



GENERAL NOTES:

- PRIOR TO THE PREPARATION OF BIDS AND/OR THE INITIATION OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN AND CAREFULLY EXAMINE THIS PLAN SET, RELATED CONSTRUCTION PLAN SETS FROM OTHER PROFESSIONAL DISCIPLINES, CONSTRUCTION SPECIFICATIONS, MANUFACTURERS INFORMATION AND ANY APPLICABLE PERMIT REQUIREMENTS/CONDITIONS OF APPROVAL FOR THE PROJECT.
- THE EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. DIG SAFE AND THE APPROPRIATE UTILITY COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
- NOT ALL UTILITIES WERE ABLE TO BE LOCATED BY RECORD INFORMATION, SITE SURVEYS OR UTILITY LOCATOR SERVICES. THE DESIGN ENGINEER AND BASE PLAN SURVEYOR DO NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OR SUBSURFACE STRUCTURES WHICH ARE OMITTED OR INACCURATELY SHOWN. PRIOR TO THE INITIATION OF WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION/ELEVATION OF EXISTING UTILITIES SHOWN ON THE PLAN.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY DISCREPANCY BETWEEN THE LOCATION/ELEVATION OF ANY EXISTING UTILITIES SHOWN ON THE PLANS AND THAT WHICH IS FOUND IN THE FIELD.
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL LAND SURVEYOR TO PROVIDE LAYOUT & CONTROL FOR THE DEVELOPMENT OF THE SITE.
- ALL CONSTRUCTION UNDER AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONSTRUCTED TO WITHSTAND A DIRECT H2O DESIGN LOAD. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL UTILITY/SITE IMPROVEMENT AREAS UNDER LANDSCAPED/NON-TRAFFIC BEARING AREAS FROM TEMPORARY CONSTRUCTION LOADS DURING CONSTRUCTION.
- THE CONSTRUCTION SHOWN ON THESE PLANS REQUIRES AN ORDER OF CONDITIONS BE ISSUED BY THE CONSERVATION COMMISSION. THE CONTRACTOR SHALL OBTAIN A COPY OF SUCH ORDERS OF CONDITIONS PRIOR TO ANY SITE-RELATED DISTURBANCES AND SHALL COMPLY WITH APPROPRIATE CONDITIONS FOR CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ADJACENT PROPERTY FROM DAMAGE. ALL DAMAGES BY THE CONTRACTOR OR SUBCONTRACTORS SHALL BE REPAIRED AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING SURVEY MONUMENTS (BOUNDS, PINS, DRILLS, HOLE, ETC.) THROUGHOUT ALL PHASES OF CONSTRUCTION. ANY DISTURBED MONUMENTS SHALL BE REPLACED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY CONTRADICTORY, INCOMPLETE OR MISLABELED INFORMATION SHOWN ON THE PLANS OR PLANS PREPARED BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR ADEQUATE TIME FOR THE ENGINEER TO RESPOND/PROVIDE DIRECTION FOR THE PLAN DISCREPANCY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS OF PRODUCTS/MATERIALS TO THE ENGINEER AND TO THE LOCAL APPROVING AUTHORITY AS REQUIRED. THE CONTRACTOR SHALL PROVIDE ALL DRAWINGS AND DOCUMENTS IF REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OVER THE PRODUCT. ADEQUATE TIME SHALL BE ALLOWED FOR THE SHOP DRAWINGS TO BE REVIEWED AND RETURNED TO THE CONTRACTOR PRIOR TO ORDERING THE SPECIFIED PRODUCTS/MATERIALS.
- ALL SUPPLEMENTAL DATA SUBMITTED IN CONJUNCTION WITH THIS COMPREHENSIVE PERMIT APPLICATION AS REQUIRED IS HEREBY INCORPORATED AS PART OF THE PLAN SET.
- ALL PERMANENT BOUNDARY AND SURVEY MONUMENTS SHALL BE INSTALLED AFTER THE COMPLETION OF ALL HEAVY SITE WORK.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
- UNLESS OTHERWISE SPECIFIED OR SHOWN, ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CITY'S DEPARTMENT OF PUBLIC WORKS STANDARDS. IF NOT SPECIFIED THEREIN, SUCH CONSTRUCTION SHALL THEN CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MDOT, FORMERLY MASSHIGHWAY) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST VERSION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TRENCH OPERATIONS PERMIT PURSUANT TO THE REQUIREMENTS OF THE CITY AND 520 CMR 14.00 (AKA "JACKIE'S LAW").

ABBREVIATIONS

ABBREVIATION	DEFINITION
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABR	ACCESSIBLE RAMP - TYPE 1
AR-1	ACCESSIBLE RAMP - TYPE 2
AR-3	ACCESSIBLE RAMP - TYPE 3
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
B&B	BASE & BACKFILL
BD	BASED ON CURB ELEVATION
BIT. CONC.	BITUMINOUS CONCRETE
BLDG	BUILDING
BM	BENCHMARK
BR	BOTTOM RAMP ELEVATION
CAL	CALIFORNIA
CB	CONCRETE BOUND
CF	CUBIC FOOT
CI	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CTB	CONTRACTOR
CY	CUBIC YARD
DH	DRILL HOLE
DI	DUCTILE IRON PIPE
DICL	DUCTILE IRON CEMENT LINED PIPE
DIA	DIAMETER
DMM	DRUMMANHOLE
ELEV	ELEVATION
EMH	EMERGENCY MANHOLE
EX.	EXISTING
EXT.	EXTERIOR
FDW	FLASH DRAIN
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
FG	FREE GRADE
FND	FOUND
FSB	FIELD STONE BOUND
FT	FOOT LINEAR MEASURE
GAL	GALLON
GPM	GALLONS PER MINUTE
HIPS	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
HT	HEIGHT
I. PIPE	IRON PIPE
ID	INSIDE DIAMETER
INV.	INVERT ELEVATION
LP	LOW POINT
MAX	MAXIMUM
MHS	MAS HIGHWAY BOUND
MIN	MINIMUM
MUTCD	MUTUAL OF UNIFORM TRAFFIC CONTROL DEVICES
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
P&P	PROTECT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R. & S	REMOVE & STOCKPILE ITEM
REQ'D	REQUIRED
SD	SOIL
SMH	SEWER MANHOLE
SPR	SPREAD
SRS	STANDARD SPECIFICATIONS OF HIGHWAYS & BRIDGES, THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
SSHB	STANDARD SPECIFICATIONS OF HIGHWAYS & BRIDGES, THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
STV	SEGMENT
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB ELEVATION
TMH	TELEPHONE MANHOLE
TDC	TOP OF DRAINAGE CONDUIT ELEVATION
TR	TOP OF RAMP ELEVATION
TYP	TYPICAL FOR ALL ITEMS SHOWN
UP	UP
VOCCTS	VERTICAL GRANITE CURB TRANSITION SEGMENT

LEGEND

EXISTING	PROPOSED
INDEX CONTOUR	-100' [100]
INTERMEDIATE CONTOUR	-99' [99]
SPOT GRADE	X 100.52 X 100.50
STONE WALL	...
EDGE OF WOODS	...
EDGE OF WATER BODY	...
100' YEAR FLOOD LINE	...
EDGE OF WETLAND	...
25' BUFFER	...
50' BUFFER	...
75' BUFFER	...
100' BUFFER	...
WETLAND	...
WETLAND FLAG	△ WFOA
RIVERFRONT	...
100' RIVER BUFFER	...
SILATION BARRIER	...
BUILDING SETBACK LINE	...
WELL	○ W
TREE	○ T
FLAGPOLE	○ F
BOLLARD	○ B
BOUND	○ B
DRILL HOLE	○ DH
IRON PIN	○ IP
BENCHMARK	○ BM
PERC TEST	○ PT
TEST PIT	○ TP
SOK BORING	○ SB
EDGE OF GRAVEL	...
EDGE OF WALK	...
EXPANSION JOINT	...
CONSTRUCTION JOINT	...
EDGE OF PAVEMENT	...
CAPE COD BERM	...
BIT CONC. (TYPE 3)	...
CONCRETE CURB	...
VERT. GRANITE CURB	...
SLOPED GRANITE CURB	...
STOCKADE FENCE	...
CHAIN LINK FENCE	...
FENCE - OTHER	...
FENCE GATE	...
GUARD RAIL	...
WOOD GUIDE RAIL	...
ROOT BARRIER	...
SEGMENT	...
TEMPORARY BENCH MARK	...
FOUNDATION DRAIN	...
ROOF DRAIN	...
DRAIN LINE	...
DRAIN MANHOLE	○ D
CATCHBASIN	田
FLARED END IN/OUT	□ □
CLEANOUT	○ C
IRRIGATION LINE	...
FIRE PROTECTION LINE	...
WATER LINE	...
WATER VALVE	...
FIRE HYDRANT	...
WATER SHUTOFF	...
THRUST BLOCK	...
WATER PIPE REDUCER	...
OVERHEAD WIRES	...
UNDERGROUND WIRES	...
GUY POLE	○ G
UTILITY POLE	○ U
GUY ANCHOR	...
UTILITY BOX	...
STREETLIGHT	...
LAMP POST	...
LIGHT POLE	...
ELECTRIC MANHOLE	○ E
TELEPHONE MANHOLE	○ T
SEWER LINE	...
SEWER LINE MAIN	...
LOW PRESSURE SEWER	...
SEWER MANHOLE	○ S
GAS LINE	...
GAS VALVE	...
HANDICAP SPACE	...
NUMBER PARKING SPACES	...
BUILDING ENTRANCE	...

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Architecture - Project Management - Interior Design

Project

MERRIMACK
VALLEY
REGIONAL
TRANSIT
AUTHORITY

FUEL TANK
RELOCATION AND
RETAINING WALL



123 RAILROAD AVE.
HAVERHILL, MA 01835
Drawing Status
FOR CONSTRUCTION

Issued On

7/16/2025

Sheet Contents

NOTES AND
LEGEND

Project Number

5728

Drawing No.

C-0

Sheet

of



Drawn by LS
Checked by SEC

Revised on

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Issued On 7/16/2025

Sheet Contents

LAYOUT AND

Project Number. 6859

C-2

Sheet 1 of 1

NOTES:
1. UTILITIES SHOWN ARE FROM RECORD INFORMATION ONLY AND
MUST BE FIELD VERIFIED PRIOR TO ANY SITE DISTURBANCE

MUST BE FIELD VERIFIED PRIOR TO ANY SITE DISTURBANCE

2. PROPERTY LINES ARE TAKEN FROM THE 1991 STAMPED SURVEY PLAN BY HANCOCK ASSOCIATES PLAN.
3. PRIOR TO ORDERING MATERIALS OR INITIATING CONSTRUCTION THE

3. PRIOR TO ORDERING MATERIALS OR INITIATING CONSTRUCTION THE EXISTING DRAIN LINE UNDER SERVICE BUILDING SHALL BE VIDEOTAPED FROM EX. CB#5 TO DMH#6 TO VERIFY ITS ABILITY AND SUITABILITY FOR RFUSE. SUPPLY VIDEO TO DESIGN ENGINEER

AND SUITABILITY FOR REUSE. SUPPLY VIDEO TO DESIGN ENGINEER AND OWNER TO PERMIT SUFFICIENT TIME TO ADAPT DESIGN, IF NEEDED.

4. ALL CONSTRUCTION TO BE ON MEVA PROPERTY ONLY.

UTILITY PLAN

0 20' 40'

BAR SCALE

1"=20'

CHECK GRAPHIC SCALE BEFORE USING

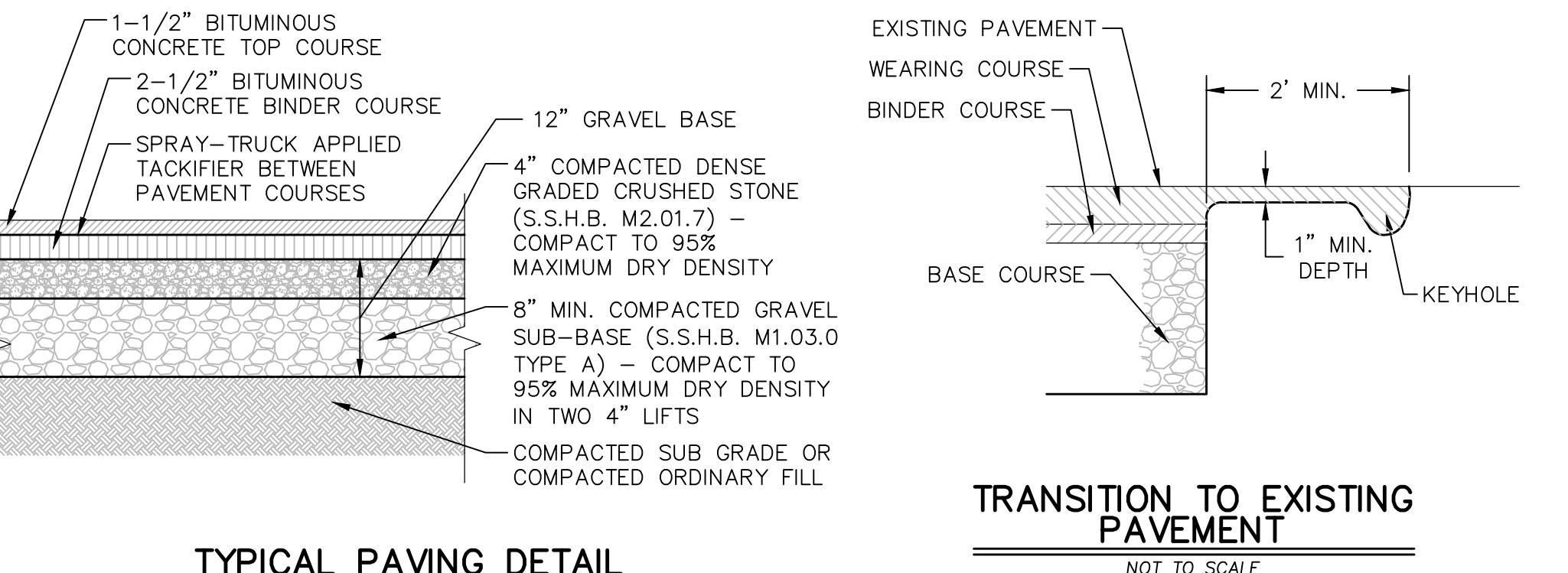
Project Number. 6859

Drawing No. C-2

Sheet 1 of 1

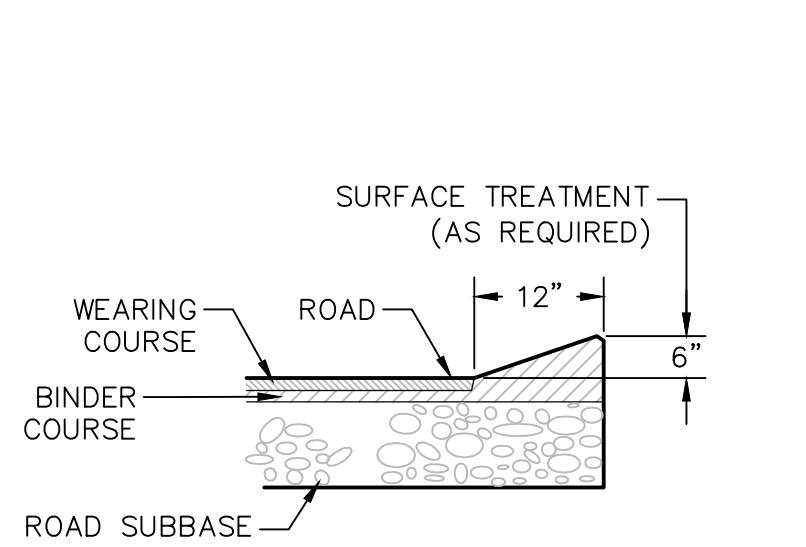


Drawn by LS
Checked by SEC
Revised on



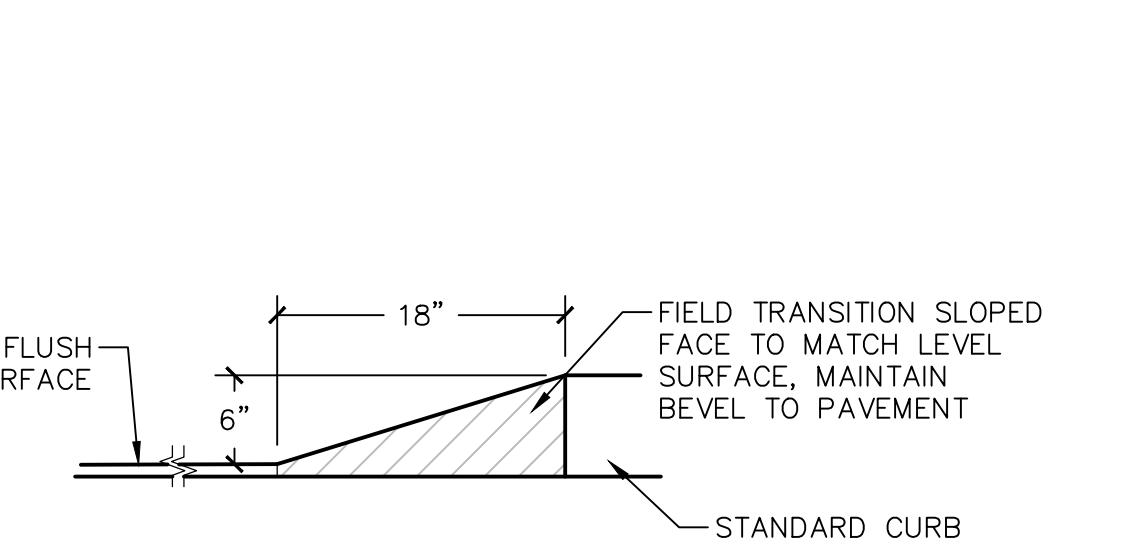
TYPICAL PAVING DETAIL

NOT TO SCALE



TRANSITION TO EXISTING PAVEMENT

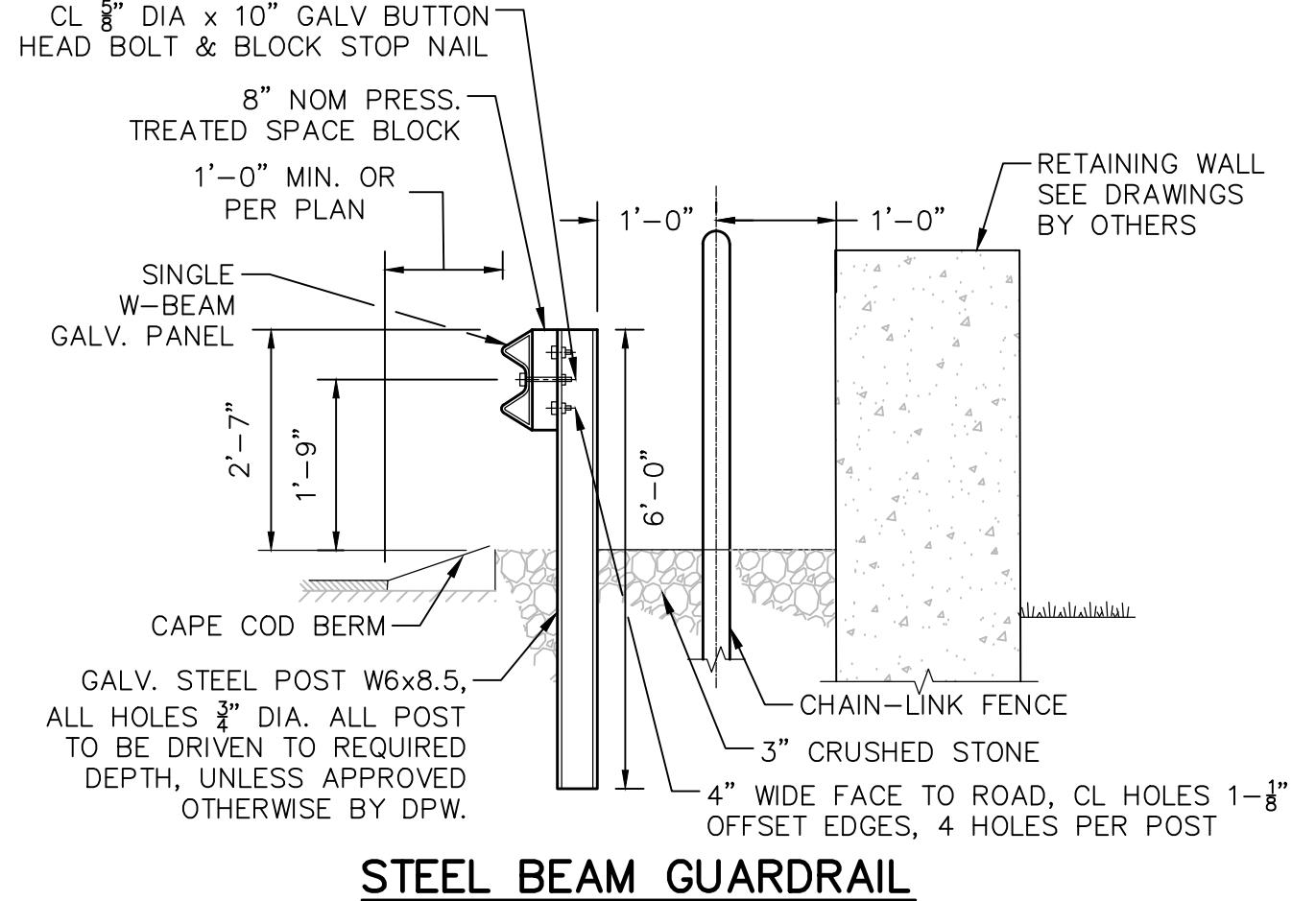
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CAPE COD BERM

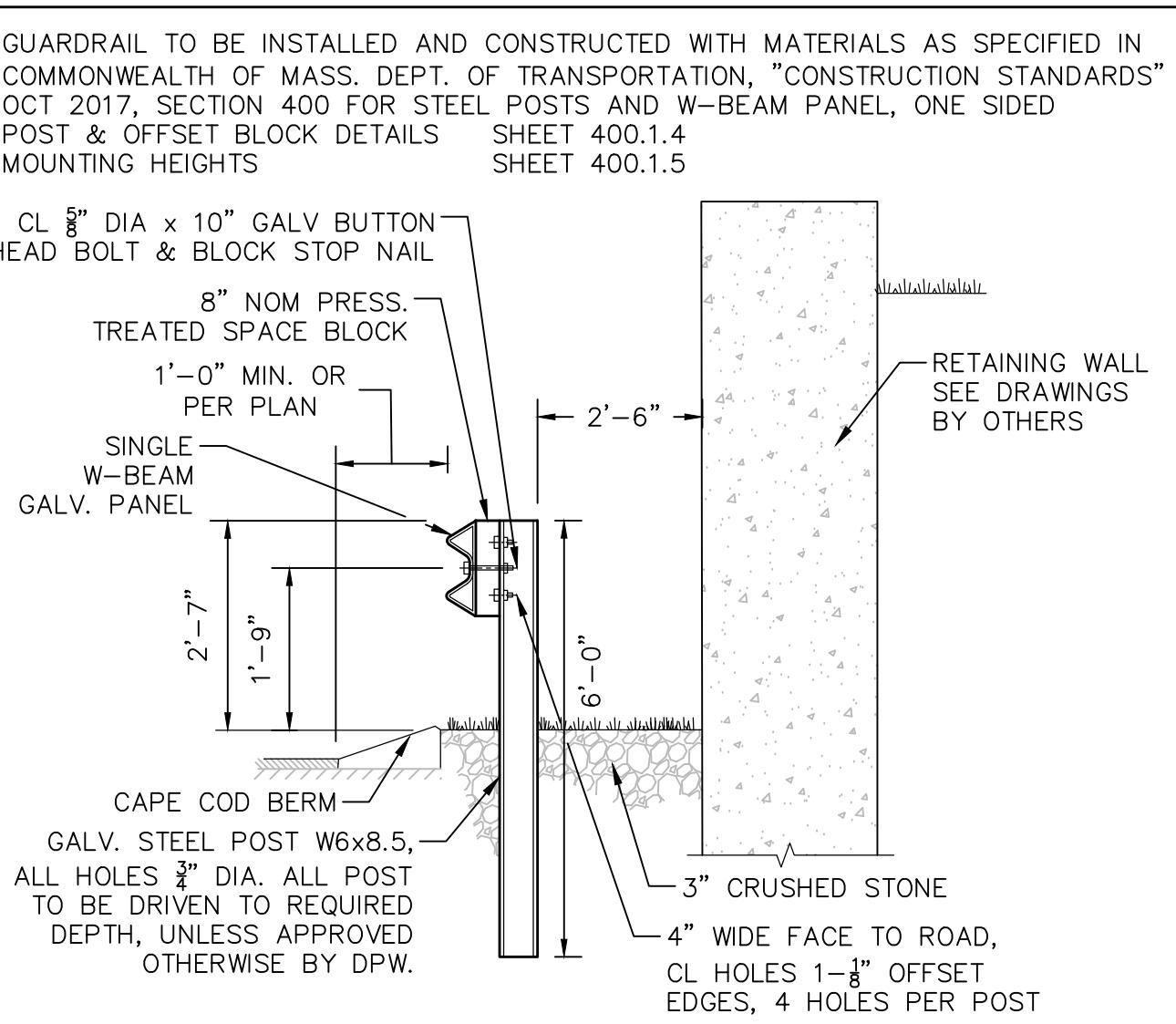
NOT TO SCALE

GUARDRAIL TO BE INSTALLED AND CONSTRUCTED WITH MATERIALS AS SPECIFIED IN COMMONWEALTH OF MASS. DEPT. OF TRANSPORTATION, "CONSTRUCTION STANDARDS" OCT 2017, SECTION 400 FOR STEEL POSTS AND W-BEAM PANEL, ONE SIDED POST & OFFSET BLOCK DETAILS SHEET 400.1.4 MOUNTING HEIGHTS SHEET 400.1.5



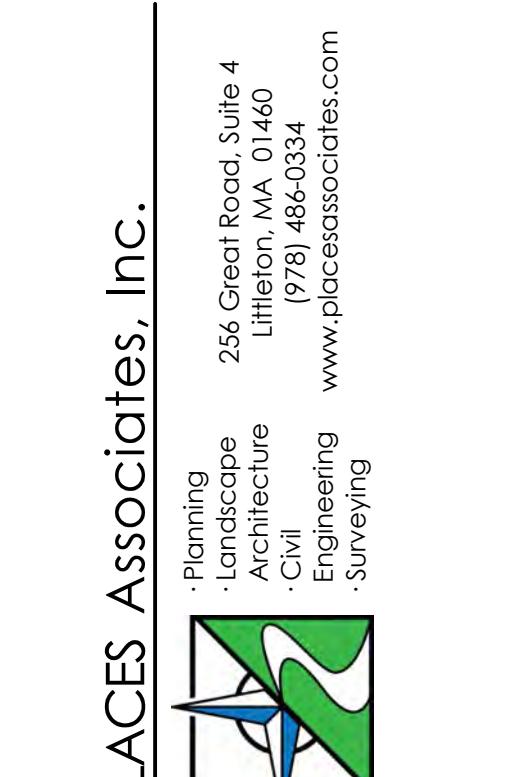
STEEL BEAM GUARDRAIL

NOT TO SCALE



STEEL BEAM GUARDRAIL - LOWER LEVEL

NOT TO SCALE



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FOR CONSTRUCTION

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Sheet Contents

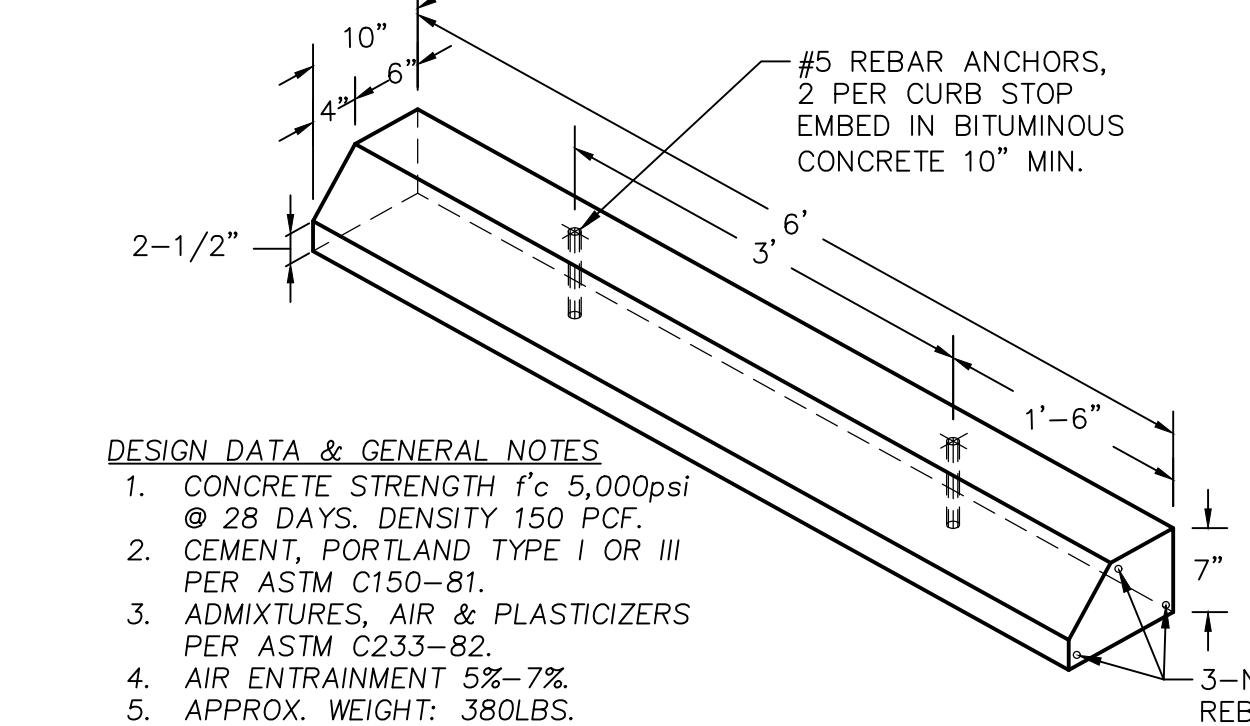
CONSTRUCTION
DETAILS

Project Number. 6859

Drawing No.

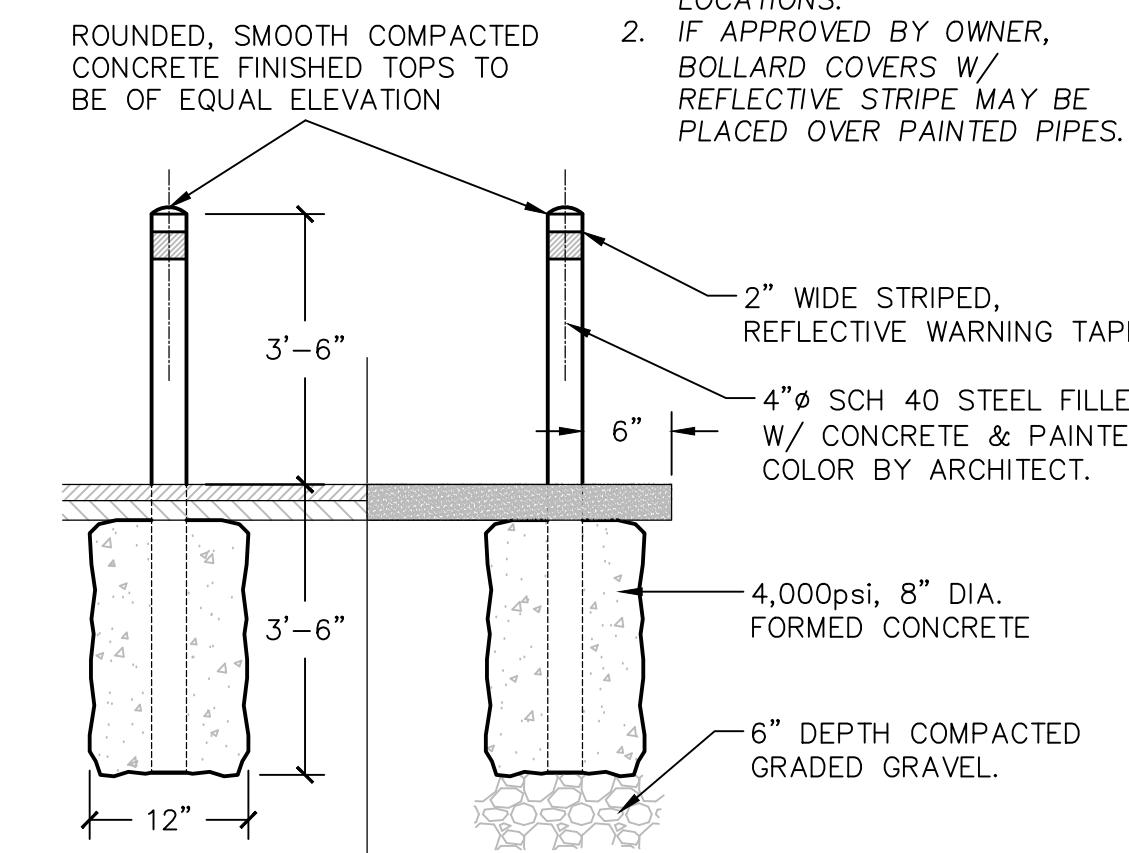
C-5

Sheet of



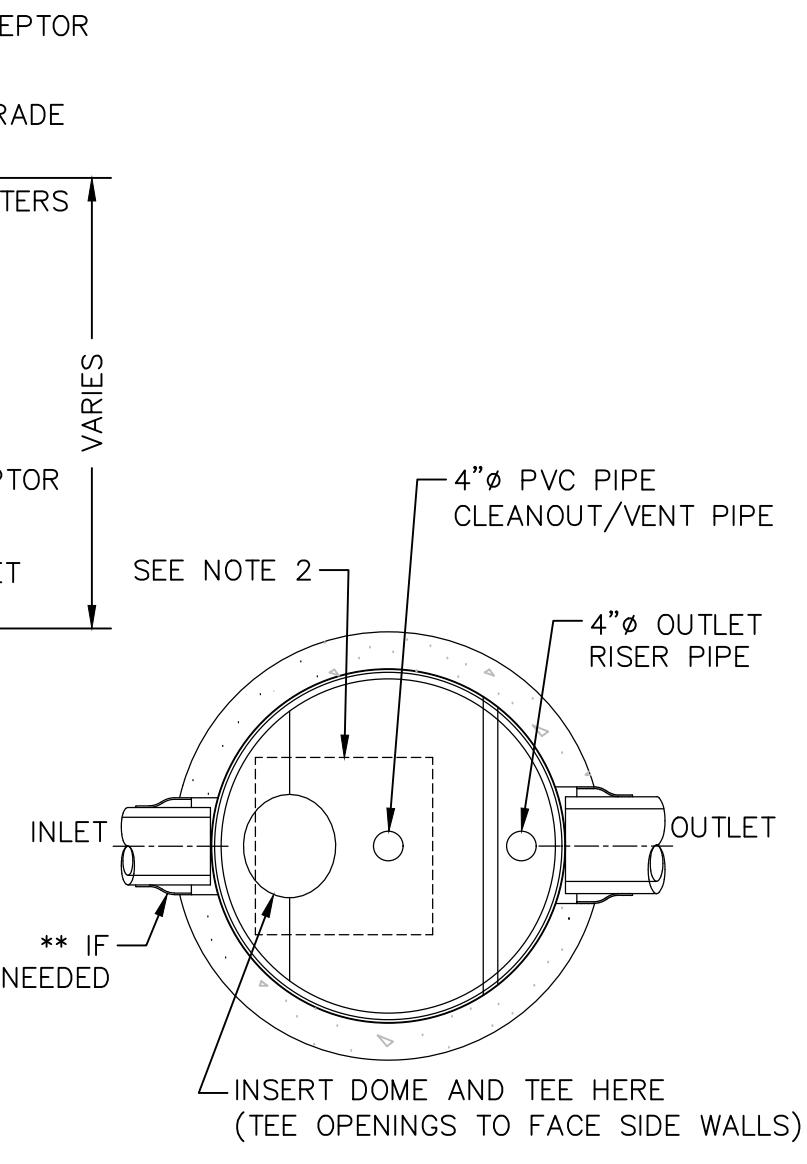
PARKING WHEEL STOP

NOT TO SCALE



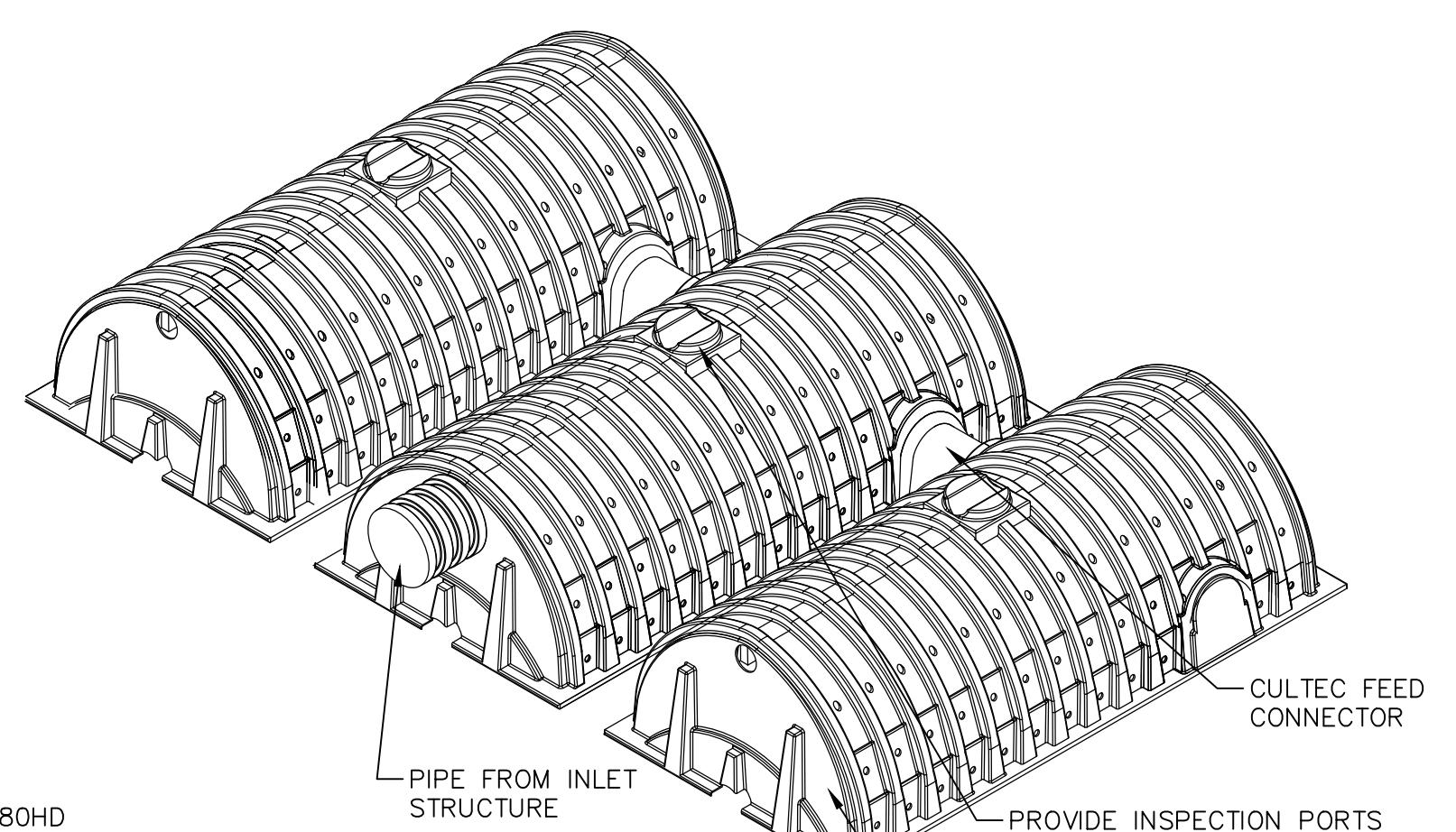
BOLLARD GUARD

NOT TO SCALE



SECTION THRU CHAMBER SECTION THRU PLAN VIEW

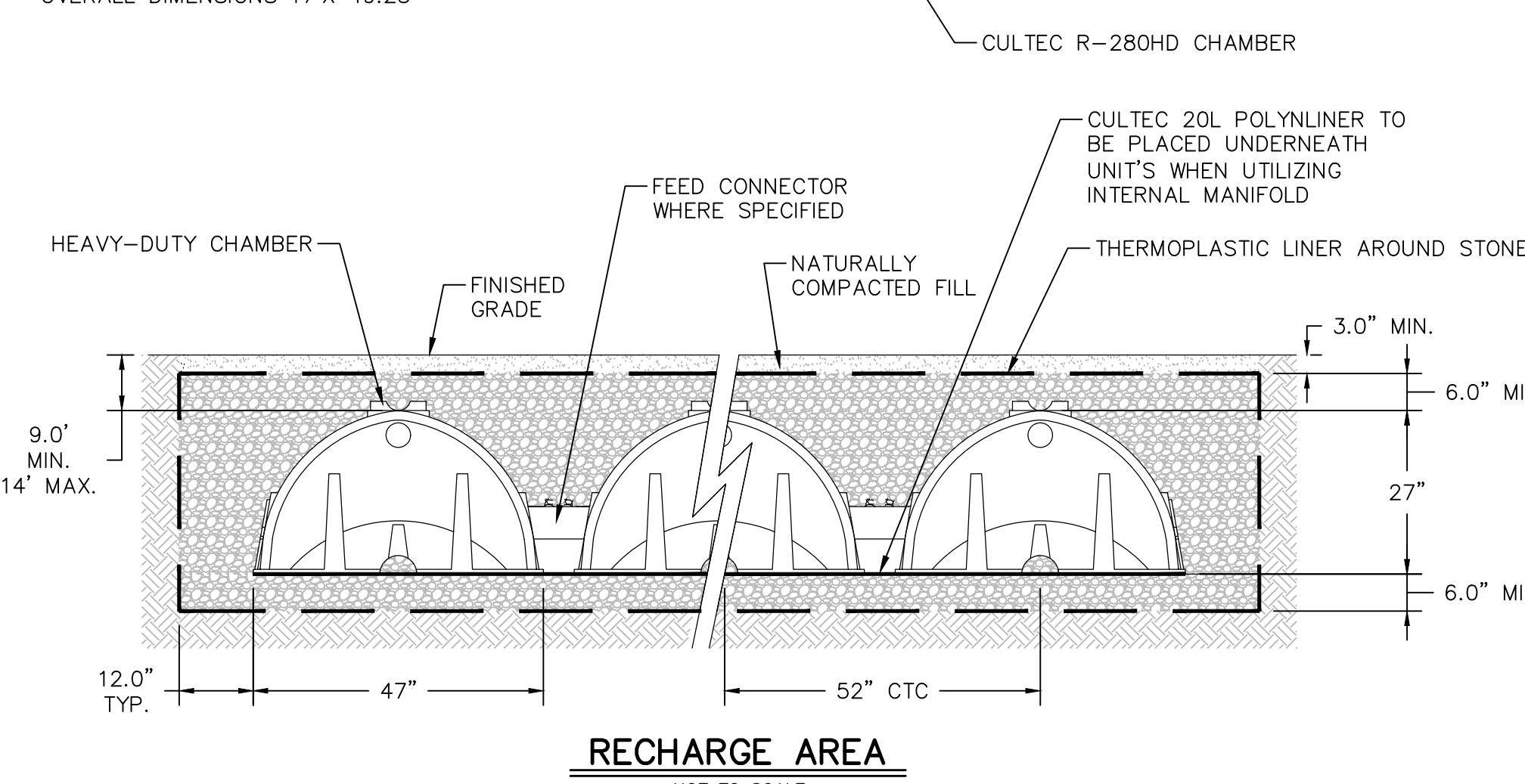
NOTE:
1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE 4" PVC CLEANOUT/VENT PIPE AND THE 4" PVC INLET DOWN PIPE.
3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #4985148, #5498331, #5725760, #5753115, #5849181.
4. CONTRACTOR TO PROVIDE CRANE TO SET UNIT (HEAVIEST SECTION WEIGHS 5000 LB)



NOTES:
CULTEC R-280HD
11 ROWS, 2 CHAMBERS TO ROW
OVERALL DIMENSIONS 17'X 49.25'

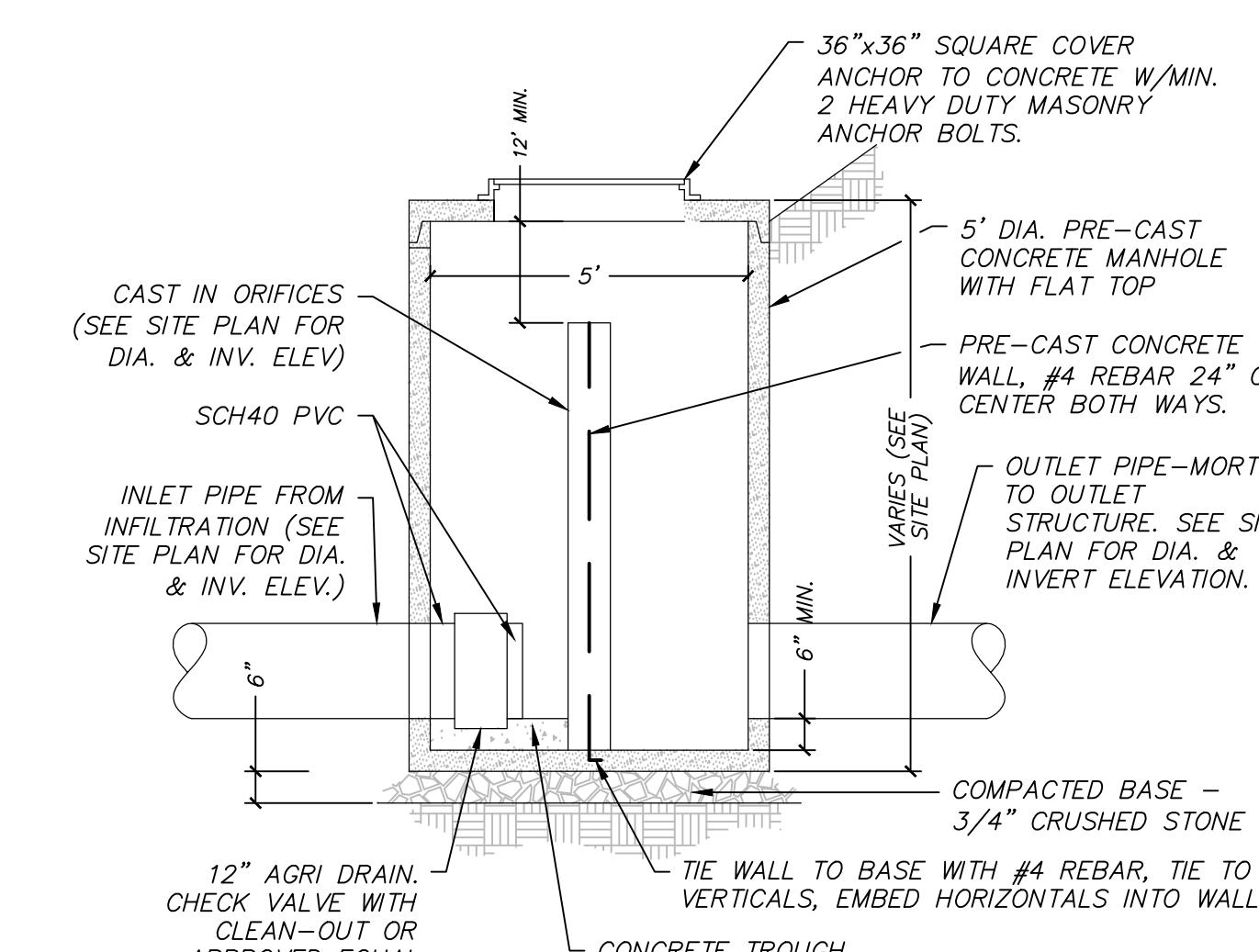
STORMCEPTOR - WATER
QUALITY SEPARATOR

NOT TO SCALE



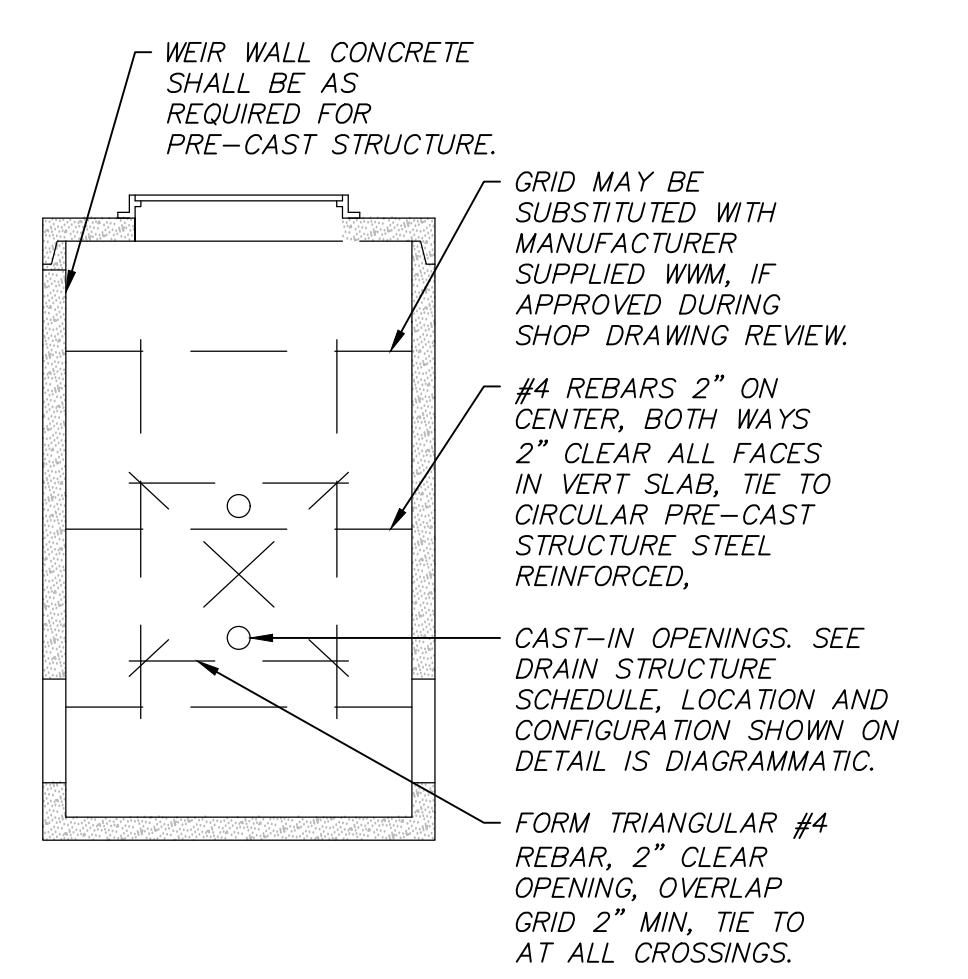
RECHARGE AREA

NOT TO SCALE

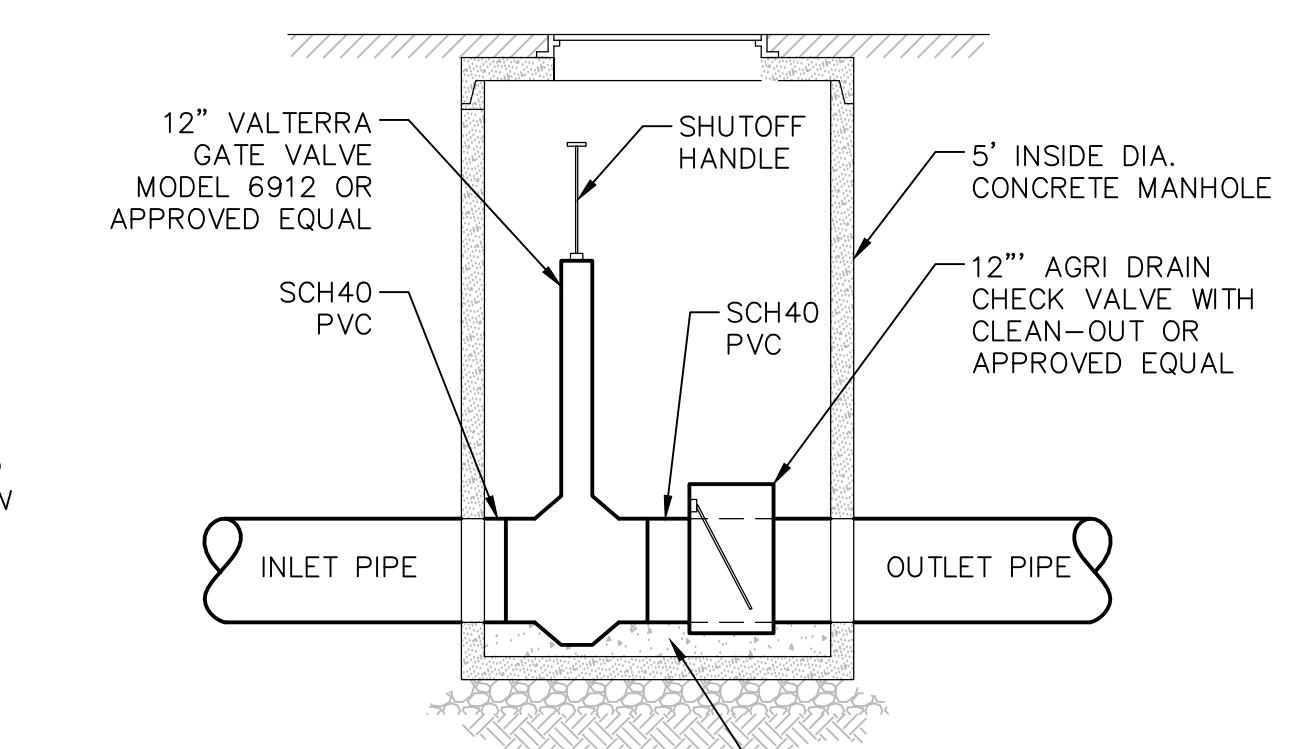


OUTLET CONTROL STRUCTURE (OCS)
WITH WEIR WALL

NOT TO SCALE

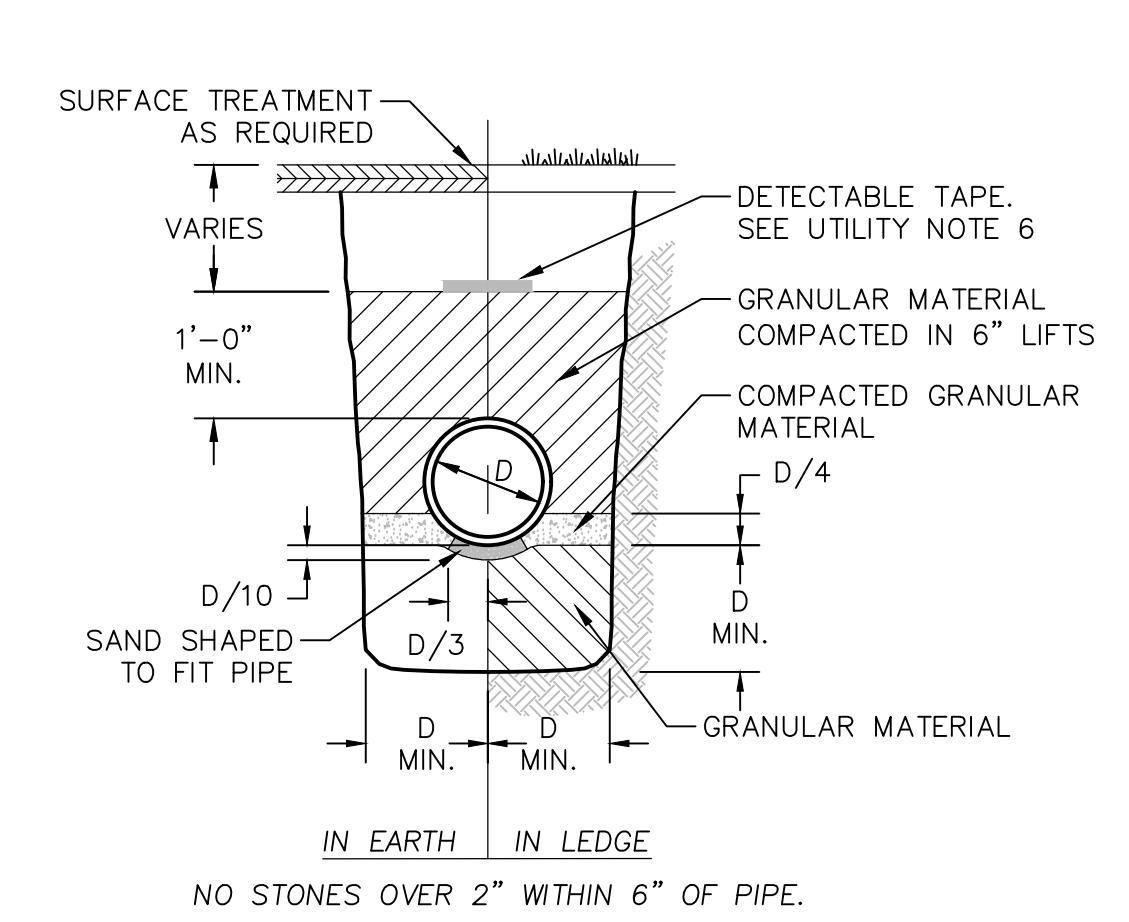


WEIR WALL REINFORCEMENT
SKETCH



OUTLET CONTROL STRUCTURE
(DMH 5D)

NOT TO SCALE



UTILITY TRENCH DETAIL

NOT TO SCALE