8	67.81	67.76	ST-1	10	12	0.005	HDPE	CONTECH CDS
CB-2	77.6	65	69.06	68.81	ST-1	50	12	0.005	HDPE	CONTECH CDS
ST-1	76.4	63.6	67.66	67.60	TANK	3	15	0.020	HDPE	
CB-3	77.0	64.5	68.57	68.375	DMH-2	38	12	0.005	HDPE	
CB-4	76.3	64.7	68.76	68.375	DMH-2	77	12	0.005	HDPE	
DMH-2	76.3	64.2	68.28	68.07	DMH-3	41	12	0.005	HDPE	
CB-5	76.0	64.1	68.14	68.07	DMH-3	13	12	0.005	HDPE	
CB-6	76.7	64.1	68.18	68.07	DMH-3	21	12	0.005	HDPE	
DMH-3	75.5	63.9	67.97	67.84	ST-2	13	12	0.010	HDPE	CONTECH CDS
CB-7	72.0	64.4	68.48	68.42	DMH-4	12	12	0.005	HDPE	
CB-8	72.1	64.5	68.52	68.42	DMH-4	19	12	0.005	HDPE	
DMH-4	72.5	64.3	68.32	67.84	ST-2	48	12	0.010	HDPE	CONTECH CDS
ST-2	75.5	63.7	67.74	67.60	P3	14	15	0.010	HDPE	POND 3
OCS3	75.5	60	64.00	61.30	DMH-5	175	18	-0.004	HDPE	
DMH-5	66.5	57.9	61.97	58.368	DMH-6	180	12	0.02	HDPE	
CB-9	66.0	58.1	62.10	62.068	DMH-5	7	12	0.005	HDPE	
CB-10	66.0	58.1	62.19	62.068	DMH-5	24	12	0.005	HDPE	
CB-11	61.7	54.5	58.51	58.368	DMH-6	28	12	0.005	HDPE	
DMH-6	61.9	54.2	58.27	58.22	EXIST. DMH	24	18	0.002	HDPE	DMH BY WETLAND
CB-12	68.0	56.6	60.65	60.50	ST-3	30	12	0.005	HDPE	CONTECH CDS
CB-13	68.0	56.5	60.57	60.50	ST-3	14	12	0.005	HDPE	CONTECH CDS
ST-3	65.8	56.4	60.40	60.20	HW-3	22	12	0.001	HDPE	HEADWALL
CB-14	60.0	54.5	58.56	58.52	Exist. DMH	43	12	0.001	HDPE	
AD-1	78.5	63.7	67.74	67.70	P4	8	6	0.005	HDPE	
AD-2	78.5	63.7	67.74	67.70	P4	8	6	0.005	HDPE	
AD-3	78.5	63.7	67.74	67.70	P4	8	6	0.005	HDPE	
AD-4	78.5	63.7	67.74	67.70	P4	8	6	0.005	HDPE	
AD-5	78.5	63.7	67.74	67.70	P4	8	6	0.005	HDPE	
ROOF			88.74	75.80	HW-1	647	12	0.02	HDPE	



**The Morin-Cameron GROUP, INC.**

CIVIL ENGINEERS | ENVIRONMENTAL CONSULTANTS  
LAND SURVEYORS | LAND USE PLANNERS

25 KENDAL AVE. HAVERHILL, MASSACHUSETTS 01830  
P: 978-375-5310, W: WWW.MORINCAMERON.COM



SURVEY BY: MCG

DRAFTED BY: CEM/LNO

CHECKED BY: SPC

APPROVED BY: SPC

SCALE: AS NOTED

DATE: APRIL 6, 2022

R E V I S I O N S	
NO.	DESCRIPTION
1	REVISIONS PER PEER REVIEW AND NO
	DATE
	05-20-2022

SITE DEVELOPMENT PLANS

IN

METHUEN, MASSACHUSETTS

501 & 600 GRIFFIN BROOK DRIVE

(ASSESSOR'S MAP 220, LOTS 9D & 9E)

PREPARED FOR:

GRIFFIN BROOK DRIVE OWNER LLC

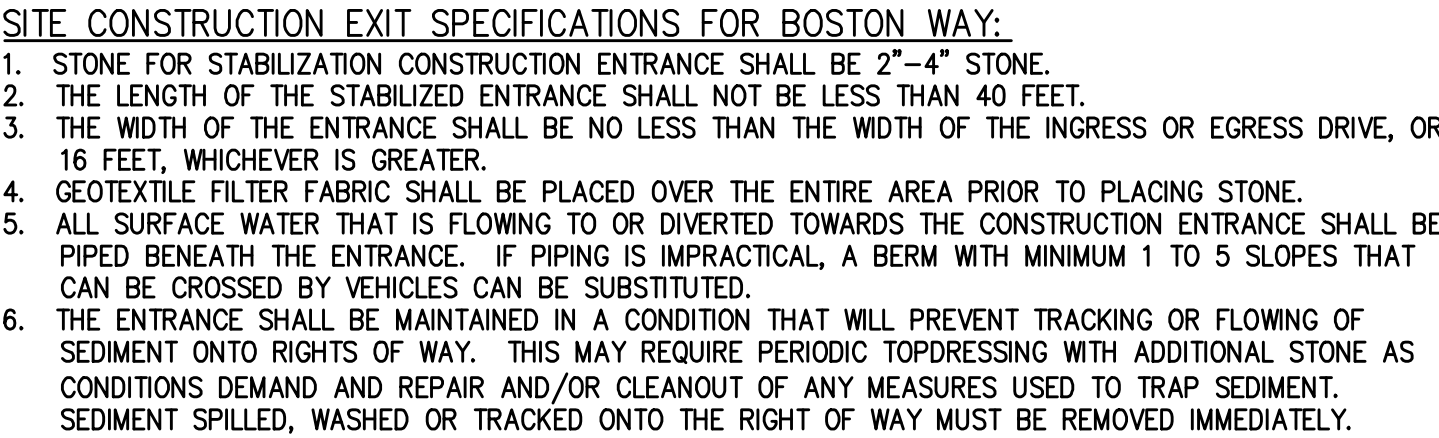
DRAINAGE SCHEDULE

DRAWING NO. C-7

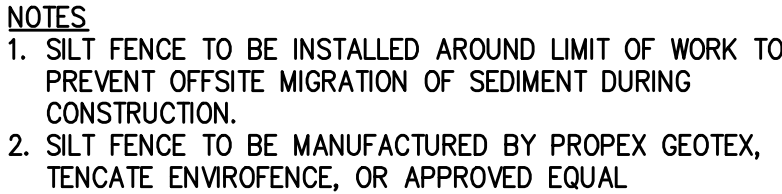




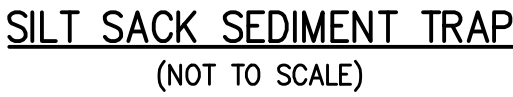




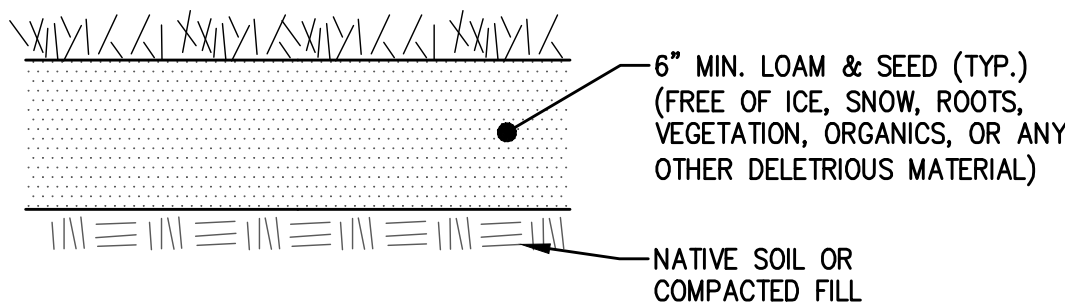
**STABILIZED CONSTRUCTION ENTRANCE DETAIL**  
(NOT TO SCALE)



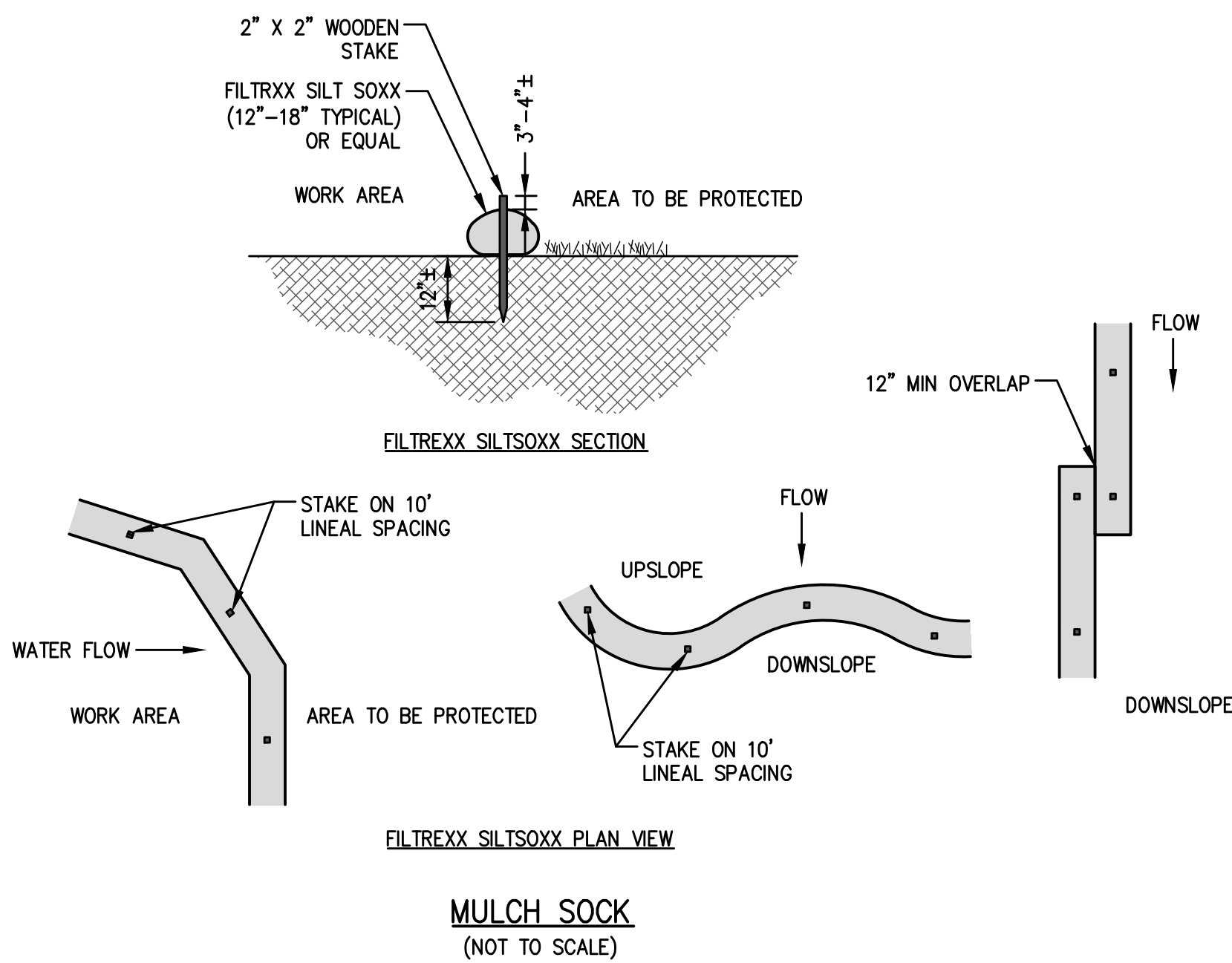
SILT SOCK BACKED WITH SILT FENCE  
(NOT TO SCALE)



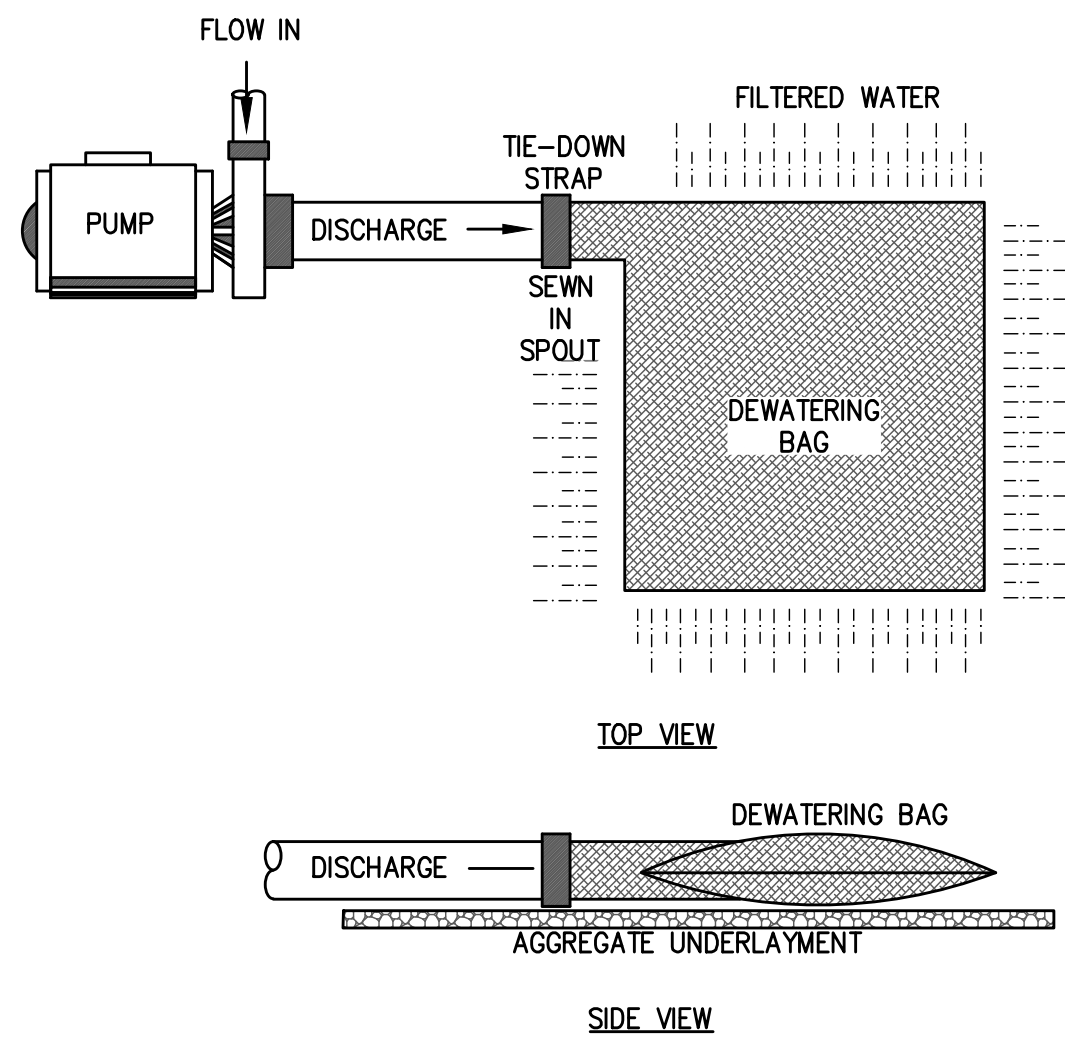
1. INSTALL SILT SACKS IN EXISTING CATCH BASINS. INSTALL SILT SACKS IN NEW CATCH BASINS AFTER INSTALLATION.
2. GRATES TO BE PLACED OVER SILT SACKS.
3. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED WHEN DEPTH OF SEDIMENT IS WITHIN 6" OF GRATE.



ORDINARY LOAM AND SEED  
(NOT TO SCALE)

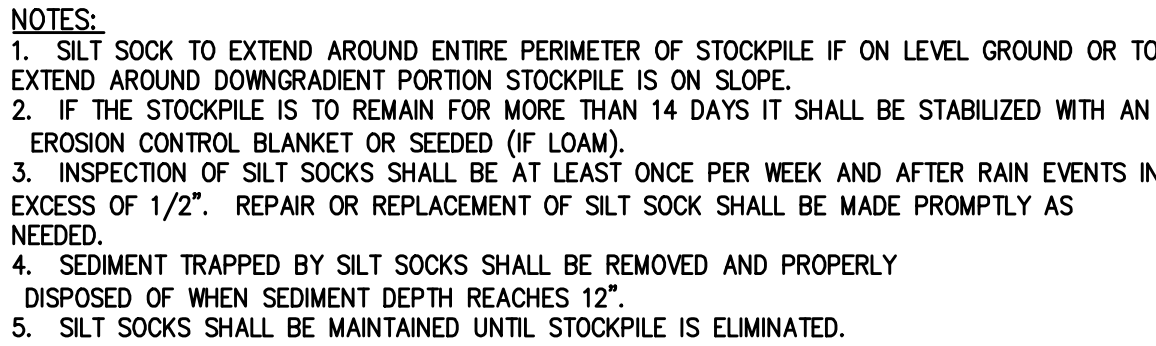


**DEWATERING BAG DETAIL**  
(NOT TO SCALE)

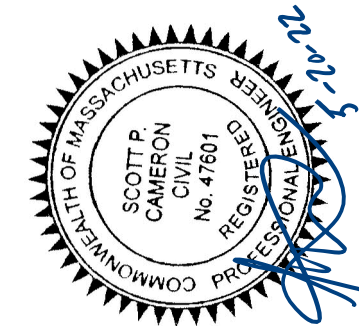


**DEWATERING SUMP DETAIL**  
NOT TO SCALE

NOTE:  
COORDINATE WITH LSP IF DEWATERING WITHIN A.U.L. AREAS



TEMPORARY SOIL STOCKPILE  
(NOT TO SCALE)



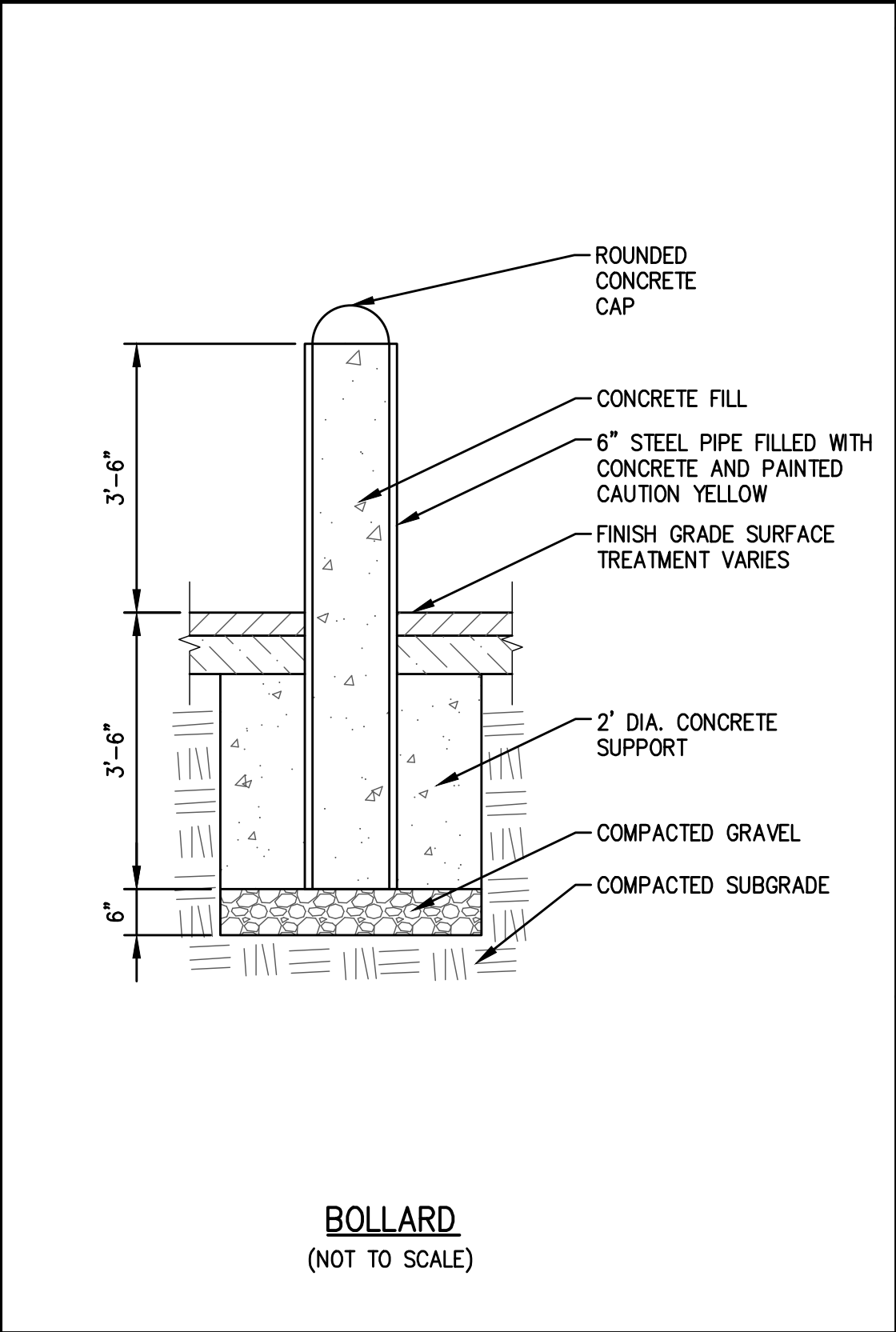
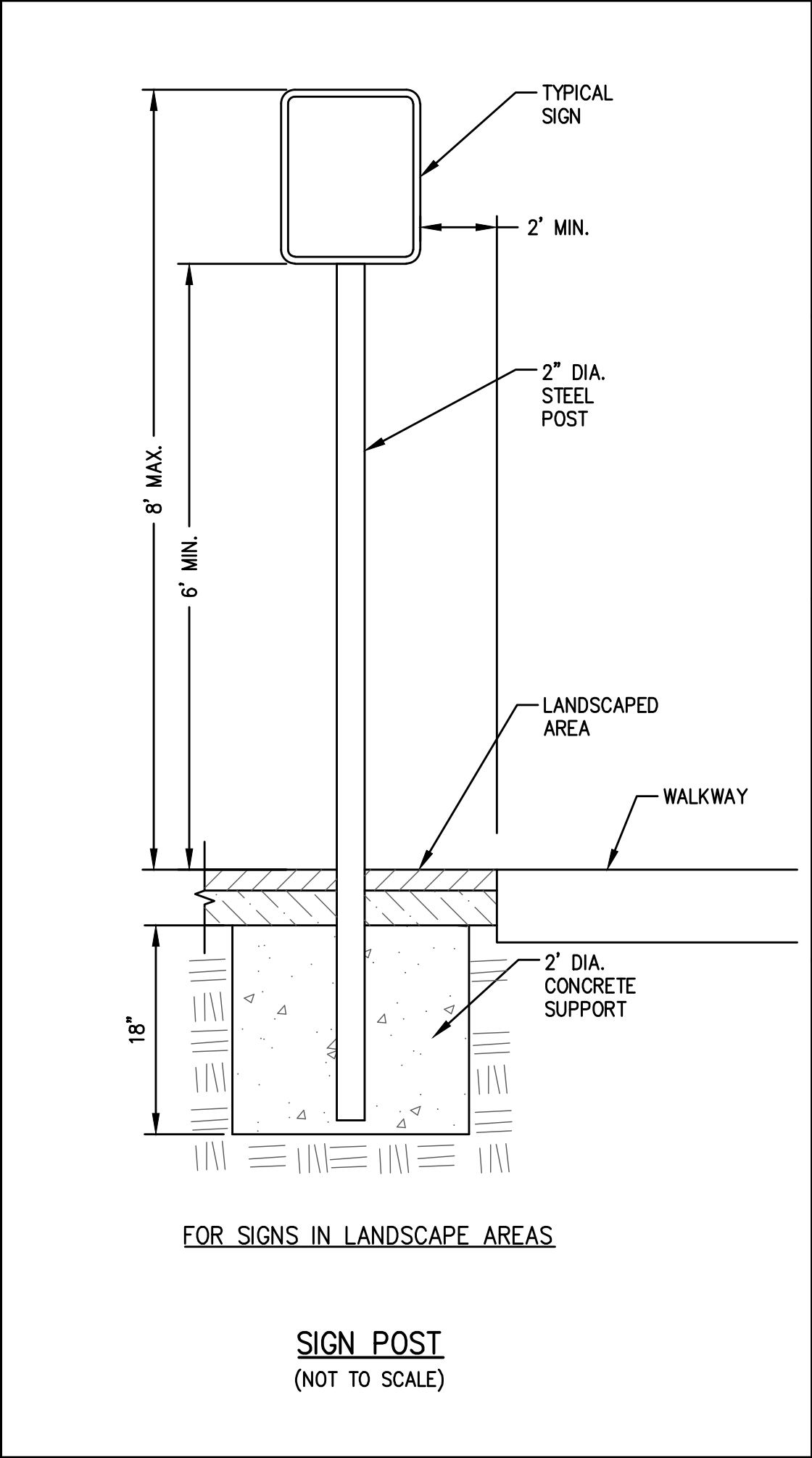
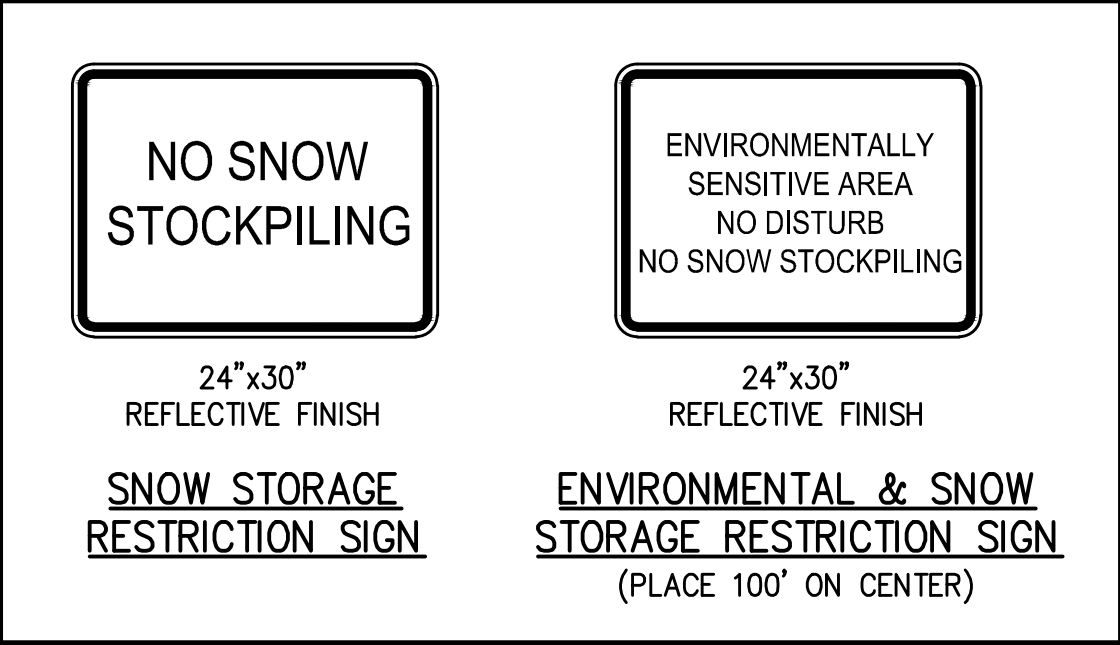
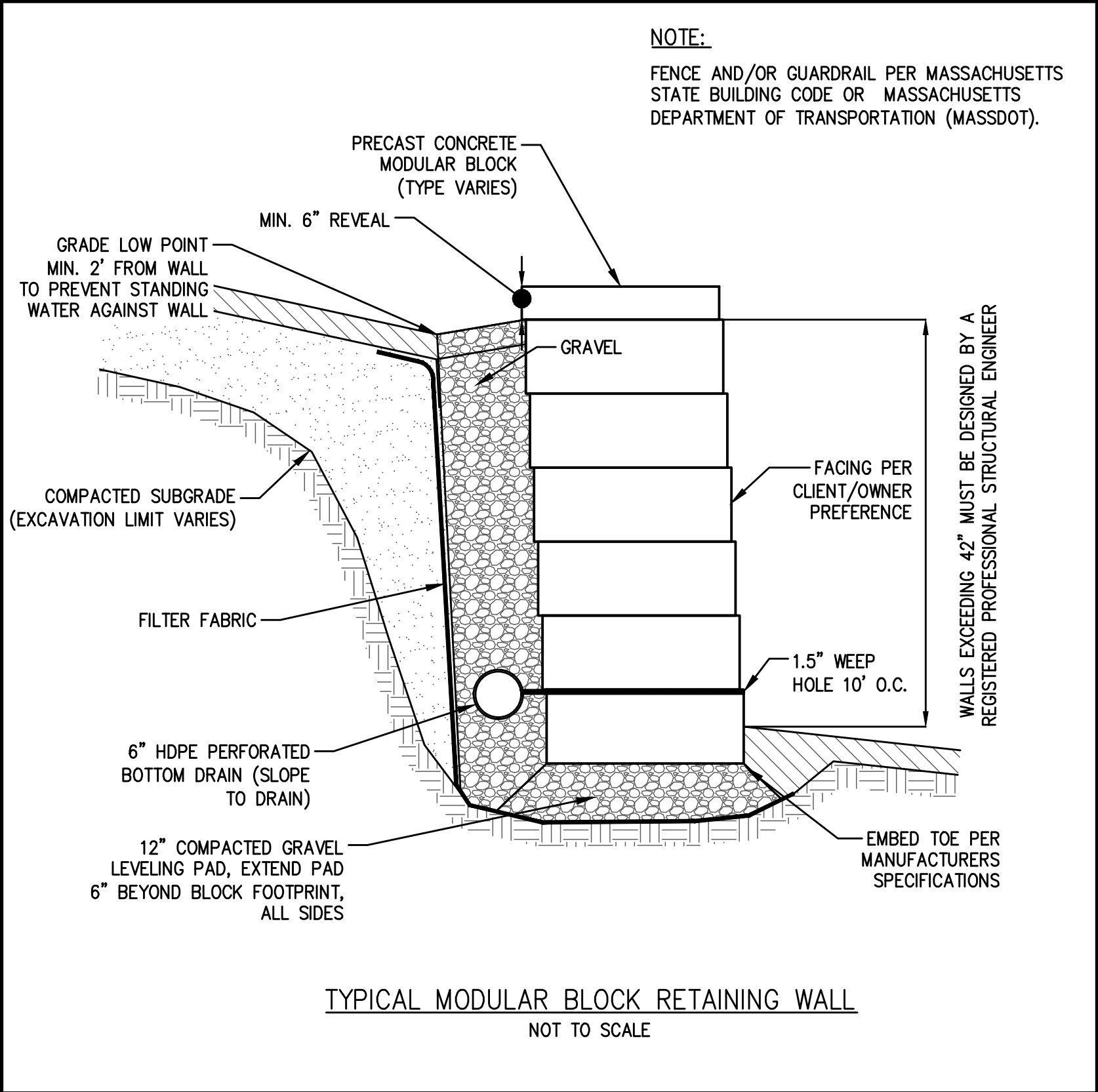
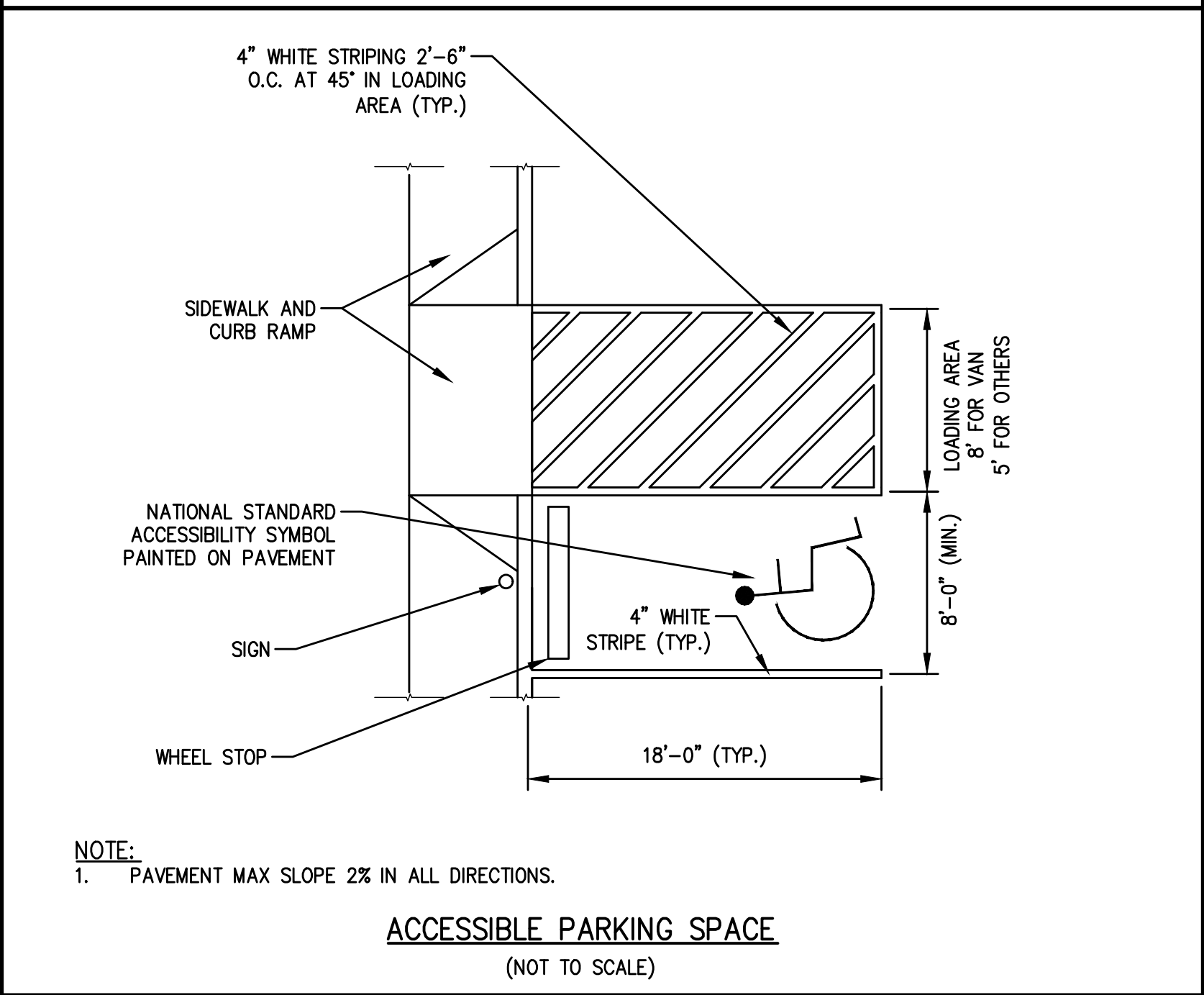
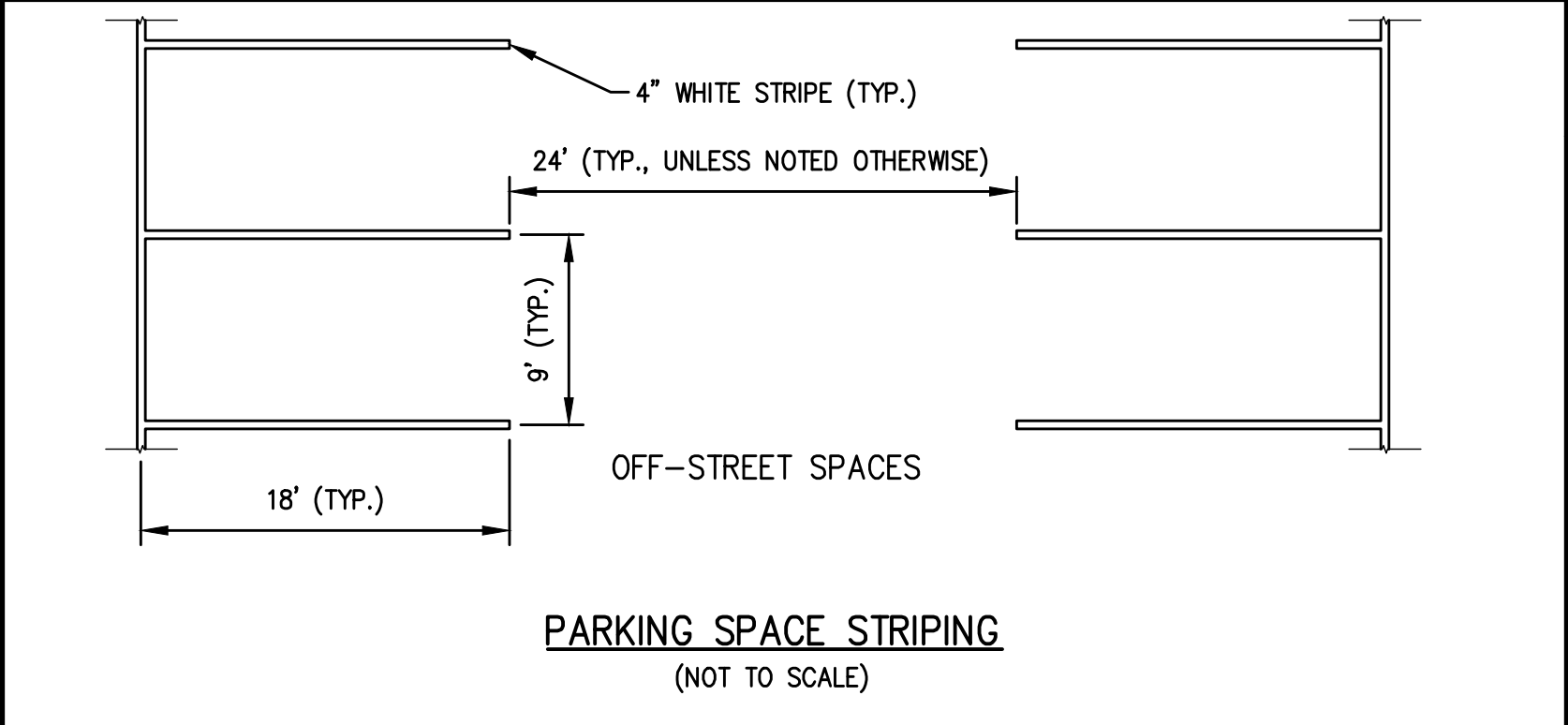
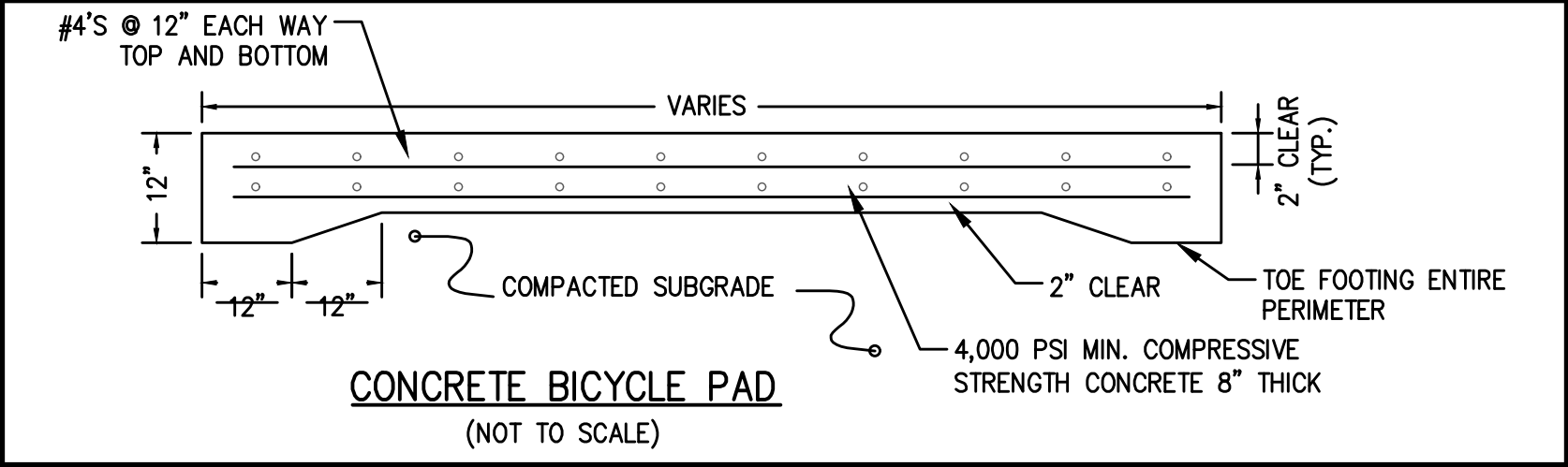
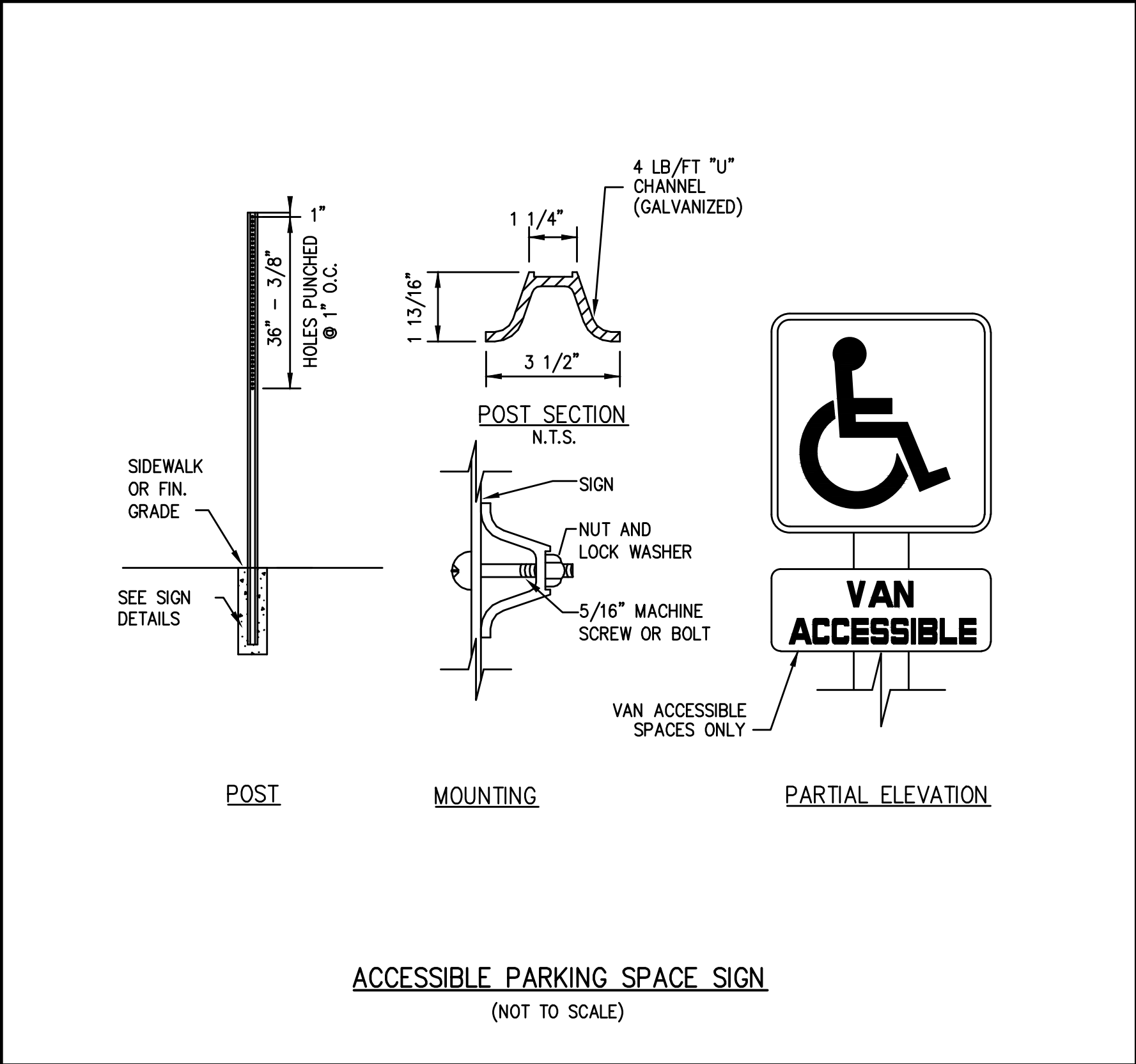
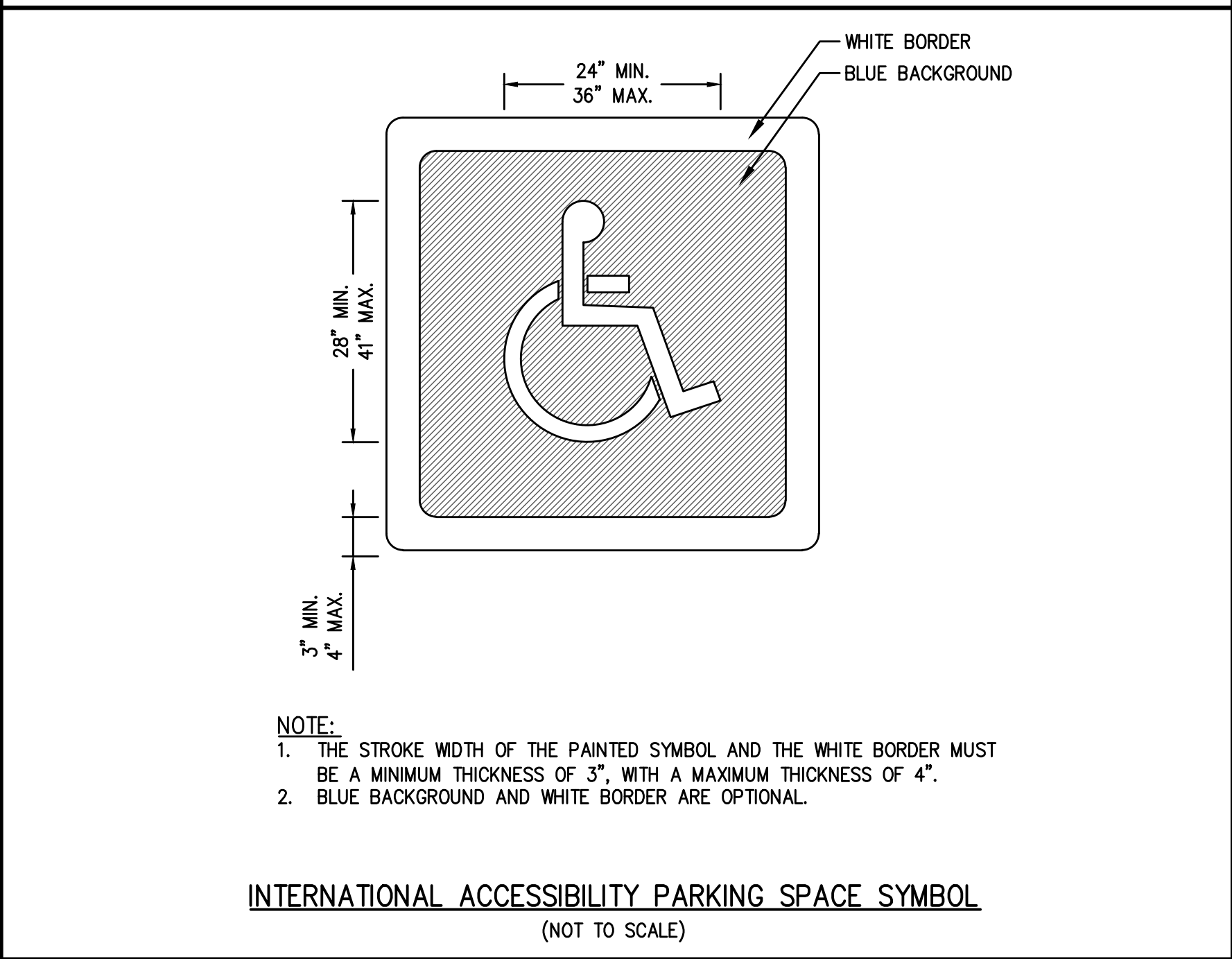
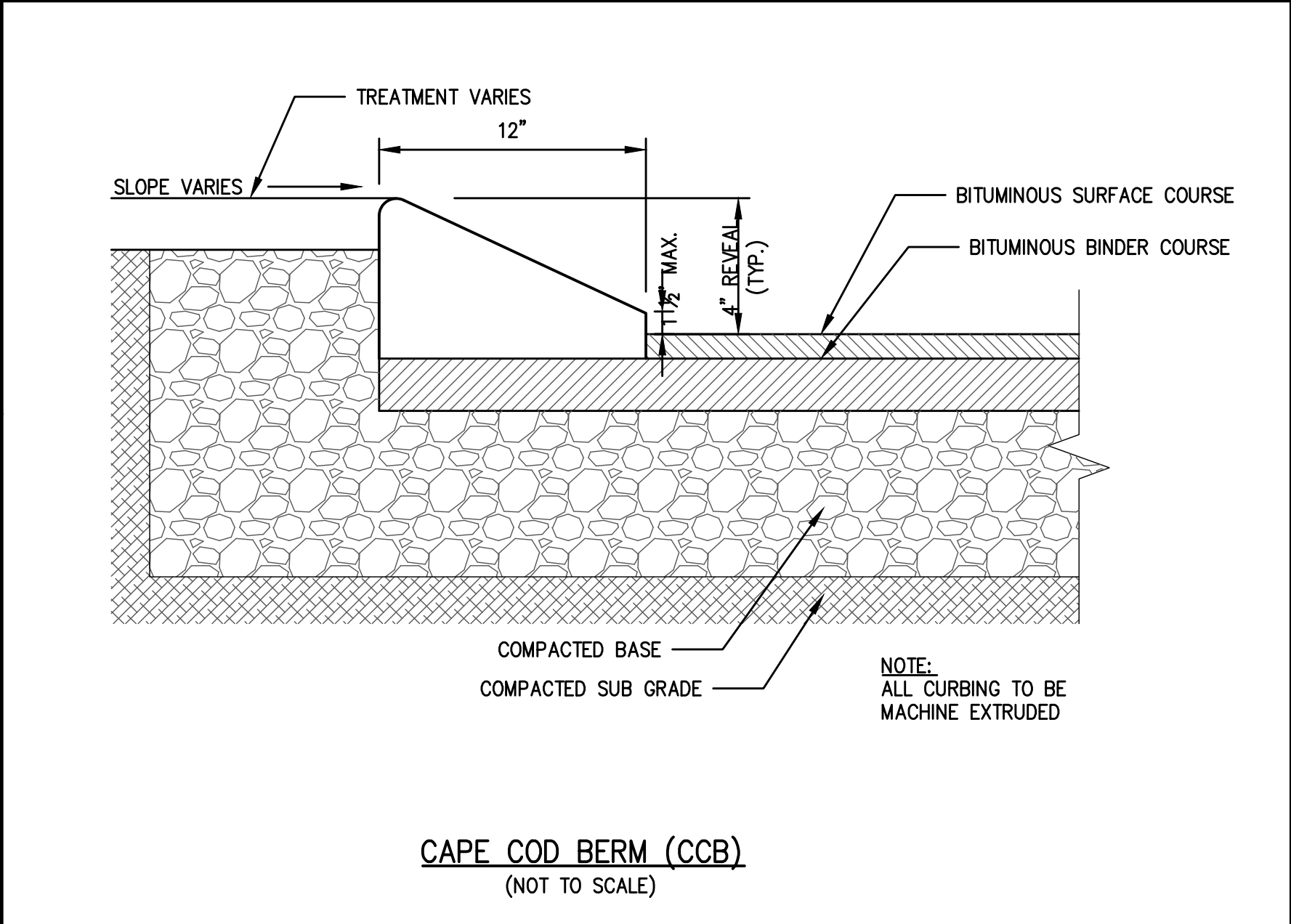
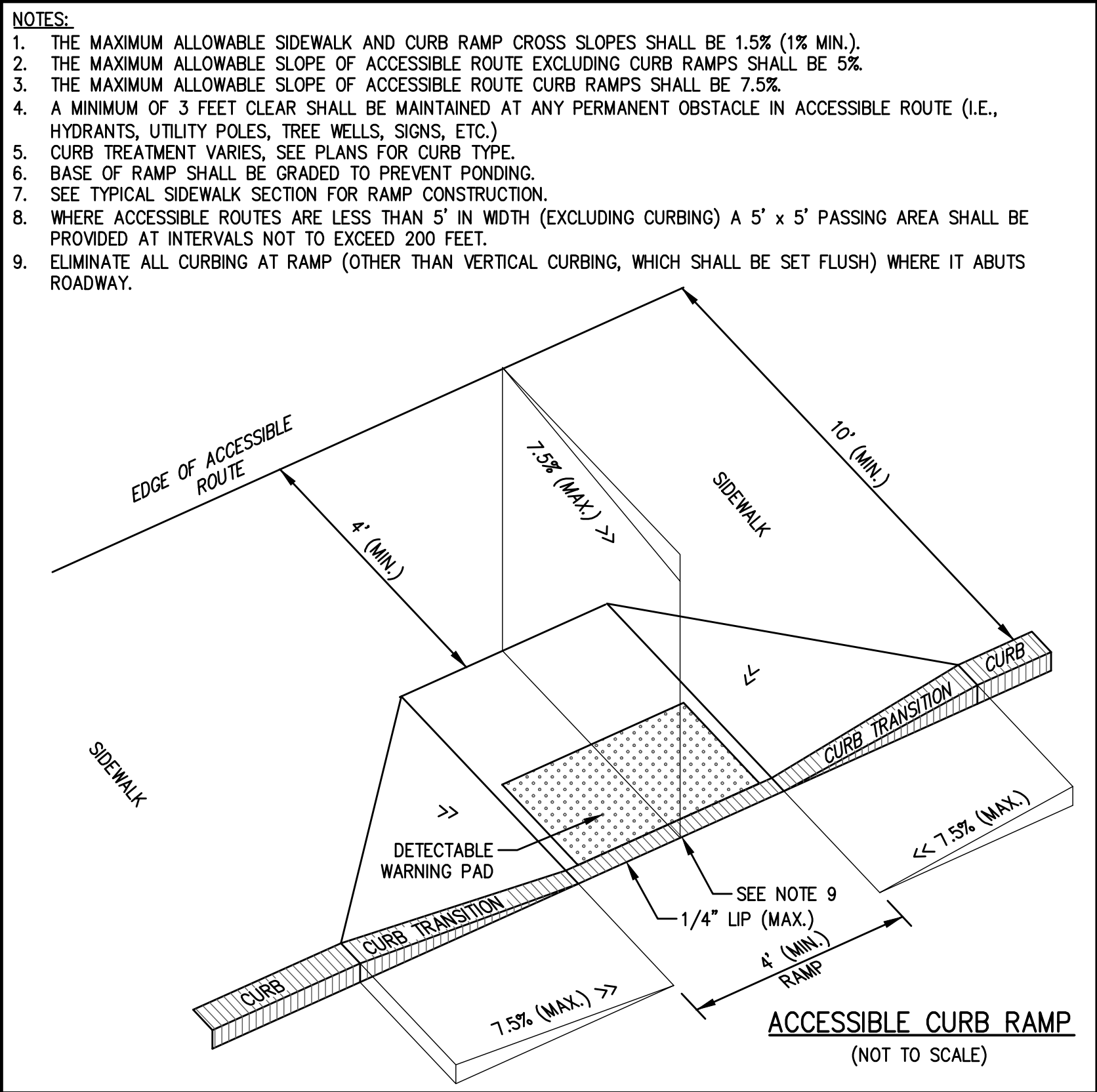
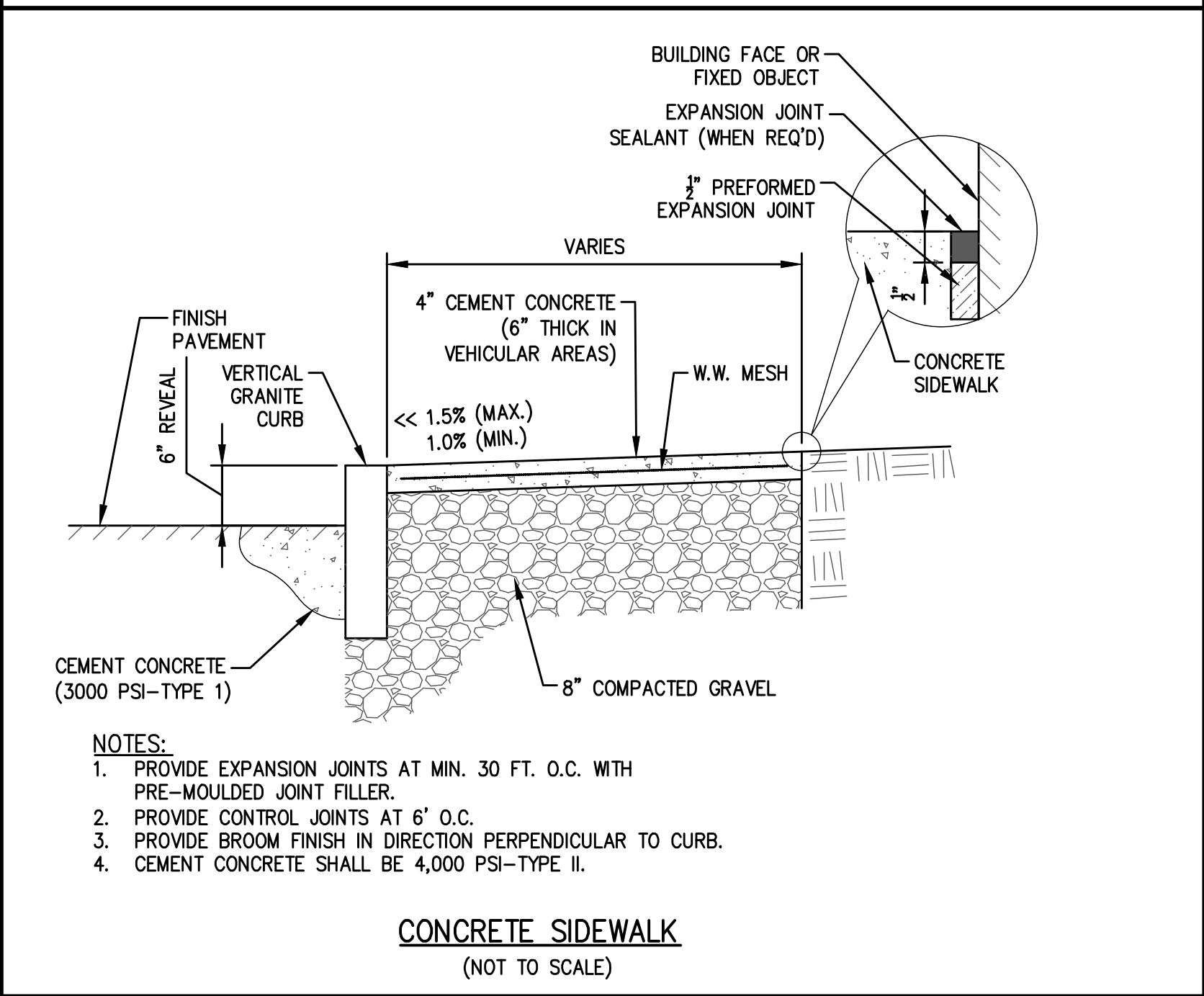
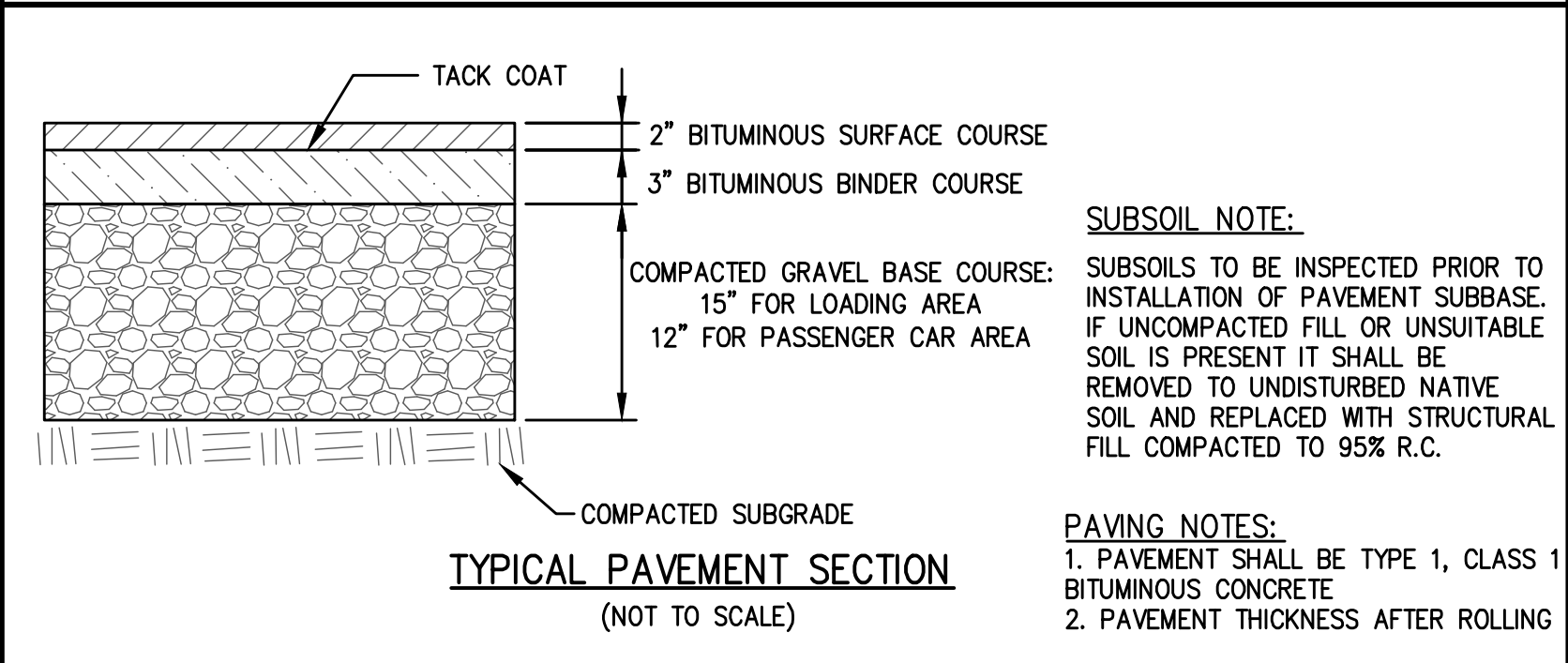
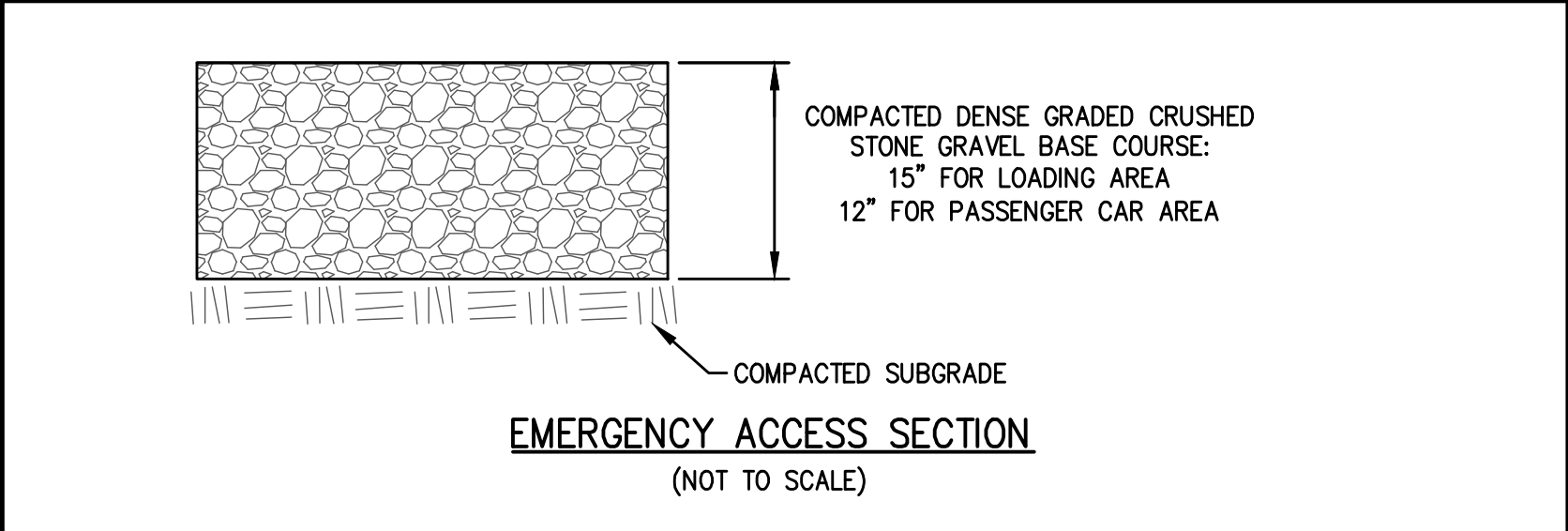
R E V I S I O N S		DATE		SURVEY BY: MGS	
NO.	DESCRIPTION	REVISIONS PER PEER REVIEW AND NOI		DRAFTED BY: CEW/LNO	
1			05-20-2022	CHECKED BY: SPC	
				APPROVED BY: SPC	
				SCALE: AS NOTED	
				DATE: APRIL 6, 2022	

**SITE DEVELOPMENT PLANS**  
**IN**  
**METHUEN, MASSACHUSETTS**  
**501 & 600 GRIFFIN BROOK DRIVE**  
**(ASSESSOR'S MAP 220, LOTS 9D & 9E)**  
**PREPARED FOR:**  
**GRIFFIN BROOK DRIVE OWNER LLC**

## EROSION CONTROL DETAILS

9-





**The Morin-Cameron GROUP, INC.**  
CIVIL ENGINEERS | ENVIRONMENTAL CONSULTANTS  
LAND SURVEYORS | LAND USE PLANNERS  
25 KENDALL AVE. HAVERHILL, MASSACHUSETTS 01830  
P: 978-375-5310, W: WWW.MORINCAMERON.COM

SCOTT P. CAMERON  
CIVIL ENGINEER  
NO. 47801  
STATE OF MASSACHUSETTS  
PROFESSIONAL ENGINEER

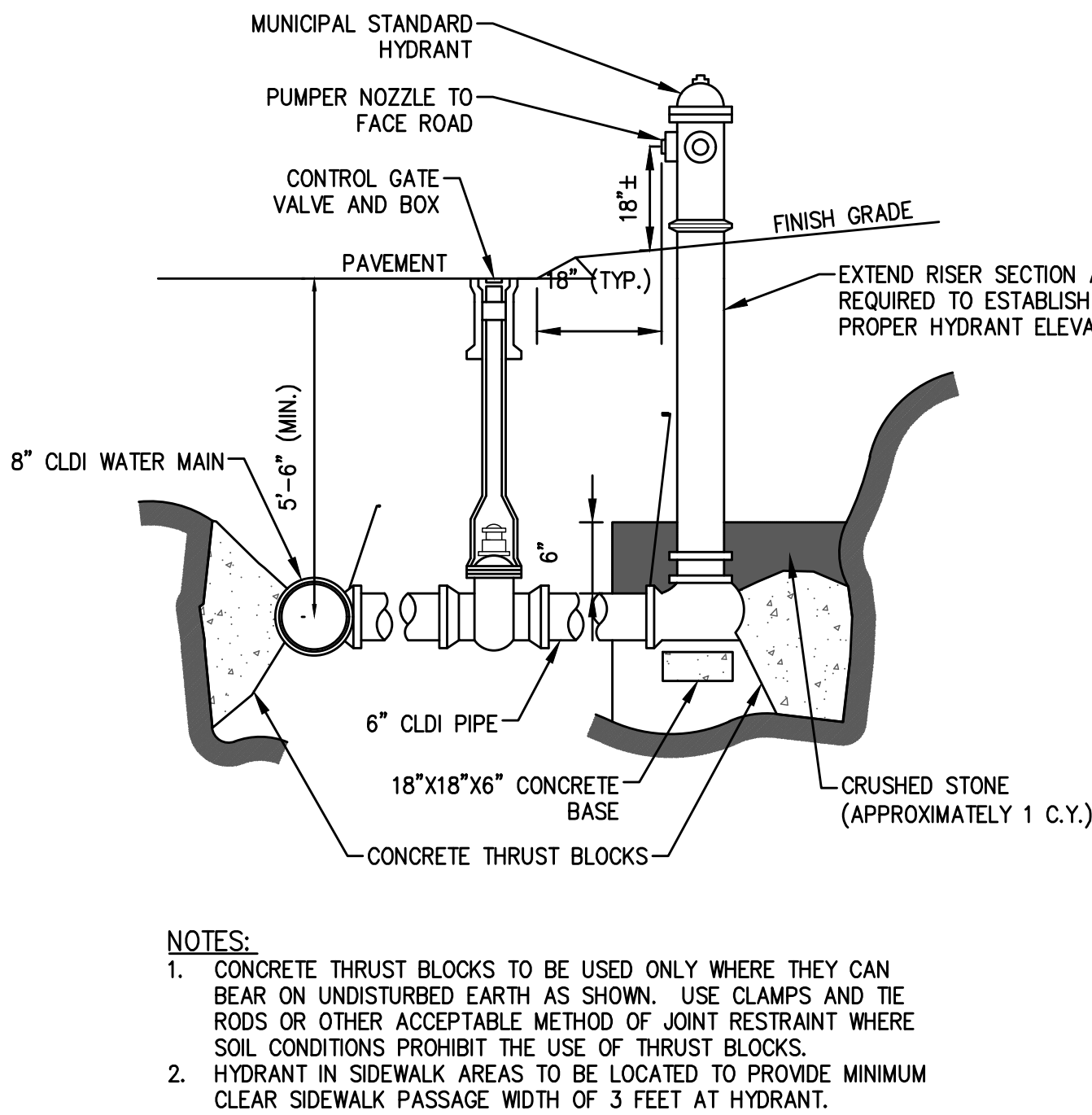
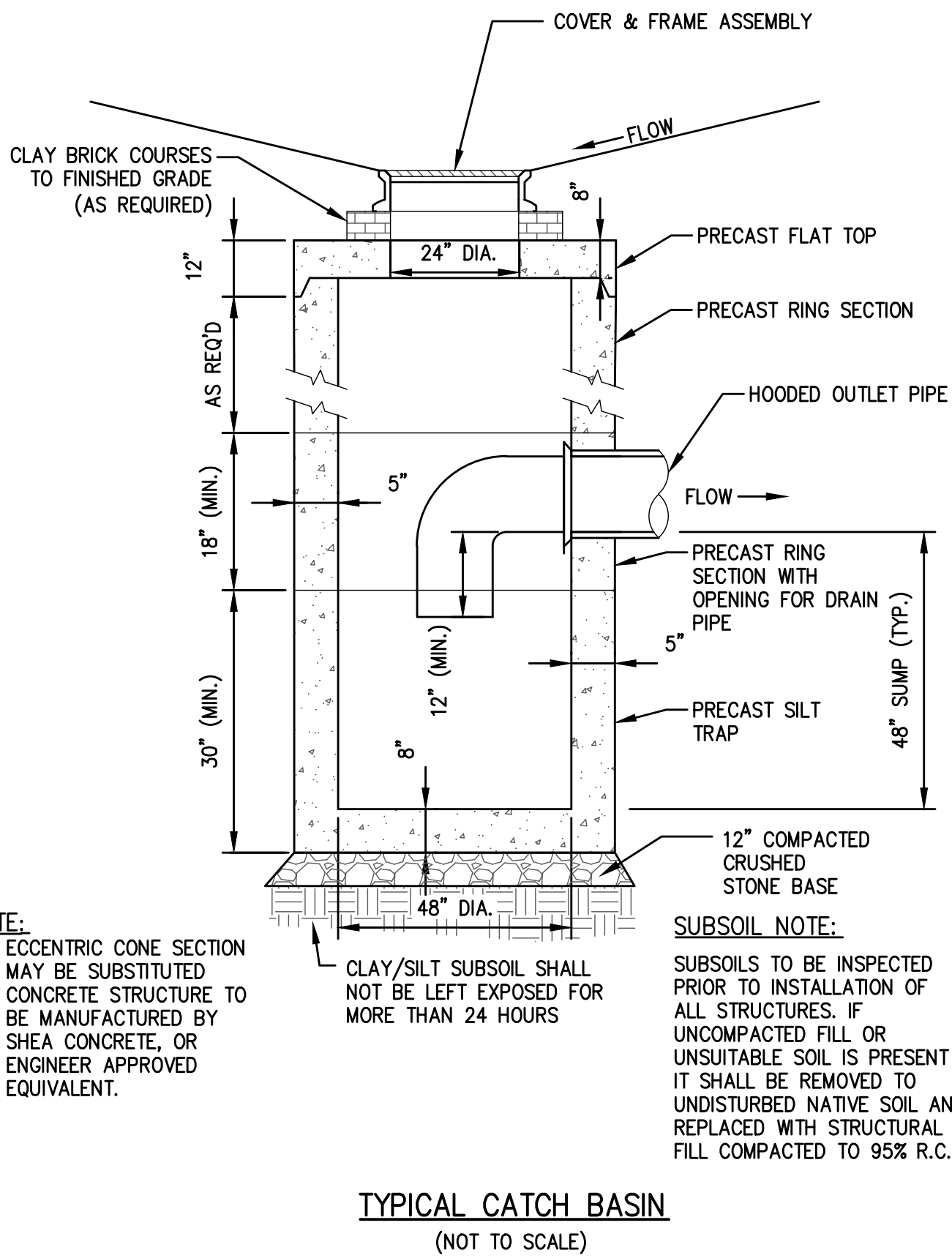
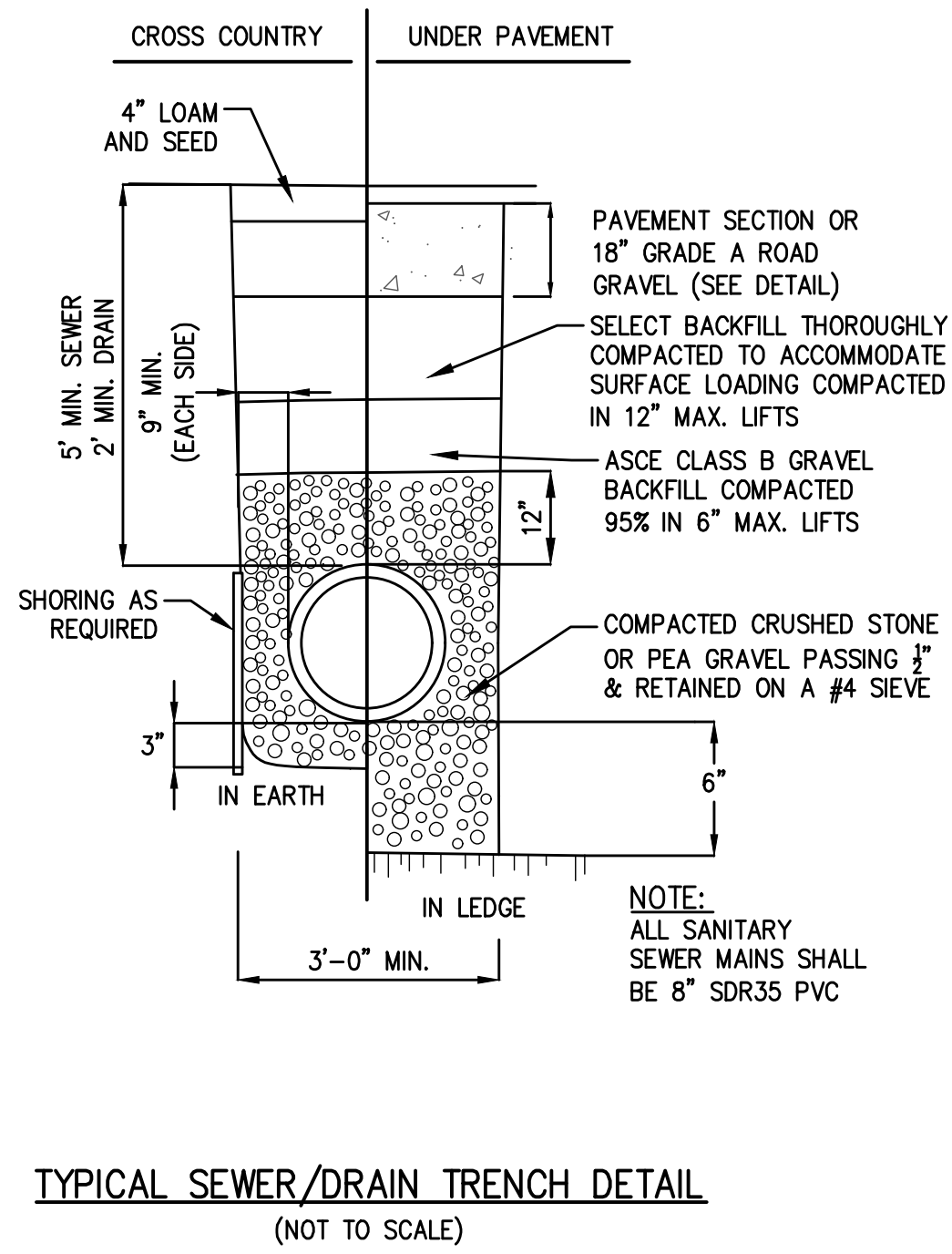
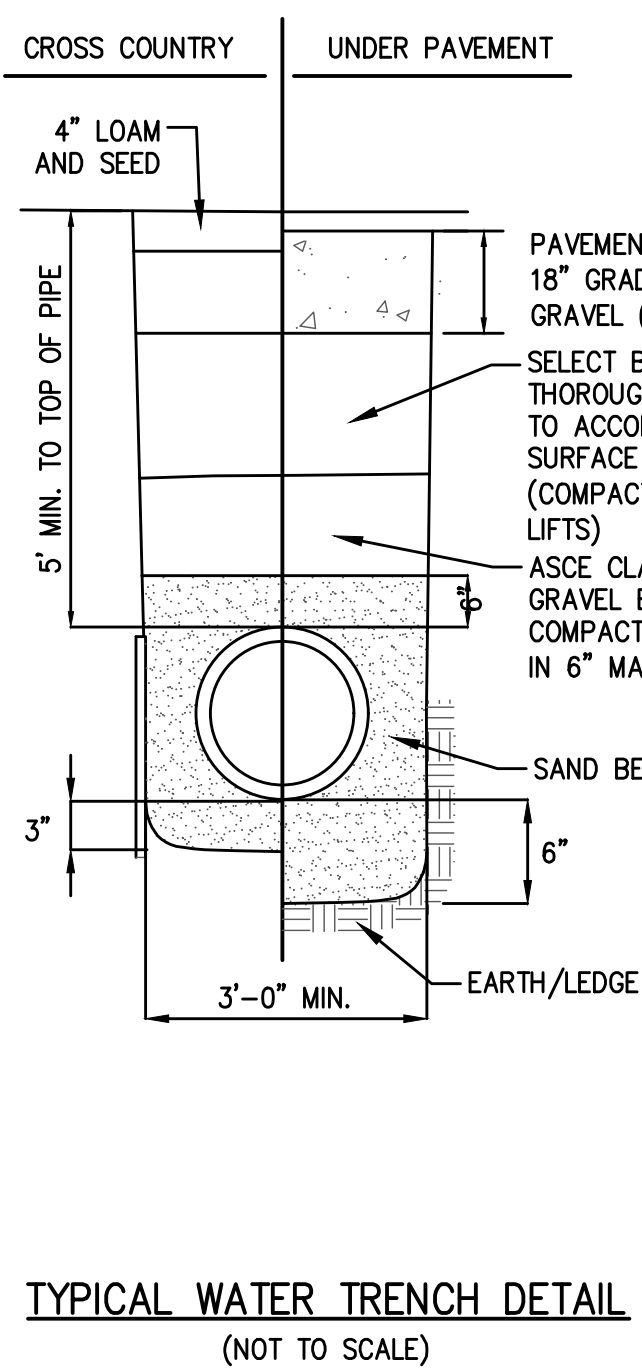
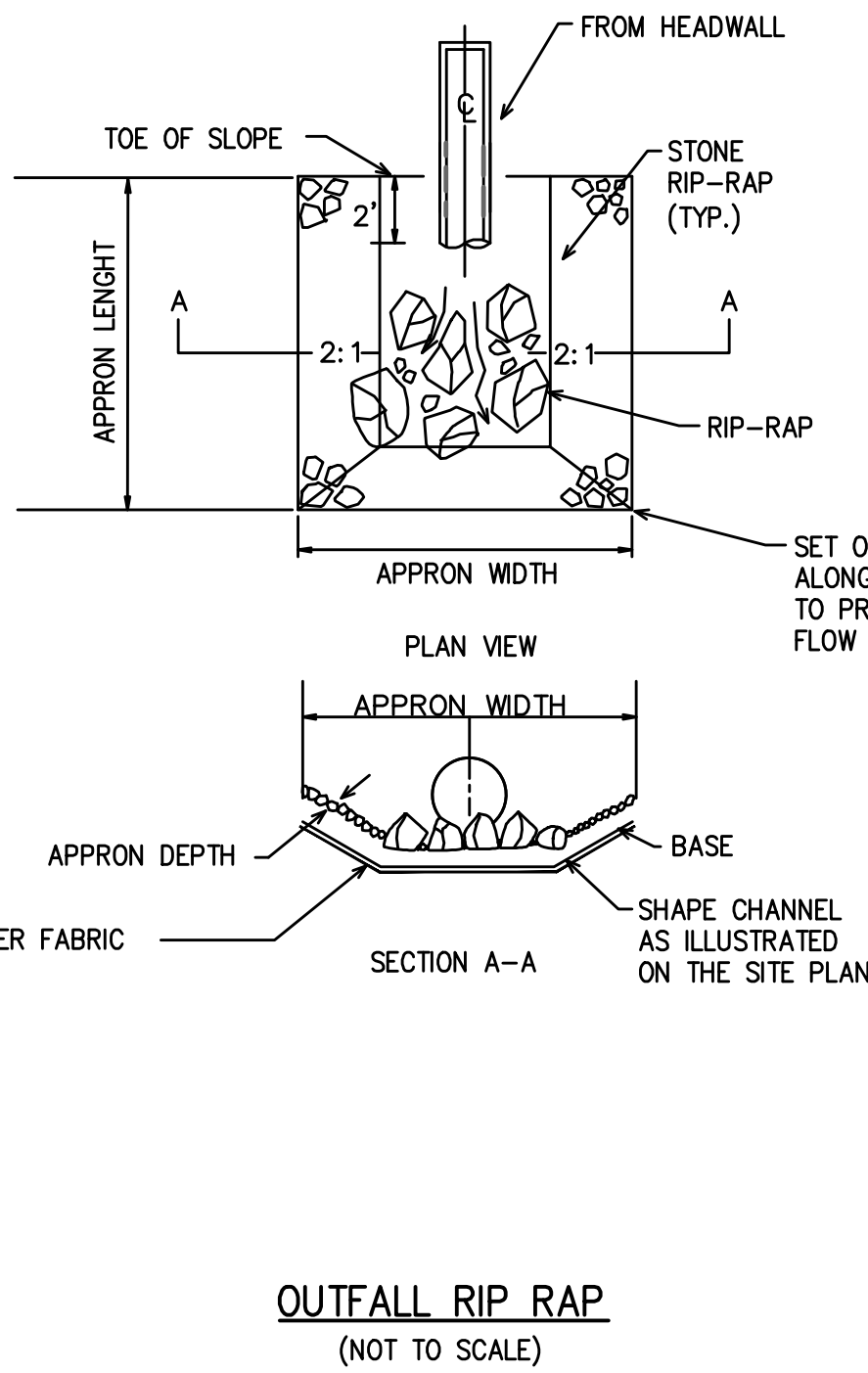
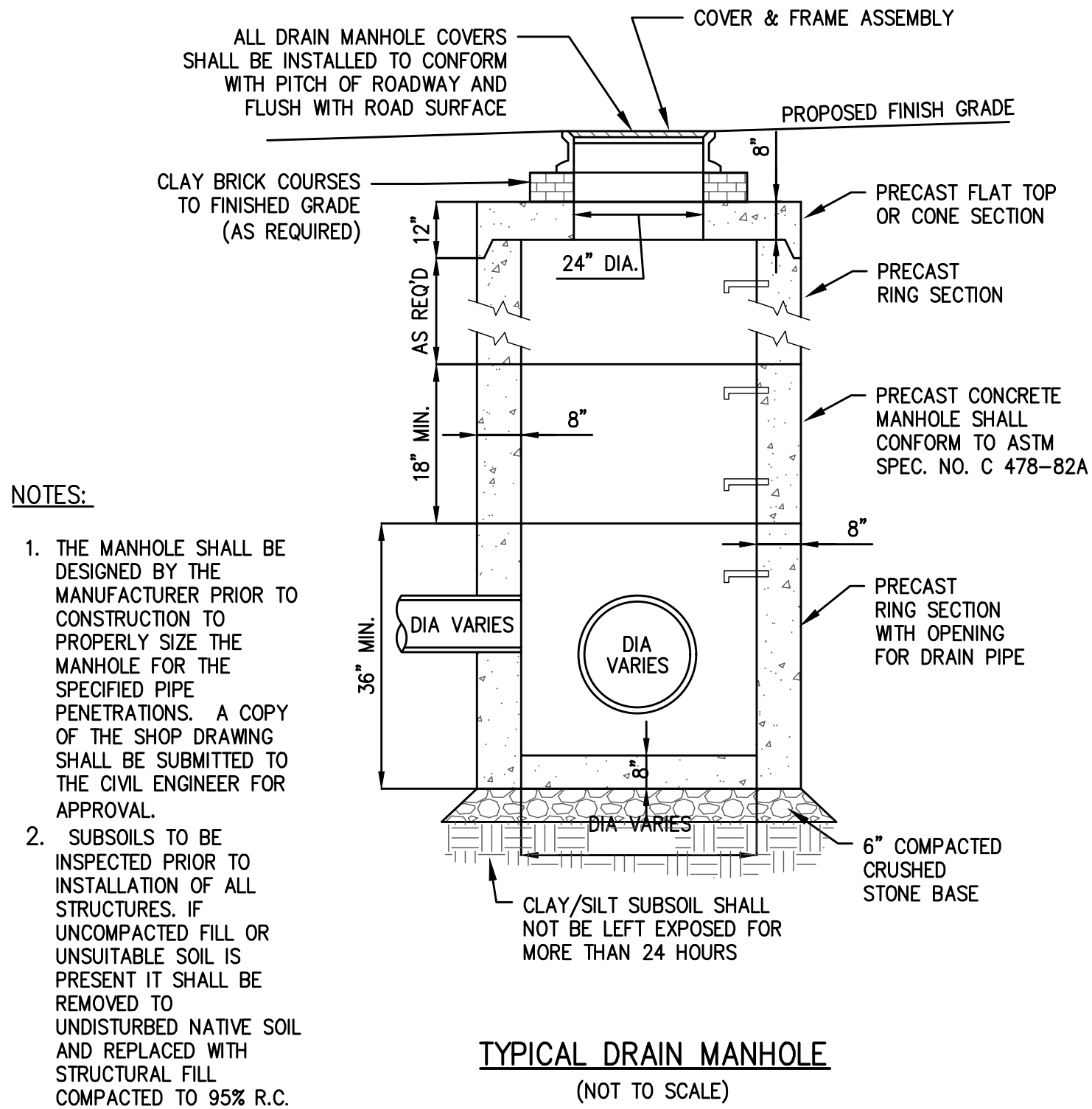
REVISIONS		DATE	DESCRIPTION
NO.	1	05-20-2022	REVISIONS PER PEER REVIEW AND NO

**SITE DEVELOPMENT PLANS**  
IN  
**METHUEN, MASSACHUSETTS**  
**501 & 600 GRIFFIN BROOK DRIVE**  
(ASSESSOR'S MAP 220, LOTS 9D & 9E)  
PREPARED FOR:  
**GRIFFIN BROOK DRIVE OWNER LLC**

**SITE DETAILS**

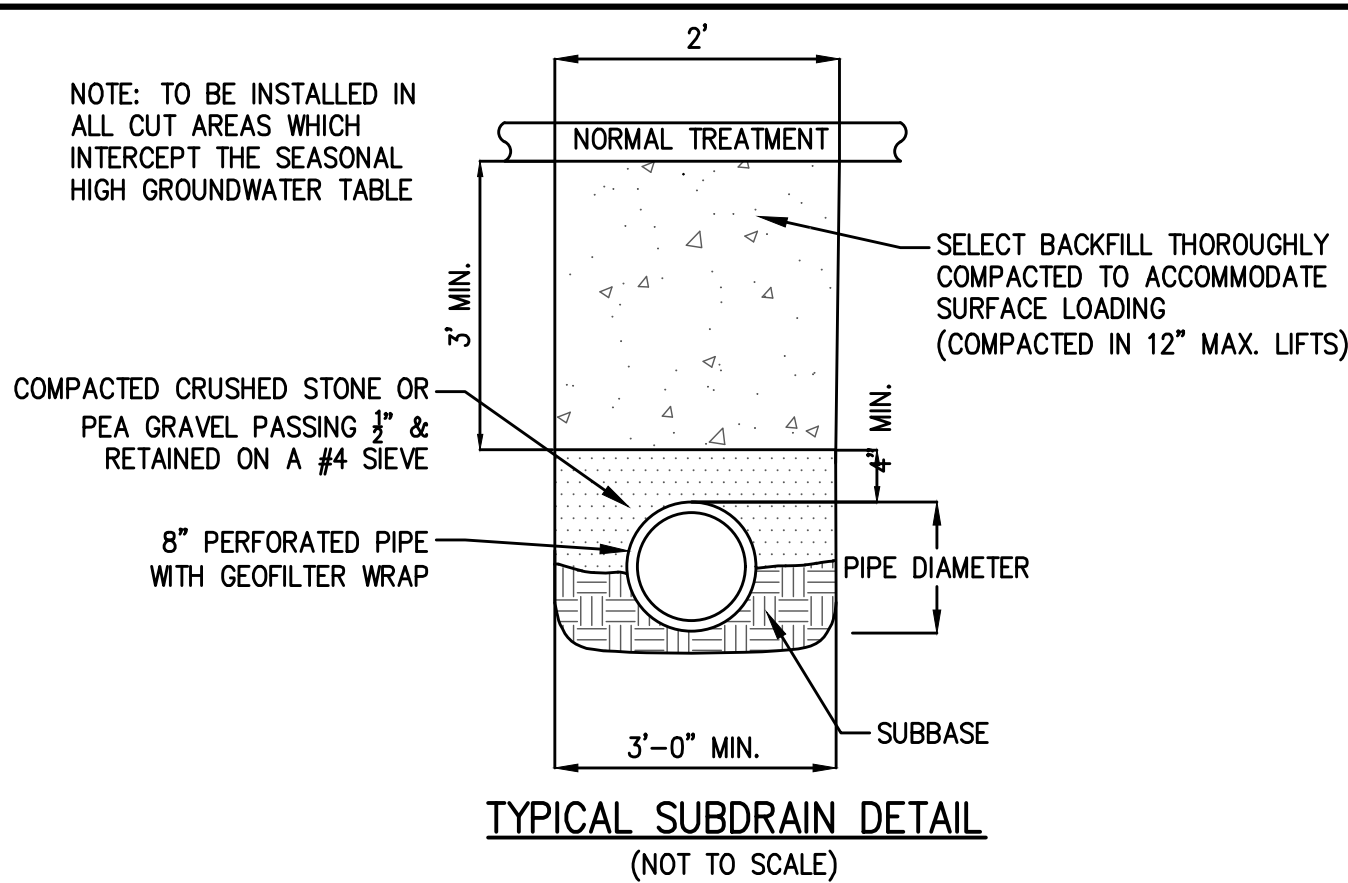
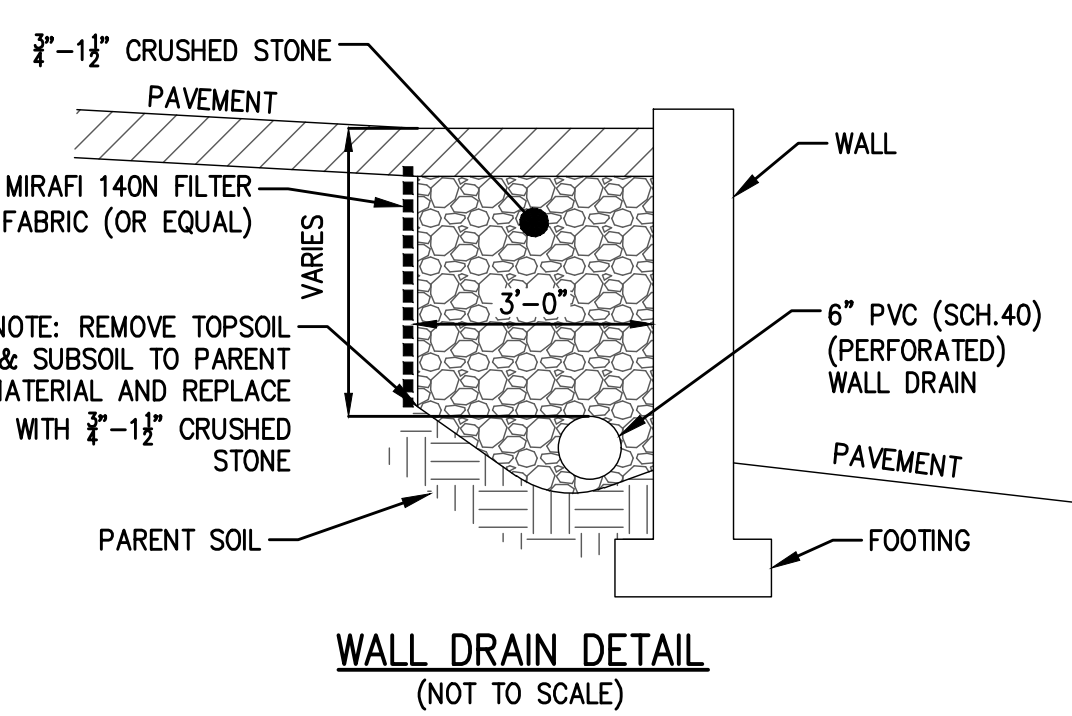
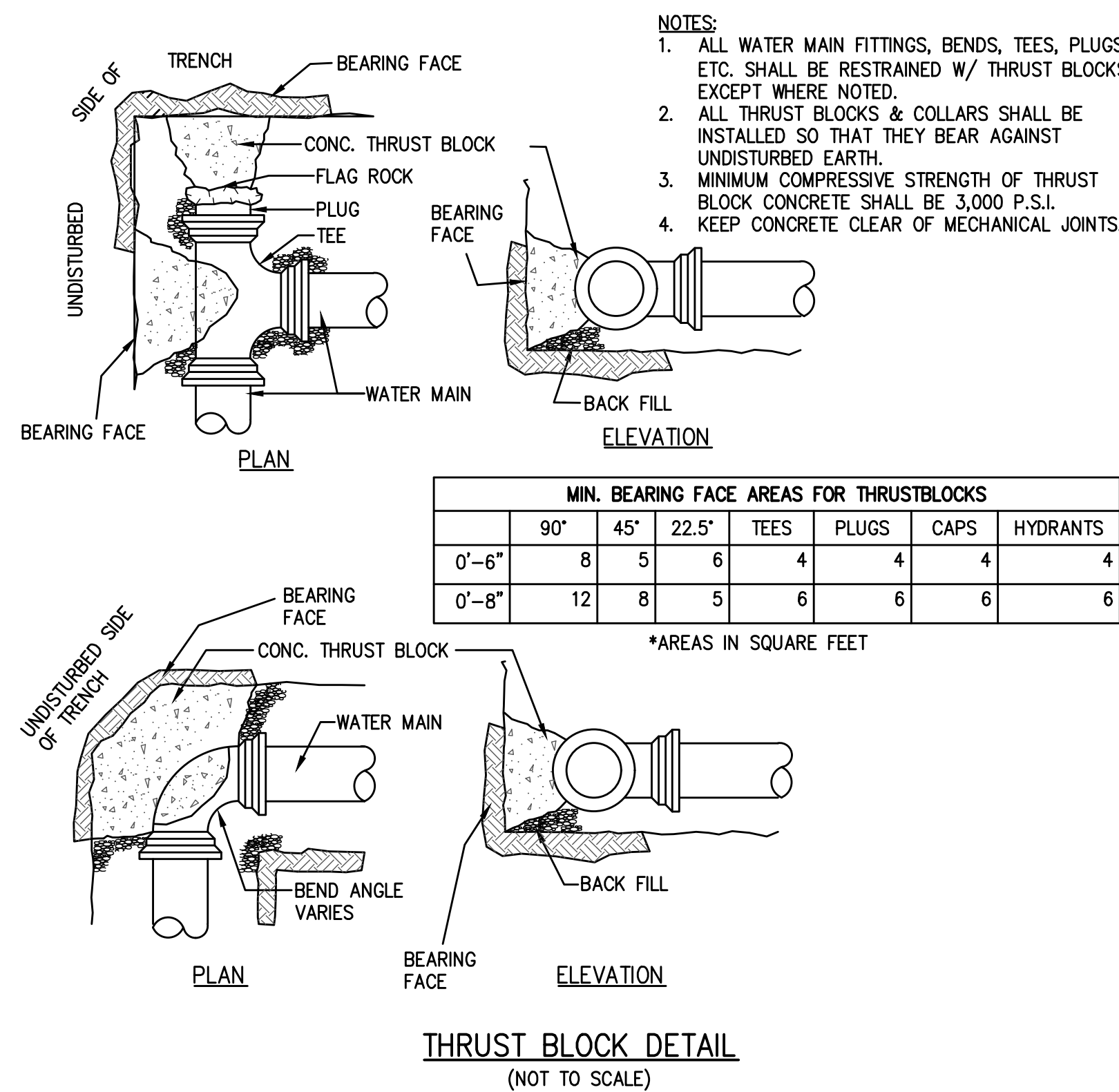
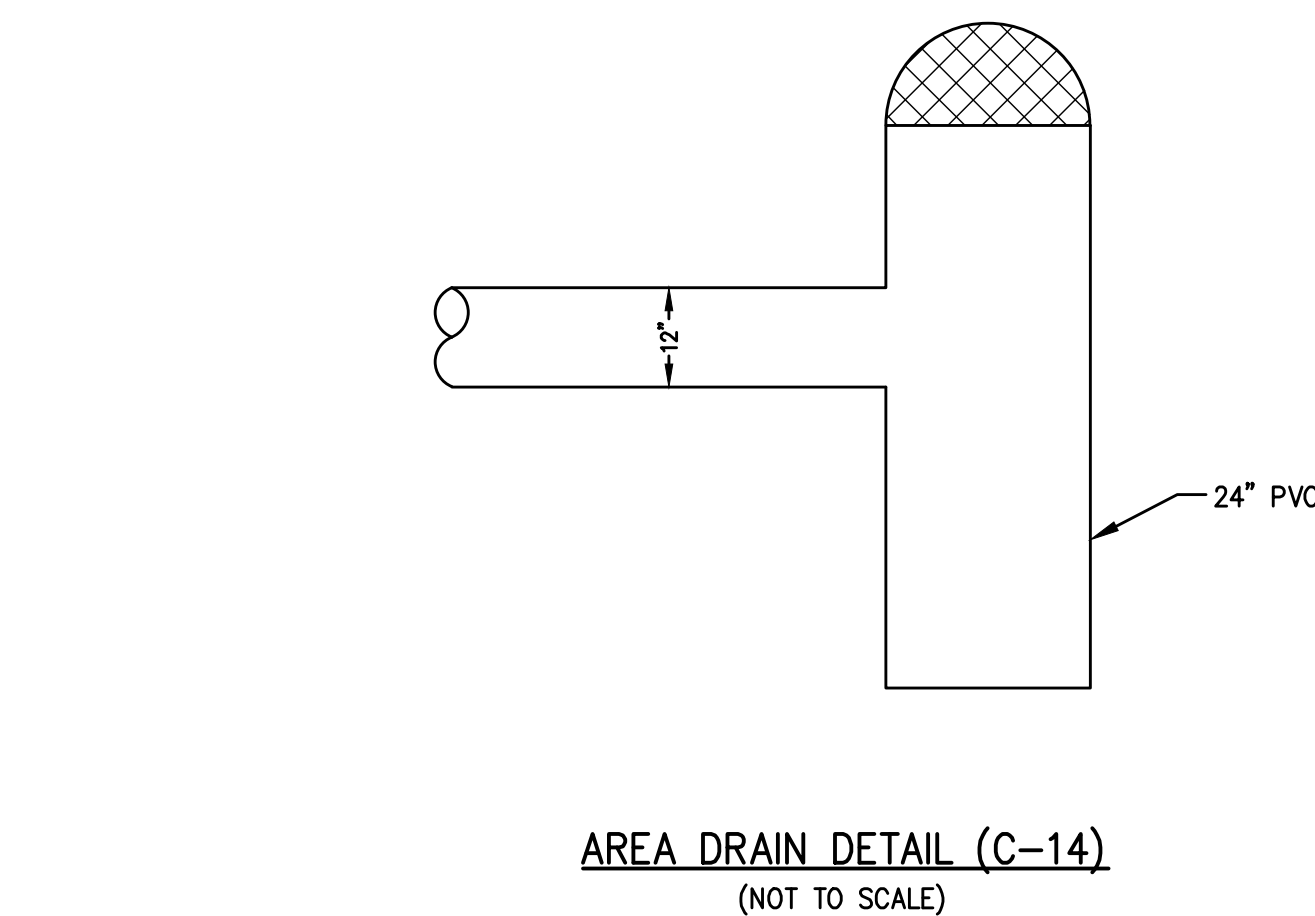
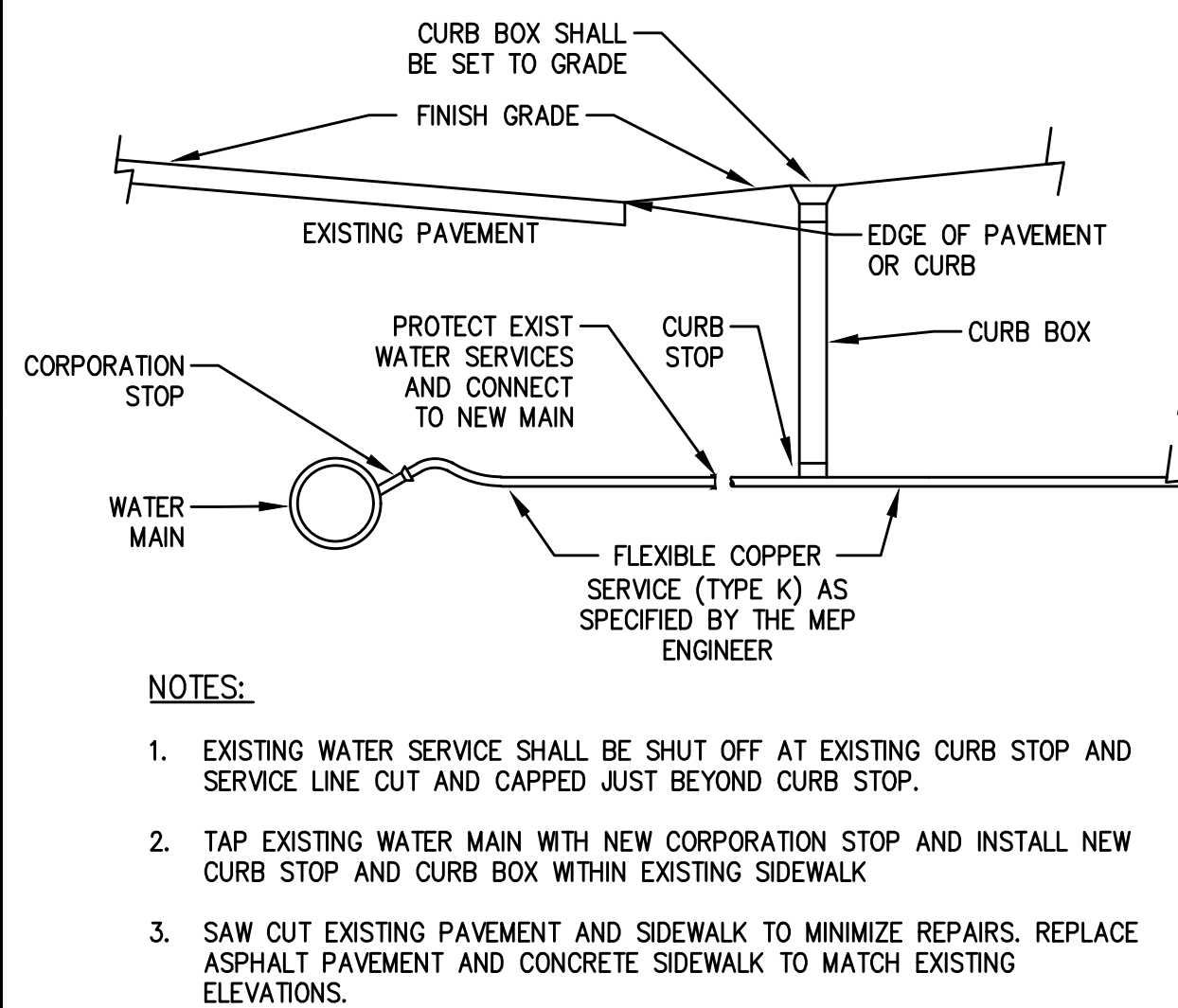
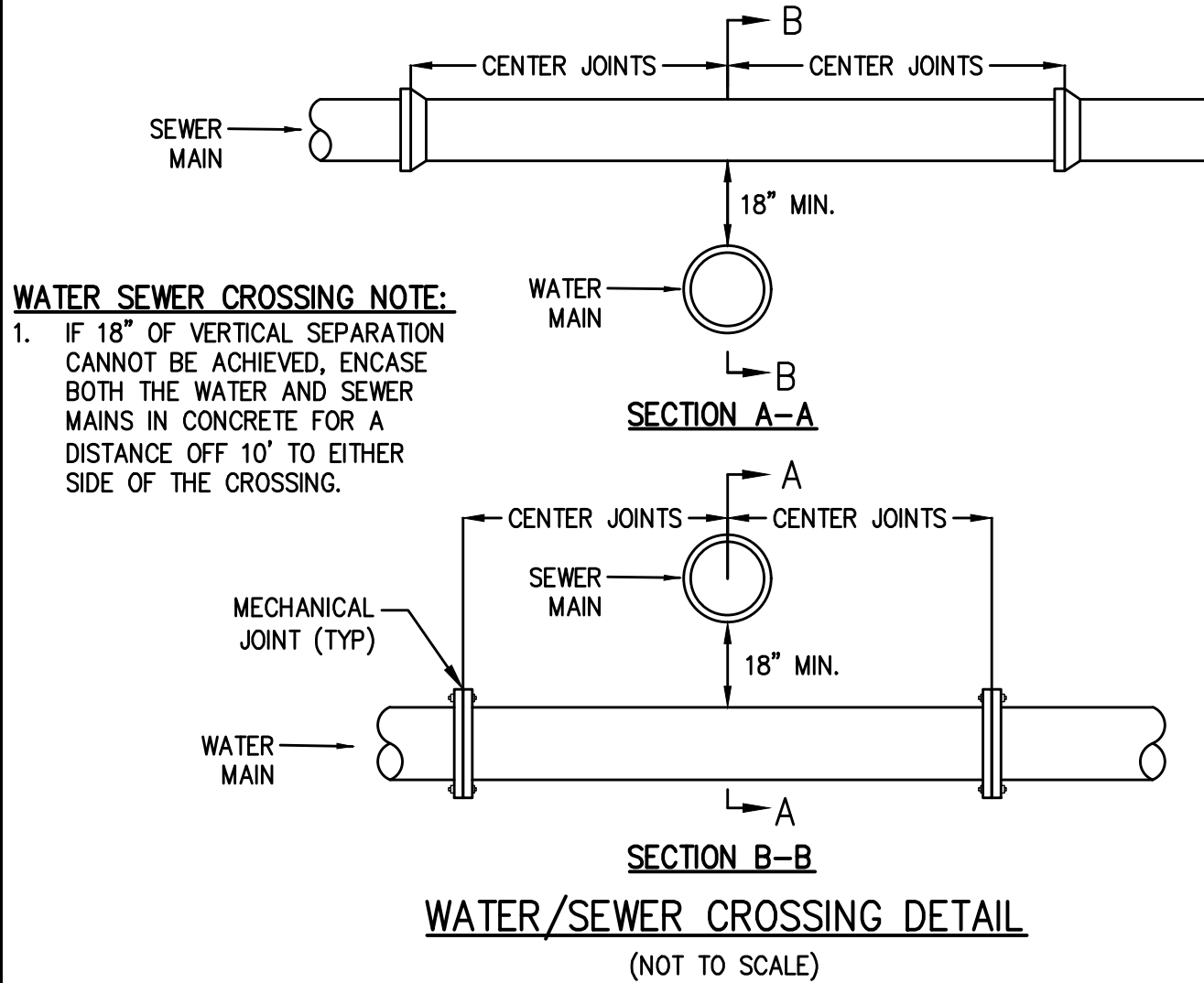
DRAWING NO. **C-10**





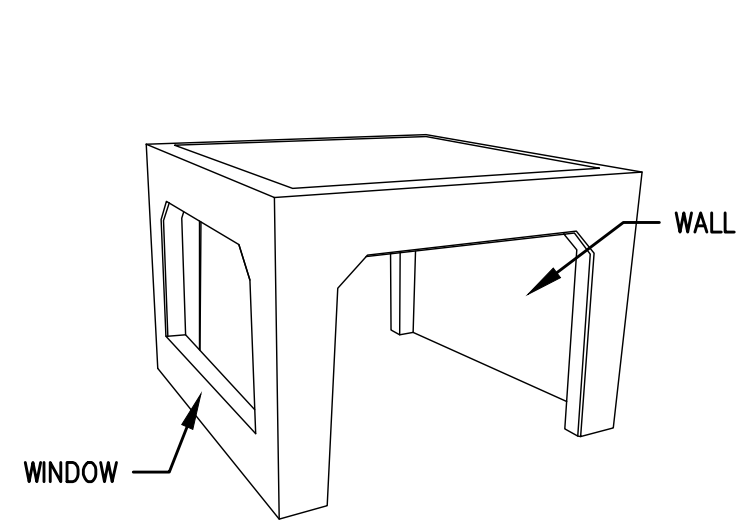
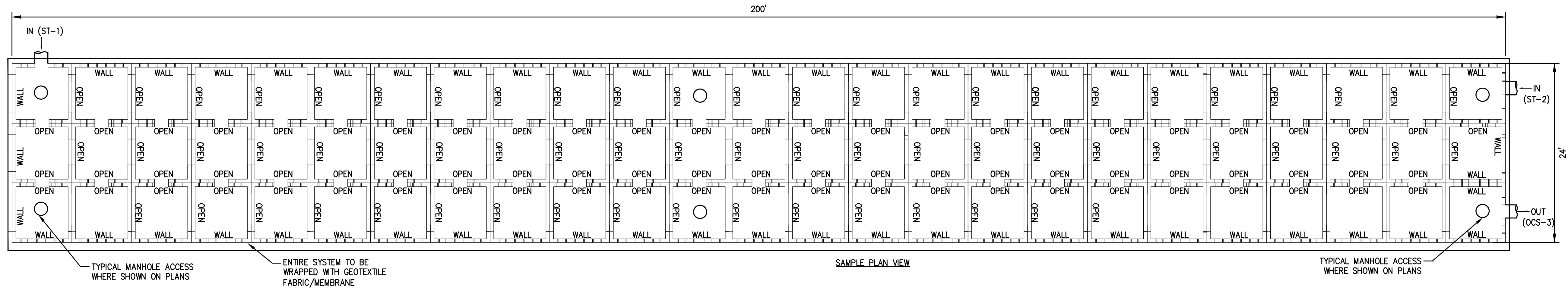
**WATER SEWER CROSSING NOTE:**

1. IF 18" OF VERTICAL SEPARATION CANNOT BE ACHIEVED, ENCASE BOTH THE WATER AND SEWER MAINS IN CONCRETE FOR A DISTANCE OFF 10' TO EITHER SIDE OF THE CROSSING.

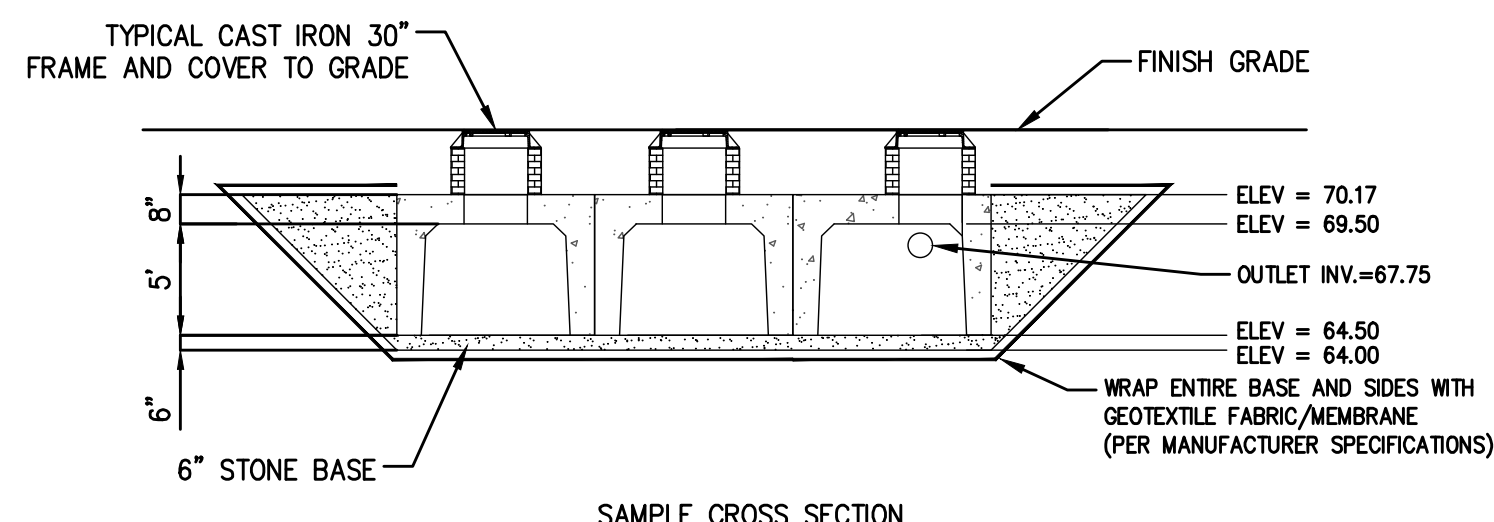


REVISIONS		DATE
NO.	DESCRIPTION	
1	REVISIONS PER PEER REVIEW AND NO	05-20-2022



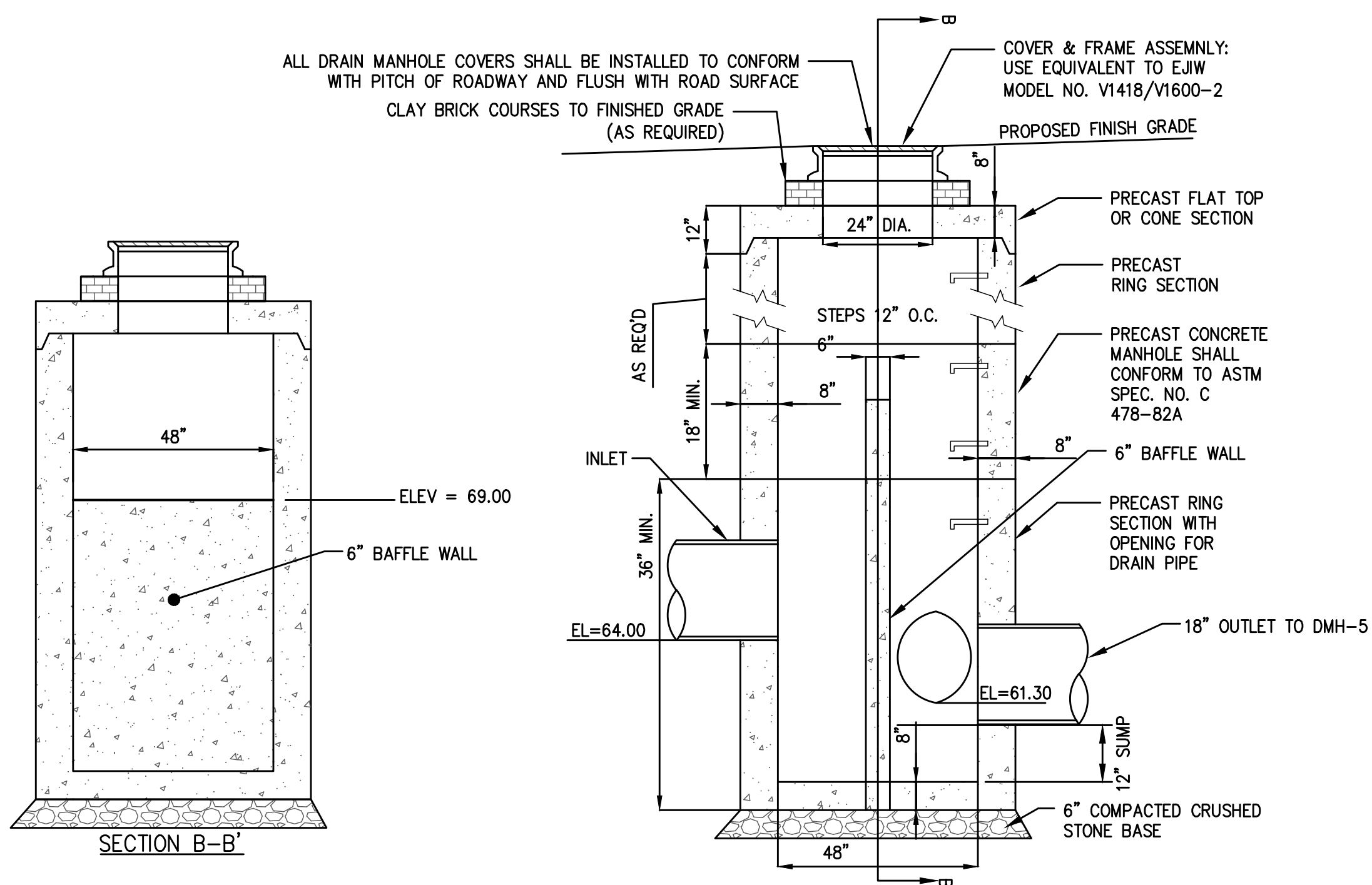


RETAIN-IT CHAMBER COMPONENT DETAIL  
(NOT TO SCALE)

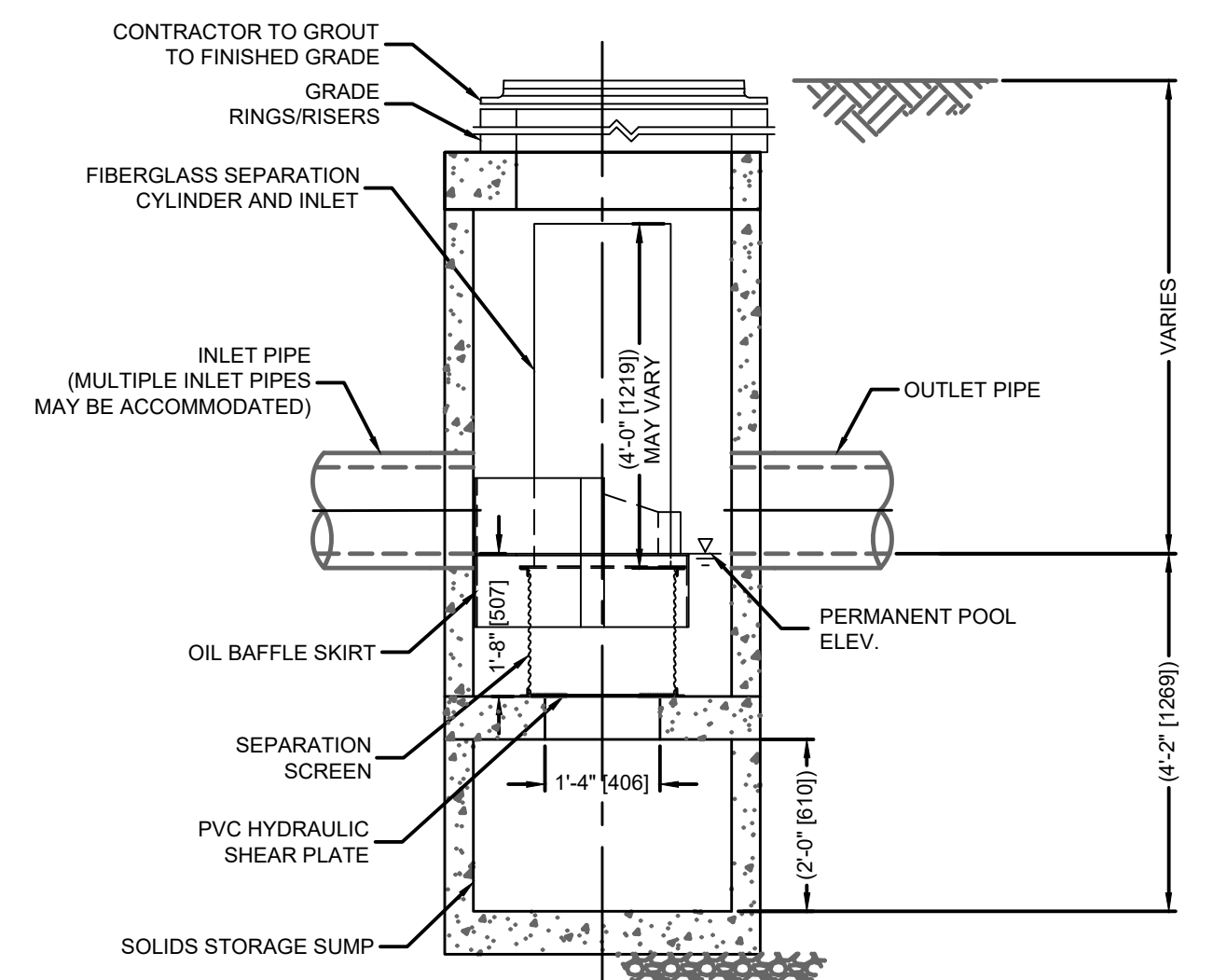
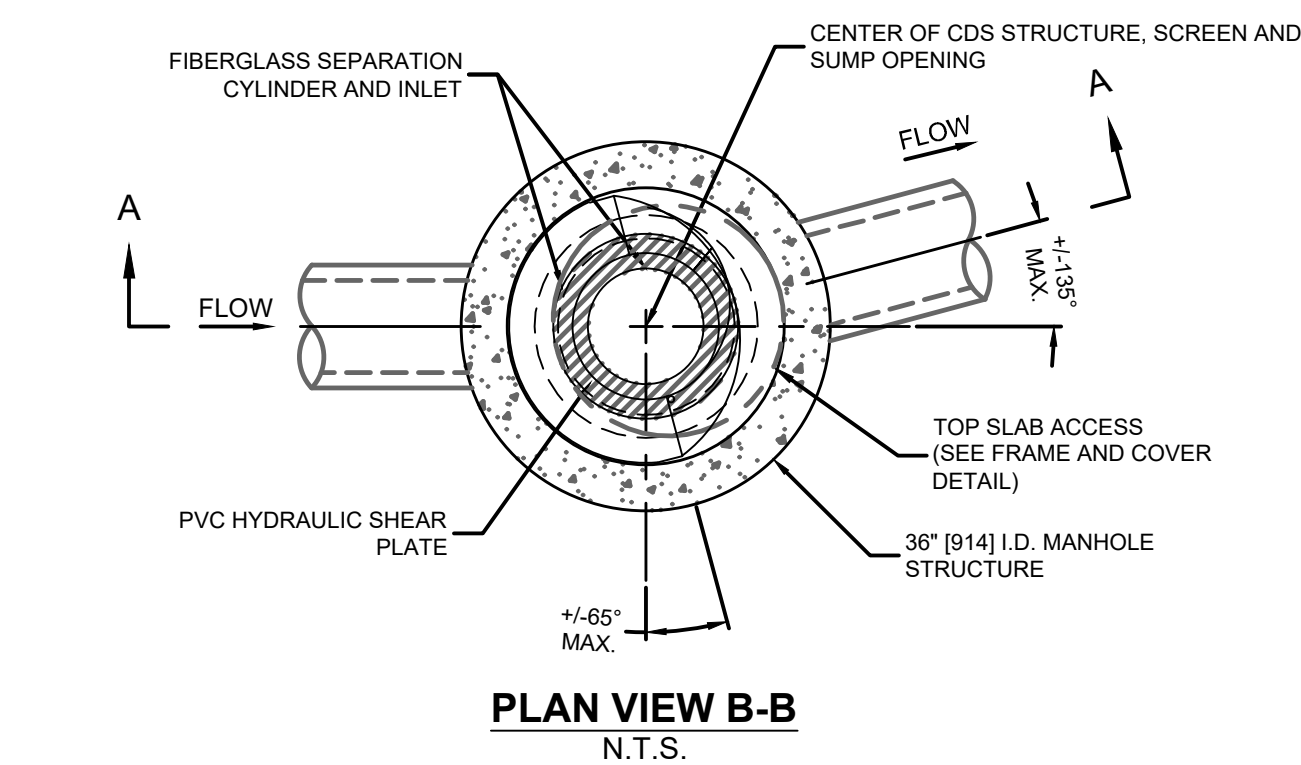


SUBSURFACE RETENTION SYSTEM (P3) (RETAIN-IT MODULES)  
(NOT TO SCALE)

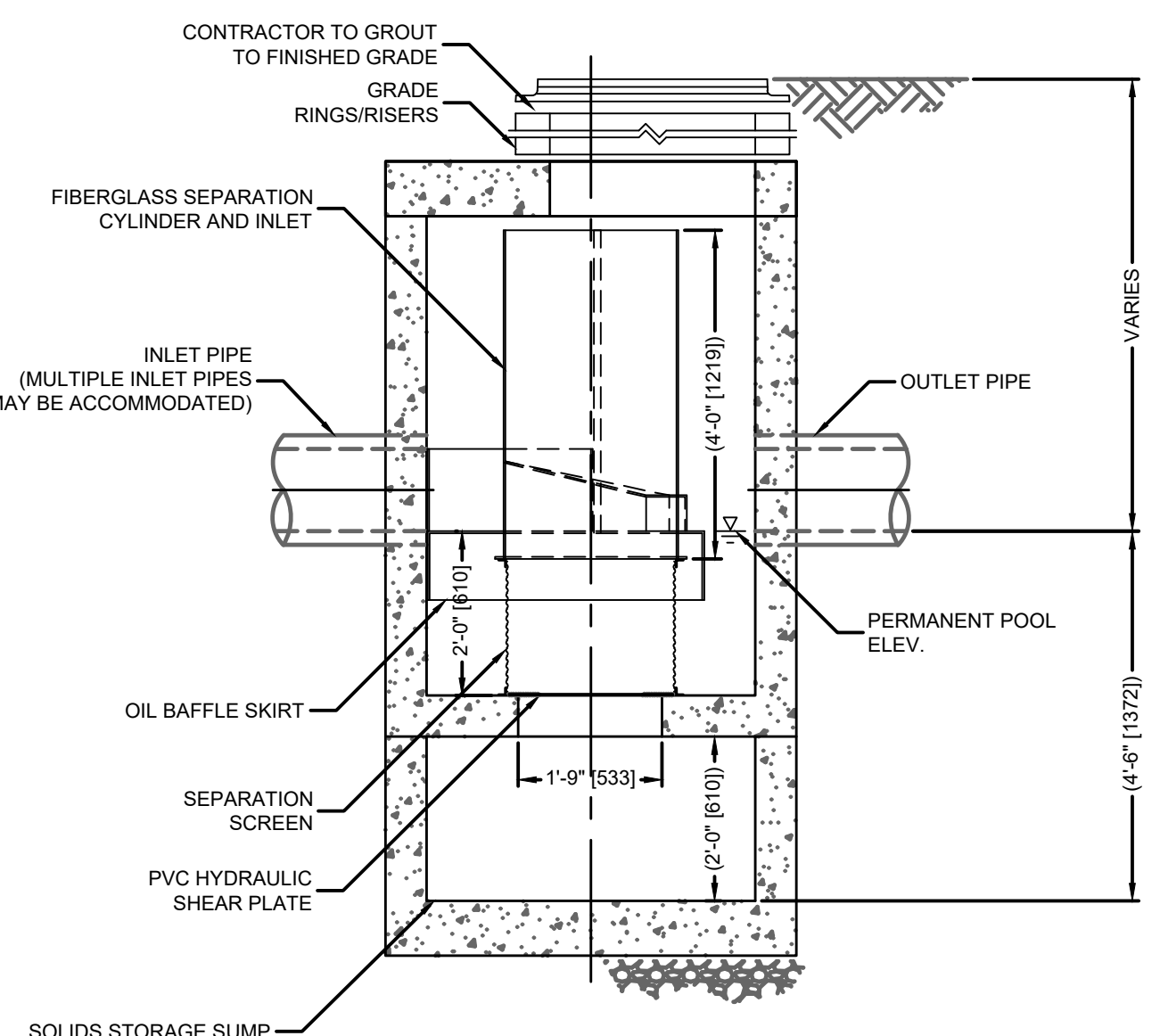
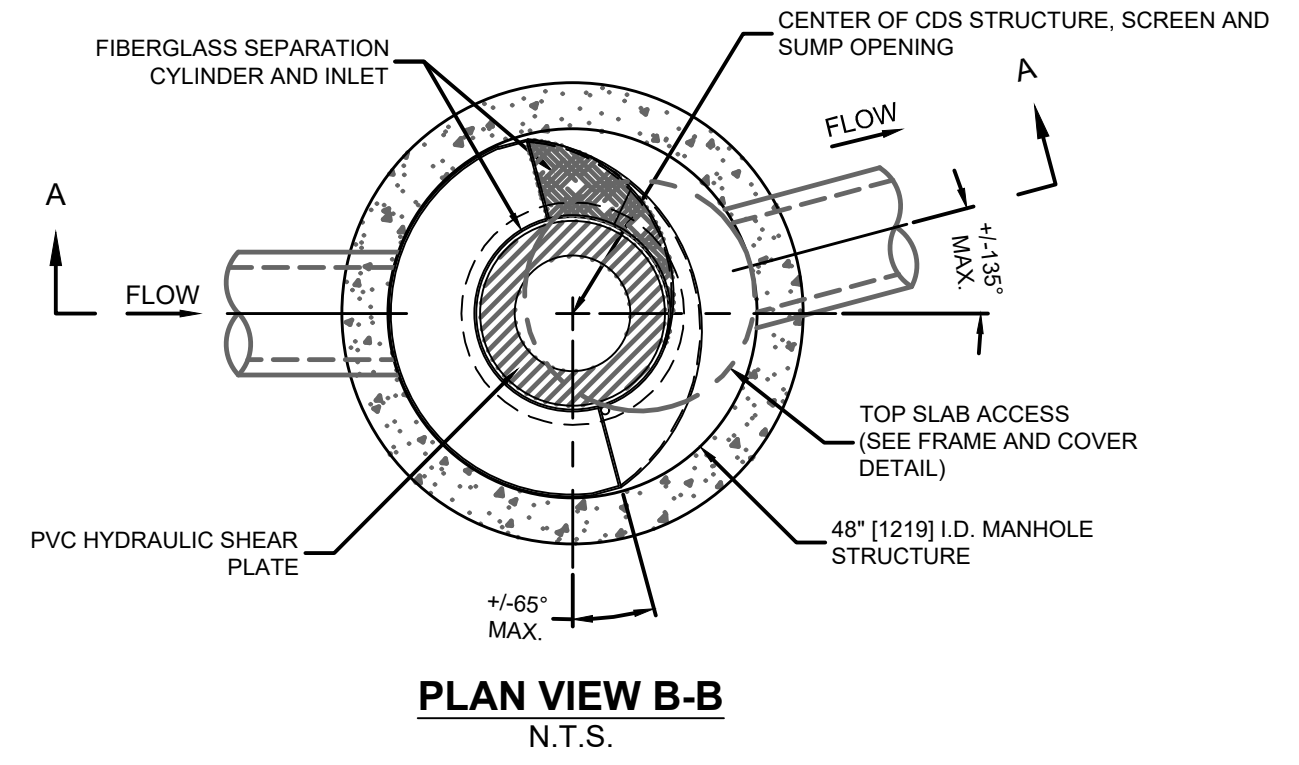
100-YEAR STORM ELEV. = 69.12  
10-YEAR STORM ELEV. = 66.99  
2-YEAR STORM ELEV. = 65.50



OUTLET CONTROL STRUCTURE (OCS-3)  
(NOT TO SCALE)



ELEVATION A-A  
N.T.S.  
CONTECH CDS1515-3-C (ST-1)  
(NOT TO SCALE)



ELEVATION A-A  
N.T.S.  
CONTECH CDS2015-4-C (ST-2)  
(NOT TO SCALE)



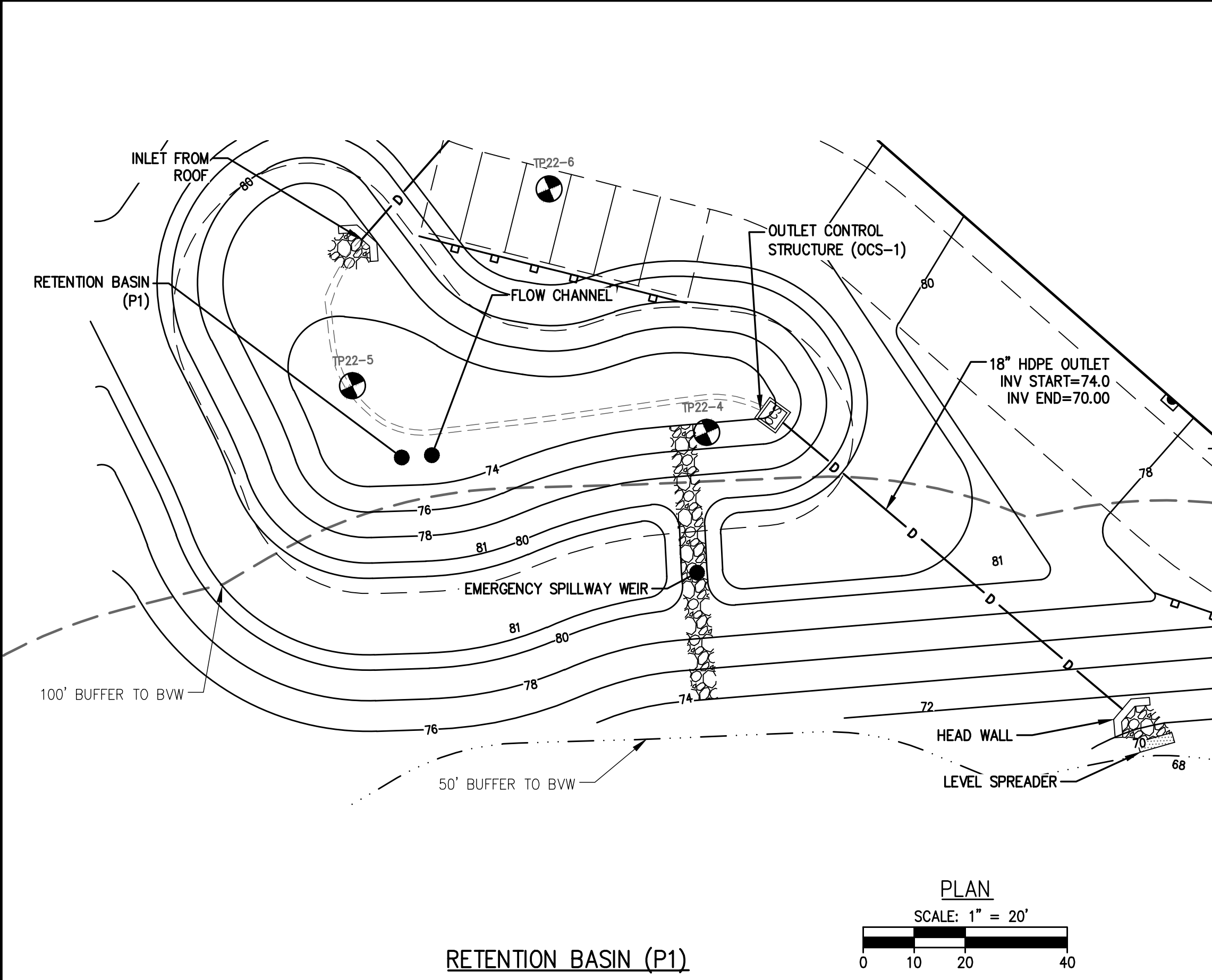
SURVEY BY: MCG  
DRAFTED BY: CEM/LNO  
CHECKED BY: SPC  
APPROVED BY: SPC  
SCALE: AS NOTED  
DATE: APRIL 6, 2022

REVISIONS		DATE
NO.	DESCRIPTION	
1	REVISIONS PER PEER REVIEW AND NO	05-20-2022

**SITE DEVELOPMENT PLANS**  
IN  
**METHUEN, MASSACHUSETTS**  
**501 & 600 GRIFFIN BROOK DRIVE**  
(ASSESSOR'S MAP 220, LOTS 9D & 9E)  
PREPARED FOR:  
**GRIFFIN BROOK DRIVE OWNER LLC**

**DRAINAGE DETAILS**  
DRAWING NO. **C-12**

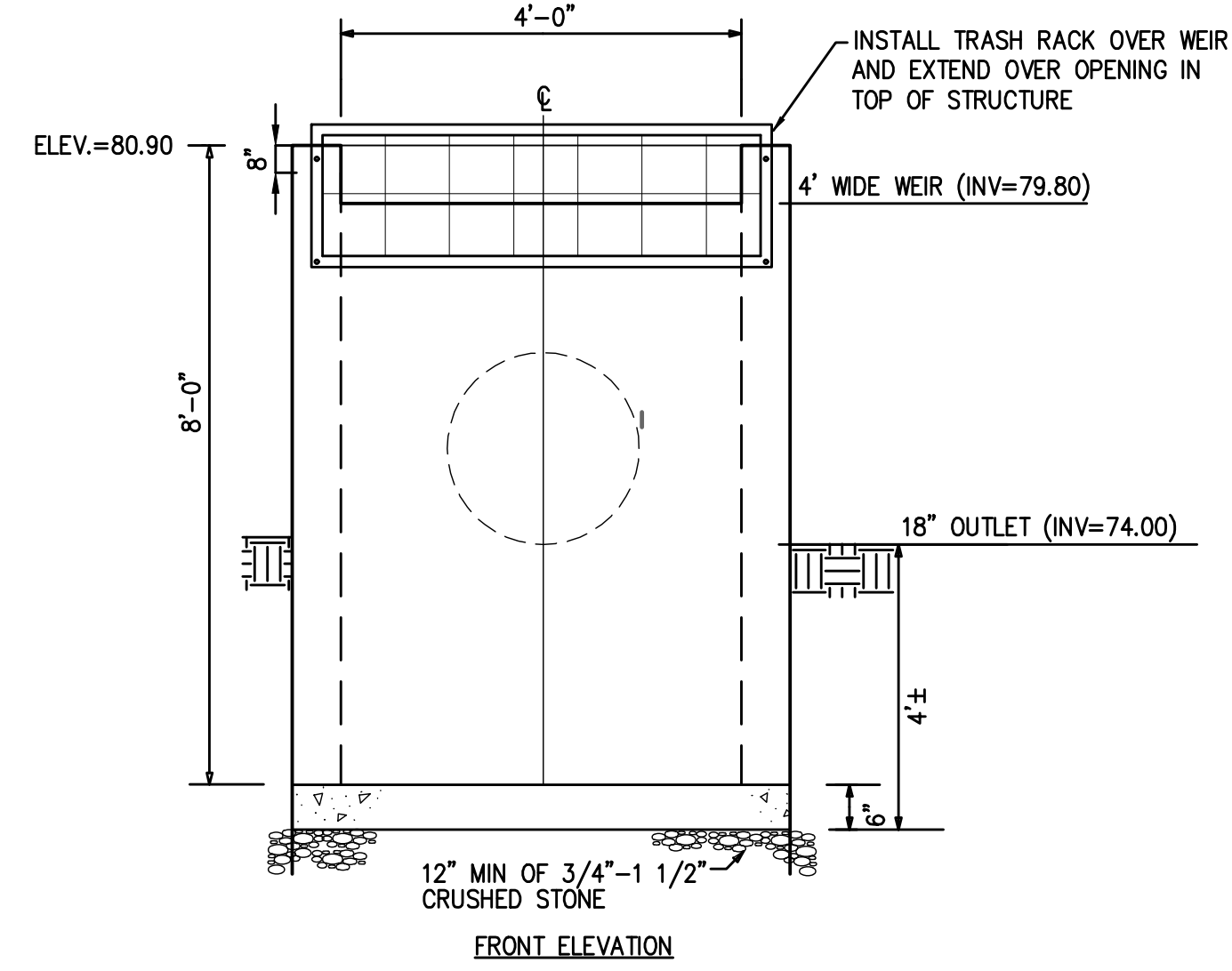
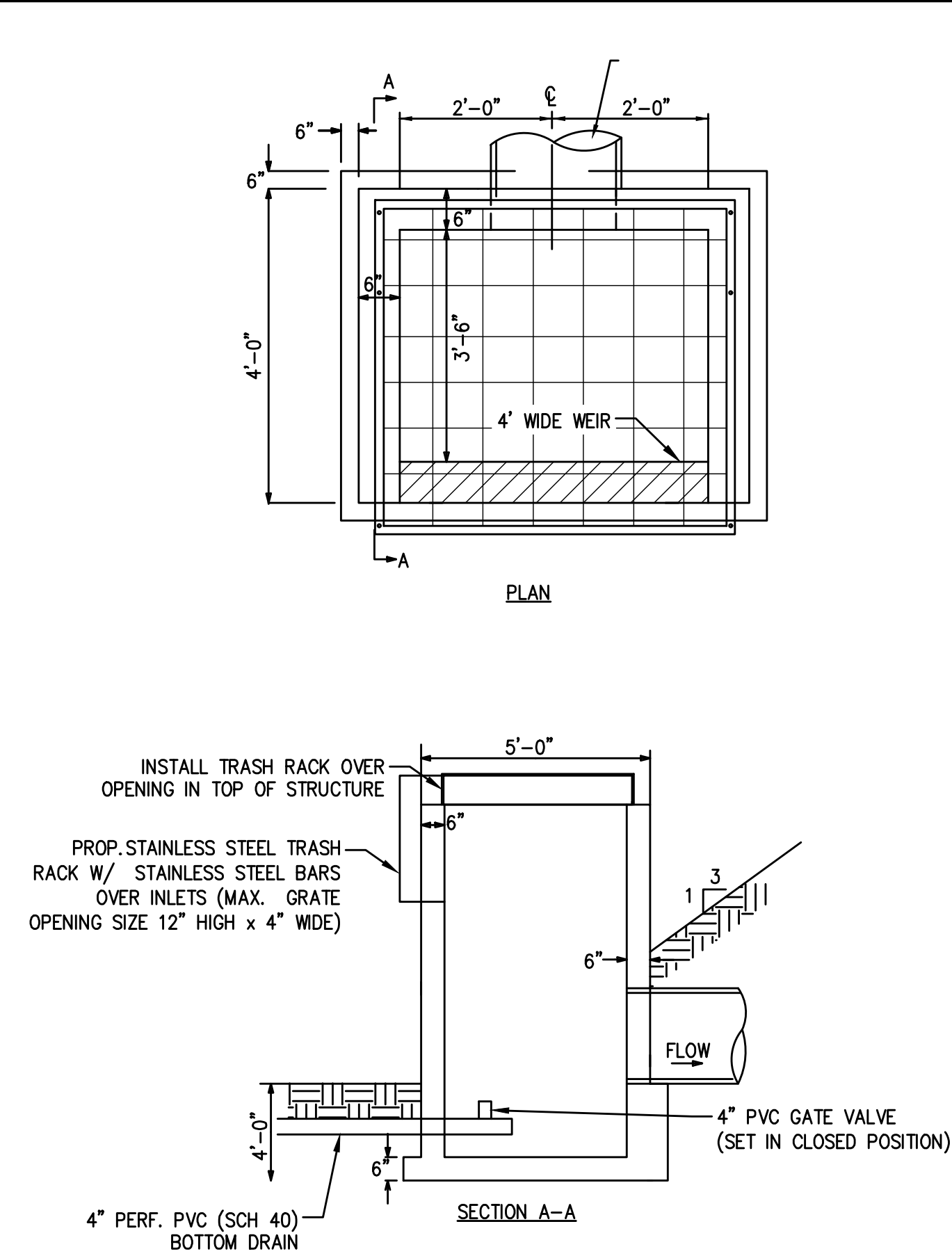
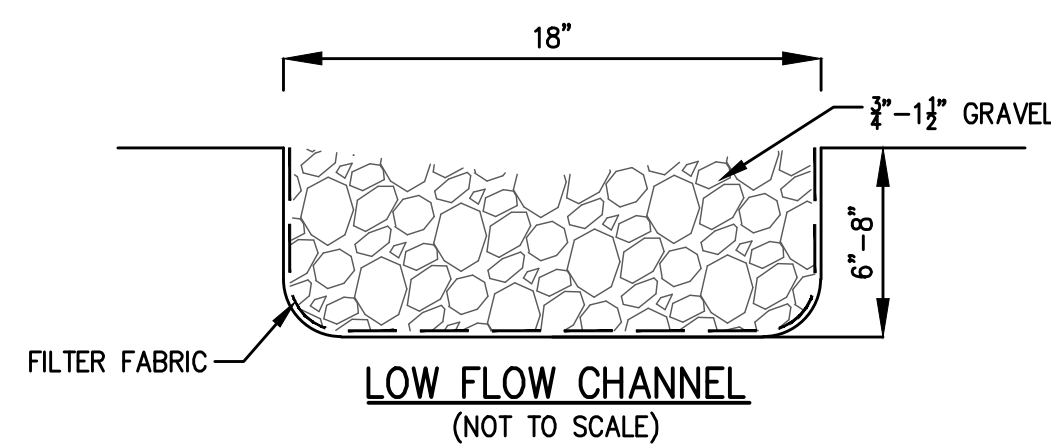
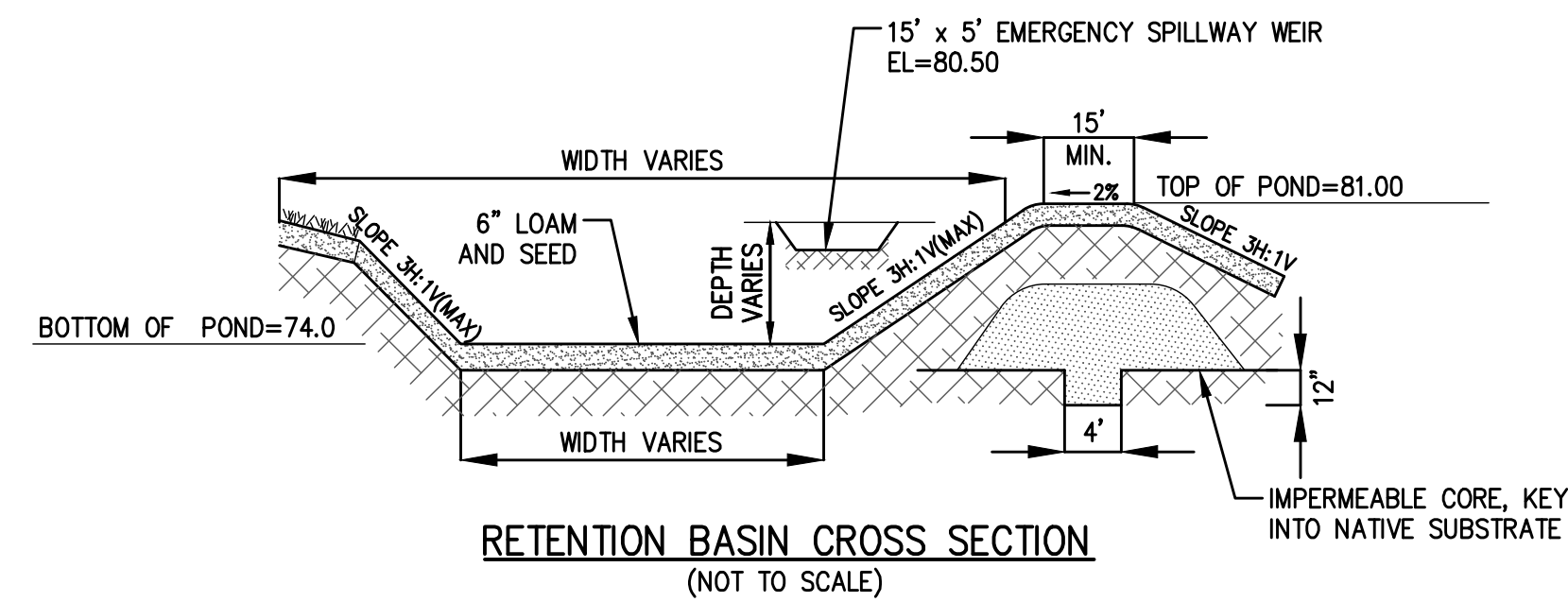




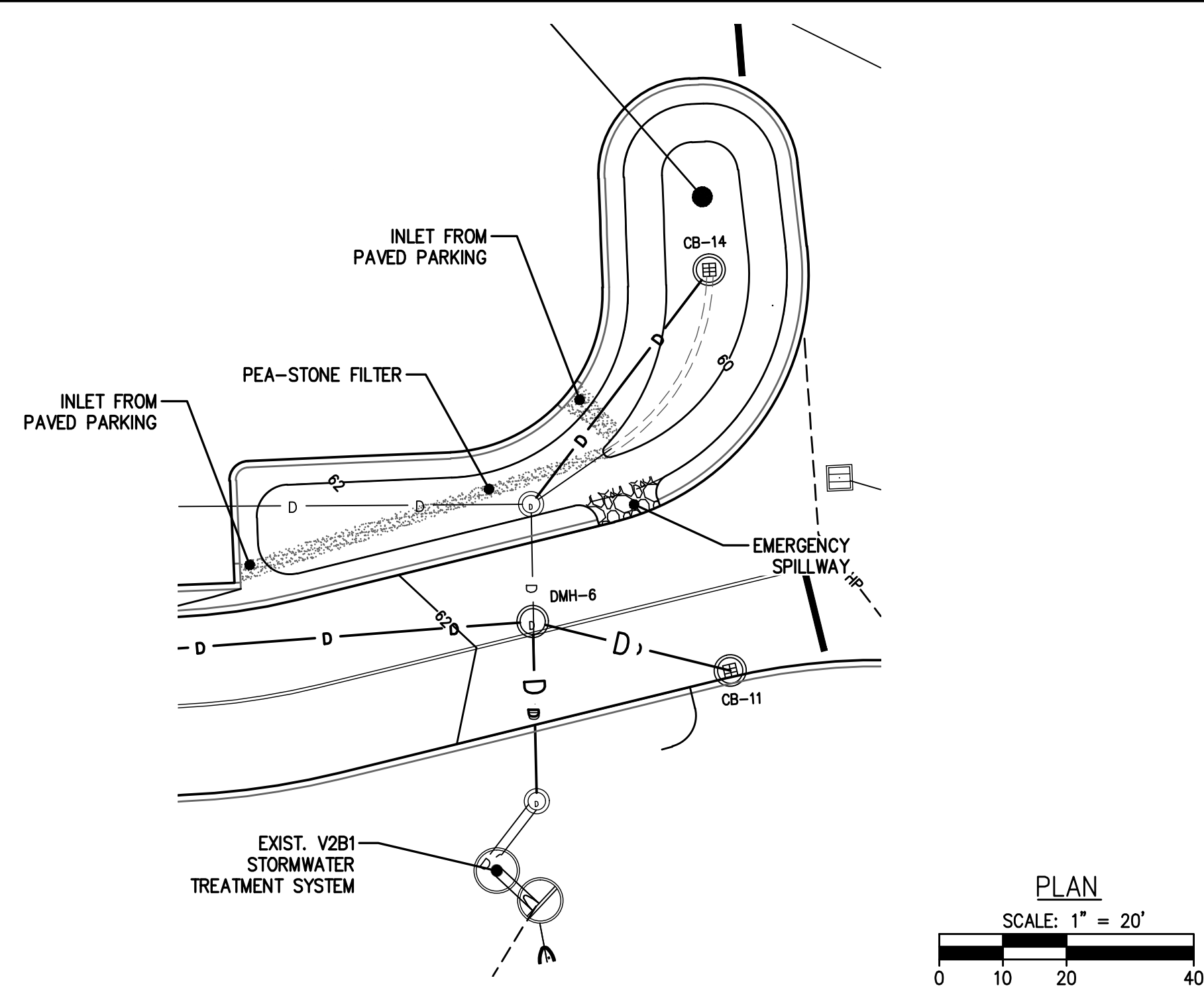
CONSTRUCTION INSPECTION NOTE:

AT LEAST 48-HOURS PRIOR TO FINALIZING BASIN GRADING AND STABILIZATION, CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEER AND METHUEN CITY ENGINEER THAT THE BOTTOM OF BASIN BED IS READY FOR INSPECTION. THE BASIN BOTTOM SHOULD BE SCARIFIED, FREE OF BEDROCK AND STONES OVER 6 INCHES DIAMETER.

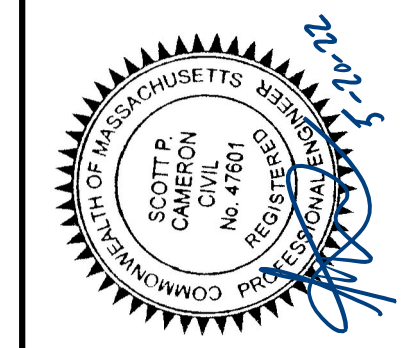
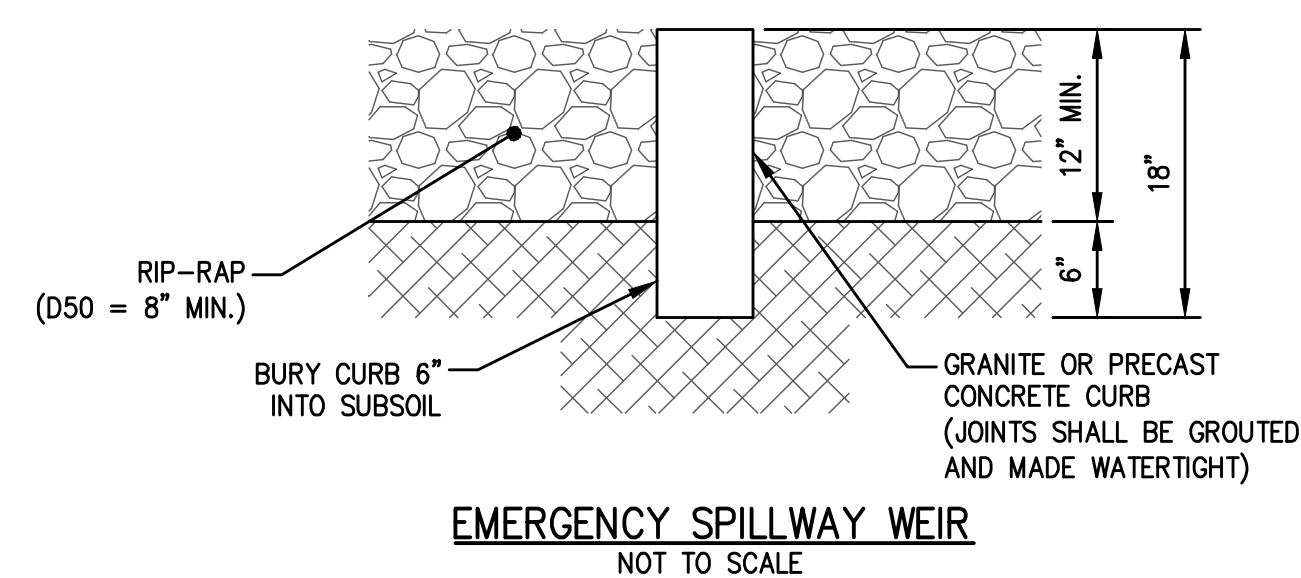
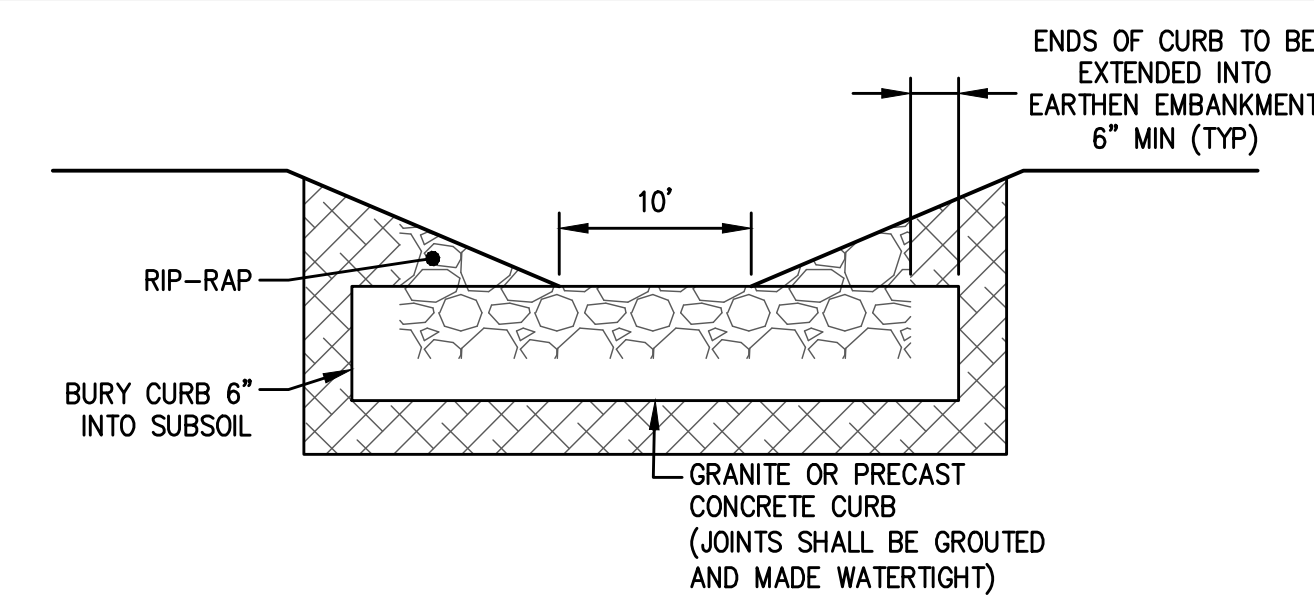
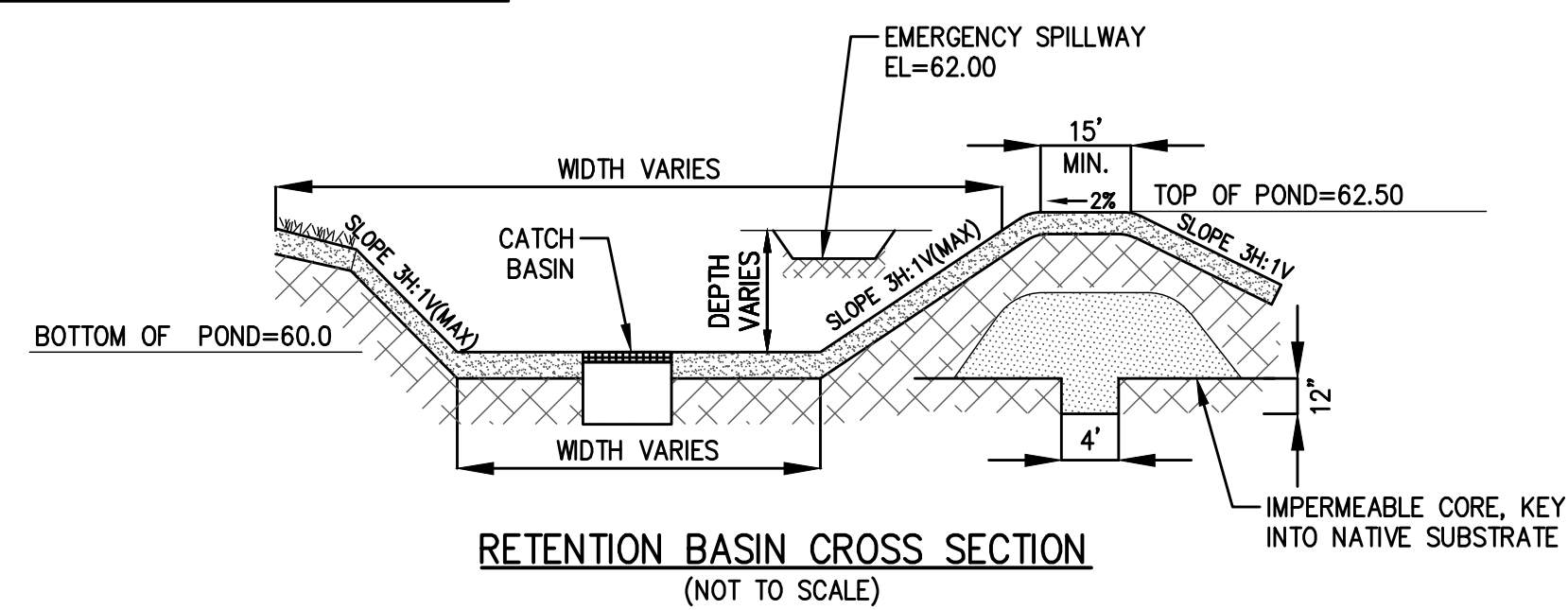
100-YEAR STORM ELEV. = 80.39  
10-YEAR STORM ELEV. = 79.26  
2-YEAR STORM ELEV. = 77.29



OUTLET CONTROL STRUCTURE (OCS-1)  
(NOT TO SCALE)



100-YEAR STORM ELEV. = 62.00  
10-YEAR STORM ELEV. = 61.87  
2-YEAR STORM ELEV. = 61.13



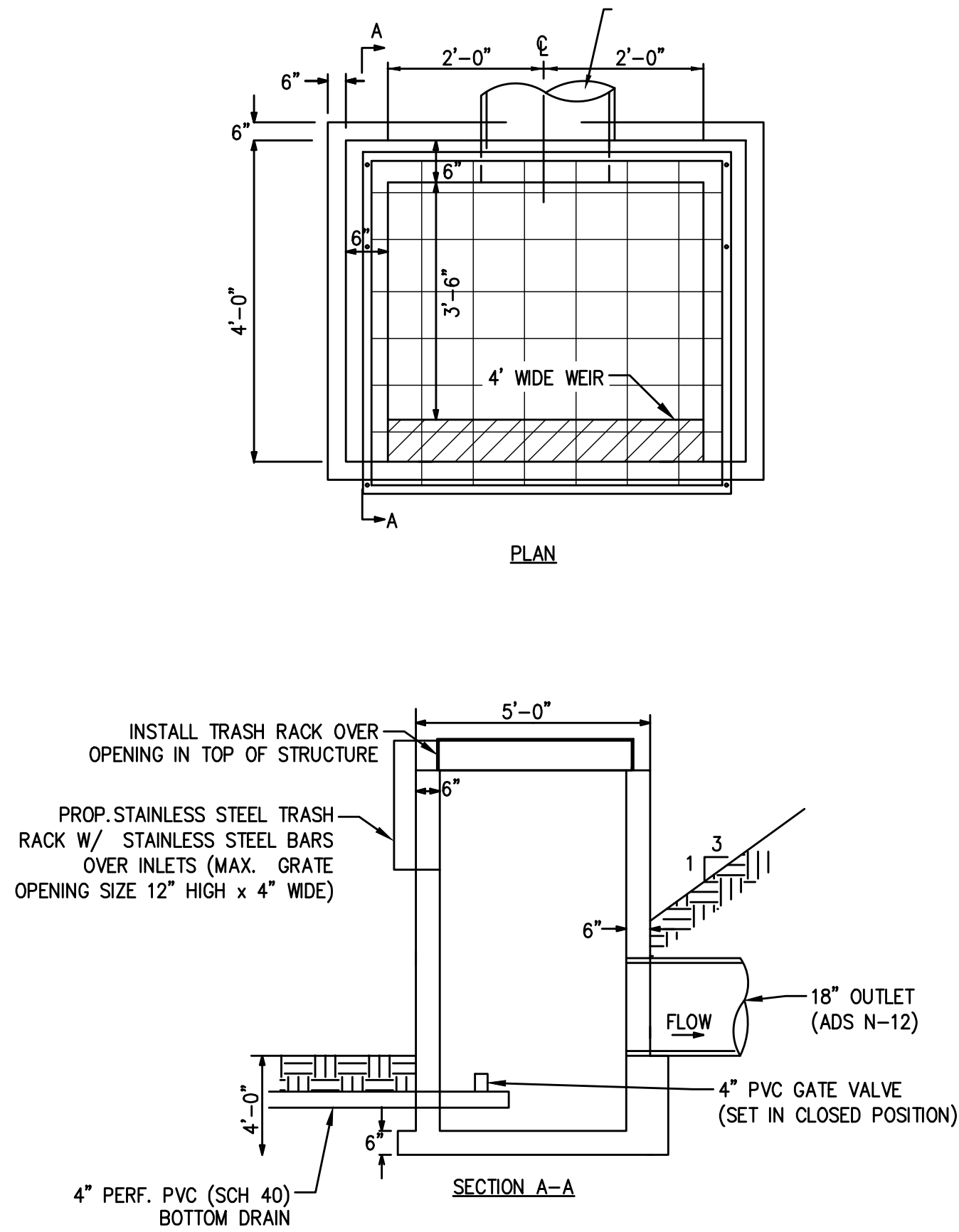
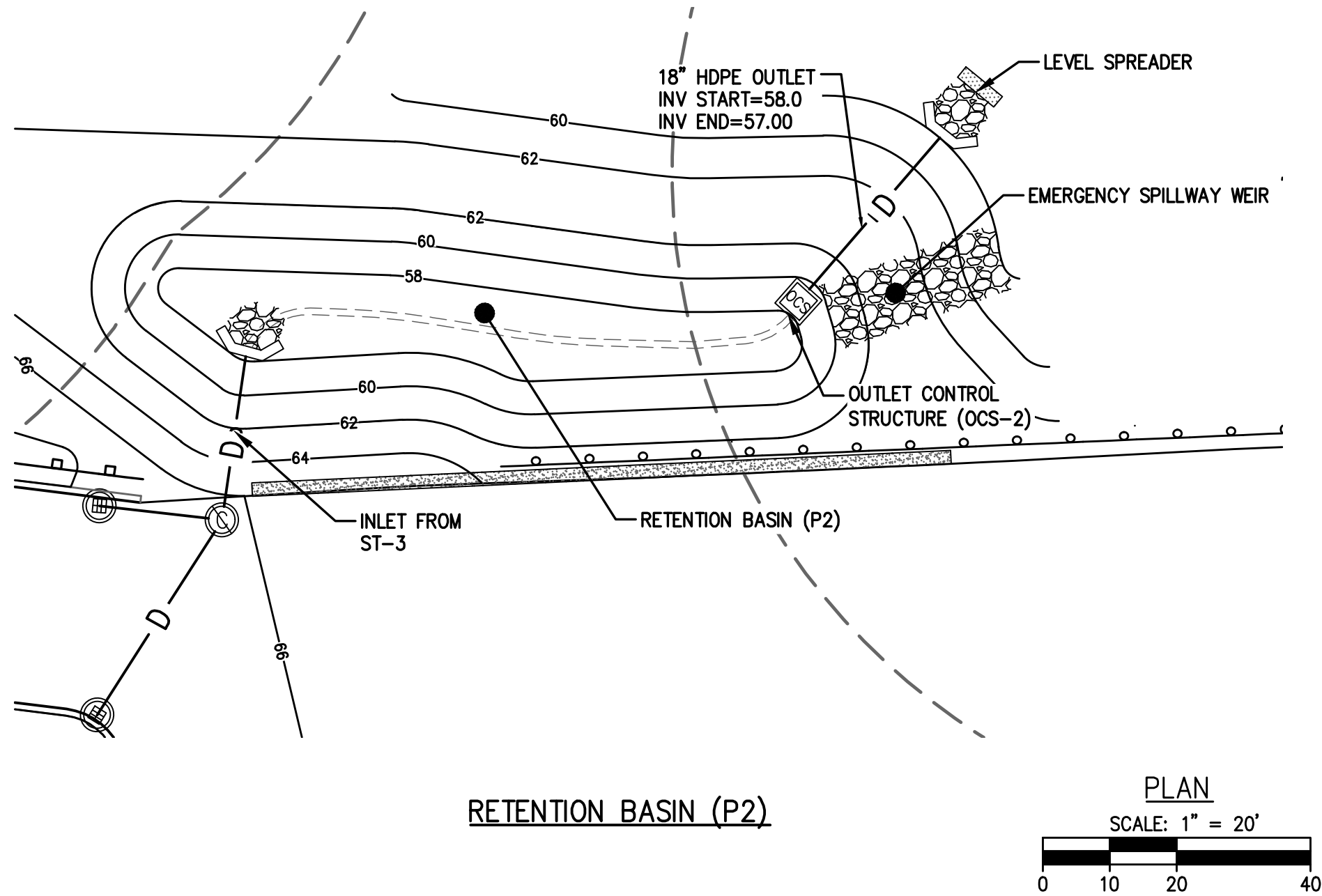
SURVEY BY: MCG  
DRAFTED BY: CEM/LNO  
CHECKED BY: SPC  
APPROVED BY: SPC  
SCALE: AS NOTED  
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REVISIONS		DATE
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1	REVISIONS PER PEER REVIEW AND NO	05-20-2022

SITE DEVELOPMENT PLANS  
IN  
METHUEN, MASSACHUSETTS  
501 & 600 GRIFFIN BROOK DRIVE  
(ASSESSOR'S MAP 220, LOTS 9D & 9E)  
PREPARED FOR:  
GRIFFIN BROOK DRIVE OWNER LLC

DRAINAGE DETAILS  
DRAWING NO. C-13

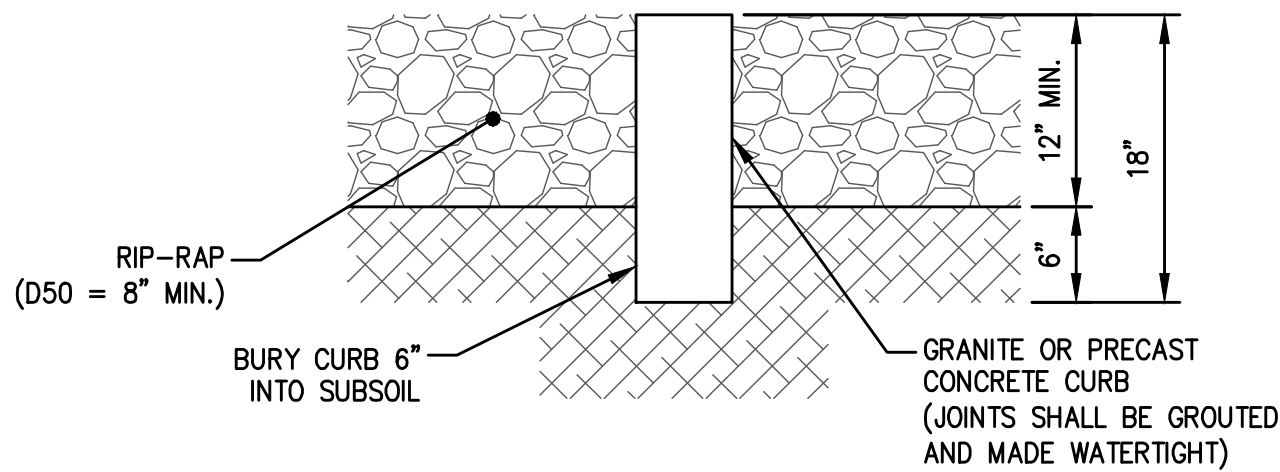
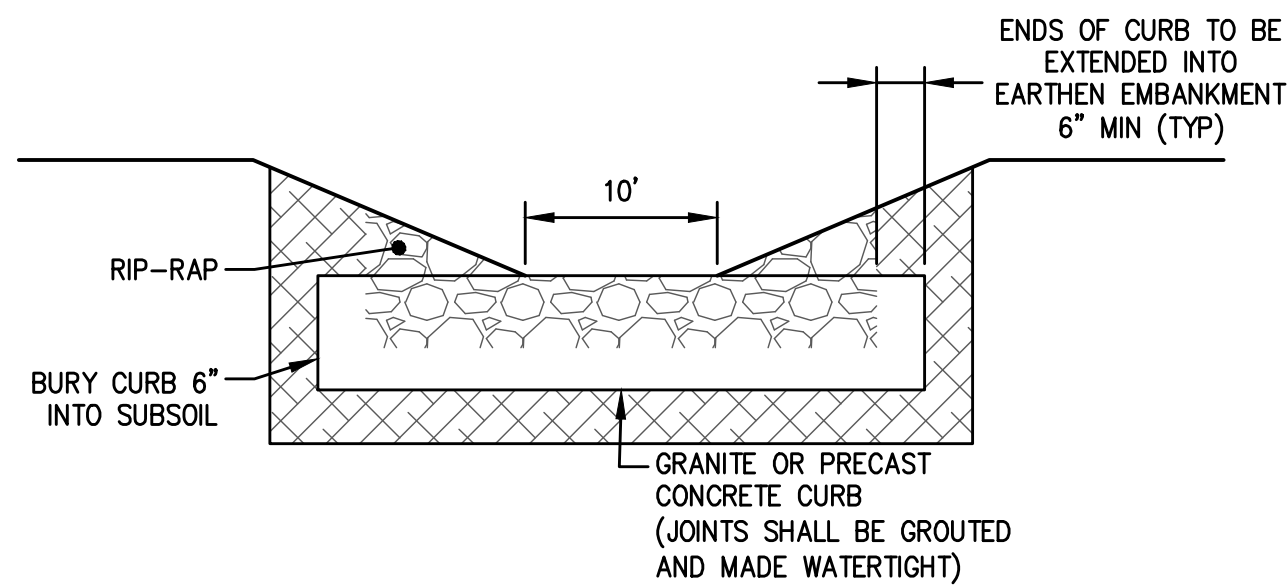
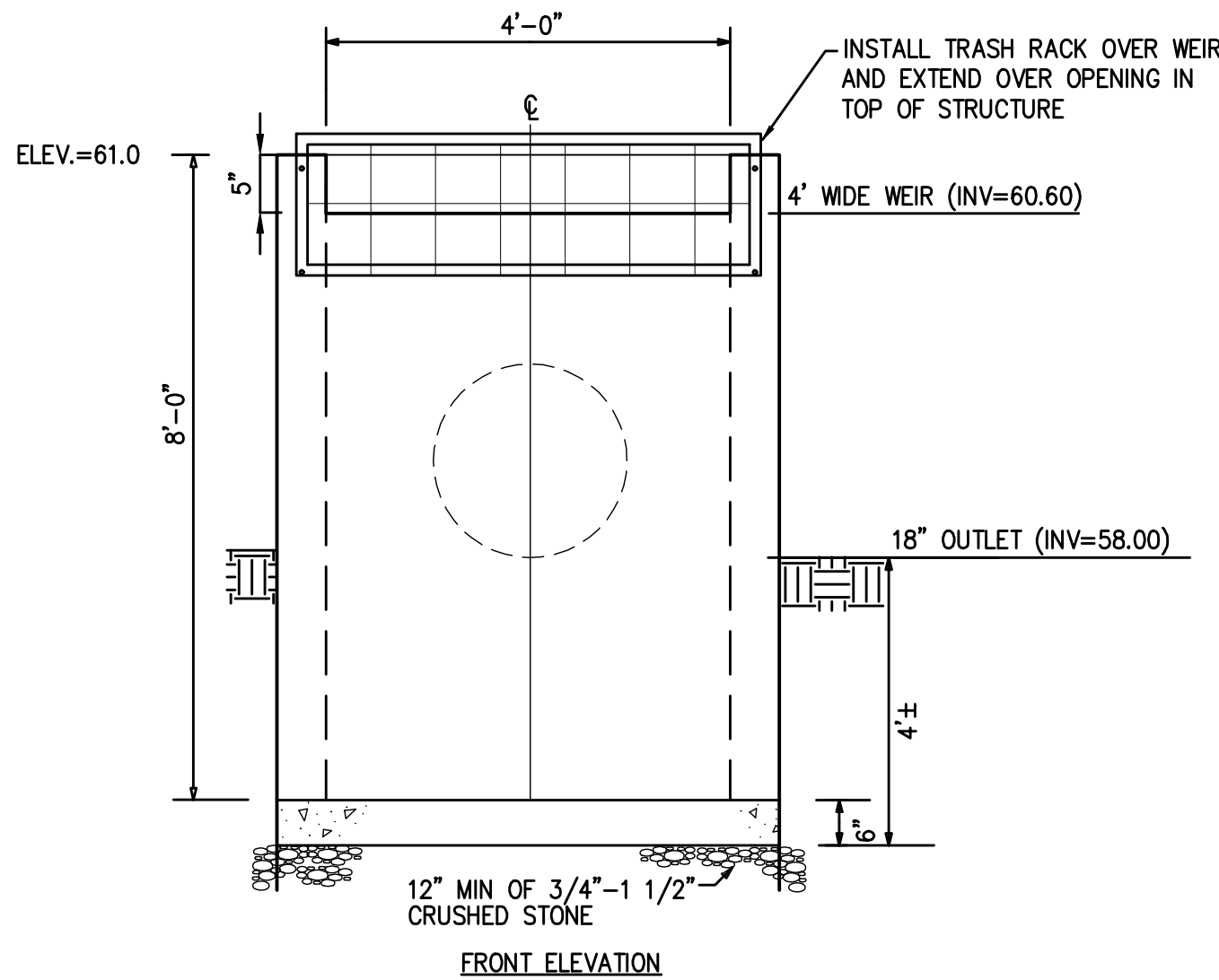
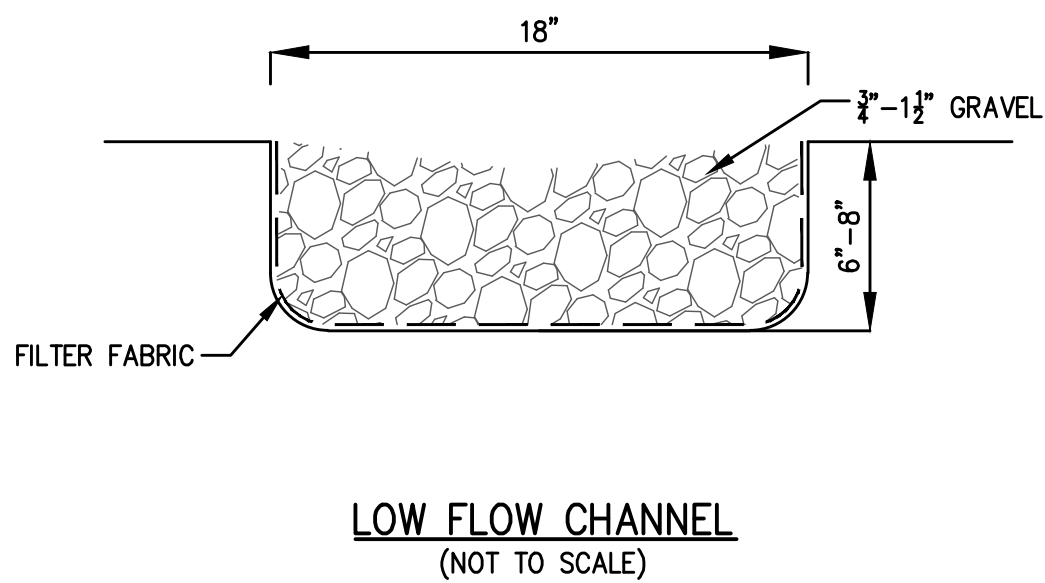
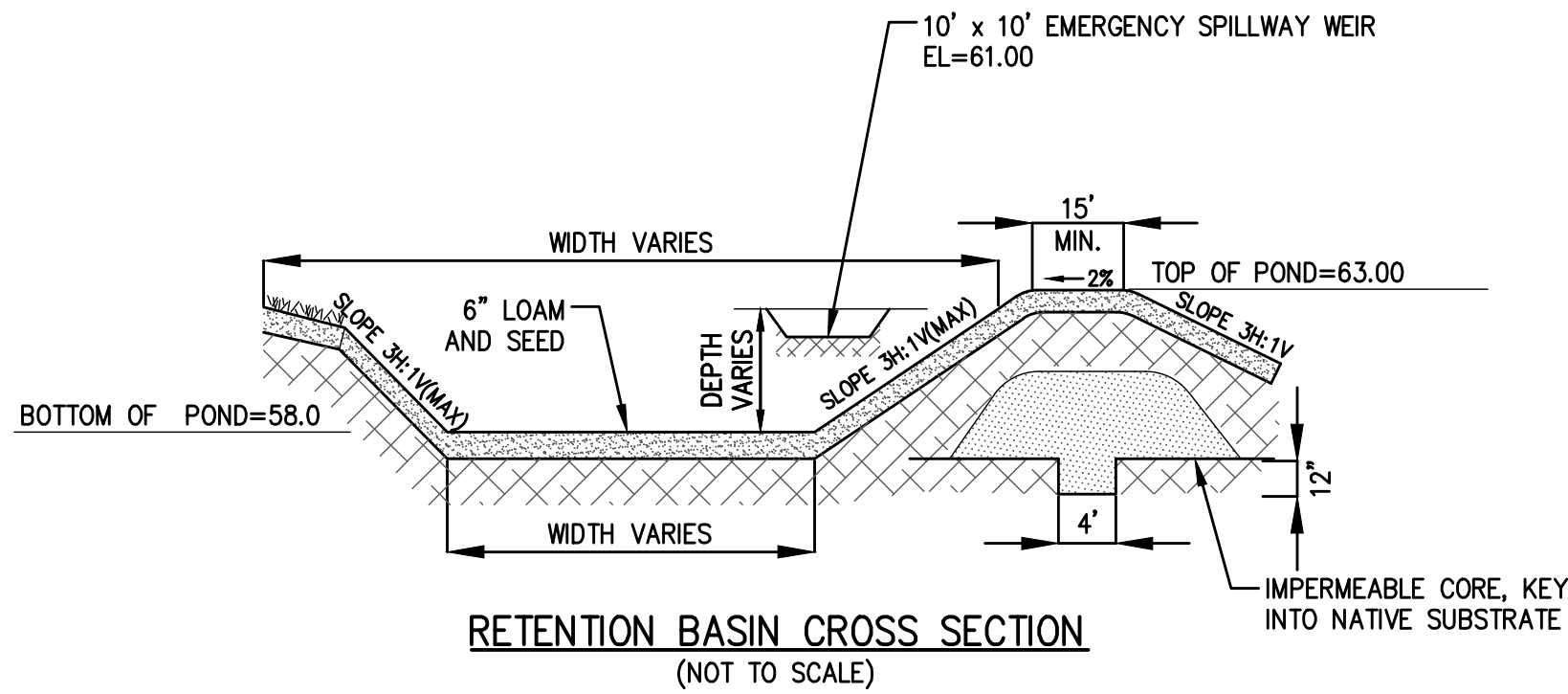




CONSTRUCTION INSPECTION NOTE:

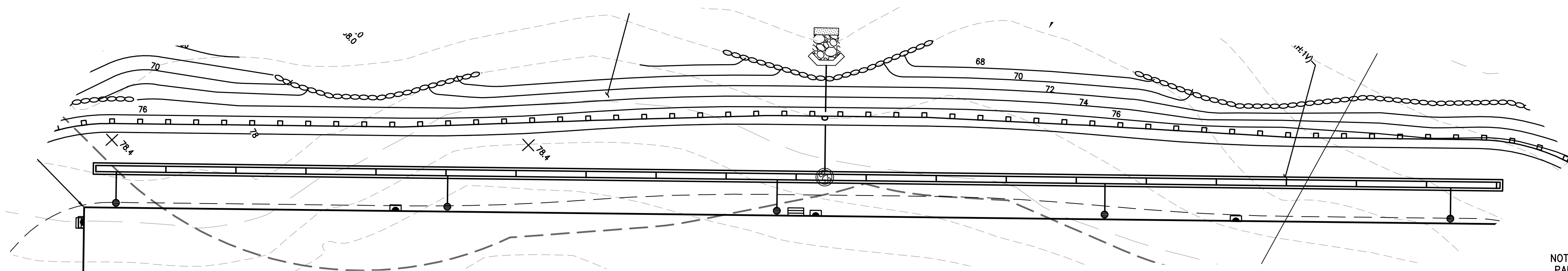
AT LEAST 48-HOURS PRIOR TO FINALIZING BASIN GRADING AND STABILIZATION, CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEER AND METHUEN CITY ENGINEER THAT THE BOTTOM OF BASIN BED IS READY FOR INSPECTION. THE BASIN BOTTOM SHOULD BE SCARIFIED, FREE OF BEDROCK AND STONES OVER 6 INCHES DIAMETER.

100-YEAR STORM ELEV. = 60.87  
10-YEAR STORM ELEV. = 60.13  
2-YEAR STORM ELEV. = 58.67



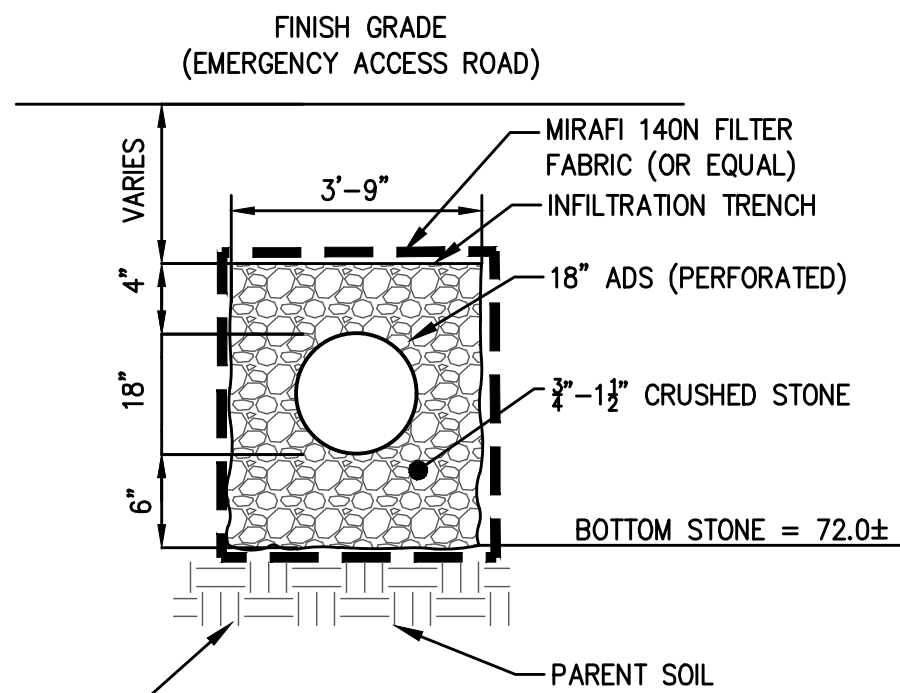
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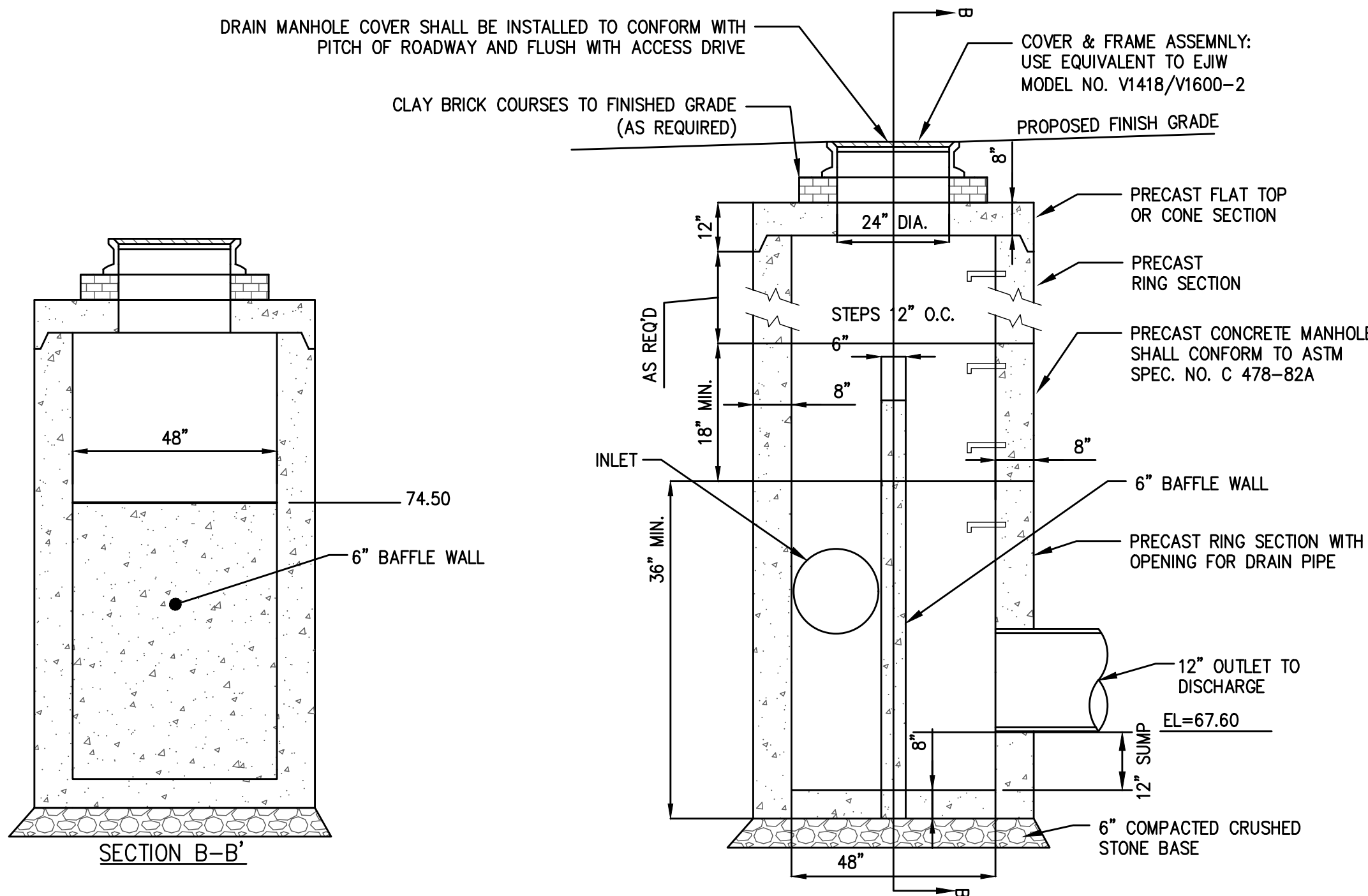
RETENTION BASIN (P4)  
(NOT TO SCALE)

100-YEAR STORM ELEV. = 74.54  
10-YEAR STORM ELEV. = 72.87  
2-YEAR STORM ELEV. = 72.05

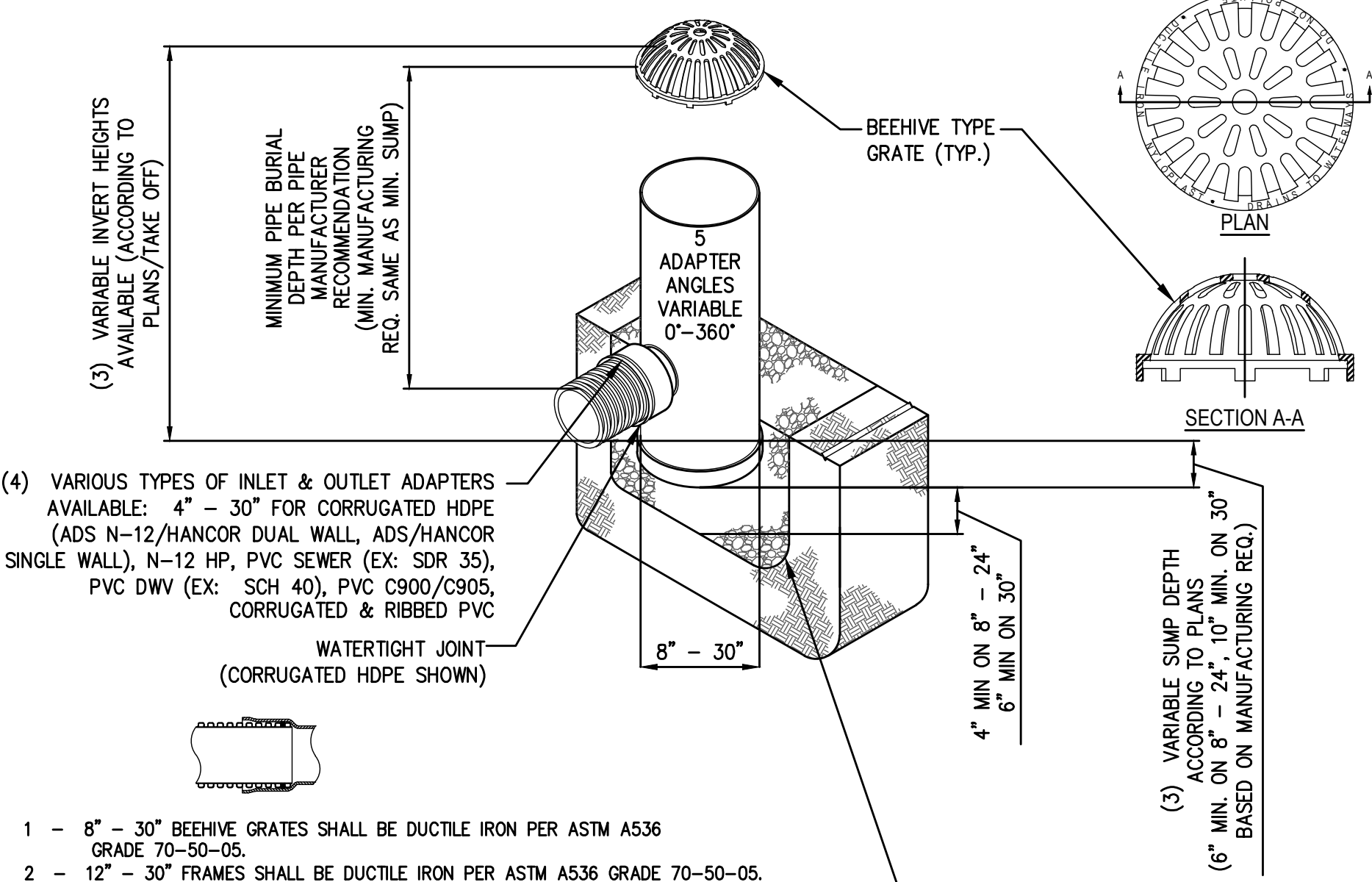


NOTE: REMOVE TOPSOIL & SUBSOIL TO PARENT MATERIAL AND REPLACE WITH 2'-1 1/2" CRUSHED STONE

INFILTRATION TRENCH  
(AD-1 TO STONE BED)  
(NOT TO SCALE)



OUTLET CONTROL STRUCTURE (OCS-4)  
(NOT TO SCALE)

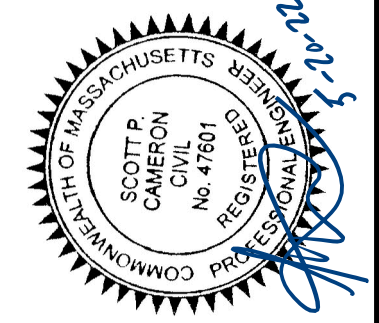


- 8" - 30" BEEHIVE GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 12" - 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 8" & 10" BEEHIVE GRATES FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
- DRAINAGE CONNECTION SUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
- ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
- 12" - 30" BEEHIVE GRATES SHALL MEET H-20 LOAD RATING.
- 8" & 10" BEEHIVE GRATES ARE RATED FOR LIGHT DUTY APPLICATIONS ONLY; NO CONCRETE COLLAR NEEDED FOR LIGHT DUTY RATING.

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I OR CLASS II MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE WELL PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

\*NYLOPLAST DRAIN BASIN WITH BEEHIVE GRATE SHOWN. APPROVED EQUAL PRODUCT MAY BE USED.

NYLOPLAST AREA DRAIN OR EQUAL  
(NOT TO SCALE)



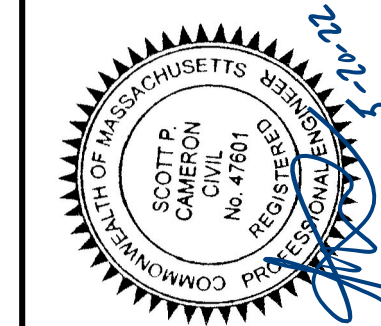
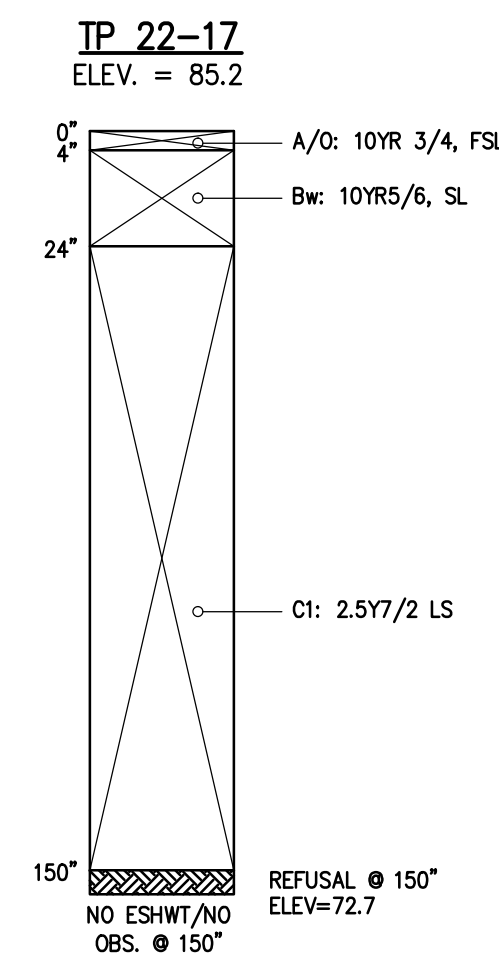
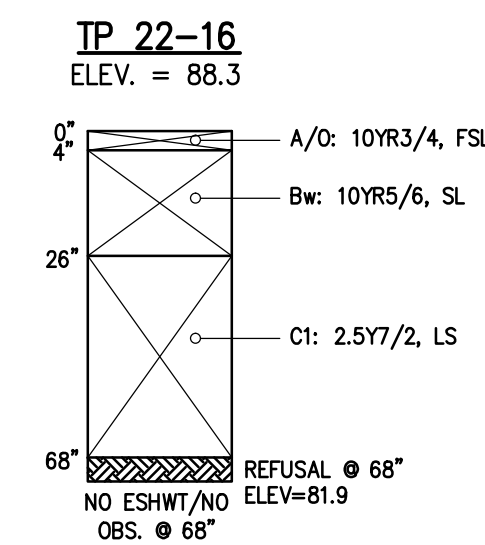
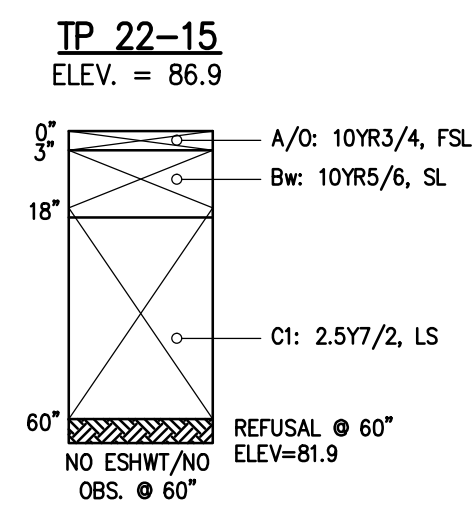
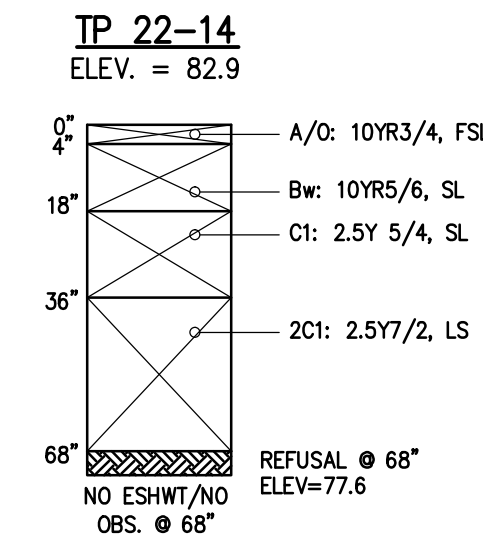
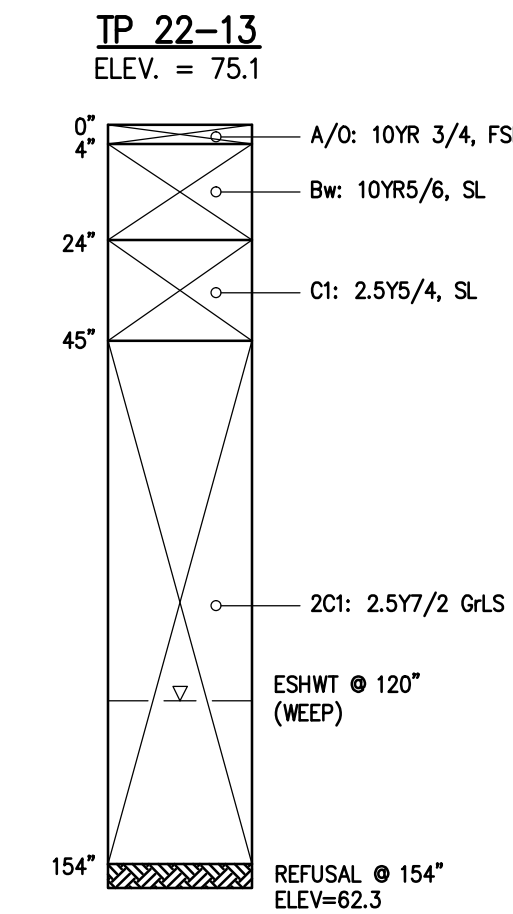
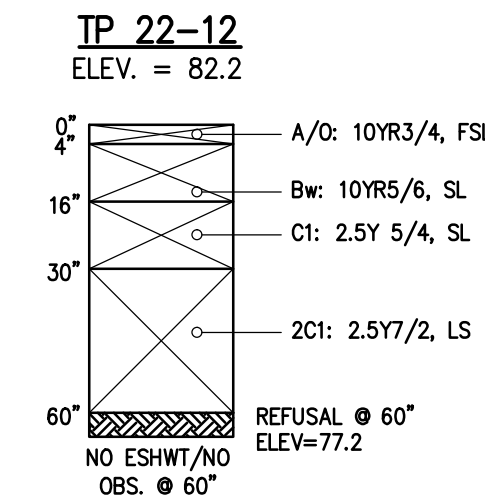
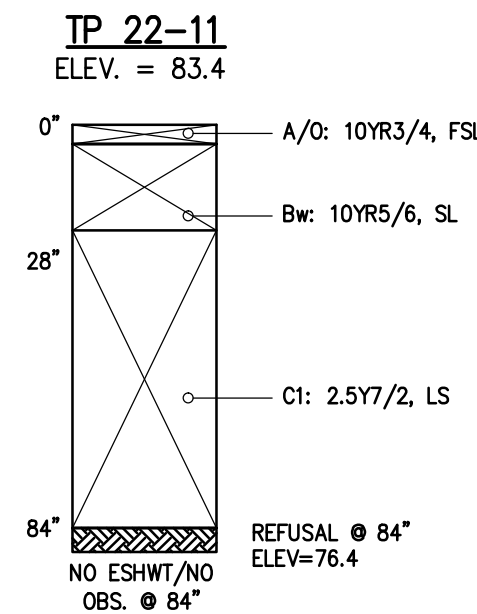
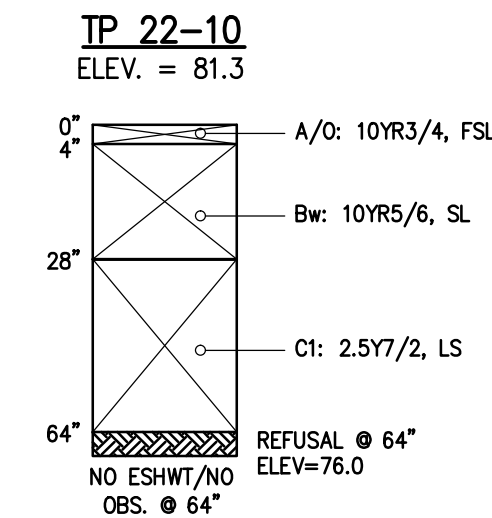
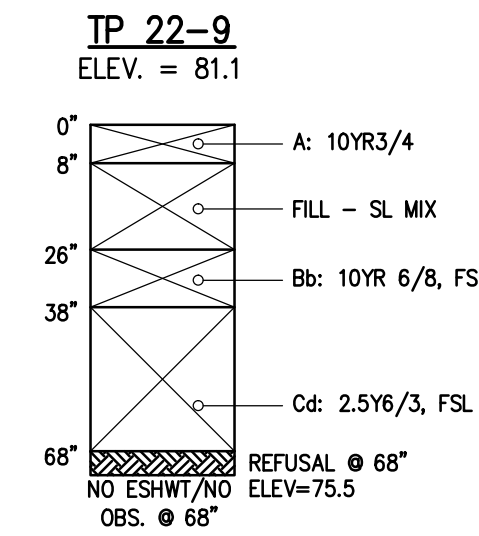
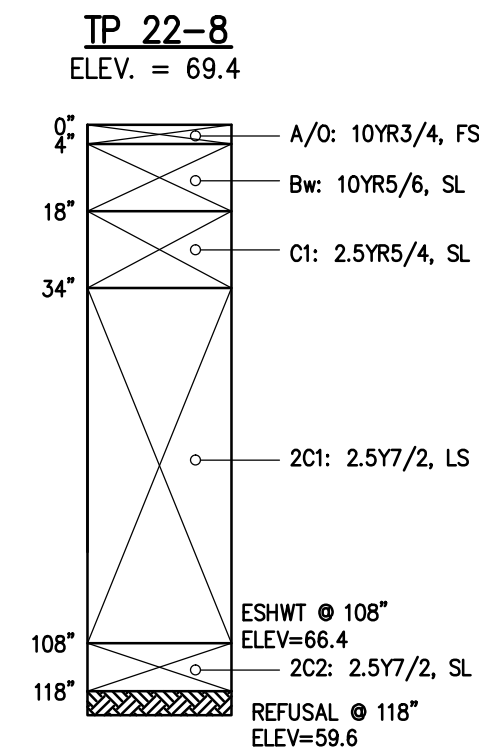
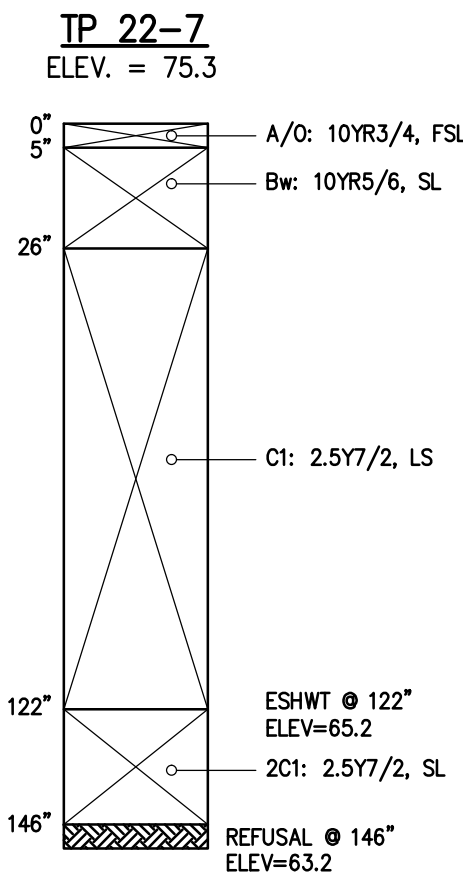
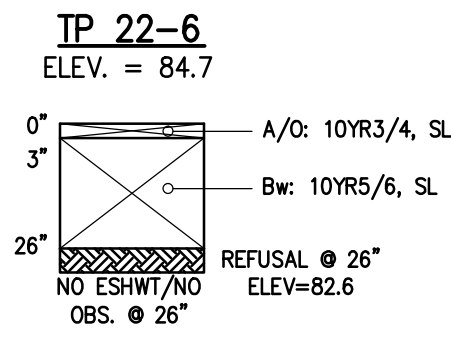
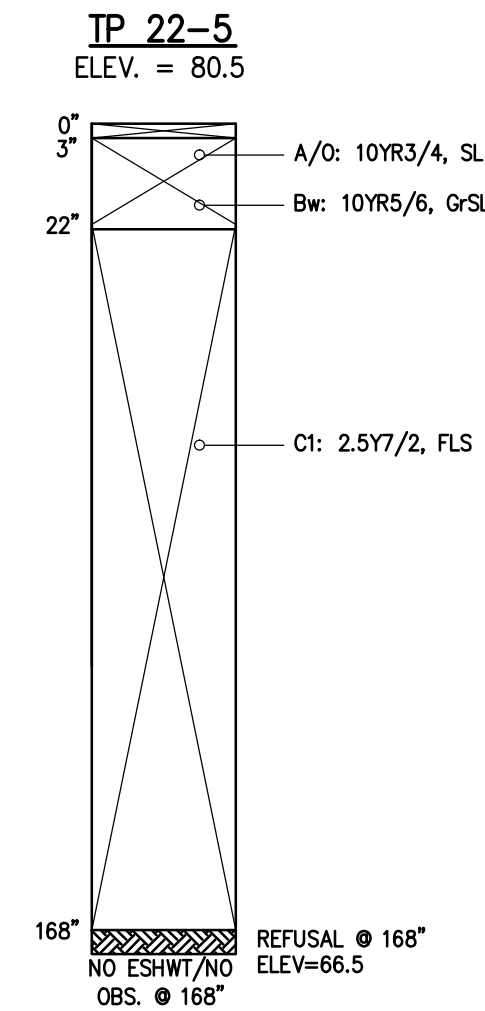
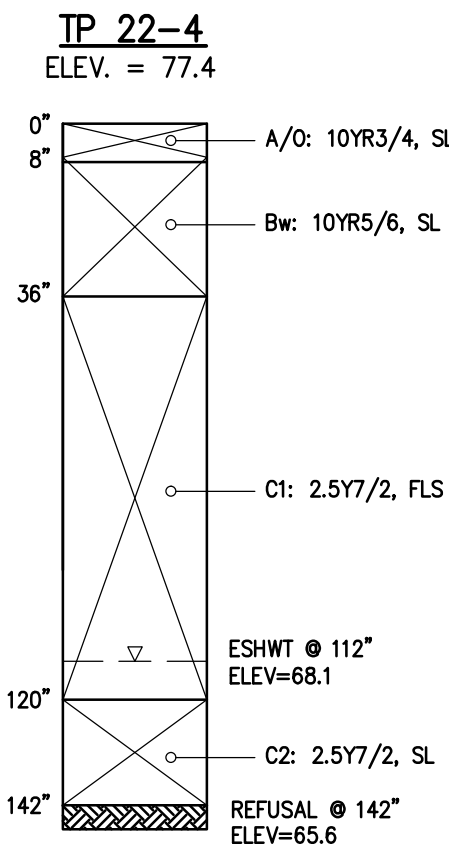
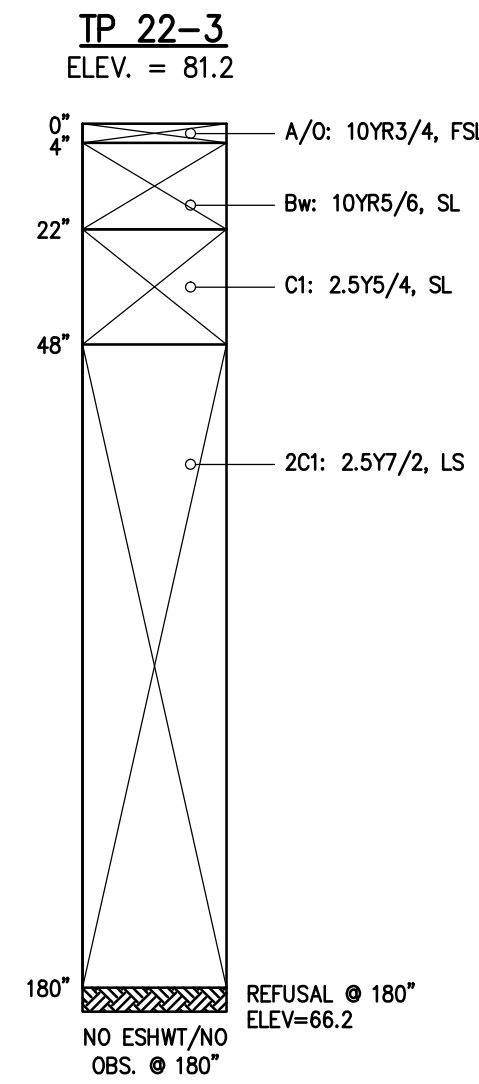
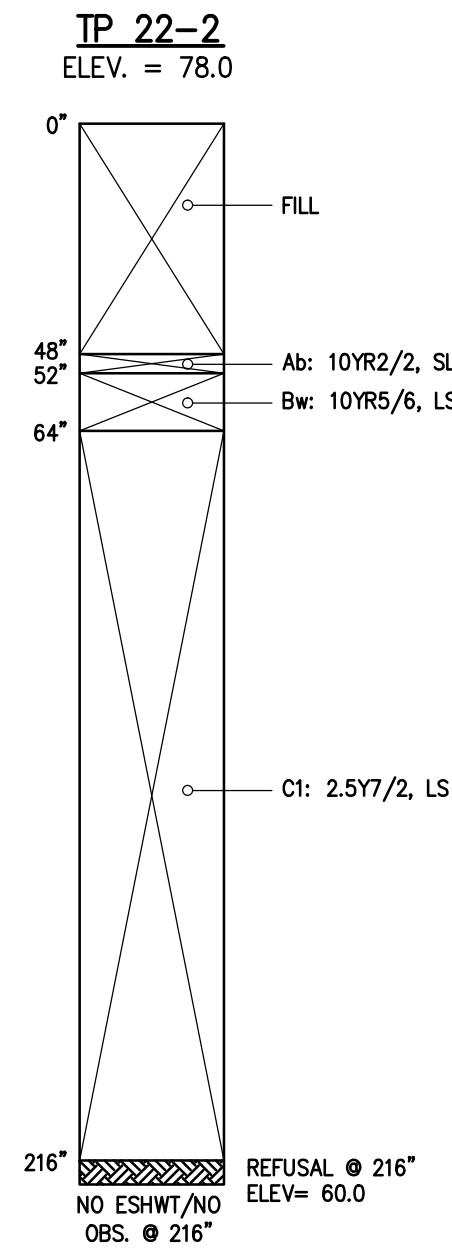
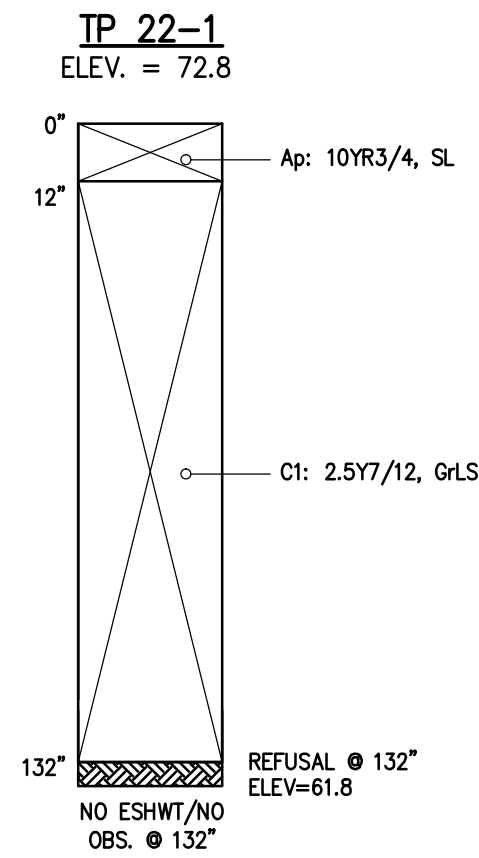
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DRAFTED BY: CEM/LNO  
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SCALE: AS NOTED  
DATE: APRIL 6, 2022

REVISIONS	
NO.	DESCRIPTION
1	REVISIONS PER PEER REVIEW AND NO
	DATE
	05-20-2022

SITE DEVELOPMENT PLANS  
IN  
METHUEN, MASSACHUSETTS  
501 & 600 GRIFFIN BROOK DRIVE  
(ASSESSOR'S MAP 220, LOTS 9D & 9E)  
PREPARED FOR:  
GRIFFIN BROOK DRIVE OWNER LLC



SOIL LOGS  
DATE PERFORMED: 02/07/2022 & 02/08/2022  
PERFORMED BY: WILL SCHKUTA, SE #14030



SURVEY BY: MCG  
DRAFTED BY: CEM/LNO  
CHECKED BY: SPC  
APPROVED BY: SPC  
SCALE: AS NOTED  
DATE: APRIL 6, 2022

R E V I S I O N S		DATE
NO.	DESCRIPTION	
1	REVISIONS PER PEER REVIEW AND NO	05-20-2022

**SITE DEVELOPMENT PLANS**  
IN  
**METHUEN, MASSACHUSETTS**  
**501 & 600 GRIFFIN BROOK DRIVE**  
(ASSESSOR'S MAP 220, LOTS 9D & 9E)  
PREPARED FOR:  
**GRIFFIN BROOK DRIVE OWNER LLC**





501 & 600 Griffin  
Brook Drive  
Owner LLC  
Methuen, MA

Civil Engineer

The Morin-Cameron Group, Inc.  
25 Kenoza Avenue  
Haverhill, MA

Landscape Architect



Radner Design  
Associates, Inc.

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Revisions per Peer Review and NOI 05/20/2022

Revision:

Drawn: kc

Checked by: mr

Scale: 1"=40'-0"

Key Plan:

Sheet Name:  
Landscape Plan

Project No.:  
22-02

Issue Date:  
04/06/2022

Sheet No.:

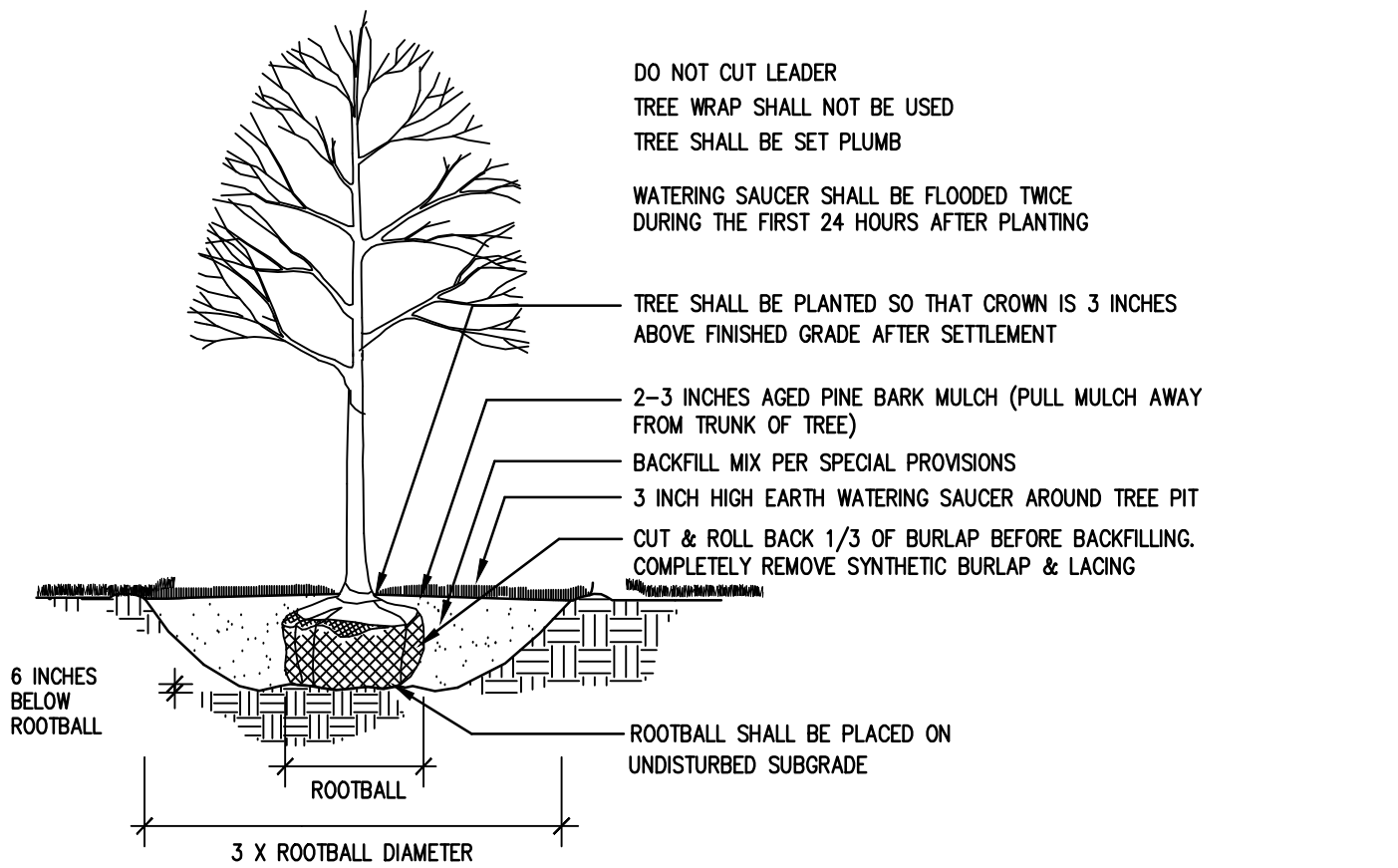
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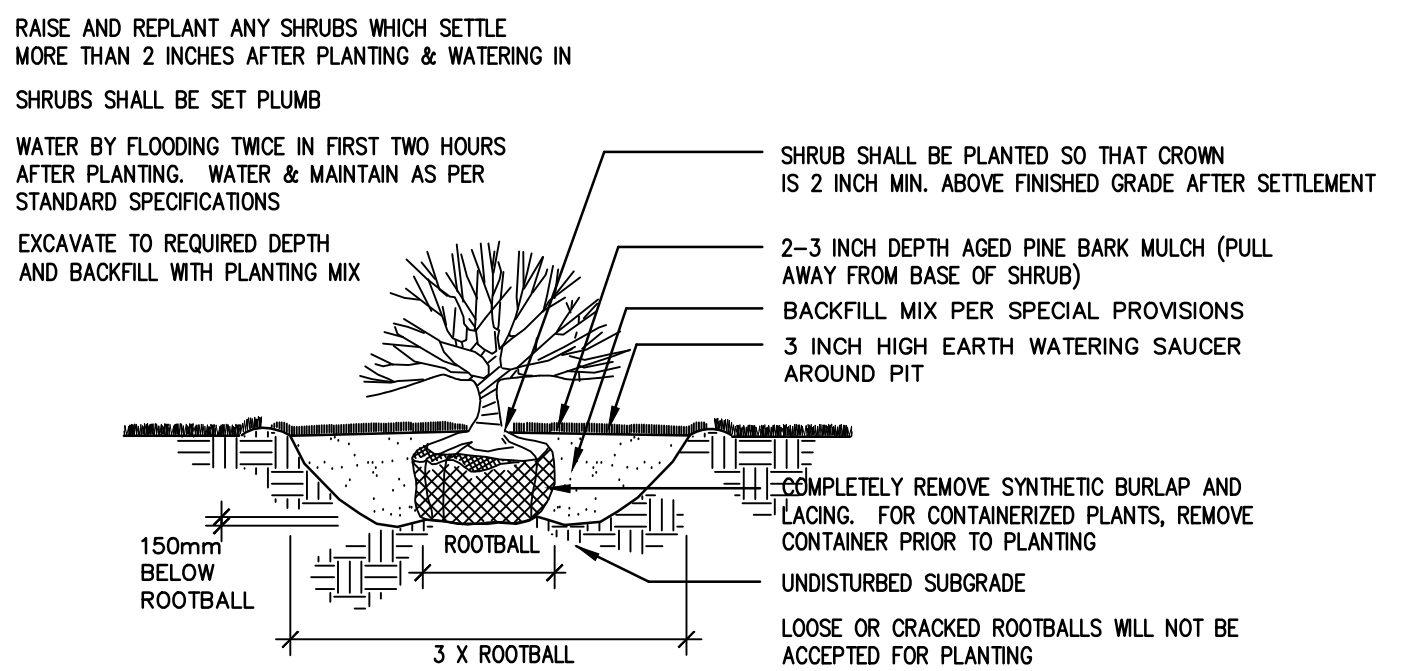




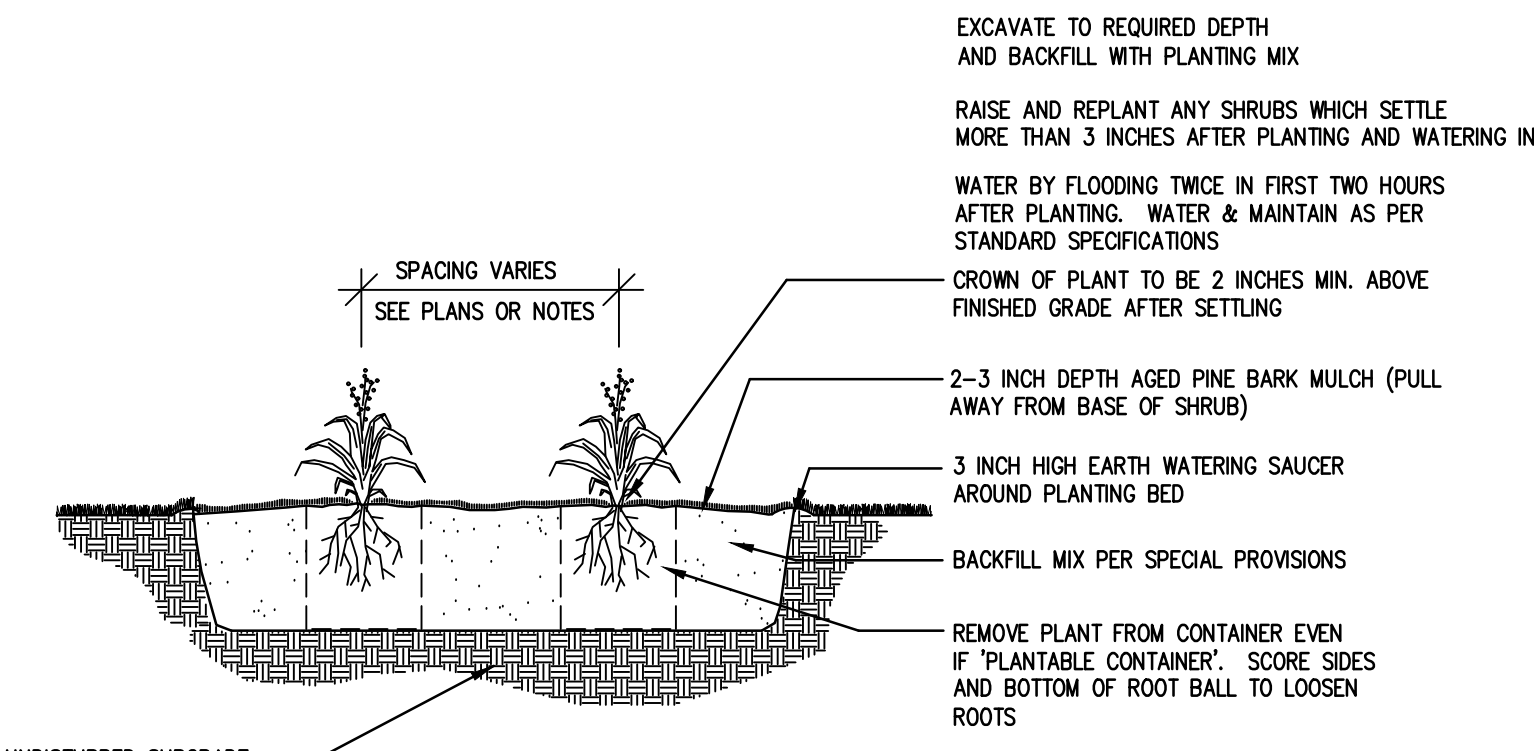




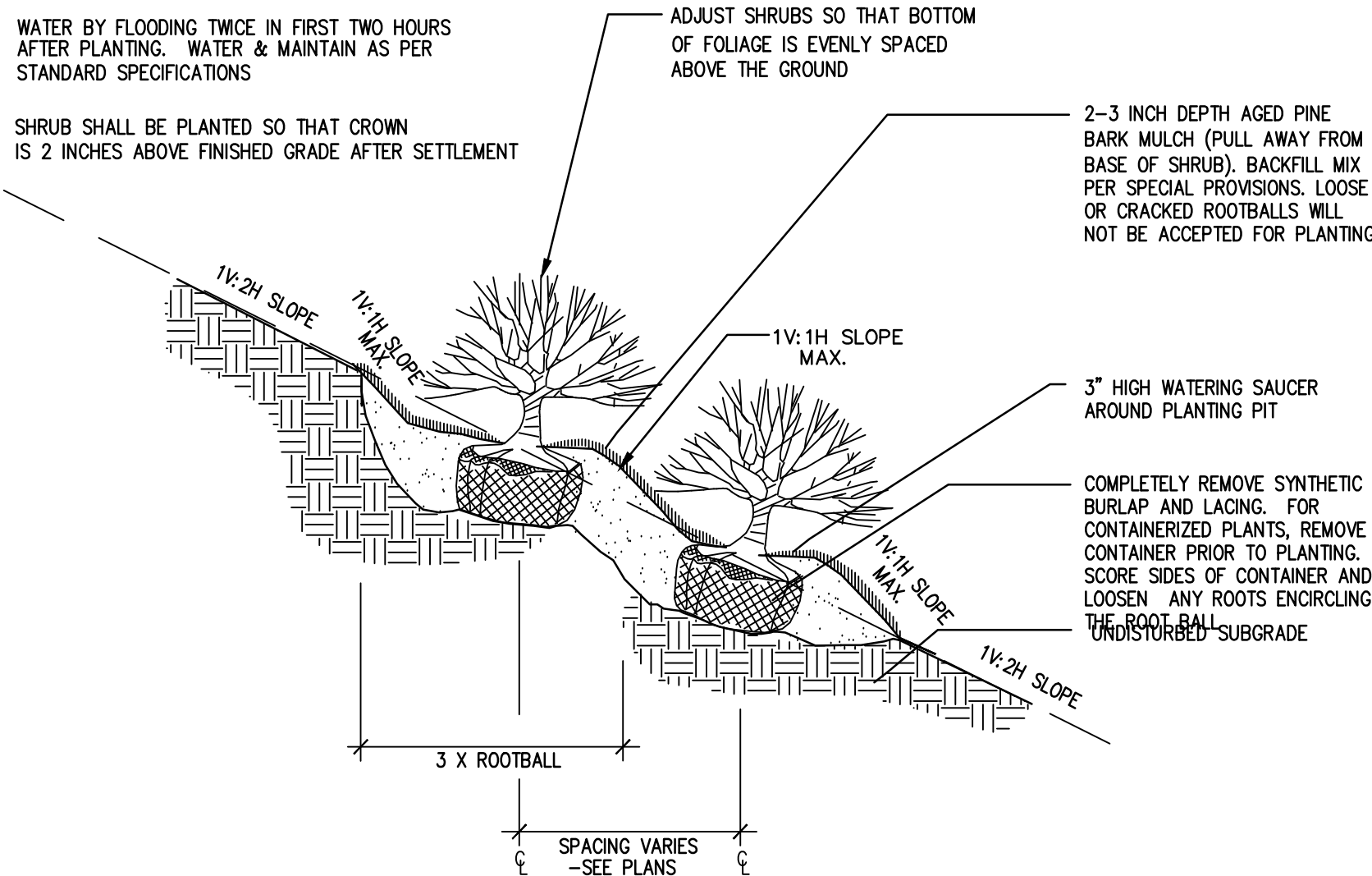
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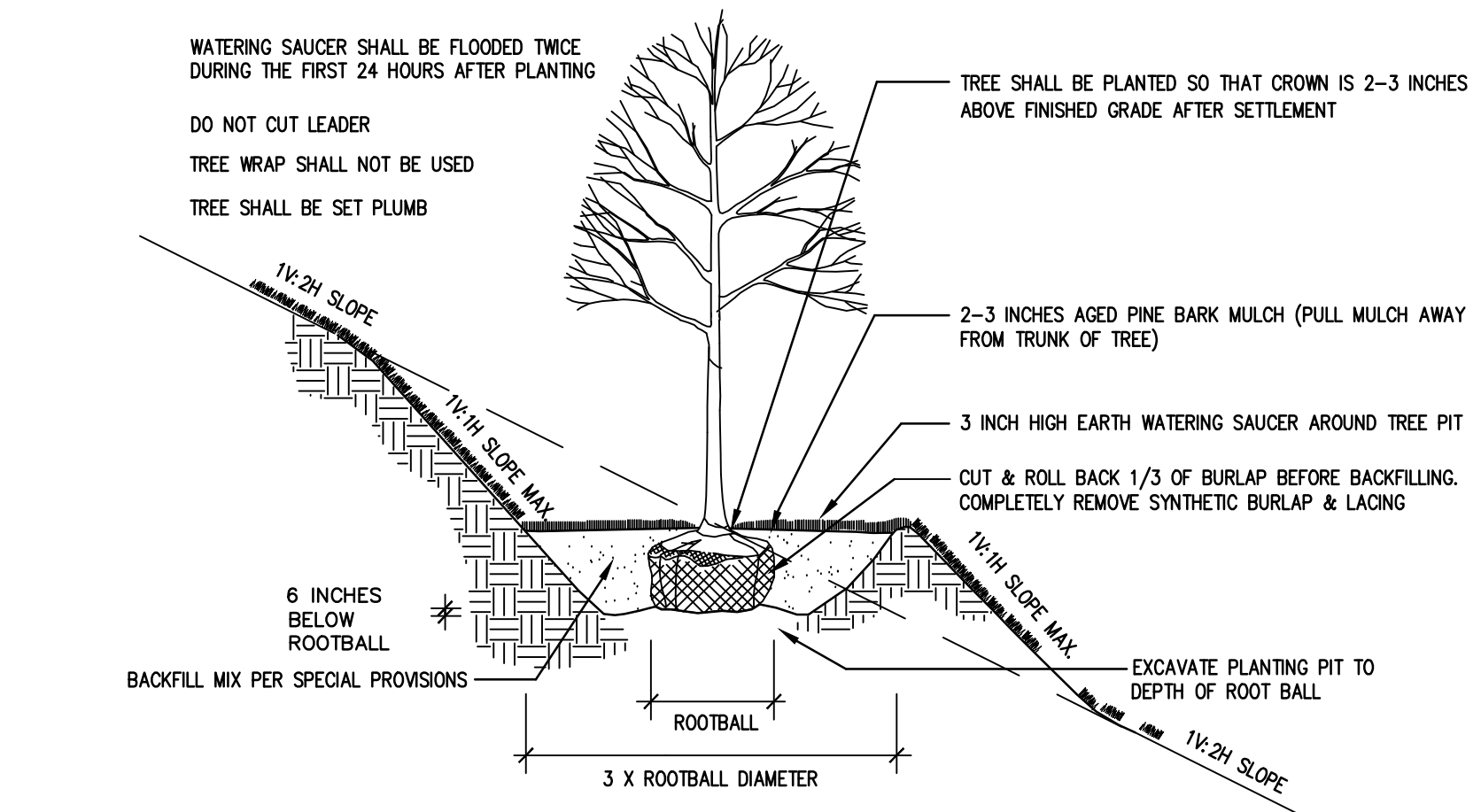
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PERENNIAL PLANTING  
NOT TO SCALE



CONTAINERIZED SHRUB PLANTING (SLOPE) DETAIL  
NOT TO SCALE



DECIDUOUS TREE PLANTING (SLOPE)  
NOT TO SCALE

#### PLANTING NOTES

- FURNISH AND INSTALL PLANTS AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR QUANTITY OF SHRUBS GRAPHICALLY SHOWN ON PLANS. IF THERE IS A DISCREPANCY BETWEEN PLANT LIST QUANTITIES AND GRAPHICS, THE GRAPHIC SHALL TAKE PRECEDENCE.
- PRIOR TO THE START OF EXCAVATION FOR THE PROJECT BOTH ON AND OF THE SITE, THE CONTRACTOR SHALL NOTIFY DIGSAFE AND BE PROVIDED A DIGSAFE NUMBER INDICATING THAT EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED.
- CONTRACTOR SHALL BEGIN 90 DAY MAINTENANCE PERIOD IMMEDIATELY UPON PLANTING AND WILL CONTINUE UNTIL FINAL ACCEPTANCE.
- CONTRACTOR SHALL VERIFY TREE REMOVALS WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION START.
- CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS, STRUCTURES, AND PLANTING BEDS.
- MAXIMUM SLOPE WITHIN DISTURBED AREAS SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
- PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS TO ORIGINAL GRADES BEFORE DIGGING.
- PLANT MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY "THE AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- PLANTS TO BE BALLED IN BURLAP OR CONTAINERIZED.
- MULCH FOR PLANTED AREAS TO BE AGED PINE BARK, PARTIALLY DECOMPOSED, DARK BROWN IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.
- PLANTING SOIL MIX: LOAM THOROUGHLY INCORPORATED WITH ROTTED MANURE PROPORTIONED 5 C.Y. TO 1 C.Y. OR EQUIVALENT. USE OF PEAT MOSS IS PROHIBITED.
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE. REQUEST THE LANDSCAPE ARCHITECT PROVIDE A WRITTEN LETTER OF ACCEPTANCE UPON COMPLETION OF EACH PHASE.
- PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT, AT THE NURSERY, AND AT THE SITE.
- LANDSCAPE ARCHITECT TO FLAG TREES TO BE TRANSPLANTED PRIOR TO CONSTRUCTION START.
- AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED WITH TOPSOIL TO A MINIMUM DEPTH OF 6", AND SEEDED WITH A MIX CONSISTING OF 40% PERENNIAL RYE GRASS; 30% CHEWINGS FESCUE; 30% KENTUCKY BLUEGRASS.
- SCREENED IMAGES SHOW EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER OR ARE IMPINGED UPON BY PROPOSED BUILDINGS AND/OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND/OR CAPPED OR DEMOLISHED AS REQUIRED.
- PROVIDE AUTOMATIC IRRIGATION SYSTEM FOR PLANTINGS AND LAWN AREAS UNLESS OTHERWISE NOTED. SUBMIT DESIGN PLANS AND PRODUCT LITERATURE PER THE SPECIFICATIONS.
- THERE SHALL BE NO SUBSTITUTION OF PLANT SPECIES WITHOUT AUTHORIZATION BY THE LANDSCAPE ARCHITECT.
- NO PLANTING SHALL BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
- PLANTS TO BE THOROUGHLY WATERED AFTER INSTALLATION, AT LEAST TWICE WITHIN THE FIRST 24 HOURS.
- PLANT SELECTION SUBJECT TO CHANGE DEPENDING ON PLANT AVAILABILITY AT THE TIME OF PLANTING, WITH APPROVAL OF LANDSCAPE ARCHITECT OR WETLAND SCIENTIST ONLY.

Suggested Plant Palette			
Latin Name	Common Name	Size	Remarks
<b>Deciduous Shade Trees</b>			
Acer rubrum 'October Glory'	October Glory Red Maple	3-3.5" Cal.	B&B, full, round, symmetrical, high-branched
Celtis occidentalis	Hackberry	3-3.5" Cal.	B&B, full, round, symmetrical, high-branched
Gleditsia triacanthos inermis 'Skyline'	Skyline Honeylocust	3-3.5" Cal.	B&B, full, round, symmetrical, high-branched
Ostrya virginiana	American Hophornbeam	3-3.5" Cal.	B&B, full, round, symmetrical, high-branched
Quercus palustris 'Pacific Brilliance'	Pacific Brilliance Pin Oak	3-3.5" Cal.	B&B, full, round, symmetrical, high-branched
<b>Ornamental Flowering Trees</b>			
Amelanchier canadensis	Shadblow Serviceberry	8-10' Ht.	B&B, full, round, multi-stem
Cercis canadensis	Eastern Redbud	8-10' Ht.	B&B, full, round, multi-stem
Cornus florida	Flowering Dogwood	8-10' Ht.	B&B, full, round, multi-stem
Crataegus phaenopyrum	Washington Hawthorn	8-10' Ht.	B&B, full, round, multi-stem
Hamamelis virginiana	Witch Hazel	8-10' Ht.	B&B, full, round, multi-stem
<b>Shrubs</b>			
Aronia arbutifolia	Red Chokeberry	3-4' Ht.	Container
Clethra alnifolia	Summersweet	3-4' Ht.	Container
Forsythia x intermedia	Border Forsythia	3-4' Ht.	Container
Hibiscus syriacus	Rose of Sharon	3-4' Ht.	Container
Hydrangea macrophylla 'All Summer Beauty'	All Summer Beauty Hydrangea	7 Gal.	Container
Hydrangea macrophylla 'Nikko Blue'	Nikko Hydrangea	7 Gal.	Container
Ilex crenata	Japanese Holly	5 Gal.	Container
Ilex glabra	Inkberry Holly	5 Gal.	Container
Juniperus chinensis 'Hetzi Columnaris'	Upright Hetz Juniper	4-5' Ht.	Container
Juniperus chinensis 'Seagreen'	Seagreen Juniper	12-18" Spr.	Container
Juniperus horizontalis 'Blue Chip'	Blue Chip Juniper	12-18" Spr.	Container
Myrica pennsylvanica	Northern Bayberry	24-30' Ht.	Container
Physocarpus opulifolium 'Diabolo'	Ninebark	3-4' Ht.	Container
Potentilla fruticosa 'Abbotswood'	Abbotswood Potentilla	12-18" Ht.	Container
Rosa rugosa	Beech Rose	5 Gal.	Container
Spiraea betulifolia	Birchleaf Spirea	12-18" Ht.	Container
Syringa vulgaris	Lilac	5 Gal.	Container
Viburnum trilobum	American Cranberrybush	7 Gal.	Container
<b>Perennials, Grasses and Groundcovers</b>			
Arctostaphylos uva-ursi	Bearberry	1 Gal.	Container
Asclepias tuberosa	Butterfly Weed	1 Gal.	Container
Aster nova-angliae	New England Aster	1 Gal.	Container
Carex pennsylvanica	Oak Sedge	1 Gal.	Container
Coreopsis verticillata 'Moonbeam'	Moonbeam Coreopsis	1 Gal.	Container
Echinacea purpurea 'Magnus'	Magnus Coneflower	1 Gal.	Container
Gaultheria procumbens	Eastern Teaberry	1 Gal.	Container
Hemerocallis x 'Pardon Me'	Pardon Me Daylily	1 Gal.	Container
Hemerocallis x 'Stella de Oro'	Stella D'Oro Daylily	1 Gal.	Container
Liatris spicata 'Kobolt'	Kobolt Blazing Star	1 Gal.	Container
Liriope muscari 'Variegata'	Variegated Lilyturf	1 Gal.	Container
Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	1 Gal.	Container
Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	1 Gal.	Container
Pennisetum alopecuroides	Fountain Grass	1 Gal.	Container
Phlox subulata	Moss Phlox	1 Gal.	Container
Rudbeckia 'American Gold Rush'	American Gold Rush Black-Eyed Susa	1 Gal.	Container
Sedum 'Autumn Joy'	Autumn Joy Stonecrop	1 Gal.	Container

#### Buffer Zone Restoration, Slope Stabilization Planting and Stormwater Basins

Latin Name	Common Name	Size	Remarks
<b>Ornamental Flowering Trees</b>			
Amelanchier canadensis	Shadblow Serviceberry	6-8'	BSB, multitrunk
Hamamelis virginiana	Witch Hazel	6-8'	BSB, multitrunk
<b>Shrubs</b>			
Aronia arbutifolia	Red Chokeberry	7 Gal.	Container
Ilex glabra	Inkberry Holly	5 Gal.	Container
Myrica pensylvanica	Northern Bayberry	7 Gal.	Container
Viburnum trilobum 'Wentworth'	Wentworth Cranberry Bush Viburnum	7 Gal.	Container
<b>Perennials, Grasses and Groundcovers</b>			
Ernst Conservation Seeds: Showy Northeast Native Wildflower & Grass Mix - ERNMX-153		Seeds	Apply 20 lbs per acre @ Bufferzone Restoration Area
Ernst Conservation Seeds: Native Steep Slope Mix w/Annual Ryegrass - ERNMX-181		Seeds	Apply 60 lbs per acre @ Stormwater Detention Basins - Slope
Ernst Conservation Seeds: Retention Basin Floor Mix - Low Maintenance - ERNMX-126		Seeds	Apply 20-40 lbs per acre @ Stormwater Detention Basins - Bottom

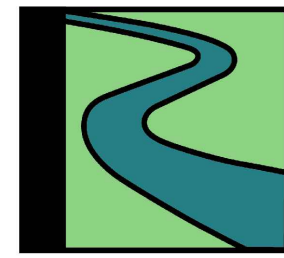
501 & 600 Griffin  
Brook Drive  
Owner LLC  
Methuen, MA

Civil Engineer

The Morin-Cameron Group, Inc.

25 Kenzoa Avenue  
Haverhill, MA

Landscape Architect



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Revisions per Peer Review and NOI 05/20/2022

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Checked by: mr

Scale: AS SHOWN

Key Plan:

Sheet Name:

Landscape Details,  
Planting Notes  
and Planting Schedule

Project No.:

22-02

Issue Date:

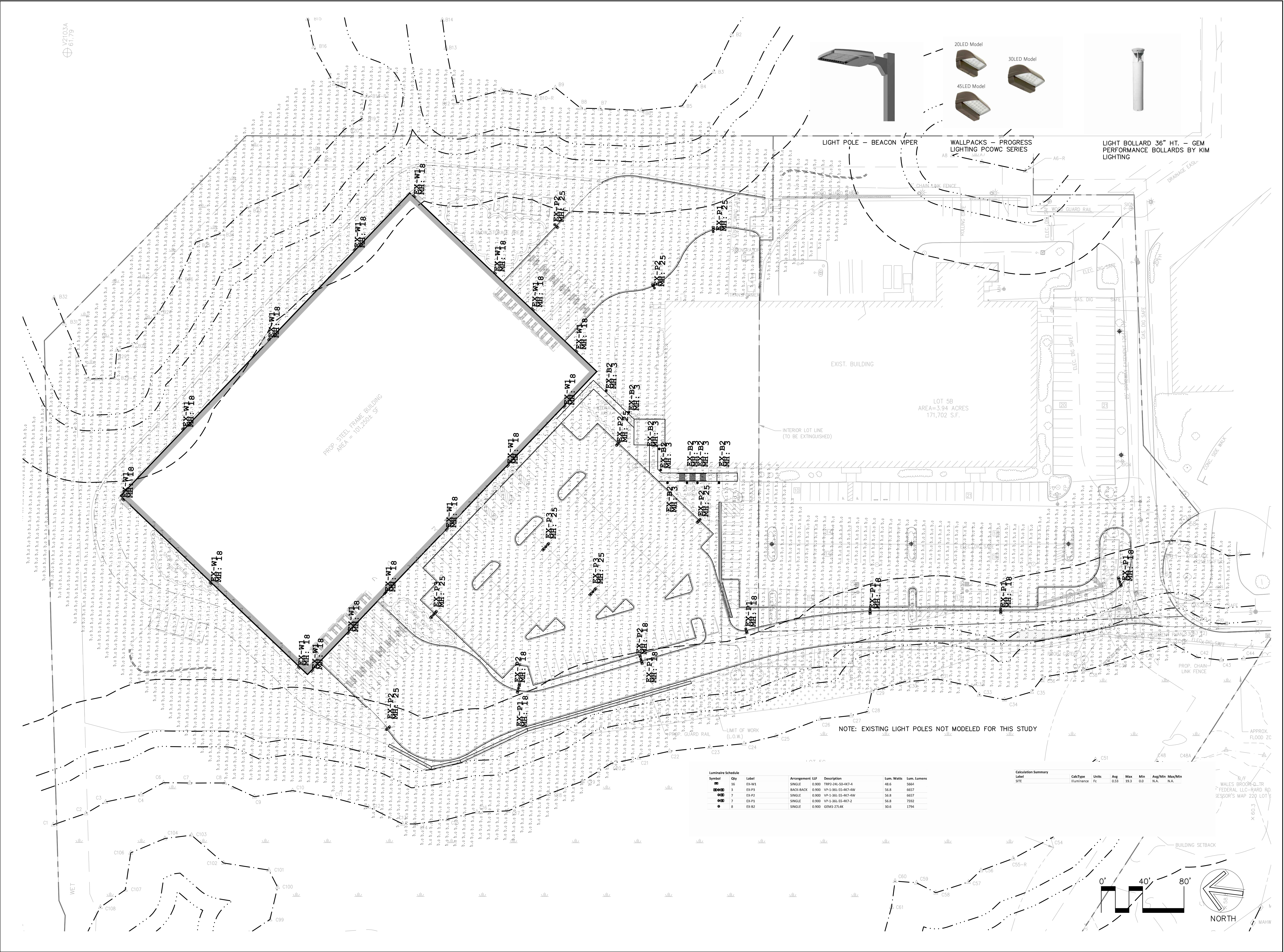
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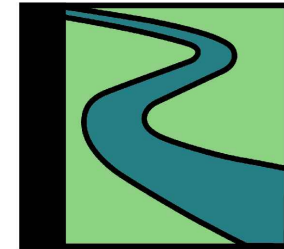


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Revisions per Peer Review and NOI 05/20/2022

Revision:

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Scale: 1"=40'-0"

Key Plan:

Sheet Name:  
Lighting Plan

Project No.:  
22-02

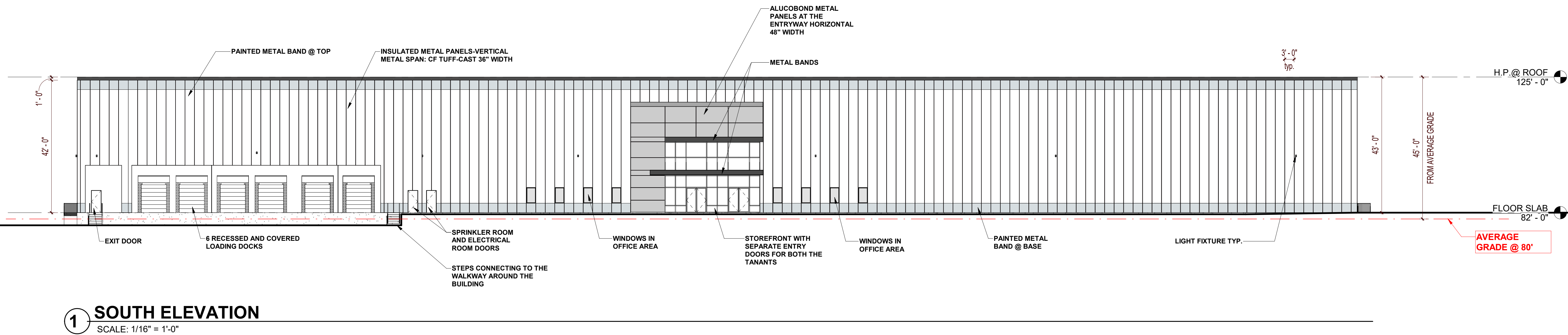
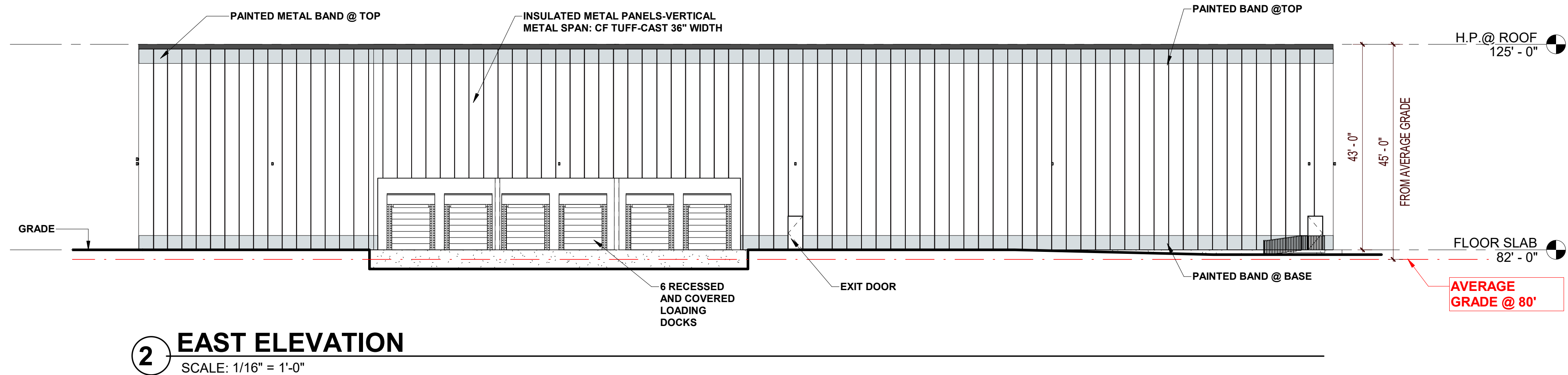
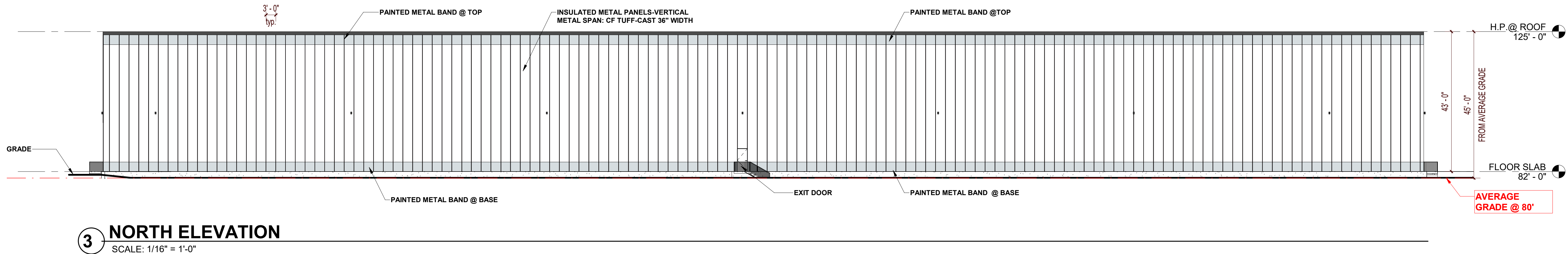
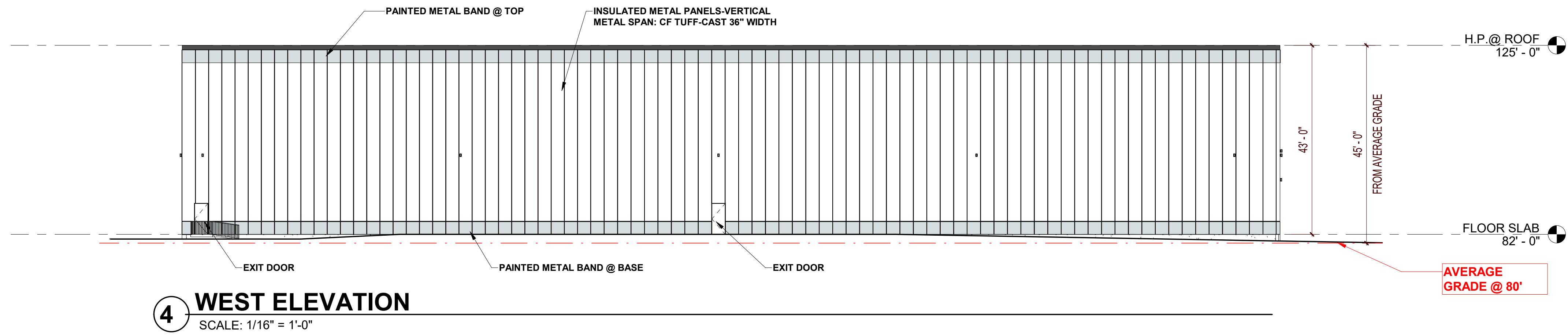
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architect:  
GSD Associates, LLC  
146 Main Street  
North Andover, MA 01845  
Tel: 978-888-5422

consultant:

sheet title:  
BUILDING  
ELEVATIONS

project name:  
PROPOSED WAREHOUSE-  
600 GRIFFIN BROOK DRIVE  
600 GRIFFIN BROOK DRIVE  
METHUEN, MA

issue date: 04/06/22

revisions:

No.	Description	Date

dr. chk.

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GSD-22-005

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