

SEE SHEET C15

PROPOSED TEMPORARY SEDIMENTATION BASIN BOTTOM OF SEDIMENTATION BASIN TO BE ONE FOOT ABOVE PROPOSED BOTTOM OF STORMWATER BASIN ONCE CONSTRUCTION PHASING IS COMPLETE. OUTLET CONTROL 6" PVC PERFORATED VERTICAL STANDPIPE WRAPPED WITH 3" CRUSHED STONE 24" THICK AROUND PIPE. 6" SOLID PVC PIPE TO RIP RAP PROTECTION, PIPING TO BE REMOVED AFTER CONSTRUCTION. ALL SEDIMENT IS TO BE REMOVED & BASIN IS TO BE CONVERTED TO PERMANENT BASIN AS SHOWN ON SITE PLANS. ALL SOIL TO BE REMOVED TO 12" BELOW BOTTOM OF PROPOSED FINAL BASIN GRADE AND REPLACED WITH A MIX OF SAND AND TOP SOIL TO PROMOTE INFILTRATION. MIN. STORAGE VOLUME= 3,600 C.F. PER ACRE OF WATERSHED

PROPOSED TEMPORARY STOCKPILE & SPOIL AREA TO BE SURROUNDED WITH EROSION CONTROL BARRIERS. AREAS TO BE KEPT OUTSIDE OF 100' BUFFER ZONES

PROPOSED TEMPORARY SEDIMENTATION BASIN BOTTOM OF SEDIMENTATION BASIN. OUTLET CONTROL 6" PVC PERFORATED VERTICAL STANDPIPE WRAPPED WITH 3" CRUSHED STONE 24" THICK AROUND PIPE. 6" SOLID PVC PIPE TO RIP RAP PROTECTION. MIN. STORAGE VOLUME= 3,600 C.F. PER ACRE OF WATERSHED

TEMP. DIVERSION BERM OR SWALE TO SEDIMENT BASIN, TYP. (SEE SITE DETAILS)

PROPOSED LIMIT OF CLEARING (TYP.)

PROPOSED STRAW WATTLE EROSION CONTROL BARRIER AT TOP OF SLOPE, TYP. (SEE SITE DETAILS)

PROPOSED SILT FENCE AND STRAW WATTLE EROSION CONTROL BARRIER AT TOE OF SLOPE, TYP. (SEE SITE DETAILS)

PROPOSED TEMPORARY STOCKPILE & SPOIL AREA TO BE SURROUNDED WITH EROSION CONTROL BARRIERS. AREAS TO BE KEPT OUTSIDE OF 100' BUFFER ZONES

PROPOSED TEMPORARY SEDIMENTATION BASIN BOTTOM OF SEDIMENTATION BASIN. OUTLET CONTROL 6" PVC PERFORATED VERTICAL STANDPIPE WRAPPED WITH 3" CRUSHED STONE 24" THICK AROUND PIPE. 6" SOLID PVC PIPE TO RIP RAP PROTECTION. MIN. STORAGE VOLUME= 3,600 C.F. PER ACRE OF WATERSHED

PROPOSED STRAW WATTLE EROSION CONTROL BARRIER IN EXISTING LOGGING TRAIL, TYP. (SEE SITE DETAILS)

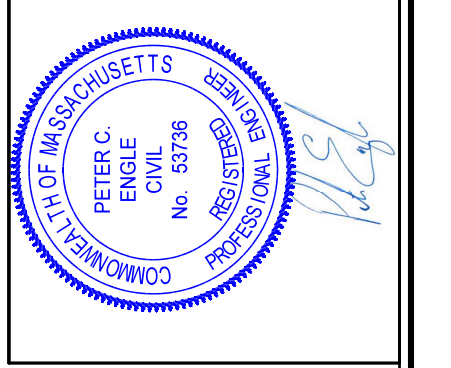
NOTE:
ALL DISTURBED AREAS SHALL BE STABILIZED WITH A MIN. 4" LOAM AND SEED. SEED SHALL BE A MIXTURE OF CREEPING RED FESCUE AND PERENNIAL RYE GRASS. AREAS OUTSIDE OF PROPOSED LAWN AREAS AND ON STEEP SLOPES SHALL BE SEED WITH NEW ENGLAND WETLAND PLANTS UPLAND. ROADSIDE MATRIX PER MANUFACTURER'S SPECS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS AS SPECIFIED ON THE DETAILS SHEET.

LEGEND
 - - - SILT FENCE AND STRAW WATTLES
 - - - TEMPORARY SWALE / BERM

HOR. SCALE IN FEET: 1"=40'

REV.	DATE	TOWN, DEP., PEER ENG. COMMENTS	MADE BY	APVD
1	11.10.22		PE	PE

PETER C. ENGLE, P.E.
 PROFESSIONAL ENGINEER
 MA LIC. NO. 53736

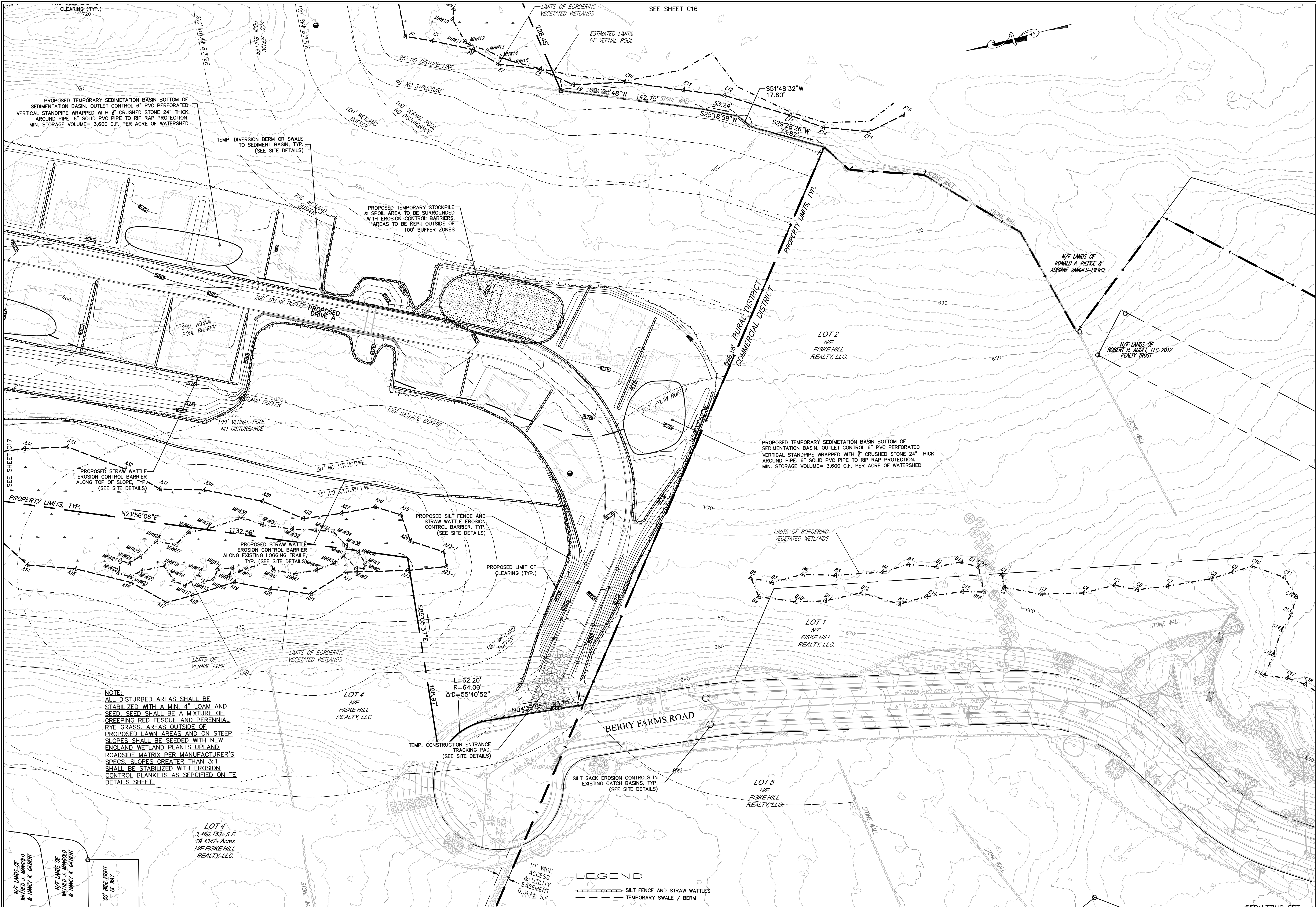


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 119 Worcester Road
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 Email: pengle@mcclureengineers.com

SPECIAL PERMIT AND SITE PLAN
"BLUEBERRY HILL ESTATES"
LOT 3 BERRY FARMS ROAD
STURBRIDGE, MA 01566
 PREPARED FOR
 JUSTIN STELMOK
 WORCESTER, MA 01607

DRAWN BY:	WON
DATE:	4/1/22
CHK BY:	CPH
SCALE:	1"=40'
PROJ. NO.:	287-2118K

EROSION & SEDIMENT CONTROL PLAN



PROPOSED TEMPORARY SEDIMENTATION BASIN BOTTOM OF SEDIMENTATION BASIN. OUTLET CONTROL 6" PVC PERFORATED VERTICAL STANDPIPE WRAPPED WITH 3" CRUSHED STONE 24" THICK AROUND PIPE. 6" SOLID PVC PIPE TO RIP RAP PROTECTION. MIN. STORAGE VOLUME= 3,600 C.F. PER ACRE OF WATERSHED

TEMP. DIVERSION BERM OR SWALE TO SEDIMENT BASIN, TYP. (SEE SITE DETAILS)

PROPOSED TEMPORARY STOCKPILE & SPOIL AREA TO BE SURROUNDED WITH EROSION CONTROL BARRIERS. AREAS TO BE KEPT OUTSIDE OF 100' BUFFER ZONES

PROPOSED TEMPORARY SEDIMENTATION BASIN BOTTOM OF SEDIMENTATION BASIN. OUTLET CONTROL 6" PVC PERFORATED VERTICAL STANDPIPE WRAPPED WITH 3" CRUSHED STONE 24" THICK AROUND PIPE. 6" SOLID PVC PIPE TO RIP RAP PROTECTION. MIN. STORAGE VOLUME= 3,600 C.F. PER ACRE OF WATERSHED

PROPOSED STRAW WATTLE EROSION CONTROL BARRIER ALONG TOP OF SLOPE, TYP. (SEE SITE DETAILS)

PROPOSED STRAW WATTLE EROSION CONTROL BARRIER ALONG EXISTING LOGGING TRAIL, TYP. (SEE SITE DETAILS)

PROPOSED SILT FENCE AND STRAW WATTLE EROSION CONTROL BARRIER, TYP. (SEE SITE DETAILS)

PROPOSED LIMIT OF CLEARING (TYP.)

TEMP. CONSTRUCTION ENTRANCE TRACKING PAD. (SEE SITE DETAILS)

SILT SACK EROSION CONTROLS IN EXISTING CATCH BASINS, TYP. (SEE SITE DETAILS)

NOTE:
ALL DISTURBED AREAS SHALL BE STABILIZED WITH A MIN. 4" LOAM AND SEED. SEED SHALL BE A MIXTURE OF CREEPING RED FESCUE AND PERENNIAL RYE GRASS. AREAS OUTSIDE OF PROPOSED LAWN AREAS AND ON STEEP SLOPES SHALL BE SEED WITH NEW ENGLAND WETLAND PLANTS UPLAND ROADSIDE MATRIX PER MANUFACTURER'S SPECS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS AS SPECIFIED ON THE DETAILS SHEET.

LOT 4
3,460,153± S.F.
79.434± Acres
N/F FISKE HILL REALTY, LLC.

N/F LANDS OF WALTER J. WANGOLD & WENDY K. GIBERTY

50' WIDE RIGHT OF WAY

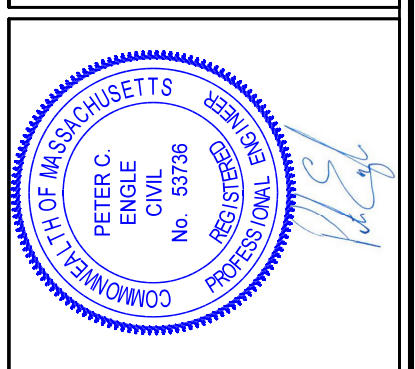
LEGEND

- SILT FENCE AND STRAW WATTLES
- - - TEMPORARY SWALE / BERM

HOR. SCALE IN FEET: 1"=40'

REV.	DATE	TOWN, DEP., PEER ENG. COMMENTS	MADE (APVD)
1	11.10.22		PE

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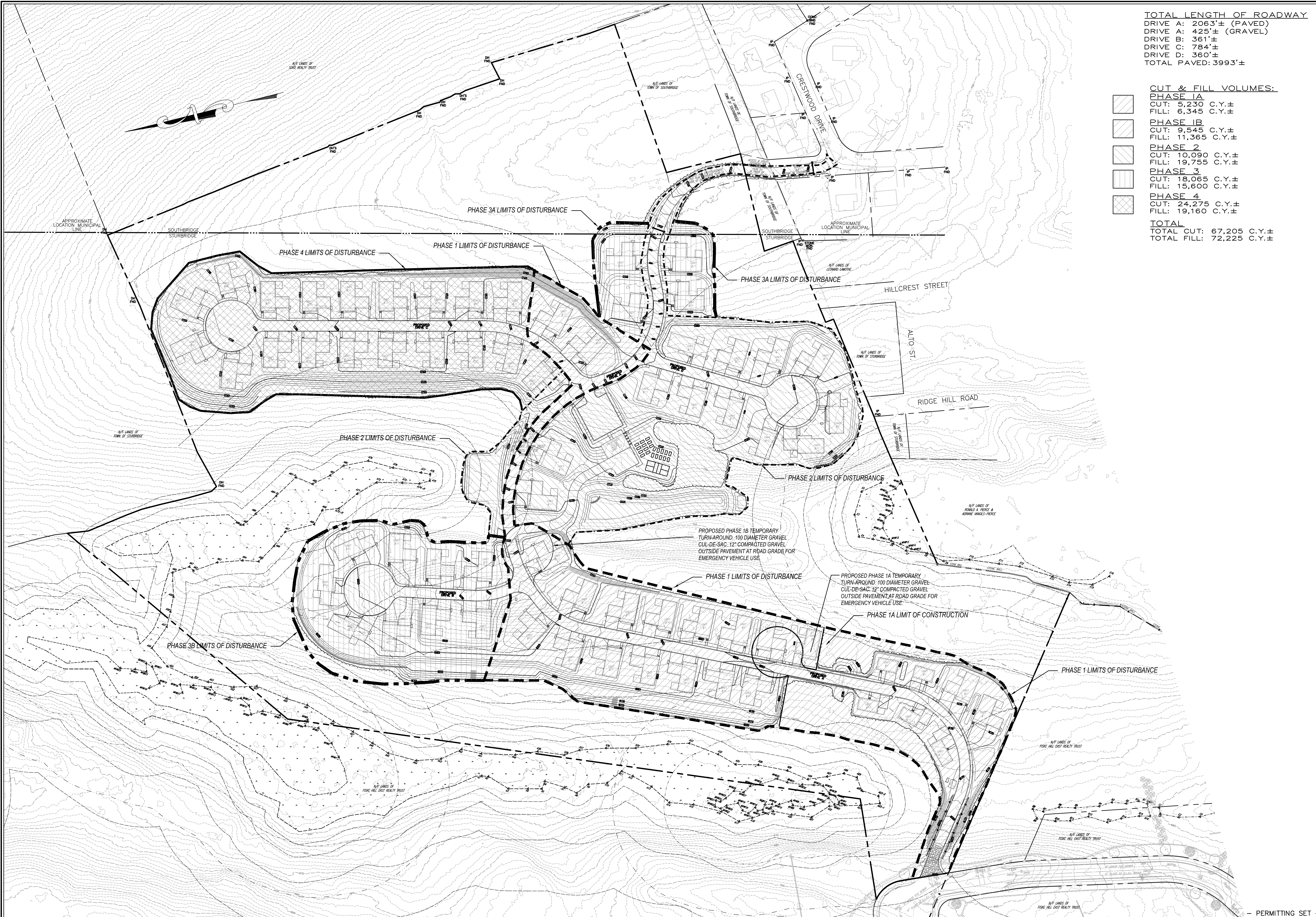


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SPECIAL PERMIT AND SITE PLAN
"BLUEBERRY HILL ESTATES"
LOT 3 BERRY FARMS ROAD
STURBRIDGE, MA 01566
PREPARED FOR
JUSTIN STELMOK
WORCESTER, MA 01607

DRAWN BY: WCN
DATE: 4/1/22
CHK BY: OPB
SCALE: 1"=40'
PROJ. NO. 287-2118K

EROSION & SEDIMENT CONTROL PLAN



TOTAL LENGTH OF ROADWAY
 DRIVE A: 2063'± (PAVED)
 DRIVE A: 425'± (GRAVEL)
 DRIVE B: 361'±
 DRIVE C: 784'±
 DRIVE D: 360'±
 TOTAL PAVED: 3993'±

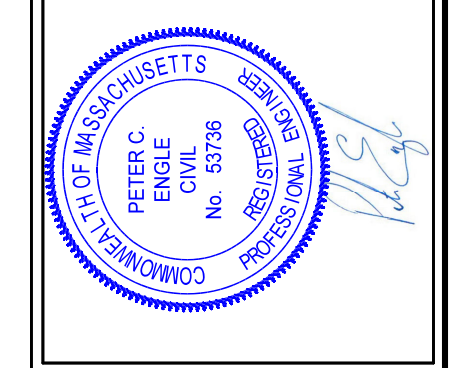
CUT & FILL VOLUMES:

	PHASE 1A
	CUT: 5,230 C.Y.±
	FILL: 6,345 C.Y.±
	PHASE 1B
	CUT: 9,545 C.Y.±
	FILL: 11,365 C.Y.±
	PHASE 2
	CUT: 10,090 C.Y.±
	FILL: 19,755 C.Y.±
	PHASE 3
	CUT: 18,065 C.Y.±
	FILL: 15,600 C.Y.±
	PHASE 4
	CUT: 24,275 C.Y.±
	FILL: 19,160 C.Y.±
TOTAL	
	TOTAL CUT: 67,205 C.Y.±
	TOTAL FILL: 72,225 C.Y.±

HOR. SCALE IN FEET: 1"=80'

REV.	DATE	TOWN, DEP.	PEER ENG. COMMENTS	MADE (APVD)
1	11.10.22			PE

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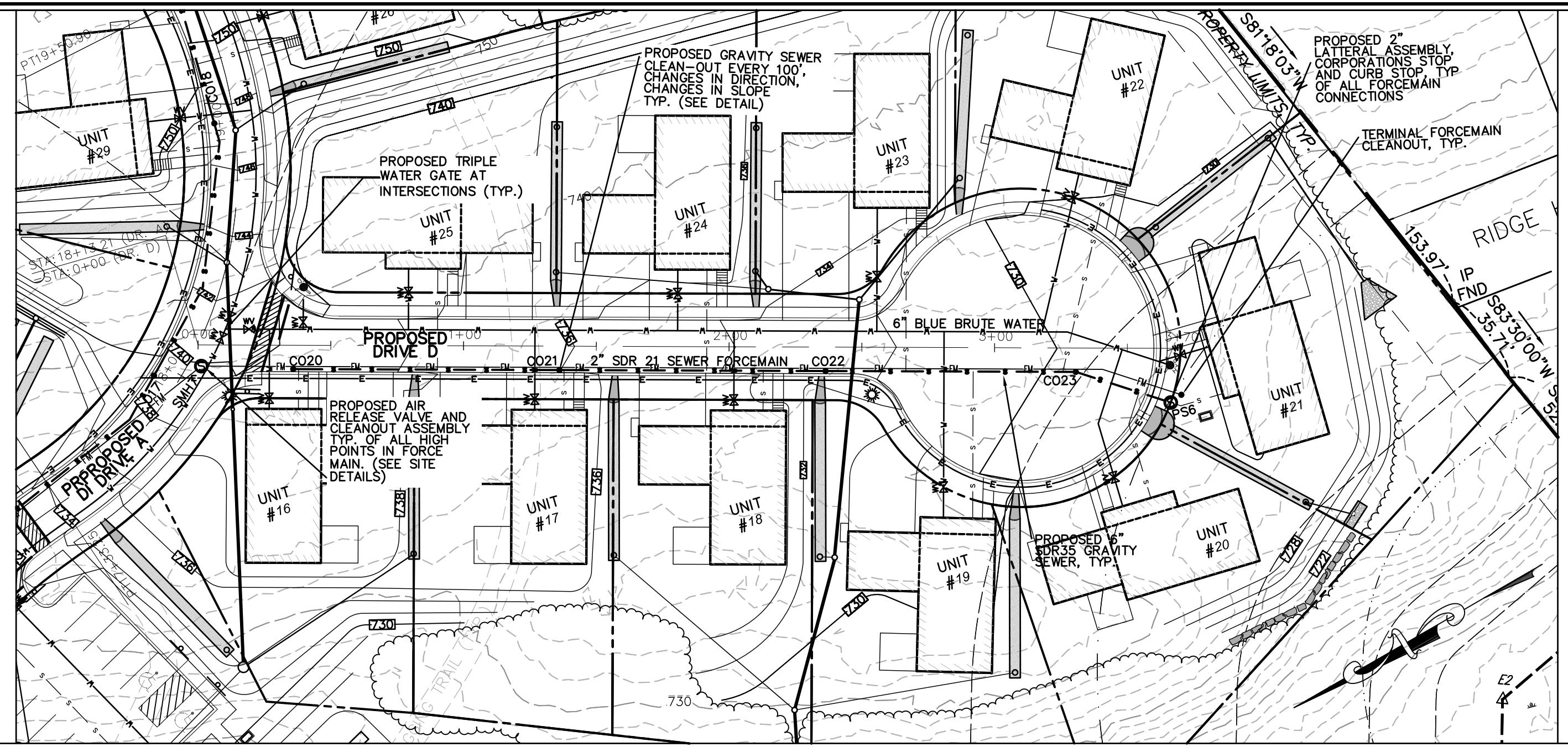
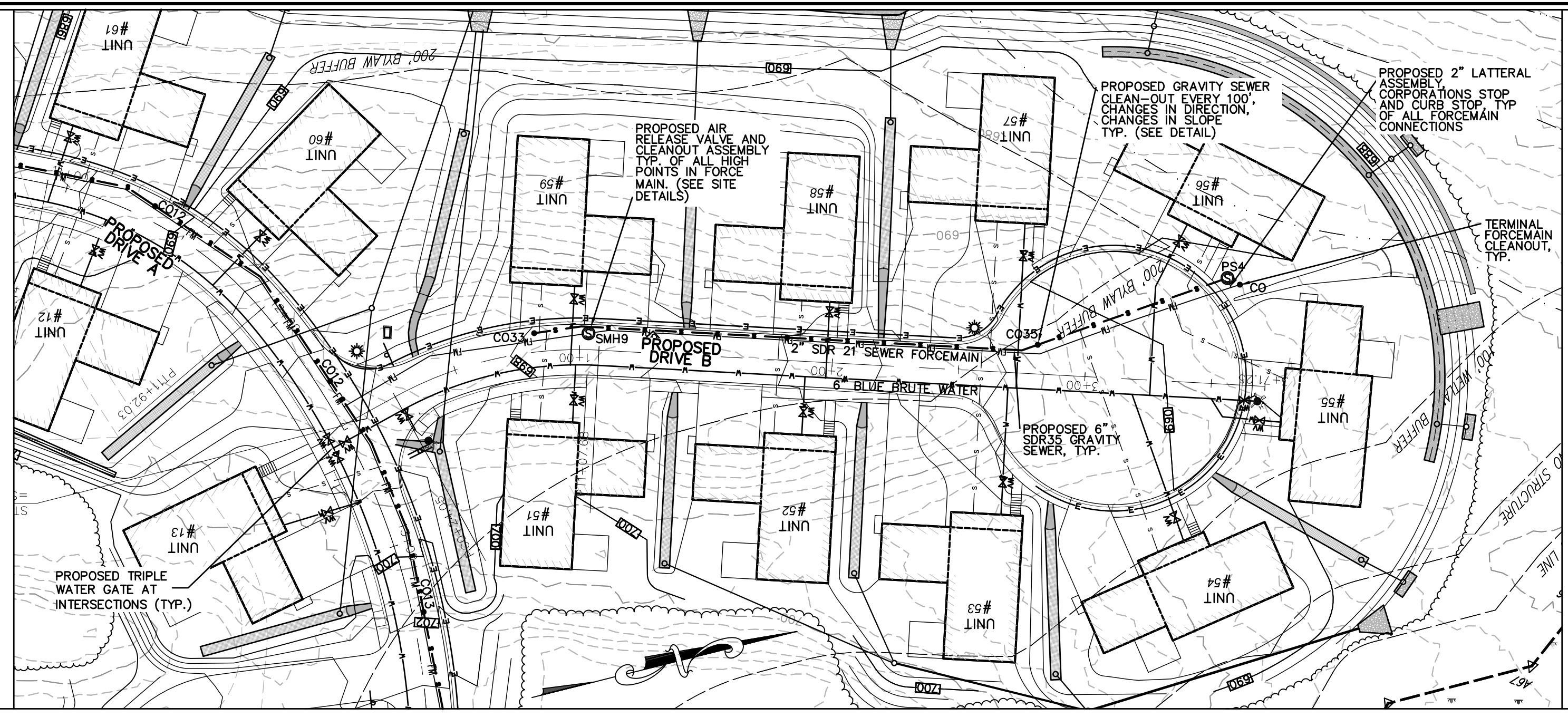


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 PREPARED FOR
JUSTIN STELMOK
557 SOUTHWEST CUTOFF
WORCESTER, MA 01607

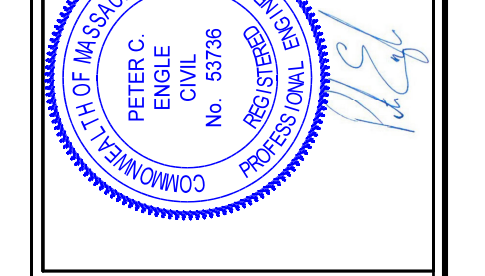
DRAWN BY:	WCH
DATE:	4/1/22
CHK BY:	OPM
SCALE:	1"=80'
PROJ. NO.:	287-2118K

PHASING PLAN



REV	DATE	TOWN, DEP. PEER ENG. COMMENTS	MADE (APVD)
1	11.10.22		PE

REVISIONS	DESCRIPTION



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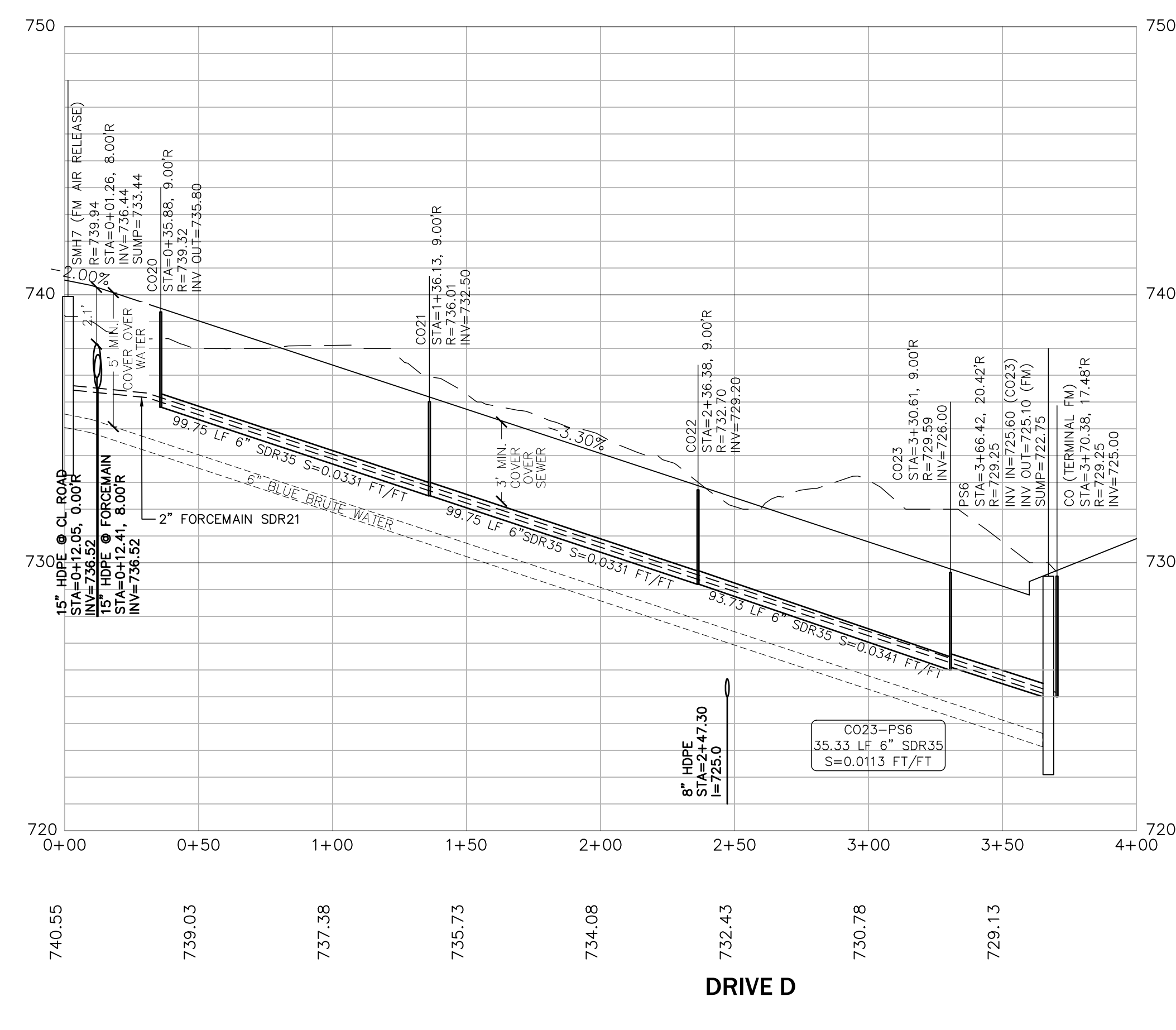
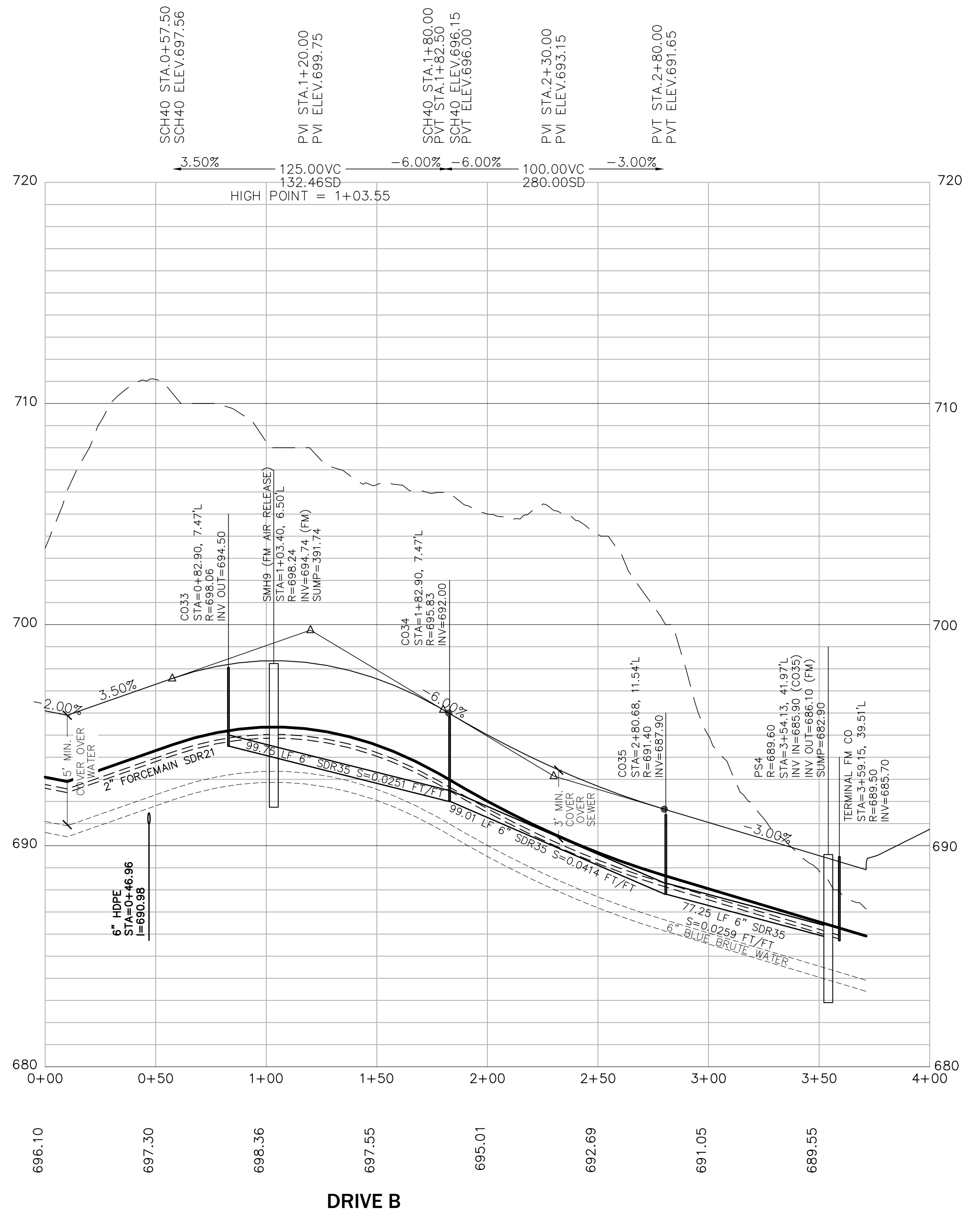
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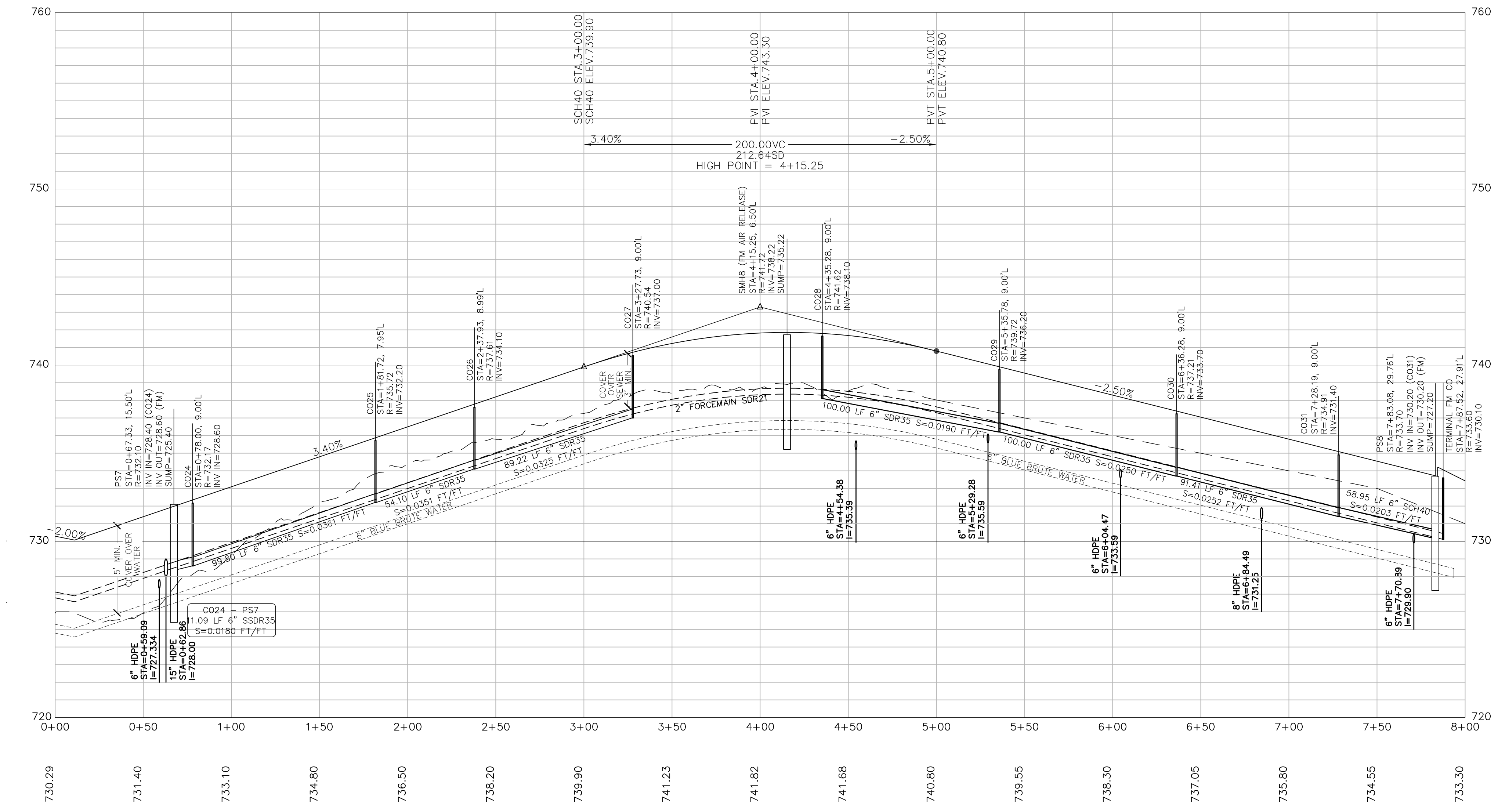
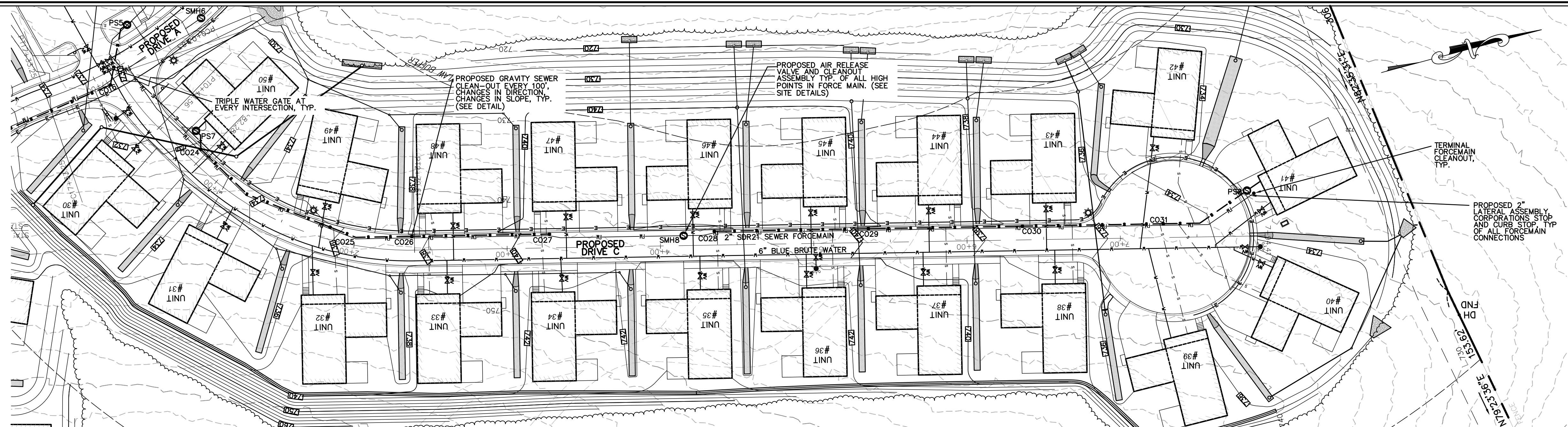
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JUSTIN STELMOK
WORCESTER, MA 01607

DRAWN BY: WCN
 DATE: 4/1/22
 CHK BY: PE
 SCALE: 1"=40' (HORIZONTAL)
 PROJ. NO.: 287-2118-K
 SCALE: 1"=4' (VERTICAL)

PLAN & PROFILE
DRIVES B & D

SHEET **C22** OF **31**





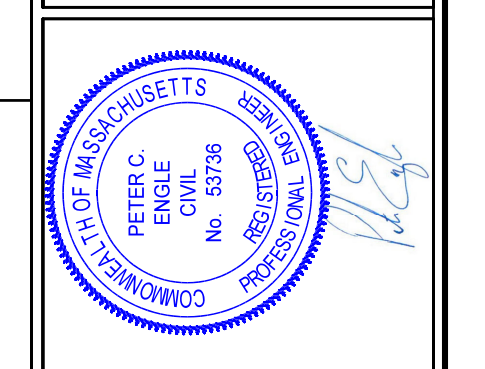
HOR. SCALE IN FEET: 1"=40'

120
80
40
0

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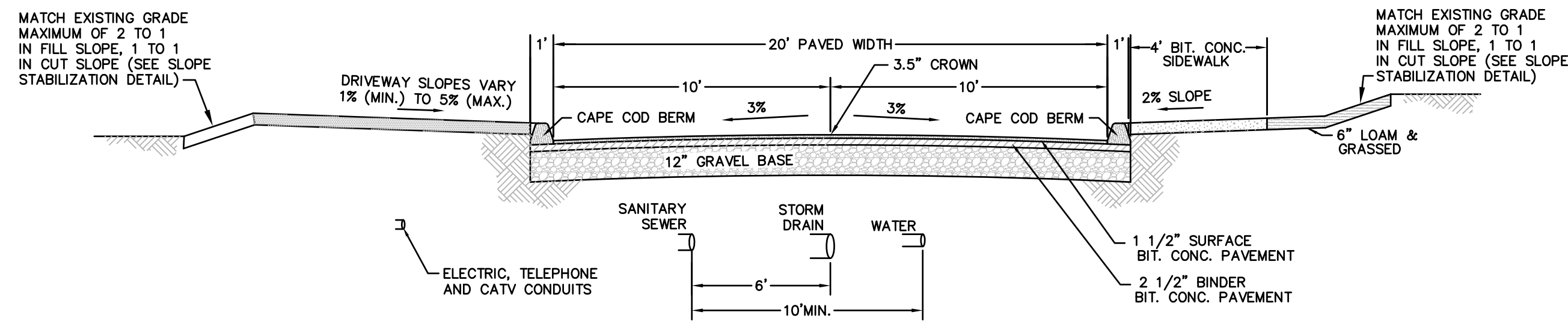
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STURBRIDGE, MA 01566

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WORCESTER, MA 01607

DRAWN BY: WCH
DATE: 4/13/22
CHK BY: PE
SCALE: 1"=40' (HORIZONTAL)
PROJ. NO. 287-2118-K
SCALE: 1"=4' (VERTICAL)

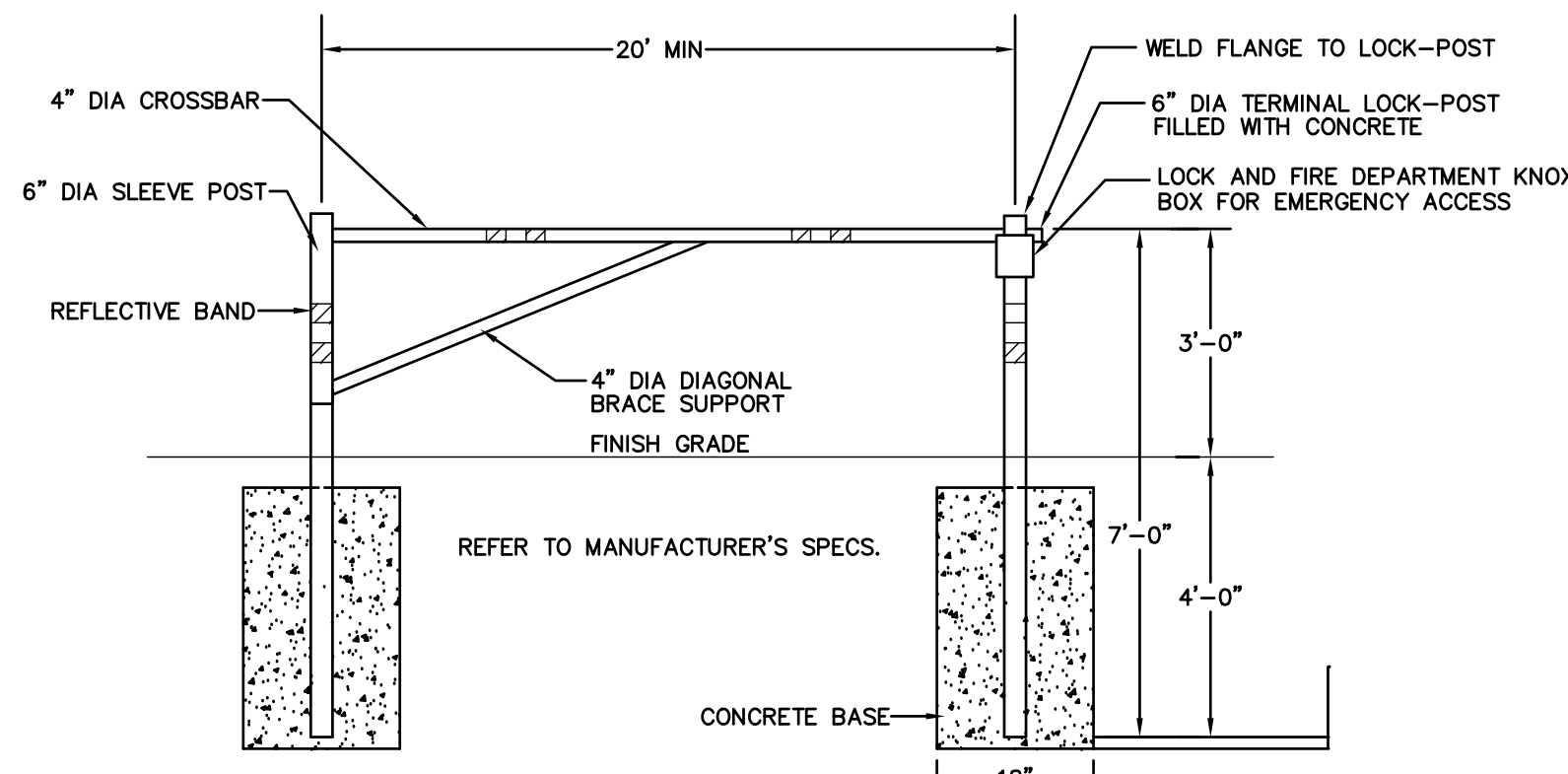
PLAN AND PROFILE
DRIVE C

SHEET **C23** OF **31**



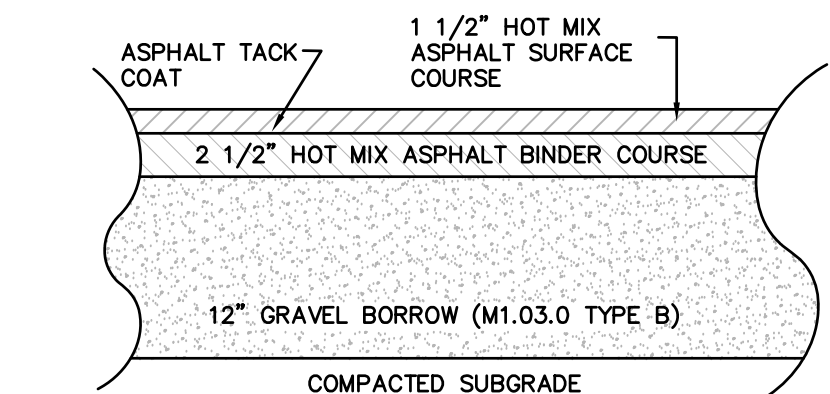
TYPICAL ROADWAY SECTION

NOT TO SCALE



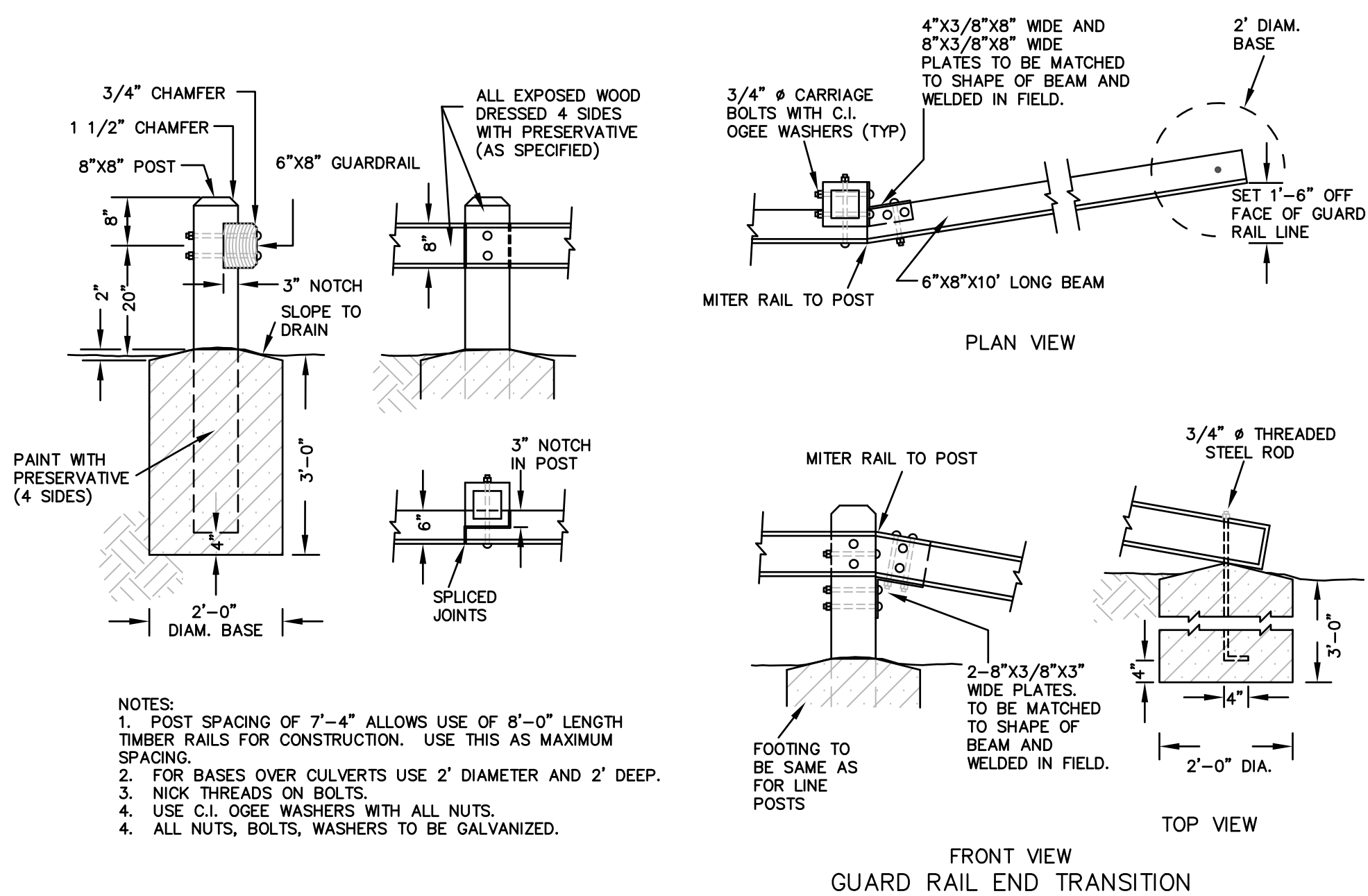
BAR GATE DETAIL

NOT TO SCALE



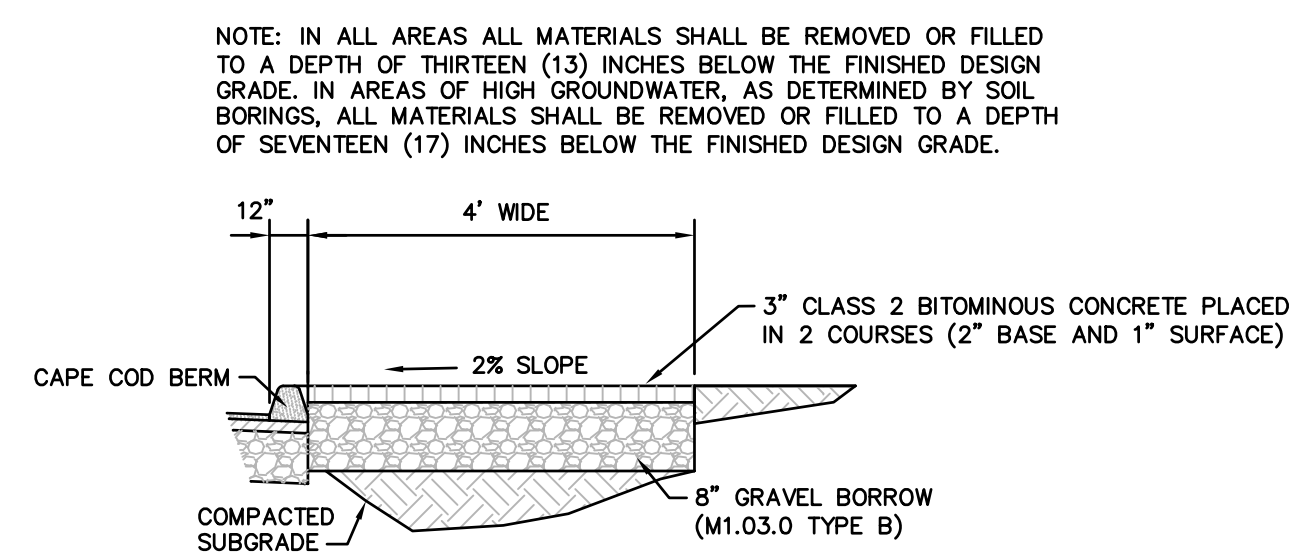
ROADWAY BIT. CONC. PAVEMENT DETAIL

NOT TO SCALE



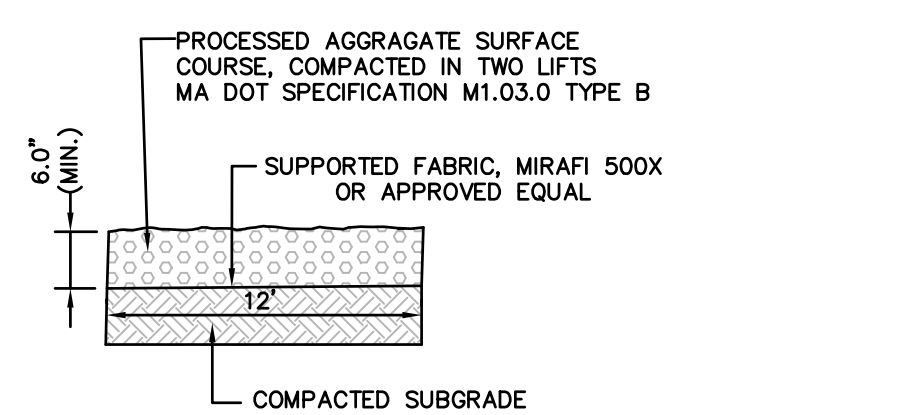
WOODEN GUARD RAIL DETAIL

NOT TO SCALE



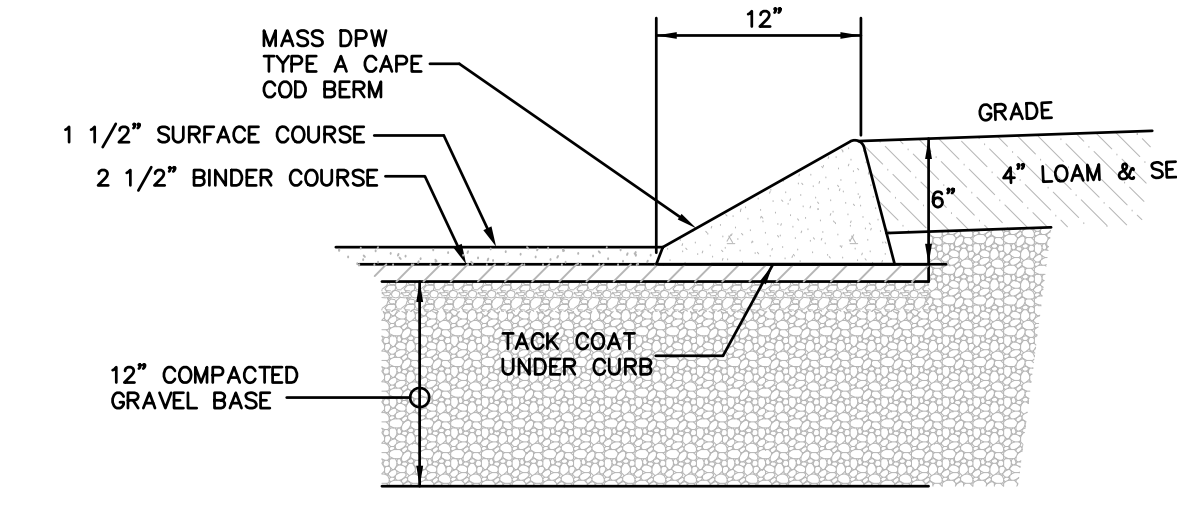
BITUMINOUS CONCRETE SIDEWALK & DRIVEWAY DETAIL

NOT TO SCALE



EMERGENCY ACCESS GRAVEL ROAD DETAIL

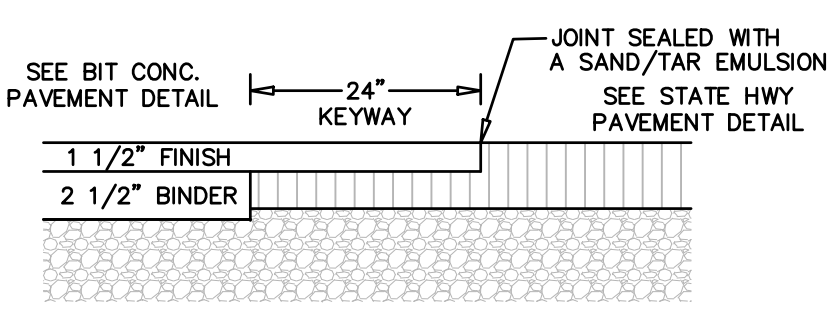
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CAPE COD BERM CURB DETAIL

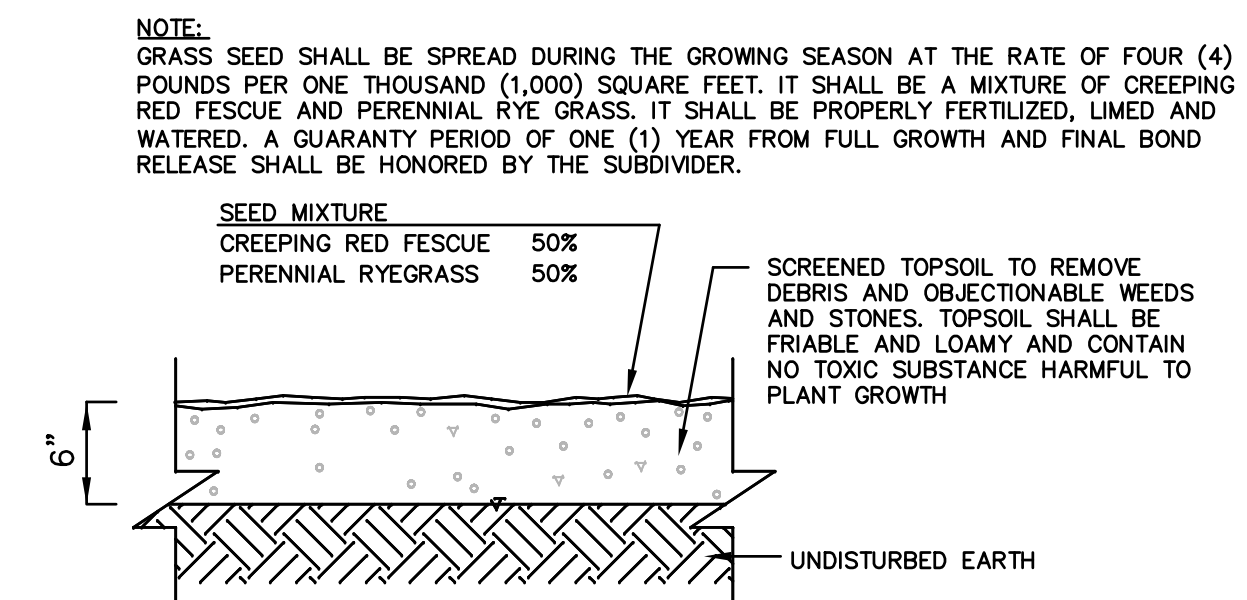
NOT TO SCALE

- NOTES:
- EXTEND TOP SOIL INSIDE PAVEMENT AN ADDITIONAL 1/4 TO 1/2 INCH ABOVE PAVEMENT SURFACE AND MATCH SURROUNDING GRADE. PROPOSED FINISHED GRADE SLOPE PER PROJECT GRADING PLAN. PROTECT PAVEMENT AREA UNTIL GRASS IS SUFFICIENTLY ESTABLISHED TO HANDLE TRAFFIC. PROVIDE 1" (MIN.) CLEARANCE BETWEEN ANY CONCRETE EDGE AND PAVEMENT.
 - GRADATION OF AASHTO #57 COARSE BASE ROCK: 100% PASSING 1 1/2" SCREEN, 95-100% PASSING 1", 25-60% PASSING 3/4", AND 0-10% PASSING #8 SCREEN.
 - COMPACT WITH ONE TO THREE PASSES OF 5-TON STEEL WHEEL ROLLER. SINCE IT IS DIFFICULT TO MEASURE DENSITY OF COARSE AGGREGATE, APPROACH OF REQUIRING A FIXED DENSITY IS NOT APPLICABLE.
 - FILTER FABRIC SHALL BE USED TO PREVENT MIGRATION OF FINES FROM SURROUNDING NATIVE SOILS INTO COARSE AGGREGATE LAYER. THE FABRIC PREVENTS CLOGGING OF AGGREGATE LAYER AND EXTENDS ITS USEFUL LIFE.



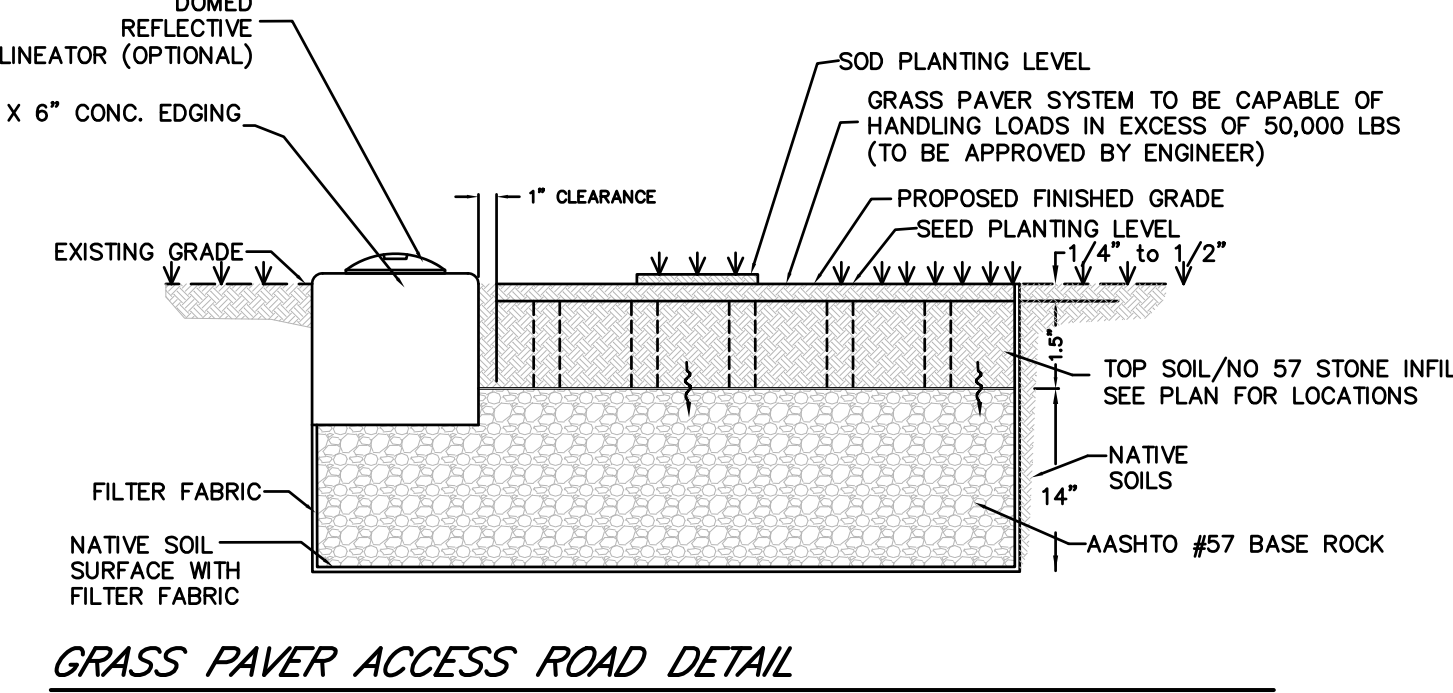
PAVEMENT BLEND DETAIL

NOT TO SCALE



LOAM & SEED DETAIL

NOT TO SCALE



GRASS PAVER ACCESS ROAD DETAIL

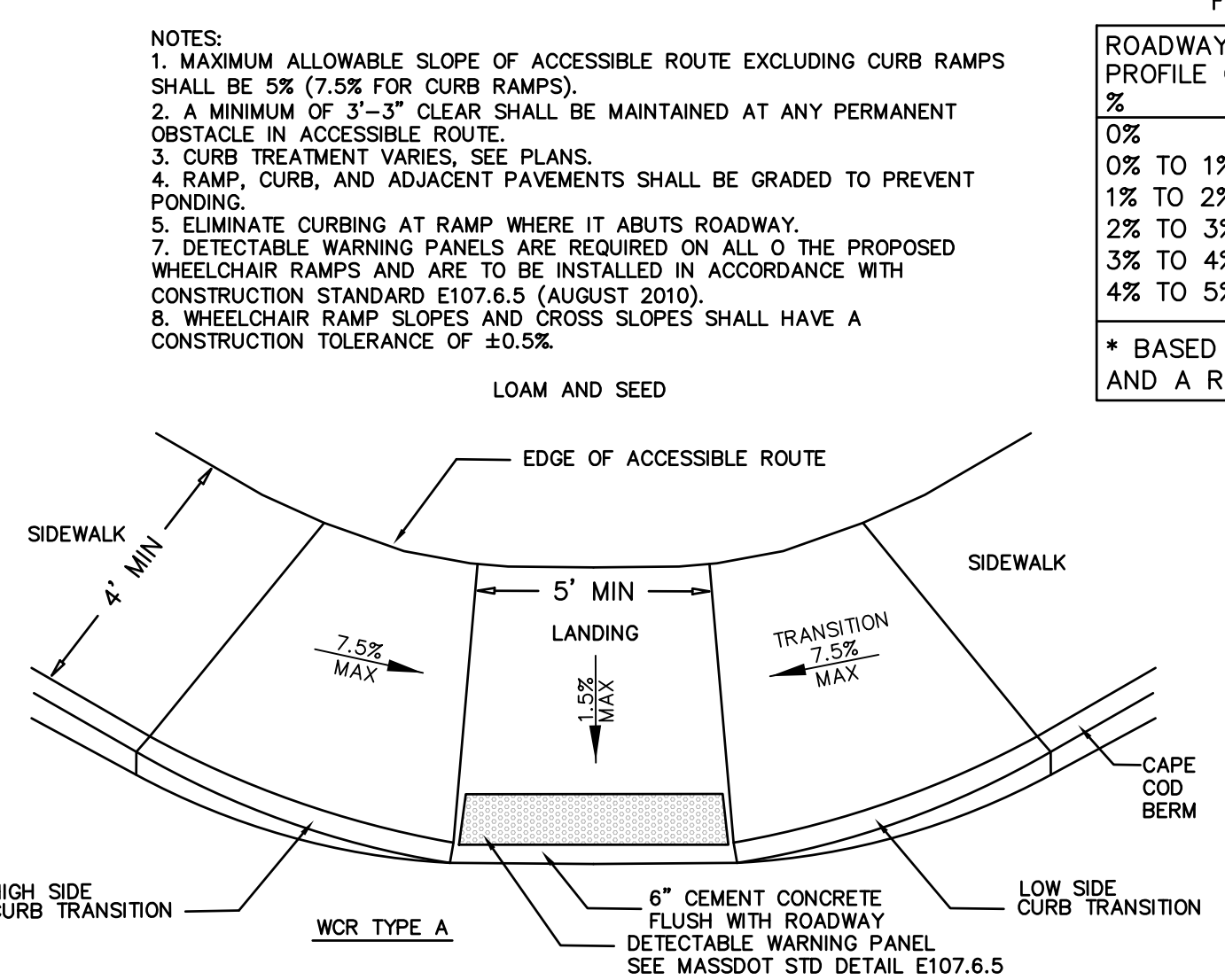
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CURB TRANSITION LENGTH FOR WHEELCHAIR RAMPS

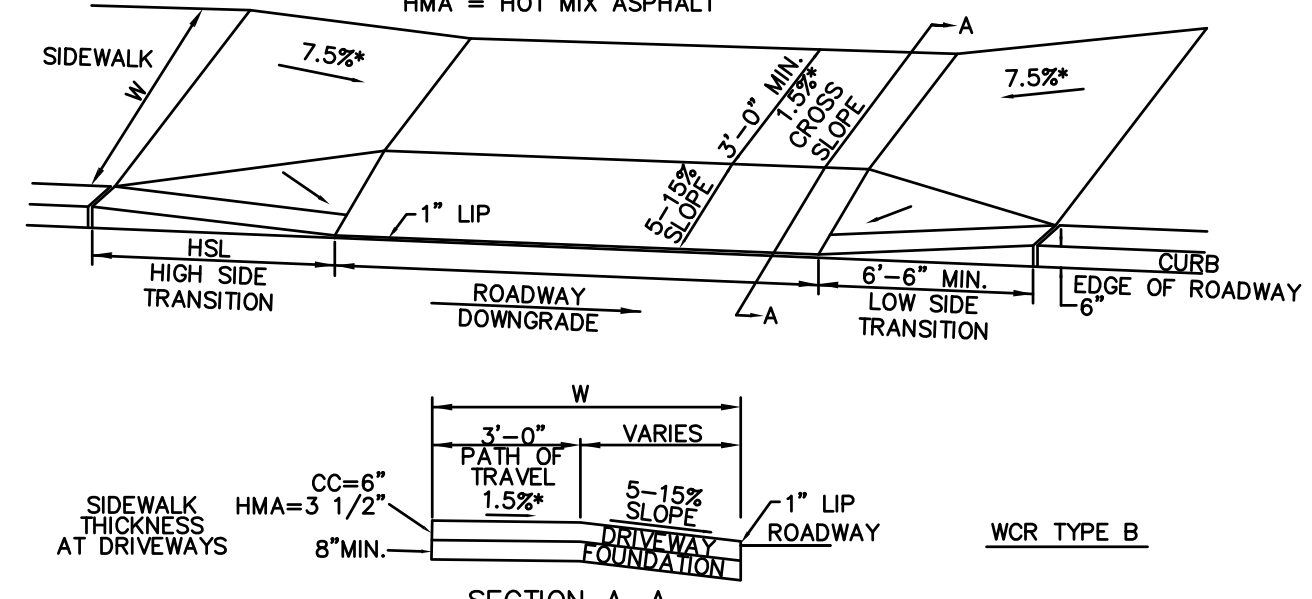
ROADWAY PROFILE GRADE %	*HIGH SIDE TRANSITION LENGTH ENGLISH UNITS
0%	6'-6"
0% TO 1%	7'-8"
1% TO 2%	9'-0"
2% TO 3%	11'-0"
3% TO 4%	14'-0"
4% TO 5%	15'-0" (MAX.)

* BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6"

LEGEND:
 HSL = HIGH SIDE TRANSITION LENGTH, SEE CURB TABLES
 W = SIDEWALK WIDTH
 * = TOLERANCE FOR CONSTRUCTION ±0.5%
 CC = CEMENT CONCRETE
 HMA = HOT MIX ASPHALT

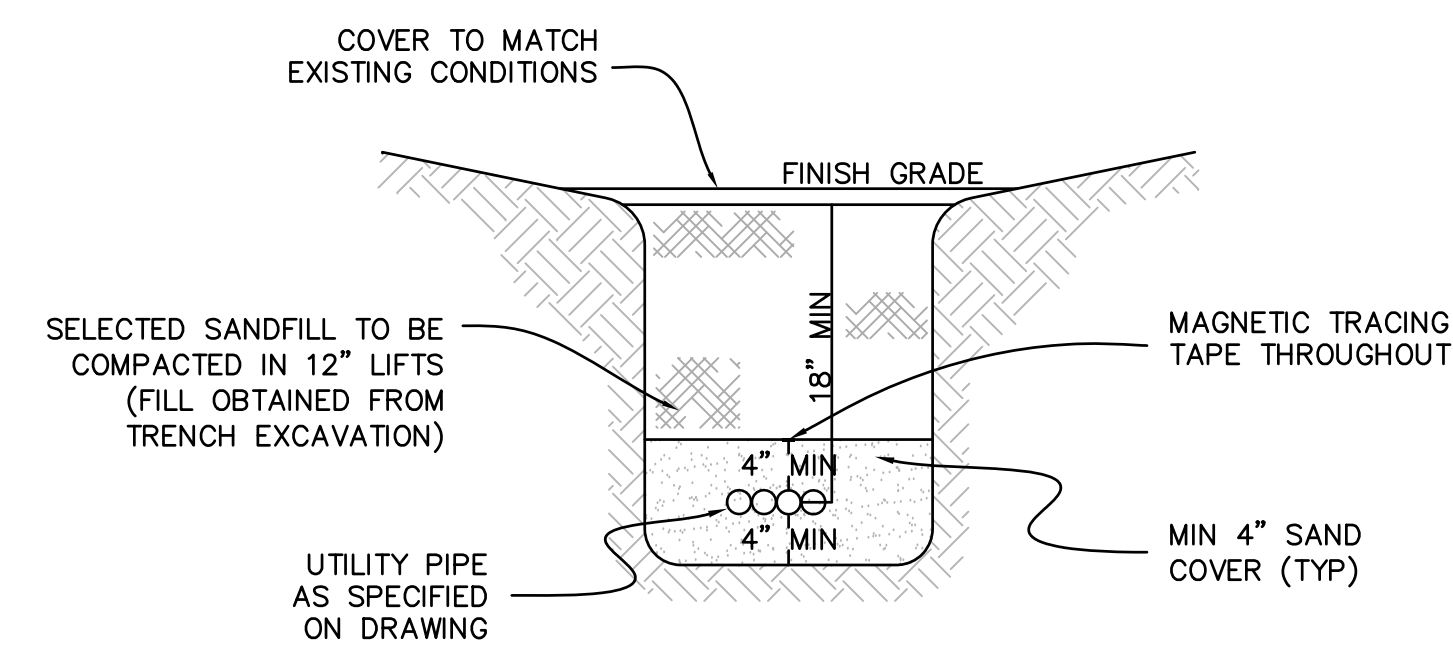


ADA SIDEWALK RAMP



SECTION A-A

NOT TO SCALE

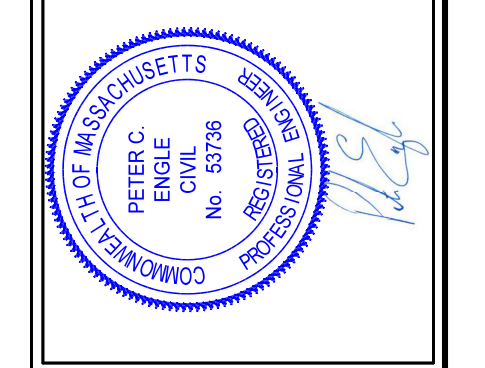


COMMUNICATIONS/ELEC TRENCH DETAIL

NOT TO SCALE

REV	DATE	DESCRIPTION	MADE (APVD)
1	11.10.22	TOWN, DEP. PEER ENG. COMMENTS	PE

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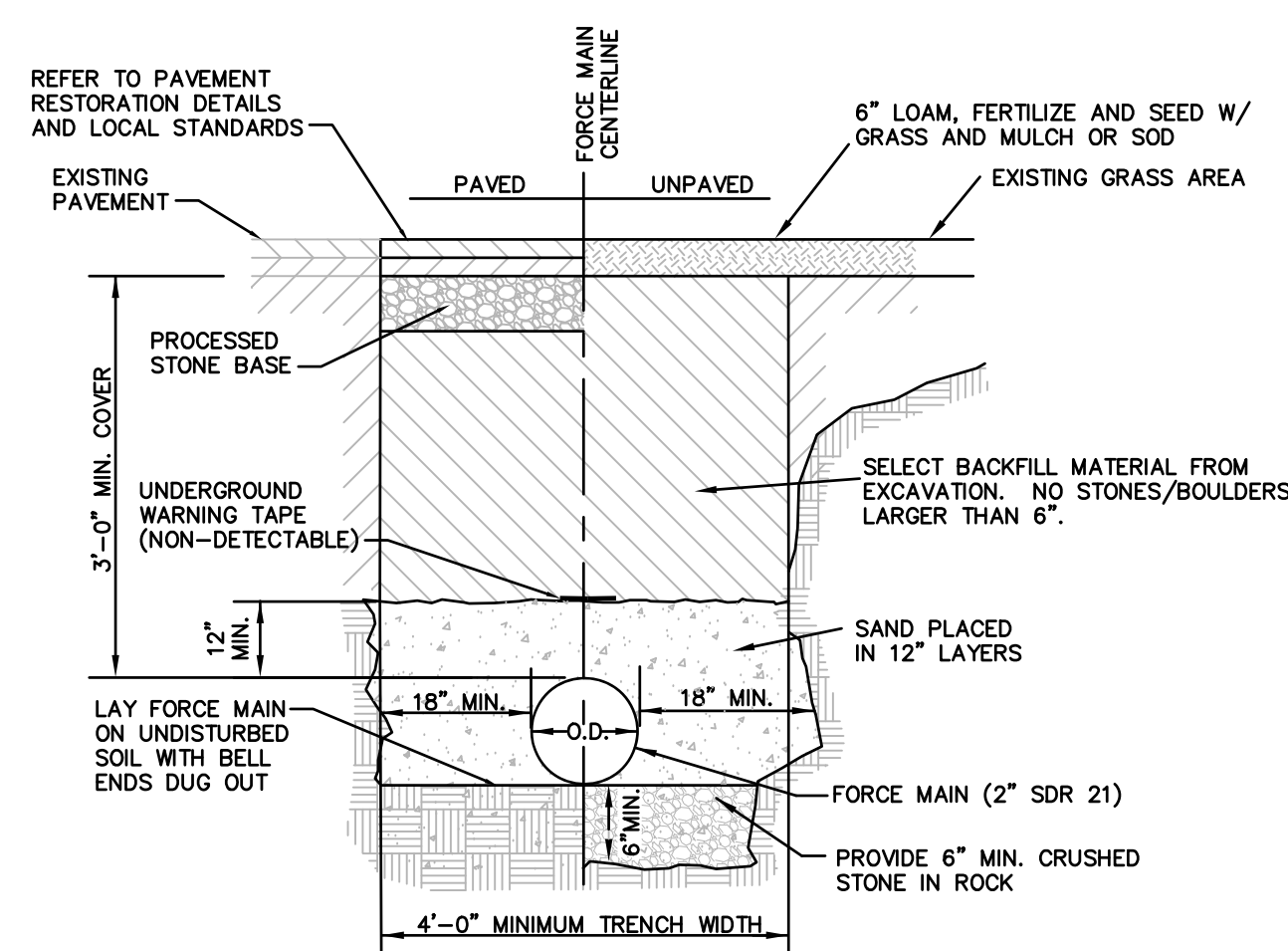


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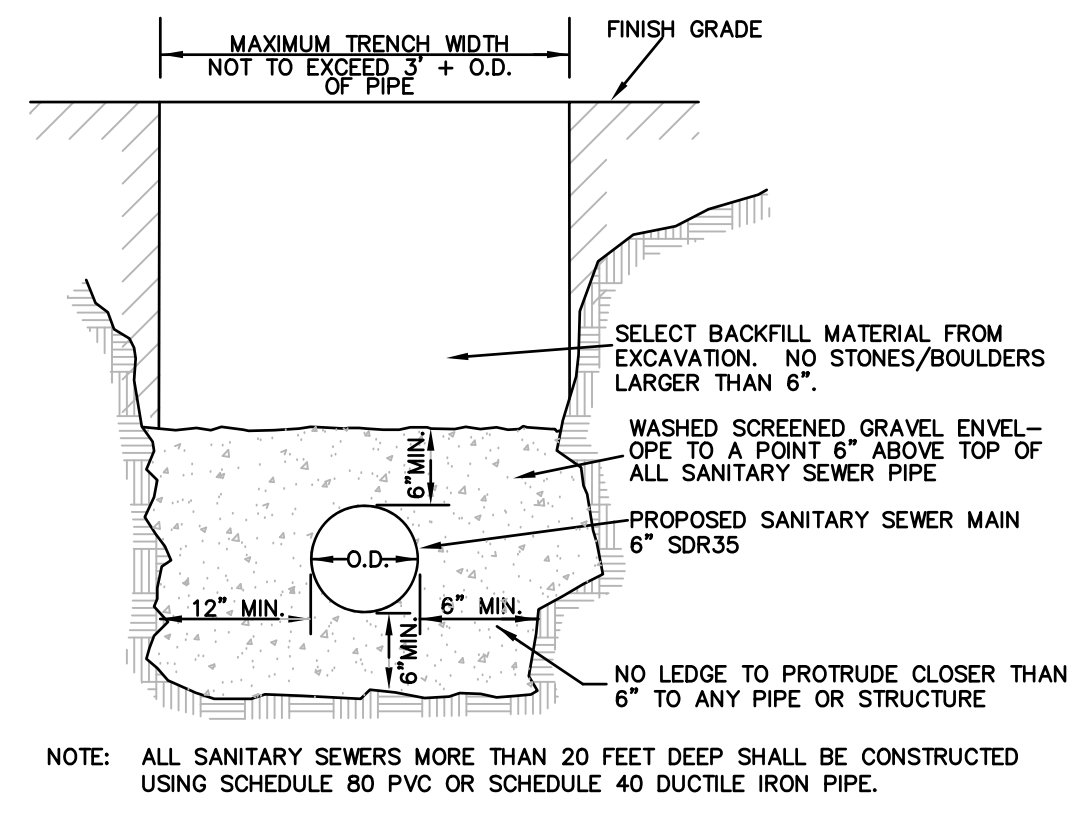
DRAWN BY:	WGN
DATE:	4/12/22
CHK BY:	IPC
SCALE:	N.T.S.
PROJ. NO.:	287-2118K

SITE DETAILS

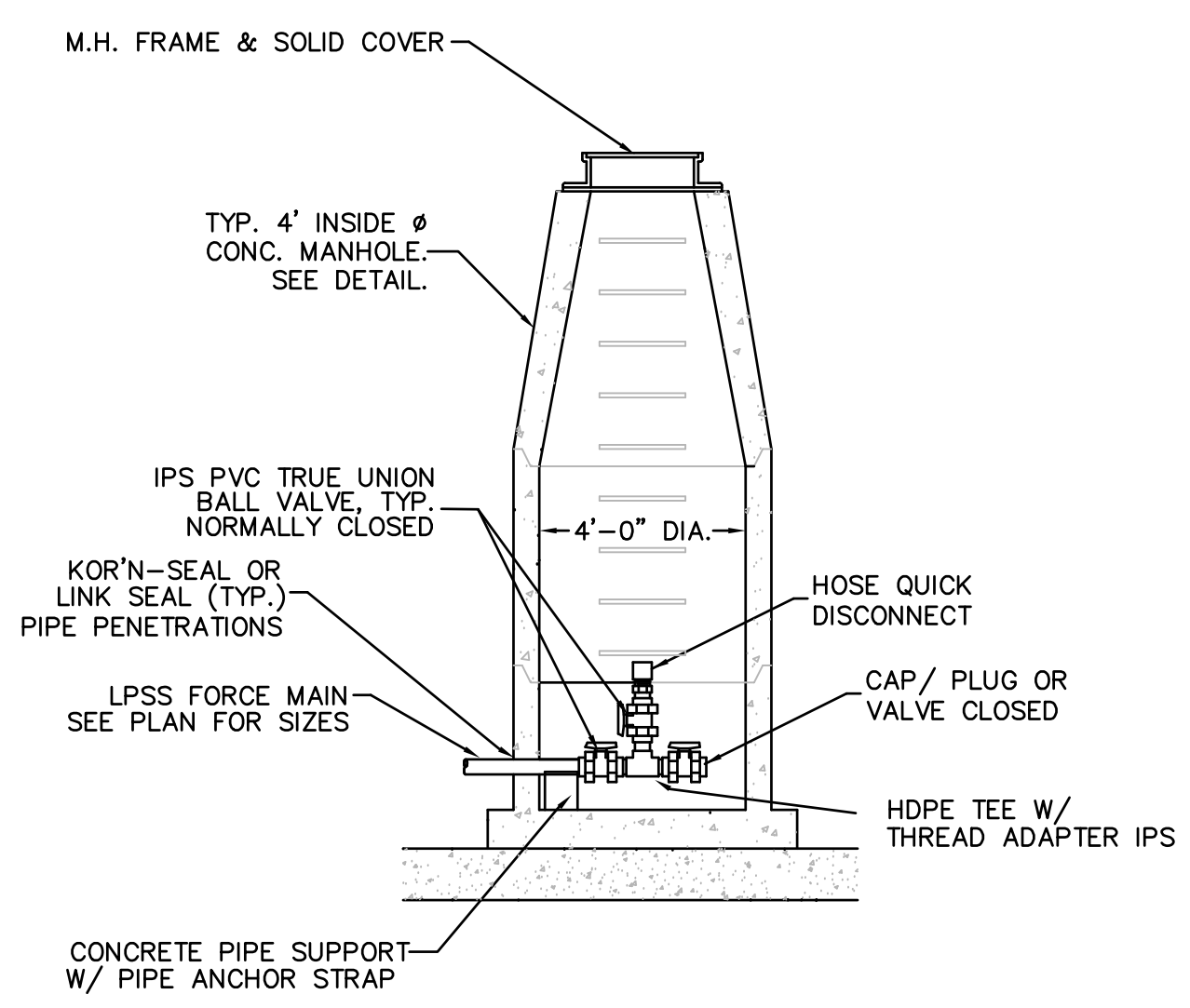


NOTES:
1. MAINTAIN MIN. 18" HORIZONTAL SEPARATION BETWEEN FORCE MAIN AND EXISTING PARALLEL UTILITIES (OUTSIDE WALL TO OUTSIDE WALL).

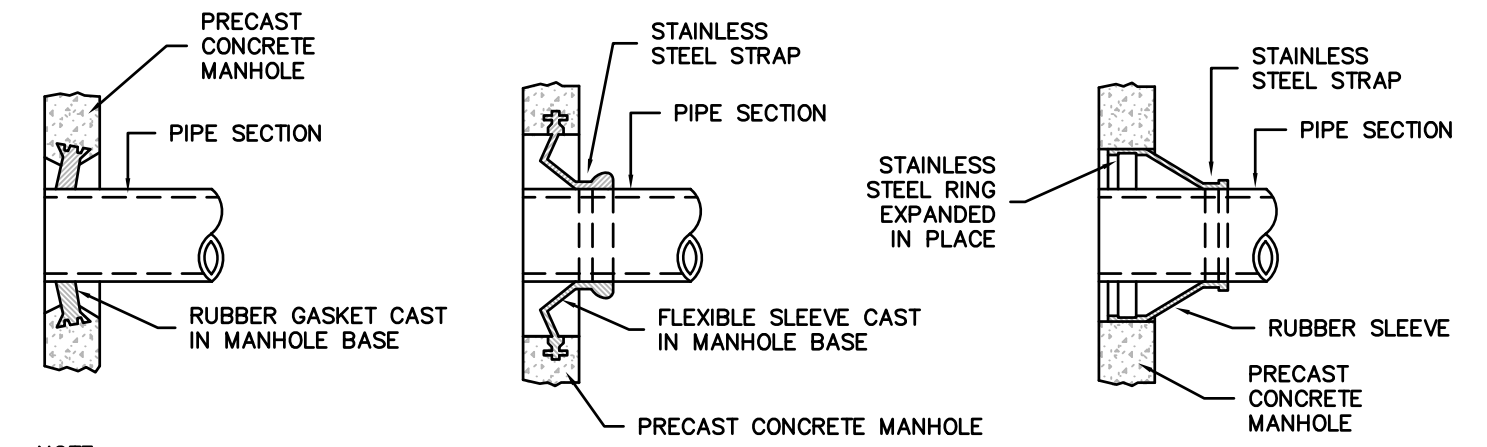
TYP. SEWER FORCE MAIN TRENCH SECTION
NOT TO SCALE



TYP. GRAVITY SEWER MAIN TRENCH SECTION
NOT TO SCALE

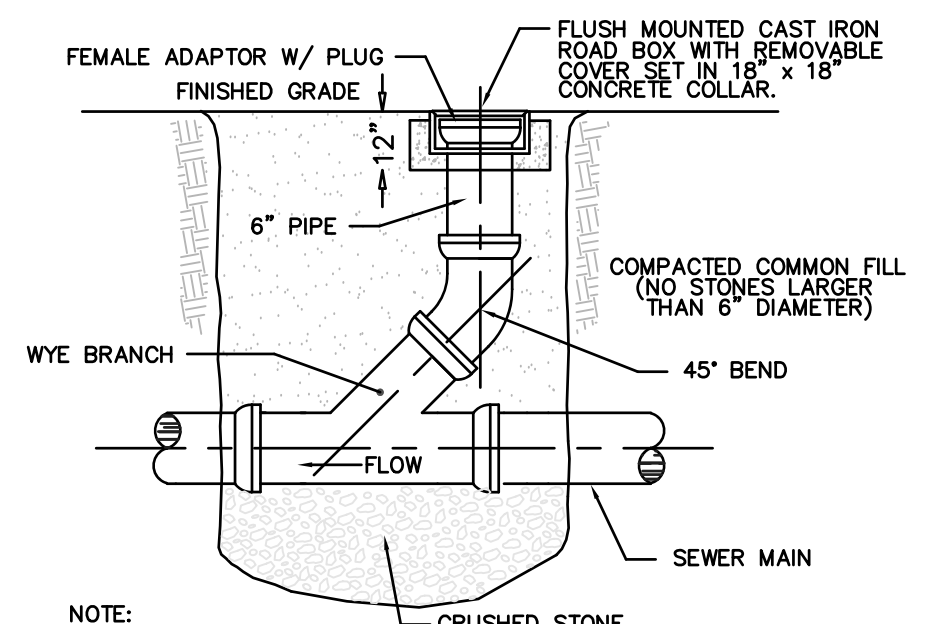


FORCE MAIN TYPICAL TERMINAL FLUSHING CONNECTION
NOT TO SCALE



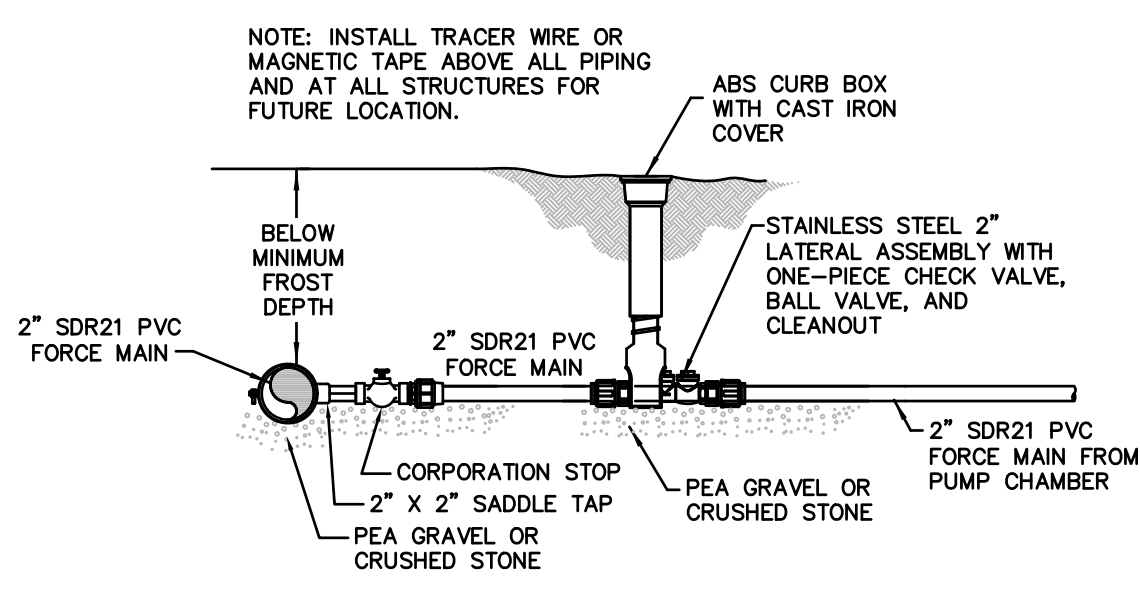
NOTE:
1) CONTRACTOR SHALL BE REQUIRED TO MAKE ALL PIPE PENETRATIONS WATER TIGHT.
2) THE PIPE TO MANHOLE CONNECTION SHALL BE A FLEXIBLE RUBBER PIPE SLEEVE EITHER CAST IN PRECAST MANHOLE SECTION OR HELD IN PLACE BY STAINLESS STEEL RINGS EXPANDED IN PLACE TO MEET SPECIFICATIONS OF ASTM C923.

MANHOLE SEAL DETAILS
NOT TO SCALE

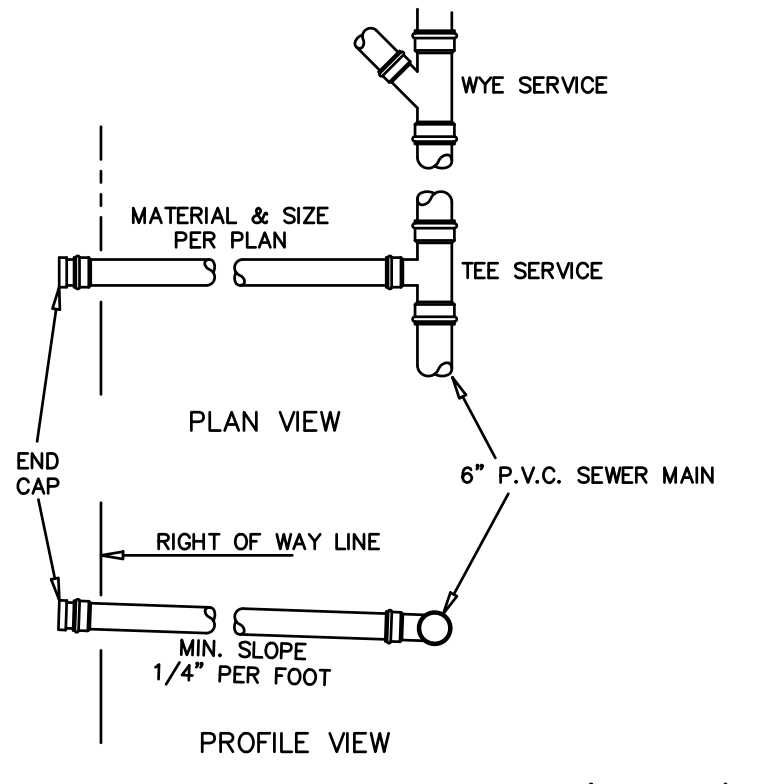


NOTE: REFER TO TYPICAL SEWER TRENCH SECTION DETAIL

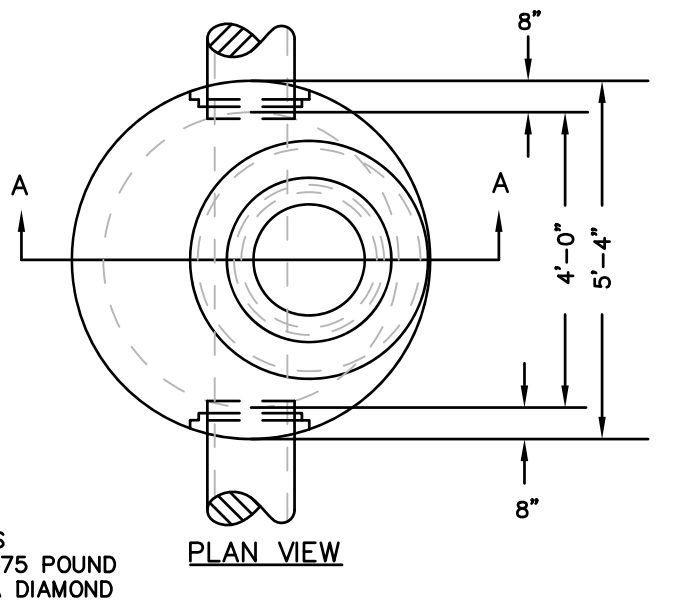
TYPICAL GRAVITY SEWER CLEANOUT DETAIL
NOT TO SCALE



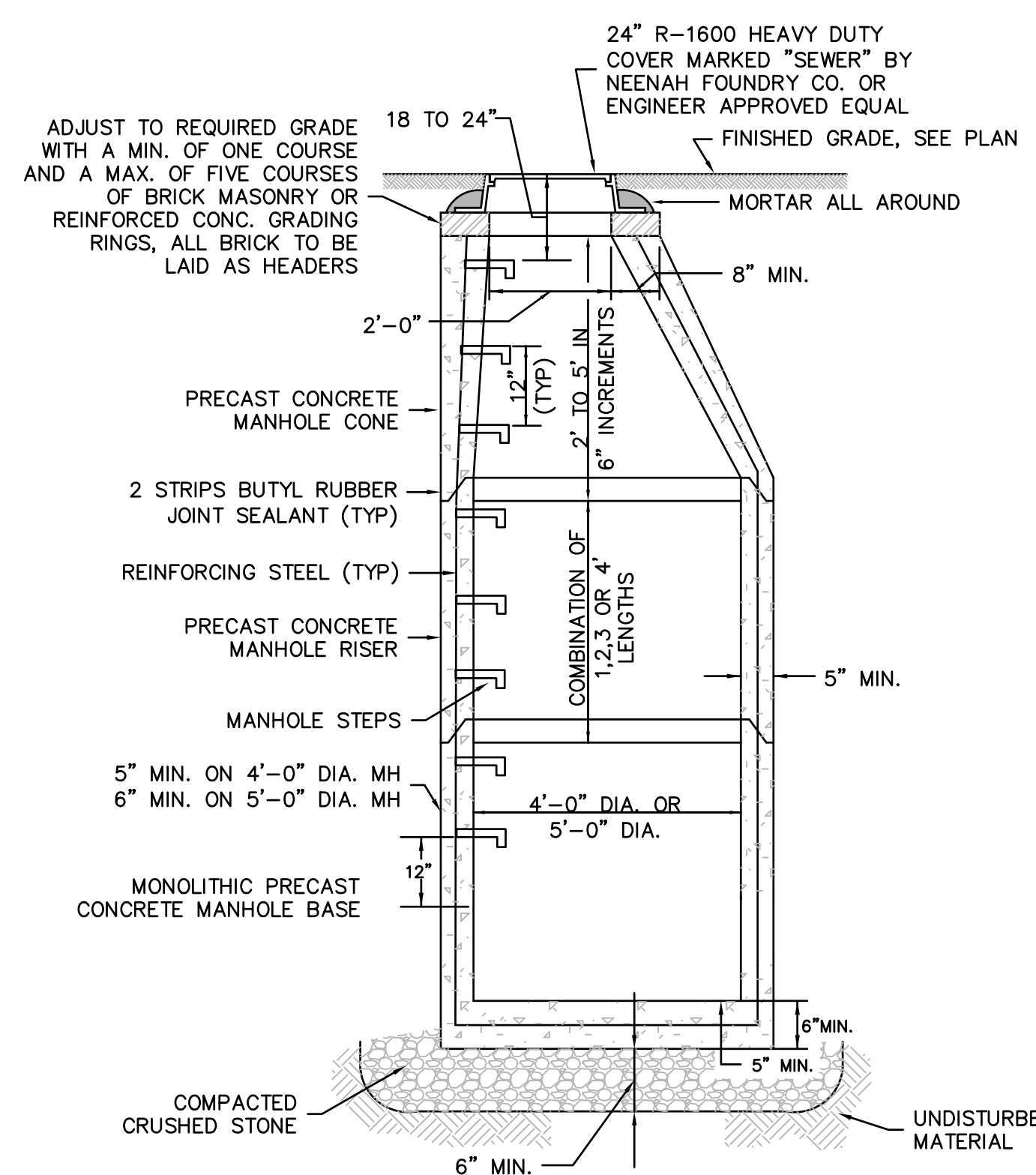
FORCE MAIN CONNECTION DETAIL
NOT TO SCALE



TYPICAL SERVICE CONNECTION (SEWER)
NOT TO SCALE

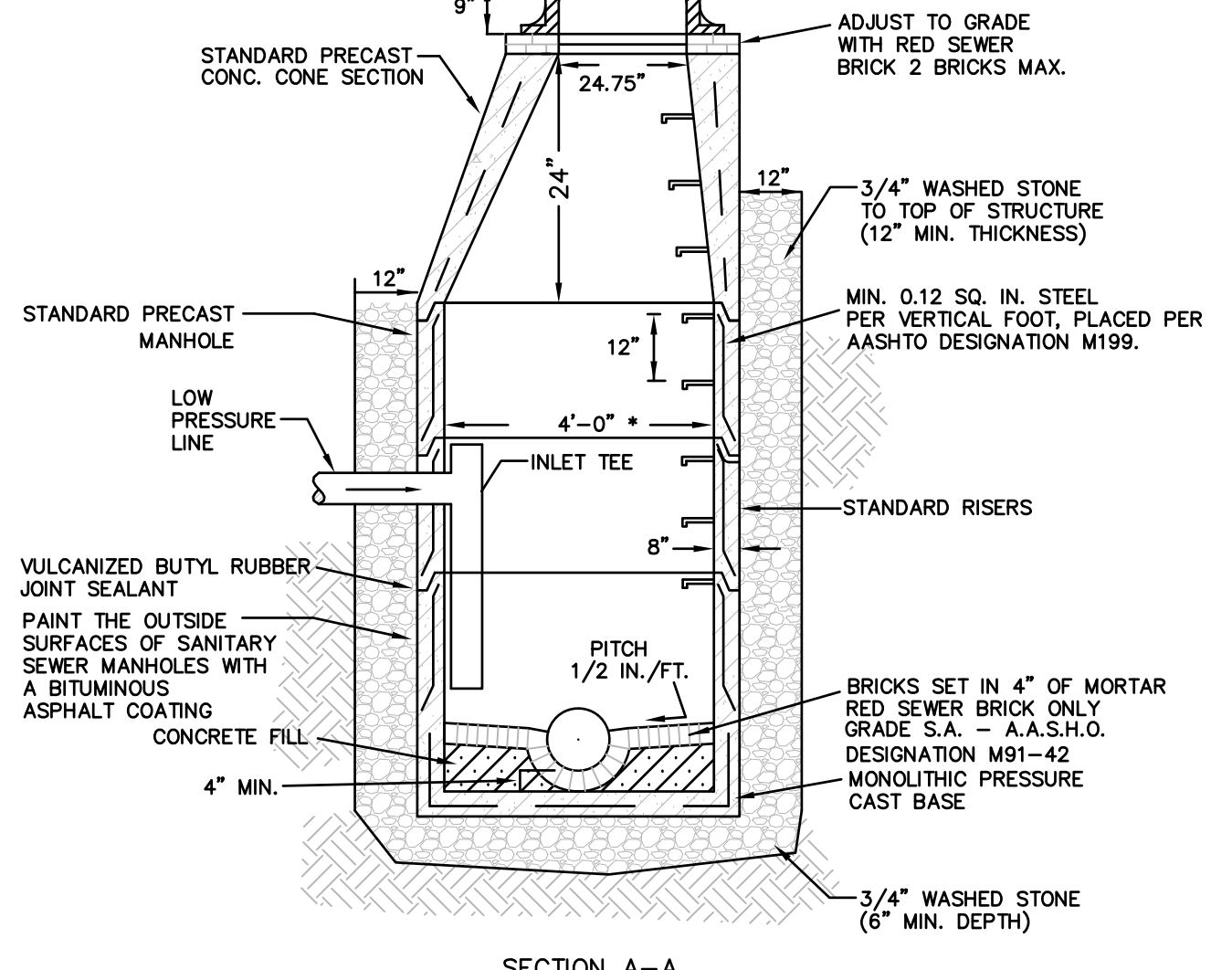


PLAN VIEW



- NOTE:
- 1) CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
 - 2) REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
 - 3) H-20 DESIGN LOADING PER AASHTO HS-20-44; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
 - 4) BUTYL RESIN SECTION JOINT CONFORMS TO LATEST ASTM C990 SPEC.
 - 5) STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC STEP CONFORMS TO LATEST ASTM C478 SPEC.
 - 6) MANHOLE JOINTS, PIPE CONNECTIONS, AND COVERS SHALL BE CONSTRUCTED TO BE WATER TIGHT.

TYPICAL MANHOLE
NOT TO SCALE



* IF INLET TEE IS DISCONNECTED OR MISSING, IT MUST BE REPLACED BEFORE MAKING NEW SANITARY SEWER CONNECTION FROM PRESSURE MAIN.

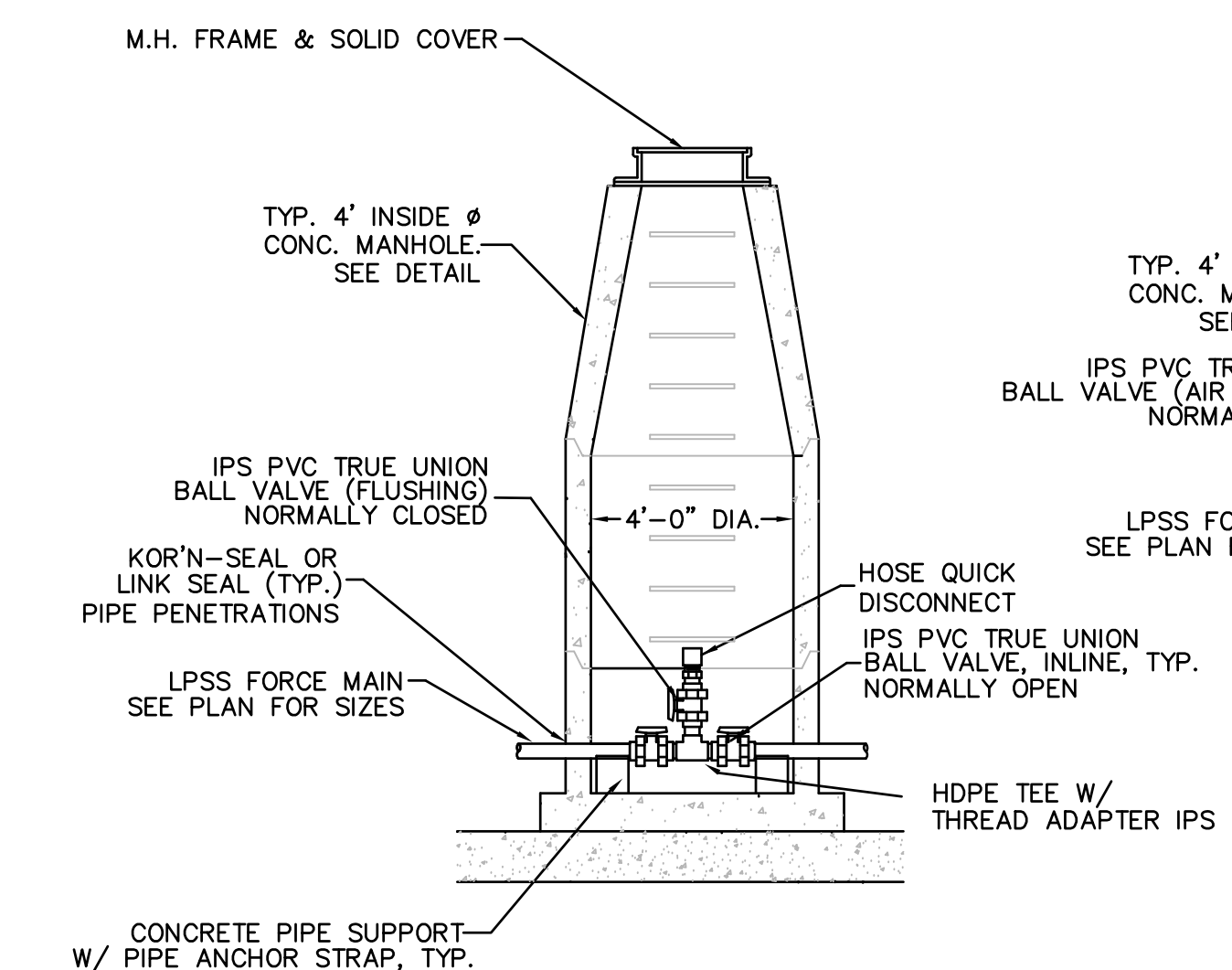
NOTE:
ALL SEWER PIPING AND/OR STRUCTURES CROSSING UNDER OR WITHIN 100 FEET OF ANY SURFACE WATER BODY, STORM WATER IMPONDMENT OR WETLAND SHALL BE BUILT USING WATERTIGHT CONSTRUCTION METHODS AND MATERIALS.

SANITARY SEWER SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL SEPARATION OF 10 FEET TO ALL WATER SUPPLY LINES. WHEN A 10' HORIZONTAL SEPARATION BETWEEN THE SEWER AND WATER CANNOT BE MAINTAINED, THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH ABOVE THE SEWER WITH AN 18 INCH VERTICAL SEPARATION BETWEEN THE CROWN OF THE SEWER AND THE INVERT OF THE WATER MAIN.

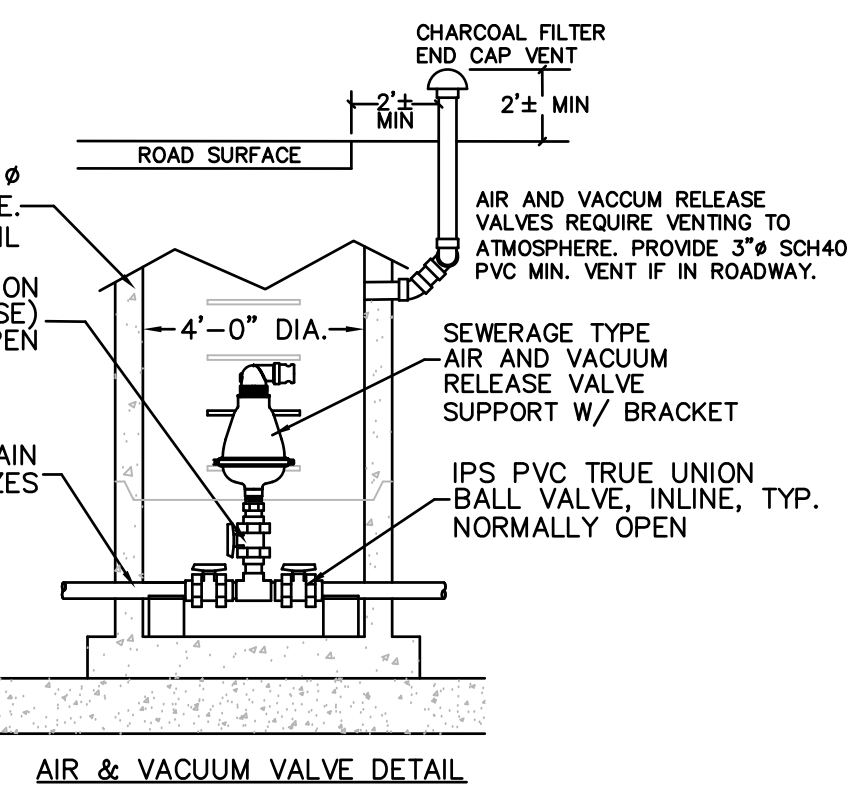
ALL ROADWAY FILLS SHALL BE BROUGHT UP IN UNIFORM ONE FOOT LAYERS AND SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 95% AS DETERMINED BY AASHTO TEST DESIGNATION T-99, METHOD C. MATERIAL SHALL BE TESTED FOR COMPLIANCE TO ABOVE REGULATION BY A MATERIALS AND TESTING FIRM IN AREAS WHERE FILL IS FIVE FEET OR MORE. COPIES OF THE TEST RESULTS SHALL BE SUBMITTED TO THE TOWN IN REPORT FORM.

ALL SANITARY SEWER OR DRAIN MANHOLES GREATER THAN 12 FEET DEEP SHALL HAVE A MINIMUM INSIDE DIAMETER OF FIVE FEET.

TYPICAL FORCE MAIN TERMINAL MANHOLE
NOT TO SCALE



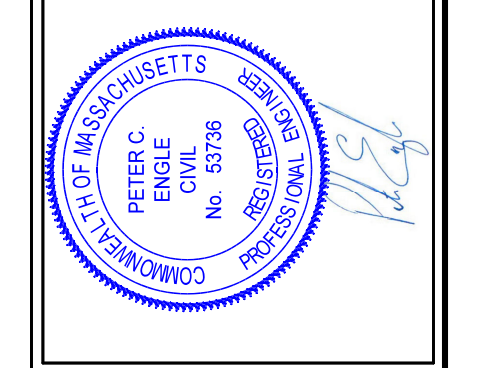
TYPICAL IN-LINE FLUSHING/ AIR RELEASE CONNECTION
NOT TO SCALE



AIR & VACUUM VALVE DETAIL

REV	DATE	TOWN, DEP., PEER ENG. COMMENTS	DESCRIPTION	REVISIONS	MADE (APVD)
1	11.10.22				PE

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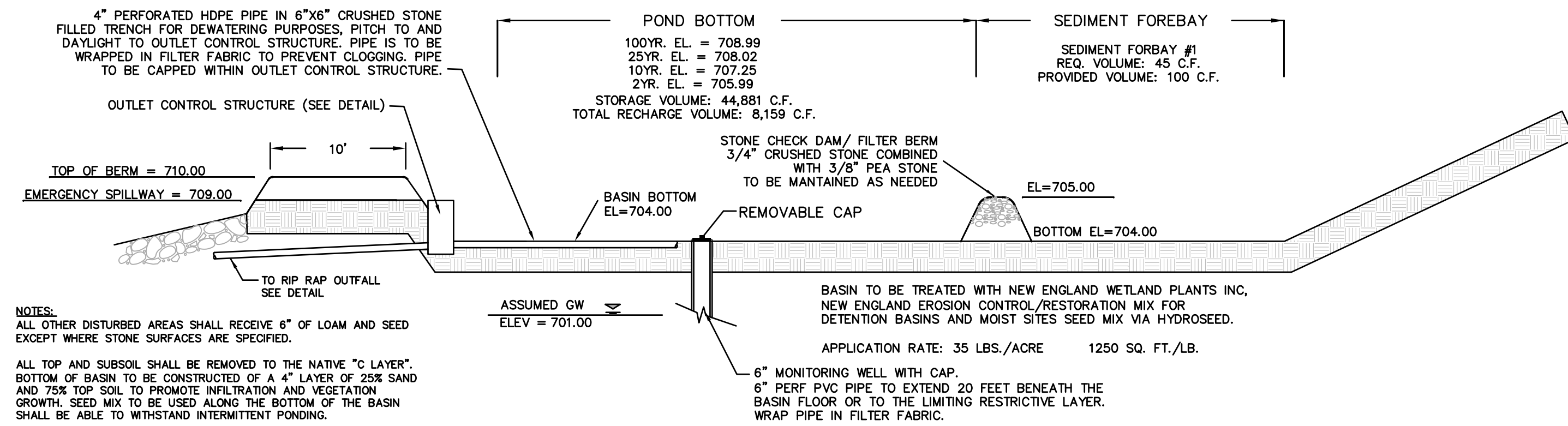


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SPECIAL PERMIT AND SITE PLAN
"BLUEBERRY HILL ESTATES"
LOT 3 BERRY FARMS ROAD
STURBRIDGE, MA 01566
PREPARED FOR
JUSTIN STELMOK
557 SOUTHWEST CUTOFF
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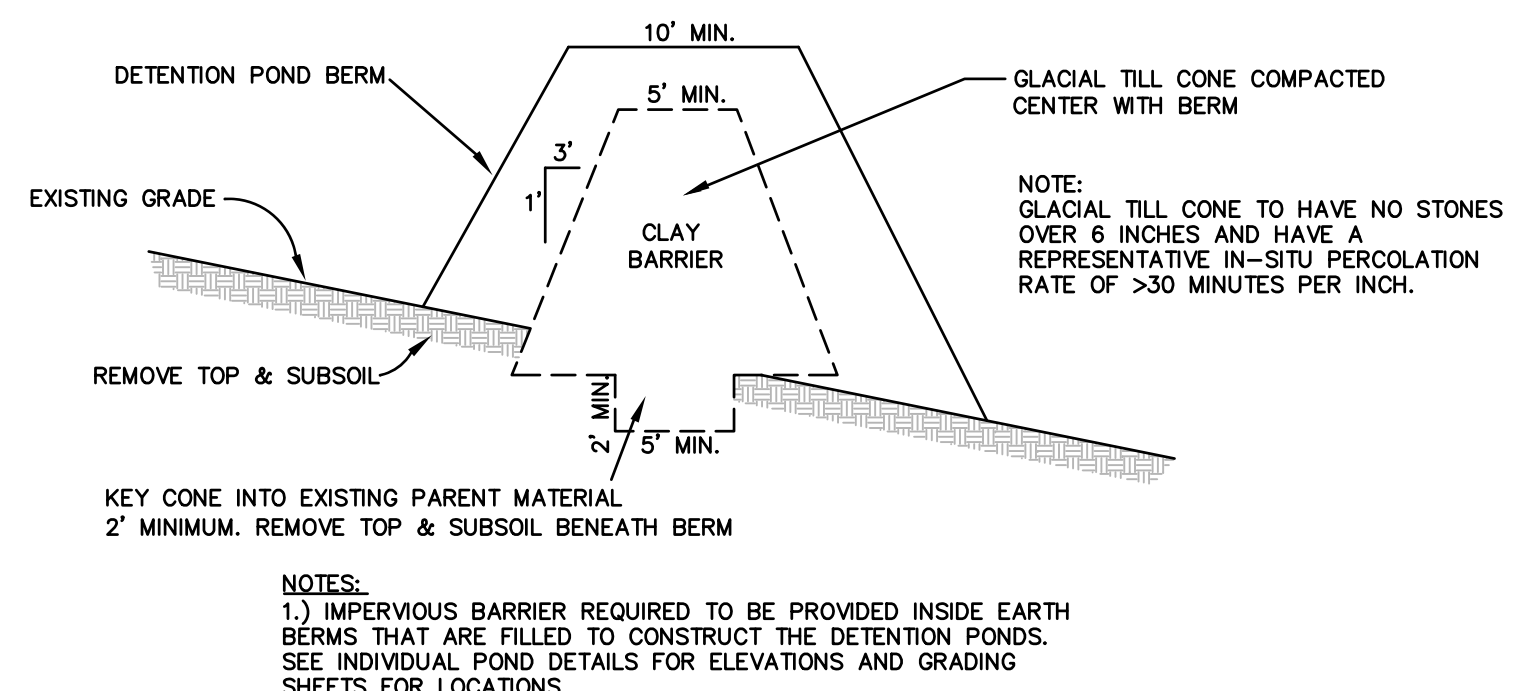
DRAWN BY:	WGN
DATE:	4/12/22
CHK BY:	POE
SCALE:	N.T.S.
PROJ. NO.:	287-2118K

SITE DETAILS



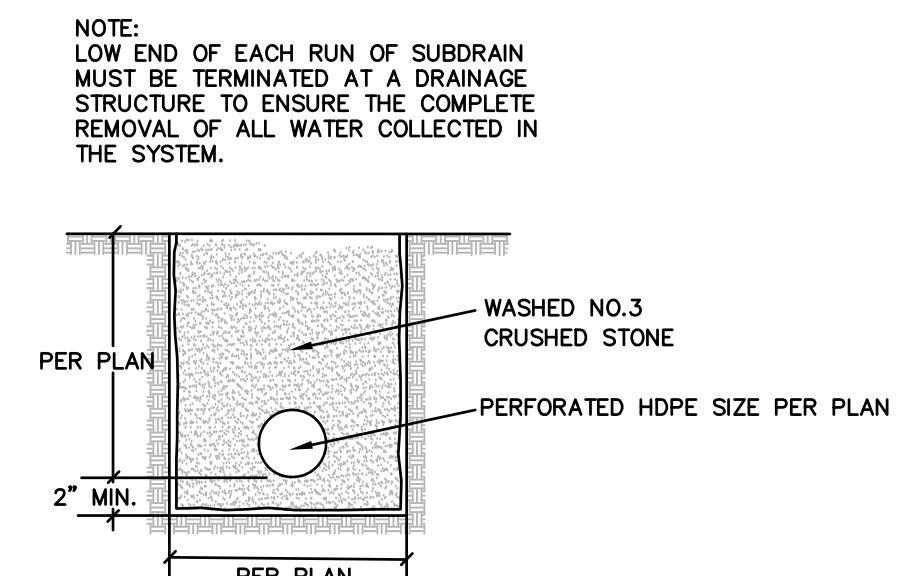
INFILTRATION BASIN 7.1

NOT TO SCALE



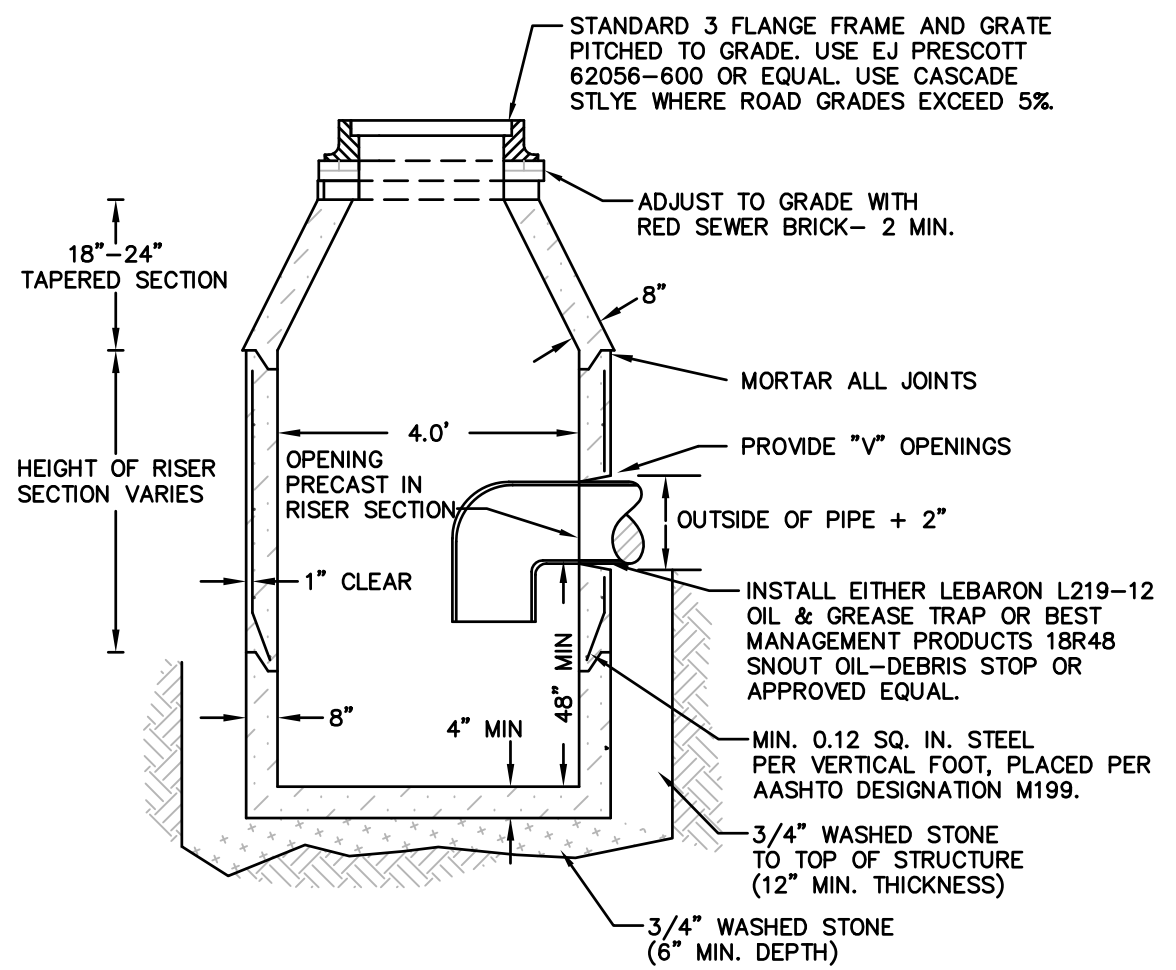
IMPERVIOUS BARRIER DETAIL

NOT TO SCALE



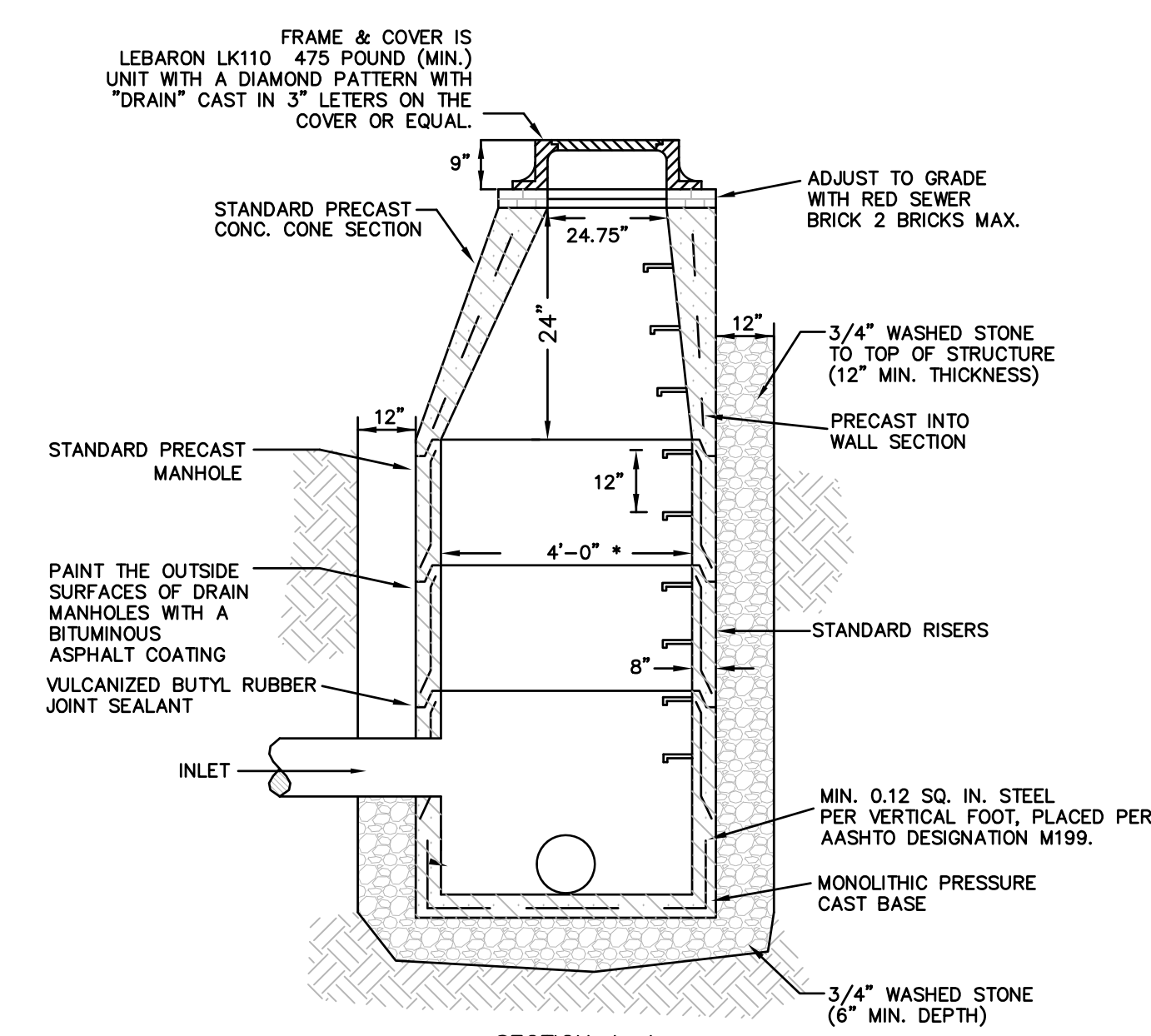
INTERCEPTOR TRENCH DETAIL

NOT TO SCALE



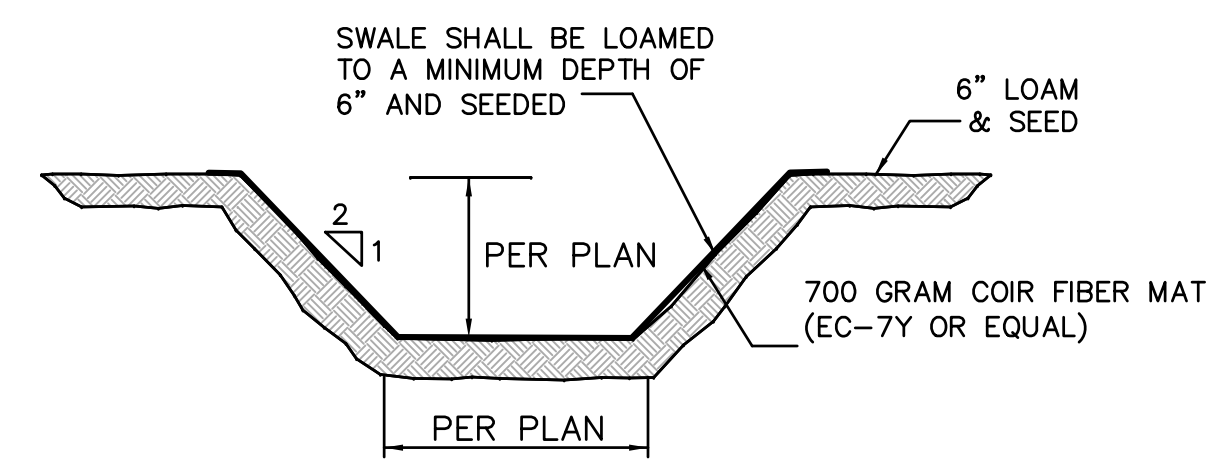
TYPICAL PRECAST CATCHBASIN

NOT TO SCALE



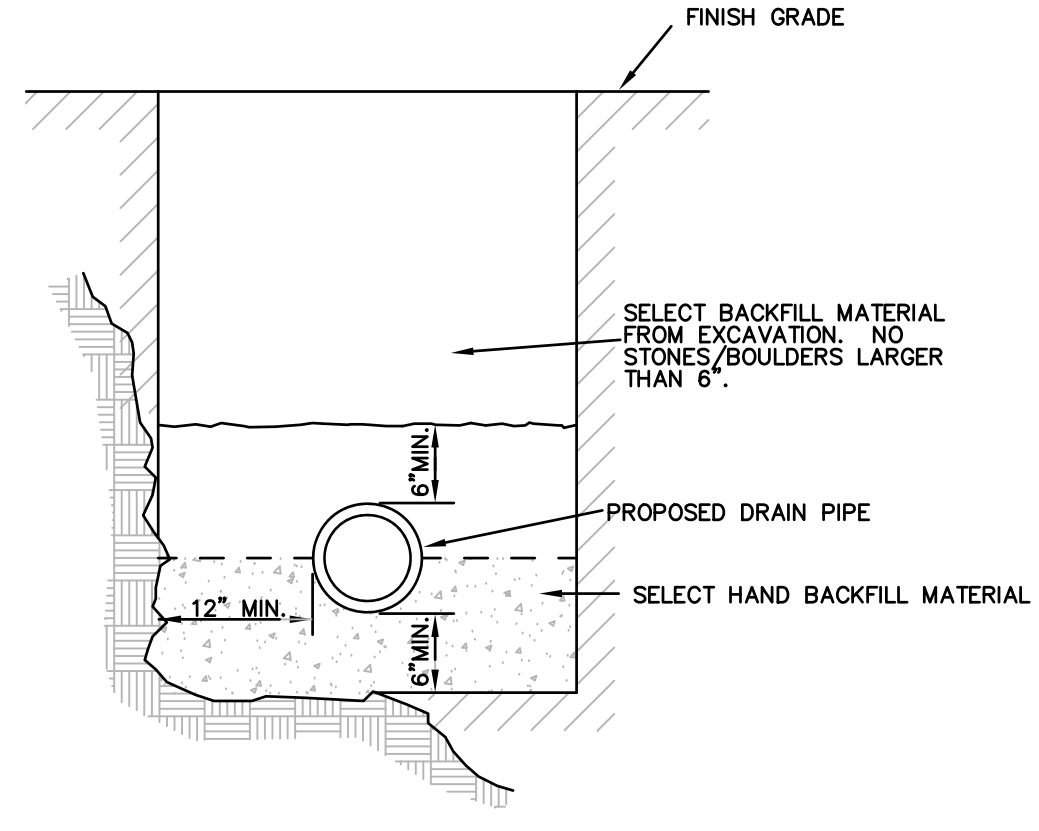
TYPICAL PRE-CAST DRAIN MANHOLE

NOT TO SCALE



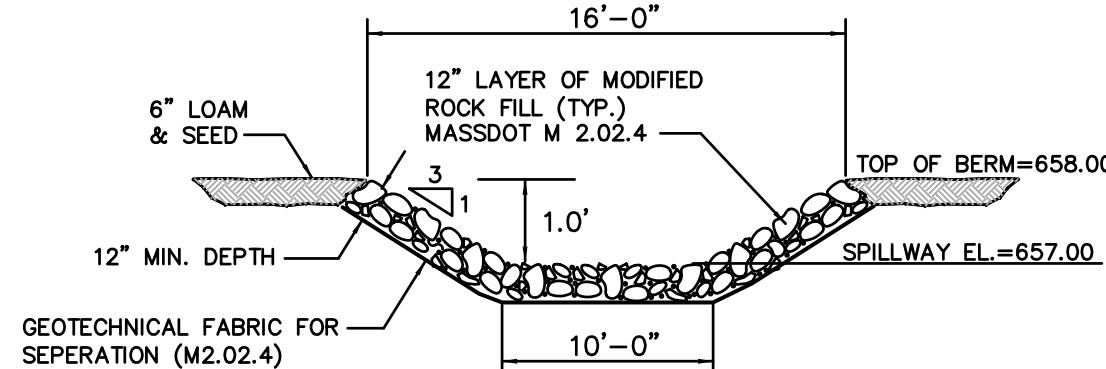
GRASS LINED SWALE DETAIL

NOT TO SCALE



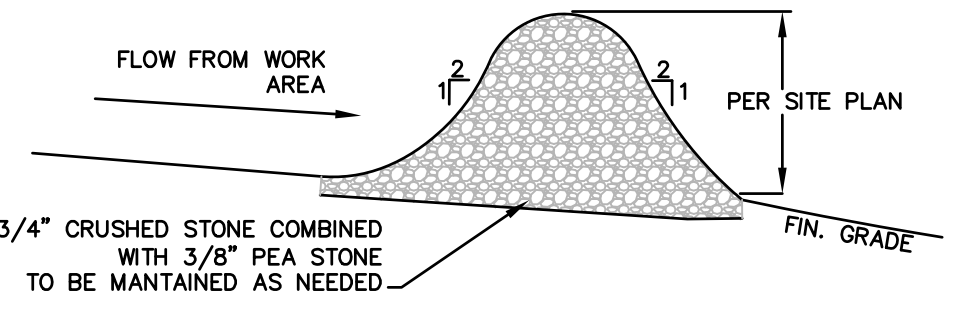
TYP. STORM DRAIN TRENCH SECTION

NOT TO SCALE



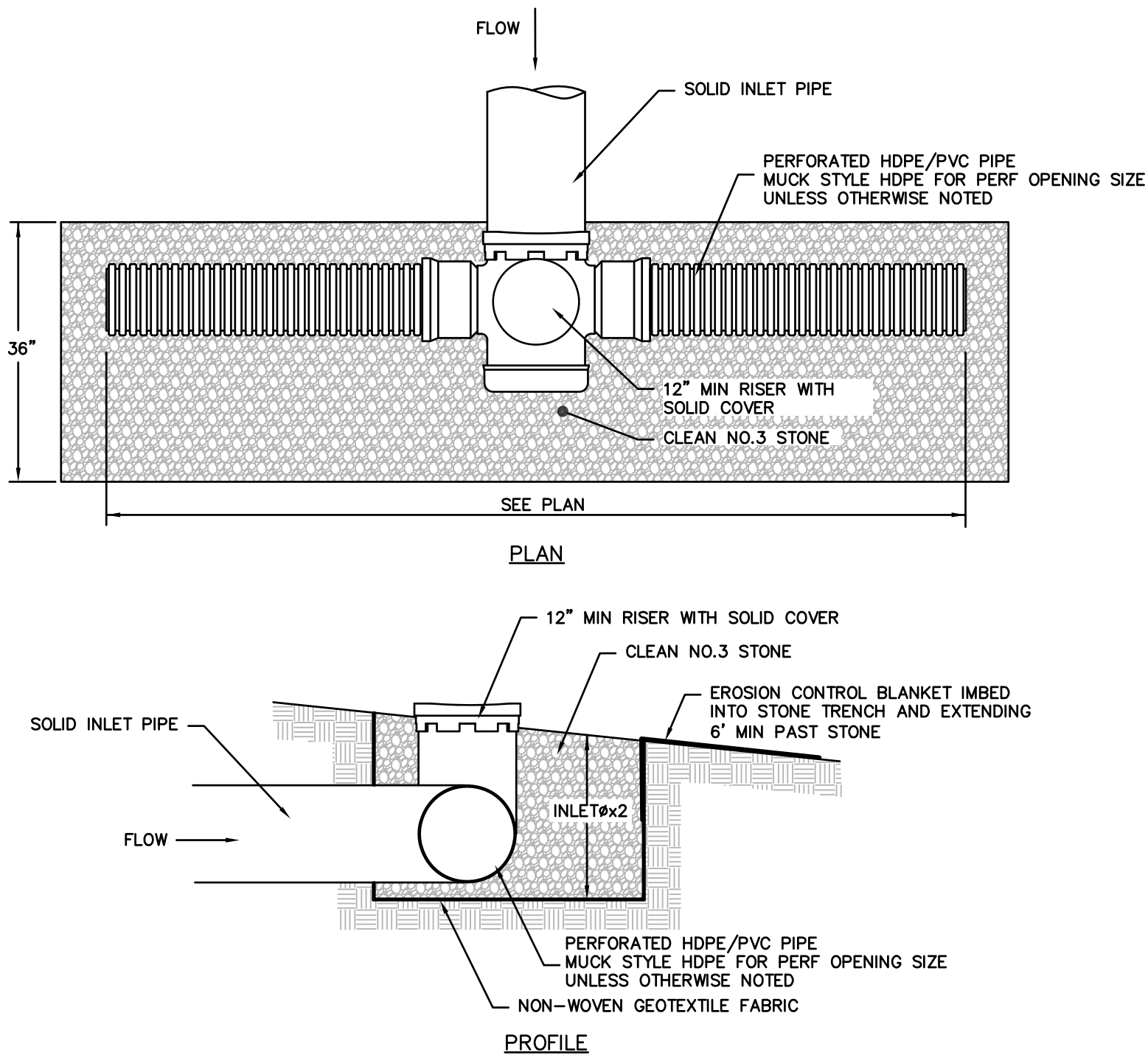
EMERGENCY SPILLWAY DETAIL

NOT TO SCALE



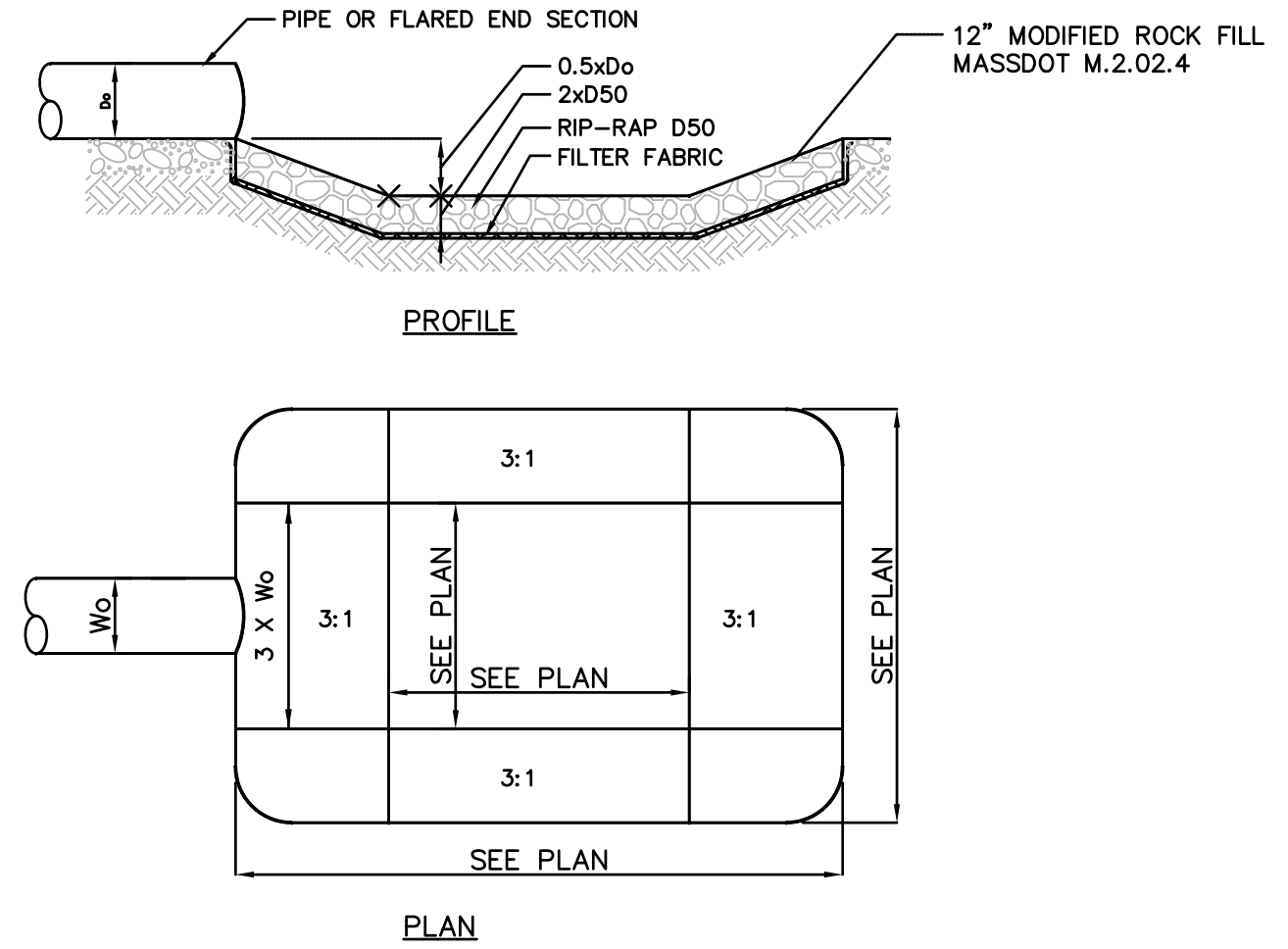
STONE CHECK DAM DETAIL

NOT TO SCALE



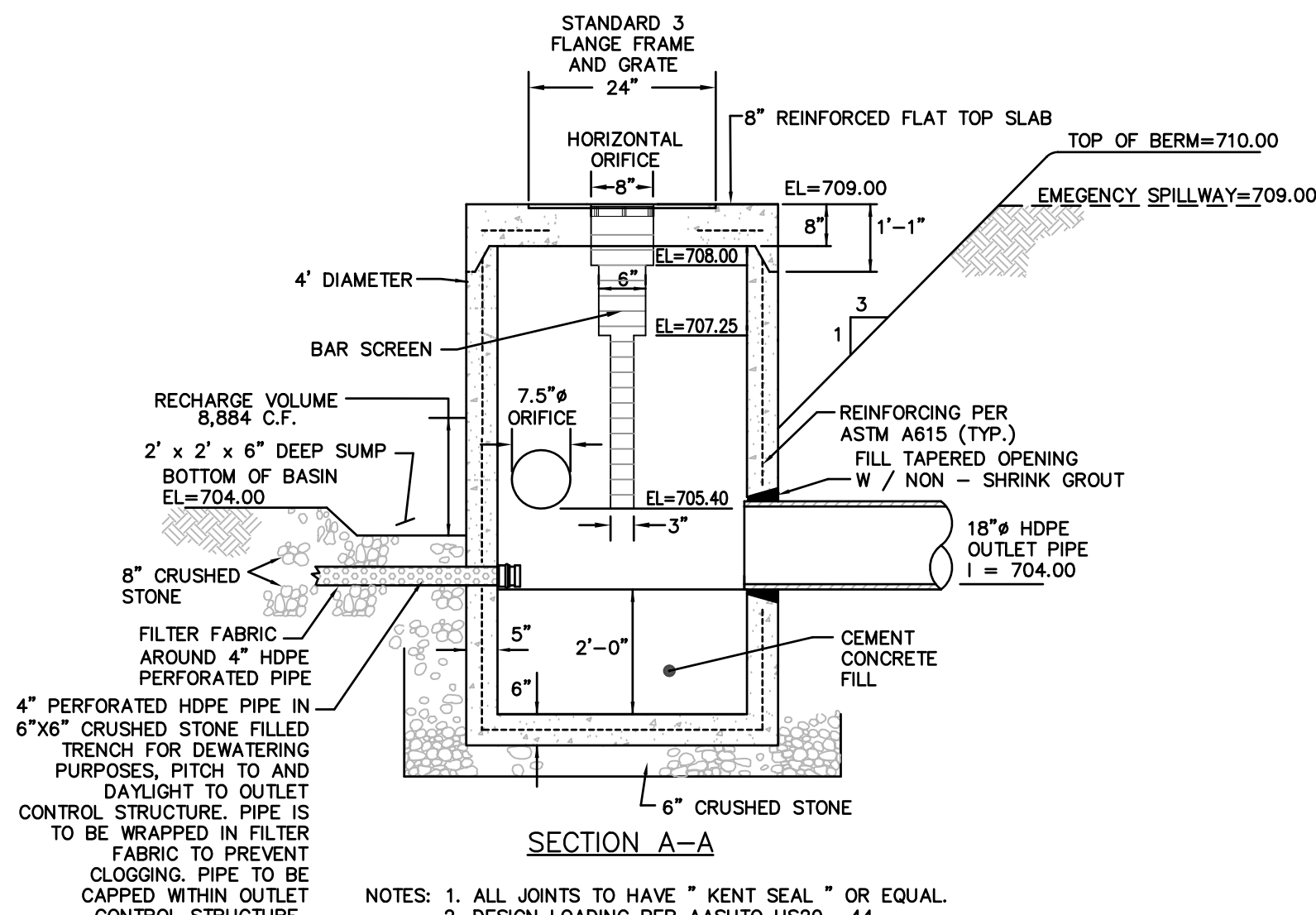
PERF. PIPE LEVEL SPREADER

NOT TO SCALE



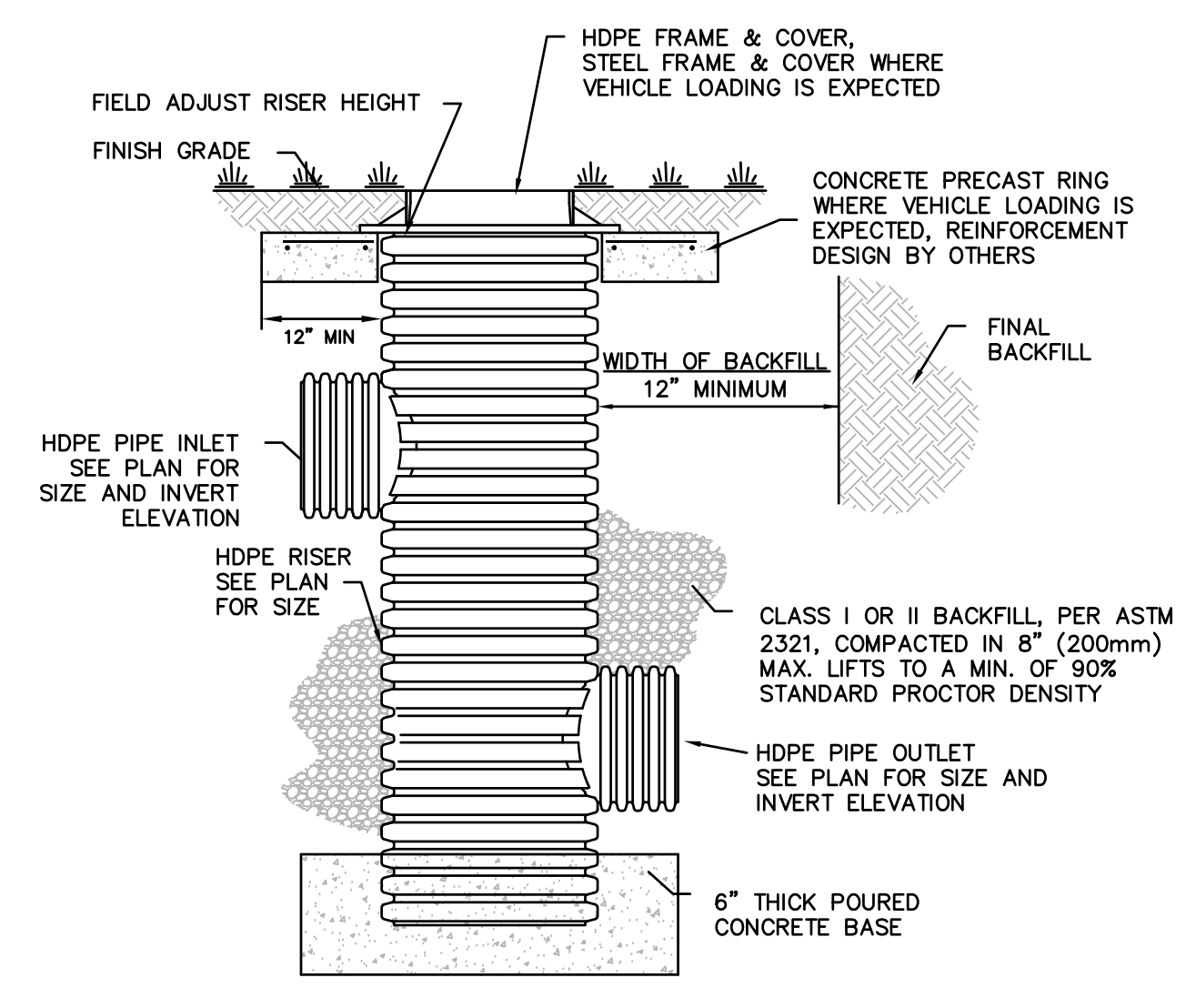
TYPICAL RIP-RAP OUTLET

NOT TO SCALE



PRECAST CONCRETE OUTLET CONTROL STRUCTURE

NOT TO SCALE



HDPE RISER DETAIL

NOT TO SCALE

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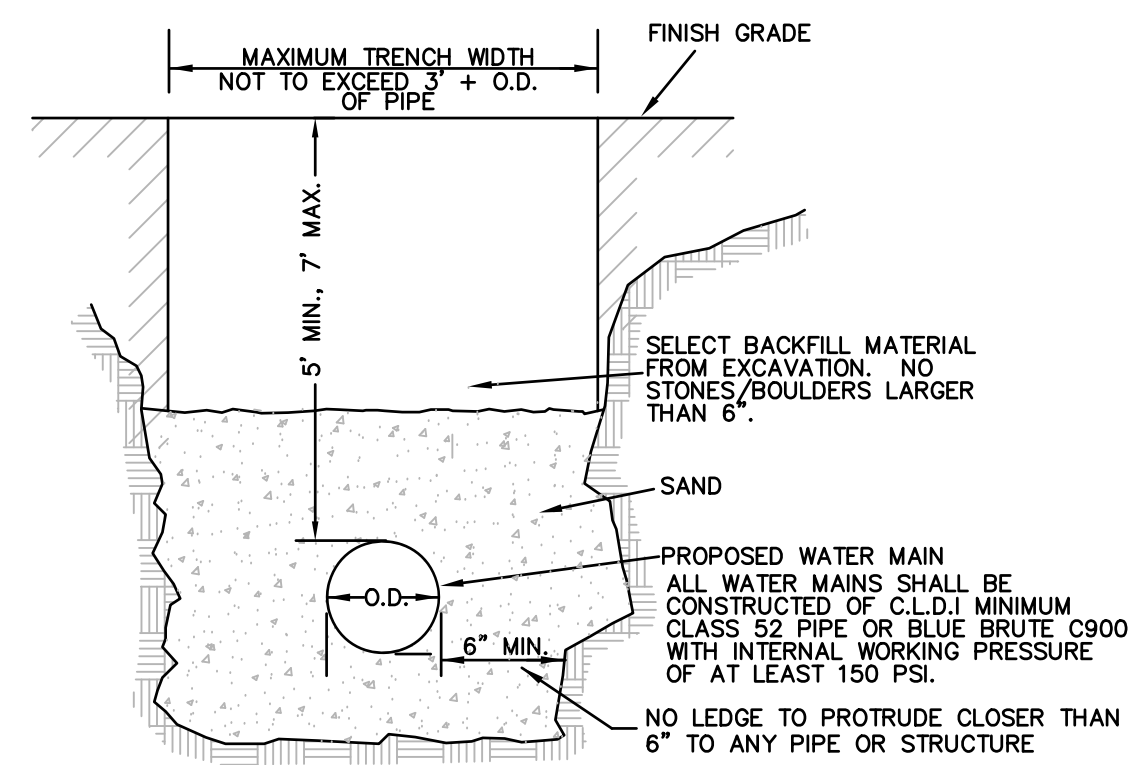
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SPECIAL PERMIT AND SITE PLAN
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PROJ. NO. 287-2118K

SITE DETAILS

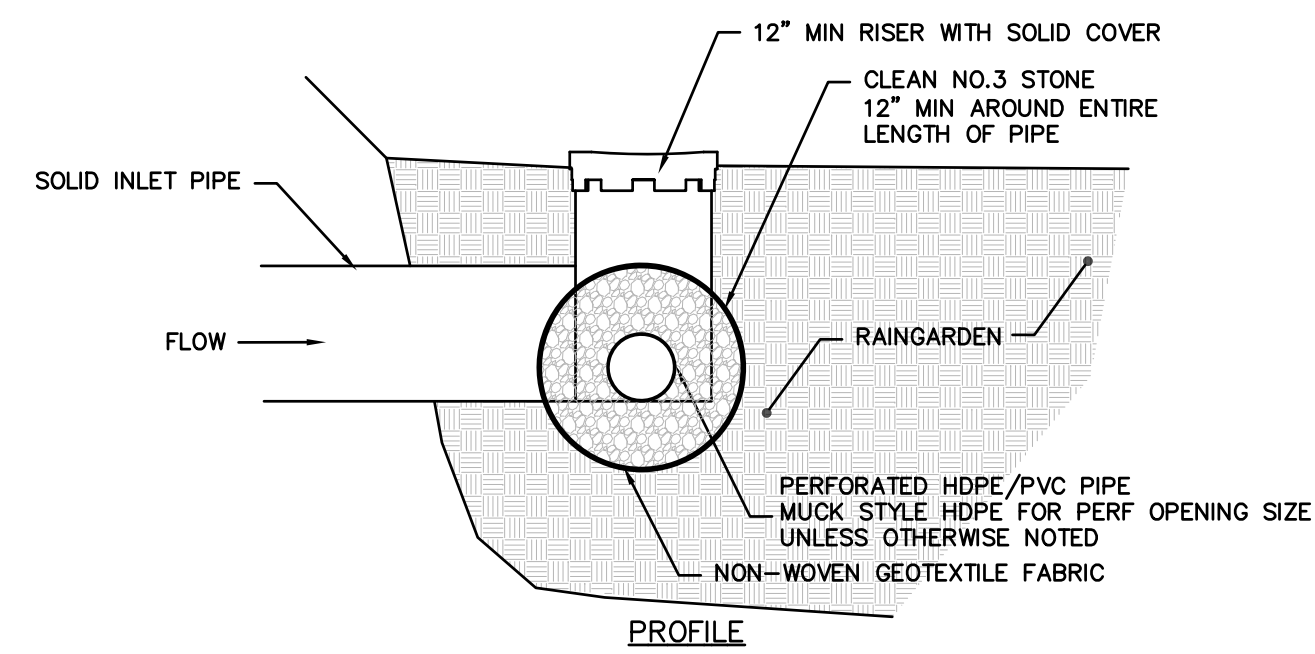
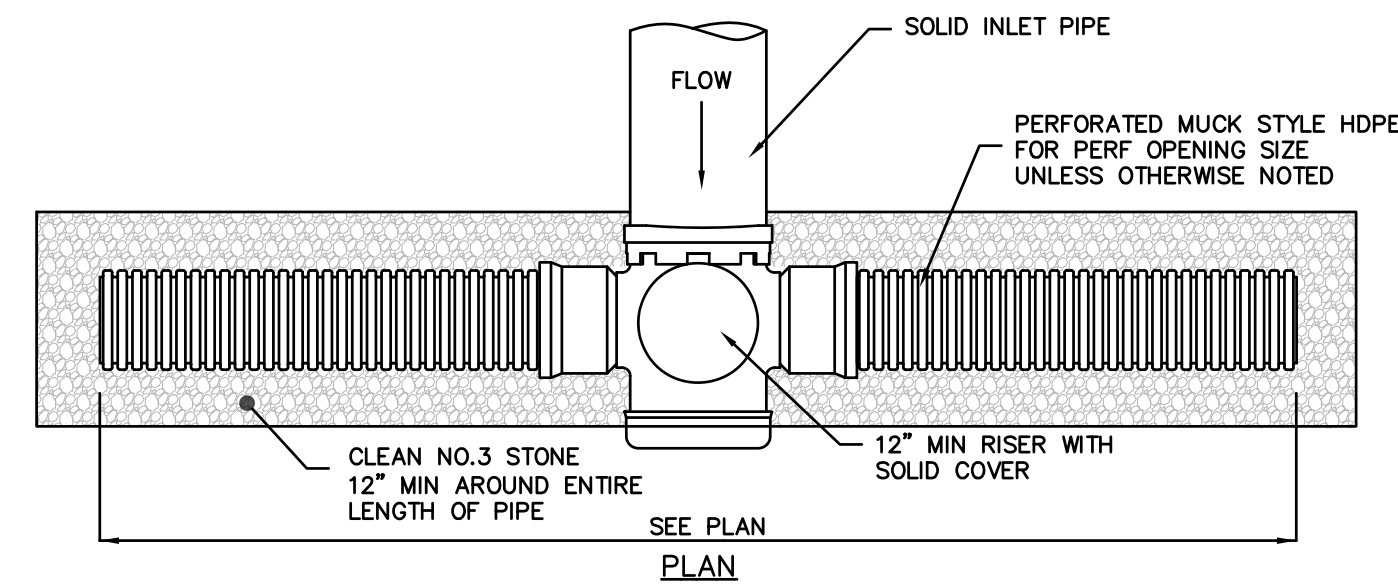
NOTE: WHERE THE WATER MAIN IS PROPOSED CROSS COUNTRY TO FISKE HILL RD. THE FINISHED GRADE IS TO MATCH EXISTING GRADE. DISTURBED SOILS ARE TO BE STABILIZED WITH BIODEGRADABLE JUTE NETTING, LOAM AND SEED.



TYP. WATER MAIN TRENCH SECTION

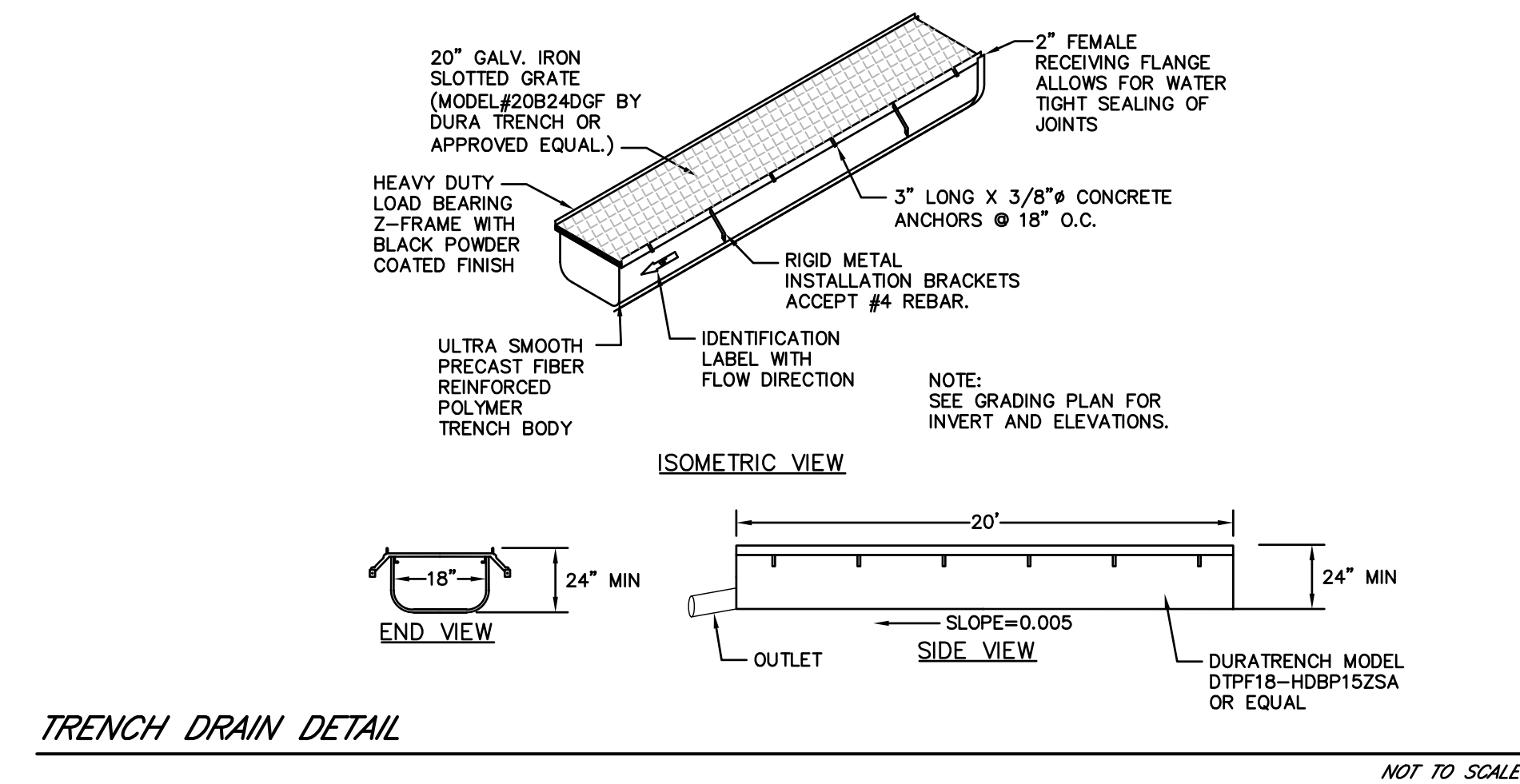
NOT TO SCALE

NOTE: IF SIGNIFICANT LEDGE IS ENCOUNTERED IN THE COURSE OF ROADWAY OR UTILITY CONSTRUCTION, THE TOWN WILL BE INFORMED AND A PLAN FOR SOIL TESTS OR BORINGS AS WELL AS EXPECTED METHODS AND SCHEDULE OF REMOVAL SHALL BE SUBMITTED TO THE TOWN.



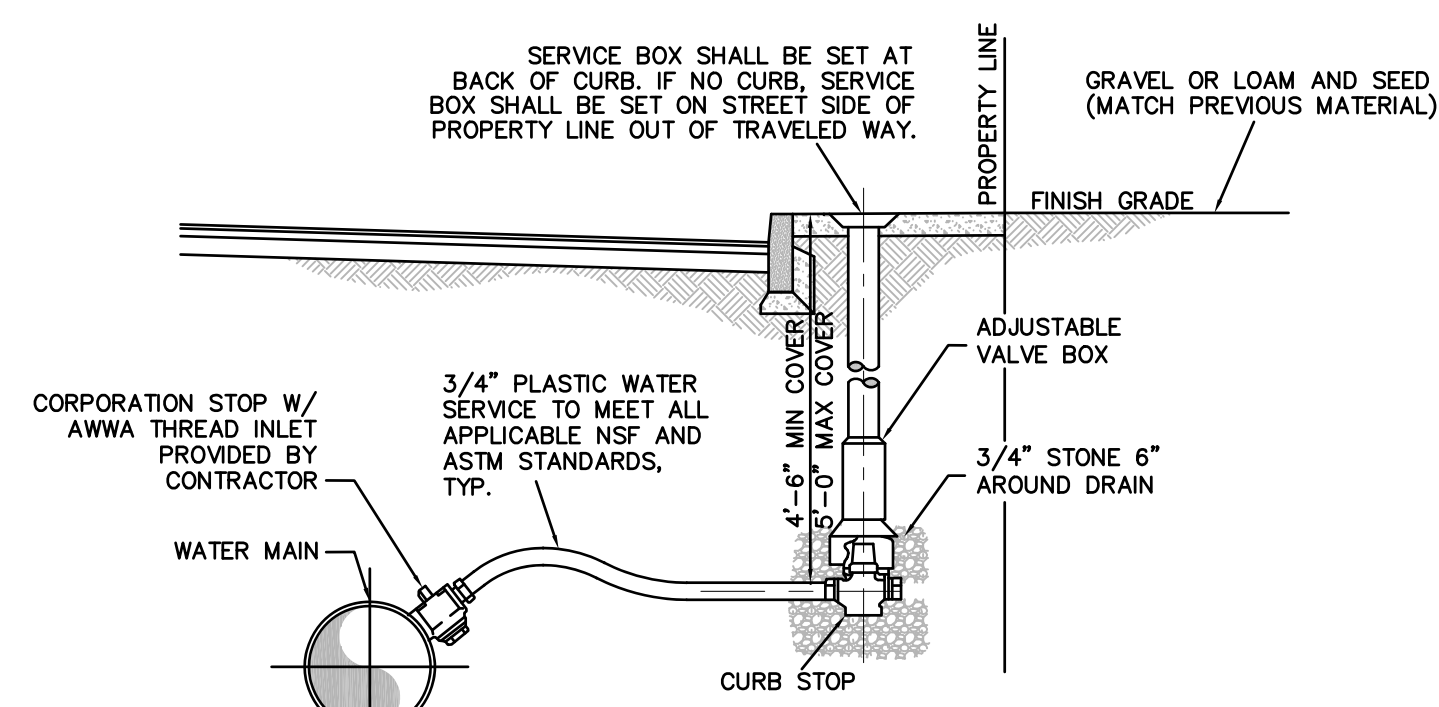
SUBSURFACE INLET DETAIL

NOT TO SCALE



TRENCH DRAIN DETAIL

NOT TO SCALE

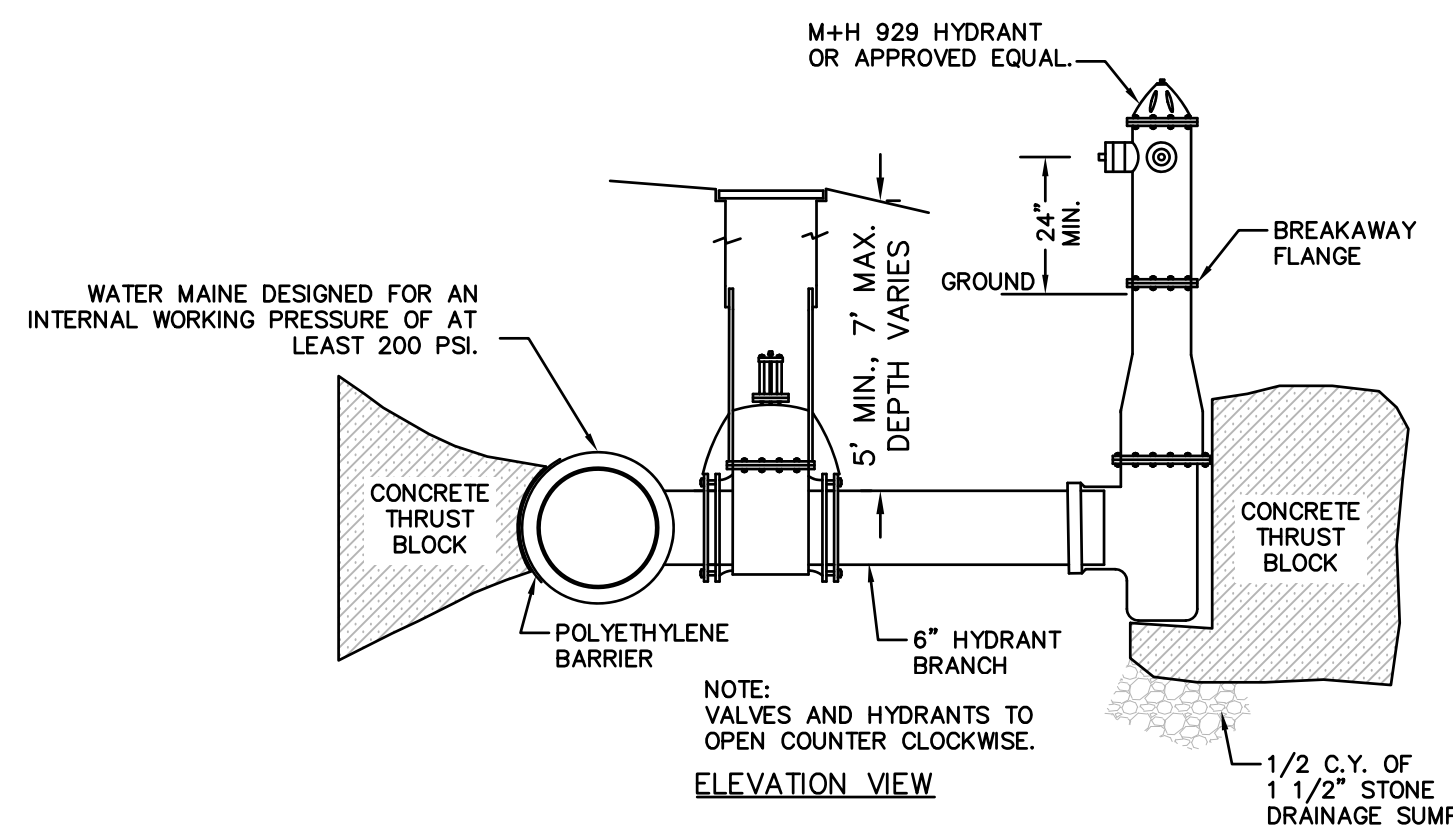


NOTES:

- 1) NO WATER PIPE DEPTH SHALL EXCEED 5 FEET FROM FINISHED GRADE
- 2) CONTRACTOR RESPONSIBLE FOR CONTACTING DIG SAFE PRIOR TO EXCAVATION
- 3) TRENCH SHALL NOT BE BACKFILLED UNTIL SERVICE HAS BEEN INSPECTED AND APPROVED BY THE STURBRIDGE D.P.W.
- 4) WATER SHALL BE TURNED ON BY THE SWD ONLY AFTER APPROVAL
- 5) ONLY CONTRACTORS APPROVED BY THE SWD SHALL MAKE TAP
- 6) WATER SERVICE LINES AND METER SHALL BE SIZED BY THE SWD
- 7) ALL COMPACTION SHALL BE BY MECHANICAL MEANS AT NO GREATER THAN 12 INCH LIFTS
- 8) NEW AND RENEWED SERVICES SHALL HAVE REMOTE READERS
- 9) SERVICE SHALL BE FLUSHED BEFORE ACTIVATING TO AVOID METER CLOGGING
- 10) THERE SHALL BE A HORIZONTAL SEPARATION OF 10 FEET FROM ANY OTHER UTILITY LINE
- 11) EXISTING CORPORATION SHALL BE CLEANED WHEN A SERVICE IS RENEWED
- 12) SERVICE SHALL BE LAID PERPENDICULAR TO THE WATER MAIN UNTIL PROPERTY LINE
- 13) THE STURBRIDGE D.P.W. RESERVES THE RIGHT TO MODIFY STANDARDS AT THEIR DISCRETION
- 14) CORPORATION STOPS, CURB STOPS AND SERVICE BOXES SHALL BE OF A TYPE APPROVED BY THE STURBRIDGE D.P.W.

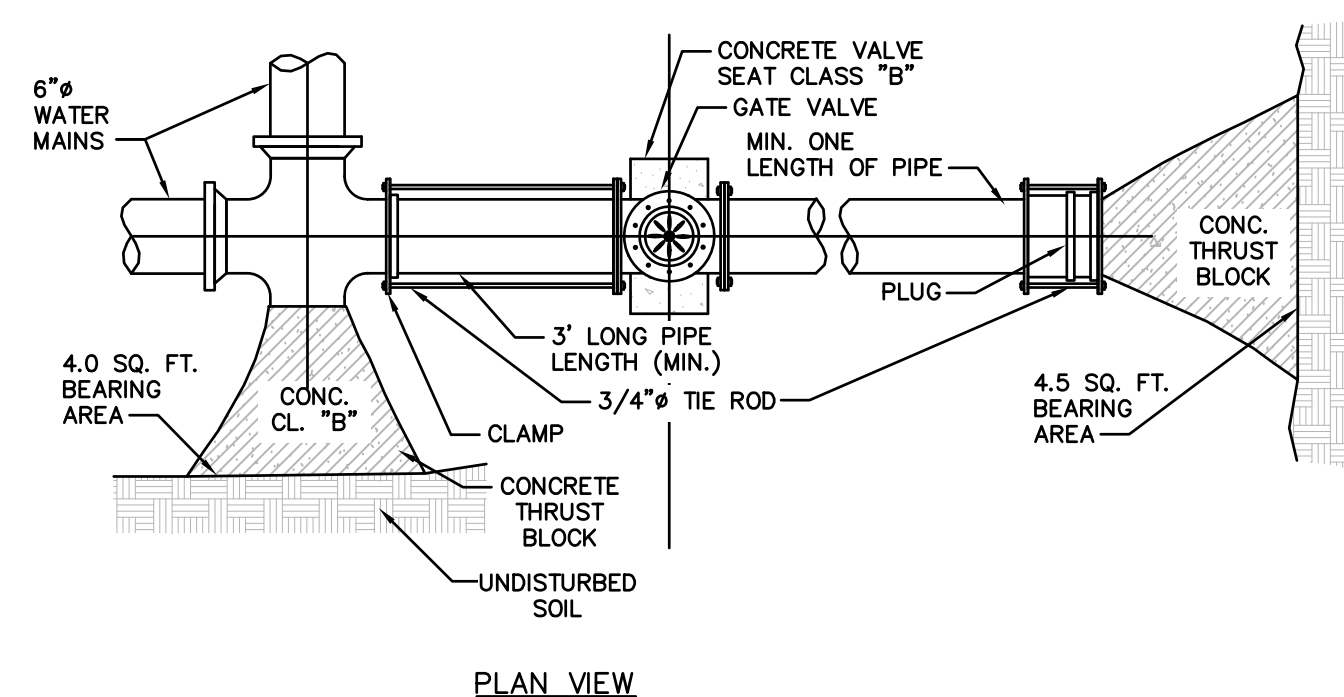
TYPICAL DOMESTIC SERVICE CONNECTION

NOT TO SCALE



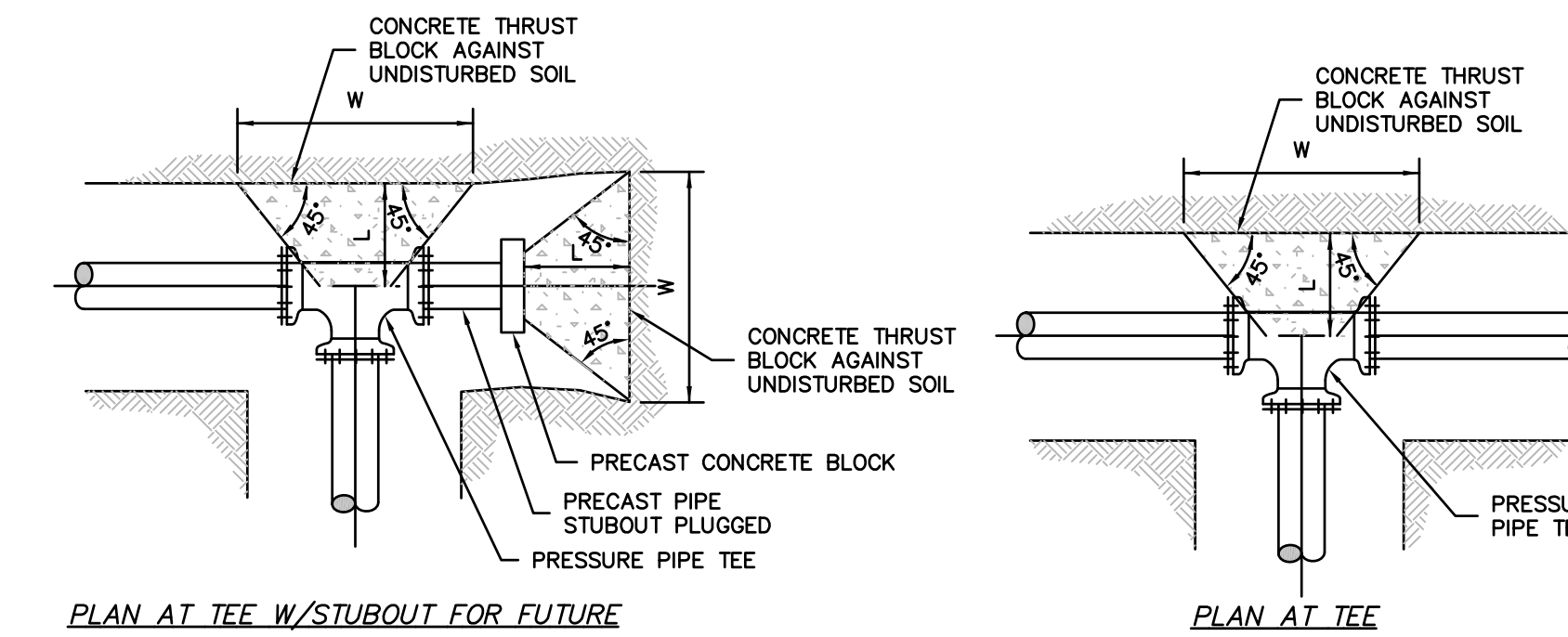
TYPICAL HYDRANT W/GATE

NOT TO SCALE



TYPICAL STUB FOR FUTURE CONNECTION

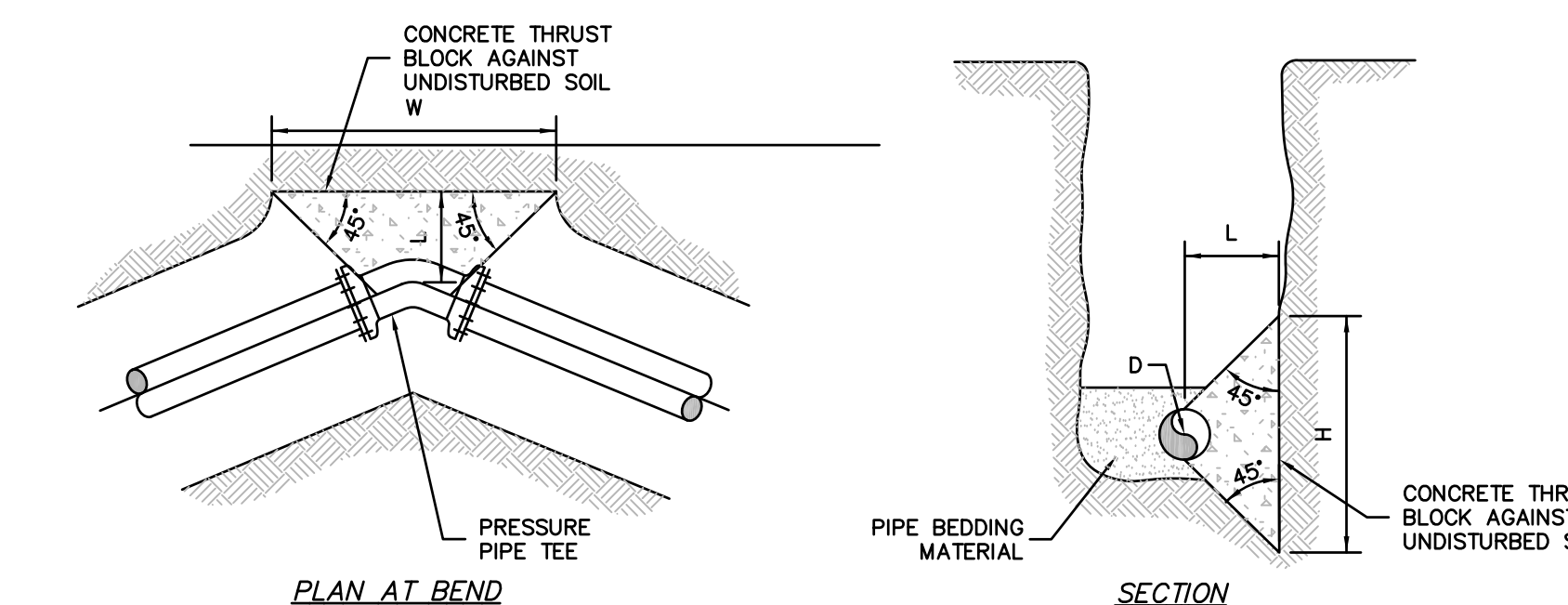
NOT TO SCALE



PLAN AT TEE W/STUBOUT FOR FUTURE

PLAN AT TEE

D	22 1/2" BEND			45° BEND			90° BEND			TEE / CAP						
	BEARING AREA (S.F.)	L"	H"	W"	BEARING AREA (S.F.)	L"	H"	W"	BEARING AREA (S.F.)	L"	H"	W"				
8"	1.5	0.5'	1.0'	1.5'	1.0'	1.5'	2.5'	5.5	1.0'	2.0'	3.0'	3.9	1.0'	2.0'	2.5'	
12"	3.5	1.0'	1.5'	2.5'	6.5	1.0'	2.0'	3.5'	12.0	1.5'	3.0'	4.5'	8.5	1.5'	2.5'	4.0'
16"	6.0	1.0'	2.0'	3.0'	11.0	1.5'	3.0'	4.0'	20.5	2.0'	4.0'	5.5'	14.5	2.0'	3.5'	5.0'



PLAN AT BEND

SECTION

GENERAL NOTES:

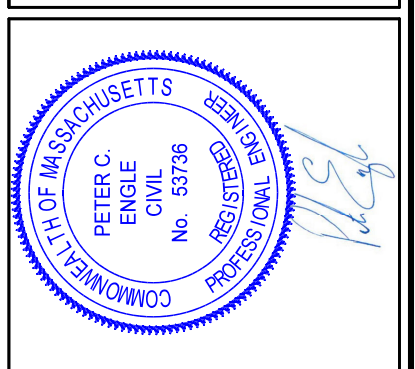
- 1) DIMENSIONS SHOWN CALCULATED PER 120 PSI INTERNAL PIPE PRESSURE FOR SOIL BEARING LOADS OF 3,000 PSF.
- 2) CONSTRUCT CONCRETE THRUST BLOCKS OF CONCRETE POURED AGAINST UNDISTURBED SOIL.
- 3) DIMENSIONS L, W, & H MAY BE ADJUSTED TO MEET FIELD CONDITIONS PROVIDED THE BEARING AREA REMAINS UNCHANGED.
- 4) THE HEIGHT OF THE BLOCK (H) SHALL BE LESS THAN OR EQUAL TO HALF THE TRENCH DEPTH.
- 5) PLACE POLYETHYLENE SHEETING OVER MJ FITTINGS TO PREVENTS DIRECT CONTACT BETWEEN CONCRETE AND THE FITTING.
- 6) THE STURBRIDGE WATER AND SEWER COMMISSION RESERVES THE RIGHT TO MODIFY STANDARDS AT THEIR DISCRETION.

CONCRETE THRUST BLOCK FOR HORIZONTAL BENDS AND TEES FOR WATER AND SEWER

NOT TO SCALE

REV	DATE	DESCRIPTION	TOWN, DEP., PEER ENG. COMMENTS
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SPECIAL PERMIT AND SITE PLAN
"BLUEBERRY HILL ESTATES"
LOT 3 BERRY FARMS ROAD
STURBRIDGE, MA 01566
PREPARED FOR
JUSTIN STELMOK
557 SOUTHWEST CUTOFF
WORCESTER, MA 01607

DRAWN BY: WCN
DATE: 4/12/22
CHK BY: POE
SCALE: N.T.S.
PROJ. NO. 287-2118K

SITE DETAILS

TREE PLANTING NOTES:

- STREET TREES SHALL BE PLANTED ALONG BOTH SIDES OF THE STREET AT APPROXIMATE INTERVALS OF FIFTY FEET (50') AND ON PRIVATELY OWNED LOTS, 5-20' FROM THE STREET RIGHT-OF-WAY. PLANTED TREES SHALL HAVE A TRUNK DIAMETER OF NOT LESS THAN 3 INCHES MEASURED 4 FEET ABOVE GRADE.
- EXISTING TREES WITHIN 5-20' FROM RIGHT-OF-WAY ARE TO BE PRESERVED WHERE POSSIBLE. ALL TREES 6" CALIPER AND OVER SHALL BE IDENTIFIED. THESE TREES CAN BE COUNTED AS STREET TREES. IF THERE ARE GAPS BETWEEN EXISTING TREES THAT CAN BE COUNTED AS STREET TREES GREATER THAN 50', NEW STREET TREES WILL BE PLANTED WITHIN THE HATCHED AREAS SO THAT THERE ARE NO PLACES WHERE THERE IS MORE THAN 50' BETWEEN STREET TREES. THE EXISTING TREES REMAINING IN THE ROAD RIGHT-OF-WAY SHALL BE PRUNED AND TRIMMED TO CONFORM TO THE SPECIFICATIONS OF THE NATIONAL ARBORISTS ASSOCIATION CLASS 1 PRUNE AND TRIM. UPON COMPLETION OF PRUNING AND TRIMMING, THE SUBDIVIDER SHALL REQUEST THE TREE WARDEN TO INSPECT THE TREES AND CERTIFY THAT THEY CONFORM TO THE SPECIFICATIONS.
- ALL PLANTED TREES AND SHRUBS SHALL BE GUARENTEED BY THE SUBDIVIDER FOR A MINIMUM PERIOD OF (2) YEARS. ANY UNHEALTHY OR DEAD TREE SHALL BE REPLACED WITH ANOTHER THAT AGAIN SHALL BE GUARENTEED FOR TWO (2) YEARS.

DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

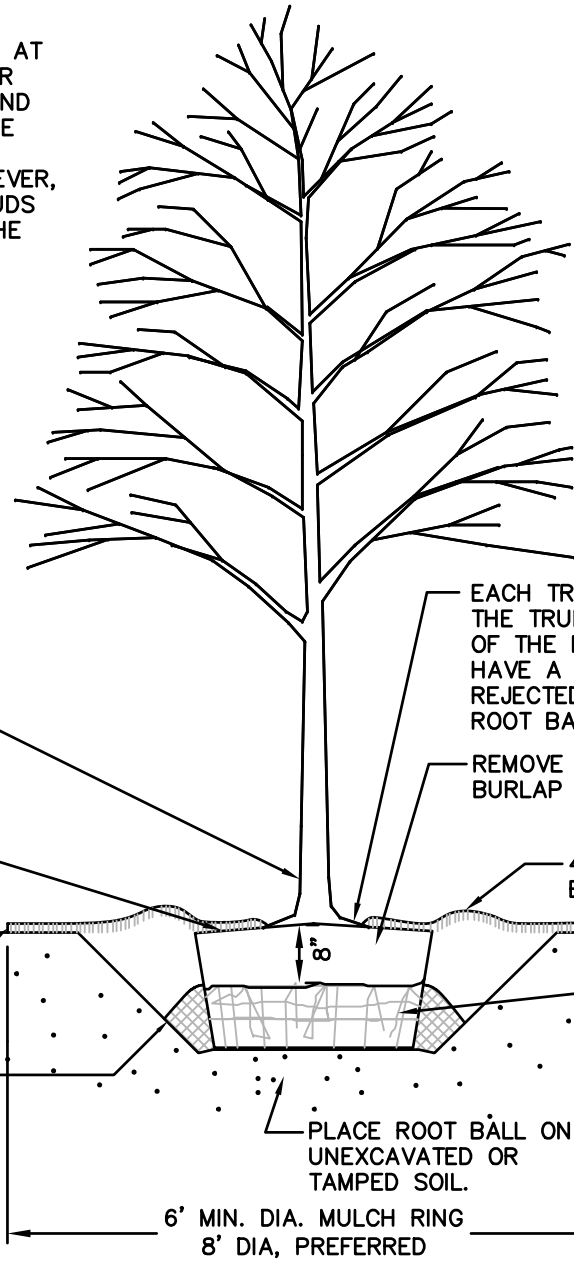
WRAP TREE TRUNKS ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

MARK THE NORTH SIDE OF THE TREE IN THE NURSERY AND ROTATE TREE TO FACE NORTH AT THE SITE, WHEREVER POSSIBLE.

SET TOP OF ROOT BALL FLUSH TO GRADE OR 1-2" HIGHER IS SLOWLY DRAINING SOILS.

2" MULCH. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK. MAINTAIN THE MULCH WEED FREE FOR A MINIMUM OF 3 YEARS AFTER PLANTING.

TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT.



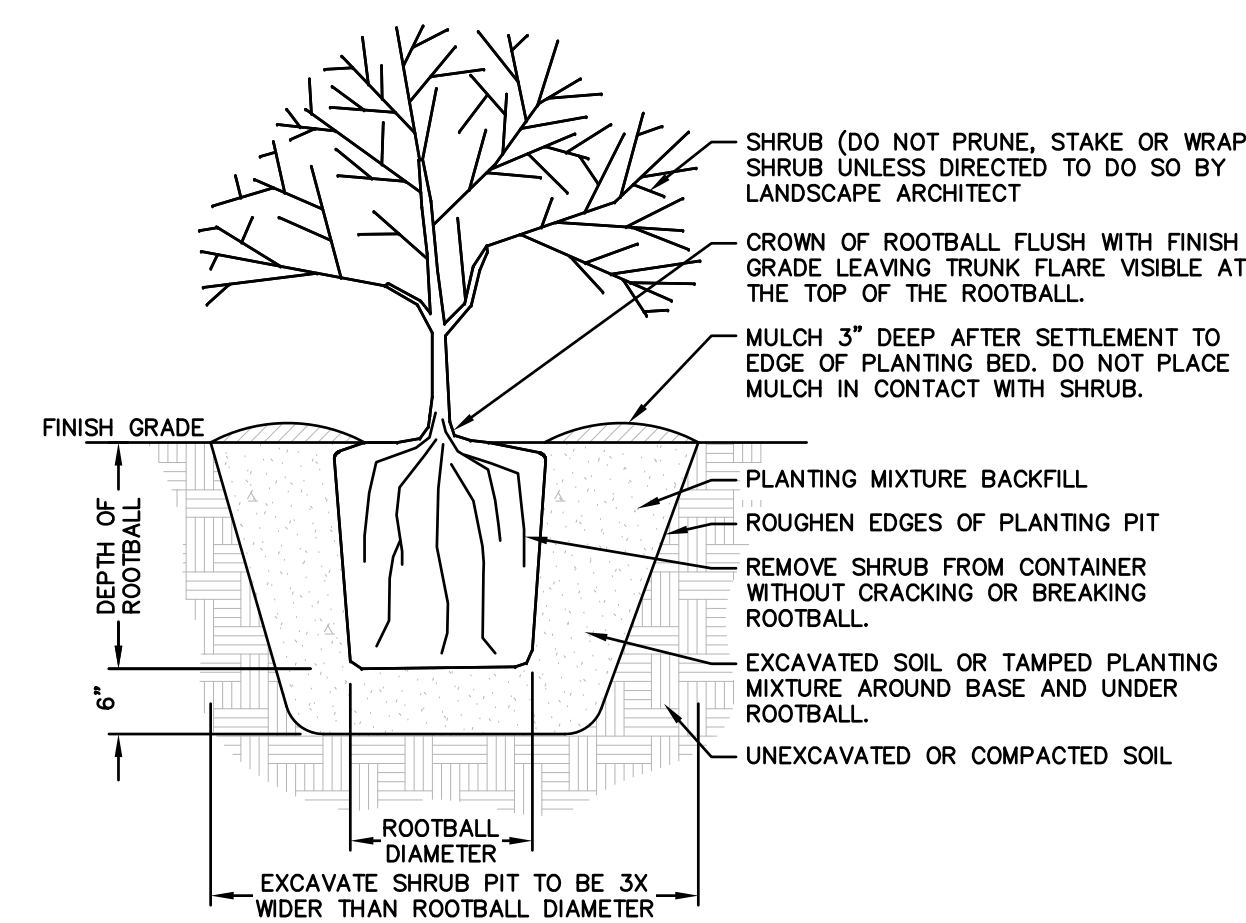
NOTES

- PLEASE REFER TO INTRODUCTION AND USE CRITERIA PRIOR TO USING THIS DETAIL.
- THIS DETAIL ASSUMES THAT THE PLANTING SPACE IS LARGER THAN 16 SQ. FT., OPEN TO THE SKY, AND NOT COVERED BY ANY PAVING OR GRATING.

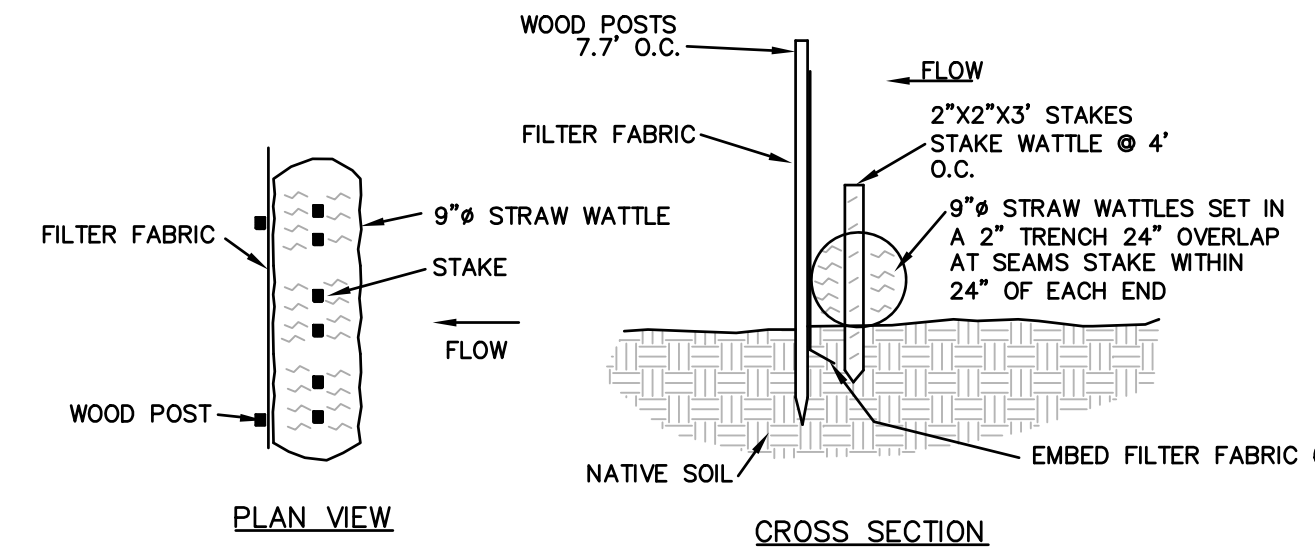
LEGEND AND PLANTING SCHEDULE:

- PROPOSED STREET TREE - QUERCUS RUBRA, NORTHERN RED OAK
- PROPOSED STREET TREE - ACER RUBRUM, RED MAPLE
- PROPOSED STREET TREE - TILIA AMERICANA, AMERICAN LINDEN
- PROPOSED STREET TREE - BETULA POPULIFOLIA, GRAY BIRCH

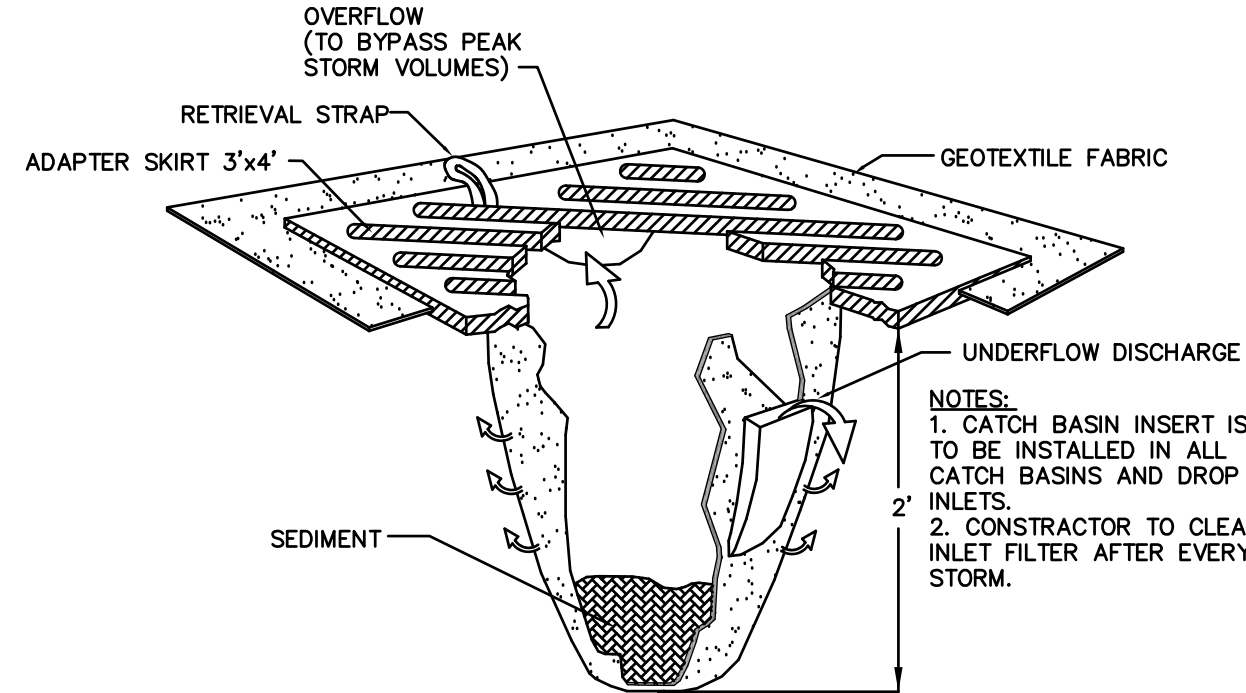
TREE PLANTING DETAIL - B&B TREES IN ALL SOIL TYPES
NOT TO SCALE



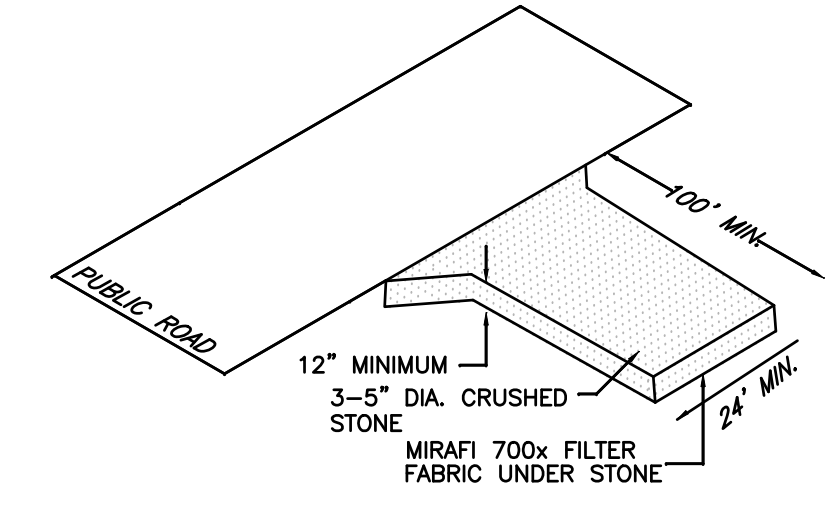
SHRUB PLANTING DETAIL
NOT TO SCALE



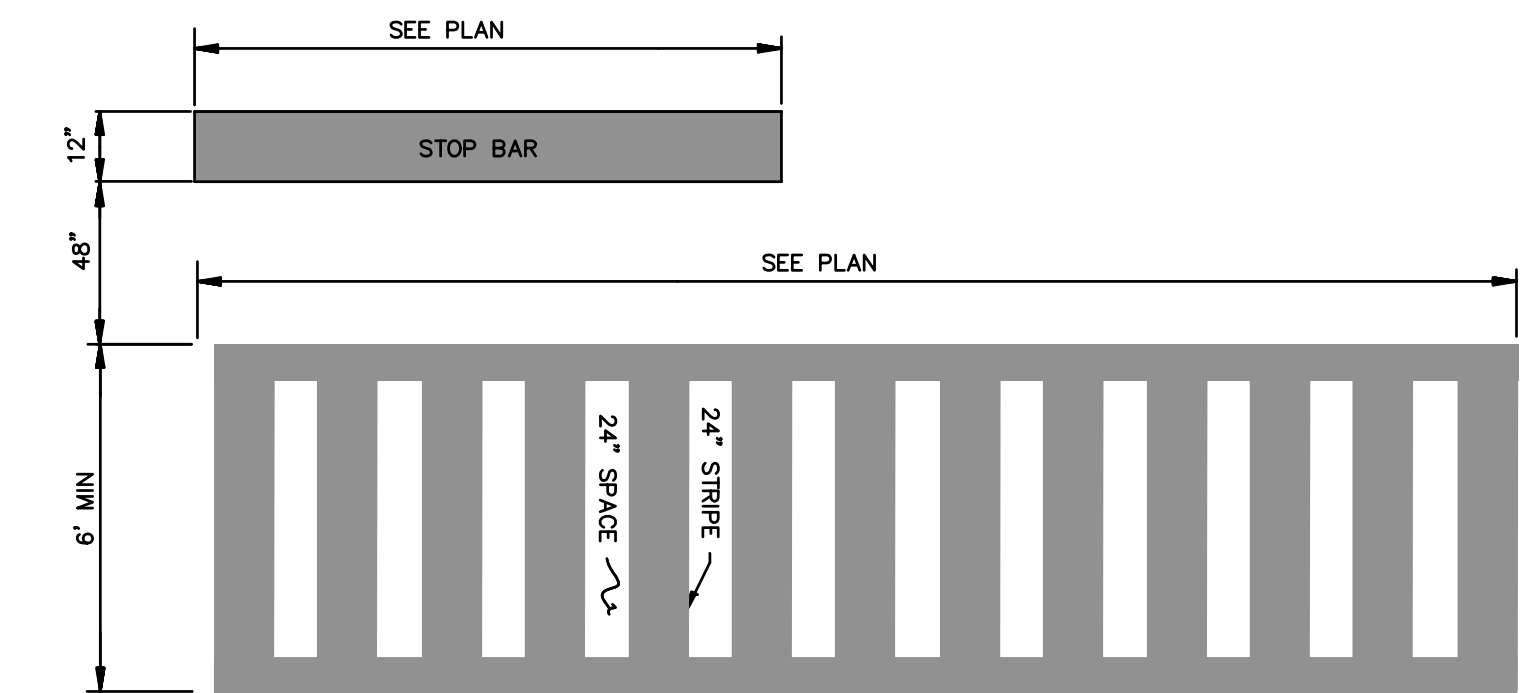
STRAW WATTLE AND SILT FENCE DETAIL
NOT TO SCALE



CATCH BASIN INLET FILTER "SILT SACK"
NOT TO SCALE

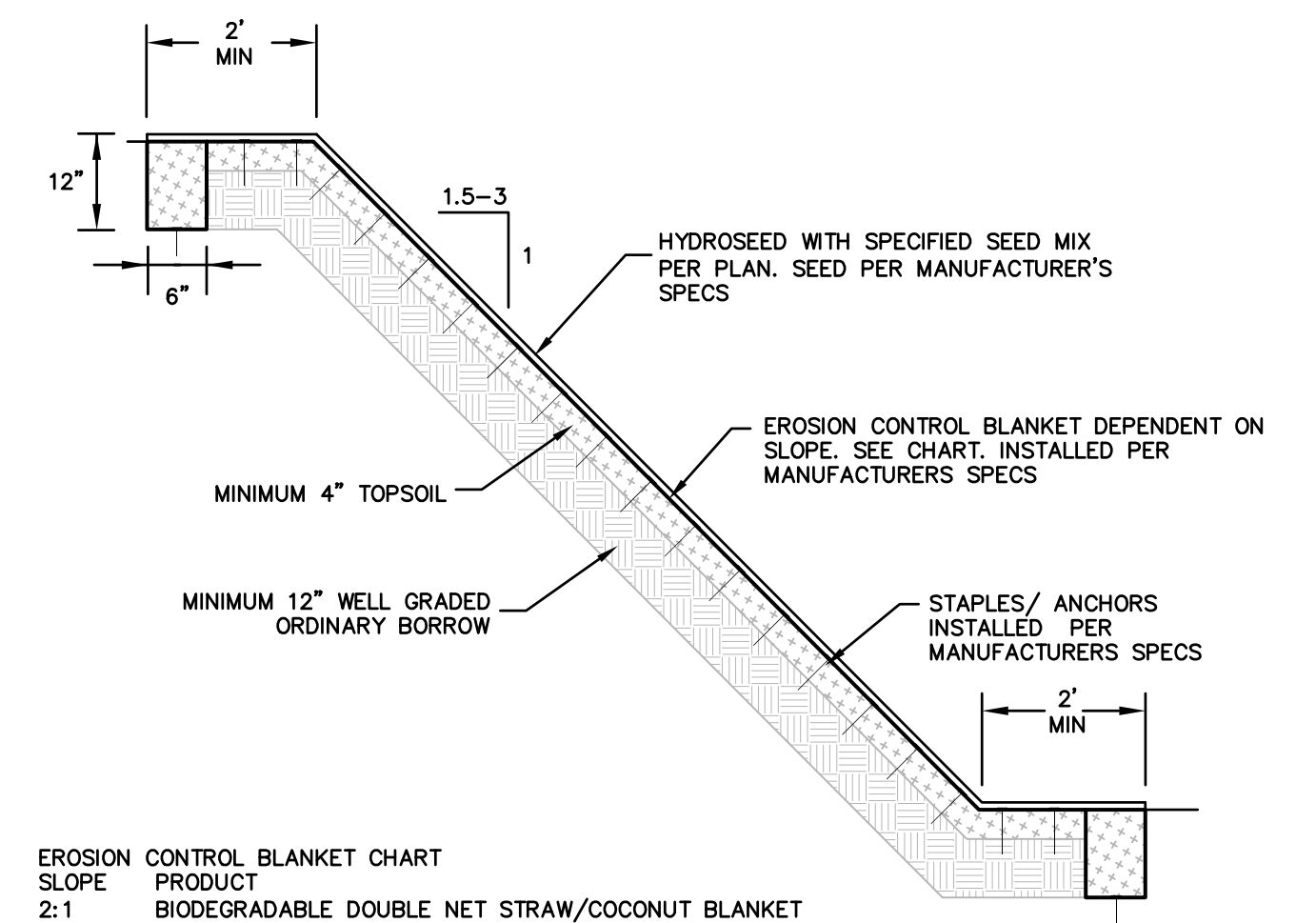


SITE ENTRANCE MAT
NOT TO SCALE



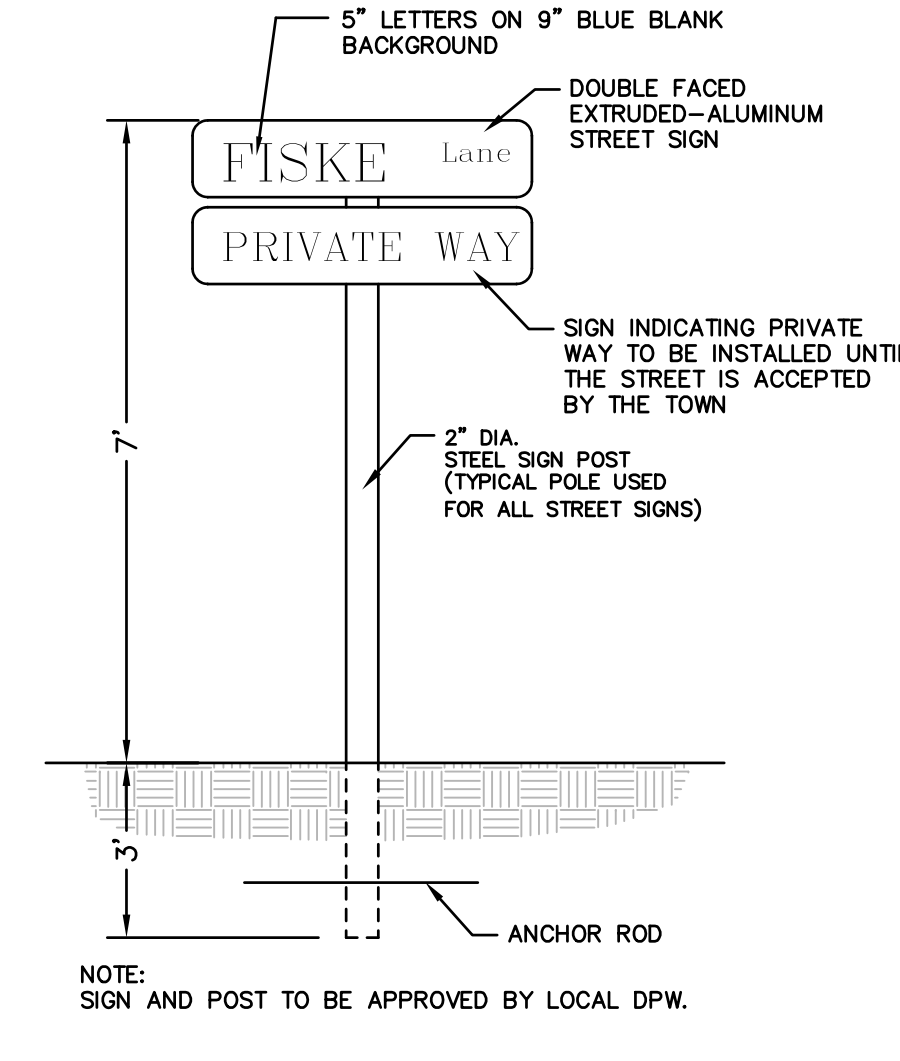
- NOTES:**
- MARKINGS FOR STREET SHALL BE ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
 - THESE MARKINGS ARE TO BE PAINTED REFLECTIVE WHITE.
 - ALL LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (FOUR 6" LINES INSTEAD OF ONE 24" LINE) WILL BE ACCEPTED.

CROSSWALK DETAIL
PAVEMENT MARKINGS
NOT TO SCALE

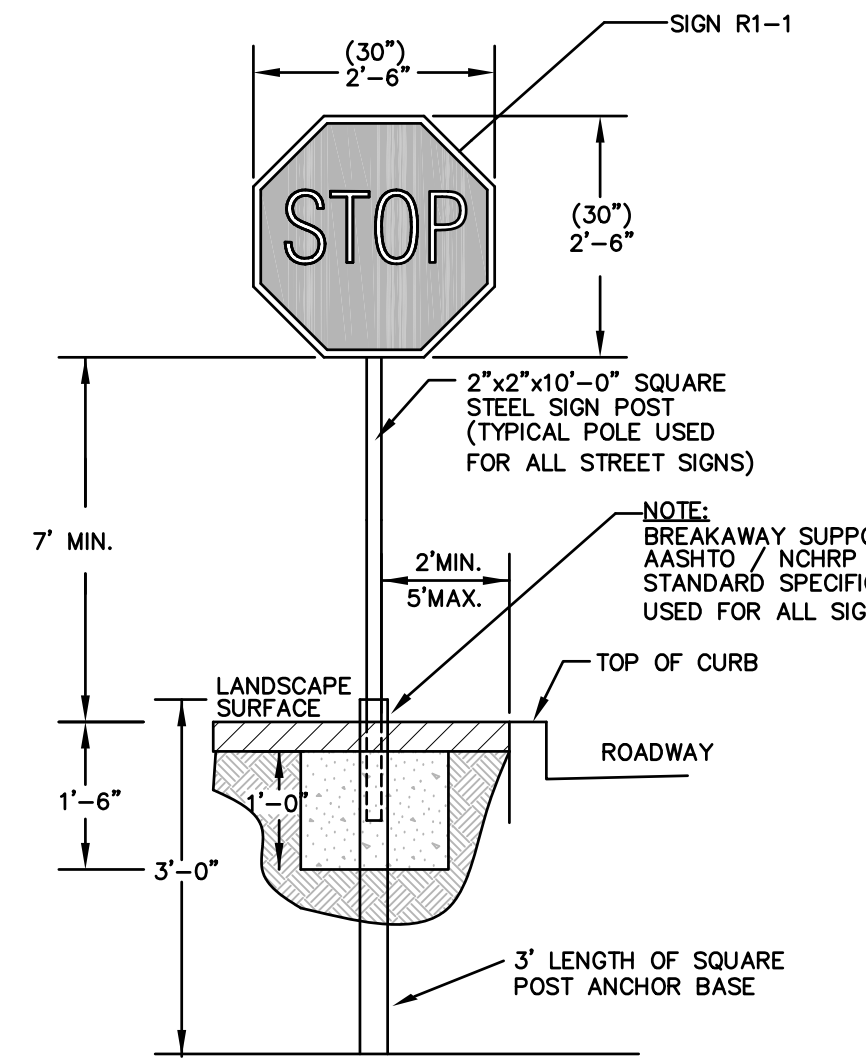


- EROSION CONTROL BLANKET CHART**
- SLOPE PRODUCT**
- 2:1 BIODEGRADABLE DOUBLE NET STRAW/COCONUT BLANKET
 - 1.5:1 BIODEGRADABLE DOUBLE NET COCONUT BLANKET
 - 1:1 700 GRAM COIR BLANKET OR WOVEN POLYPROPYLENE TURF REPLACEMENT MAT (EC T-RECS OR EQUAL)

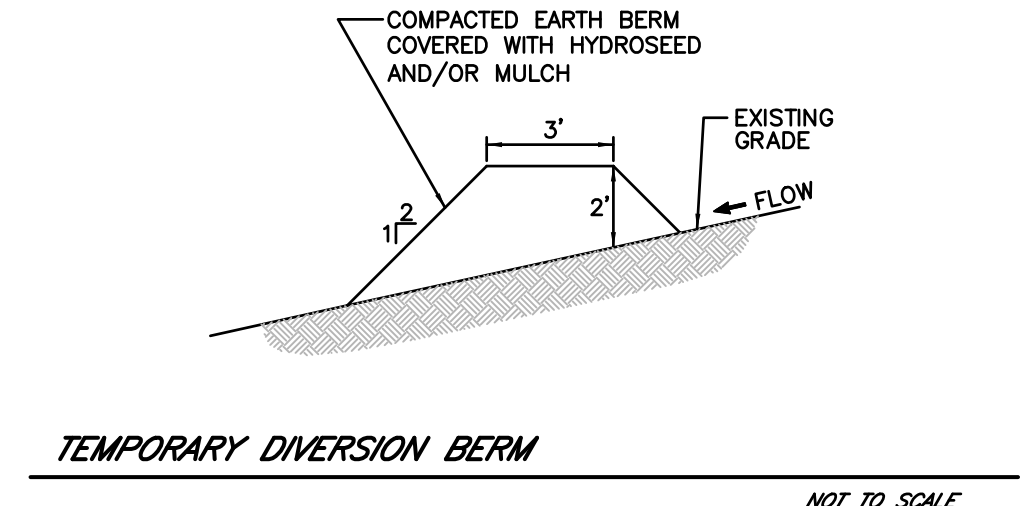
SLOPE STABILIZATION TREATMENT
NOT TO SCALE



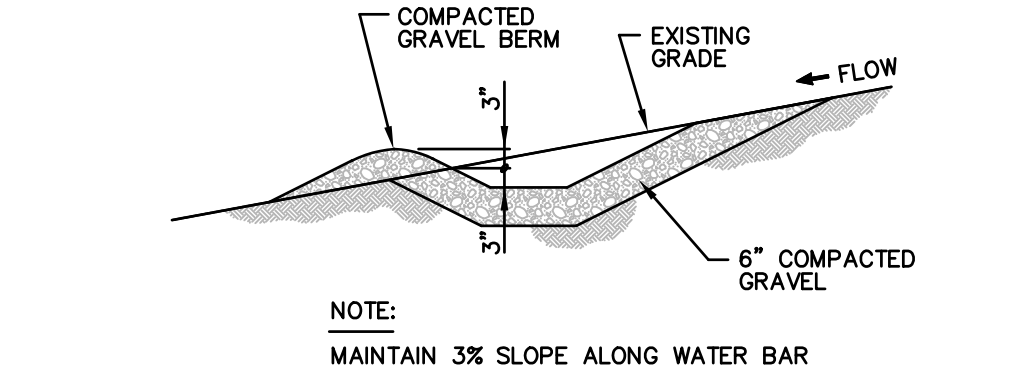
STANDARD STREET SIGN DETAIL
NOT TO SCALE



STOP SIGN DETAIL
NOT TO SCALE



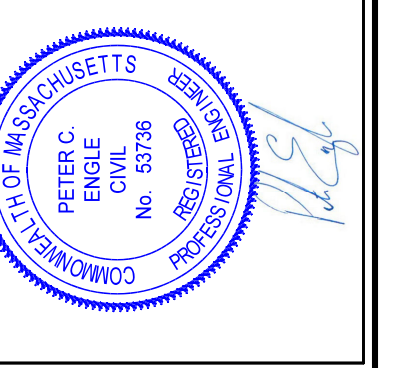
TEMPORARY DIVERSION BERM
NOT TO SCALE



TEMPORARY DIVERSION SWALE
NOT TO SCALE

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1	11.10.22		PE
			PE

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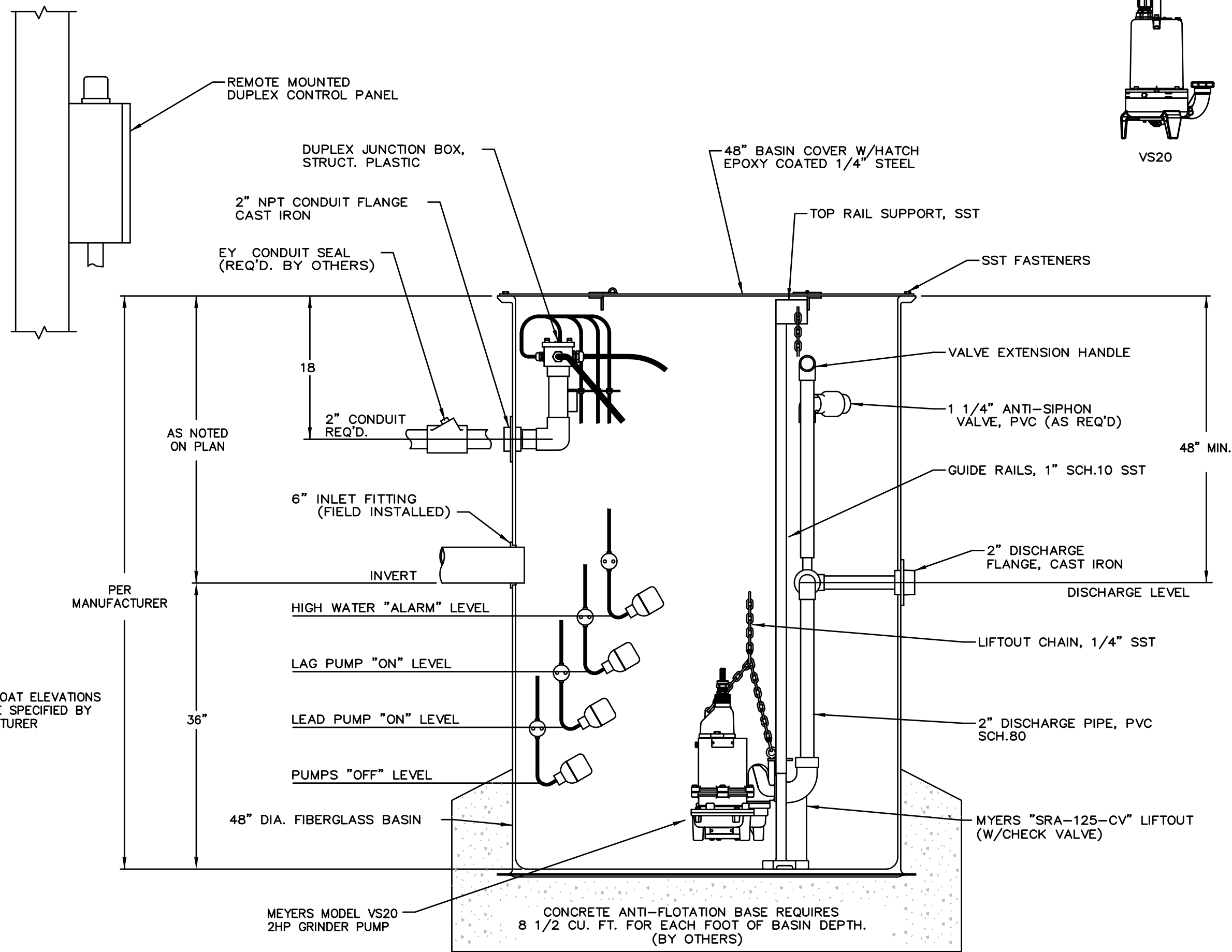


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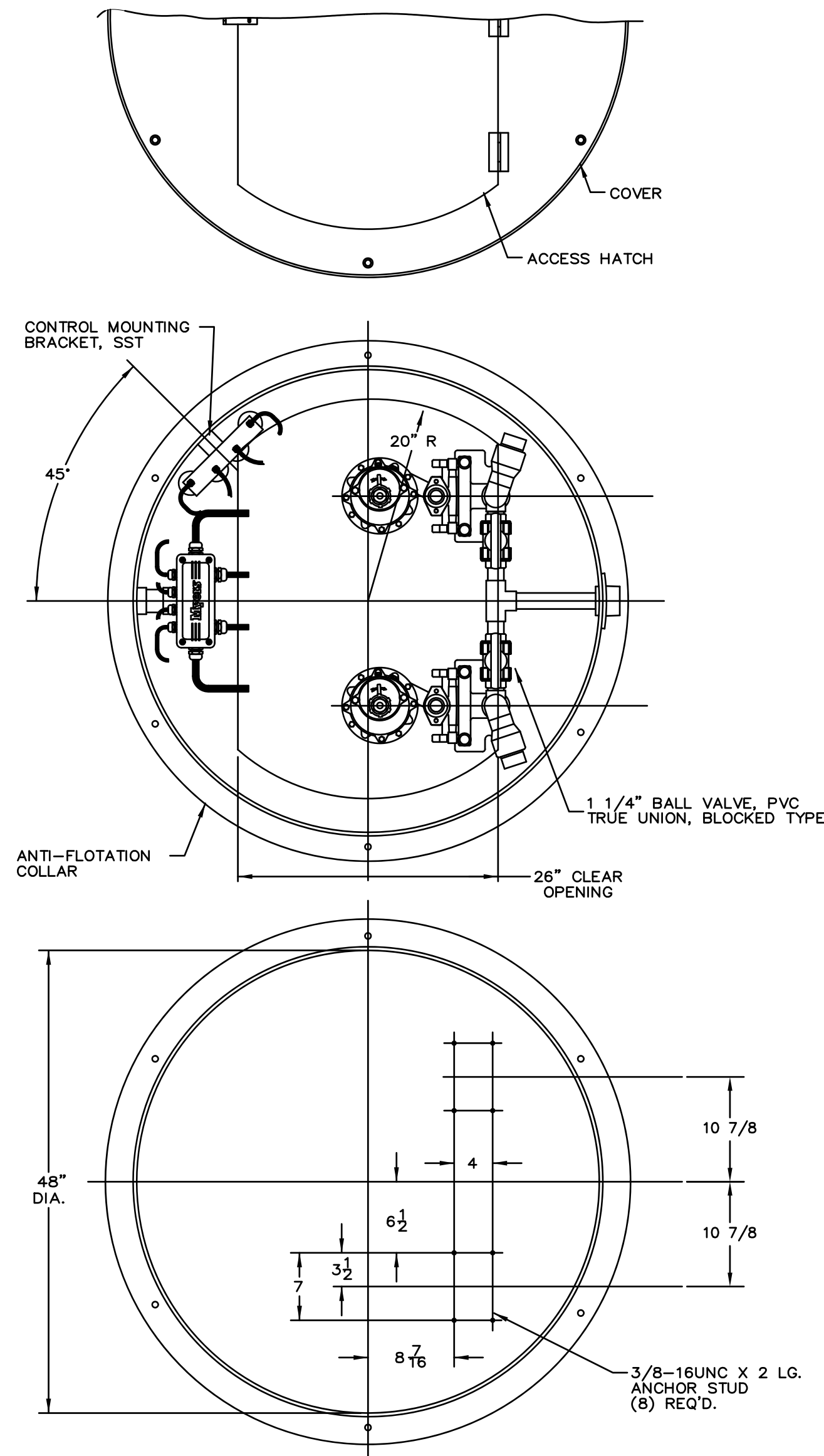
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PROJ. NO. 287-2118K

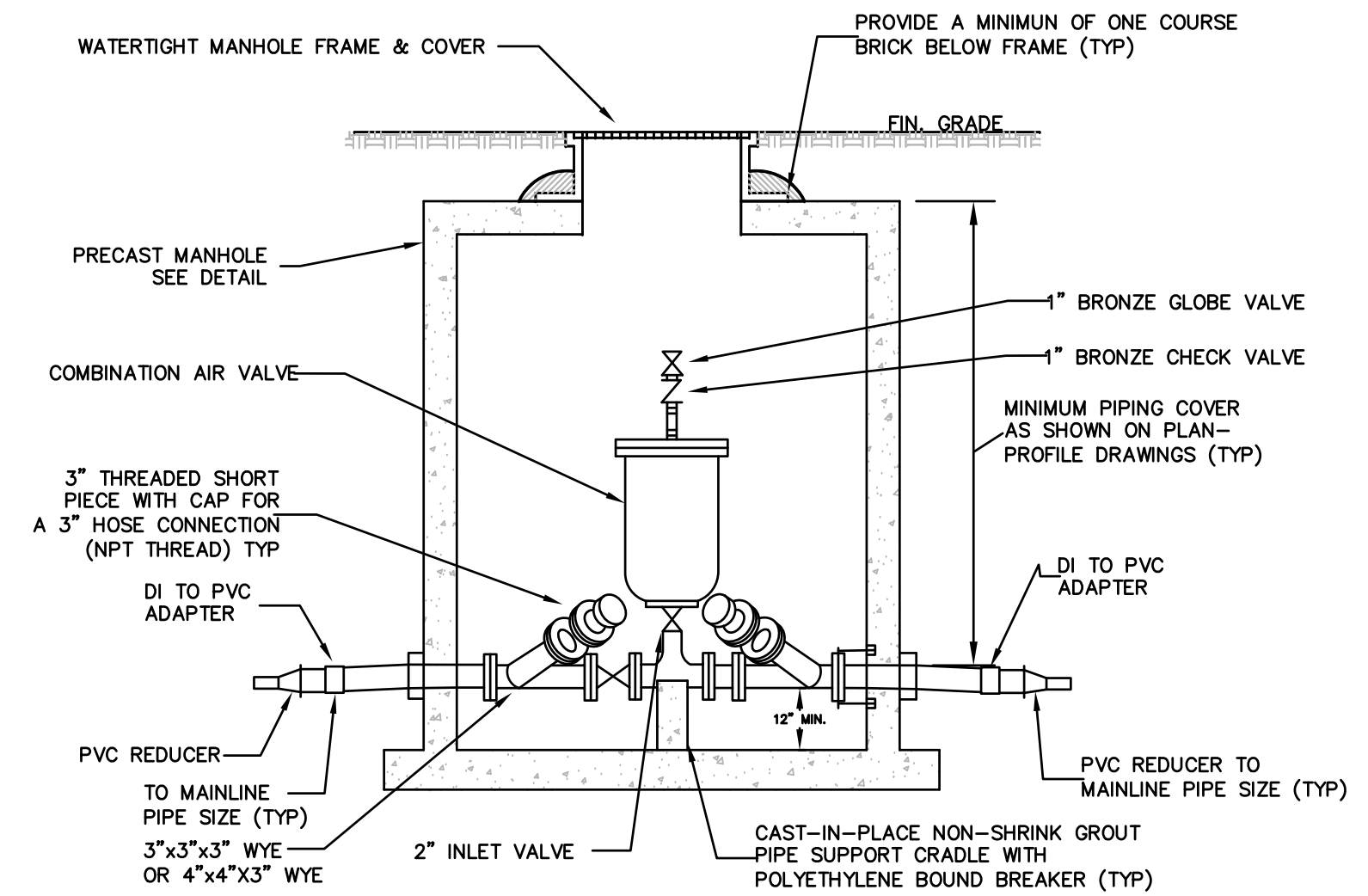
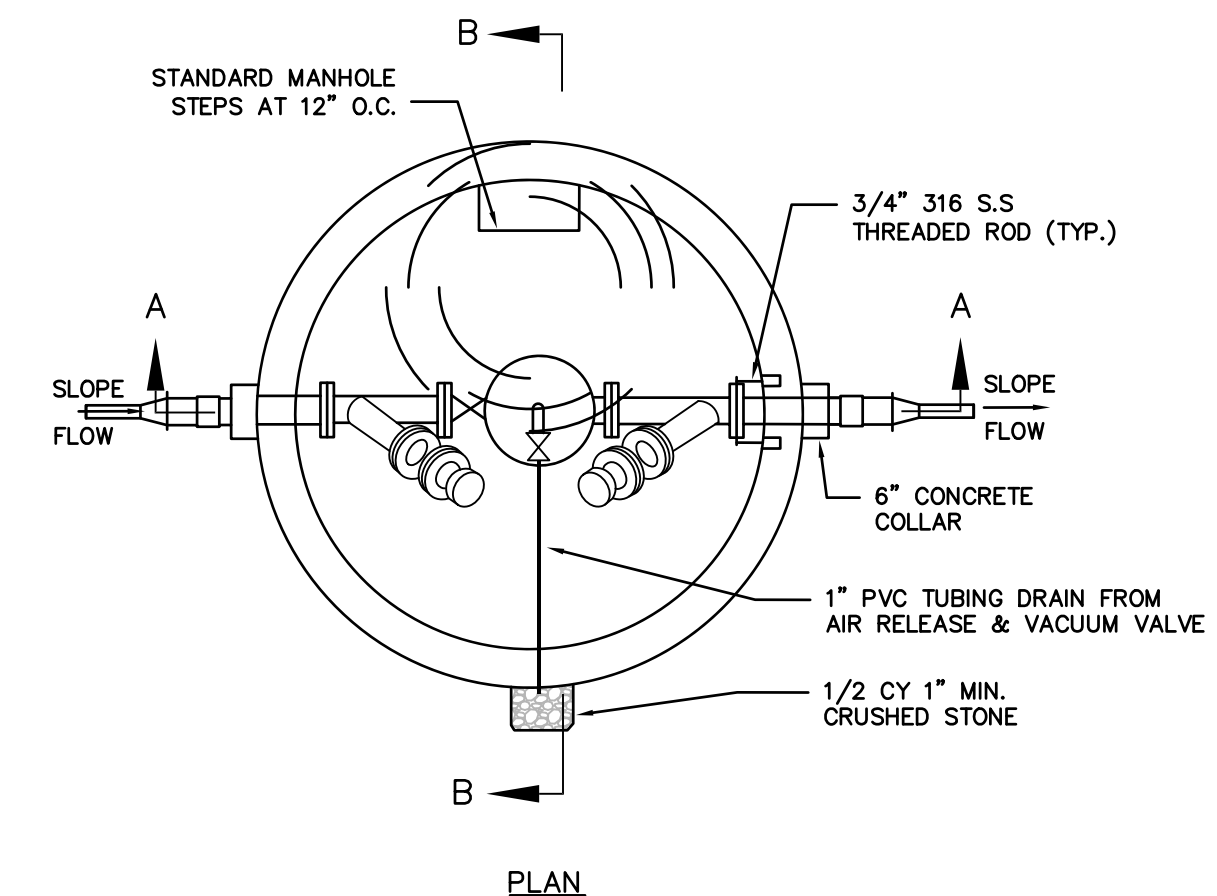
SITE DETAILS



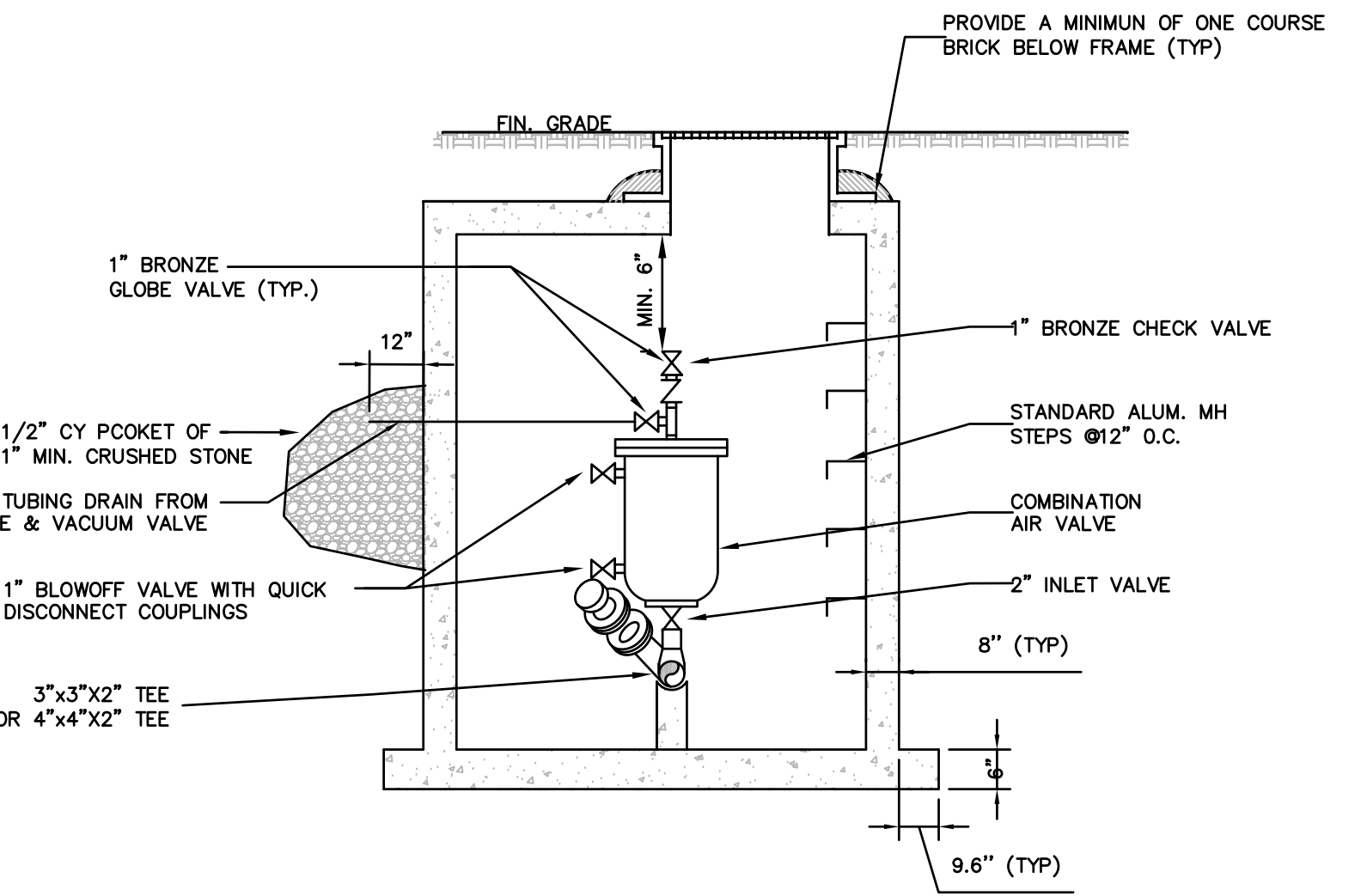
TYPICAL SEWER PUMP CHAMBER DETAIL



NOT TO SCALE



SECTION A-A



SECTION B-B

- NOTE:
- AIR VALVE TO BE SUPPORTED INDEPENDENTLY FROM PIPE.
 - STRUCTURE WITH 4" MAINLINE PIPE SHALL BE FITTED WITH 4" IN-LINE GATE VALVE, TEES, AND WYES.

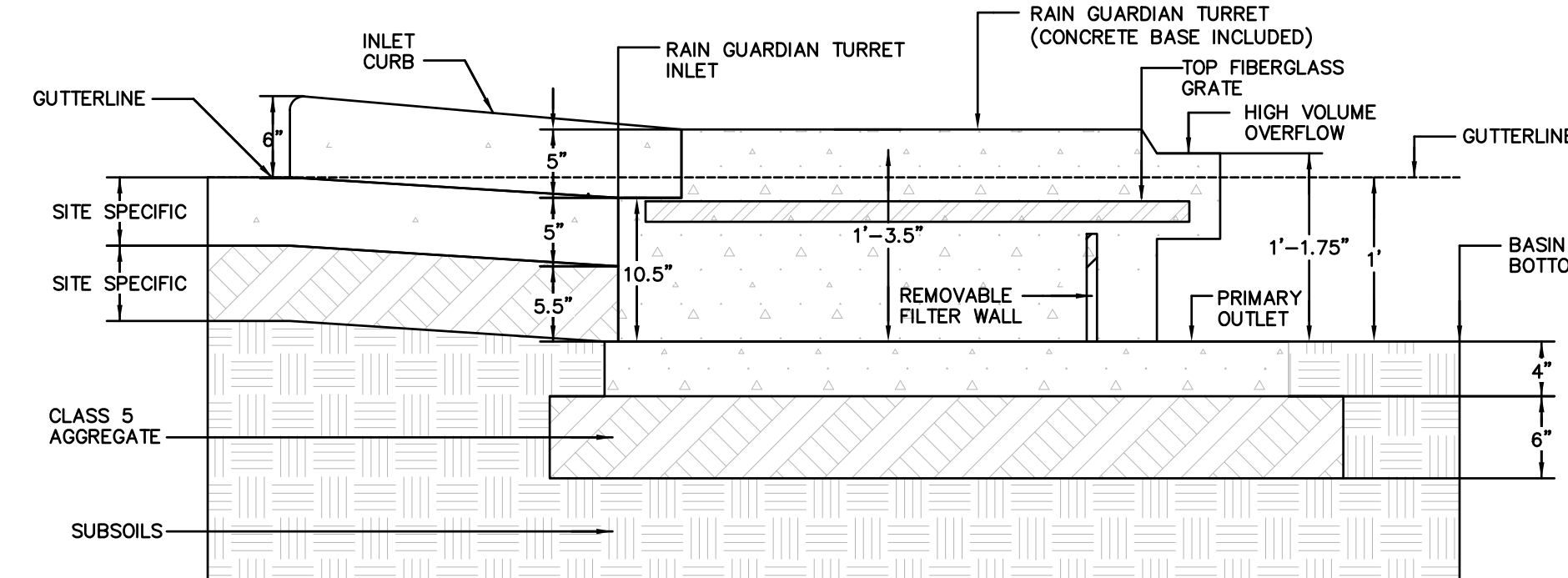
TYPE "A" STRUCTURE
IN-LINE AIR RELEASE, FLUSHING & CLEANOUT MANHOLE
NOT TO SCALE

NOTE: FLOAT ELEVATIONS SHALL BE SPECIFIED BY MANUFACTURER

- PLAN VIEW NOTES
- INLET WIDTH AND DISTANCE BETWEEN BACK OF CURB AND RAIN GUARDIAN TURRET MAY VARY WITH SITE CONDITIONS.
 - CONCRETE BASE EXTENDS BEYOND THE FILTER WALL OF THE RAIN GUARDIAN TURRET TO SERVE AS A SPLASH DISSIPATOR.

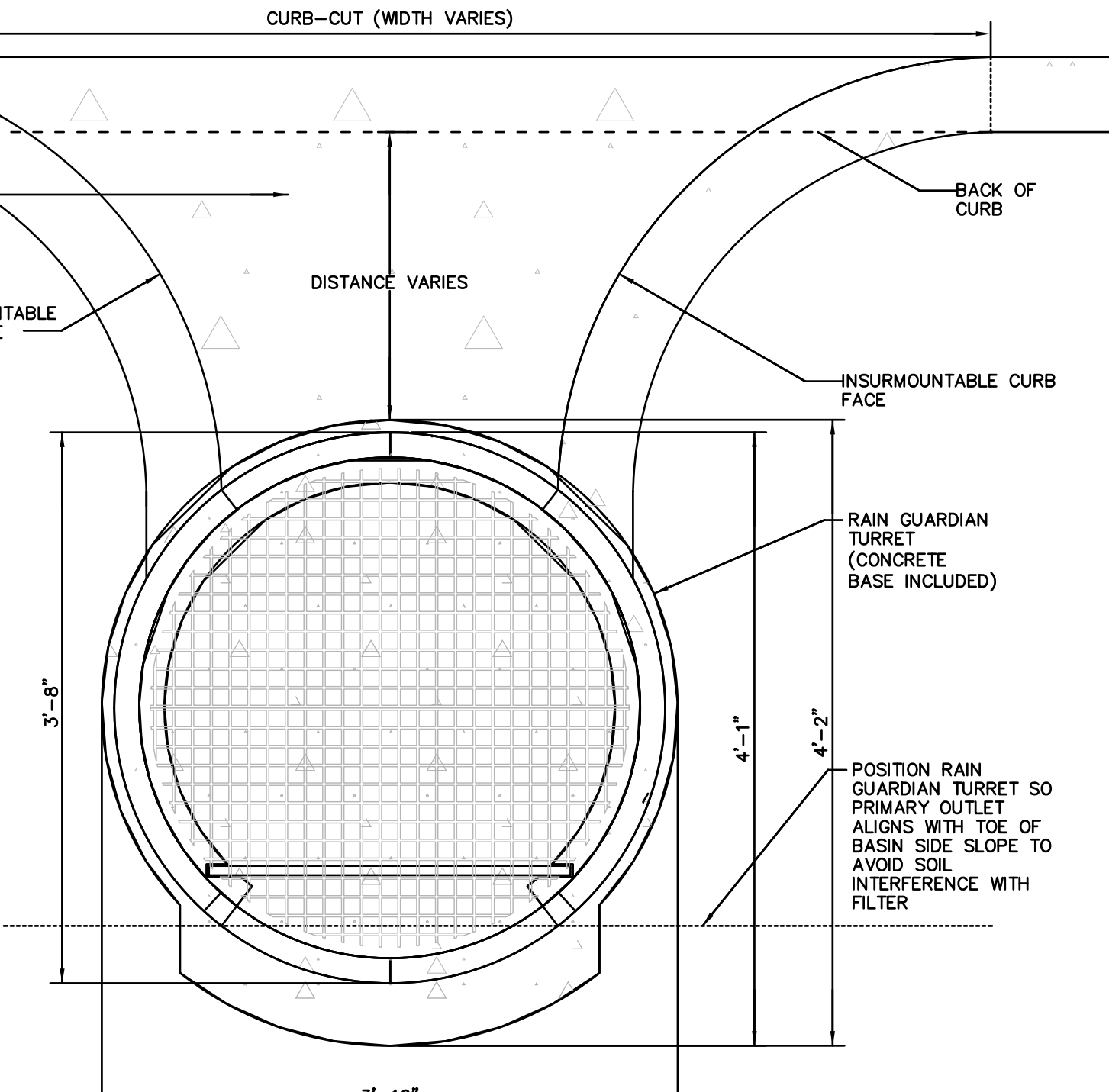
- SPECIFICATIONS
- STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (1,030 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (4% TO 8% BY VOLUME). MANUFACTURED AND DESIGNED TO ASTM C858.
 - THREE-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
 - TWO-PIECE LIGHT-DUTY GALVANIZED GRATE (34.5 LBS/PIECE) FOR 541 LB CONCENTRATED LOAD OR 309 LB/SQ FT UNIFORM LOAD.
 - TWO-PIECE HEAVY-DUTY GALVANIZED GRATE (77.5 LBS/PIECE) FOR 2,456 LB CONCENTRATED LOAD OR 1,404 LB/SQ FT UNIFORM LOAD.

- INSTALLATION NOTES
- INSTALL THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN TURRET. POSITION RAIN GUARDIAN TURRET SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. EXCAVATE 1'-10" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 1" PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN TURRET BASE (INCLUDED). THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1'-4" BELOW THE GUTTERLINE ELEVATION. THE TOP OF THE RAIN GUARDIAN TURRET METAL GRATE WILL BE 10-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN TURRET.
 - SET RAIN GUARDIAN TURRET ON THE PREPARED CLASS 5 BASE.
 - INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN TURRET AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN TURRET ON THE BIORETENTION SIDE.
 - INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN TURRET AND CONCRETE INLET BEFORE POURING INLET.
 - SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.
 - REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC FACING THE RAIN GUARDIAN TURRET INLET.



RAIN GUARDIAN TURRET DETAIL

CROSS-SECTION
U.S. PATENT
8,501,016



PLAN VIEW
U.S. PATENT
8,501,016

NOT TO SCALE

REV	DATE	DESCRIPTION	TOWN, DEP. PEER ENG. COMMENTS	MADE (APVD)
1	11.10.22	TOWN, DEP. PEER ENG. COMMENTS		PE

PETER C. ENGLE, P.E.
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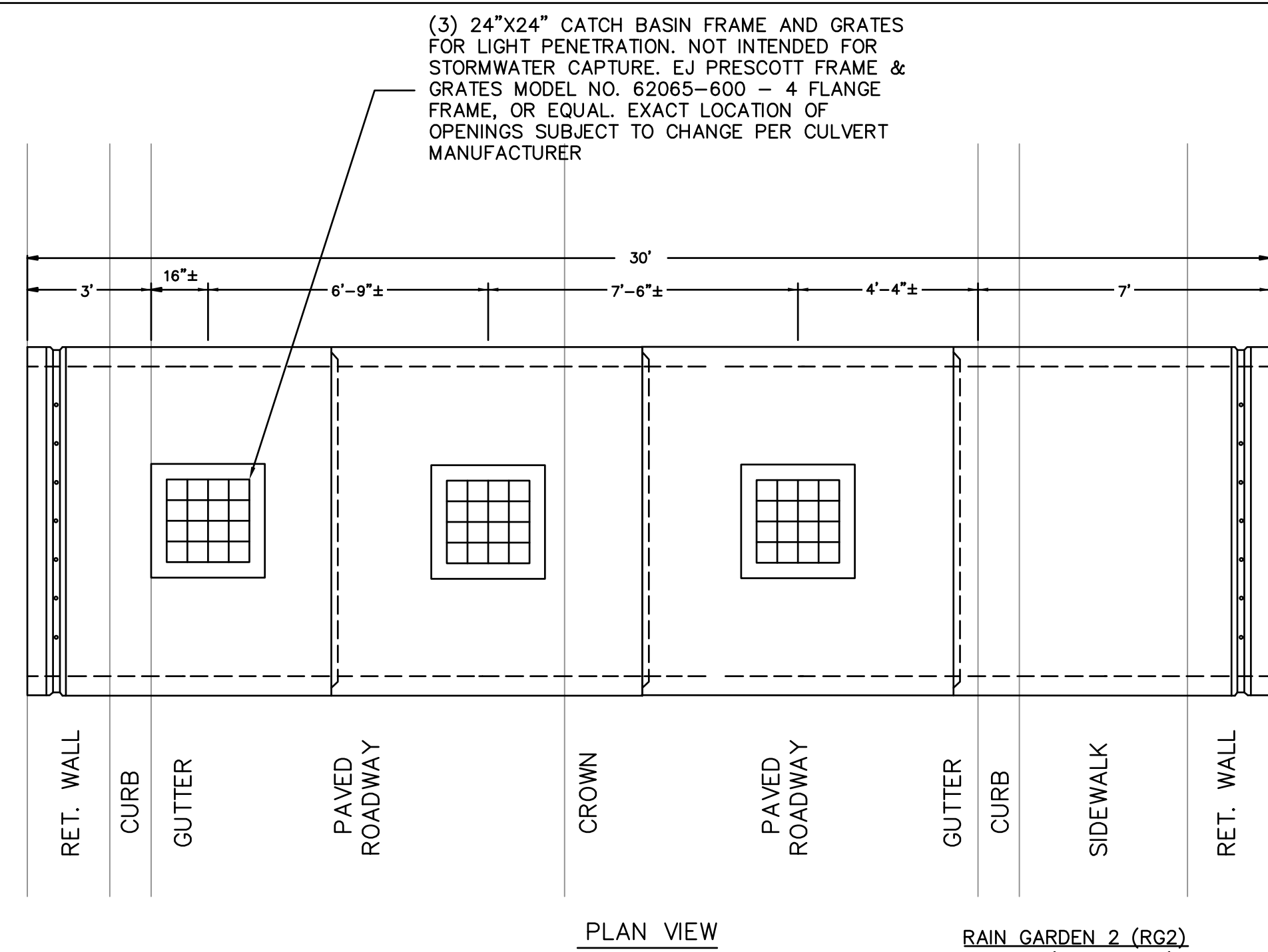
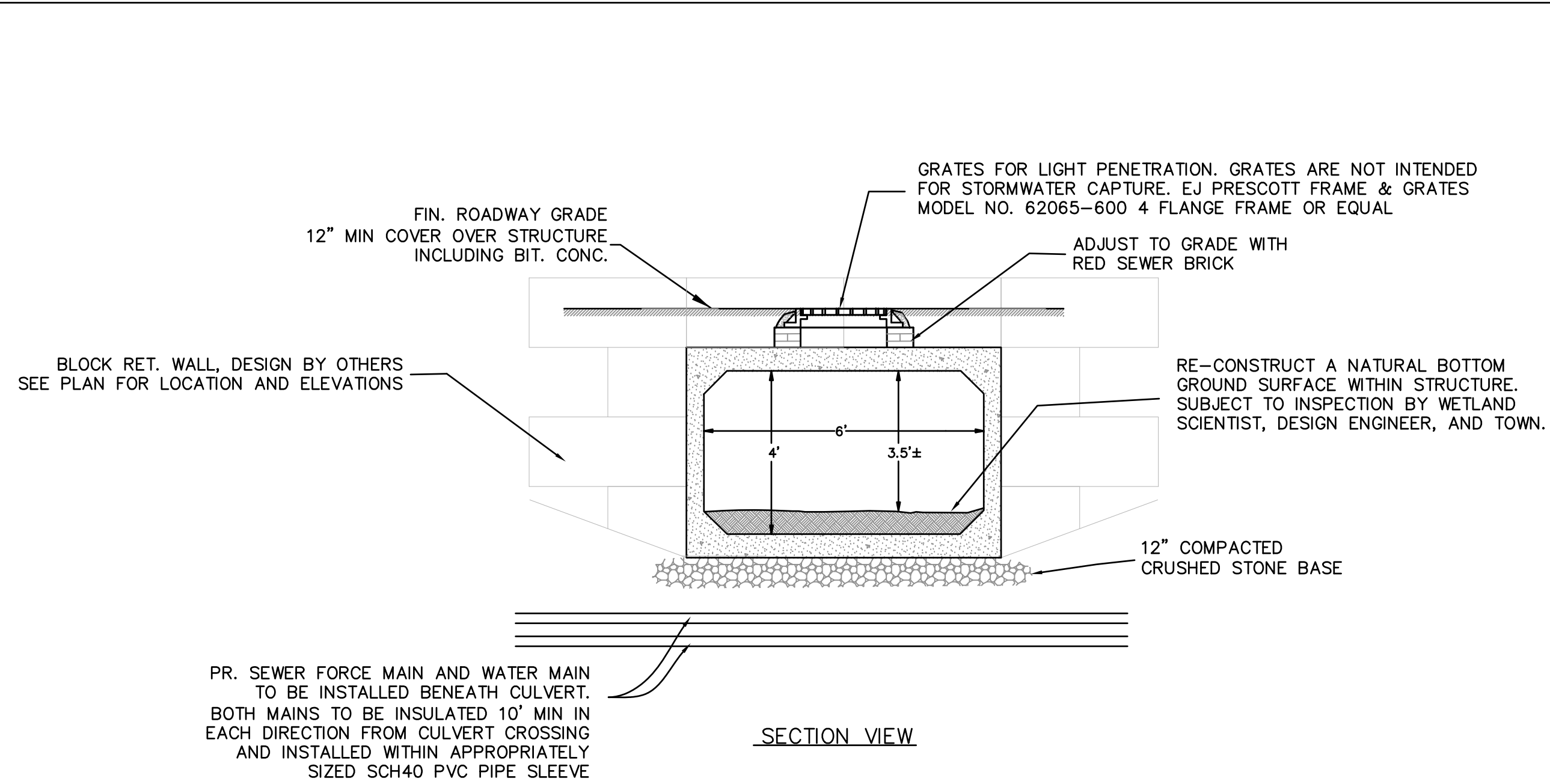


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SPECIAL PERMIT AND SITE PLAN
"BLUEBERRY HILL ESTATES"
LOT 3 BERRY FARMS ROAD
STURBRIDGE, MA 01566
PREPARED FOR
JUSTIN STELMOK
557 SOUTHWEST CUTOFF
WORCESTER, MA 01607

DRAWN BY: WCN
DATE: 4/12/22
CHK BY: PCE
SCALE: N.T.S.
PROJ. NO. 287-2118K

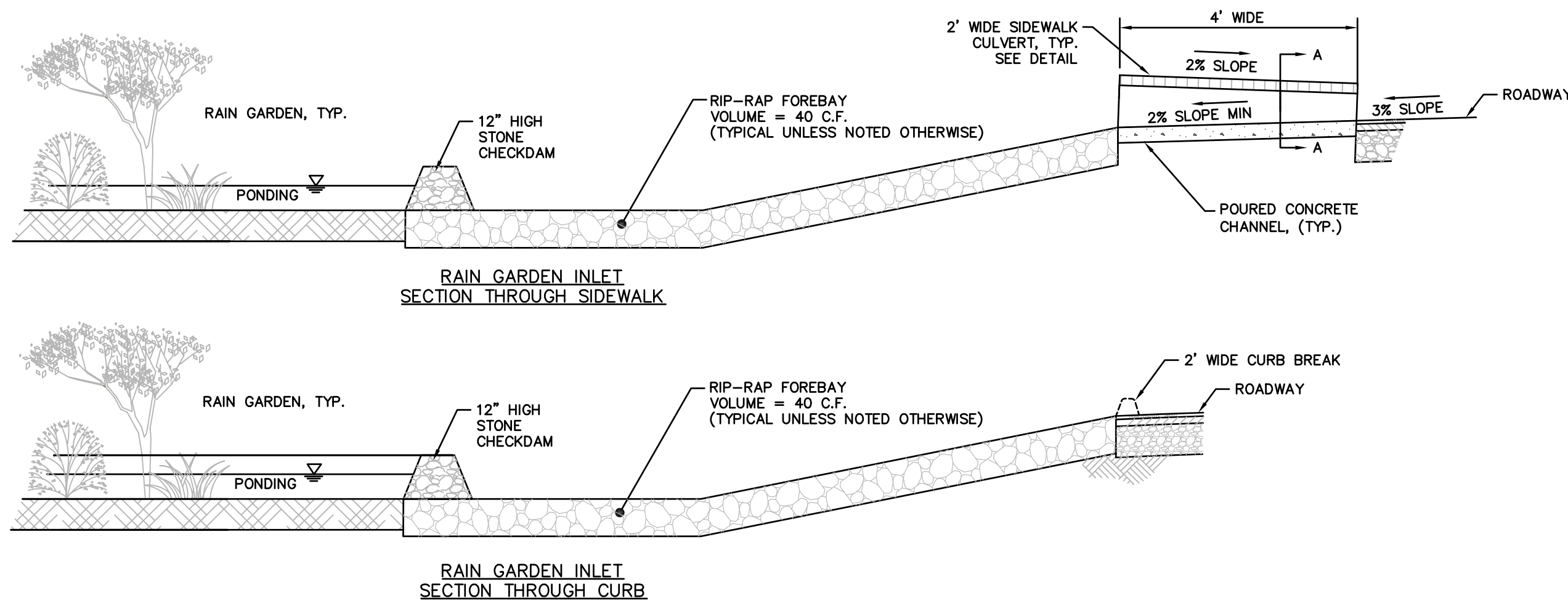
SITE DETAILS



- BOX CULVERT NOTES:**
- BOX CULVERT SHALL BE INSTALLED SO THAT THE INSIDE BOTTOM ELEVATION IS AT 675.83.
 - BOX CULVERT SHALL BE BACKFILLED WITH 6"± SUITABLE FILL MATERIAL TO RECREATE A NATURAL GROUND SURFACE.
 - THE INTERIORS OF BOTH BOX CULVERTS SHALL BE EPOXY COATED. ALL JOINTS SHALL BE SEALED BUTYL RUBBER OR EQUAL.
 - CULVERT TO BE DESIGNED FOR H2O LOADING. WITH 5,000 PSI CONC. AFTER 28 DAYS. REINFORCEMENT PER ASTM A615. STRUCTURAL DESIGN BY OTHERS.

AMPHIBIAN/ WILDLIFE CROSSING CULVERT DETAILS

NOT TO SCALE



SCHEDULE OF RAIN GARDEN DATA

TYPE A
 LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" STONE
 6" SOLID HDPE OUTLET @ BOTTOM
 (1) 6" SOLID RISER WITH BEEHIVE GRATE 6" ABOVE STONE
 (1) 2" ORIFICE @ BOTTOM
 (1) 4" ORIFICE 27" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN (60'L)
 12" MAX POND DEPTH

TYPE B
 LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" MULCH
 8" SOLID OUTLET @ BOTTOM
 (2) 6" RISERS WITH BEEHIVE GRATES 6" ABOVE MULCH
 (1) 3" ORIFICE @ BOTTOM FOR EACH RISER (2 TOTAL)
 (1) 3" ORIFICE 30" ABOVE BOTTOM FOR EACH RISER (2 TOTAL)
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

TYPE C
 NOT LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" MULCH
 6" SOLID OUTLET 24" ABOVE BOTTOM
 (1) 6" RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 2" ORIFICE 24" BOTTOM
 (1) 4" ORIFICE 30" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

TYPE D
 NOT LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" MULCH
 6" SOLID OUTLET 24" ABOVE BOTTOM
 (1) 6" RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 2" ORIFICE 24" ABOVE BOTTOM
 (1) 3" ORIFICE 33" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

TYPE E
 LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" MULCH
 6" SOLID OUTLET 24" ABOVE BOTTOM
 (1) 6" RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 2" ORIFICE @ BOTTOM
 (1) 3" ORIFICE 33" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

RAIN GARDEN 2 (RG2)
 LINED 55' LONG X 6' WIDE
 36" SOIL DEPTH, 3" STONE
 6" SOLID OUTLET @ BOTTOM
 (1) 6" RISER WITH BEEHIVE GRATE 6" ABOVE STONE
 (1) 2" ORIFICE @ BOTTOM
 (1) 4" ORIFICE 27" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN (55'L)
 12" MAX PONDING DEPTH

RAIN GARDEN 5 (RG5)
 LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" MULCH
 6" SOLID OUTLET @ BOTTOM
 (1) 6" RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 2" ORIFICE @ BOTTOM
 (1) 4" ORIFICE 30" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

RAIN GARDEN 28 HIGH (RG28H)
 LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" MULCH
 8" SOLID OUTLET @ BOTTOM
 (2) 6" RISERS WITH BEEHIVE GRATES 6" ABOVE MULCH
 (1) 3" ORIFICE @ BOTTOM FOR EACH RISER (2 TOTAL)
 (1) 4" ORIFICE 30" ABOVE BOTTOM FOR EACH RISER (2 TOTAL)
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

RAIN GARDEN 14 (RG14)
 LINED 60' LONG X 4' WIDE
 27" SOIL DEPTH, 3" MULCH
 6" SOLID HDPE OUTLET @ BOTTOM
 (1) 6" SOLID RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 2" ORIFICE @ BOTTOM
 (1) 4" ORIFICE 21" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

RAIN GARDEN 15 HIGH (RG15H)
 NOT LINED 60' LONG X 4' WIDE
 36" SOIL DEPTH, 3" MULCH
 8" SOLID HDPE OUTLET 24" ABOVE BOTTOM
 (1) 8" SOLID RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 3" ORIFICE 24" ABOVE BOTTOM
 (1) 3" ORIFICE 33" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH

RAIN GARDEN 42 (RG42)
 LINED 60' LONG X 8' WIDE
 36" SOIL DEPTH, 3" MULCH
 6" SOLID HDPE OUTLET 24" ABOVE BOTTOM
 (1) 6" SOLID RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 3" ORIFICE 24" ABOVE BOTTOM
 (1) 3" ORIFICE 33" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN
 12" POND DEPTH
 FOREBAY VOLUME = 70 C.F.

RAIN GARDENS 21,22,67-70
 DOUBLE FOREBAY VOLUME = 40 C.F. EACH

RAIN GARDEN 69 & 70 (RG69/RG70)
 NOT LINED 35' LONG X 6' WIDE
 36" SOIL DEPTH, 3" STONE
 6" SOLID OUTLET 24" ABOVE BOTTOM
 (1) 6" RISER WITH BEEHIVE GRATE 6" ABOVE STONE
 (1) 2" ORIFICE 24" ABOVE BOTTOM
 (1) 4" ORIFICE 30" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN (35'L)
 12" MAX PONDING DEPTH

RAIN GARDEN 3 (RG3)
 LINED 35' LONG X 6' WIDE
 36" SOIL DEPTH, 3" STONE
 6" SOLID OUTLET @ BOTTOM
 (1) 6" RISER WITH BEEHIVE GRATE 6" ABOVE MULCH
 (1) 2" ORIFICE @ BOTTOM
 (1) 4" ORIFICE 27" ABOVE BOTTOM
 12" PERFORATED UNDERDRAIN (35'L)
 12" MAX PONDING DEPTH

RAIN GARDEN 21 (RG2.1)
 NOT LINED 85' LONG X 50' WIDE
 36" SOIL DEPTH, 3" STONE
 12" SOLID OUTLET 27" ABOVE BOTTOM
 (2) 10" RISERS WITH BEEHIVE GRATES 12" ABOVE STONE
 (1) 2" ORIFICE 27" ABOVE BOTTOM (PER RISER, 2 TOTAL)
 (1) 6" ORIFICE 36" ABOVE BOTTOM (PER RISER, 2 TOTAL)
 12" PERFORATED UNDERDRAIN CONNECTING RISERS TO OUTLET (85')
 24" MAX PONDING DEPTH (18" PONDING DURING 100 YEAR STORM)
 NO FOREBAY

RAIN GARDEN 3.1 (RG3.1)
 NOT LINED 235' LONG X 6' WIDE
 36" SOIL DEPTH, 3" STONE
 (3) 6" SOLID OUTLETS 24" ABOVE BOTTOM
 (3) 6" RISERS WITH BEEHIVE GRATES 12" ABOVE STONE
 (1) 0.5" ORIFICE 24" ABOVE BOTTOM (PER RISER, 3 TOTAL)
 (1) 3" ORIFICE 39" ABOVE BOTTOM (PER RISER, 3 TOTAL)
 12" PERFORATED UNDERDRAIN CONNECTING RISERS (235'L)
 18" MAX PONDING DEPTH (14.5" PONDING DURING 100 YEAR STORM)
 10' WIDE EMERGENCY SPILLWAY 15" ABOVE STONE
 DOUBLE SEDIMENT FOREBAY VOLUME = 150 C.F. EACH

RAIN GARDEN 4.1 (RG4.1)
 NOT LINED 360' LONG X 12' WIDE
 36" SOIL DEPTH, 3" STONE
 (4) 8" SOLID OUTLETS 24" ABOVE BOTTOM (1 PER RISER)
 (4) 8" RISERS WITH BEEHIVE GRATES 15" ABOVE MULCH
 (1) 3" ORIFICE 24" ABOVE BOTTOM (PER RISER, 4 TOTAL)
 (1) 4" ORIFICE 30" ABOVE BOTTOM (PER RISER, 4 TOTAL)
 NO UNDERDRAIN
 24" MAX PONDING DEPTH (18" PONDING DURING 100 YEAR STORM)
 10' WIDE EMERGENCY SPILLWAY 18" ABOVE STONE
 NO FOREBAY

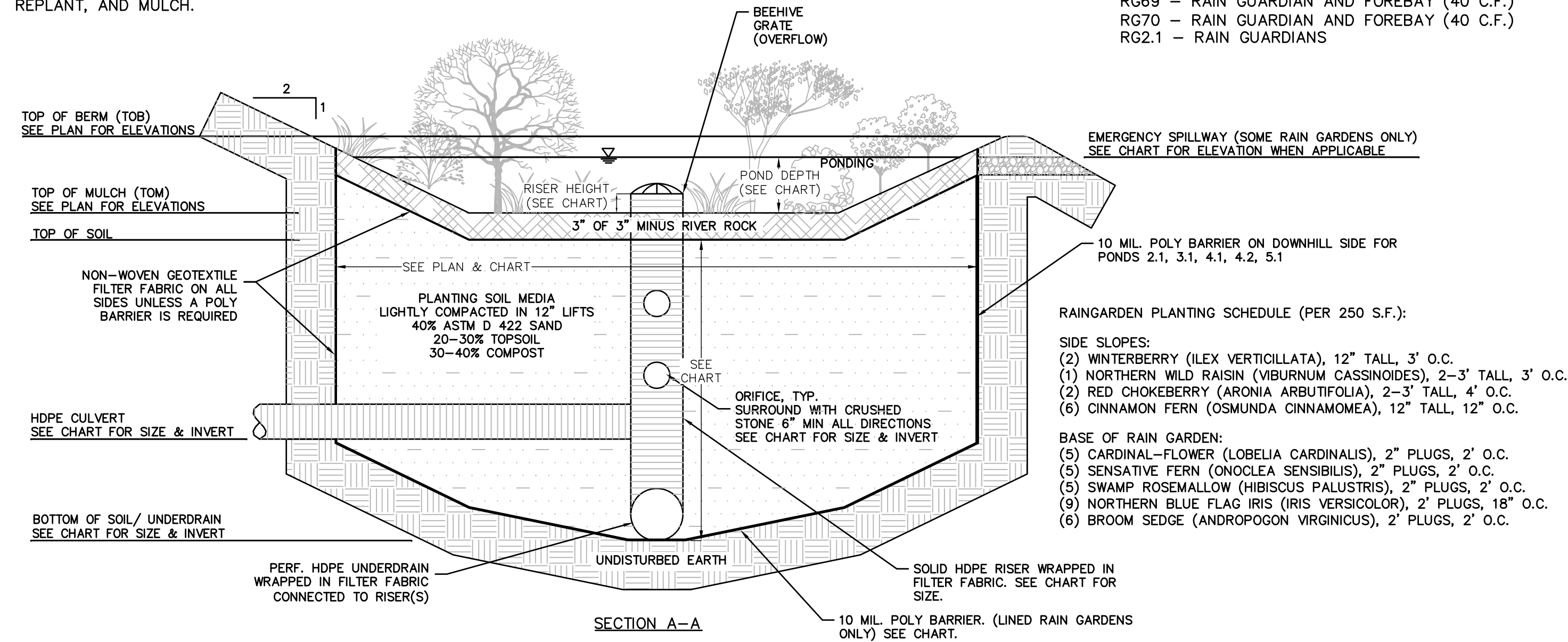
RAIN GARDEN 4.2 (RG4.2)
 NOT LINED 240' LONG X 10' WIDE
 36" SOIL DEPTH, 3" STONE
 (4) 6" SOLID OUTLETS 24" ABOVE BOTTOM (1 PER RISER)
 (4) 6" RISERS WITH BEEHIVE GRATES 18" ABOVE STONE
 (1) 2" ORIFICE 24" ABOVE BOTTOM (PER RISER, 4 TOTAL)
 (1) 5" ORIFICE 30" ABOVE BOTTOM (PER RISER, 4 TOTAL)
 NO UNDERDRAIN
 24" MAX PONDING DEPTH (16.7" PONDING DURING 100 YEAR STORM)
 10' WIDE EMERGENCY SPILLWAY 18" ABOVE STONE
 NO FOREBAY

RAIN GARDEN 5.1 (RG5.1)
 NOT LINED 78'± LONG X 24'± WIDE (1,870 S.F.±)
 36" SOIL DEPTH, 3" STONE
 (1) 12" SOLID OUTLET 24" ABOVE BOTTOM
 (2) 12" RISER WITH BEEHIVE GRATE 15.5" ABOVE STONE
 (1) 5.5" ORIFICE 24" ABOVE BOTTOM (PER RISER, 2 TOTAL)
 12" UNDERDRAIN CONNECTING BOTH RISERS (60'L)
 24" MAX PONDING DEPTH (16" PONDING DURING 100 YEAR STORM)
 10' WIDE EMERGENCY SPILLWAY 18" ABOVE STONE
 FOREBAY VOLUME = 120 C.F.

- FOREBAY/ PRETREATMENT NOTES**
- RG5.1 - DEEP SUMP MH AND FOREBAY (120 C.F.)
 - RG3.1 - DOUBLE FOREBAYS - 150 C.F. EACH
 - RG21 - DOUBLE FOREBAYS - 50 C.F. EACH
 - RG22 - DOUBLE FOREBAYS - 70 C.F. EACH
 - RG69 - RAIN GUARDIAN AND FOREBAY (40 C.F.)
 - RG70 - RAIN GUARDIAN AND FOREBAY (40 C.F.)
 - RG2.1 - RAIN GUARDIANS

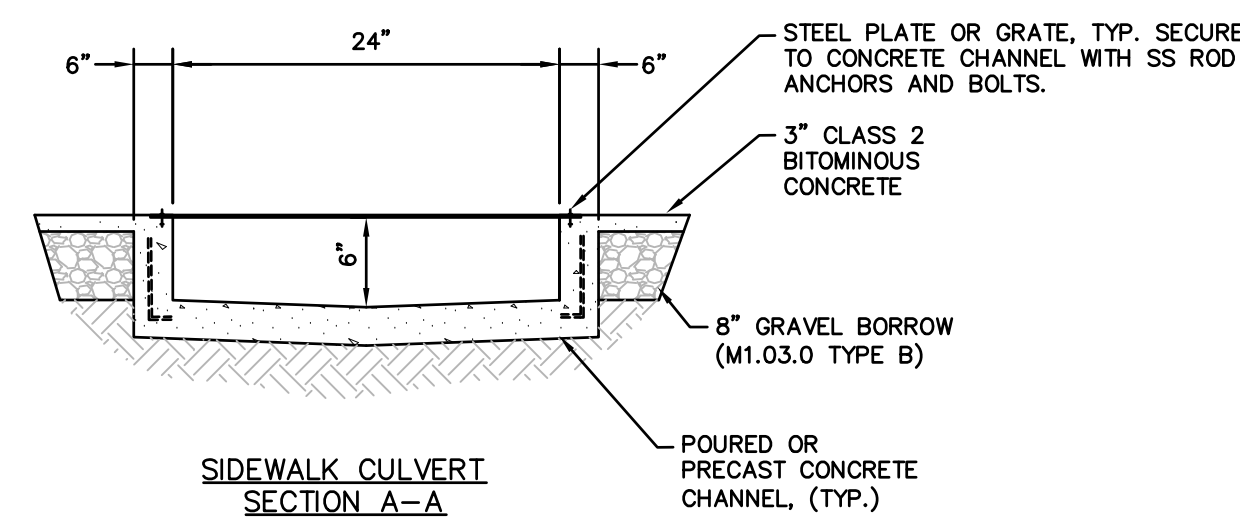
- RAINGARDEN PLANTING SCHEDULE (PER 250 S.F.):**
- SIDE SLOPES:**
- (2) WINTERBERRY (ILEX VERTICILLATA), 12" TALL, 3' O.C.
 - (1) NORTHERN WILD RAISIN (VIBURNUM CASSINOIDES), 2-3' TALL, 3' O.C.
 - (2) RED CHOKEBERRY (ARONIA ARBUTIFOLIA), 2-3' TALL, 4' O.C.
 - (6) CINNAMON FERN (OSMUNDA CINNAMOMEA), 12" TALL, 12" O.C.
- BASE OF RAIN GARDEN:**
- (5) CARDINAL-FLOWER (LOBELIA CARDINALIS), 2" PLUGS, 2' O.C.
 - (5) SENSATIVE FERN (ONOCLEA SENSIBILIS), 2" PLUGS, 2' O.C.
 - (5) SWAMP ROSEMALLOW (HIBISCUS PALUSTRIS), 2" PLUGS, 2' O.C.
 - (9) NORTHERN BLUE FLAG IRIS (IRIS VERSICOLOR), 2" PLUGS, 18" O.C.
 - (6) BROOM SEDGE (ANDROPOGON VIRGINICUS), 2" PLUGS, 2' O.C.

NOTE:
 UNTIL THE PLANTINGS HAVE TAKEN ROOT, WATER THE RAIN GARDEN ON A DAILY BASIS. IN ADDITION, WATER THE RAIN GARDEN DURING DROUGHT CONDITIONS. INSPECT THE SOIL AN DREPAIR ERODED AREAS OF THE RAIN GARDEN MONTHLY. RE-MULCH VOID AREAS AS NEEDED. REMOVE LITER AND DEBRIS MONTHLY. TREAT DISEASED VEGETATION AS NEEDED. REMOVE AND REPLACE DEAD VEGETATION TWICE PER YEAR (SPRING AND FALL). REMOVE INVASIVE SPECIES INCLUDING WEEDS AS NEEDED TO PREVENT THESE SPECIES FROM SPREADING INTO THE RAIN GARDEN. REPLACE MULCH EVERY TWO YEARS, IN THE EARLY SPRING. UPON FAILURE, EXCAVATE THE RAIN GARDEN AREA, SCARIFY THE BOTTOM AND SIDES, REPLACE SOIL, REPLANT, AND MULCH.



RAIN GARDEN TYPICAL CROSS SECTION (BIORETENTION AREA)

NOT TO SCALE



SIDEWALK CULVERT SECTION A-A

REV	DATE	DESCRIPTION	REVISIONS	MADE (APVD)
1	11.10.22	TOWN, DEP. PEER ENG. COMMENTS	PE	PE

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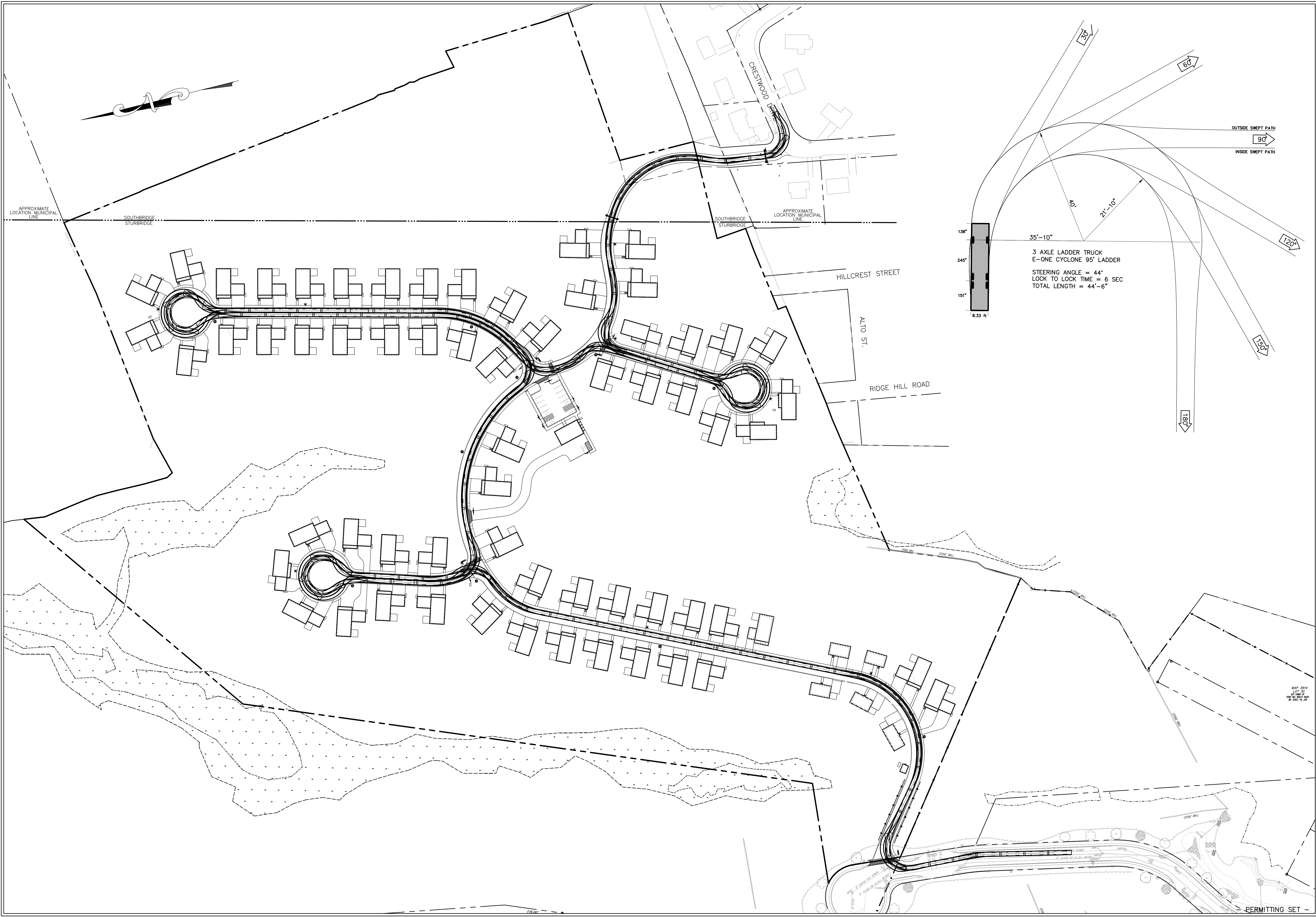


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SPECIAL PERMIT AND SITE PLAN
 "BLUEBERRY HILL ESTATES"
 LOT 3 BERRY FARMS ROAD
 STURBRIDGE, MA 01566
 PREPARED FOR
 JUSTIN STELMOCK
 557 SOUTHWEST CUTOFF
 WORCESTER, MA 01607

DRAWN BY: WCN
DATE: 4/1/22
CHK BY: PCE
SCALE: N.T.S.
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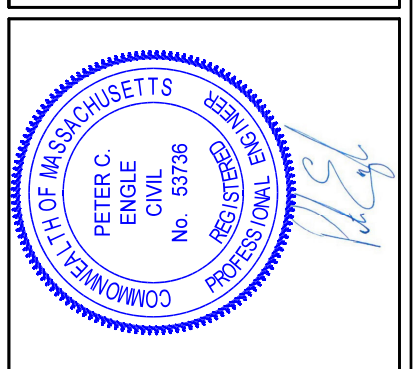
SITE DETAILS



HOR. SCALE IN FEET: 1"=80'

REV	DATE	TOWN, DEP.	PEER ENG. COMMENTS	MADE (APVD)
1	11.10.22			PE

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"BLUEBERRY HILL ESTATES"
LOT 3 BERRY FARMS ROAD
STURBRIDGE, MA 01566
PREPARED FOR
JUSTIN STELMOK
557 SOUTHWEST CUTOFF
WORCESTER, MA 01607

DRAWN BY: WCN
DATE: 4/1/22
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FIRE TRUCK TURN ANALYSIS

SHEET **C31** OF **31**