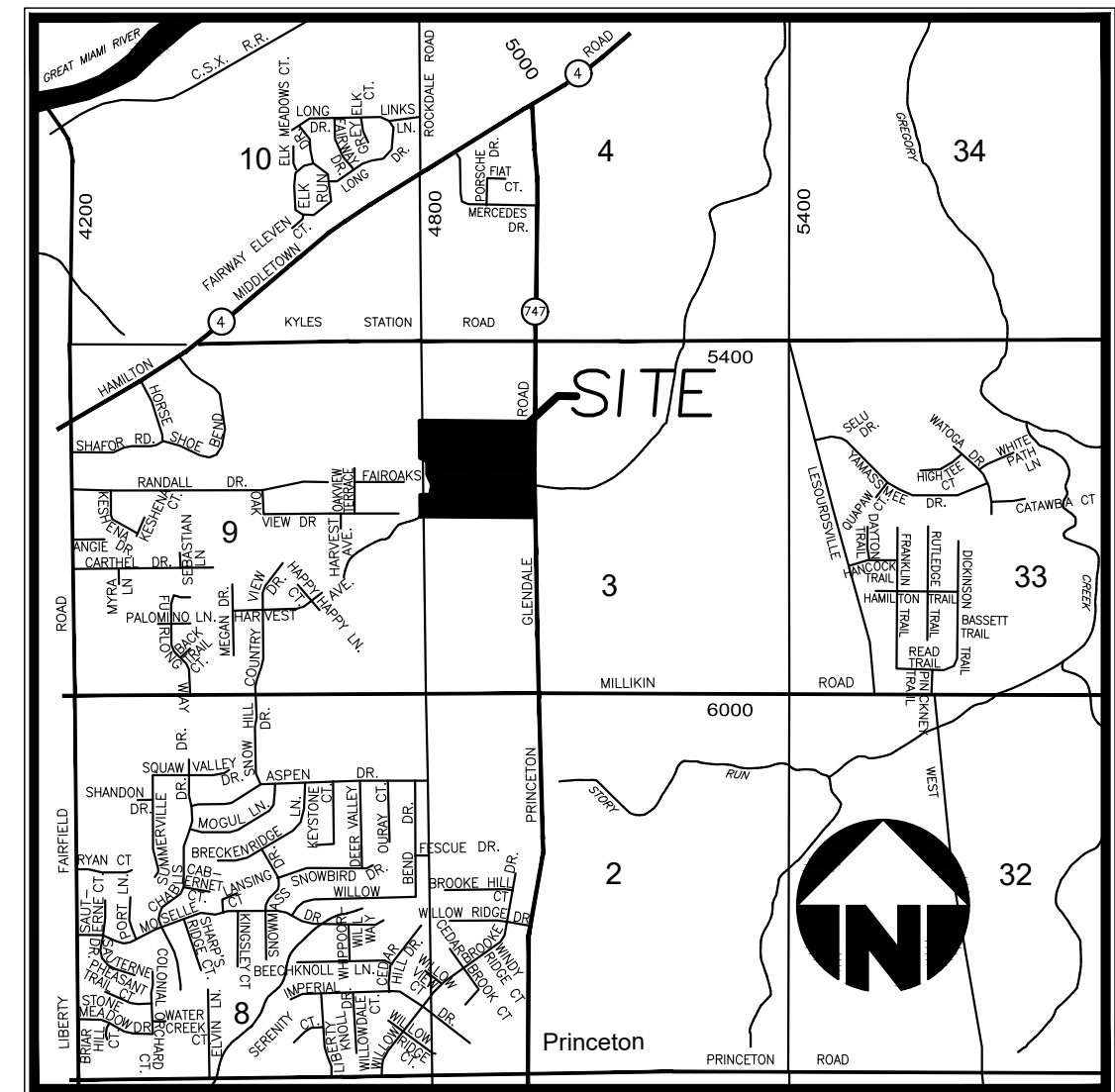
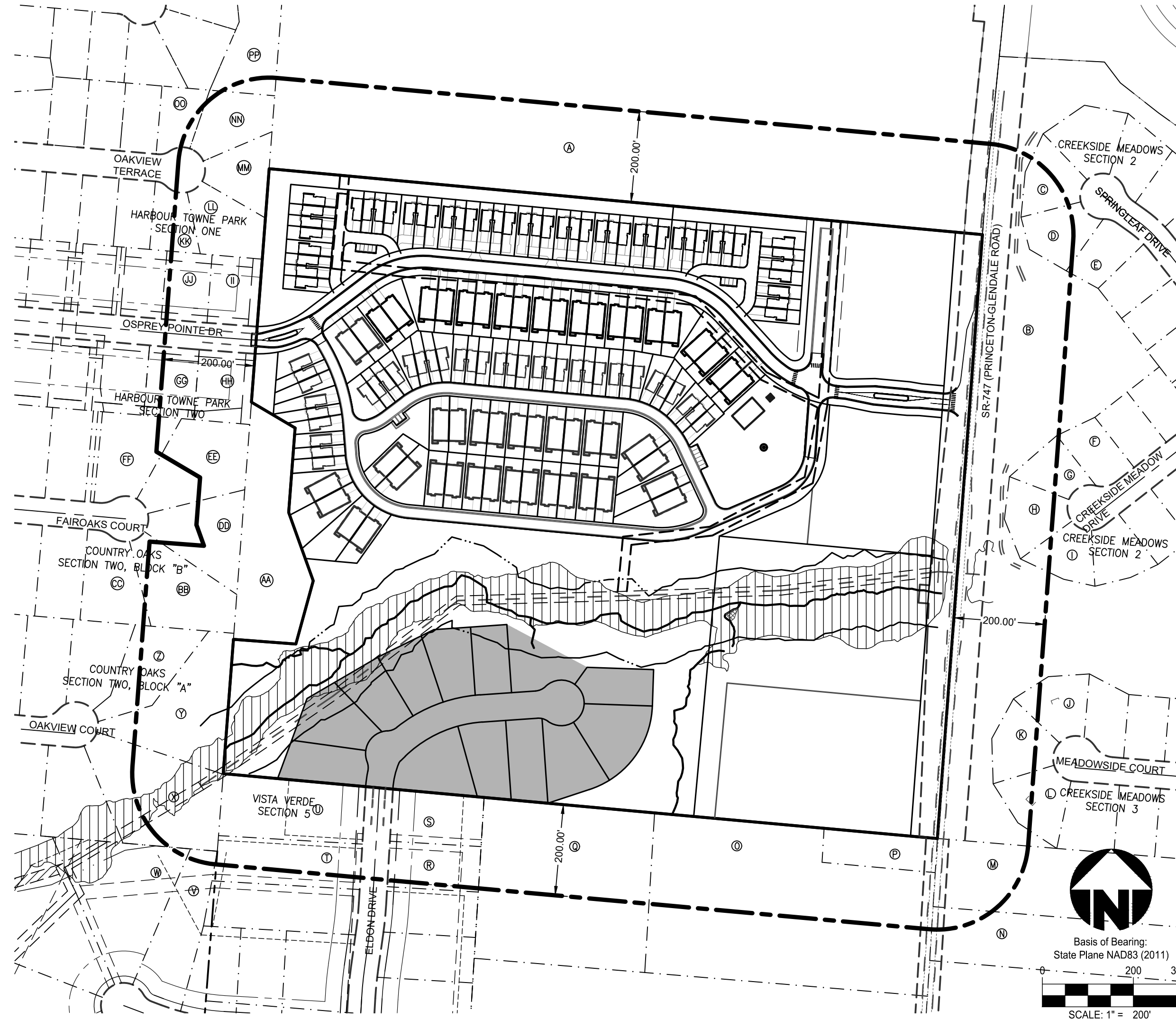


GENERAL NOTES

- ITEM NUMBERS REFER TO THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS OF BUTLER COUNTY REQUIREMENTS AND STANDARDS FOR SUBDIVISIONS. WHEN IN CONFLICT, THE COUNTY REQUIREMENTS SHALL PREVAIL.
- ITEMS THAT PERTAIN TO UNDERGROUND UTILITIES SUCH AS WATER MAIN PIPE, SANITARY SEWER PIPE, WATER VALVES AND MANHOLE FRAMES AND COVERS, ETC., WILL REMAIN UNDER SPECIFICATIONS OF THE UTILITY SERVING THE AREA. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUTLER COUNTY ENGINEER.
- ALL TRENCHES WITHIN THE RIGHT-OF-WAY AND 10' UTILITY EASEMENT SHALL BE COMPACTED AND BACKFILLED IN ACCORDANCE WITH ITEM 203 AND 603 IN THE STATE SPECIFICATIONS.
- SURFACE COURSE (ITEM 448) AND TACK COAT (ITEM 407) ARE TO BE APPLIED NO SOONER THAN NINE (9) MONTHS AFTER THE LEVELING COURSE (ITEM 448), AND FIFTY (50) PERCENT OF THE HOMES ARE COMPLETED, IF AFTER TWO (2) YEARS FIFTY (50) PERCENT OF THE HOMES HAVE NOT BEEN COMPLETED, THEN THE TOP COURSE MAY BE APPLIED.
- A MINIMUM 10' UTILITY EASEMENT SHALL BE SHOWN ON THE RECORD PLAT PARALLEL AND IMMEDIATELY ADJACENT TO THE RIGHT-OF-WAY LINE ALLOWING FOR INSTALLATION, OPERATION AND MAINTENANCE OF SEWERS, WATER, ELECTRIC AND TELEPHONE CONDUITS AND ANY OTHER PUBLIC OR QUASI PUBLIC UTILITY.
- DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONDUITS FOR THE FULL WIDTH OF THE PUBLIC RIGHT-OF-WAY AT A DEPTH OF 36" FOR USE BY THE ELECTRIC, TELEPHONE AND CABLE SERVICES. THE LOCATION OF THE LINES SHALL BE COORDINATED WITH UTILITY COMPANIES BY THE DEVELOPER.
- ALL ELECTRICAL TRANSFORMERS SHALL BE LOCATED SO THAT THEY DO NOT INTERFERE WITH THE EXISTING MANHOLES OR WATER MAIN APPURTENANCES.
- SUMP LINE CONDUITS ARE TO BE SDR 35, ARMO 2000, OR EQUIVALENT.
- WATER MAIN
 - WATER MAIN MATERIALS, VALVES, FIRE HYDRANTS, FITTINGS AND APPURTENANCES AND INSTALLATION TO BE AS PER BUTLER COUNTY SPECIFICATIONS, USING CLASS 53 DUCTILE IRON AS PER AWWA C-151 WITH MINIMUM 4" COVER.
 - ALL WATER MAIN VALVES TO HAVE A MINIMUM DEPTH OF 2.5' AND A MAXIMUM DEPTH OF 4' FROM PROPOSED GRADE TO THE TOP OF THE VALVE OPERATING NUT.
 - MINIMUM 10' HORIZONTAL, 18" VERTICAL SEPARATION BETWEEN WATER MAIN AND SANITARY AND/OR STORM SEWER.
 - IF METER PITS CANNOT BE INITIALLY INSTALLED AT THE LOCATION SHOWN ON THE TYPICAL SECTION, A CURB STOP CAN BE SET UP AT THIS LOCATION.
- SANITARY SEWER
 - SANITARY SEWER MATERIALS AND INSTALLATION TO BE AS PER BUTLER COUNTY SPECIFICATIONS, USING SECTION 3110 FOR PVC SDR-35 & 26 PIPE, SECTION 3140 FOR ABS OR PVC COMPOSITE PIPE, SECTION 3410 FOR MANHOLES.
 - CROSSINGS WHENEVER A SANITARY SEWER AND WATER MAIN MUST CROSS, THE SEWER SHALL BE AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES MEASURED BETWEEN THE OUTSIDE PIPE WALLS, BELOW THE BOTTOM OF THE WATER MAIN, IF IT IS ABSOLUTELY IMPOSSIBLE TO MAINTAIN THE 18 INCH VERTICAL SEPARATION, THE WATER MAIN SHALL BE RELOCATED OR THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
 - A SEWER PASSING OVER OR UNDER THE WATER MAIN SHALL BE ENCASED OR CONSTRUCTED OF MATERIALS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE WATER MAIN.
 - THE SEWER CROSSING SHALL BE CONSTRUCTED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
 - WHERE A WATER MAIN PASSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.
 - SANITARY LATERALS SHALL BE EXTENDED TO AT LEAST TEN (10) FEET BEYOND THE PROPERTY / RIGHT-OF-WAY OR TO THE EDGE OF THE EASEMENT, WHICHEVER IS GREATER.
 - SANITARY SEWER LATERALS, WHICH SHALL INCLUDE ALL PIPE AND APPURTENANCES FROM THE BUILDING TO THE PUBLIC SEWER MAIN, AND THE CONNECTION TO THE PUBLIC SEWER MAIN SHALL BE CONSIDERED PRIVATE AND THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN. THE CONNECTION TO THE SEWER WOULD BE ANY PIPING THAT EXTENDS OUT FROM THE MAIN BARREL OF THE SEWER MAIN.
 - ALL BUILDINGS TO BE SERVED BY THE PUBLIC SEWER SYSTEM SHALL BE CONSTRUCTED SO AS TO PROVIDE A MINIMUM OF FOUR FEET (4') OF VERTICAL SEPARATION BETWEEN THE PUBLIC SANITARY SEWER, AT THE POINT OF CONNECTION, AND THE LOWEST BUILDING LEVEL SERVED BY A GRAVITY SEWER CONNECTION AND SHALL NOT EXCEED A DEPTH OF 12 FEET BELOW FINISH GRADE AT THE END OF THE LATERAL AT THE RIGHT-OF-WAY UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY. IN ADDITION, SAID BUILDING LEVEL SHALL BE AT LEAST ONE (1) FOOT ABOVE THE LOWEST POINT OF FREE OVERFLOW (NON-SEALED MANHOLE COVER) UPSTREAM OF ANY TREATMENT FACILITY OF WASTEWATER PUMPING FACILITY THAT RECEIVES THE DISCHARGE FROM SAID BUILDING. SAID MINIMUM SERVICE LEVELS SHALL BE RECORDED ON THE "AS-BUILT" PLANS FOR THE DEVELOPMENT WHICH WILL BE KEPT ON FILE IN THE OFFICE OF THE BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES.
- BUTLER COUNTY WATER AND SEWER DEPARTMENT DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE RELOCATION, REPAIR, OR REPLACEMENT OF ANY OTHER UTILITY INSTALLED WITHIN FIVE (5) FEET OF THE CENTER LINE OF ANY SANITARY SEWER MAIN OR WATER MAIN.
- PRIVATE DRIVEWAYS, PARKING LOTS AND OTHER PAVED AREAS, EARTHEN BERMS OR STRUCTURES SHOULD NOT BE CONSTRUCTED OVER PRIVATE WATER OR SEWER SERVICE LINES WITHIN THE PUBLIC ROAD RIGHT OF WAY OR WITHIN THE EASEMENT AREAS FOR PUBLIC UTILITIES. SHOULD THIS OCCUR, THE PROPERTY OWNER SHALL BE HELD RESPONSIBLE FOR THE PROTECTION AND REPAIR AND FOR PROVIDING ACCESS TO ANY CURB STOPS, METER PITS, MANHOLES, CLEAN-OUTS, ETC. INSTALLED IN CONJUNCTION WITH THESE PRIVATE SERVICE LINES AND FOR ANY DAMAGE OR RESTORATION OF THE PAVED SURFACES OR STRUCTURES THAT MAY RESULT FROM THE FUTURE OPERATION, MAINTENANCE, REPAIR OR REPLACEMENT OF SAID SERVICE LINES AND APPURTENANCES.
- STORM SEWER
 - STORM SEWER PIPE SHALL MEET THE REQUIREMENTS AS FOLLOWS:
 - PVC PIPE AS PER ODOT SPECIFICATION 707.42 FOR ALL DIAMETERS
 - HDPE PIPE AS PER ODOT SPECIFICATION 707.33
 - CORRUGATED STEEL PIPE AS PER ODOT SPECIFICATION 707.01 OR 707.02 FOR ALL DIAMETERS
 - REINFORCED CONCRETE PIPE AS PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATION 706.02 FOR ALL DIAMETERS. CLASS SHALL BE SPECIFIED AT THE CONTRACTOR'S REQUEST. (CINCINNATI CONCRETE PIPE, DURACRETE OR EQUAL).
 - BITUMINOUS COATED CORRUGATED STEEL PIPE AS PER ODOT SPECIFICATION 707.05 OR 707.07
 INSTALLATION SHALL MEET BUTLER COUNTY SPECIFICATIONS. ALL JOINTS SHALL BE SOIL SEAL JOINTS UNLESS SPECIFICALLY NOTED ON THE PLANS.
 - DEFLECTION TESTING FOR STORM SEWERS AND CULVERTS 15% OF ALL STORM SEWERS SHALL BE TESTED FOR DEFLECTION WITHIN THIRTY DAYS AFTER THEY ARE COMPLETE. BUTLER COUNTY ENGINEER OR HIS DESIGNATED REPRESENTATIVE WILL DETERMINE WHAT 15% SHALL BE TESTED. IF ANY STORM SEWER IN THE ORIGINAL 15% IS FOUND OUT OF COMPLIANCE, DEFLECTION TESTS WILL BE REQUIRED ON 100% OF THE REMAINING STORM SEWER. A VERTICAL RING DEFLECTION GREATER THAN 5% WILL NOT BE ALLOWED. THIS DEFLECTION IS DEFINED AS 5% REDUCTION IN THE VERTICAL BASE OR AVERAGE INSIDE DIAMETER. THE METHOD OF TESTING SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. IF RIGID BALLS OR MANDRELS ARE USED TO TEST PIPE DEFLECTION, NO MECHANICAL PULLING DEVICES SHALL BE USED. THE DEFLECTION TEST MAY BE CONDUCTED WITH A NINE PRONG MANDREL, A BALL OR A CYLINDER OR ANOTHER MANNER ACCEPTABLE TO THE BUTLER COUNTY ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THE TESTING WILL BE ACCOMPLISHED FROM MANHOLE TO MANHOLE OR CATCHBASIN TO CATCHBASIN, FOLLOWING THE COMPLETE FLUSHING OF THE LINE. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT REQUIRED TO COMPLETE THE DEFLECTION TESTING. THE DEFLECTION TEST SHALL BE WITNESSED BY THE COUNTY ENGINEER OR HIS DESIGNATED REPRESENTATIVE. ANY SECTION OF PIPE THAT FAILS TO MEET THE AFOREMENTIONED REQUIREMENTS SHALL BE REWORKED BY A PROCEDURE ACCEPTABLE TO THE COUNTY OR BE EXCAVATED AND EITHER BE RELAYED OR REPLACED, AND RETESTED UNTIL THE REQUIREMENTS ARE MET.
 - ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 4' SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF ODOT STD. 604 AND SHALL CONFORM TO THE DETAILS AS SHOWN ON BUTLER COUNTY STANDARD DRAWING MH-1A.
 - HEADWALL: HW-4A TO BE USED WITH CORRUGATED METAL PIPE OR HW-4B TO BE USED WITH CONCRETE PIPE.
- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- ANY DETENTION BASIN ON SITE SHOULD BE CONSTRUCTED PRIOR TO THE CLEARING OF TOPSOIL AND GRADING OF THE SITE. ALL TREES AND VEGETATION SHALL BE REMOVED FROM ALL PROPOSED DETENTION BASINS REGARDLESS OF MAINTENANCE RESPONSIBILITY.
- SEDIMENTATION CONTROL: THE PROJECT HAS BEEN DESIGNED TO CONTROL EROSION AND PREVENT DAMAGE TO OTHER PROPERTY. ALL STRIPPING, EARTHWORK, AND REGRADING SHALL BE PERFORMED TO MINIMIZE EROSION. NATURAL VEGETATION SHALL BE RETAINED WHEREVER POSSIBLE. THE PROPOSED PLAN WILL ALLOW ALMOST ALL ERODED MATERIAL TO BE RETAINED ON SITE. ALL AREAS DISTURBED BY THE CONSTRUCTION OF THE ROADWAYS, DITCHES AND SEDIMENT BASINS SHALL BE SEEDED AND STRAWED AS SOON AS POSSIBLE TO LIMIT THE EROSION AND STABILIZE THE SOIL. PAYMENT WILL BE BY THE NUMBER OF SQUARE YARDS DISTURBED AS PER THE GRADING PLAN. FOR ADDITIONAL SEDIMENTATION CONTROL DETAILS, SEE GRADING PLAN.
- BUTLER COUNTY WILL NOT BE RESPONSIBLE FOR ANY PAVEMENT OR STORM SEWER REPAIRS RESULTING FROM WATER MAIN AND SANITARY SEWER REPAIRS. BUTLER COUNTY ALSO WILL NOT BE RESPONSIBLE FOR ADJUSTING MANHOLES, VALVES, FIRE HYDRANTS, METER PITS, ETC. AS A RESULT OF GRADE CHANGES. THE GRANITOR SHALL BE RESPONSIBLE FOR PROPER ADJUSTMENT OF MANHOLES, VALVES, FIRE HYDRANTS, METER PITS, ETC. TO THE SATISFACTION OF BUTLER COUNTY, DUE TO GRADE CHANGES, PAVING, REPAIRING, ETC. INITIATED BY THE GRANITOR.
- A TYPICAL FIVE (5) FOOT DRAINAGE EASEMENT IS TO BE PROVIDED ON BOTH SIDES OF EVERY LOT LINE.
- ANY ROADWAY SETTLEMENT GREATER THAN ONE INCH WILL BE REQUIRED TO BE REPAIRED WITH ITEM 613 LOW STRENGTH MORTAR BACKFILL (TYPE 1). SEE DETAIL ON SHEET #7.
- PROVIDE THE BUTLER COUNTY ENGINEER'S OFFICE WITH A FORTY-EIGHT (48) HOUR NOTICE PRIOR TO THE START OF ANY CONSTRUCTION, INCLUDING SANITARY INSTALLATION. PHONE 785-4145.
- CONTRACTORS TO ACCEPT ALL QUANTITIES AS CORRECT PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL INCLUDE THE COST OF COUNTY INSPECTION AND EXTENSION FEES IN UNIT PRICE BID.
- EXISTING ZONING: MU-PUD
- TOTAL PROPERTY ACREAGE: 46.71 ACRES
SINGLE FAMILY ACREAGE: 4.18 ACRES
- ALL UNITS ARE TO BE OWNER OCCUPIED.
- ELECTRIC AND GAS TO BE SUPPLIED BY DUKE ENERGY COMPANY.
- STREET LIGHTS TO BE PROVIDED BY DUKE ENERGY.
- A HOME OWNERS ASSOCIATION WILL BE ESTABLISHED TO MAINTAIN COMMON FACILITIES INCLUDING THE MAINTENANCE OF LANDSCAPING, LIGHTING OR ANY OTHER ITEMS PROPOSED WITHIN THE MEDIANS LOCATED IN THE PUBLIC RIGHT OF WAY.
- HIGH WATER TABLES ARE APPARENT IN THIS AREA. IF BASEMENTS ARE CONSTRUCTED, IT IS THE RESPONSIBILITY OF THE BUILDER TO TAKE SPECIAL PRECAUTIONS TO ENSURE THE BASEMENTS STAY DRY.
- ALL TWELVE SINGLE FAMILY LOTS SHALL BE PROVIDED WITH A NFPA 30 SPRINKLER SYSTEM FOR FIRE PROTECTION. LIBERTY TOWNSHIP FIRE DEPARTMENT SHALL REVIEW THE PROPOSED SPRINKLER SYSTEM FOR EACH LOT AT THE BUILDING PERMIT STAGE OF THE APPROVAL PROCESS.

CALLAWAY PLACE - SF FINAL DEVELOPMENT PLAN

SECTION 3, TOWN 5, RANGE 3
5695 PRINCETON - GLENDALE ROAD
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO



VICINITY MAP
NOT TO SCALE

OWNER
LIBERTY 5695 PRINCETON GLENDALE, LLC
6355 CENTRE PARK DRIVE
WEST CHESTER, OH 45069

DEVELOPER
M/I HOMES OF CINCINNATI, LLC
9349 WATERSTONE BLVD, SUITE 100
CINCINNATI, OH 45249
PH: 513-833-2201

ENGINEER / SURVEYOR
BAYER BECKER
6900 TYLERSVILLE ROAD, SUITE A
MASON, OHIO 45040
PH: (513)336-6600

INDEX OF SHEETS

DRAWING NO.	DRAWING TITLE	ISSUE DATE	REVISION NO.	REVISION DATE
C1.0	TITLE SHEET	08-13-21		
C2.0	EXISTING CONDITIONS & DEMOLITION PLAN	08-13-21		
C3.0	LAYOUT PLAN	08-13-21		
C3.1	SITE DETAILS	08-13-21		
C4.0	UTILITY PLAN & PROFILE	08-13-21		
C4.1	UTILITY PROFILES & DETAILS	08-13-21		
C5.0	GRADING & EROSION CONTROL PLAN	08-13-21		
C5.1	GRADING & EROSION CONTROL NOTES & DETAILS	08-13-21		
C6.0	BUTLER COUNTY SANITARY SEWER DETAILS	08-13-21		
C6.1	BUTLER COUNTY WATER DETAILS	08-13-21		
C6.2	BUTLER COUNTY STORM SEWER DETAILS	08-13-21		

BENCHMARK

Existing Cross Notch Located at
STA. 17+64, 12' Lt. on Eldon Drive.
Northing: 519928.3876
Easting: 1415929.6894

- | | | | | |
|--|---|---|--|--|
| A D2010-003-000-008
ELIZABETH A. MEHL, TR
O.R. 6821, PG. 1886
39.948 ACRES | J D2020-280-000-051
LOT #110
JAMES & BRENDA K. SCHUTTINGER
O.R. 7800, PG. 1727 | S D2020-334-000-017
LOT 145
WELSH DEVELOPMENT COMPANY, INC.
O.R. 8882, PG. 2270 | BB D2020-247-000-038
LOT 86
JEFFERY & PAMELA DUCHARDT
O.R. 7359, PG. 1942 | JJ D2020-247-000-067
LOT 89
DAVID J. & ELESIA M. RAY
O.R. 9199, PG. 376 |
| B D2020-280-000-045
OPEN SPACE LOT #88
CREEKSIDE MEADOWS
HOMEOWNERS ASSOCIATION
O.R. 7847, PG. 1346 | K D2020-280-000-050
LOT #109
DAVID ROGER COLTHARP CO. TR.
O.R. 9438, PG. 350 | T D2020-334-000-015
LOT 143
NVR, INC.
O.R. 9551, PG. 851 | CC D2020-247-000-039
LOT 87
THOMAS & MARY BETH DAWSON, TRUSTEE
O.R. 8995, PG. 1157 | KK D2020-247-000-047
LOT 47
BROOKS R. & LINDSEY S. KIERES
O.R. 9109, PG. 147 |
| C D2020-280-000-033
LOT #76
DARA T. PHOU & RATHANA M. &
LONN TIM
O.R. 8754, PG. 2339 | L D2020-032-000-030
LOT #108
DANIELA A. CLEMENTS
O.R. 8916, PG. 1812 | U D2020-334-000-016
LOT 144
WELSH DEVELOPMENT COMPANY, INC.
O.R. 8882, PG. 2270 | DD D2020-247-000-037
LOT 85
KEVIN & BETH ELLEN LEE
O.R. 8272, PG. 1904 | LL D2020-247-000-046
LOT 46
WALTER, JR. & DELORES A. MURPHY
O.R. 8923, PG. 500 |
| D D2020-280-000-032
LOT #75
THOMAS M. & KRISTEN M. ELLIS
O.R. 7857, PG. 229 | M D2020-032-000-001
PT. LOT 25
THOMAS L. LIEBERST CO-TR.
O.R. 8169, PG. 405 | V D2020-334-000-010
LOT 138
WELSH DEVELOPMENT COMPANY, INC.
O.R. 8882, PG. 2270 | EE D2020-247-000-036
LOT 84
WAYNE S. JR. & RHONDA M. HARRIS
O.R. 7046, PG. 290 | MM D2020-300-000-045
LOT 44
NICHOLAS & ESTHER AFADZI
O.R. 8171, PG. 2261 |
| E D2020-280-000-032
LOT #74
CHRIS & SONYA ASHER
O.R. 8198, PG. 427 | N D2020-032-000-002
PT. LOT 25
THOMAS L. LIEBERST CO-TR.
O.R. 8169, PG. 405 | W D2020-334-000-009
LOT 137
NVR, INC.
O.R. 9563, PG. 834 | FF D2020-247-000-035
LOT 83
ELLERY A. & MICHELLE A. BERLINGER
O.R. 7165, PG. 115 | NN D2020-300-000-044
LOT 43
CLYDE A. JONES
O.R. 8158, PG. 867 |
| F D2020-280-000-024
LOT #67
DAVID N. MUTUA &
LYVEEN SABINA KOBOI
O.R. 9524, PG. 1291 | O D2020-030-000-020
PT. LOT 3
DONALD J. GILGRIST
O.R. 8463, PG. 2231 | X D2020-247-000-014
LOT 62
JUSTIN DOUGLAS HALL
O.R. 9014, PG. 1334 | GG D2020-247-000-070
LOT 92
SAMATHA MARIE & JEFFERY TODD AMOS
O.R. 9543, PG. 1769 | OO D2020-300-000-043
LOT 43
RICK T. BARGE
O.R. 8638, PG. 2090 |
| G D2020-280-000-023
LOT #66
MURALI & SREDEVI MANCHINEELA
O.R. 9524, PG. 1291 | P D2020-030-000-021
PT. LOT 3
RICHARD A. FLAHERTY JR. &
CRYSTAL FALLON
O.R. 9031, PG. 1604
0.43 AC. | Y D2020-247-000-013
LOT 61
STEPHANIE & DARREL JOHNSON
O.R. 9526, PG. 1212 | HH D2020-247-000-069
LOT 91
WHITSON T. & ALYSSA B. DAVIS
O.R. 9138, PG. 1234 | PP D2020-300-000-067
OPEN SPACE LOT 77
INVERNESS GROUP, INCORPORATED
O.R. 8345, PG. 1818 |
| H D2020-280-000-022
LOT #65
TANNER T. SCHWEICKART
O.R. 9262, PG. 1907 | Q D2020-030-000-022
PT. LOT 2
DONALD J. GILGRIST
O.R. 8463, PG. 2231
3 AC. | Z D2020-247-000-012
LOT 60
MATTHEW & ABBEY M. BRADLEY
O.R. 9256, PG. 773 | II D2020-247-000-068
LOT 90
SATNAM SINGH & SUNDIP KAUR
O.R. 9407, PG. 289 | |
| I D2020-280-000-021
LOT #64
BRADLEY C. & RUBY L. PARAMORE
O.R. 9041, PG. 408 | R D2020-334-000-018
LOT 146
NVR, INC.
O.R. 9566, PG. 87 | AA D2010-003-000-046
OLD KYLE STATION, LLC
O.R. 8659, PG. 2333
1.419 AC. | | |

**CALLAWAY PLACE - SF
FINAL DEVELOPMENT PLAN**
 SECTION 3, TOWN 5, RANGE 3
 5695 PRINCETON - GLENDALE ROAD
 LIBERTY TOWNSHIP
 BUTLER COUNTY, OHIO

bayer becker
 www.bayerbecker.com
 6900 Tylersville Road, Suite A
 Mason, OH 45040 - 513.336.6600

Drawing: 20-0191 CD SF
 Drawn by: MTL
 Checked by: CJO
 Issue Date: 08-13-21

C1.0

Plot time: Sep 14, 2021 - 3:25pm
 Drawing name: J:\2020\20-0191\CD\DWG\Single Family\20-0191 CD SF.dwg - Layout Tab: C1.0 TITLE

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Plot time: Sep 14, 2021 - 3:32pm
 Drawing name: J:\2020\20-0191\CV\DWG\Single Family\20-0191 CD SF.dwg - Layout Tab: C3.0 LAYOUT



Overall Project Summary:

Acreage Summary:		
Commercial Acreage (Including Future Public Callaway Drive)	13.42 Ac	(28.7%)
Total Residential Acreage	33.29 Ac	(71.3%)
Single Family Acreage	4.18 Ac	
Total Acreage:	46.71 Ac	(100%)

Units:	Single Family	Project Total
Single Family	12	12/12
Townhome Buildings/Units	0	26/84
Paired-patio Buildings/Units	0	26/52
Total:	12	64/148

Open Space:	Project Total
Required:	14.02 Ac (30.0%)
Provided:	15.26 Ac (32.7%)

Single Family Parking Summary:	Spaces
Required:	
(2 spaces/unit)	24
Provided:	
Driveways (2 spaces/unit)	24
Garage (2 spaces/unit)	24
Off Street Parking	0
Total Provided:	48

Curve Table: Alignments			
Curve #	Radius	Length	Chord Direction
CL-1	300.000	209.347	N66° 01' 32.09"E
CL-2	44.000	17.733	N34° 29' 20.00"W
CL-3	200.000	68.250	N13° 10' 01.60"E

LEGEND

CONCRETE SIDEWALK BY SITE CONTRACTOR
 SEE DETAIL SHEET C3.1



Know what's below.
 Call before you dig.

1-800-362-2764
 OHIO UTILITIES PROTECTION SERVICE (OUPS)
 LOCATION OF ALL EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

Basis of Bearing:
 State Plane NAD83 (2011)
 0 50 75
 SCALE: 1" = 50'

Date	Drawn	Chk	Item	Revision Description

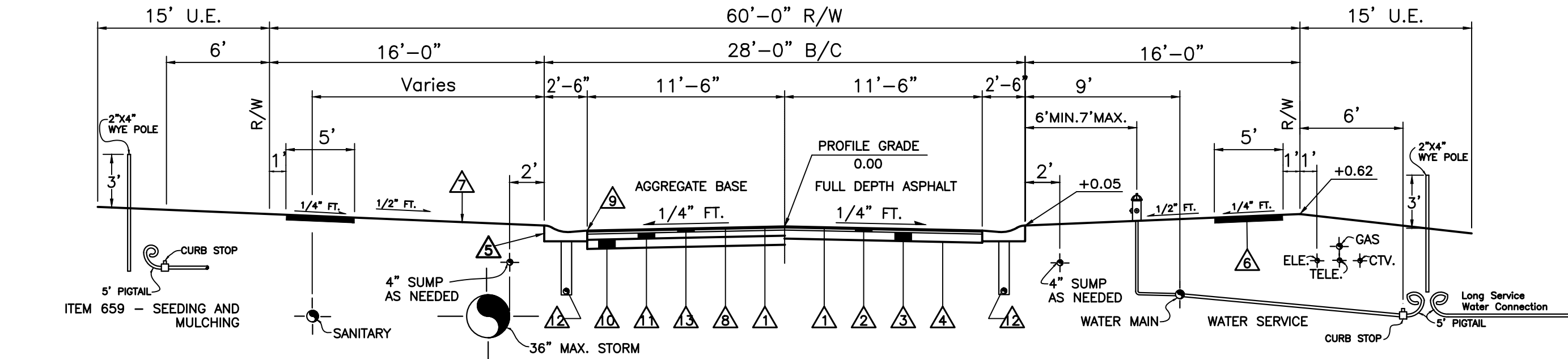
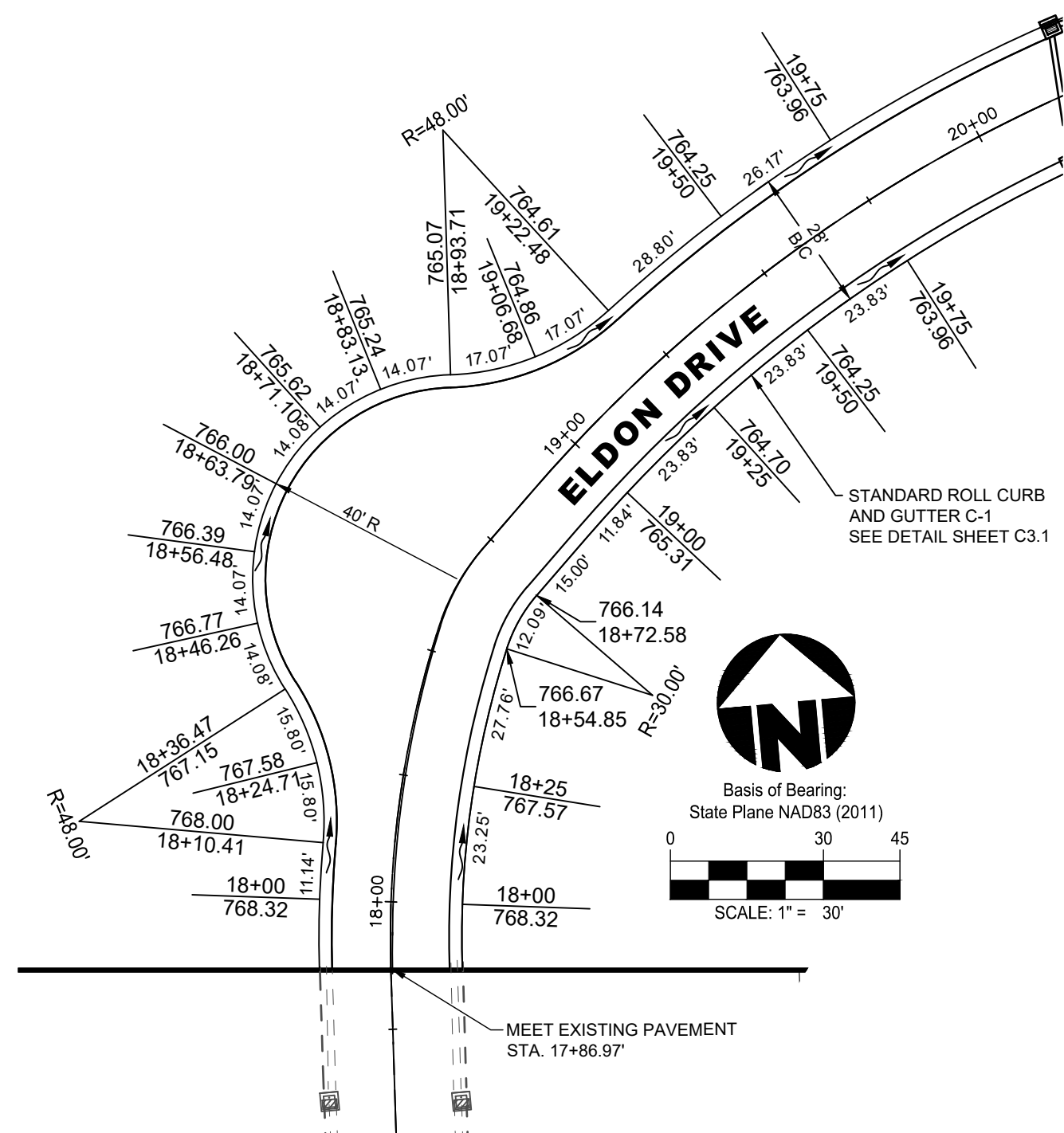
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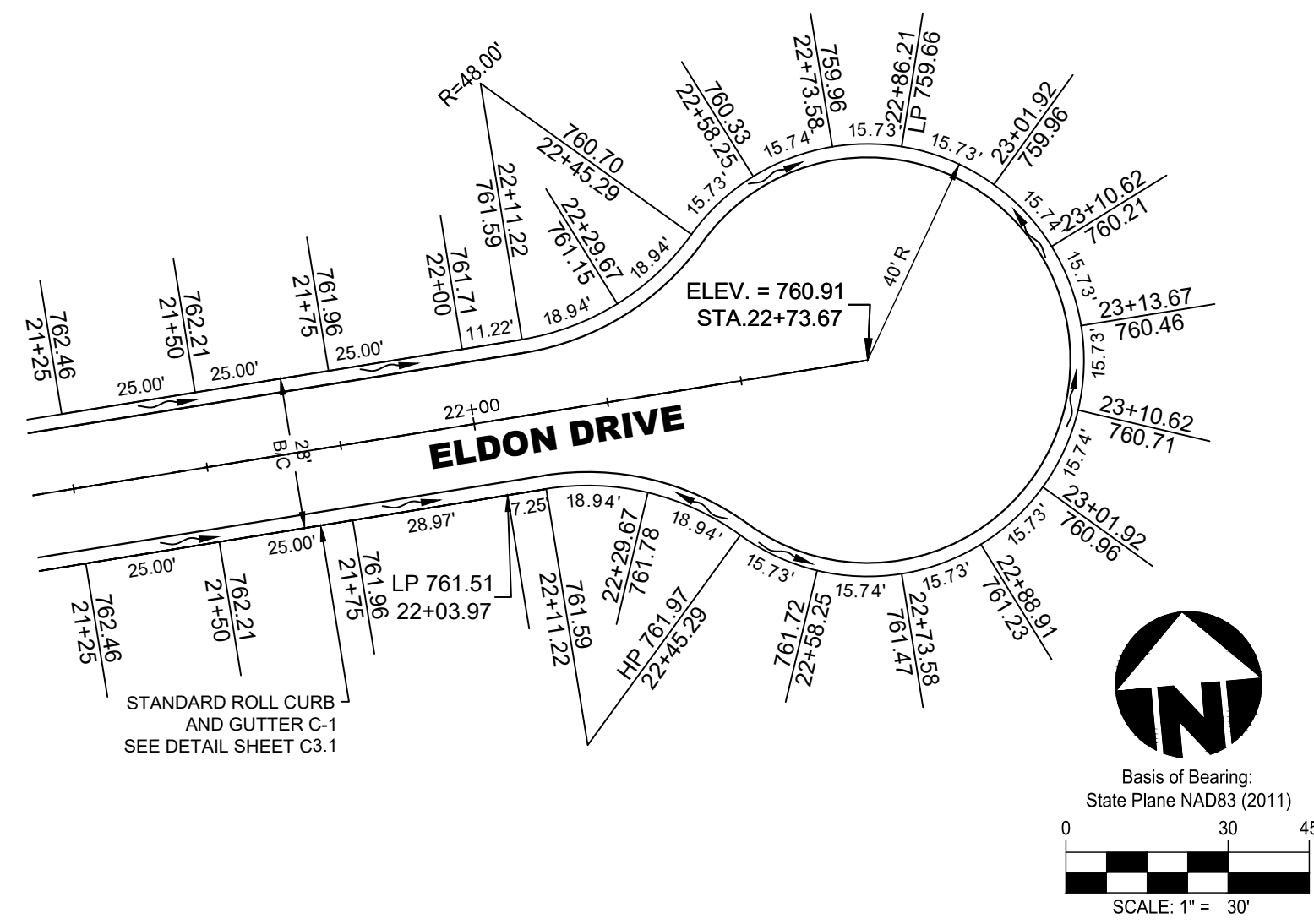
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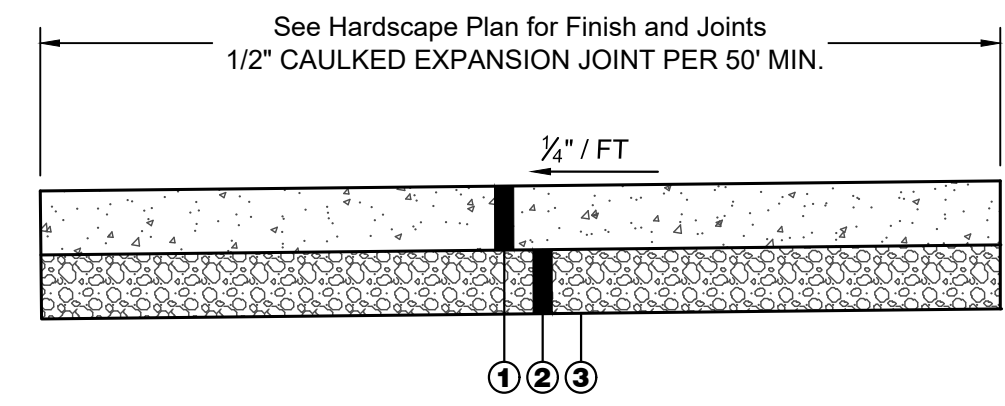
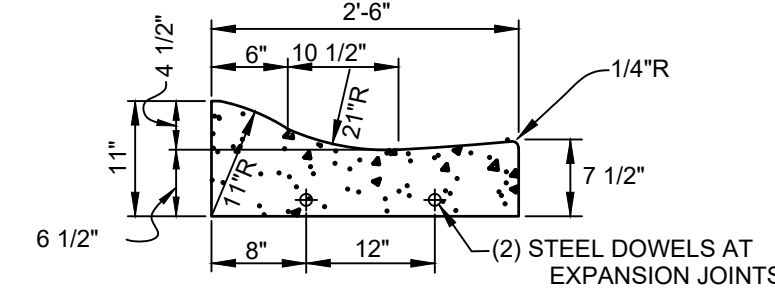


- | ITEM | DEPTH | DESCRIPTION |
|------------|-------|-------------|
| Underdrain | 18" | |
| Supplies | 24" | |
| Gas | 30" | |
| Water | 36" | |
| Electric | 42" | |
| Telephone | 48" | |
| Cable TV | 54" | |
- * SURFACE COURSE (ITEM 448) AND TACK COAT (ITEM 407) ARE TO BE APPLIED NO SOONER THAN TWELVE (12) MONTHS AFTER THE LEVELING COURSE (ITEM 448), AND FIFTY (50) PERCENT OF THE HOMES HAVE NOT BEEN COMPLETED. IF AFTER TWO (2) YEARS FIFTY (50) PERCENT OF THE HOMES HAVE NOT BEEN COMPLETED, THEN THE TOP COURSE MAY BE APPLIED.
 - INSTALLATION OF 301 BITUMINOUS AGGREGATE BASE. ALSO TO BE APPLIED
 - 1" ITEM SURFACE COURSE - 448 ASPHALTIC CONCRETE SEE * NOTE
 - 2 1/2" LEVELING COURSE - ITEM 448 ASPHALTIC CONCRETE
 - 6" BASE COURSE - ITEM 301 BITUMINOUS AGGREGATE BASE
 - ROLL TYPE CURB & GUTTER - ITEM 609 (BUTLER COUNTY STANDARD C-1)
 - COMPACTED SUBGRADE - ITEM 204
 - FOUR INCH THICK CLASS "C" CONCRETE SIDEWALK, FIVE FEET WIDE (EXCEPT WHERE SHOWN OTHERWISE ON PLAN) ITEM 608 WALK TO BE 1/2"
 - SEEDING & MULCHING - ITEM 659
 - TACK COAT - ITEM 407 - TO BE APPLIED AT A RATE OF 0.05 GAL. PER SQUARE YARD. SEE * NOTE
 - TACK COAT - ITEM 407 - TO BE APPLIED TO FRONT FACE OF CURB PRIOR TO INSTALLATION OF 301 BITUMINOUS AGGREGATE BASE. ALSO TO BE APPLIED TO CURB JOINT AFTER THE INSTALLATION OF 448 LEVELING COURSE.
 - 6" BASE COURSE - ITEM 304 AGGREGATE BASE
 - 5" BASE COURSE - ITEM 301 BITUMINOUS AGGREGATE BASE
 - 4" UNDERDRAIN - ITEM 605. CONNECT UNDERDRAIN TO CENTERLINE OF CURB AND GUTTER. CONNECT TO SIDEWALL OF NEAREST CATCH BASIN
 - 1 1/2" LEVELING COURSE - ITEM 448 ASPHALTIC CONCRETE

**TYPICAL PUBLIC STREET SECTION
 ELDON DRIVE**

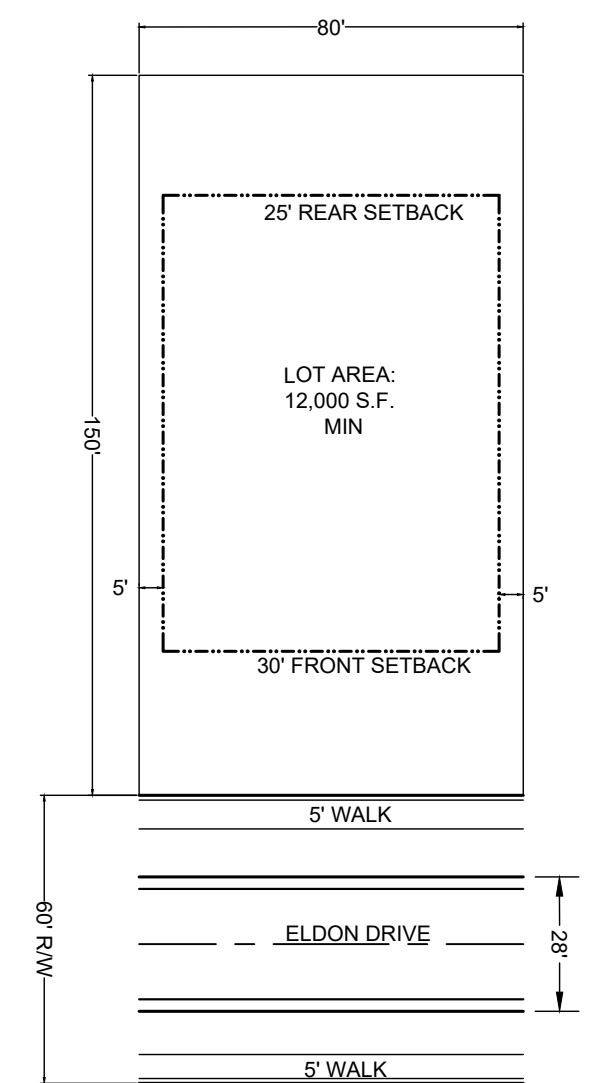


**STANDARD ROLL TYPE CURB & GUTTER C-1
 NOT TO SCALE**



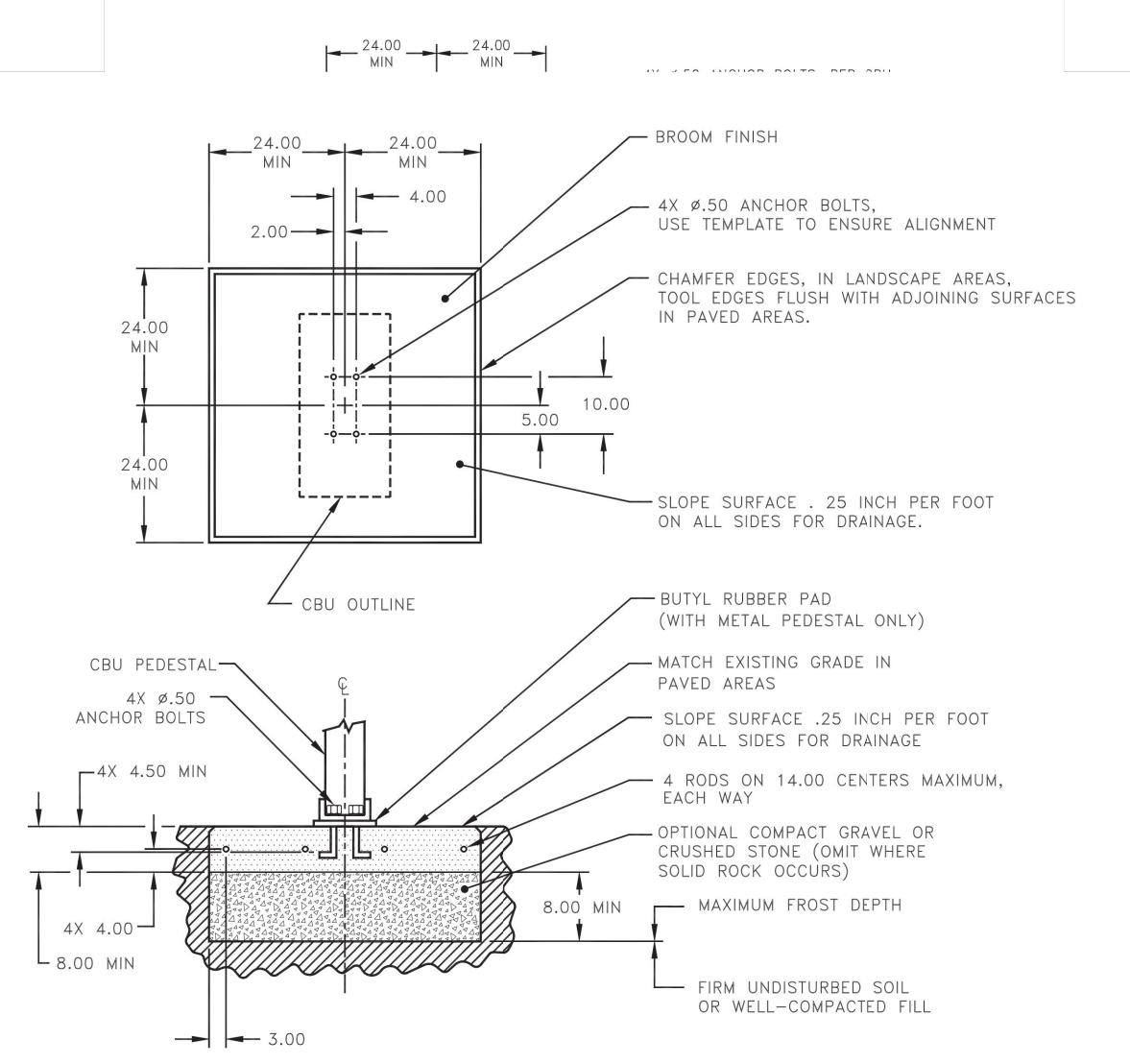
**TYPICAL SIDEWALK SECTION
 NOT TO SCALE**

- NOTE: Sidewalk Joints Shall Be In Accordance With Item 608.03 Unless Otherwise Detailed as a Part of the Architectural Plans.
- ITEM 608 - 4" CLASS C
 - ITEM 304 - 4" AGGREGATE BASE
 - ITEM 204 - SUBGRADE COMPACTION



**TYPICAL LOT DETAIL
 NOT TO SCALE**

USPS APPROVED SPECIFICATIONS - CONCRETE PAD (SINGLE UNIT)



- NOTES:
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN - 6% MAX AIR ENTRAINMENT AND BE PLACED WITH A 3.50 - 4.50 SLUMP IN ACCORDANCE WITH ACI 301.
 - REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
 - ANCHOR BOLTS SHALL CONFORM TO ASTM A193, GRADE B8M, TYPE 316 STAINLESS STEEL.

USPS APPROVED SPECIFICATIONS - CONCRETE PAD (MULTIPLE UNIT)

**CALLAWAY PLACE - SF
 FINAL DEVELOPMENT PLAN**
 SECTION 3, TOWN 5, RANGE 3
 LIBERTY TOWNSHIP
 BUTLER COUNTY, OHIO

bayer becker
 www.bayerbecker.com
 6900 Tyersville Road, Suite A
 Mason, OH 45040 - 513.336.6600

Drawing: 20-0191 CD SF
 Drawn by: MTL
 Checked by: CJO
 Issue Date: 08-13-21

Sheet:
C3.1

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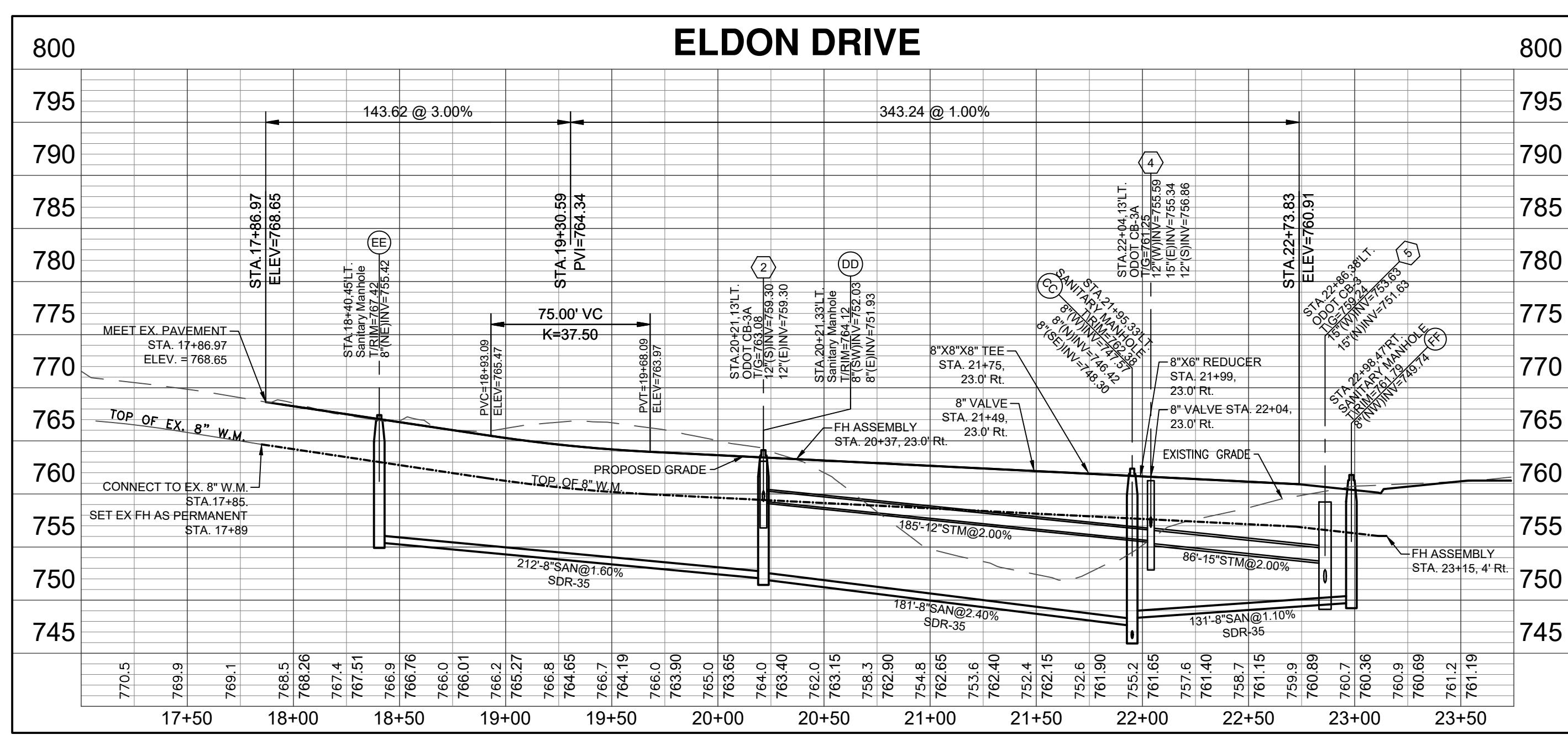
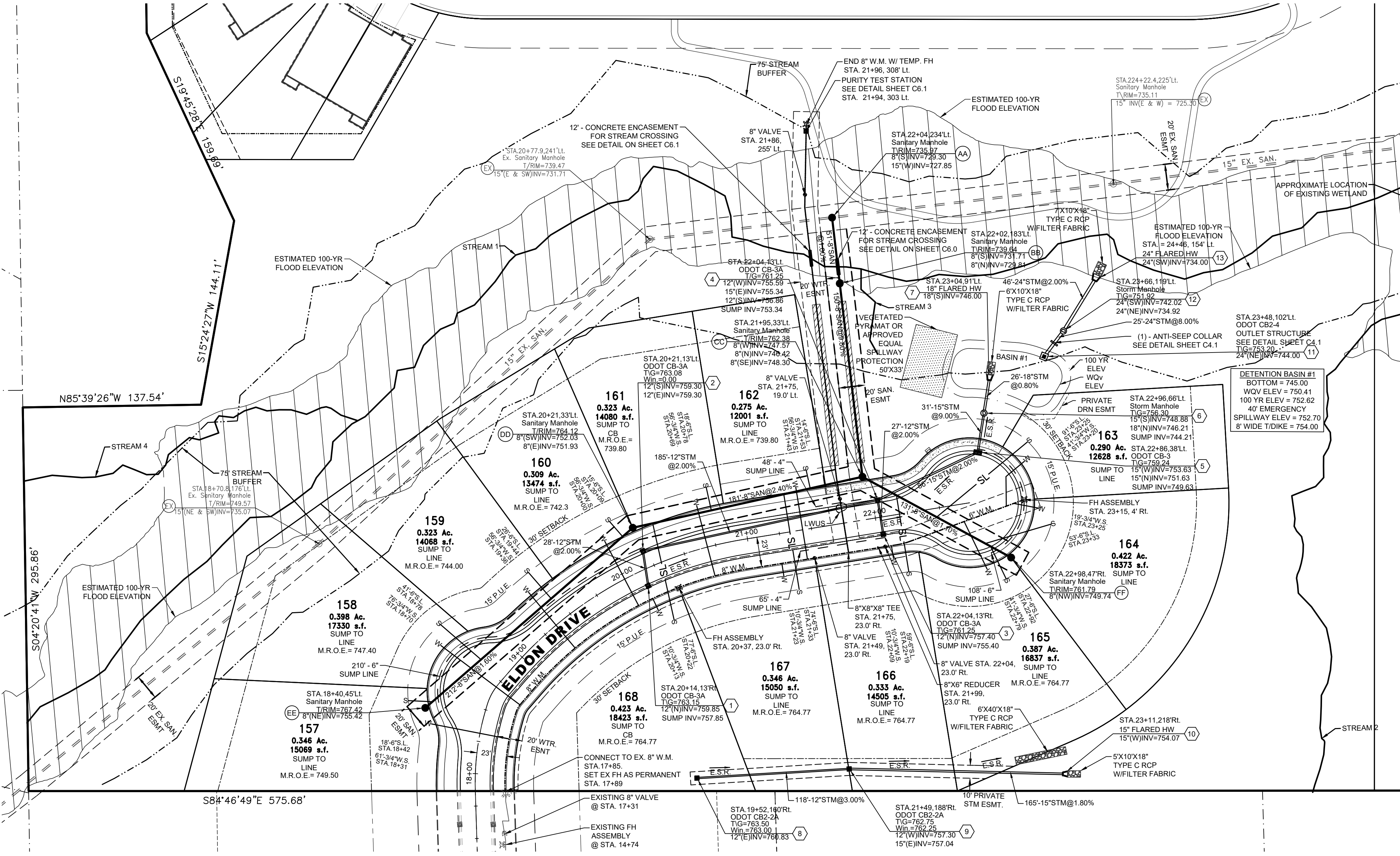
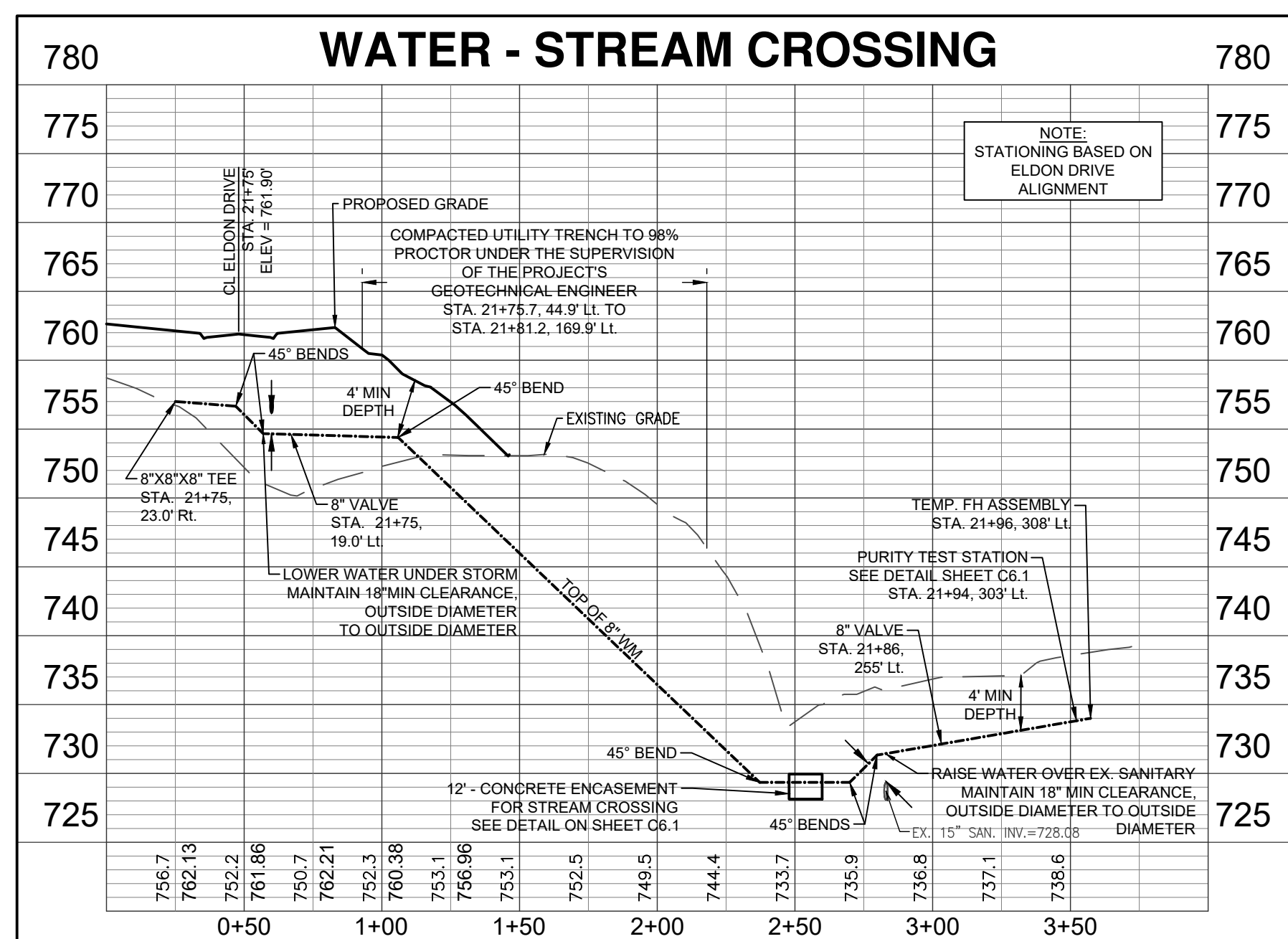
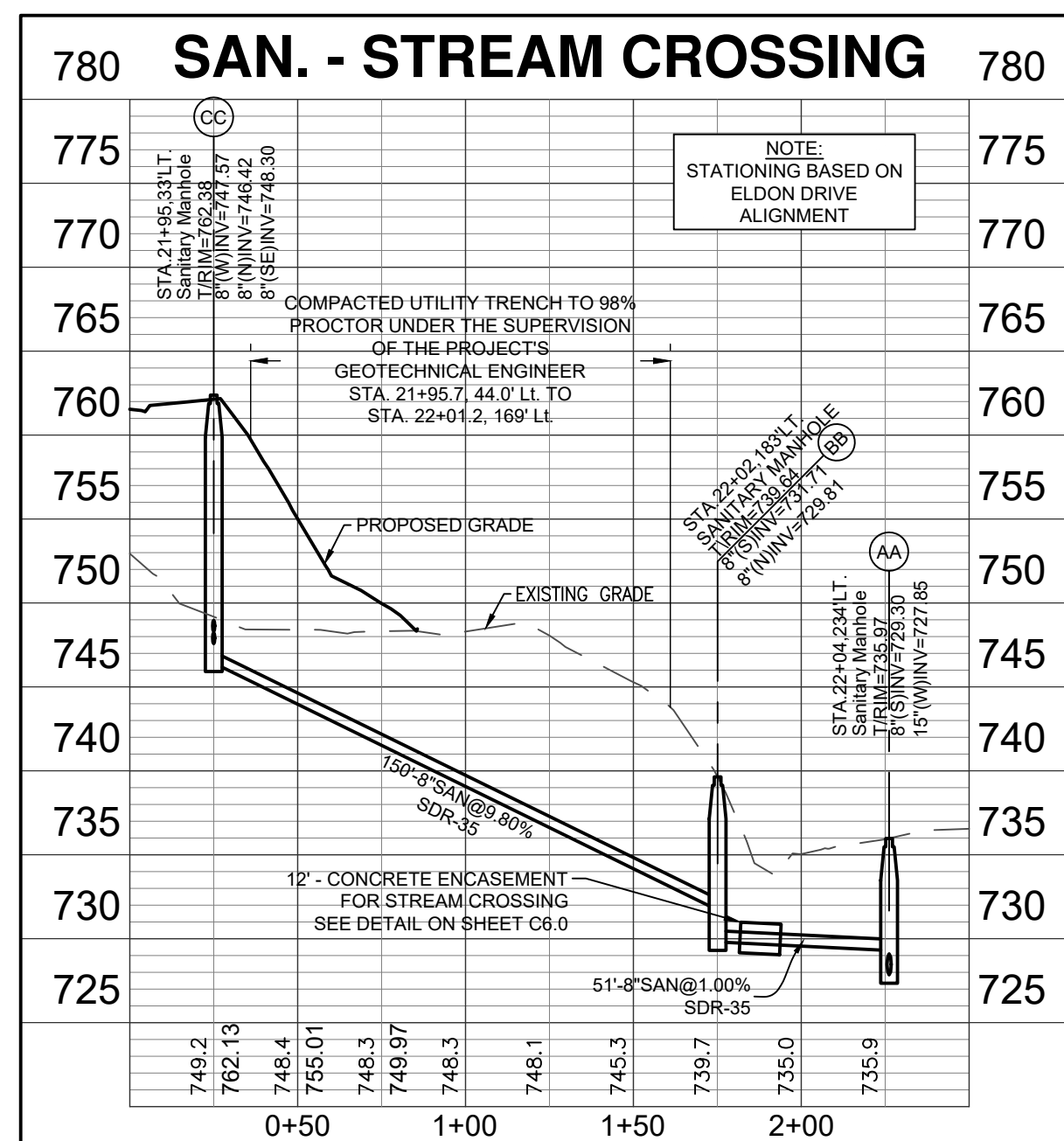
NOTE:
At Crossings, the water main shall have a minimum vertical distance of eighteen (18") inches from storm and sanitary sewers. Also, one full length of water main shall be located so the joints are as far from the storm and sanitary sewers as possible. Fittings, not joint deflection, must be used when water main is lowered at crossings.

NOTES:

- 48 hours notice to be given to affected residents before construction begins.
- Lower 3/4" Water Services as needed to avoid conflicts with Storm with Min. 4' Cover.
- Location of existing utilities to be determined in the field prior to work beginning.
- All lots Sump to Sump Drain unless otherwise noted in plan.
- Sump Lines to be installed as per Standard Service Detail. Wyes or Tees are to be placed ten feet past lot line, on the low side of specified lots, and marked with Wye poles.
- Contractors to accept all quantities as correct prior to beginning construction.
- Coordinate purity test station locations with BCWS Inspector.

WATER MAIN RESTRAINT JOINT LOCATION CHART

Water Main Dia.	Horizontal 45° Bends	Vertical 45° Bends Up (Lower Water Under...)	Vertical 45° Bends Down (Lower Water Under...)	Dead Ends (Permanent & Temporary)	Tees (for Tee Branch)
6"	18' both sides	18' both sides	36' both sides	72' Back	54' 8" 10"
8"	18' both sides	36' both sides	36' both sides	90' Back	54' 72'
10"	36' both sides	36' both sides	36' both sides	117' Back	54' 72' 90'
12"	36' both sides	54' both sides	72' both sides	180' Back	36' 72' 90'
14"	54' both sides	54' both sides	90' both sides	198' Back	36' 72' 90'
16"	54' both sides	54' both sides	90' both sides	216' Back	36' 54' 90'



LEGEND

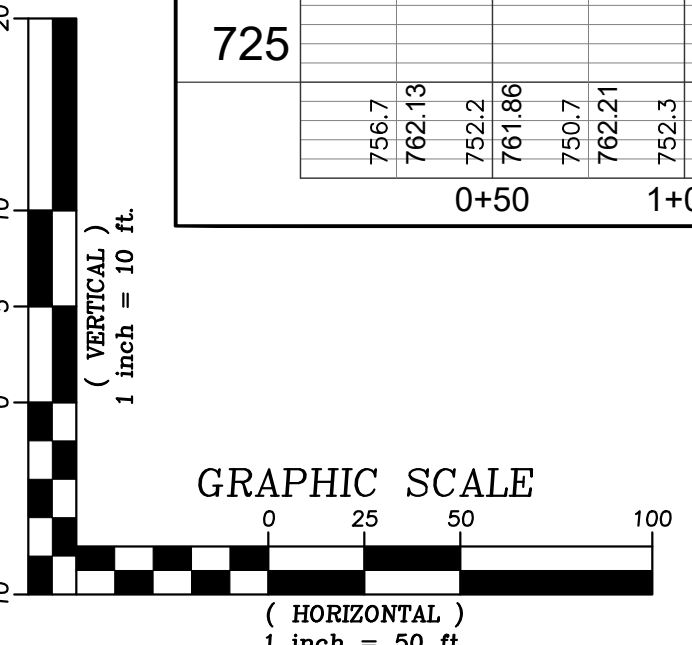
- COMPACTED UTILITY TRENCH TO 98% PROCTOR UNDER THE SUPERVISION OF THE PROJECT'S GEOTECHNICAL ENGINEER



Know what's below.
Call before you dig.

1-800-362-2764
OHIO UTILITIES PROTECTION SERVICE (OUPS)
LOCATION OF ALL EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

Plot time: Sep 14, 2021 - 3:34pm
Drawing name: J:\2020\20-0191\CD\DWG\Single Family\20-0191 CD SF.dwg - Layout Tab: C4.0 UTIL



Scale: 1" = 50'

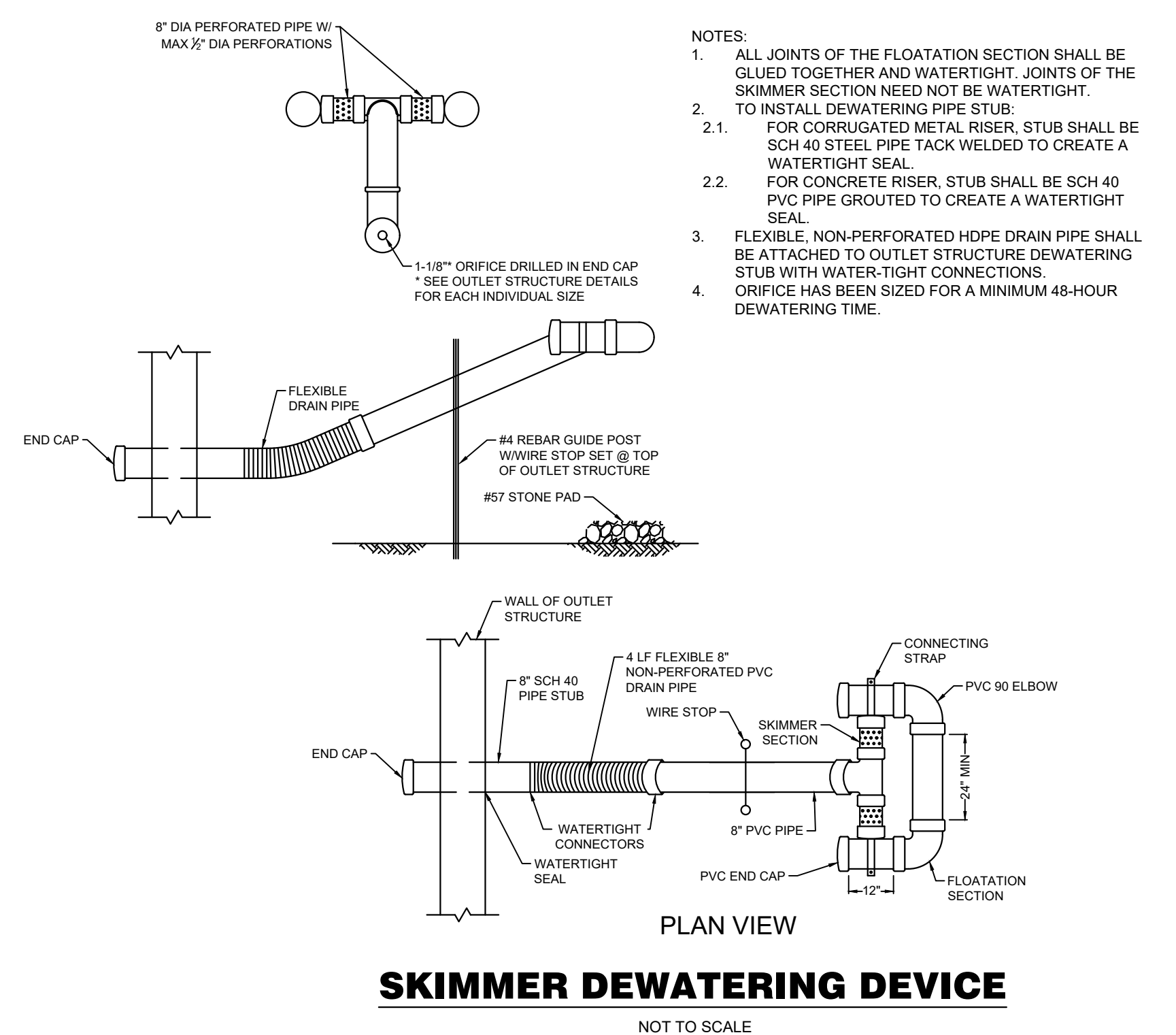
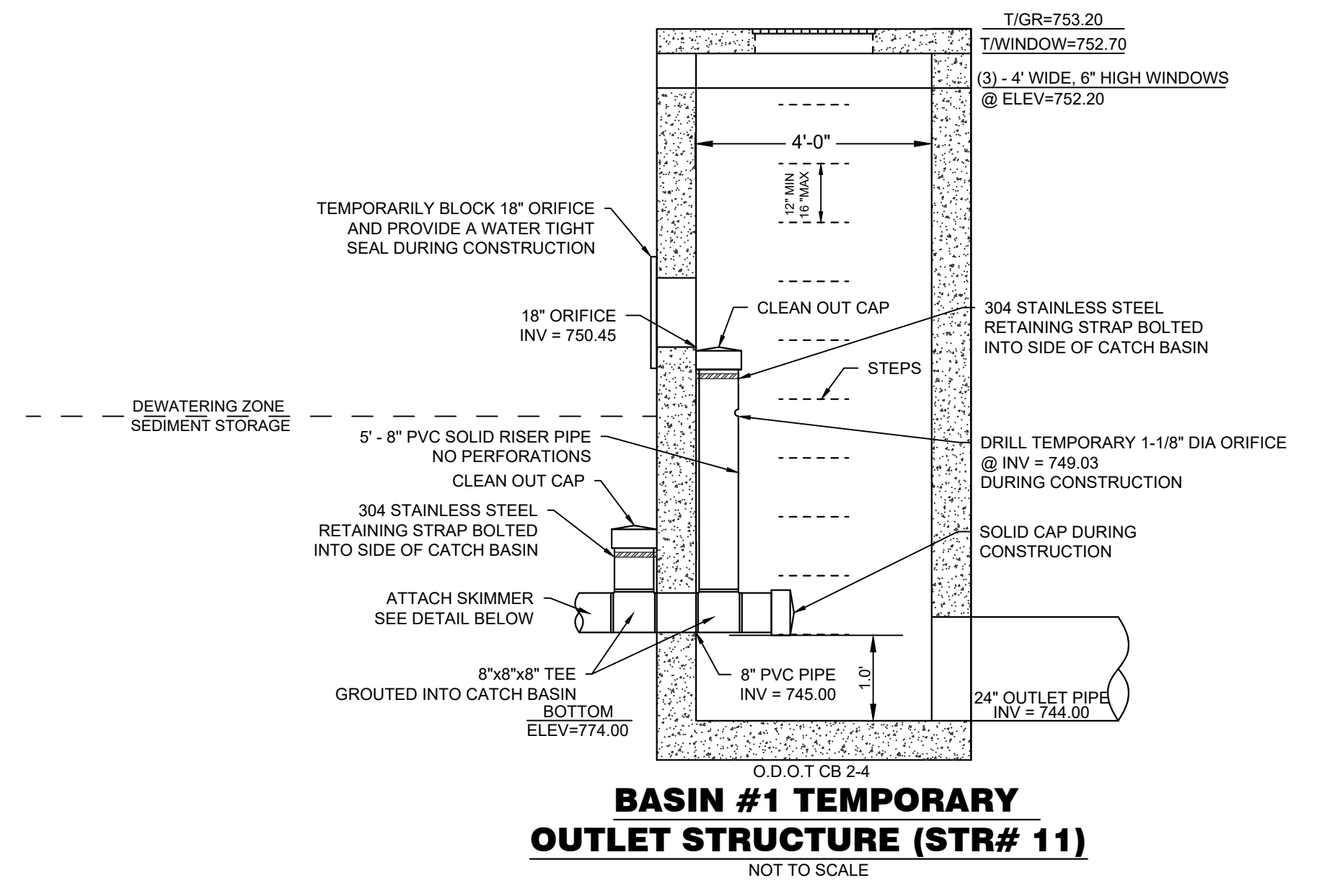
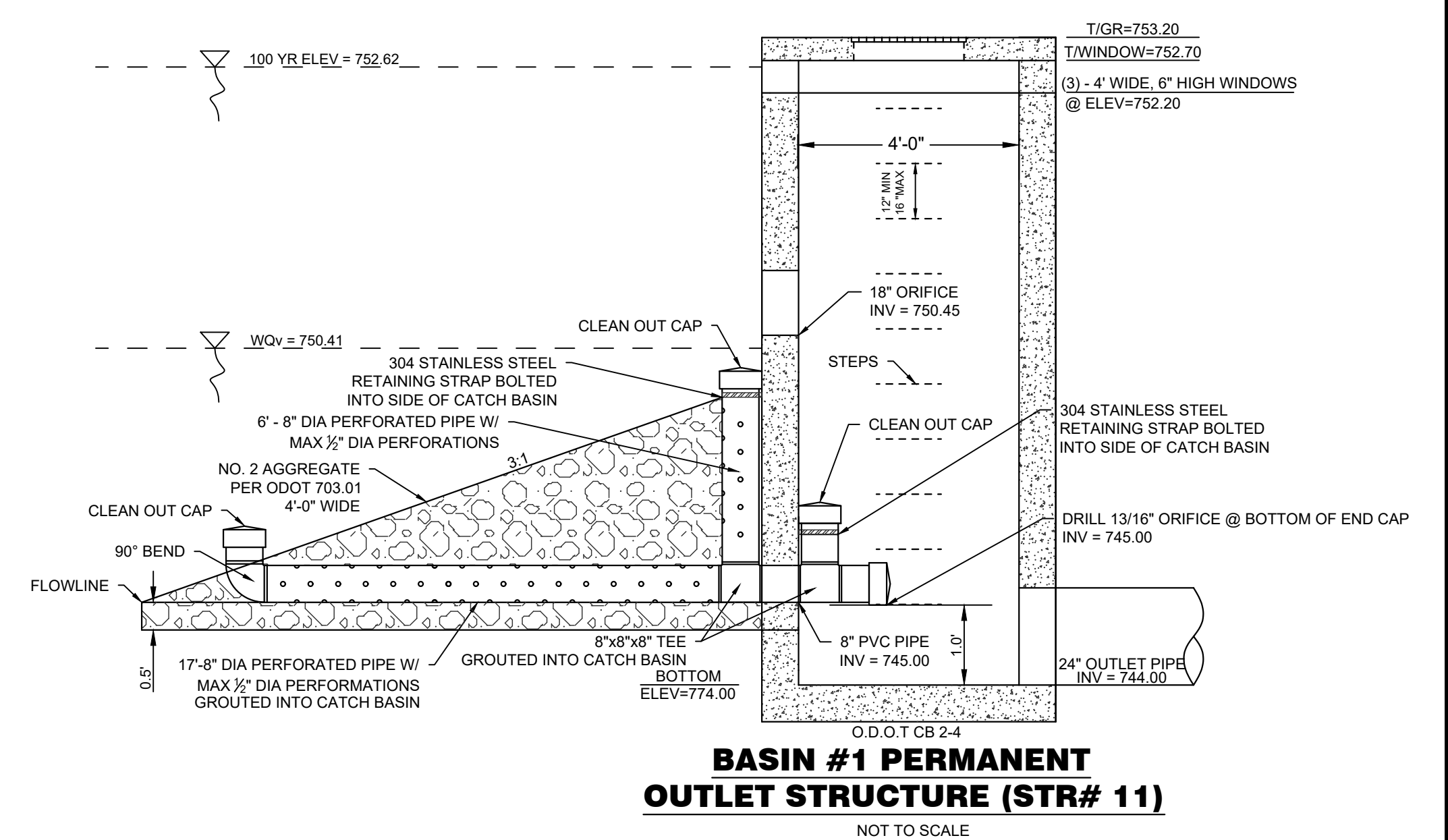
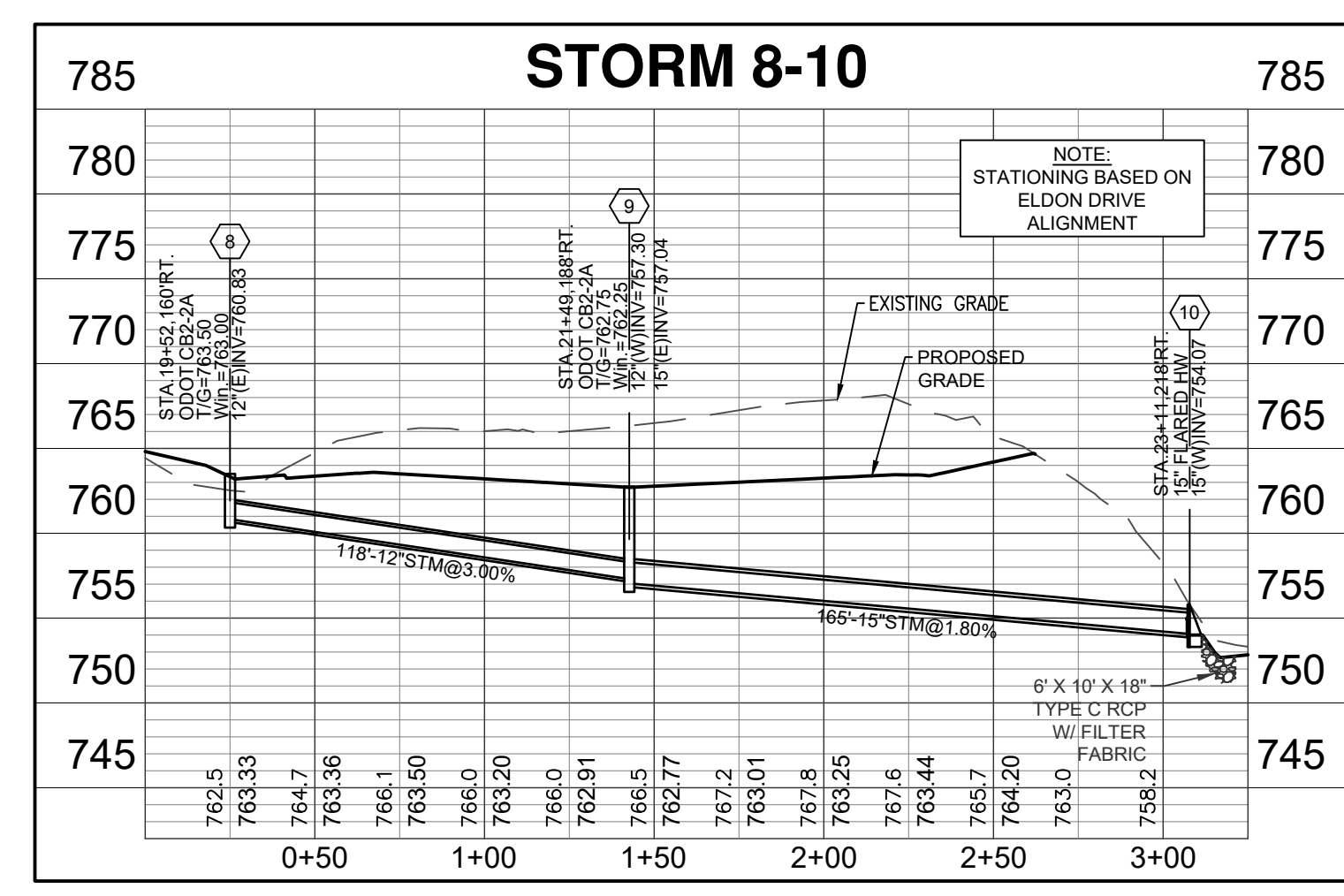
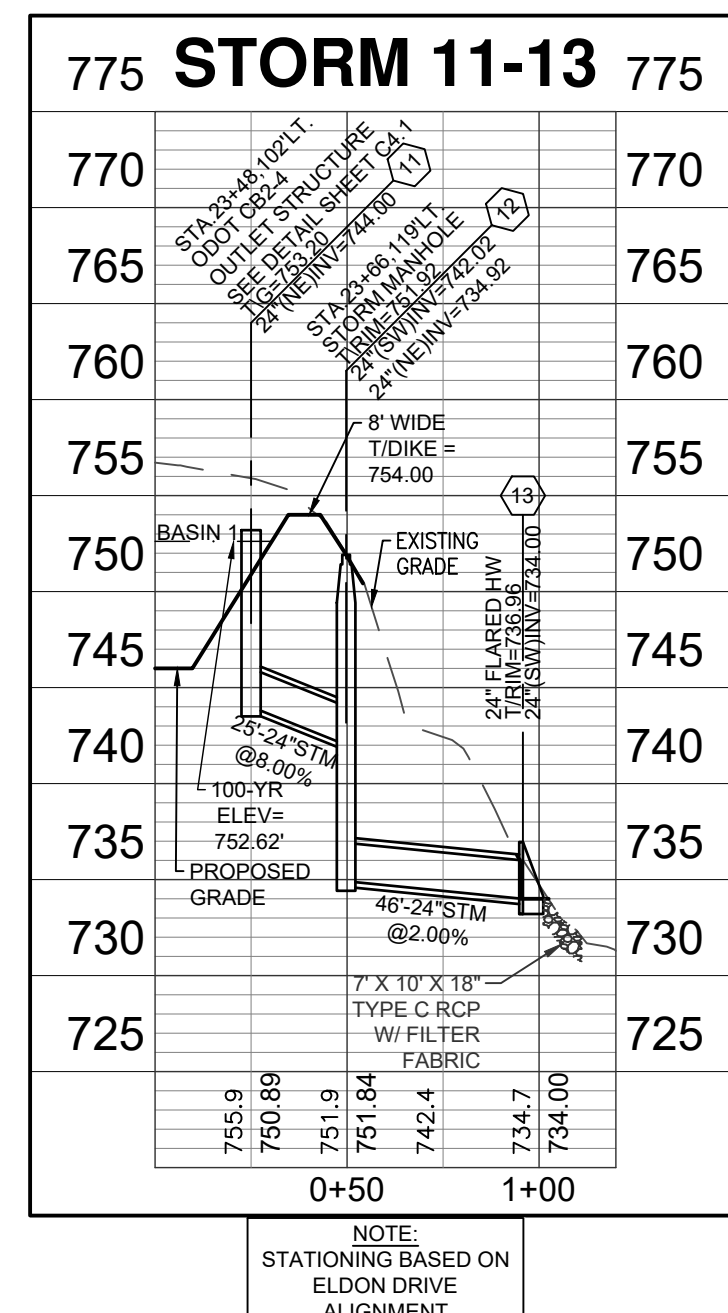
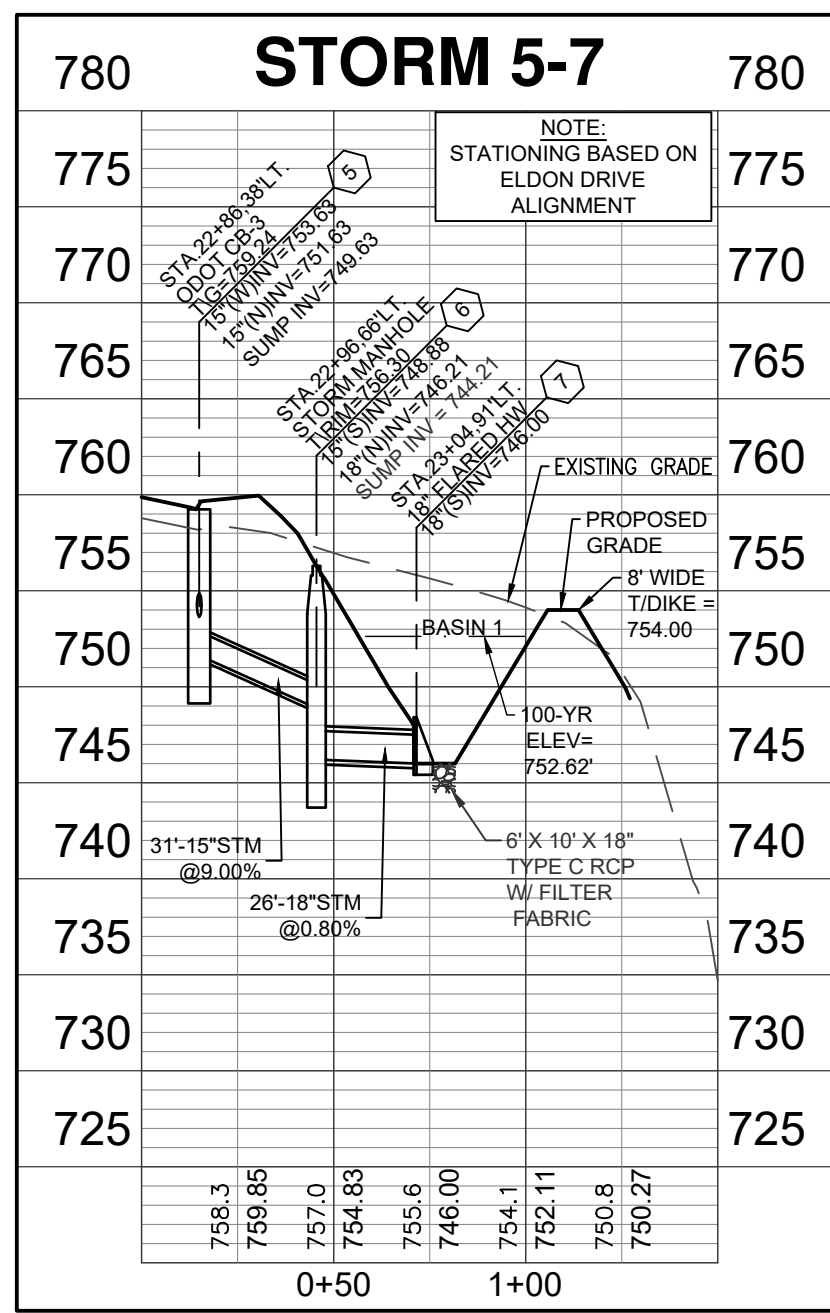
Date	Drawn	Chk
Item	Revision	Description

**CALLAWAY PLACE - SF
FINAL DEVELOPMENT PLAN**
SECTION 3, TOWN 5, RANGE 3
5695 PRINCETON - GLENDALE ROAD
BUTLER COUNTY, OHIO



Drawing: 20-0191 CD SF
Drawn by: MTL
Checked by: CJO
Issue Date: 08-13-21
Sheet: **C4.0**

Plot time: Sep 14, 2021 - 3:34pm
 Drawing name: J:\2020\20-0191\CD\DWG\Single Family\20-0191 CD SF.dwg - Layout Tab: C4.0 UTIL



- NOTES:
- ALL JOINTS OF THE FLOATION SECTION SHALL BE GLUED TOGETHER AND WATERTIGHT. JOINTS OF THE SKIMMER SECTION NEED NOT BE WATERTIGHT.
 - TO INSTALL DEWATERING PIPE STUB:
 - FOR CORRUGATED METAL RISER, STUB SHALL BE SCH 40 STEEL PIPE TACK WELDED TO CREATE A WATERTIGHT SEAL.
 - FOR CONCRETE RISER, STUB SHALL BE SCH 40 PVC PIPE GROUDED TO CREATE A WATERTIGHT SEAL.
 - FLEXIBLE, NON-PERFORATED HDPE DRAIN PIPE SHALL BE ATTACHED TO OUTLET STRUCTURE DEWATERING STUB WITH WATERTIGHT CONNECTIONS.
 - ORIFICE HAS BEEN SIZED FOR A MINIMUM 48-HOUR DEWATERING TIME.

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CALLAWAY PLACE - SF FINAL DEVELOPMENT PLAN
 SECTION 3, TOWN 5, RANGE 3
 5695 PRINCETON - GLENDALE ROAD
 LIBERTY TOWNSHIP
 BUTLER COUNTY, OHIO

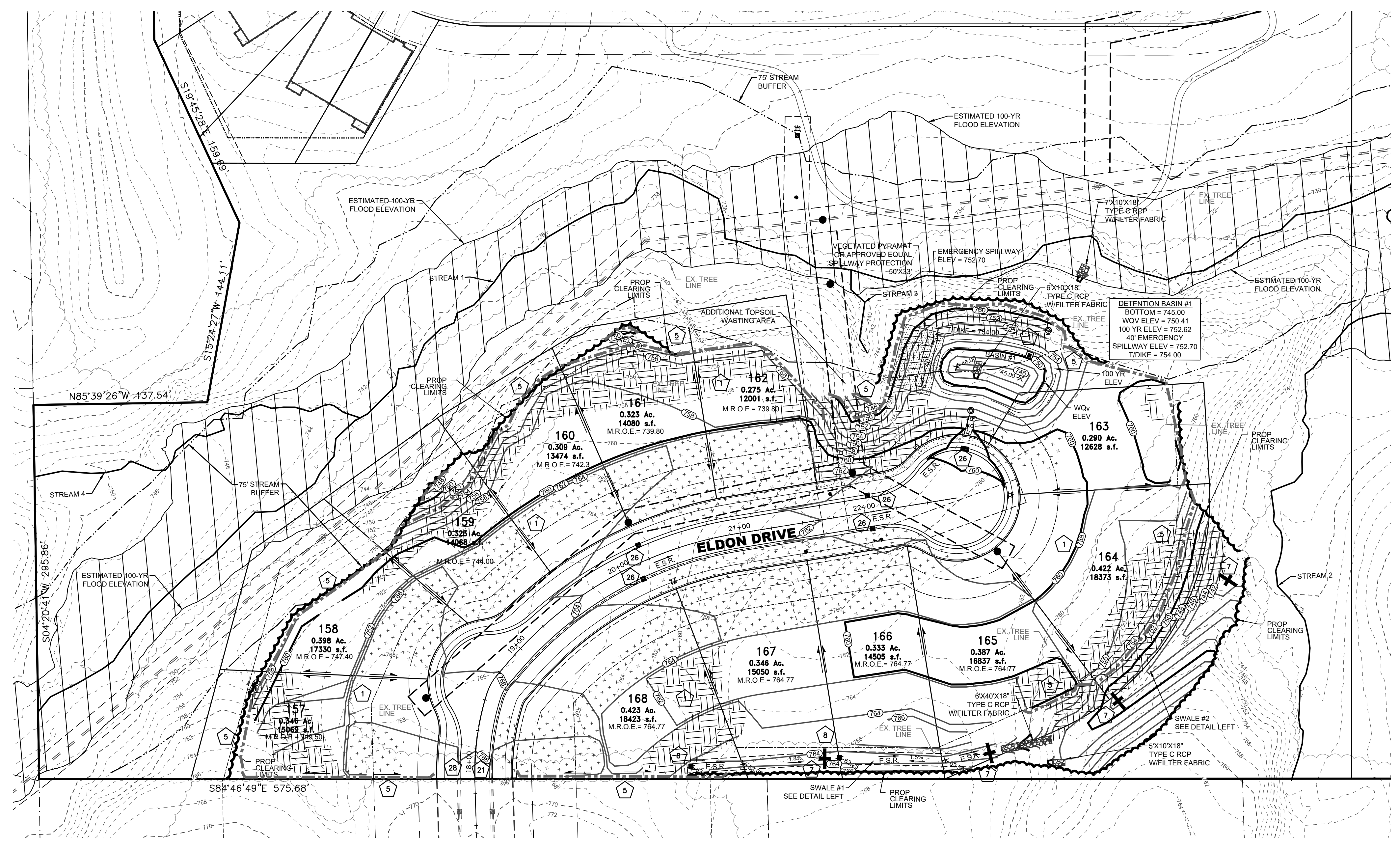
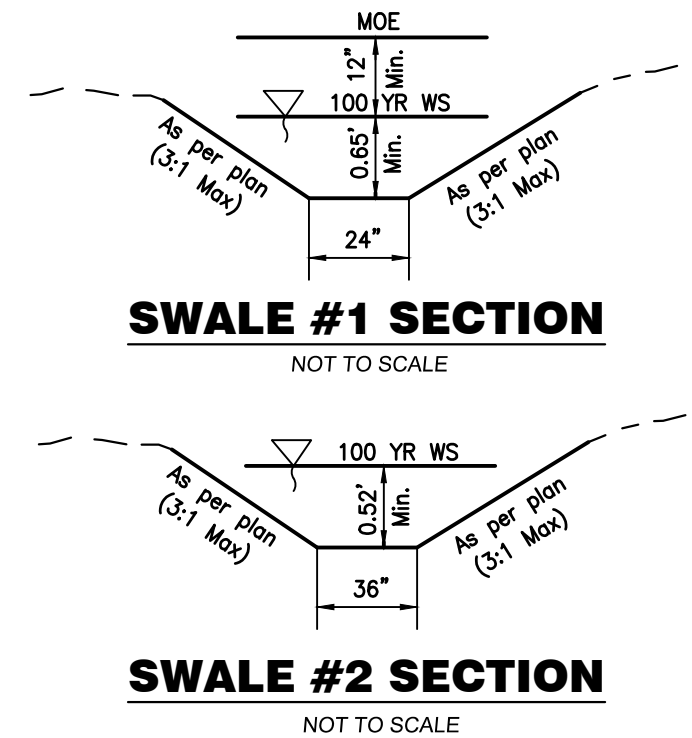
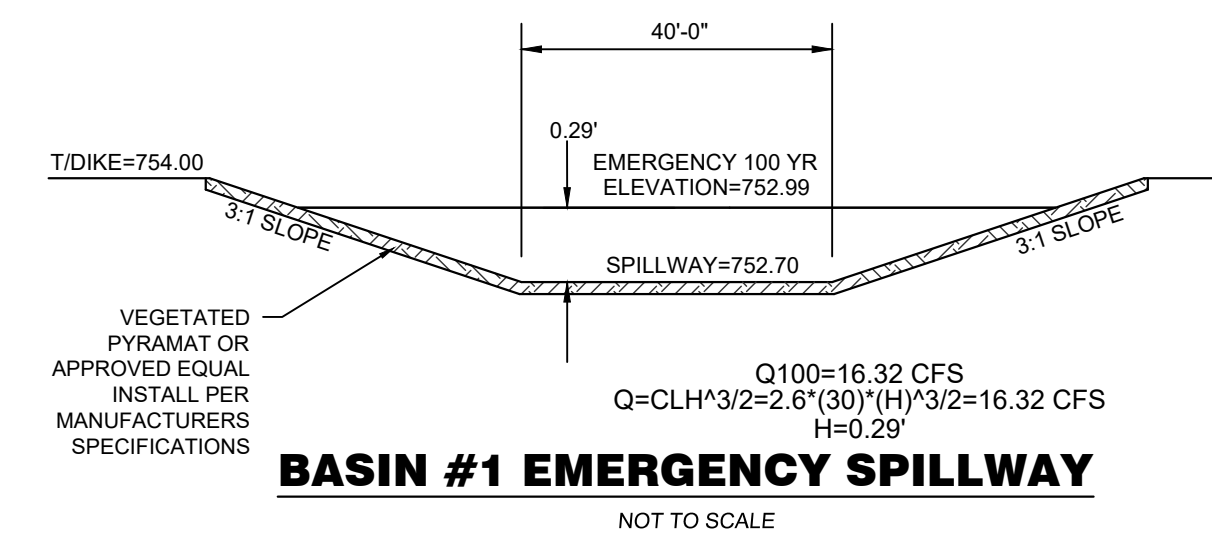
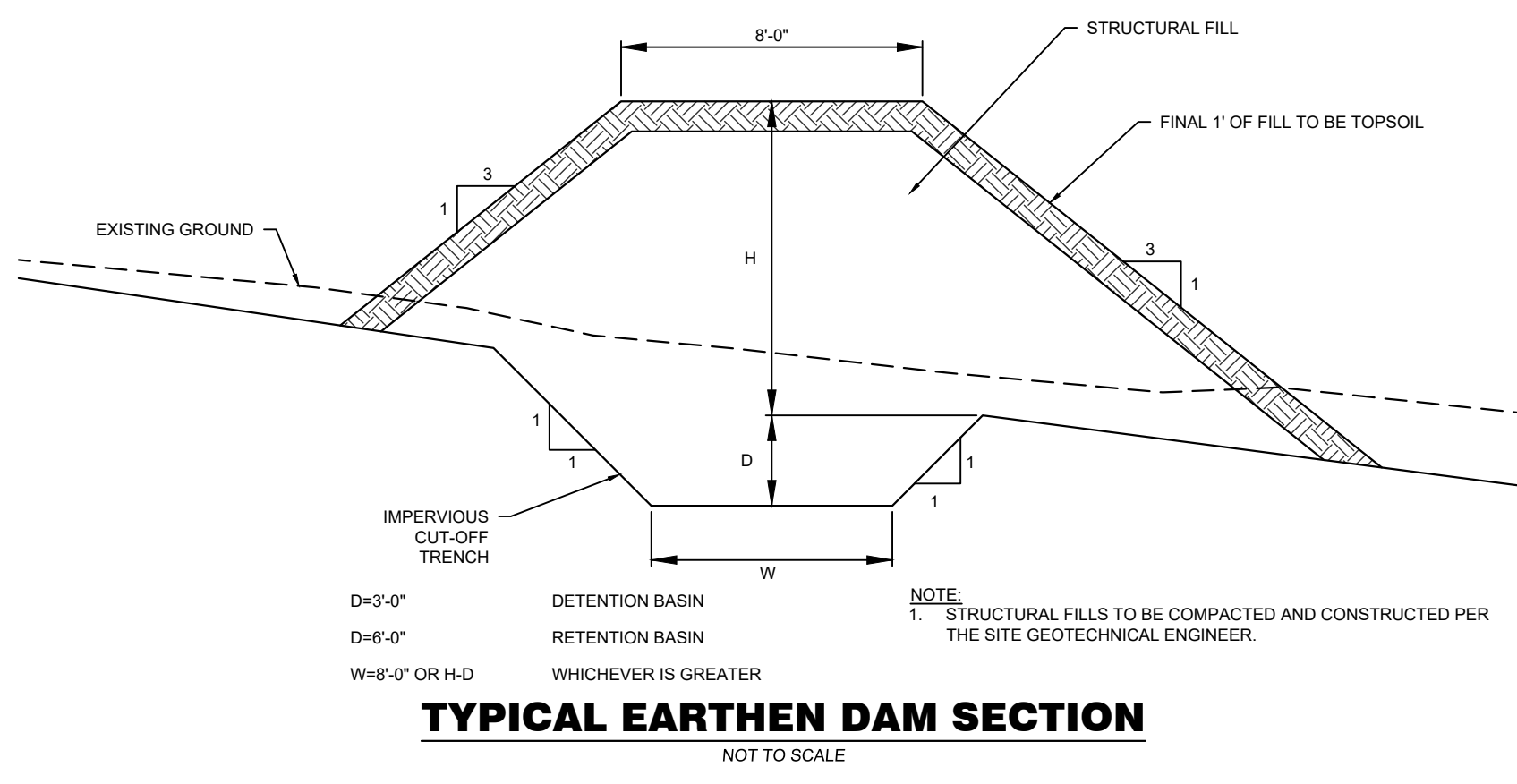
UTILITY PROFILES & DETAILS

bayer becker
 www.bayerbecker.com
 6900 Tyersville Road, Suite A
 Mason, OH 45040 - 513.336.6600

Date	
Drawn	
Chk	
Item	
Revision Description	

Drawing: 20-0191 CD SF
 Drawn by: MTL
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 Sheet:

C4.1



GRADING NOTES

- LOCATION OF EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL OBTAIN A COPY OF THE COMPLETE GEOTECHNICAL REPORT PRIOR TO BIDDING THE PROJECT. GEOTECHNICAL REPORT WAS COMPLETED BY ALT & WITZIG, INC. DATED JULY 13, 2021. PROJECT NO.: 21CN0197.
- CONTRACTORS SHALL SET UP AN ONSITE PRE-CONSTRUCTION MEETING WITH THE DEVELOPER, PROJECT GEOTECHNICAL ENGINEER, EARTHWORK CONTRACTOR, AND SITE CIVIL ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL ASSUME THE TOP 4" OF EXISTING GROUND IS TOPSOIL. TOPSOIL REMOVED TO DEPTHS GREATER THAN 4" SHALL BE DONE ONLY AFTER CONSULTATION WITH THE PROJECT GEOTECHNICAL ENGINEER AND APPROVAL OF THE DEVELOPER.
- ALL EARTHWORK AND CONSTRUCTION ACTIVITY SHALL BE PERFORMED PER THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS DESCRIBED IN THE GEOTECHNICAL EXPLORATION REPORT AND ALL ADDENDUMS.
- CONTRACTOR SHALL VERIFY ALL EARTHWORK QUANTITIES PRIOR TO AWARD OF CONTRACT. PAY QUANTITIES ARE FINAL EXCEPT FOR DOCUMENTED UNDERCUT APPROVED BY DEVELOPER PRIOR TO COMPLETION OF THE EXTRA WORK. UPON REQUEST, CONTRACTORS MAY HAVE ACCESS TO THE SITE TO FIELD CHECK TOPOGRAPHY.

NOTES:

- REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY SEVEN (7) DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24 HOUR PERIOD. PROVIDED WILL BE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION AND CORRECTIVE MEASURES TO BE TAKEN.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST CONFORM TO THE SPECIFICATIONS OF RAINWATER AND LAND DEVELOPMENT, OHIO'S STANDARDS FOR STORM WATER MANAGEMENT, LAND DEVELOPMENT AND URBAN STREAM PROTECTION.
- PERIMETER SEDIMENTATION CONTROL AND BASINS/TRAPS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN SEVEN (7) DAYS OF INITIAL GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE STABILIZED.
- DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR A PERIOD OF FOURTEEN (14) DAYS OR MORE, SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROVED MEANS WITH SEVEN (7) DAYS. ALL DISTURBED AREAS WITHIN FIFTY (50) FEET OF AN INTERMITTENT OR SOLID BLUE LINE STREAM SHALL BE STABILIZED WITHIN TWO (2) DAYS. ALL AREAS OF A SITE WHICH ARE AT FINAL GRADE SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROVED MEANS WITHIN (7) DAYS.
- QUANTITIES FOR EROSION CONTROL MAY VARY BETWEEN DETAILED PLANS AND FIELD CONDITIONS DURING CONSTRUCTION. PLAN QUANTITIES ARE A MINIMUM; MORE EROSION CONTROL MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.
- SEDIMENTATION CONTROL AND DITCH SWALES ARE SUBJECT TO CHANGE UPON COMPLETION OF ENTIRE SET OF CONSTRUCTION DRAWINGS.
- NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
- HOME BUILDERS ARE RESPONSIBLE FOR EROSION CONTROL ON EACH INDIVIDUAL LOT.
- CONTRACTORS TO ACCEPT ALL QUANTITIES AS CORRECT PRIOR TO BEGINNING CONSTRUCTION.

SEQUENCE OF CONSTRUCTION

- THE FOLLOWING SEQUENCE OF CONSTRUCTION WILL BE SIMULTANEOUSLY FOLLOWED FOR ALL AREAS ELIMINATING ONLY THOSE STEPS THAT DO NOT PERTAIN TO THAT PARTICULAR AREA:
- INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
 - PERFORM CLEARING OPERATION. STRIP AND STOCKPILE TOPSOIL.
 - ROUGH GRADE SITE. STABILIZE EROSION PRONE AREAS. ALL SLOPES 3 TO 1 AND GREATER SHALL BE IMMEDIATELY STABILIZED WITH SEED AND MULCH OR AN EQUAL.
 - INSTALL UTILITIES. CONSTRUCT TEMPORARY SILT TRAPS WHERE SHOWN.
 - INSTALL BASE COURSE IN ROADWAYS FOLLOWING THE INSTALLATION OF IMPROVEMENTS.
 - PERFORM SOIL PROFILE RESTORATION IN ALL SOIL MANAGEMENT AREAS PER OEPA SOIL MANAGEMENT PROVISIONAL PRACTICE GUIDELINES.
 - FINE GRADE AND SEED. REMOVE EROSION CONTROL METHODS UPON COMPLETION OF ALL IMPROVEMENTS.
 - AS INDIVIDUAL HOME CONSTRUCTION IS COMPLETED, TOPSOIL REPLACEMENT SHALL BE PERFORMED IN ALL AREAS NOTED FOR SOIL MANAGEMENT AS PER OEPA SOIL MANAGEMENT PROVISIONAL PRACTICE GUIDELINES.

SWPPP NOTES

- THE CONSTRUCTION ACTIVITY WILL CONSIST OF MASS EARTHWORK, UTILITY INSTALLATION, PAVEMENT CONSTRUCTION ACRES:
 - DISTURBED AREA 4.83 ACRES
 - PRIOR LAND USE: VACANT LAND/AGRICULTURE
 - IMPERVIOUS CALCULATIONS:
 - IMPERVIOUS AREA
 - PRE-DEVELOPED 0.00 ACRES
 - POST-DEVELOPED 12.69 ACRES
 - IMPERVIOUS PERCENTAGE
 - PRE-DEVELOPED 0.0%
 - POST-DEVELOPED 27.2%
 - EXISTING SOIL DATA:

SYMBOL	SOIL NAME	HSG
RvB2r	Russell-Miamian silt loams, 2-6 percent slopes, moderately eroded	
RwB2	Russell-Miamian silt loams bedrock substratum, 2-6 percent slopes	
HeE2	Hennepin-Miamian silt loams, 18-25 percent slopes, moderately eroded	
XeA	Xenia silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	
 - THE DEVELOPMENT DRAINS TO THE NORTHEAST TO A DRY DETENTION BASIN.
- NOTE: IMPERVIOUS CALCULATION ONLY INCLUDES CALLAWAY PLACE PHASE 1A & 1B AND SINGLE FAMILY LOTS. CALLAWAY DRIVE (PUBLIC), COMMERCIAL OUTLOTS, AND FUTURE SECTIONS OF THE MULTI-FAMILY PORTION OF THE SITE OR NOT INCLUDE.

LEGEND

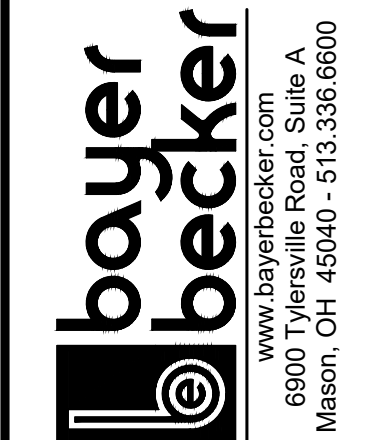
- 1 SEEDING AND MULCHING
 - 5 SILT FENCE
 - 7 DITCH CHECK
 - 8 INLET PROTECTION
 - 21 CONSTRUCTION ENTRANCE
 - 26 BEAVER DAM
 - 28 CONCRETE WASHOUT
 - E.S.R. EMERGENCY STORM ROUTE
 - LOT DRAINAGE SWALES
 - LAST 6" OF FILL TO BE TOPSOIL
 - LAST 1' OF FILL TO BE TOPSOIL
- (SEE SHEET C5.1 FOR EROSION CONTROL DETAILS)



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OHIO UTILITIES PROTECTION SERVICE (OUPS)
LOCATION OF ALL EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

**CALLAWAY PLACE - SF
FINAL DEVELOPMENT PLAN**
SECTION 3, TOWN 5, RANGE 3
LIBERTY PRINCETON - GLENDALE ROAD
BUTLER COUNTY, OHIO



Drawing: 20-0191 GR SF
Drawn by: CJO
Checked by:
Issue Date: 08-13-21
Sheet:

C5.0

Plot time: Sep 15, 2021 10:52am
 Drawing name: J:\2020\20-0191\CAD\DWG\Single Family 20-0191 GR SF.dwg
 Layout Tab: C5.1 Erosion & Sediment Control Details

PERMANENT SEEDING

Permanent seeding includes the seedbed preparation, seeding, and the establishment of perennial vegetation used to permanently stabilize soil, prevent sediment pollution, reduce runoff by promoting infiltration, and provide storm water quality benefits offered by dense vegetation.

CONDITIONS WHERE PRACTICE APPLIES

Permanent seeding should be applied to:

- Areas or portions of construction-sites which can be brought to final grade. Applications of permanent seeding should not be delayed while construction on limited portions of the site being completed.
- Areas on that will be graded, but will be dormant for a year or more.

PLANNING CONSIDERATIONS

Healthy dense turf will have a dramatic long lasting effect on stormwater quality as well as promoting infiltration and reducing the amount of runoff. To establish quality vegetation, careful preparation of the seedbed, soil, even subsoil is highly encouraged.

Soil Compaction—Stormwater quality and the amount of runoff both vary significantly with soil compaction. Non-compacted soils improve stormwater by promoting:

- dense vegetation
- high infiltration & lower runoff rates.
- pollutant filtration, deposition & absorption, and
- beneficial biologic activity in the soil.

Construction activity can cause highly compacted soils but also offers the opportunity to improve soil condition. The best time for improving soil condition is during the establishment of permanent vegetation. It is highly recommended that subsolers, plows or other implements be specified as part of final seedbed preparation. Use discretion in slip-prone areas.

Minimum Soil Conditions—Vegetation cannot be expected to stabilize soil that is unstable due to its texture, structure, water movement or excessively steep slope. The following minimum soil conditions are needed for the establishment and maintenance of a long-lived vegetation cover. If these conditions cannot be met, see the Standards and Specifications for Resolving.

- Soils must include enough fine-grained material to hold at least a moderate amount of available moisture.
- The soil must be free from material that is toxic or otherwise harmful to plant growth.

Permanent Seeding				
Seed Mix	Seeding Rate		Notes:	
	lb./ac.	lb./1,000 ft. 2		
General Use				
Creeping Red Fescue	20-40	1/2-1		
Ryegrass	10-20	1/4-1/2		
Kentucky Bluegrass	10-20	1/4-1/2		
Tall Fescue	40	1		
Dwarf Fescue	40	1		
Steep Banks or Cut Slopes				
Tall Fescue	40	1		
Crown Vetch	10	1/4		Do not seed later than August
Tall Fescue	20	1/2		
Flat Pea	20	1/2		Do not seed later than August
Tall Fescue	20	1/2		
Road Ditches and Swales				
Tall Fescue	40	1		
Dwarf Fescue	90	2 1/4		
Kentucky Bluegrass	5	2 1/4		
LAWNS				
Perennial Ryegrass	60	1 1/2		
Kentucky Bluegrass	60	1 1/2		
Creeping Red Fescue	60	1 1/2		For shaded areas
Kentucky Bluegrass	60	1 1/2		
Note: Other approved seed species may be substituted.				

Maintenance for Permanent Seedings					
Fertilization and Mowing					
Mixture	Formula	lb./ac.	lb./1,000 sq. ft.	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12		Not closer than 3"
Tall Fescue	10-10-10	500	12	Fall, yearly or as needed	Not closer than 4"
Dwarf Fescue	10-10-10	500	12		Not closer than 2"
Crown Vetch Fescue	0-20-20	400	10	Spring, yearly following establishment and every 4-7 yrs thereafter	Do not mow
Flat Pea Fescue	0-20-20	400	10		Do not mow
Note: Following soil test recommendations is preferred to fertilizer rates shown above.					

SITE PREPARATION

1. A subsoiler, plow or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.

2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.

3. Resoil shall be applied where needed to establish vegetation.

SEEDBED PREPARATION

1. Lime—Agricultural grade limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 lb./1,000 sq. ft. or 2 tons/ac.

2. Fertilizer—Fertilizer shall be applied as recommended by a soil test. In lieu of a soil test, fertilizer shall be applied at a rate of 12 lb./1,000 sq. ft. or 500 lb./ac. of 10-10-10 or 12-12-12 analysis.

3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-till harrow, or other suitable flail implement to a depth of 3 in. On sloping land the soil shall be worked on the contour.

SEEDING DATES AND SOIL CONDITIONS

Seeding should be done March 1 to May 31 or August 1 to September 30. These seeding dates are ideal but, with the use of additional mulch and irrigation, seedings may be made any time throughout the growing season. Tillage/seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by a hand. For winter seeding, see the following section on dormant seeding.

MULCHING

1. Mulch material shall be applied immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization. Dormant seeding shall be mulched.

2. Materials:

- Straw—If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
- Hydroseeders—If wood cellulose fiber is used, it shall be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
- Other—Other acceptable mulches include mulch matings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

3. Straw Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water.

- Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 in.
- Mulch Nettings—Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentration runoff and on critical slopes.
- Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.
- Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
- Wood-Cellulose Fiber—Wood-cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood-cellulose fiber binder mixed with water and the mixture shall contain a maximum of 50 lb./100 gal.

PERMANENT SEEDING

MAINTENANCE

1. Permanent seeding shall not be considered established for at least 1 full yr. from the time of planting. Seeded areas shall be inspected for failure and vegetation conditions. If they are necessary to irrigate, fertilize, overseed, or reestablish plantings in order to provide permanent vegetation for adequate erosion control.

2. Maintenance fertilization rates shall be established by soil test recommendations or by using the rates shown in the following table.

DORMANT SEEDINGS

1. Seeding shall not be planted from October 1 through November 20. During this period the seeds are likely to germinate but probably will not be able to survive the winter.

2. The following methods may be used for "Dormant Seeding":

- From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
- From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilizer, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
- Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
- Where feasible, except when a cultipacker type seeder is used, the seedbed should be firm following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.
- Mulch Nettings—Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.
- Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
- Wood Cellulose Fiber—Wood cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

IRRIGATION

1. Permanent seeding shall include irrigation to establish vegetation during dry or hot weather or on adverse site conditions as needed for adequate moisture for seed germination and plant growth.

2. Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.

TEMPORARY SEEDING

Temporary seeding provides erosion control on areas in between construction. Grasses which are quick growing are seeded and usually mulched to provide prompt, temporary soil stabilization. It effectively minimizes the area of construction-site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

CONDITIONS WHERE PRACTICE APPLIES

Temporary seeding should be applied on exposed soil where additional work (grading etc.) is not scheduled for more than 14 days. Permanent seeding should be applied if the area is idle for more than a year.

PLANNING CONSIDERATIONS

This practice has the potential to drastically reduce the amount of sediment eroded from a construction-site. Control efficiencies greater than 90% will be achieved with proper applications of temporary seeding. Because practices used to trap sediment are usually much less effective, temporary seeding is to be used even on areas where runoff is treated by sediment trapping practices. Because temporary seeding is highly effective and practical on construction-sites, its liberal use is highly recommended.

Temporary Seeding Species Selection

Seeding Dates	Species	Lb./1,000 ft. 2	Per Acre
March 1 to August 15	Coste	3	4 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Annual Ryegrass	1	40 lb.
August 16 to November 1	Rye	3	2 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Wheat	3	2 bushel
	Tall Fescue	1	40 lb.
Annual Ryegrass	1	40 lb.	
November 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding.		

Note: Other approved seed species may be substituted.

MULCHING TEMPORARY SEEDING

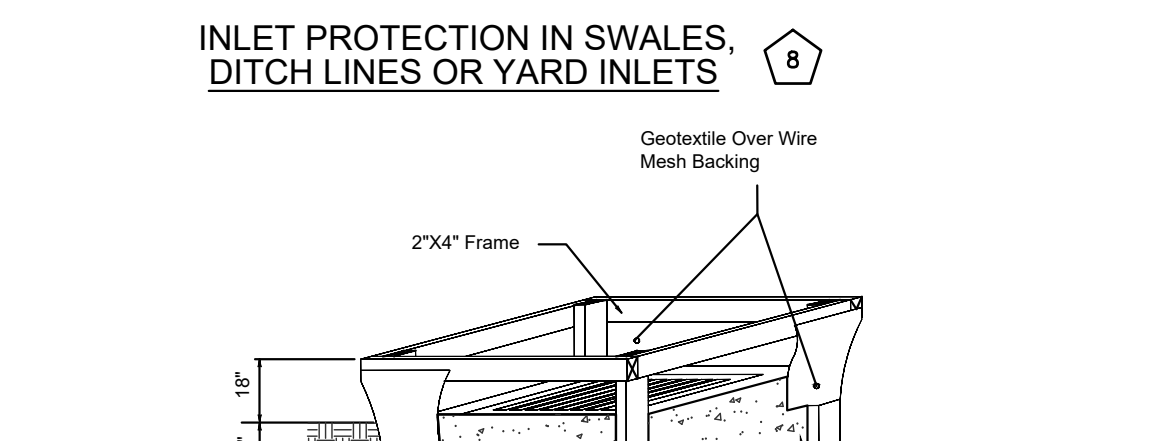
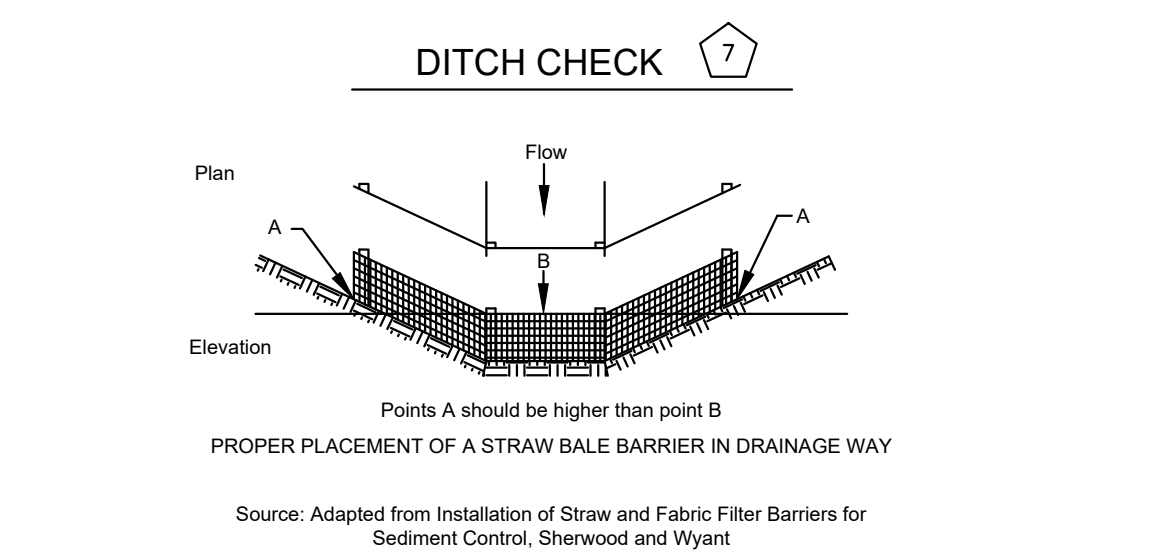
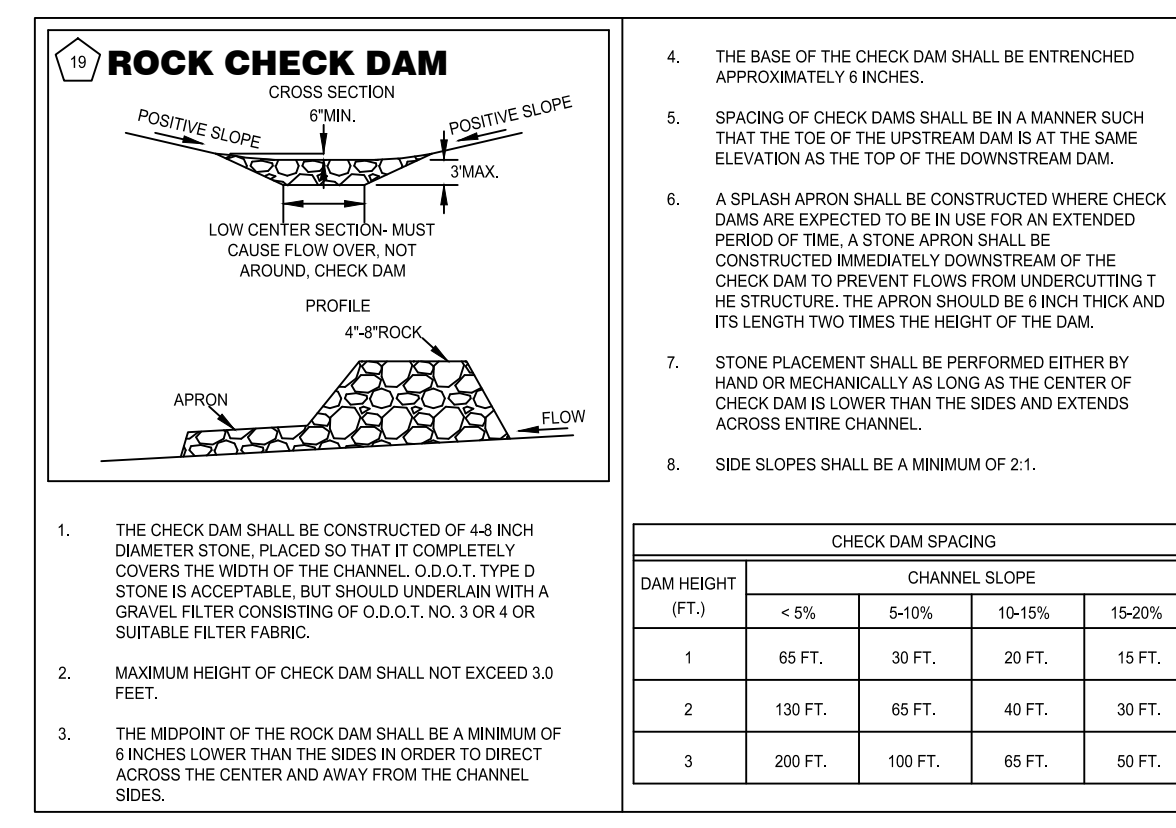
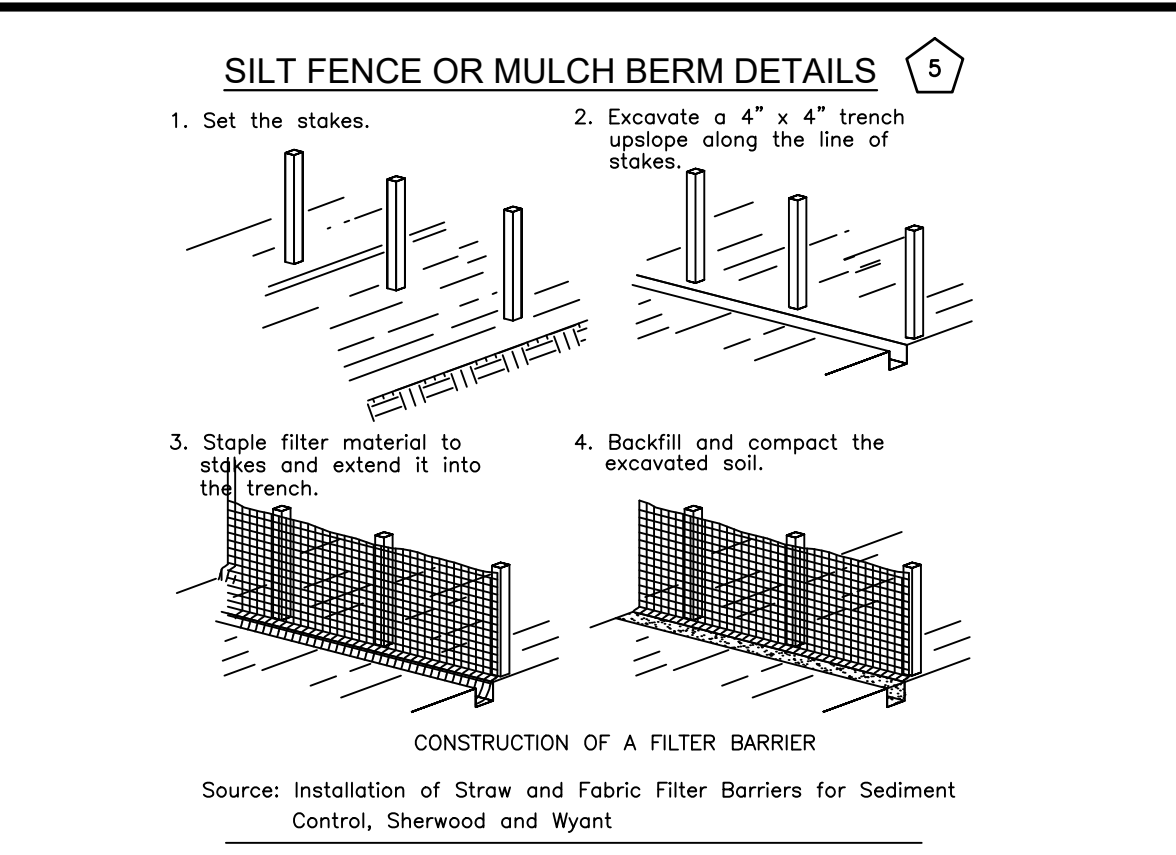
1. Applications of temporary seeding shall include mulch which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization.

2. Materials:

- Straw—If straw is used, it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
- Hydroseeders—If wood cellulose fiber is used, it shall be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
- Other—Other acceptable mulches include mulch matings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

3. Straw mulch shall be anchored immediately to minimize loss by wind or water. Anchoring Methods:

- Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 in.
- Mulch Nettings—Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentration runoff and on critical slopes.
- Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.
- Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
- Wood-Cellulose Fiber—Wood-cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood-cellulose fiber binder mixed with water and the mixture shall contain a maximum of 50 lb./100 gal.



CONSTRUCTION ENTRANCE

1. Stone Size—Two-inch stone shall be used, or recycled concrete equivalent.

2. Length—The construction entrance shall be as long as required to stabilize high traffic areas but not less than 50 ft. (except on single residence lot where a 30-ft. minimum length applies).

3. Thickness—The stone layer shall be at least 12 in. thick.

4. Width—The entrance shall be at least 15 ft. wide, but not less than the full width at points where ingress or egress occur.

5. Bedding—A geotextile shall be placed over the entire area prior to placing stone. It shall have a Grab Tensile Strength of at least 200 lb. and a Mullen Burst Strength of at least 190 lb.

6. Culvert—A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flowing across the entrance from being directed onto paved surfaces.

7. Water Bar—A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from following the length of the construction entrance and out onto paved surfaces.

8. Maintenance—Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surfaces where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.

9. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.

10. Contractor shall provide all weather access to and from construction staging area, construction office, and around the building.

Erosion Prevention and Sediment Control Site Inspection Form

Introduction: By using some simple Best Management Practices (BMP's) developers and contractors can do their share to protect Clermont County's water resources from the harmful effects of sediment. The topography of the site and the extent of the construction activities will determine which of these practices are applicable to any given site, but the BMP's listed here are applicable to most construction sites. For details on the installation and maintenance of these BMP's, please refer to the approved plans and or the Rainwater and Land Development Manual, Ohio's Standards for Storm Water Management, Land Development and Urban Stream Protection (ODNR, 1996).

Temporary Stabilization is the most effective BMP. All disturbed areas that will lie dormant for 14 days or more must be stabilized within 7 days of the date the area becomes inactive. The goal of temporary stabilization is to prevent cover quickly. Areas within 50 feet of a stream must be stabilized within 2 days of reaching final grade. This is accomplished by seeding with fast-growing grasses, then covering with straw mulch. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. To minimize your costs of temporary stabilization, leave natural cover in place for as long as possible by only disturbing areas worked within the next 14 days.

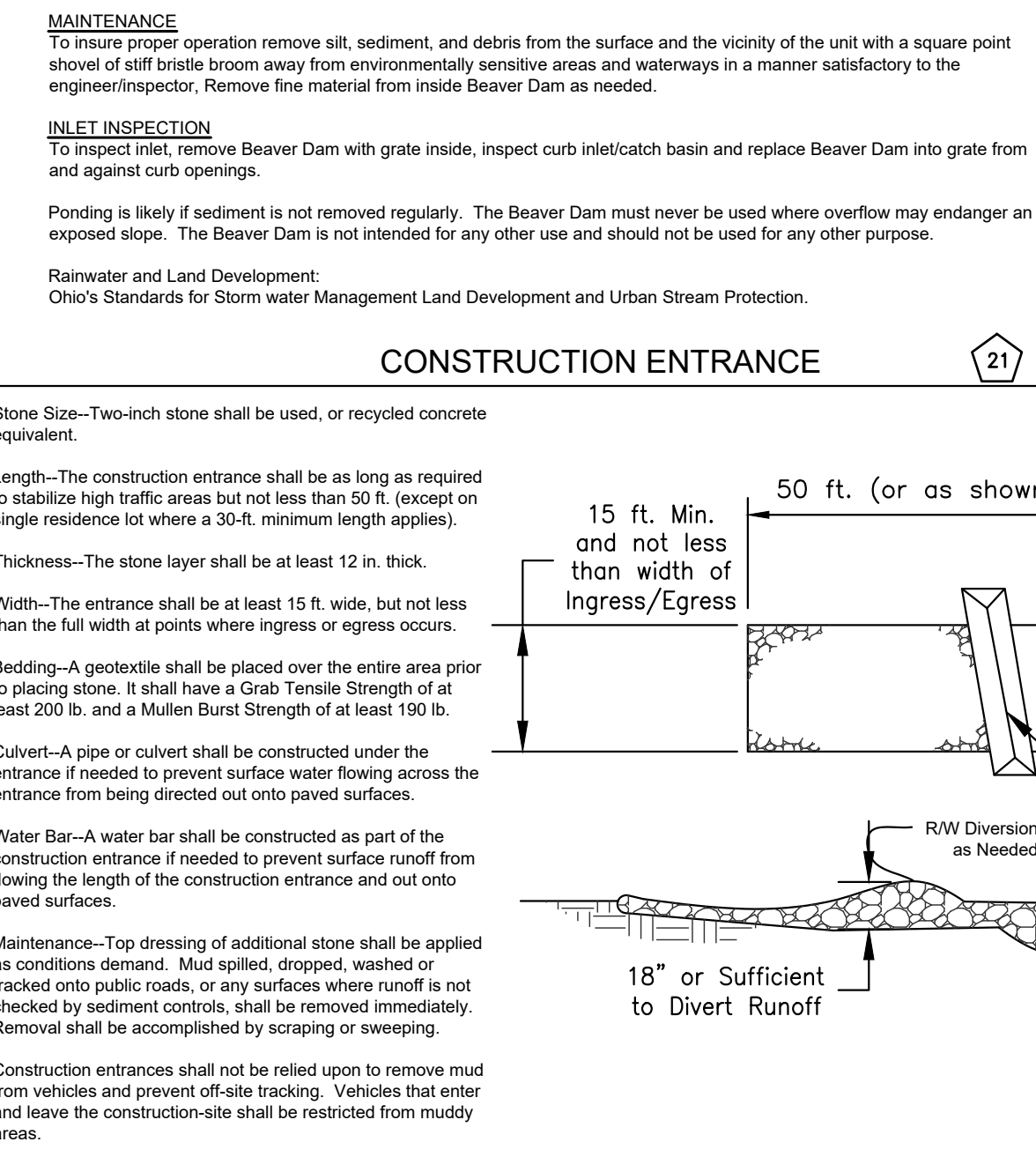
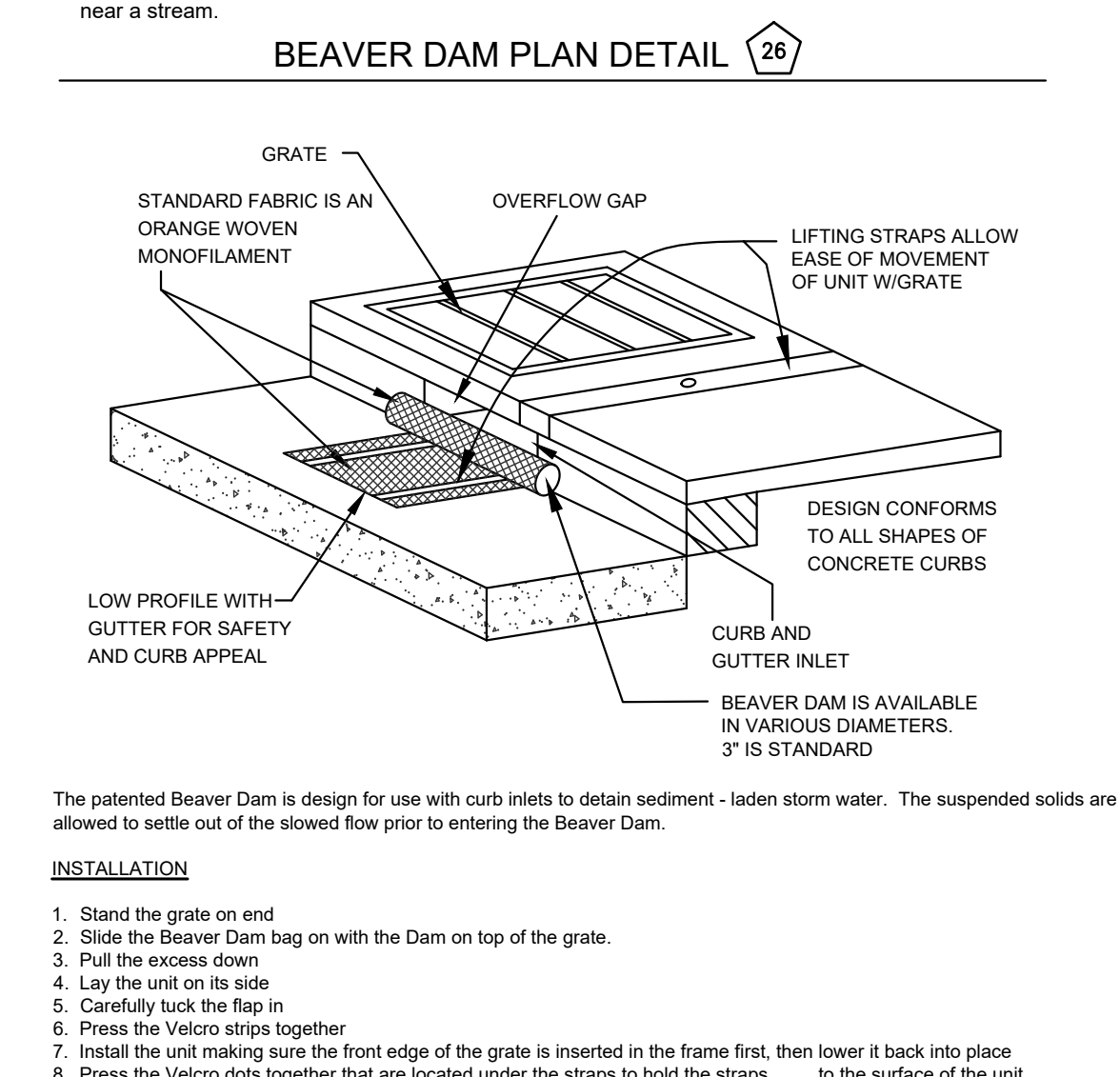
Construction Entrances are installed to minimize off-site tracking of sediments. A rough stone access drive underlain with woven geotextile shall be installed at every point where vehicles enter or exit the site. Every individual lot should also have its own drive construction on the lot begins. Maintenance is performed by top dressing with stone and/or street sweeping.

Silt Fence or Mulch Berms are typically used at the perimeter of a disturbed area. They are only for small drainage areas on relatively flat slopes or around small soil storage piles; not suitable where runoff is concentrated in a ditch, pipes or through streams. For large drainage areas where flow is concentrated, collect runoff in diversion berms or channels and pass it through a sediment pond prior to discharging it from the site. Combination barriers constructed of silt fence supported by welded wire fencing, mulch berms supported by rock check dams, or silt fence embedded within rock check dams may be effective within small channels. As with all sediment controls, silt fence or mulch berms must be capable of ponding runoff so that sediment can settle out of suspension. These must be installed within 7 days of first grubbing the area it controls. Whenever practical they should be installed before clearing or grubbing the area it controls.

Inlet Protection must be installed on all yard drains and curb drains when these inlets do not drain to a sediment trap or basin. Even if there is a sediment trap or basin, inlet protection is still recommended, as it will reduce the amount of sediment entering the basin and increase the overall sediment removal efficiency. Best used on roads with little or no traffic. If working properly, inlet protection will cause water to pond. If used on curb inlets, streets will flood temporarily during heavy storms. (overflow should be built-in.) Check with the authority that has jurisdiction over the roads before installing. They may prefer an alternate BMP. Care should be taken when placing inlet protection so that the runoff is not diverted to public roads or other areas where it could cause a hazard.

Permanent Stabilization must occur on areas at final grade within 7 days of reaching final grade. This is usually accomplished by using seed and mulch, but special measures are sometimes required. This is particularly true in drainage ditches or on steep slopes. These measures include the addition of topsoil, erosion control matting, rock riprap or retaining walls. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. At all times of the year, the area should be temporarily stabilized until a permanent seeding can be applied. Areas within 50 feet of a stream must be stabilized within 2 days of reaching final grade.

Inspections shall be performed at least once a week and within 24 hours after a storm event greater than 1/2 inch of rainfall within a 24-hour duration using the enclosed Inspection Form. Inspections can be tracked using the enclosed Inspection Log. These shall be maintained throughout the development process and kept on file for three years per ODEPA requirements. Erosion prevention and sediment control (EP&SC) measures shall be observed to ensure correct operation. Discharge locations shall be inspected to determine effectiveness of EP&SC measures in preventing significant impacts to the receiving waters. Where practices require repair or maintenance, it must be accomplished within three days of the inspection or as soon as site conditions allow. Repairs to sediment ponds shall be completed within 10 days or as soon as site conditions allow. Most of these BMP's are easy to implement with a little bit of planning and go a long way toward keeping your site clean and organized if they are properly installed and maintained. Please be sure to inform all parties on site how these BMP's affect their operations on the site, particularly those that will be working near a stream.



Erosion Prevention and Sediment Control Site Inspection Form

Inspector: _____ Date: _____

General:
 Amount of rainfall since last inspection: _____ inches
 Overall site conditions: _____

Construction Entrances:
 Are the entrances installed correctly according to the approved plan? YES NO N/A
 (Check for mud in stones/street, runoff diverted from street, etc.)
 Action Needed: _____

Sediment Basins/Traps:
 Are all Basins installed correctly according to the approved plan? YES NO N/A
 (Check for runoff directed to basin, down slope areas stabilized, riser pipe wrapped with wire fence/filter fabric, emergency overflow, accumulated sediment more than 40% of volume, etc.)
 Action Needed: _____

Silt Fence/Mulch Berms:
 Are all Silt Fence/Mulch Berm (SF/MB) installed correctly according to the approved plan?
 YES NO N/A (Check for fabric trenched in, follow contour, turned upslope at ends, silt accumulated, broken stakes, tight fabric, installed in all areas where sediment could leave the site)
 Action Needed: _____

Inlet Protection:
 Are all Inlet Protections installed correctly according to the approved plan? YES NO N/A
 (Check for runoff ponding, in good shape, silt accumulated, etc.)
 Action Needed: _____

Temporary Stabilization:
 Are all disturbed areas that will lie dormant for 21 days or more stabilized with seed/straw or mulch? (stockpiles, hillsides, etc.) YES NO N/A
 Are all areas stabilized still in good condition and not eroding? YES NO N/A

Permanent Stabilization:
 Have areas that achieved final grade within the last 7 days been stabilized? YES NO N/A
 Do all storm water outflow areas have riprap or concrete to prevent scouring? YES NO N/A

Stream Crossings:
 Are the Stream Crossings installed correctly according to the approved plan? YES NO N/A
 (Check for stabilized edges, runoff diverted from stream, mud over stones, end of useful life, etc.)
 Action Needed: _____

Erosion Prevention and Sediment Control Site Inspection Form

If you answered "no" to any of the above questions, note any corrective action needed above, and note on the Inspection Log when the action was completed.

Inspection Log

The site shall be inspected before and after storm events with 0.5 inches or greater predicted or actual precipitation, and documented on the Construction Site Inspection Form. Incidents of noncompliance must be reported to the Engineer. A log of all inspections, as shown below, shall be kept current.

Date:	Inspector:	Corrective Actions Performed/Date:

CONCRETE WASHOUT

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.

2. THE CONCRETE WASHOUT SIGN (SEE FIG. 4-15) SHALL BE INSTALLED WITHIN 10 M OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CALLAWAY PLACE - SF FINAL DEVELOPMENT PLAN

SECTION 3, TOWN 5, RANGE 3
 5695 PRINCETON - GLENDALE ROAD
 BUTLER COUNTY, OHIO

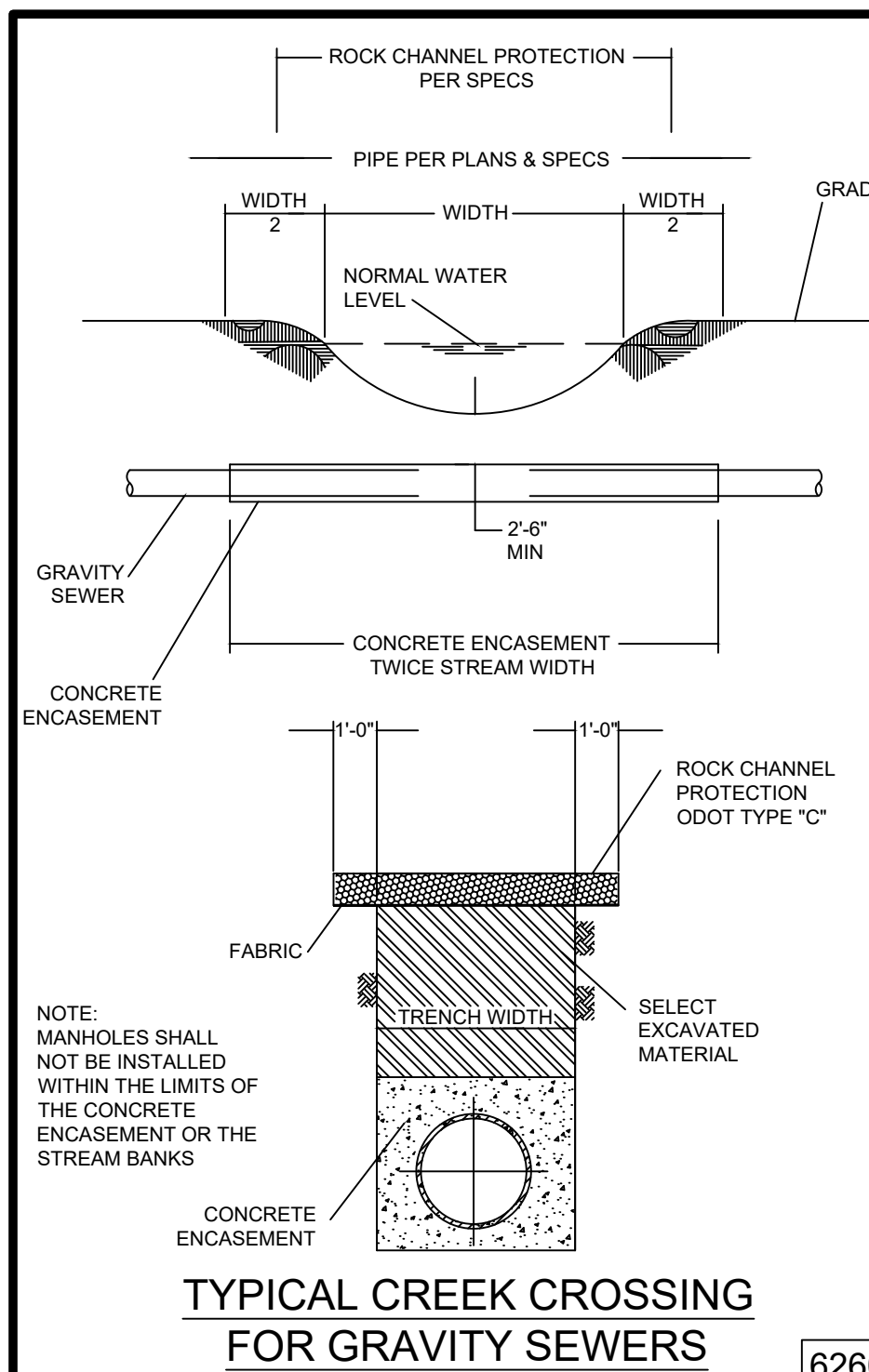
GRADING & EROSION CONTROL NOTES & DETAILS

Revision Description		Date	Drawn	Chk.
1				
2				
3				
4				
5				
6				
7				
8				
9				

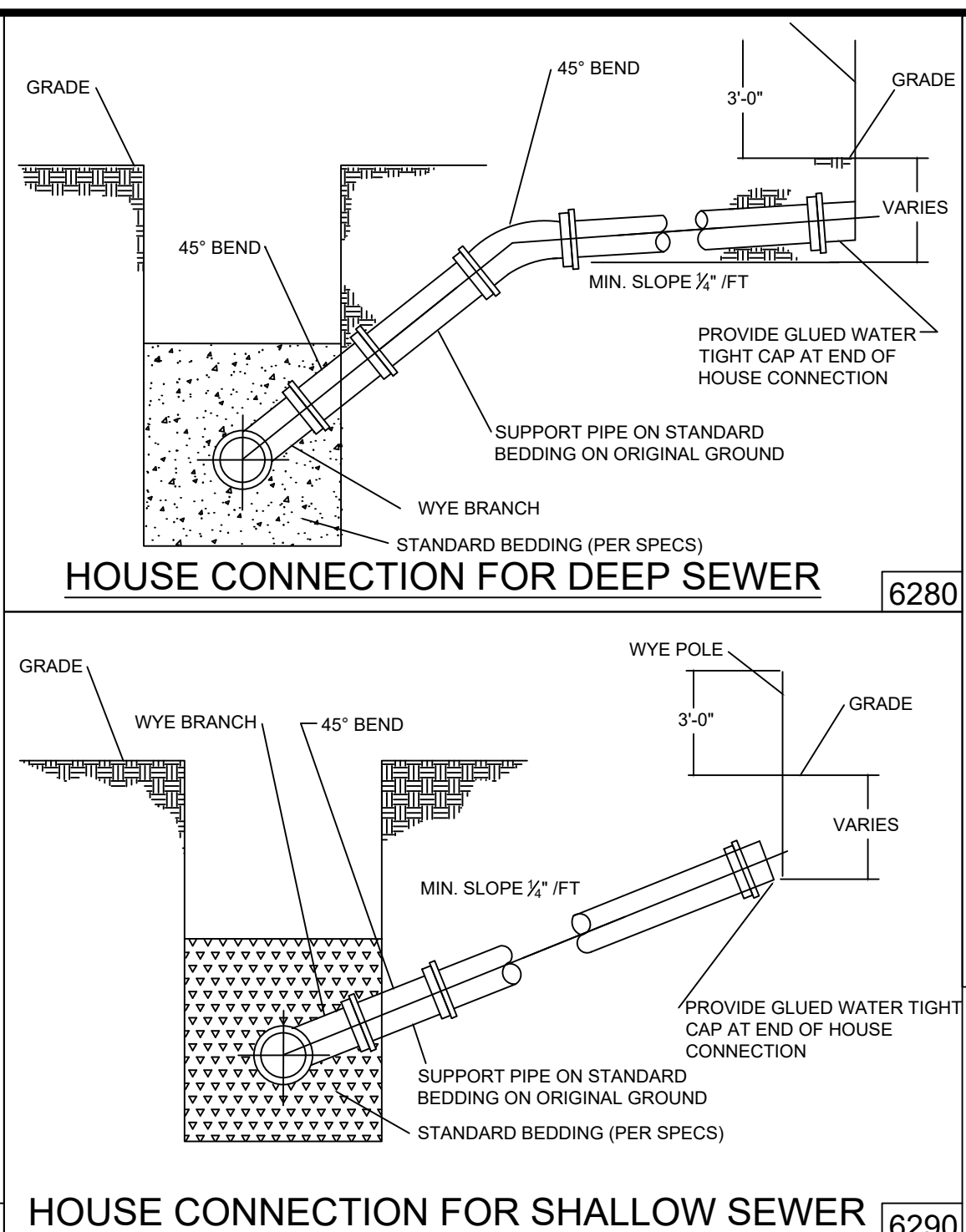
www.bayerbecker.com
 6900 Tyersville Road, Suite A
 Mason, OH 45040 • 513.336.6600

Drawing: 20-0191 GR SF
 Drawn by: _____
 Checked by: _____
 Issue Date: 08-13-21
 Sheet: **C5.1**

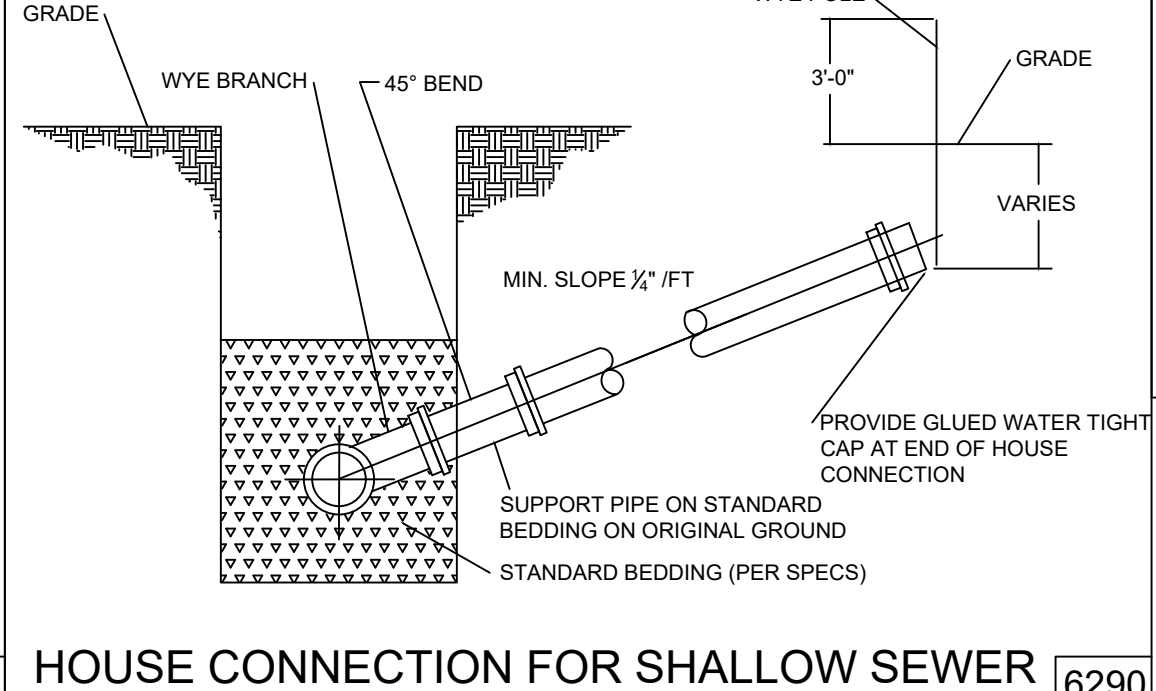
THIS DOCUMENT AND ALL RELATED DETAIL DRAWINGS, SPECIFICATIONS, AND ELECTRONIC MEDIA PREPARED OR FURNISHED BY BAYER BECKER (BB), ARE INSTRUMENTS OF BB'S PROFESSIONAL SERVICE, AND IS THE EXCLUSIVE PROPERTY OF BB. NO DISCLOSURE, REPRODUCTION, OR DISTRIBUTION IN WHOLE OR IN PART, MAY BE MADE WITHOUT WRITTEN PERMISSION OF BB AND IS CONSIDERED USER'S SOLE RESPONSIBILITY. ALL RIGHTS RESERVED.



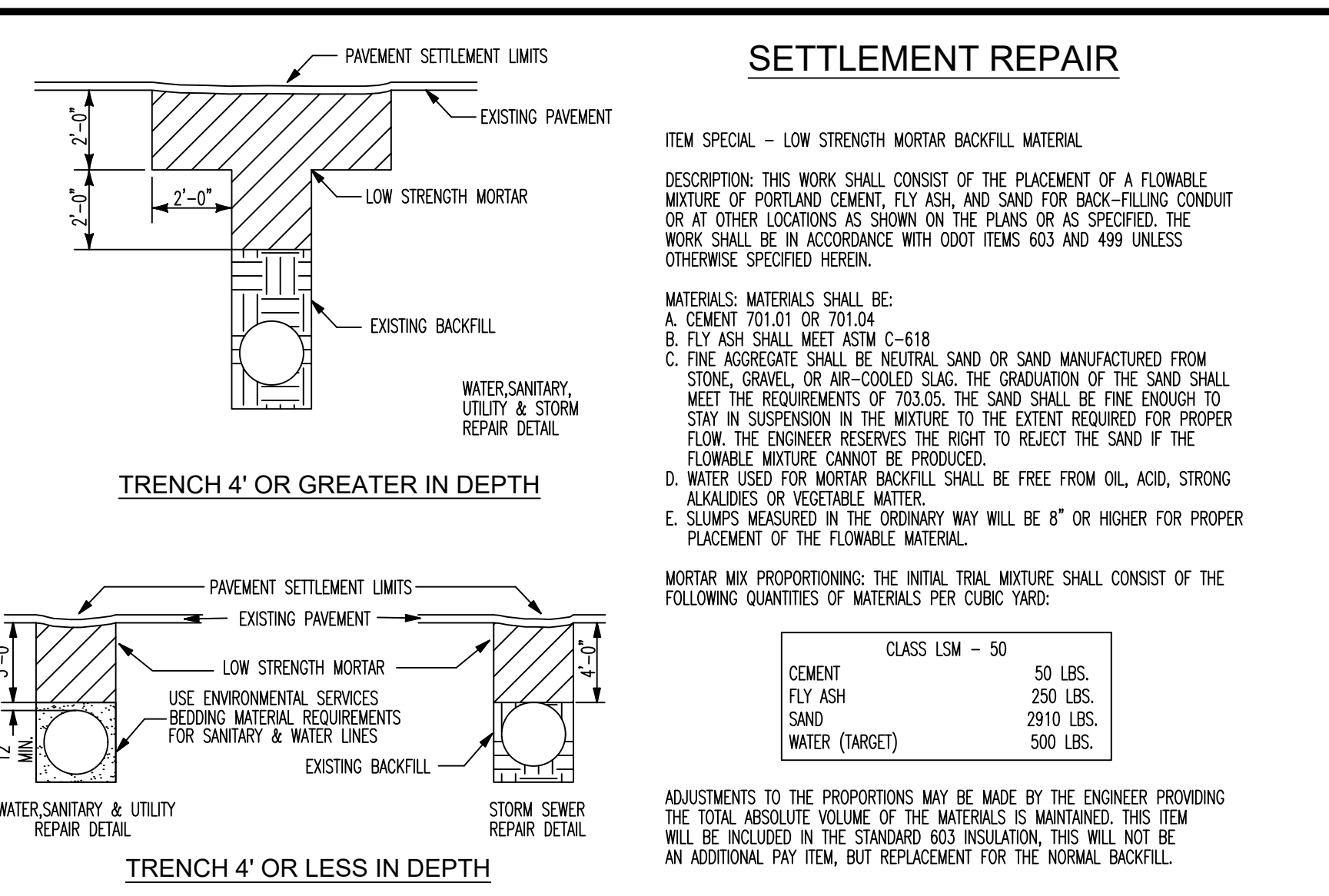
TYPICAL CREEK CROSSING FOR GRAVITY SEWERS 6260



HOUSE CONNECTION FOR DEEP SEWER 6280



HOUSE CONNECTION FOR SHALLOW SEWER 6290



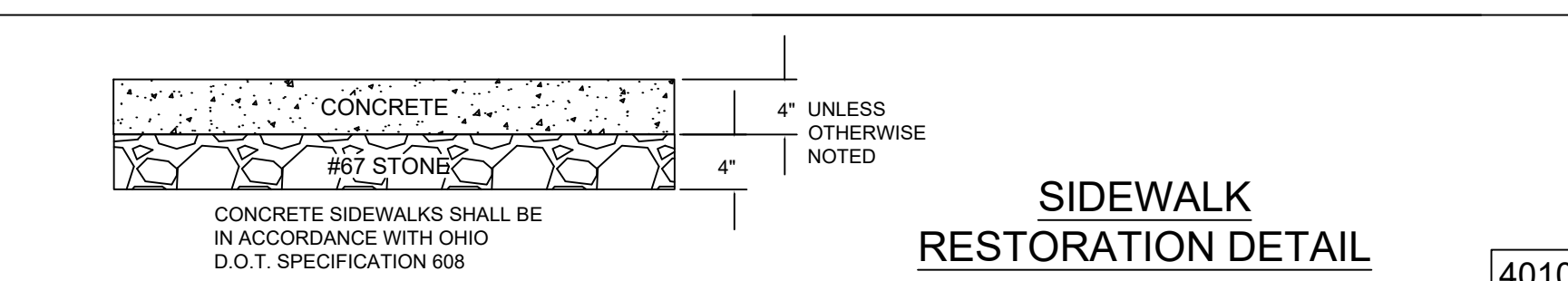
SETTLEMENT REPAIR

ITEM SPECIAL - LOW STRENGTH MORTAR BACKFILL MATERIAL
 DESCRIPTION: THIS WORK SHALL CONSIST OF THE PLACEMENT OF A FLOWABLE MIXTURE OF PORTLAND CEMENT, FLY ASH, AND SAND FOR BACK-FILLING CONDUIT OR AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS SPECIFIED. THE WORK SHALL BE IN ACCORDANCE WITH ODOT ITEMS 603 AND 499 UNLESS OTHERWISE SPECIFIED HEREIN.
 MATERIALS: MATERIALS SHALL BE:
 A. CEMENT 701.01 OR 701.04
 B. FLY ASH SHALL MEET ASTM C-618
 C. FINE AGGREGATE SHALL BE NEUTRAL SAND OR SAND MANUFACTURED FROM STONE, GRAVEL OR AIR-COOLED SLAG. THE GRADATION OF THE SAND SHALL MEET THE REQUIREMENTS OF 703.05. THE SAND SHALL BE FINE ENOUGH TO STAY IN SUSPENSION IN THE MIXTURE TO THE EXTENT REQUIRED FOR PROPER FLOW. THE ENGINEER RESERVES THE RIGHT TO REJECT THE SAND IF THE FLOWABLE MIXTURE CANNOT BE PRODUCED.
 D. WATER USED FOR MORTAR BACKFILL SHALL BE FREE FROM OIL, ACID, STRONG ALKALIES OR VEGETABLE MATTER.
 E. SLUMPS MEASURED IN THE CROWNWAY MAY WILL BE 8\"/>

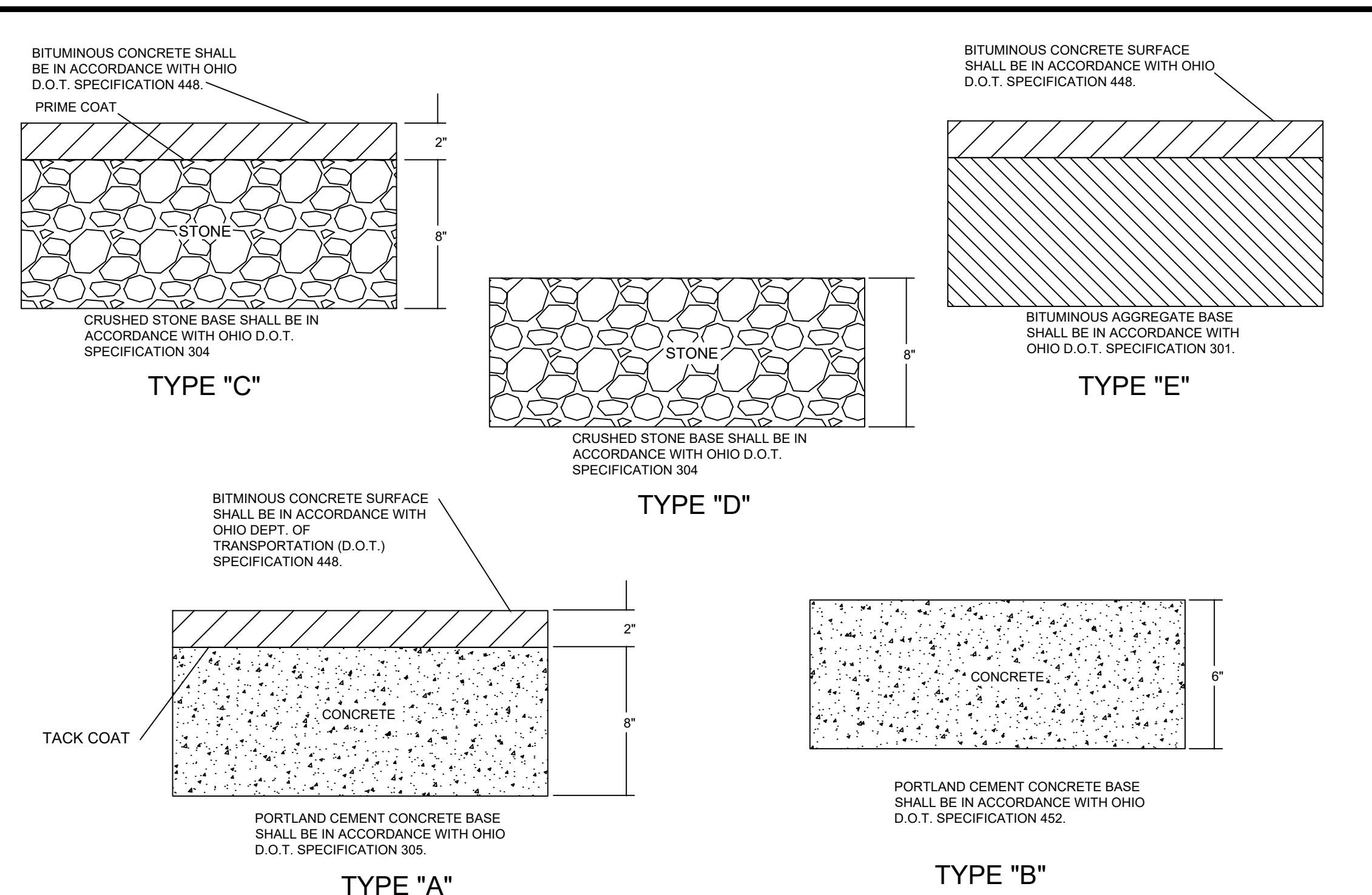
MORTAR MIX PROPORTIONING: THE INITIAL TRIAL MIXTURE SHALL CONSIST OF THE FOLLOWING QUANTITIES OF MATERIALS PER CUBIC YARD:

CEMENT	50 LBS.
FLY ASH	250 LBS.
SAND	2910 LBS.
WATER (TARGET)	500 LBS.

 ADJUSTMENTS TO THE PROPORTIONS MAY BE MADE BY THE ENGINEER PROVIDING THE TOTAL ABSOLUTE VOLUME OF THE MATERIALS IS MAINTAINED. THIS ITEM WILL BE INCLUDED IN THE STANDARD 603 INSULATION. THIS WILL NOT BE AN ADDITIONAL PAY ITEM, BUT REPLACEMENT FOR THE NORMAL BACKFILL.

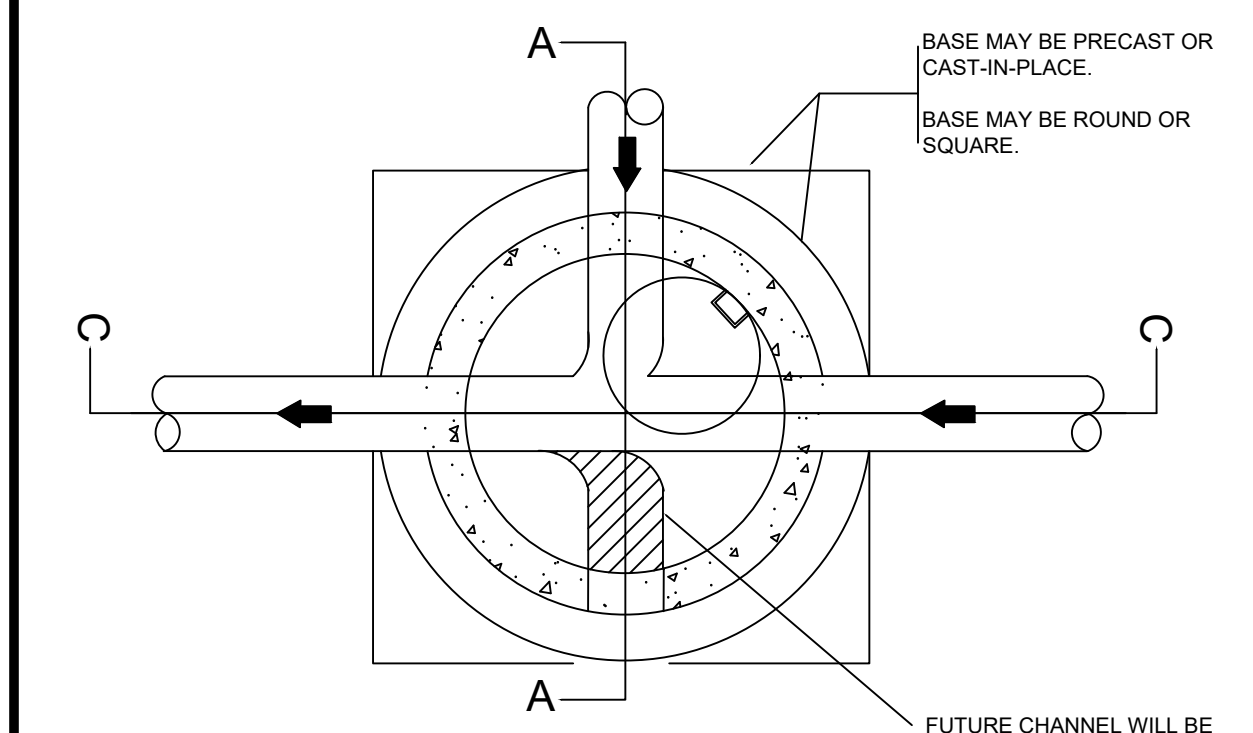


SIDEWALK RESTORATION DETAIL 4010

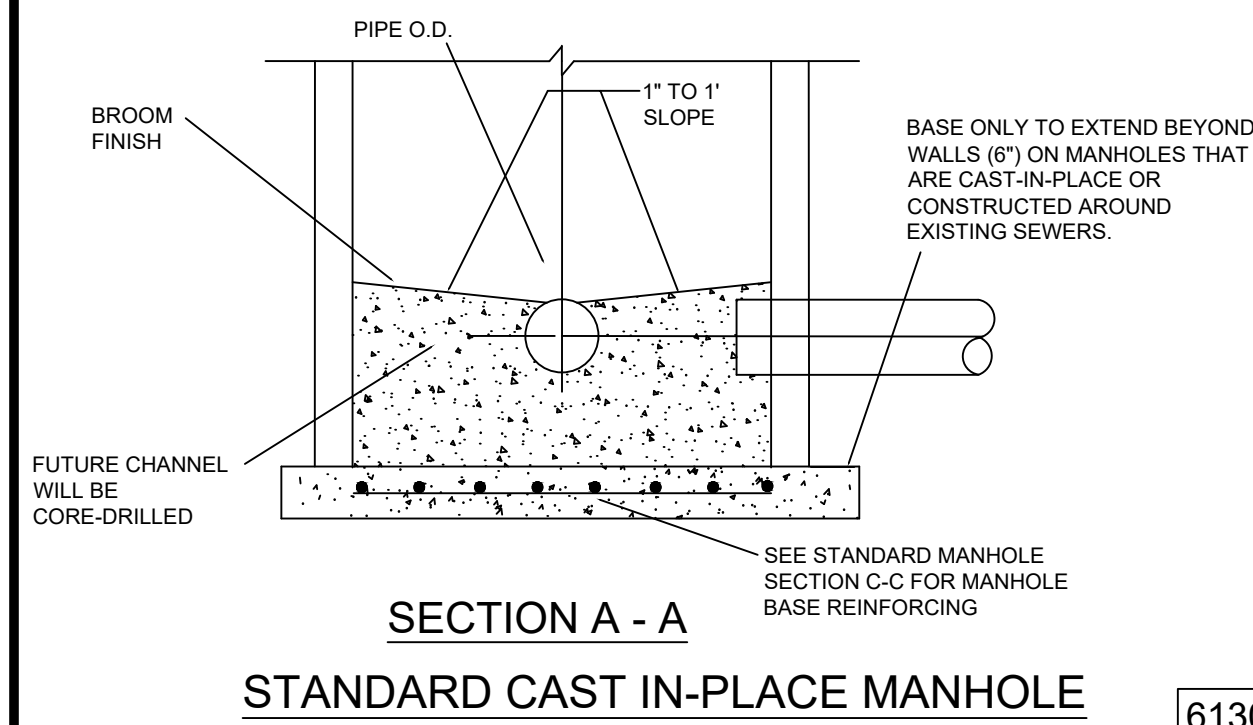


PAVEMENT REPLACEMENT DETAILS

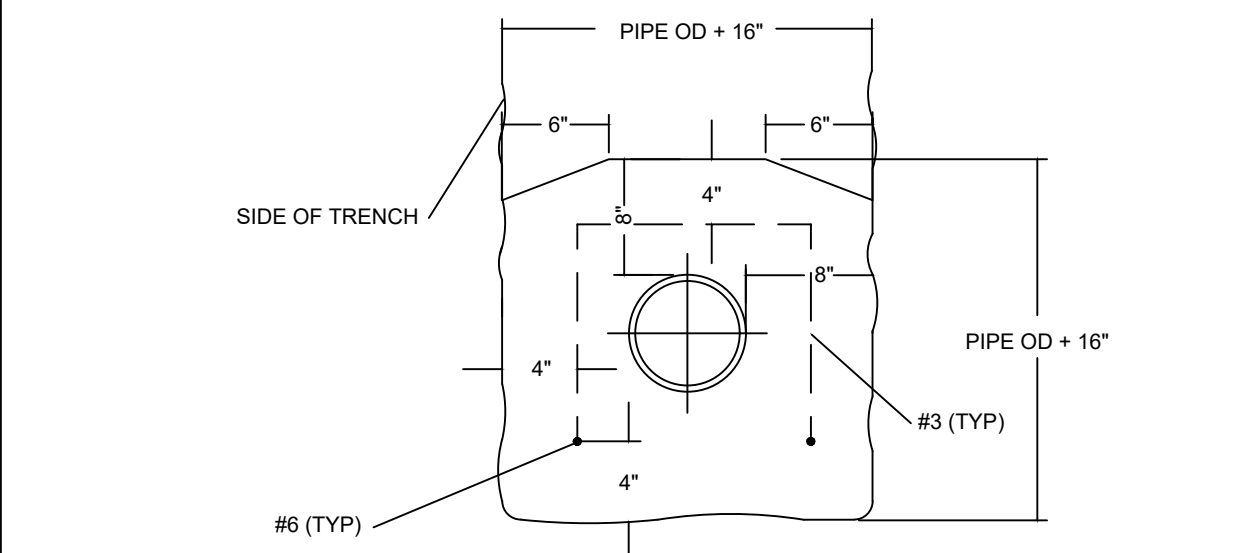
TYPE "C", **TYPE "D"**, **TYPE "A"**, **TYPE "B"**, **TYPE "E"**



PLAN VIEW



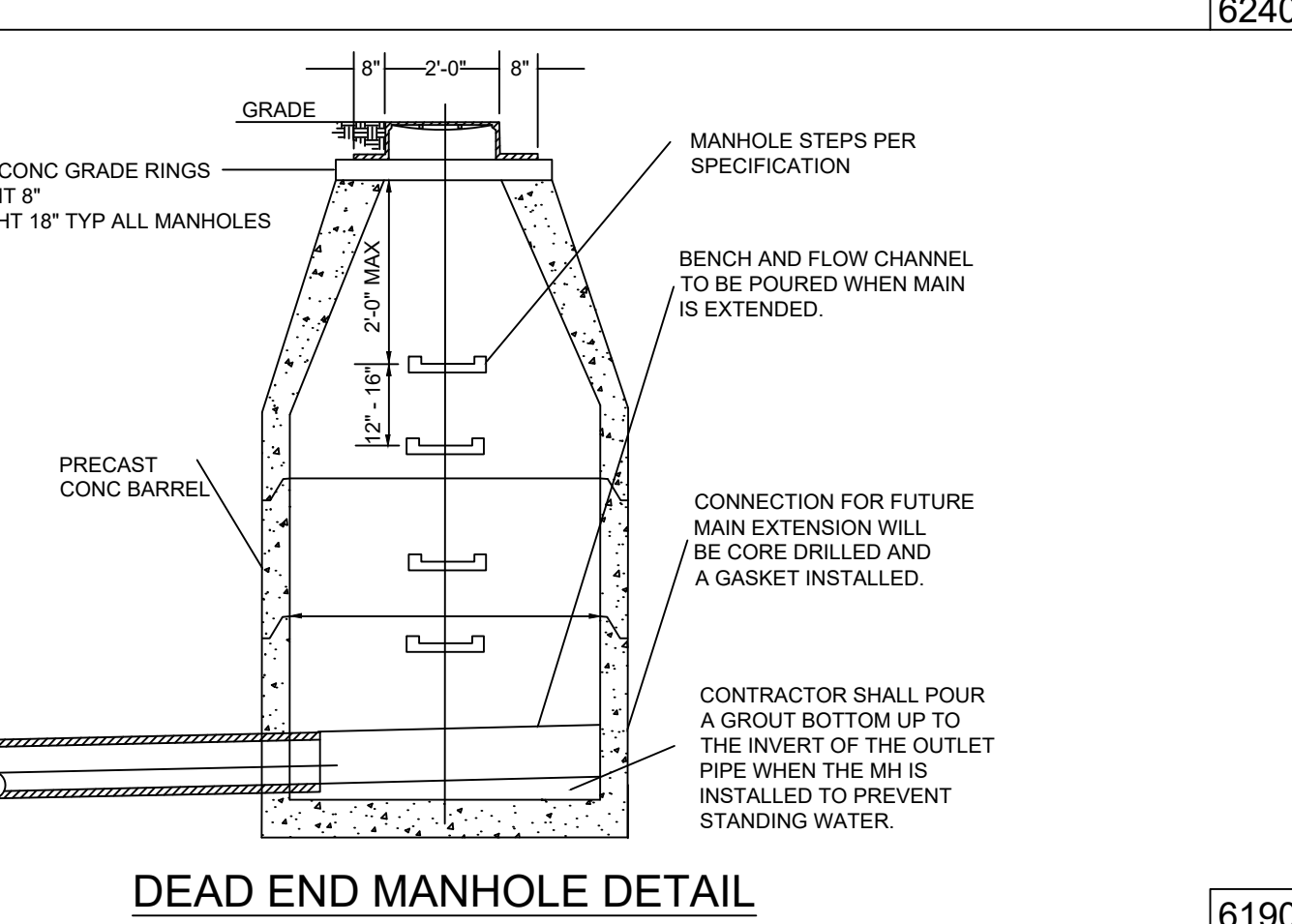
SECTION A - A STANDARD CAST-IN-PLACE MANHOLE 6130



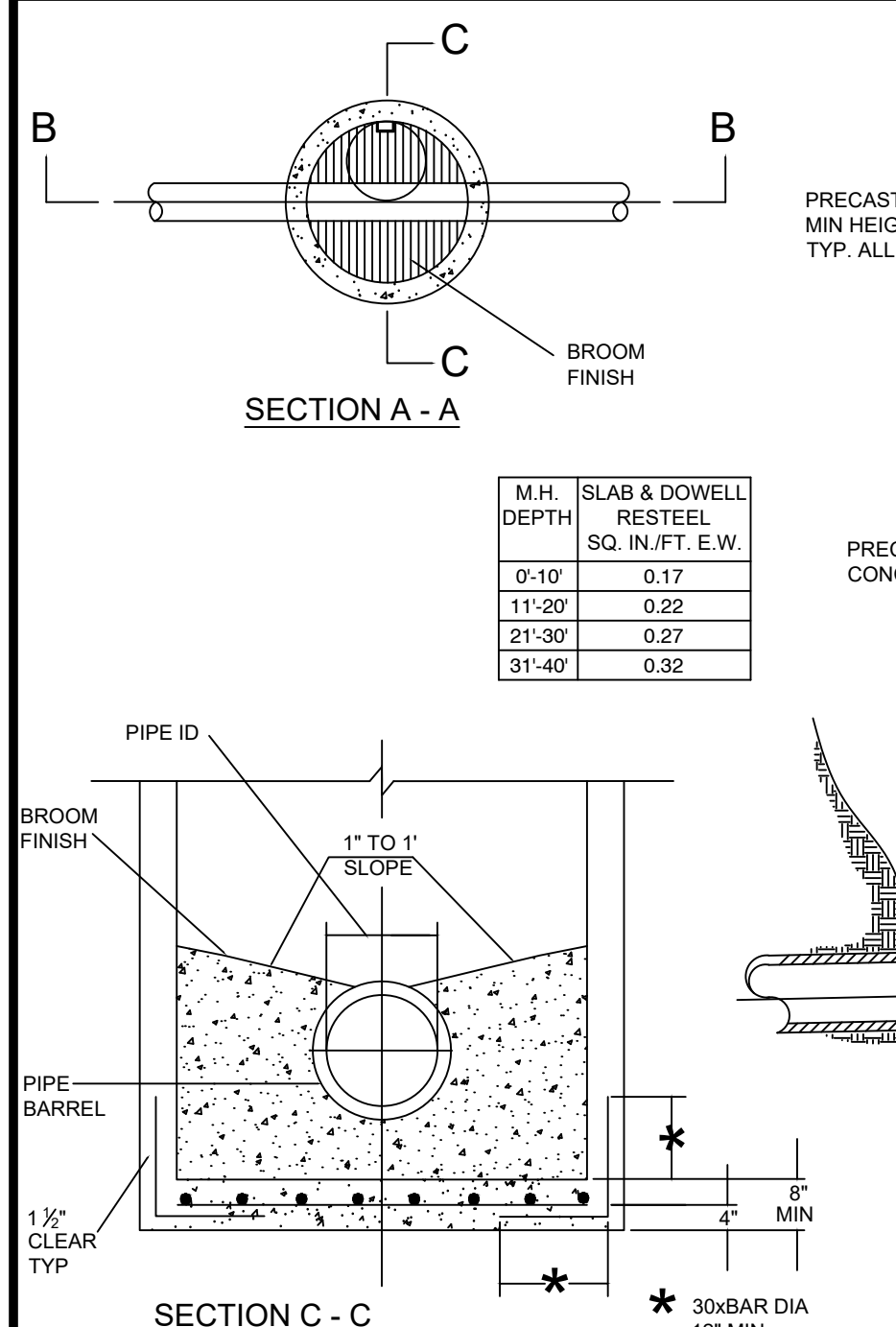
TYPICAL TRENCH DETAIL SEWER INSTALLATION 6270

CONCRETE ENCASEMENT DETAIL 6240

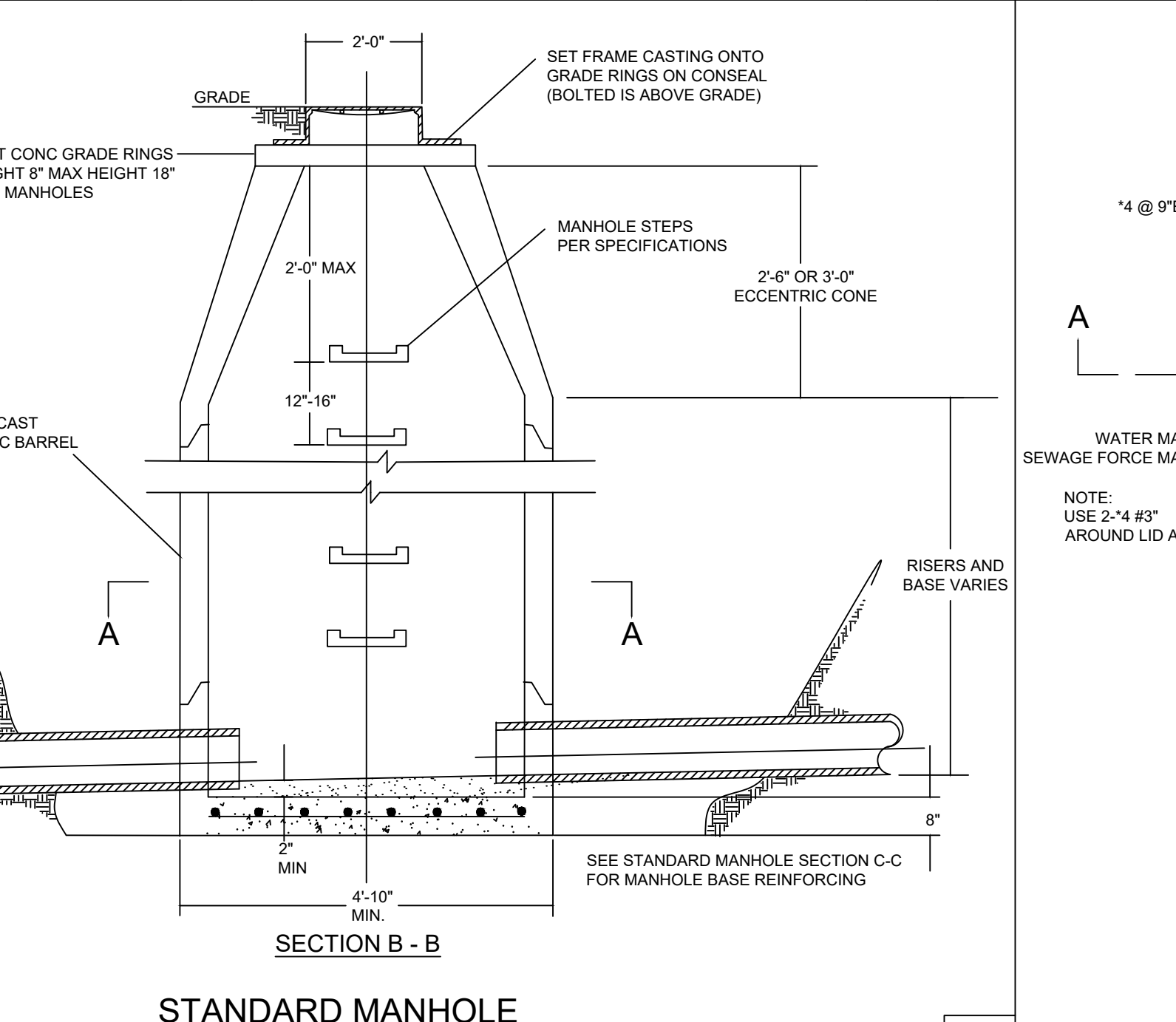
PIPE SIZE	CY CONC PER LIN FT	LENGTH OF NO 3 BARS	SPACING (FT) BETWEEN NO 3 BARS
6"	0.121	3'-9"	1.64
8"	0.158	4'-3"	1.25
10"	0.157	4'-9"	1.12
12"	0.177	5'-3"	1.02
16"	0.200	6'-3"	0.85
18"	0.247	6'-10"	0.78
20"	0.270	7'-5"	0.72
24"	0.315	8'-6"	0.63
30"	0.540	10'-4"	0.57



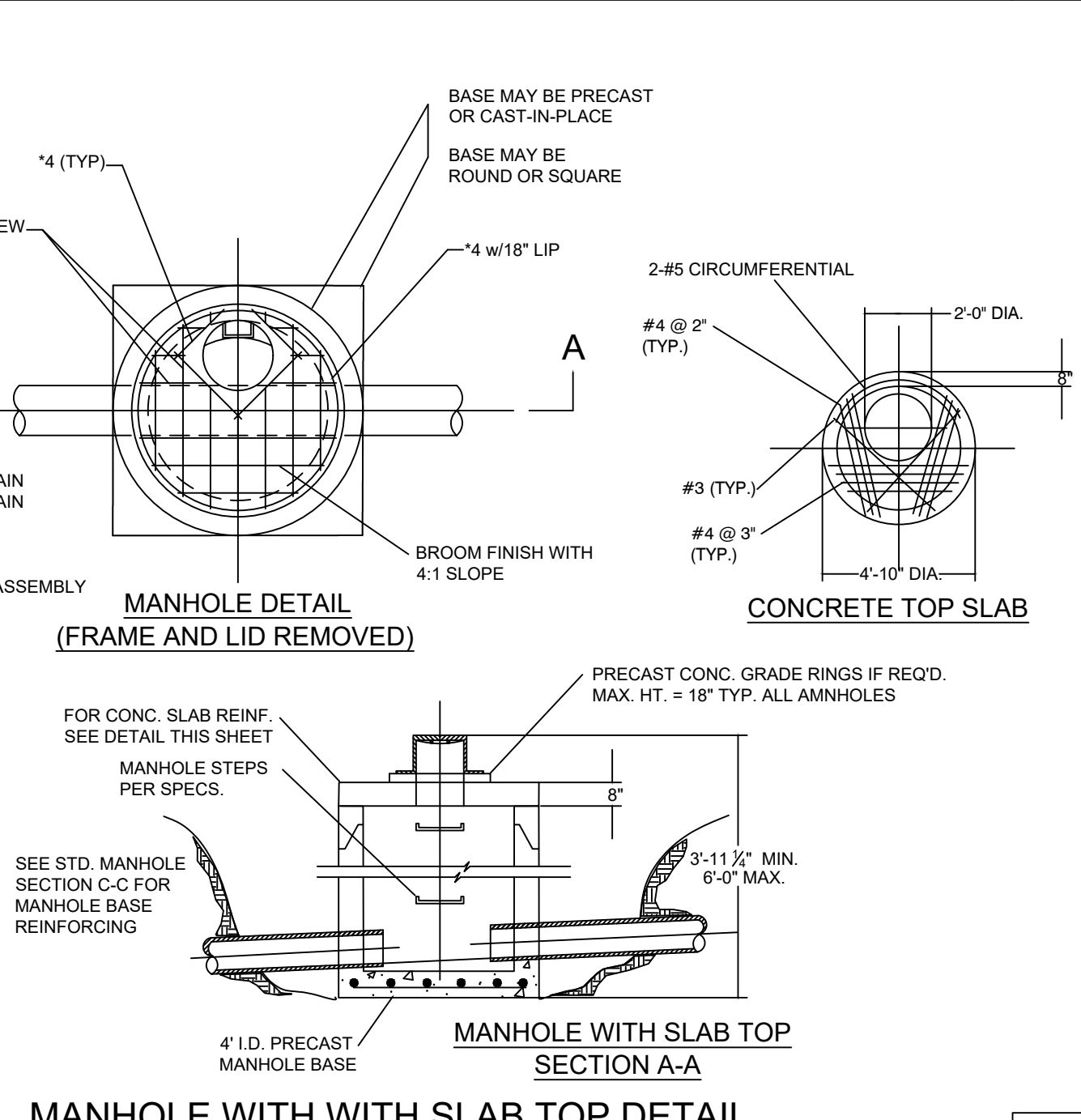
DEAD END MANHOLE DETAIL 6190



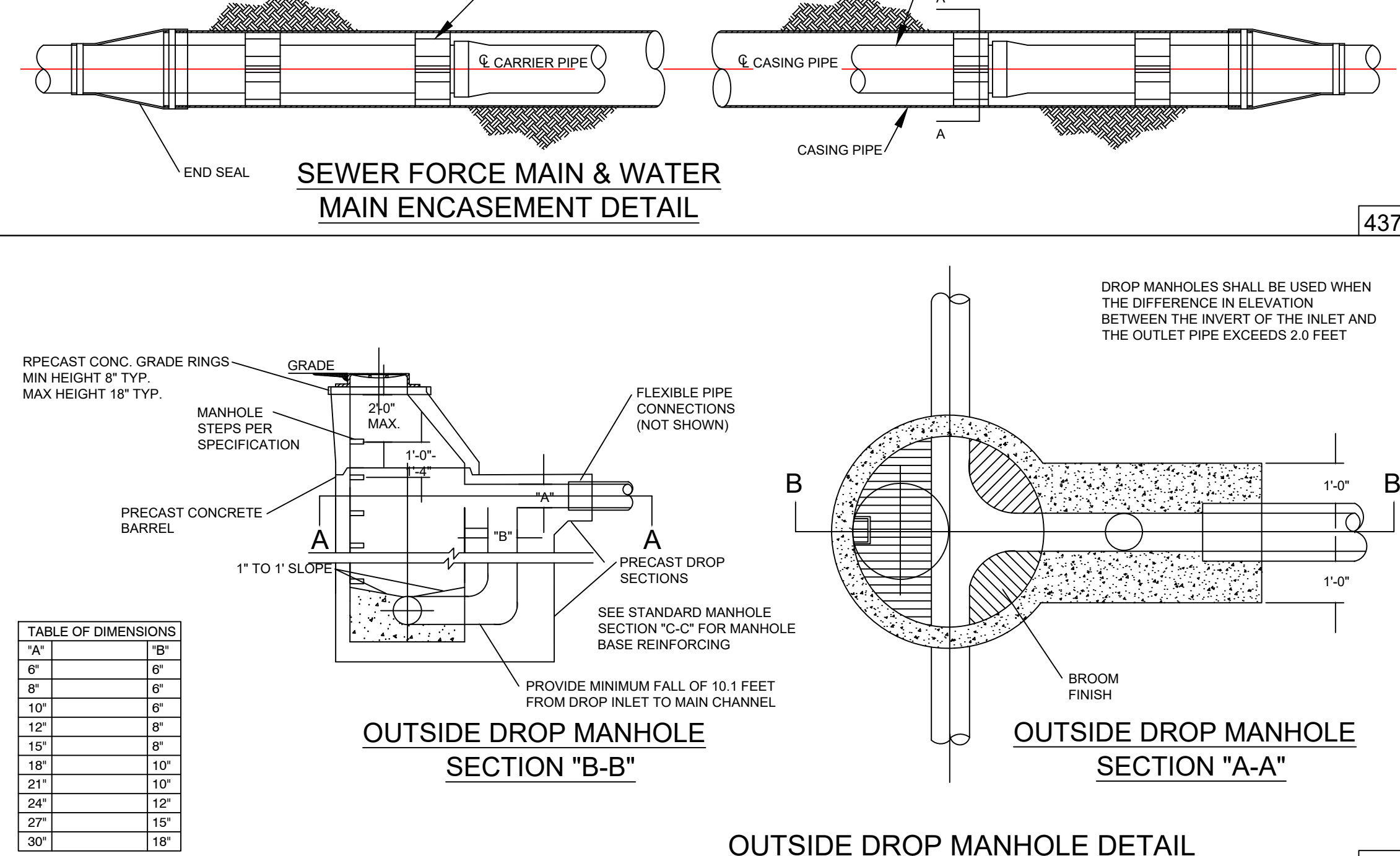
SECTION C - C STANDARD MANHOLE 6200



SECTION B - B STANDARD MANHOLE 6200



MANHOLE WITH WITH SLAB TOP DETAIL 6210



SEWER FORCE MAIN & WATER MAIN ENCASEMENT DETAIL 4370

OUTSIDE DROP MANHOLE SECTION "B-B"

OUTSIDE DROP MANHOLE SECTION "A-A"

Plot time: Sep 14, 2021 - 3:36pm
 Drawing name: J:\2020\20-0191\CD\DWG\Single Family\20-0191 CD SF.dwg - Layout Tab: C6.0 SAN DET

CALLAWAY PLACE - SF FINAL DEVELOPMENT PLAN
 SECTION 3, TOWN 5, RANGE 3
 5695 PRINCETON - GLENDALE ROAD
 BUTLER COUNTY, OHIO

BUTLER COUNTY SANITARY SEWER DETAILS

bayer becker
 www.bayerbecker.com
 6900 Tyersville Road, Suite A
 Mason, OH 45040 - 513.336.6600

Revision Description
 Item
 Date
 Dwn: Chk:

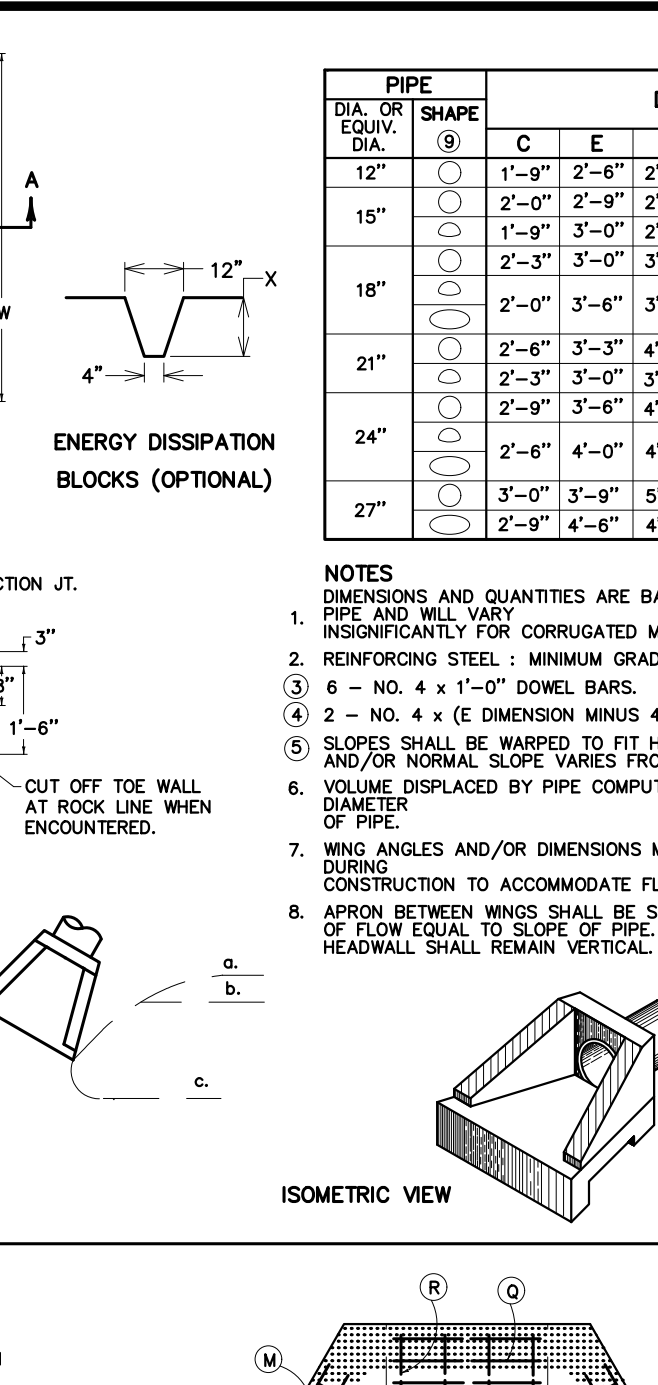
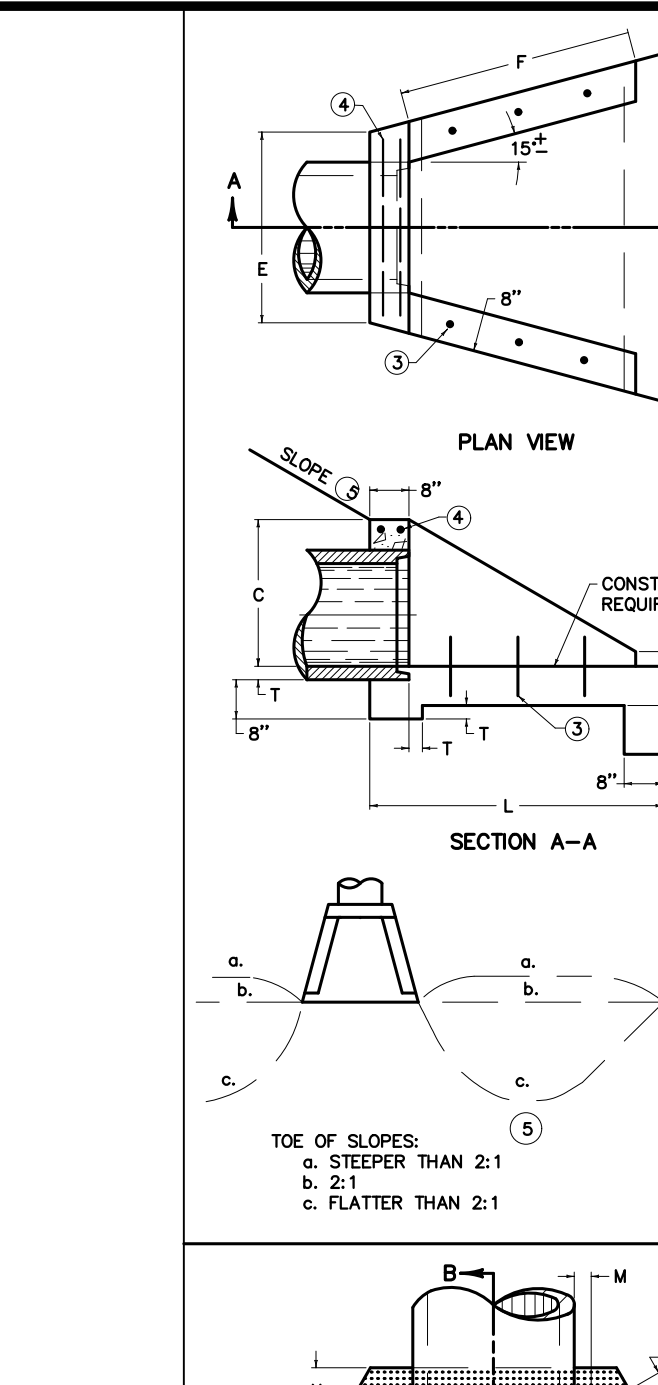
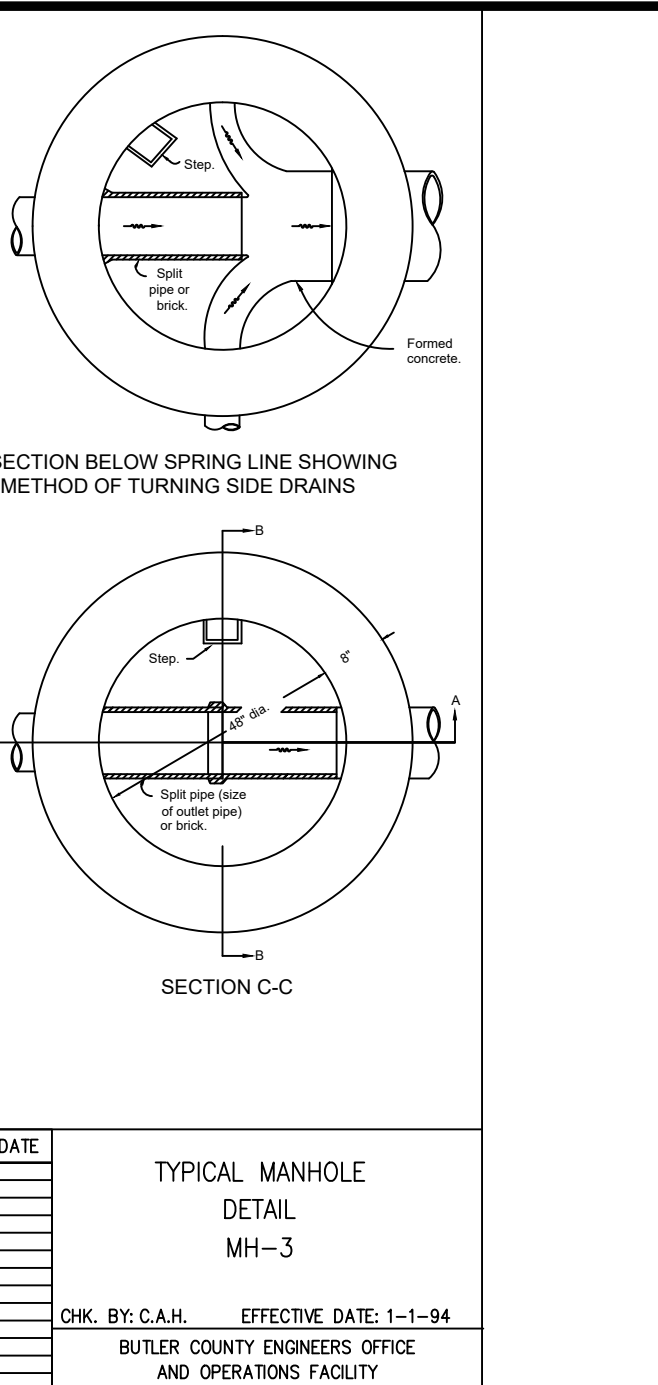
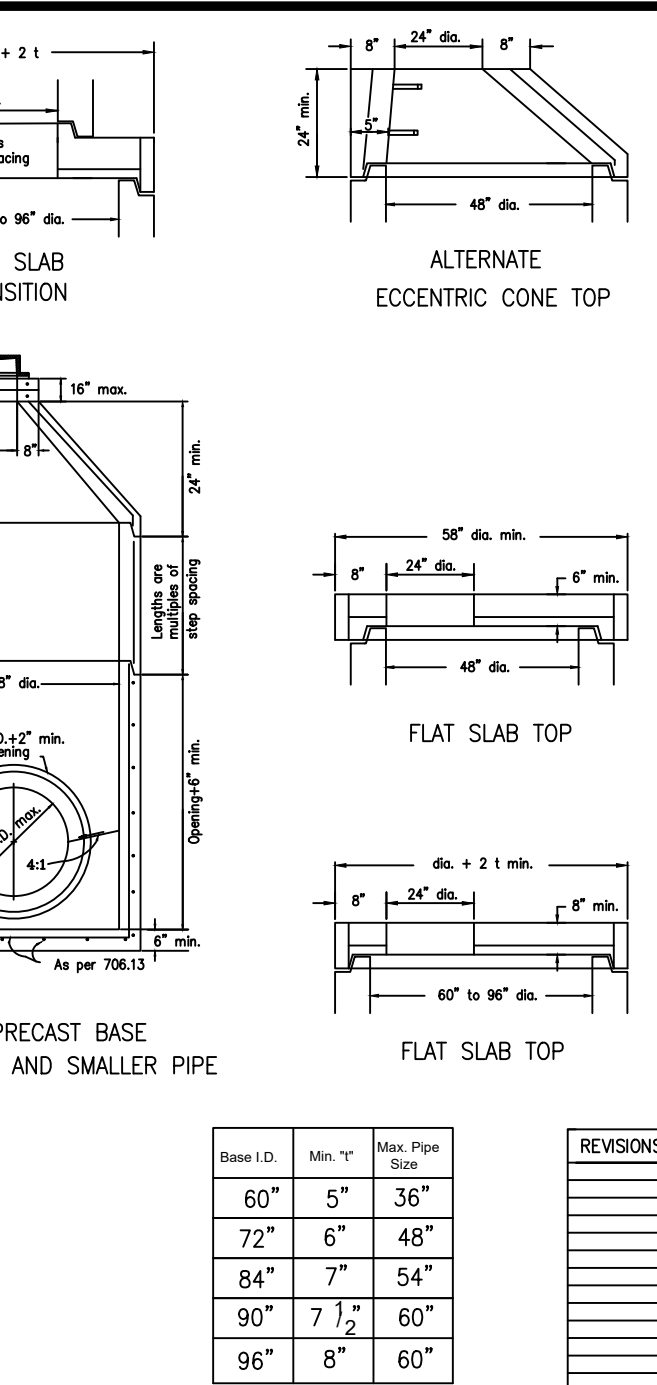
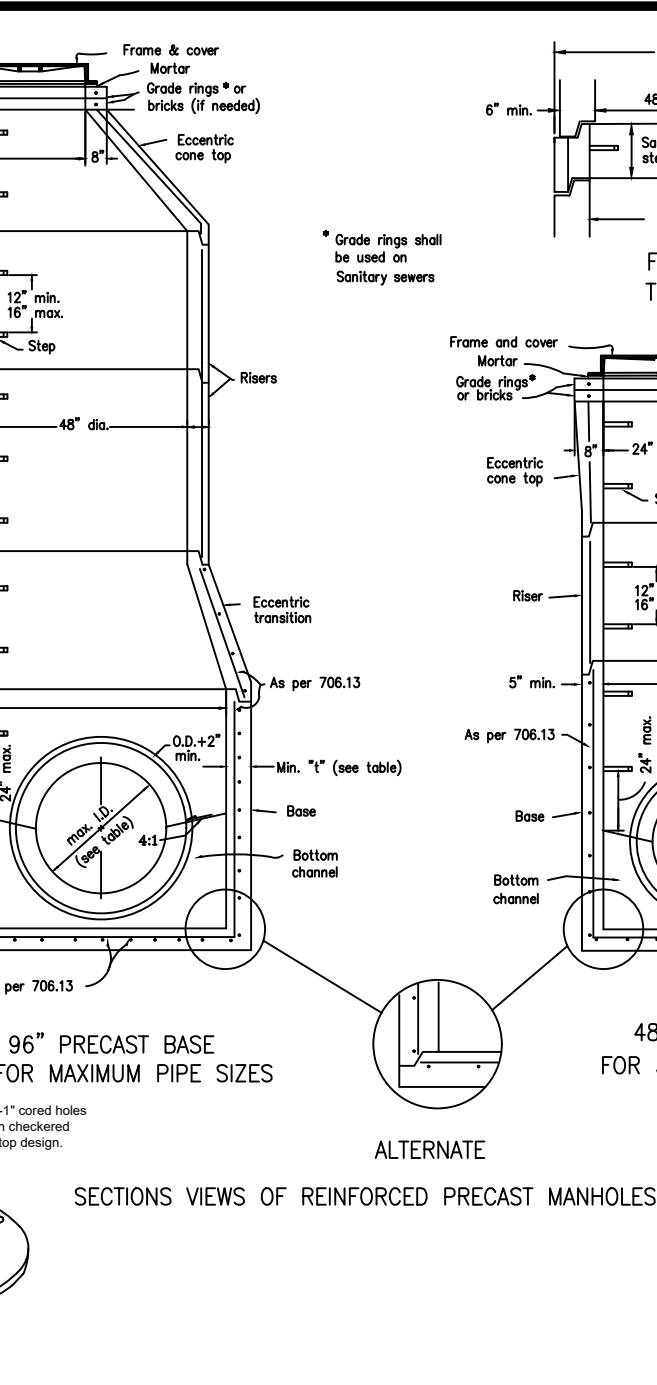
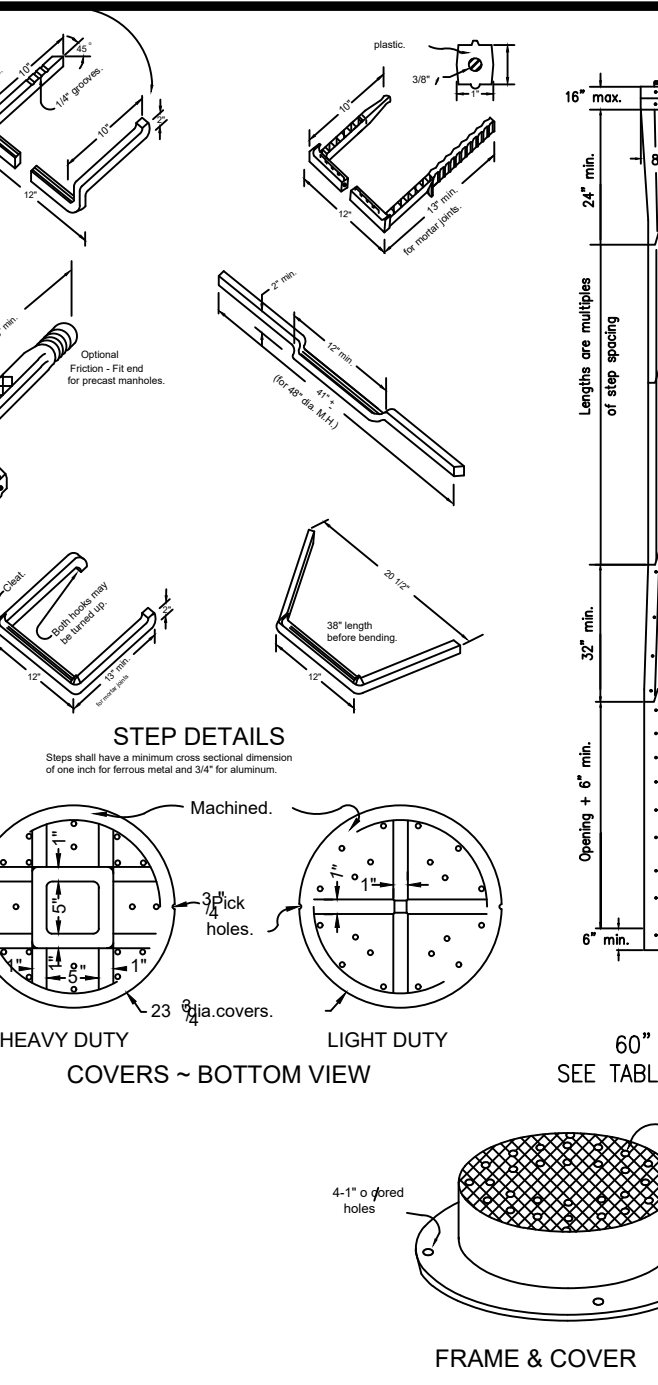
Drawing: 20-0191 CD SF
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 Checked By:
 Issue Date: 08-13-21
 Sheet:

C6.0

Plot time: Sep 14, 2021, 3:36pm
Drawing name: J:\2020\2019\CV\DWG\Single Family\2019\0191 CD SF.dwg - Layout Tab: C6.2 STORM DET

NOTES
GENERAL: With normal soil and site conditions this standard precast manhole shall be used for any required manhole depth.
Sections of the precast manhole shall be cast and assembled with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.
TOP AND TRANSITION (or reducer) sections may be either eccentric cone or flat top.
BASIS: For No.3 Manholes are shown with monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and ship the floor and barrel separately. Openings for inlet and outlet pipes shall be provided, either when the unit is cast or later, to meet project requirements. Bottom channels may be formed of concrete precast in the base or by field construction as shown on MH-1 and MH-2.
OPENINGS IN RISER SECTIONS for 18" and smaller inlet pipes may be prefabricated or cast in the field provided the side of the pipe at the springline do not project into the manhole.
CONNECTIONS between precast manhole sections and pipes on sanitary sewers may be sealed with resilient connectors conforming to ASTM C923.
JOINT SEAL between precast manhole sections on sanitary sewers shall be resilient and flexible gasket joints per 706.11.
MATERIALS for bases and other precast sections, including reinforcement not specified hereon, shall comply with the requirements of 706.13.

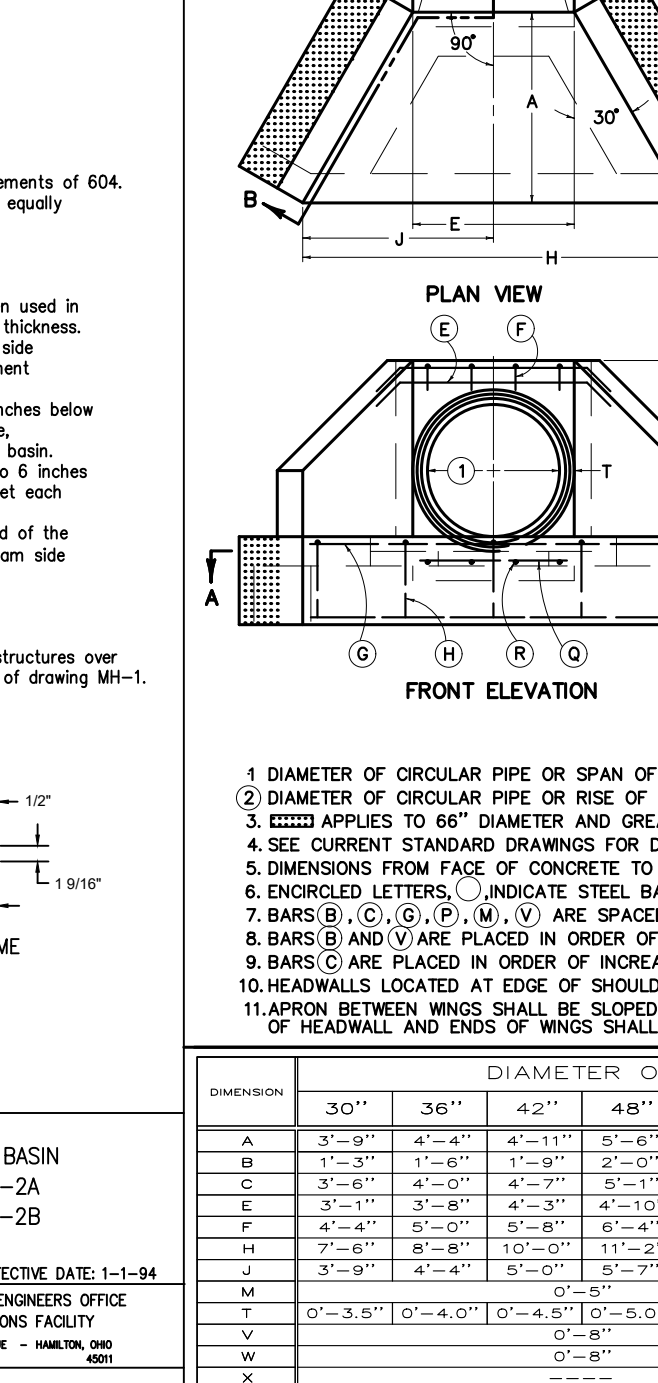
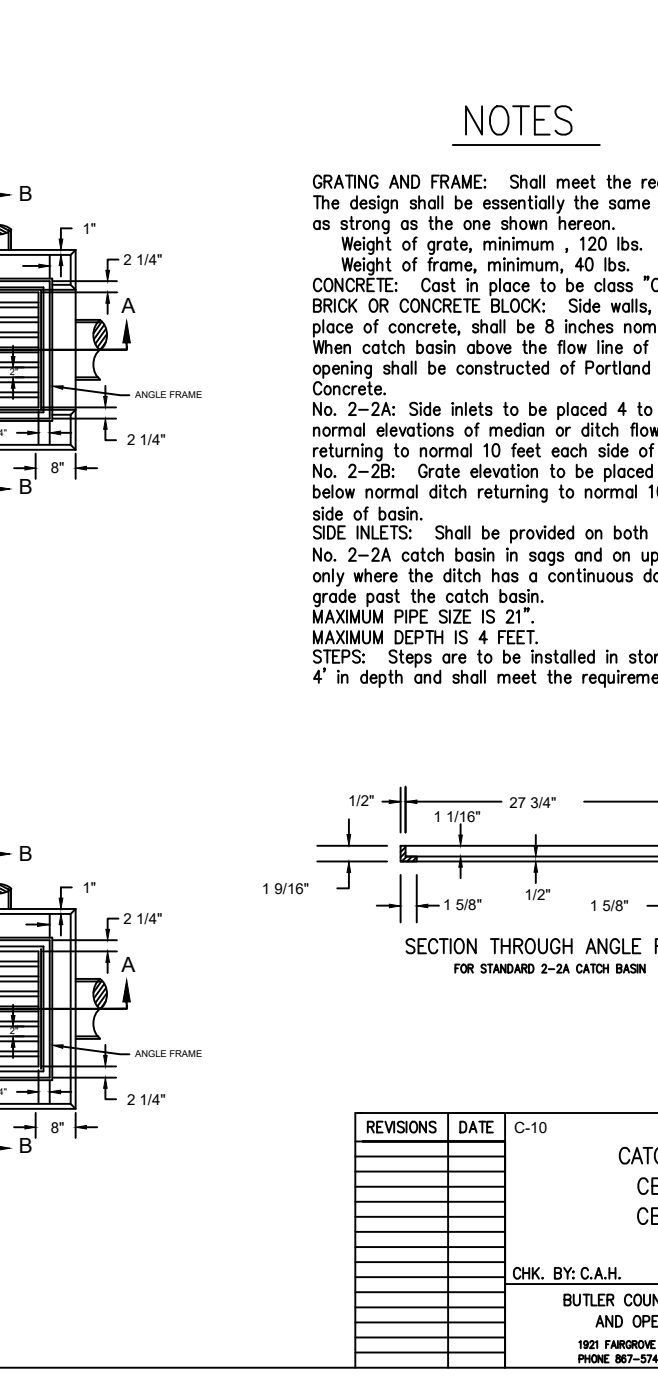
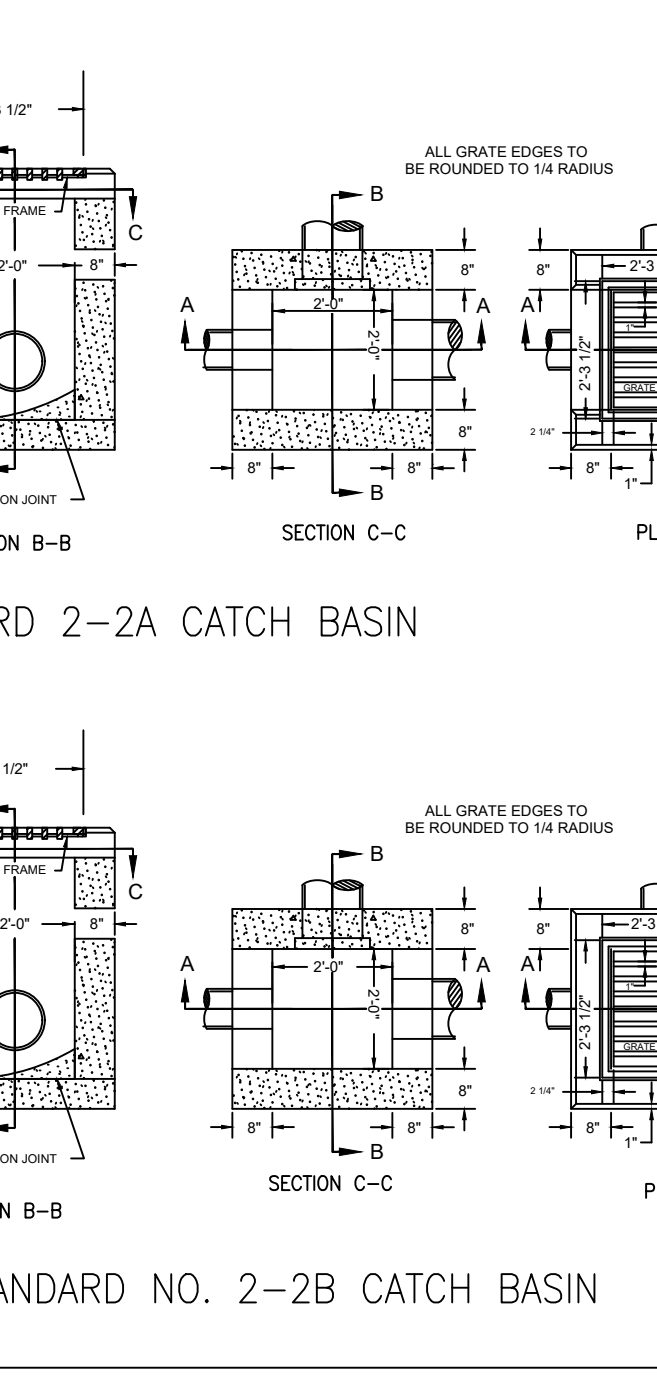
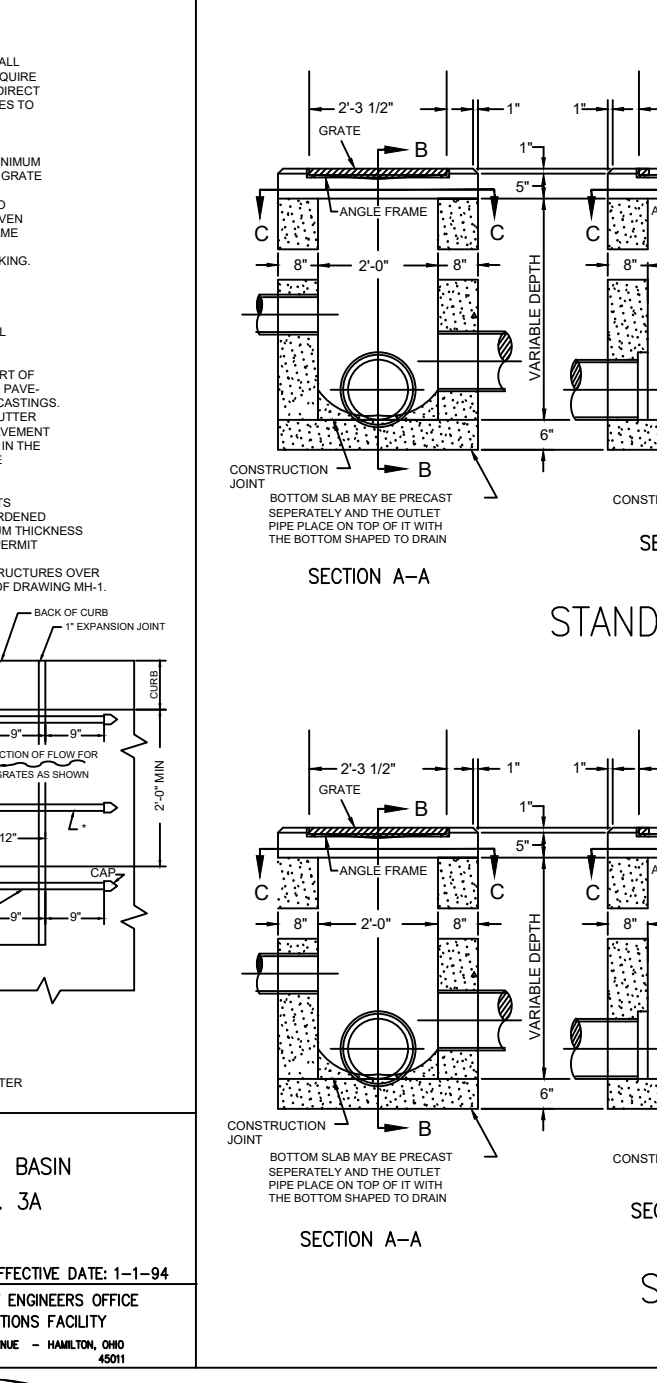
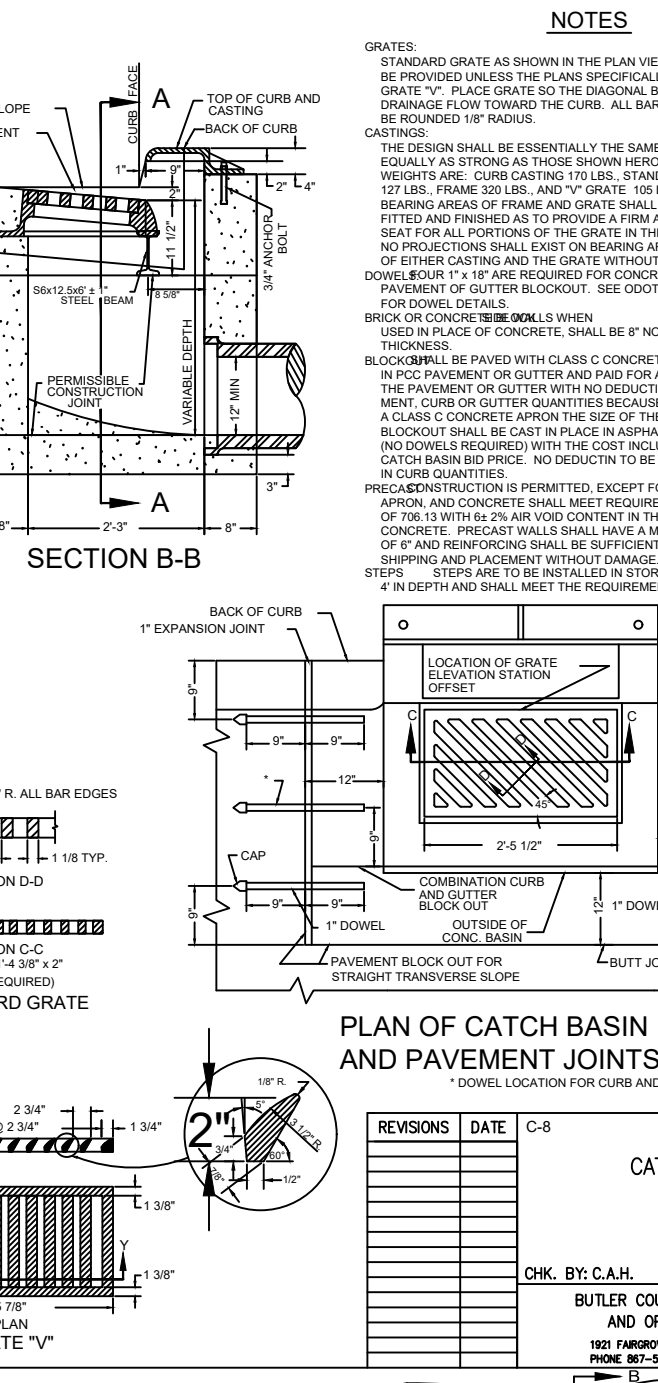
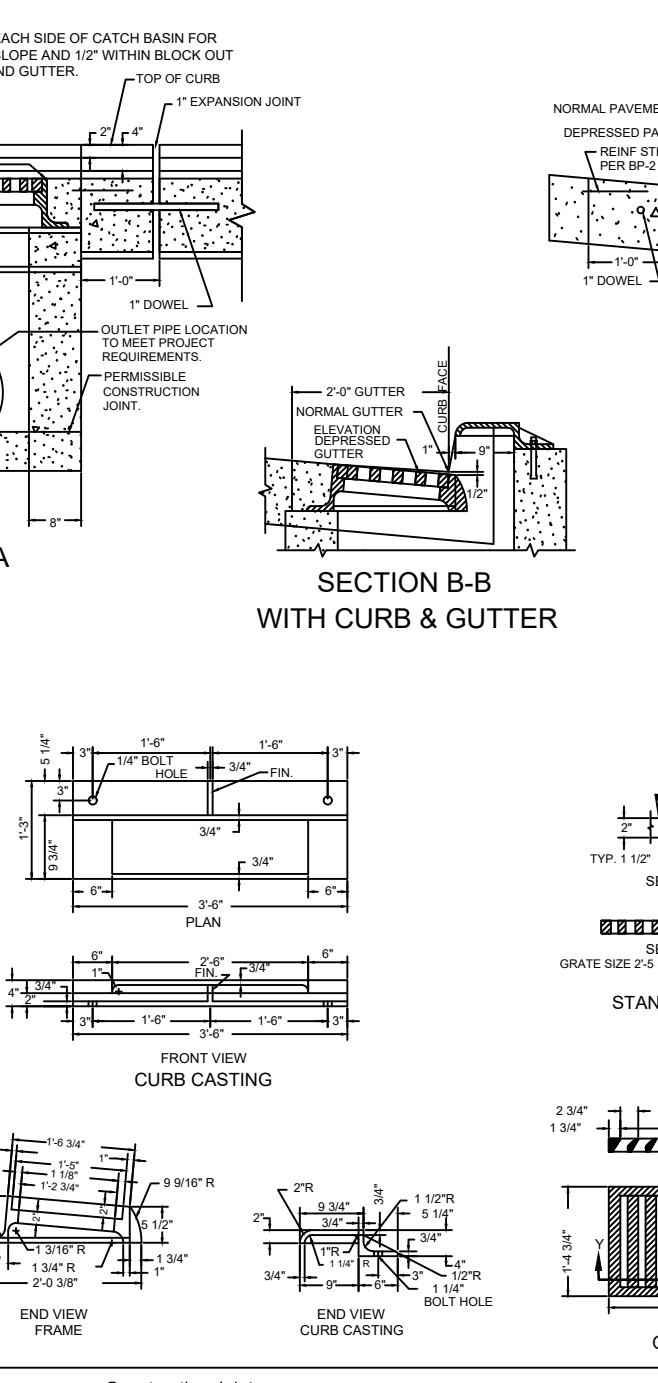
FRAME AND COVERS shall be of heavy design (475 lbs. min. total weight) when the manhole is placed within the limits of the pavement or shoulder, otherwise the light design shall be finished smooth and fitted so as to provide a firm and even seat to all portions of the cover in the frame. Each cover shall seat in its frame without rocking and shall be marked as a matched frame and cover before delivery to the project. The base of the frame shall be set in a full bed of Portland cement mortar, and so adjusted to conform to the finished pavement or shoulder elevation and slope. Castings meeting item 604 requirements and designed essentially the same and equally as strong those shown hereon shall be provided.
STEPS shall conform to the material requirements of specification 604. All steps shall have a depressed tread or a 1/2" minimum deck height at the ends. Steps installed in fresh concrete shall be embedded to a minimum depth of 4". Steps installed in mortar joints shall be embedded to a minimum depth of 7". Friction-rip steps meeting the requirements of 711.31 with a 1/2" diameter rebar may be used in precast manholes. The receiving holes for friction-rip steps shall not penetrate the manhole wall.
The Engineer may require the contractor to test load a maximum of one step per manhole to a proof load of 400 lbs. in direct pull. The equipment used shall meet the approval of the Engineer.
If the selected step fails the pullout test, the remaining steps in that manhole shall also be tested. All steps not passing the pullout test shall be removed and a new step installed and tested to the satisfaction of the Engineer. Cost of testing shall be incidental to the unit price bid for the manhole.
DROPPY PIPE, when specified on the plans, shall be constructed as shown on MH-2.
SANITARY SEWER COVERS shall be without the pick and vent holes shown hereon and shall include a sealing gasket fitted to the bearing surface. Ball-down covers shall not be used unless specified in the plans.



PIPE DIA. OR EQUIV. DIA.	SHAPE	C	E	F	L	W	T	X	C. Y.	LBS.
12"	○	1'-9"	2'-6"	3'-6"	4'-0"	4'-0"	2"	12"	0.58	7
15"	○	2'-0"	2'-6"	3'-6"	4'-0"	4'-0"	2 1/4"	14"	0.75	8
18"	○	2'-3"	3'-0"	3'-6"	4'-6"	5'-3"	2 1/2"	15"	0.93	8
21"	○	2'-6"	3'-3"	4'-0"	5'-0"	6'-0"	3"	16"	1.14	9
24"	○	2'-6"	4'-0"	4'-0"	5'-0"	6'-0"	3 1/4"	18"	1.30	9
27"	○	3'-0"	3'-9"	5'-0"	6'-0"	7'-0"	3 1/2"	21"	1.57	10

REVISIONS	DATE	DESCRIPTION

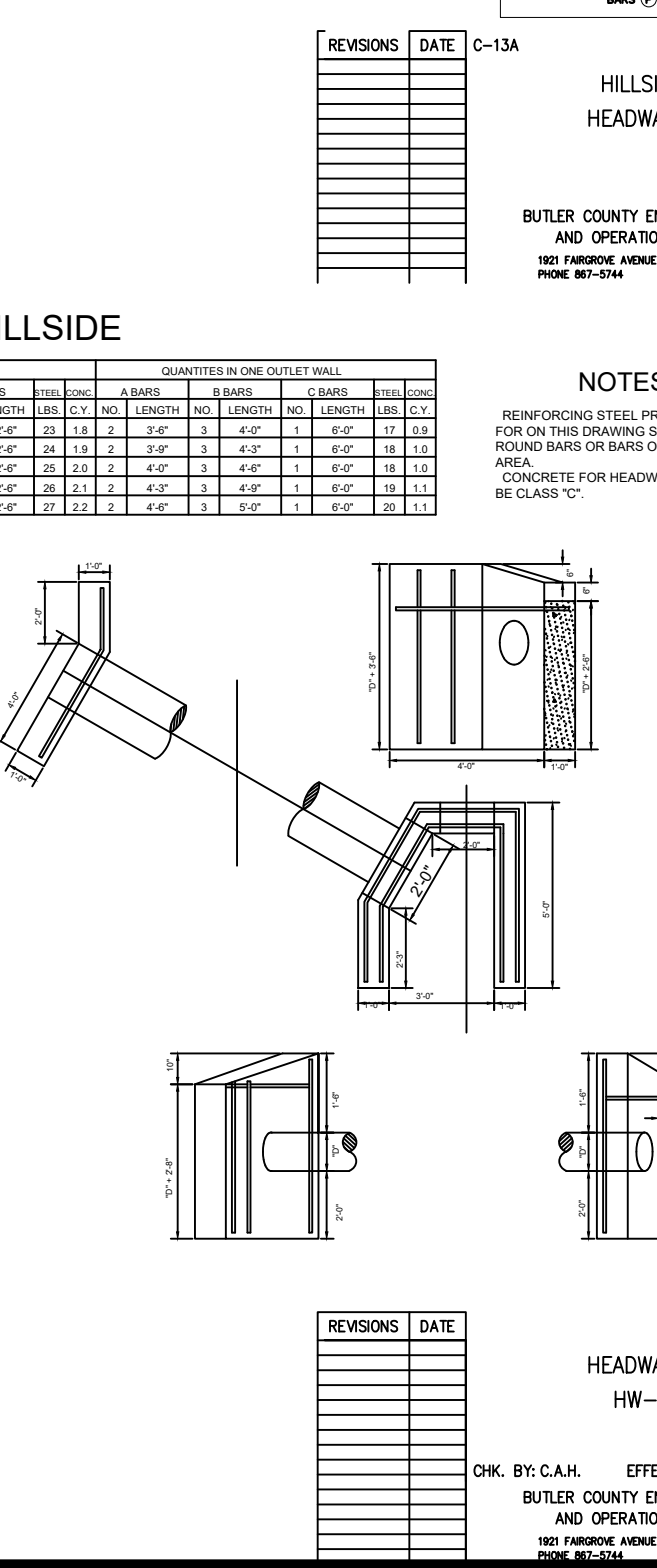
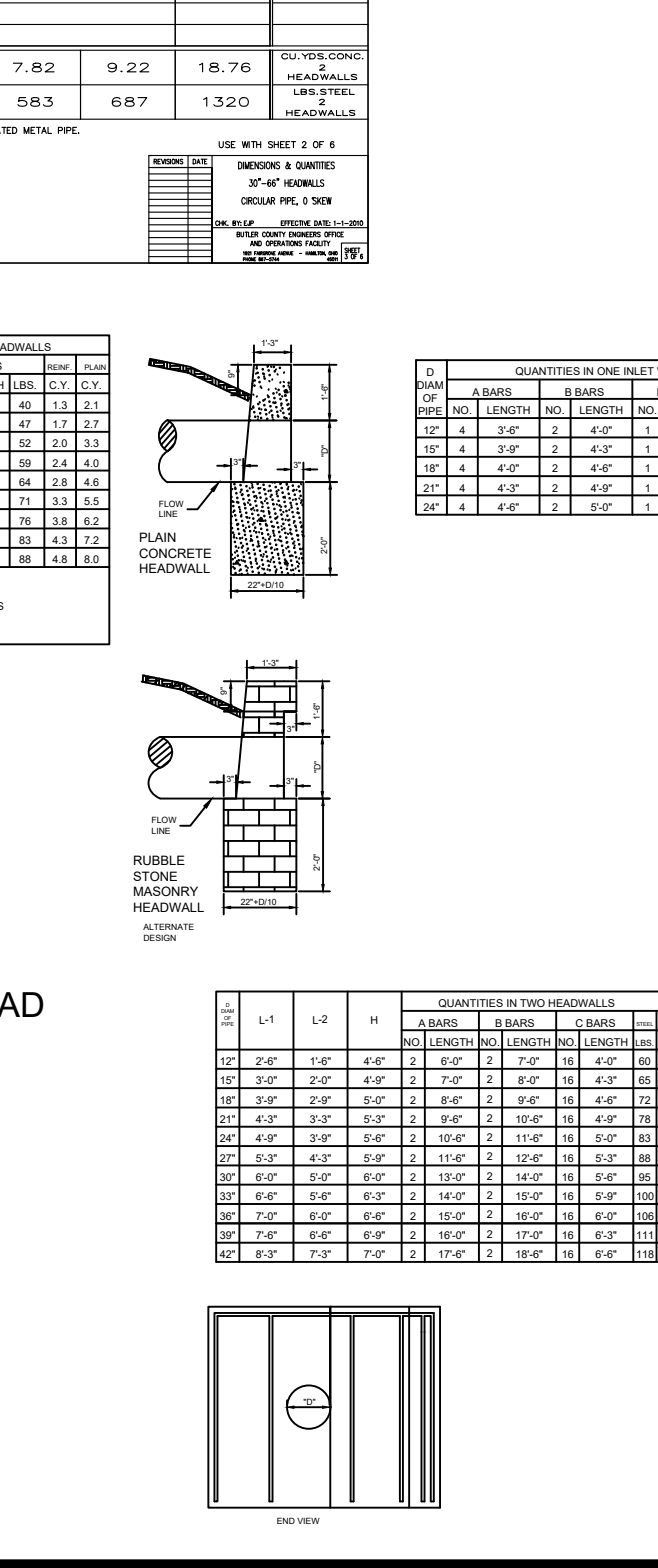
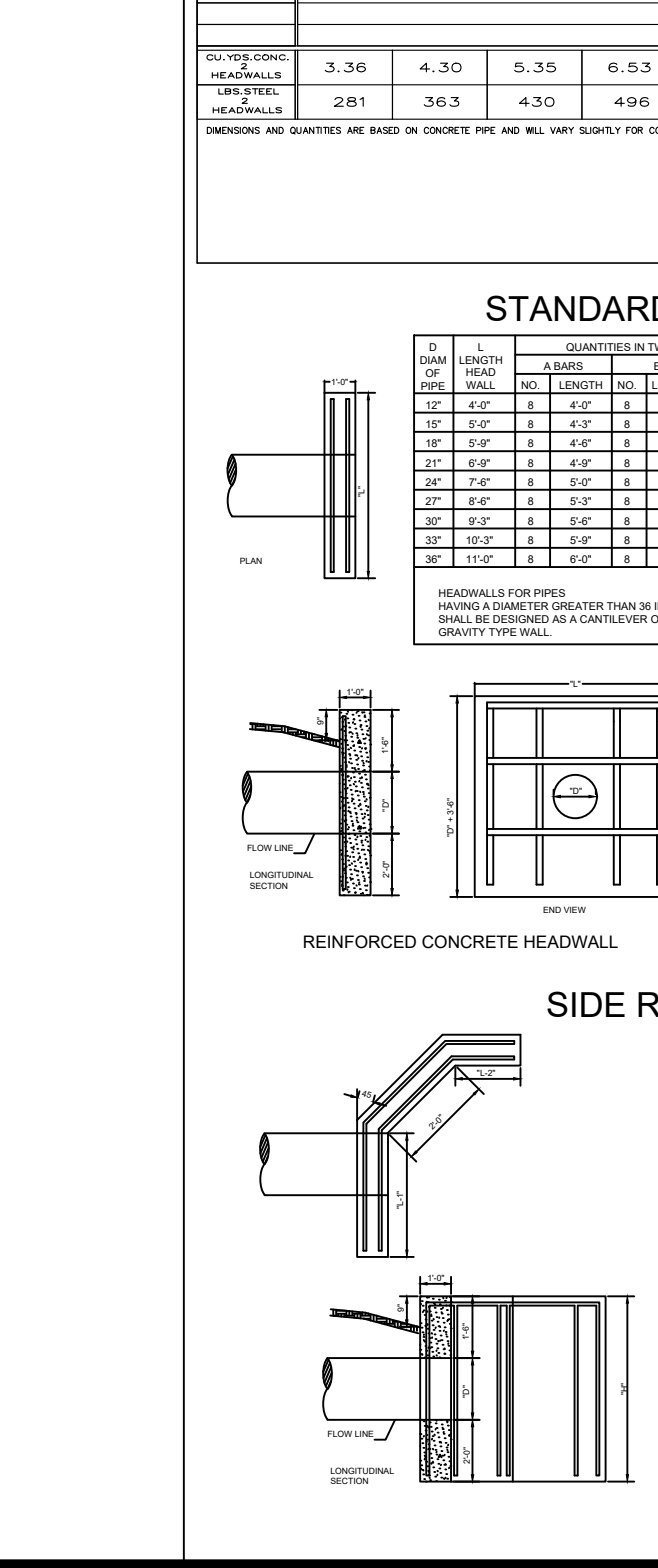
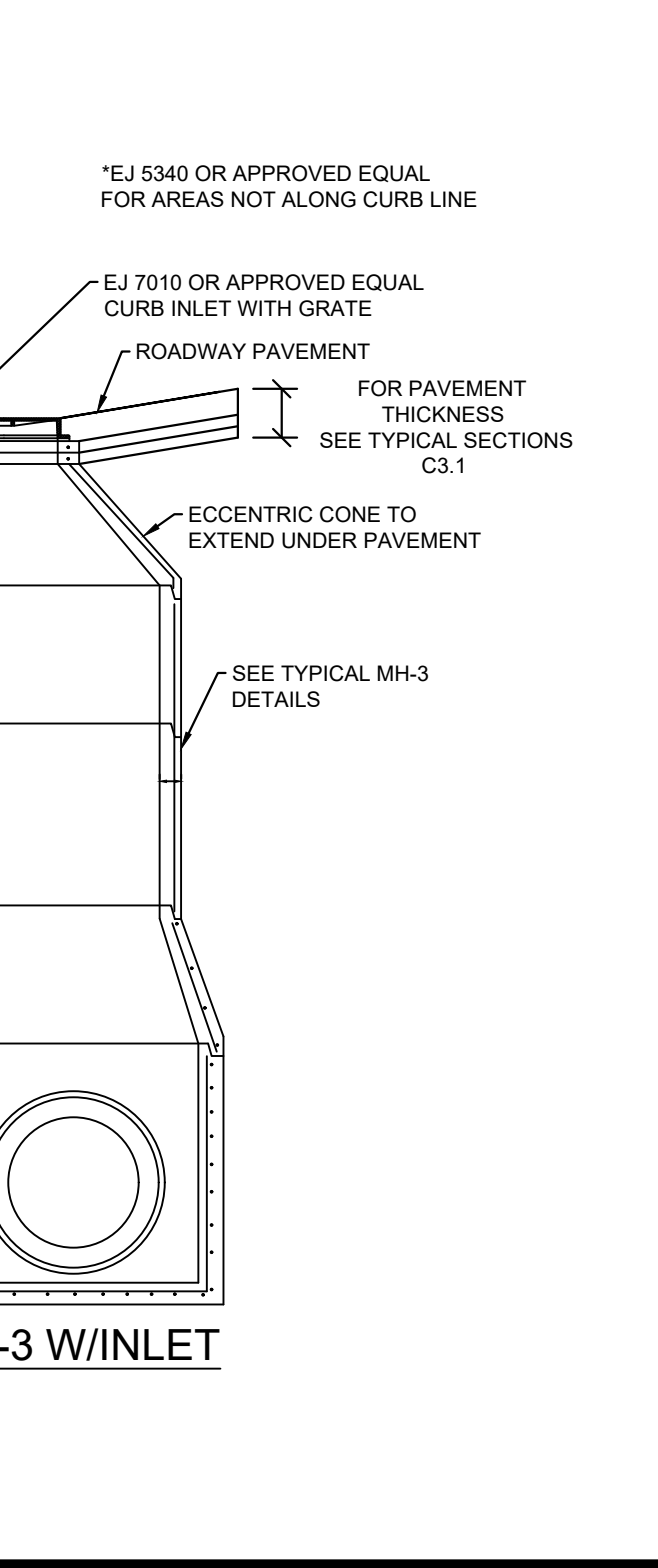
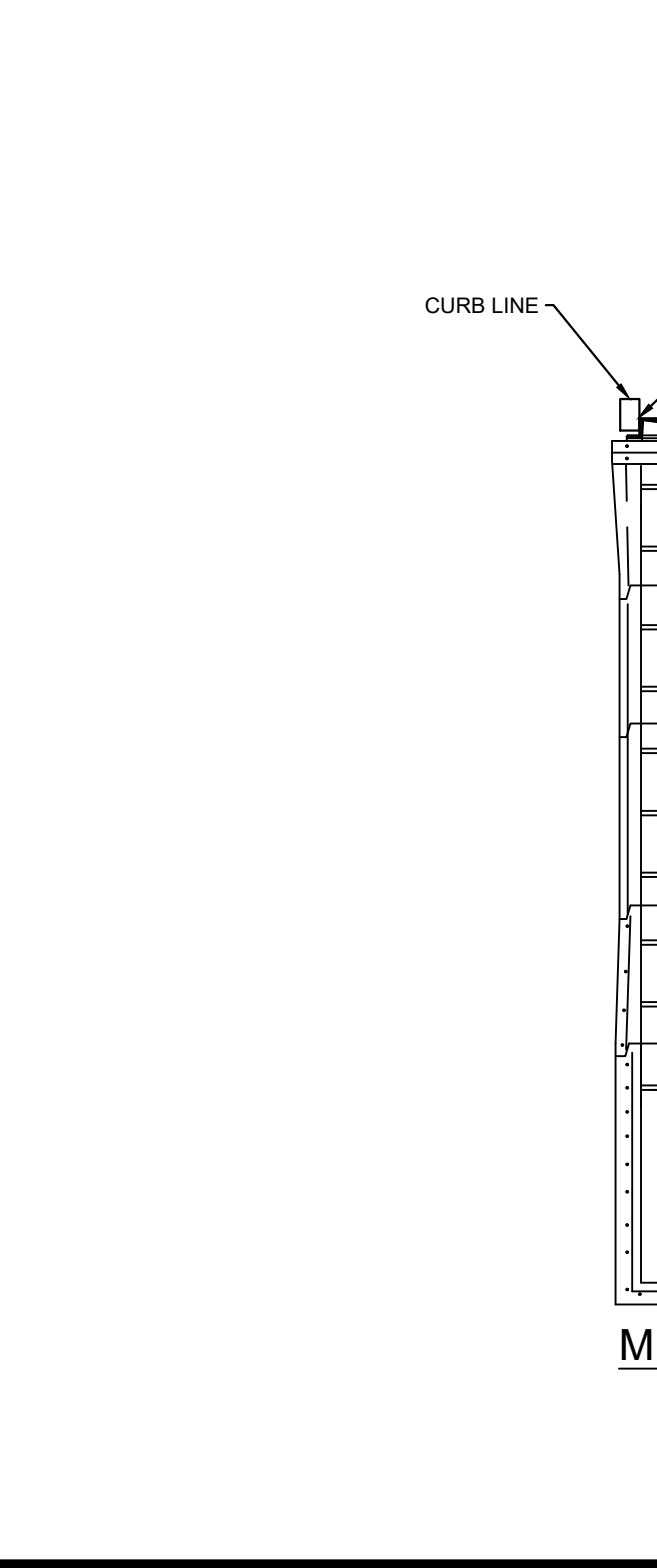
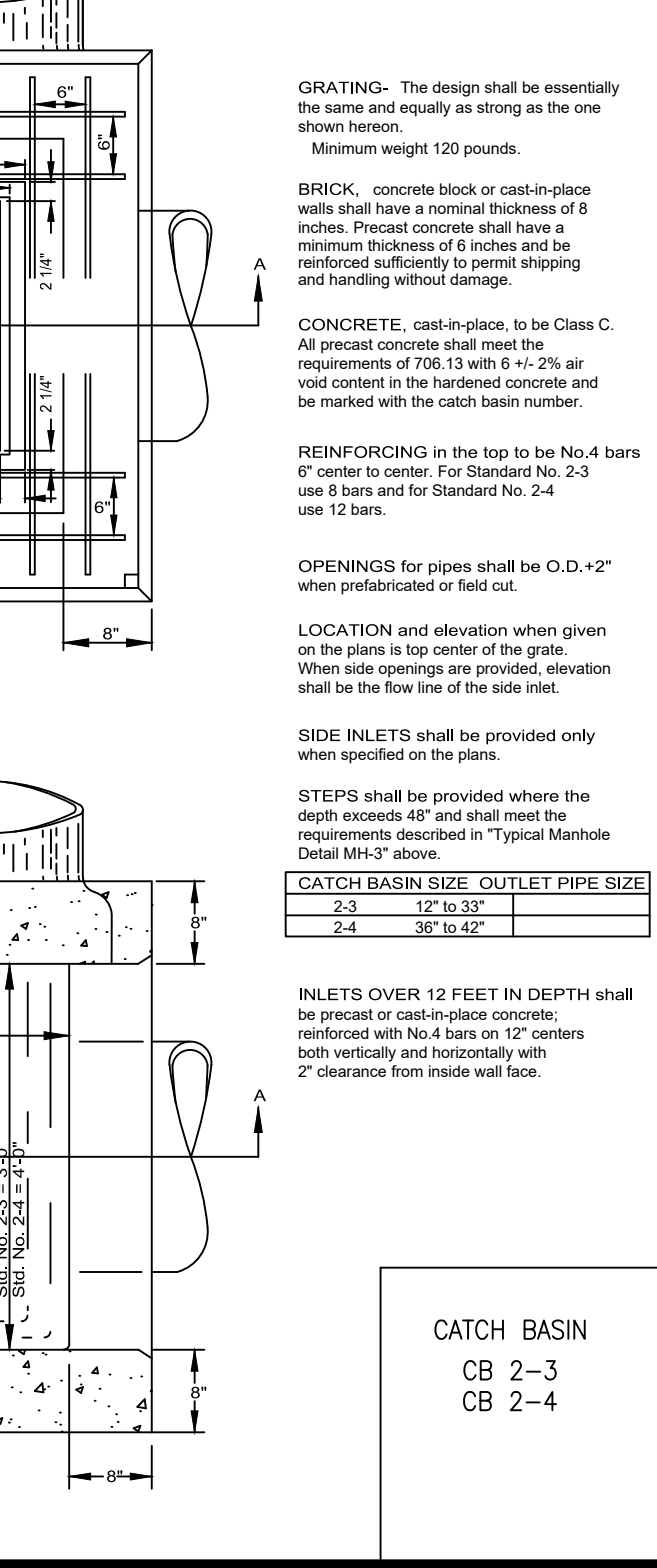
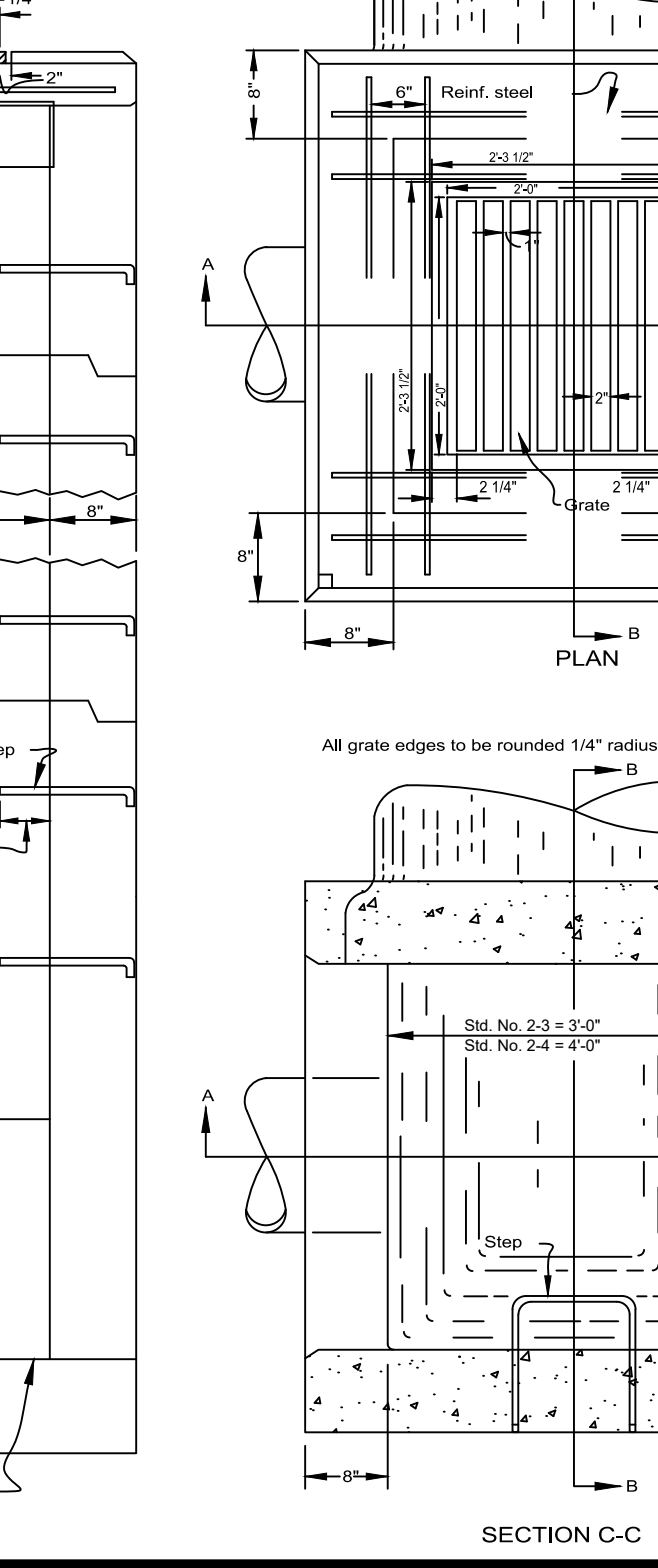
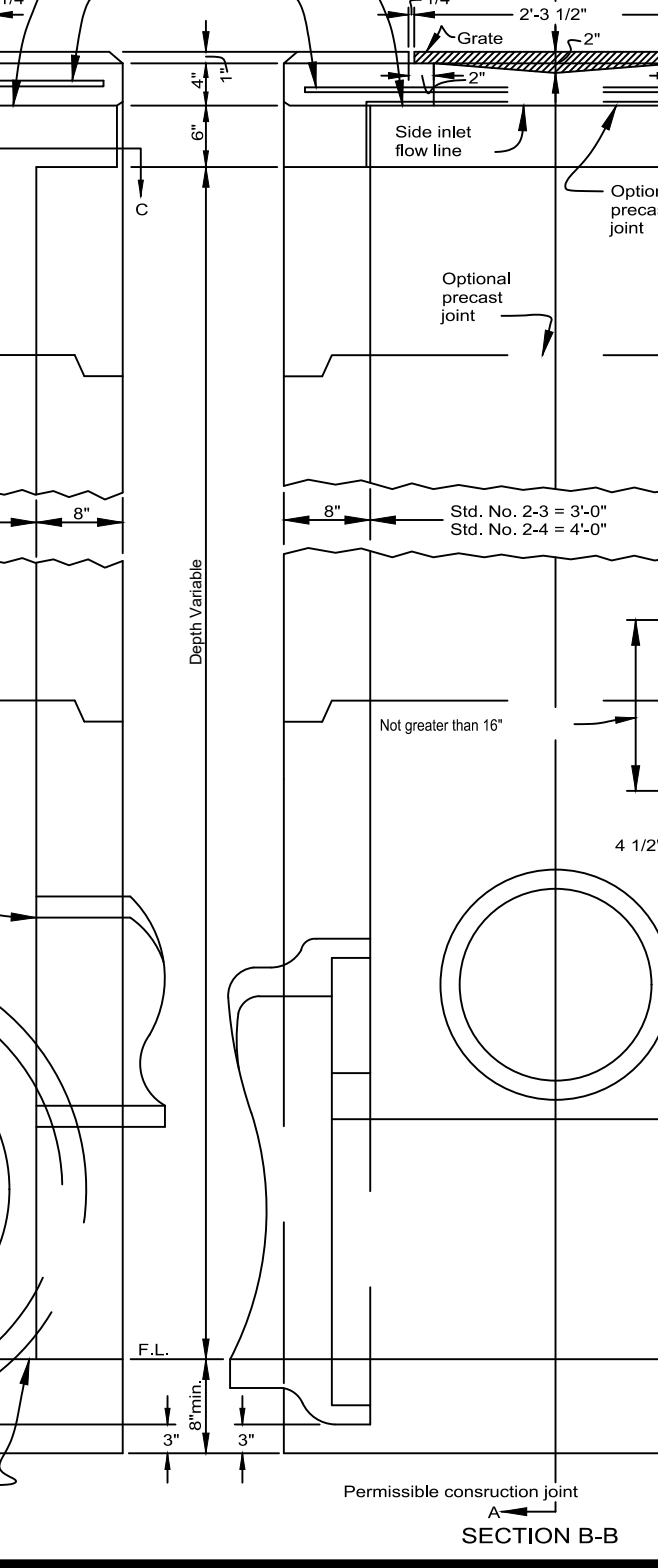
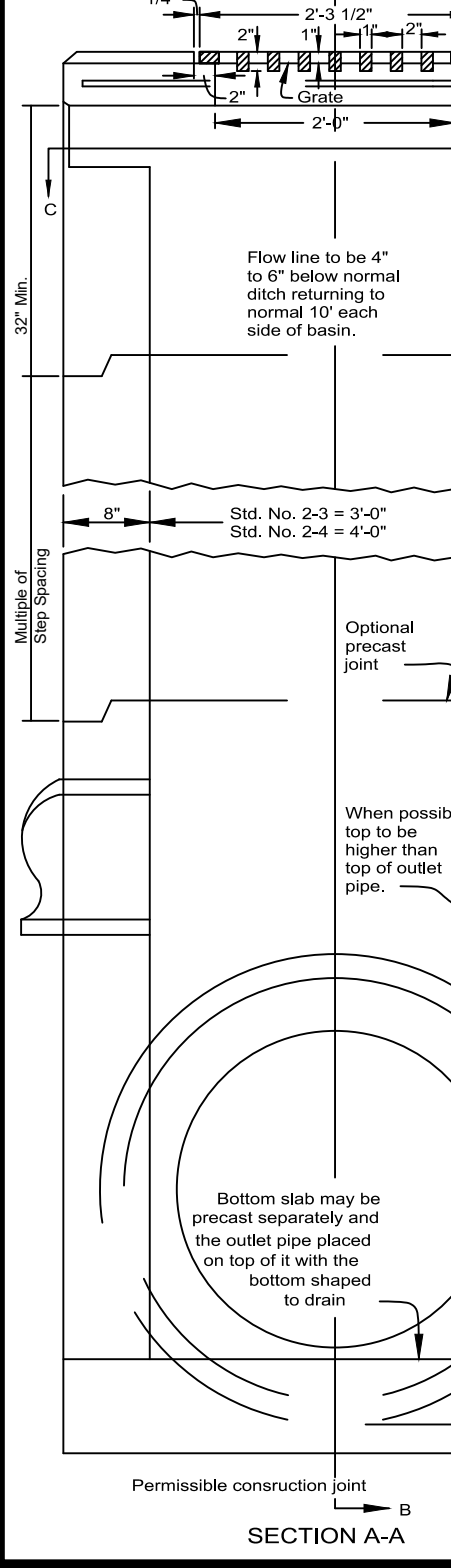
NOTES
STANDARD GRATE: The design shall be essentially the same and equally as strong as the one shown hereon.
BRICK: concrete block or cast-in-place walls shall have a nominal thickness of 8 inches. Precast concrete shall have a minimum thickness of 6 inches and be reinforced sufficiently to permit shipping and handling without damage.
CONCRETE: cast-in-place, to Class C. All precast concrete shall meet the requirements of 706.13 with a 1/2" air void content in the hardened concrete and be marked with the catch basin number.
REINFORCING in the top to be No. 4 bars 8" center to center. For Standard No. 2-3 use 8 bars and for Standard No. 2-4 use 12 bars.
OPENINGS for pipes shall be O.D. +2" when prefabricated or field cut.
LOCATION and elevation when given on the plans is top center of the grate. When side openings are provided, elevation shall be the flow line of the side inlet.
SIDE INLETS shall be provided only when specified on the plans.
STEPS shall be provided where the depth exceeds 48" and shall meet the requirements described in 'Typical Manhole Detail MH-3' above.
INLETS OVER 12 FEET IN DEPTH shall be precast or cast-in-place concrete reinforced with No. 4 bars on 12" centers both vertically and horizontally with 2" clearance from inside wall face.



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CALLAWAY PLACE - SF FINAL DEVELOPMENT PLAN
SECTION 3, TOWN 5, RANGE 3
5695 PRINCETON - GLENDALE ROAD
BUTLER COUNTY, OHIO
BUTLER COUNTY STORM SEWER DETAILS

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Sheet: **C6.2**

DATE: 12-27 SLOPE/HILLSIDE
CHK. BY: E.P. EFFECTIVE DATE: 1-1-2008
BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY
180 FARMBANK AVENUE - HAMILTON, OH 45030
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