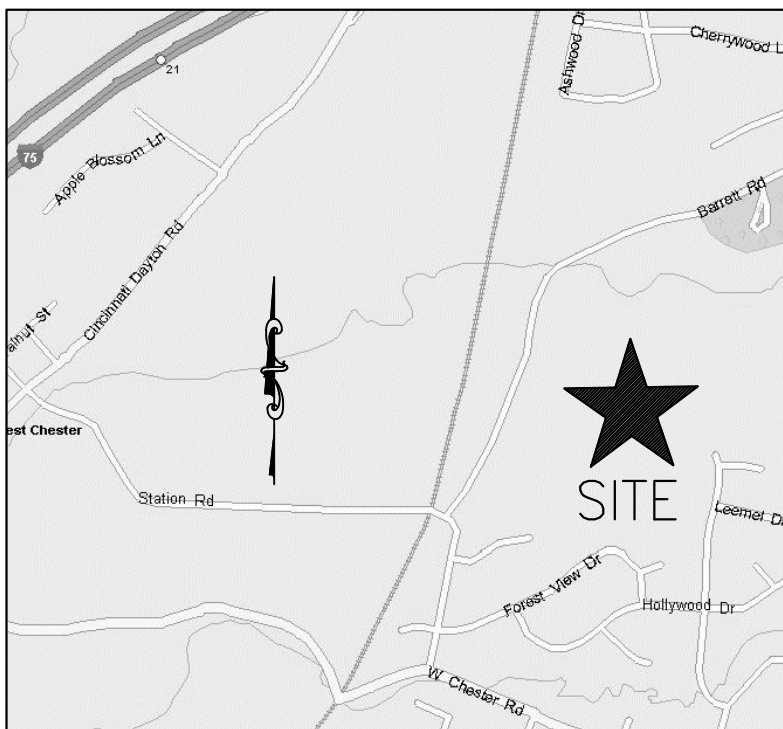


SECTION SIX (PHASES 5, 6, &7) FINAL DEVELOPMENT PLAN

**SECTION 22, TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OHIO**



VICINITY MA
NOT TO SCALE

- ## 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.
2. Items that pertain to underground utilities such as watermain 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.
3. All trenches within the right-of-way and 10' utility easement shall be compacted and backfilled in accordance with Item 204 and 603 (ODOT 2010) in the state specifications.
4. 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.
5. All corner lots shall have driveway access to the lesser traveled road.
6. 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.
7. 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.
8. All electrical transformers shall be located so that they do not interfere with the existing manholes or water main appurtenances.
9. Sump line conduits are to be SDR 35.
10. WATER MAIN
- 10.A. Water main materials, valves, fire hydrants, fittings and appurtenances and installation to be as per Butler County specifications, using class 63 Ductile Iron as per AWWA C-151 with minimum 4' cover.
- 10.B. 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.
- 10.C. Minimum 10' horizontal, 18" vertical separation between water main and sanitary and/or storm sewer.
- 10.D. 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.
11. SANITARY SEWER
- 11.A. 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.
- 11.B. 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:
- 11.B.1. 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.
- 11.B.2. The sewer crossing shall be constructed so that the sewer joints will be equidistant and as far as possible from the water main joints.
- 11.B.3. Where a water main passes under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main.
- 11.C. 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.
- 11.D. Sanitary sewer laterals, which shall include all pipes 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.
- 11.E. 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 system 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 or 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.
12. 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.
13. STORM SEWER
- 13.A. Storm sewer pipe shall meet the requirements as follows:
- 13.A.1. PVC pipe as per ODOT Specification 707.42 for all diameters
- 13.A.2. HDPE pipe as per ODOT Specification 707.33
- 13.A.3. Corrugated steel pipe as per ODOT Specification 707.01 or 707.02 for all diameters
- 13.A.4. 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).
- 13.A.5. 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.
- 13.B. 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 pound 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 rerouted by a procedure acceptable to the County or be excavated and either be replaced or replaced, and retested until the requirements are met.
- 13.C. 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.
- 13.D. Headwall: HW-4A to be used with Corrugated Metal pipe or HW-4B to be used with Concrete Pipe.
14. Roof drains, foundation drains, and other clean water connections to the sanitary sewer system are prohibited.
15. 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.
16. SEDIMENTATION CONTROL
- 16.A. 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.
- 16.B. 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.
17. Butler County will not be responsible for any pavement or storm sewer repairs resulting from water main and sanitary sewer repairs. Butler County will not be responsible for adjusting manholes, valves, fire hydrants, meter pits, etc. as a result of grade changes. The grantor 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 grantor.
18. A typical five (5) foot drainage easement is to be provided on both sides of every lot line.
19. 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 C8.0.
20. 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 785-4155.
21. Contractors to accept all Quantities as correct prior to beginning construction.
22. Contractor shall include the cost of County inspection and extension fees in unit price bid.
23. 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 the 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

SECTION SIX SUMMARY

EXISTING ZONING	R-PUD (7/18/2008)
TYPICAL LOT FRONTAGE	100 FT
SQUARE FOOTAGE (MIN)	15,000 SF
FRONT SETBACK (MIN)	30 FT
SIDE SETBACK (MIN)	5 FT
SIDE SETBACK (TOTAL) (20 FT MIN REQUIRED BTW HOUSES)	30 FT
REAR SETBACK	30 FT
NUMBER OF LOTS	43 LOTS
OPEN SPACE LOTS	2 LOTS
TOTAL	45 LOTS
TOTAL ACREAGE	36.785 ACRES
TOTAL OPEN SPACE	10.320 ACRES
% OF OPEN SPACE	28.05%

PLANNER, ENGINEER, SURVEYOR, AND LANDSCAPE ARCHITECT

BAYER BECKER
6900 TYLERSVILLE ROAD, SUITE A
MASON, OHIO 45040
PH: 513-336-6600

DEVELOPER

RHEIN GUNDLER LLC
11025 REED HARTMAN HIGHWAY, SUITE B-1
CINCINNATI, OH 45242
PH: 513-891-7100

OWNERS

ERROL & NANCY GUNDLER
6466 CONTRERRAS ROAD,
OXFORD, OH 45056

LAWRENCE & ESTELLA GUNDLER
6745 BARRETT ROAD
WEST CHESTER, OH 45071

BENCHMARK

ON PIN SET - CAPPED BB TRAVERSE LOCATED 12.00'
WEST OF FIRE HYDRANT AT THE SOUTHWEST
INTERSECTION OF BARRET ROAD & SPRUCE HILL CIRCLE
ELEVATION = 768.52
ELEVATION BASED ON STATE PLANE COORDINATE
SYSTEM (NAD 83) OHIO SOUTH ZONE 3402

INDEX OF SHEETS

DRAWING NO.	DRAWING TITLE	ISSUE DATE	REVISION NO.	REVISION DATE
C1.0	TITLE SHEET	06-15-20	3	08-05-20
C1.1	TYPICAL SECTIONS & MISC. DETAILS	06-15-20	1	08-05-20
C2.0	LAYOUT PLAN	06-15-20	3	08-05-20
C3.0	UTILITY PLAN	06-15-20	2	08-05-20
C3.1	UTILITY PLAN NORTH BASIN	06-15-20	2	08-05-20
C4.0	UTILITY PROFILES	06-15-20	1	08-05-20
C4.1	UTILITY PROFILES	06-15-20	1	08-05-20
C4.2	UTILITY PROFILES	06-15-20	2	08-05-20
C4.3	UTILITY PROFILES & INTERSECTION DETAILS	06-15-20	1	08-05-20
C5.0	GRADING AND EROSION CONTROL PLAN	06-15-20	2	08-05-20
C5.1	Basin Grading and Erosion Control Plan	06-15-20	2	08-05-20
C5.2	SOIL AND EROSION CONTROL DETAILS	06-15-20		
C6.0	SIGHT DISTANCE EXHIBIT	06-15-20	2	08-05-20
C7.0	BUTLER COUNTY SANITARY DETAILS	06-15-20		
C7.1	BUTLER COUNTY WATER DETAILS	06-15-20	1	08-05-20
C7.2	BUTLER COUNTY STORM DETAILS	06-15-20		



Know what's **below**.
Call before you dig.

LOCATION OF ALL EXISTING UTILITIES TO BE
DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

Date	Drwn:	Chk:
2007-09-20	DTM	JSD
2007-15-20	JSD	
2008-05-20	LDF	JSD

[illegible]

Revision	Description
	ING COMMENTS
	ING COMMENTS
	COMMENTS

REVISED PER ZONE
REVISED PER ZONE
BUTLER COUNTY (

[illegible]

**WEST CHESTER
PHASES 5, 6
13, RANGE 2
TOWNSHIP,
COUNTY, OHIO**

TITLE SHEET

**THE OAK
SECTION**

er
ker
om
Suite A
336.6600

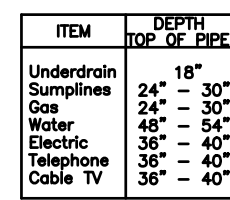


bayer
beck

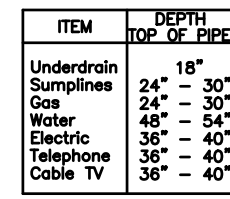
www.bayerbecker.com
6900 Tylersville Road, S
ason, OH 45040 - 513.3

Drawing: 06F158-006 CD
Drawn by: LDF

Checked By: JSD
Issue Date: 06-15-2006
Sheet: C1.0



SUSAN SPRINGS DRIVE & OAKCREST WAY (STA. 16+42.09 TO STA. 17+68.68)



OAKCREST WAY (STA. 17+68.68 TO CDS) & PARKWAY COURT

*ADD "NO PARKING" SIGNS ON:



*NOTE: ALL SIGNS TO BE INSTALLED WITH
GROUND MOUNTED SUPPORT NO. 3 POST



**THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)**
SECTION 22, TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
DELAWARE

**bayer
becker**

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

Drawing: 06F158-006 CD

Drawn by: LDF

Checked By:	JSD
-------------	-----

Issue Date:	06-15-20
-------------	----------

Sheet:

C1.1

Plot time: Aug 05, 2020 - 9:28am
Drawing name: J:\2006\06F158-006\CD\DWG\06F158-006 CD.dwg - Layout Tab: C2.0 LAYOUT PLAN

LEGEND

ASPHALT PAVEMENT FOR 24' PRIVATE DRIVE
(PAVEMENT TO MATCH ROADWAY TYPICAL SECTION
MATERIALS & THICKNESS, SEE SHEET C1.1)

RESTRICTIONS ON CONSERVATION/PRESERVATION EASEMENT:

THE CONSERVATION EASEMENT SHOWN ON LOTS 53 & 54 HAVE BEEN ESTABLISHED TO PRESERVE EXISTING TREES. NO LIVING AND HEALTHY DECIDUOUS OR EVERGREEN TREE LOCATED WITHIN THIS EASEMENT GREATER THAN 3" IN DIAMETER SHALL BE REMOVED WITHOUT THE APPROVAL FROM WEST CHESTER TOWNSHIP, OHIO AND THE OAKS OF WEST CHESTER HOMEOWNERS ASSOCIATION. THE OWNER OF LOTS 107-111 ("OWNERS") MAY CUT AND REMOVE ANY DEAD STANDING TREES, FALLEN TREES, DISEASED TREES AND UNDERGROWTH WITHIN THE EASEMENT. THE OWNERS SHALL NOT CONDUCT OR PERMIT TO BE CONDUCTED ANY TYPE OF ACTIVITY WITHIN THE EASEMENT WHICH WILL CAUSE THE EXISTING TREES TO BE HARMED OR KILLED, INCLUDING BUT NOT LIMITED TO MASS FILLING OR REMOVAL OF SOIL OR THE SPRAYING OF DANGEROUS HERBICIDES. THE OWNER MAY SUPPLEMENT THE EXISTING PLANTS IN THE EASEMENT WITH ADDITIONAL TREES OR VEGETATION OF A SPECIES NATIVE TO WEST CHESTER TOWNSHIP, OHIO AREA.



Know what's below.
Call before you dig.

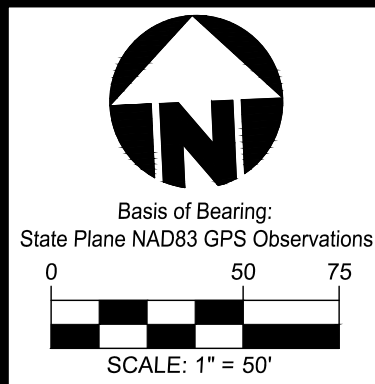
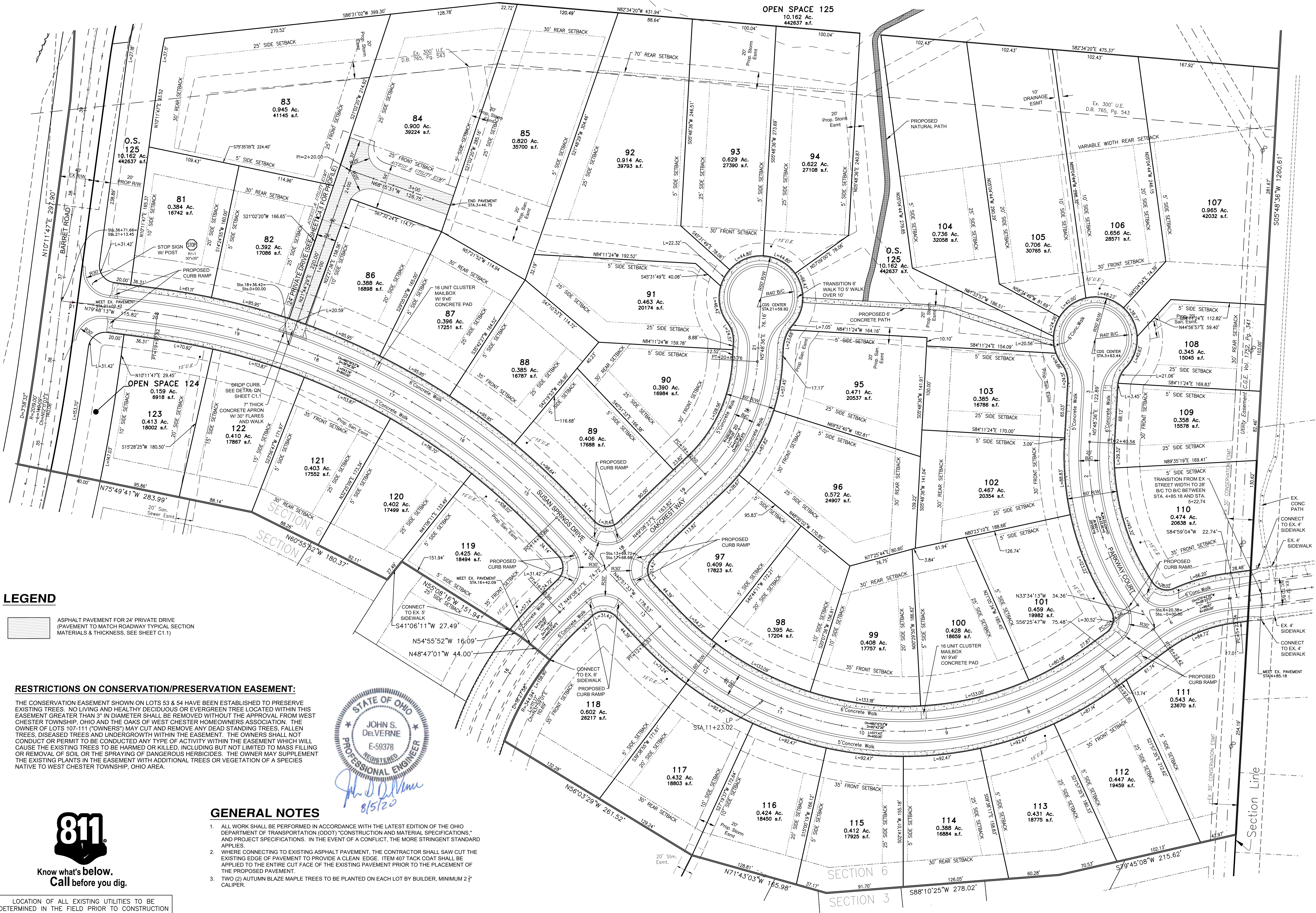
LOCATION OF ALL EXISTING UTILITIES TO BE
DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) "CONSTRUCTION AND MATERIAL SPECIFICATIONS," AND PROJECT SPECIFICATIONS. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT STANDARD APPLIES.
- WHERE CONNECTING TO EXISTING ASPHALT PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING EDGE OF PAVEMENT TO PROVIDE A CLEAN EDGE. ITEM 407 TACK COAT SHALL BE APPLIED TO THE ENTIRE CUT FACE OF THE EXISTING PAVEMENT PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT.
- TWO (2) AUTUMN BLAZE MAPLE TREES TO BE PLANTED ON EACH LOT BY BUILDER, MINIMUM 2 1/2" CALIPER.



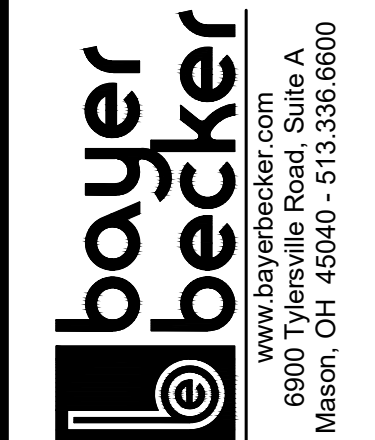
John S. DelVerne
8/5/20



Date	Drawn	Chk
07-09-20	JSD	
07-20-20	JSD	
08-05-20	LDF	

Item	Revision Description
1	REVISED PER ZONING COMMENTS
2	REVISED PER ZONING COMMENTS
3	BUTLER COUNTY COMMENTS
4	

THE OAKS OF WEST CHESTER SECTION SIX (PHASES 5, 6, & 7) SECTION 22, TOWN 3, RANGE 2 WEST CHESTER TOWNSHIP, BUTLER COUNTY, OHIO



Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20
Sheet:

C2.0

Plot time: Aug 05, 2020 - 10:27 am
Drawing name: J:\2006\06F158-006\CD\DWG08F158-006 CD.dwg - Layout Tab: C3.0 UTILITY



Know what's below.
Call before you dig.

LOCATION OF ALL EXISTING UTILITIES TO BE
DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

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

NOTE:
MSL = MIN. SERVICE LEVEL - LOWEST FLOOR ELEVATION SERVED W/ GRAVITY SANITARY SEWER SERVICE. EJECTOR PUMPS REQUIRED TO SERVE LOWER LEVEL.

NOTE:
* LOTS 81, 83, 84, 85, & 123 WILL NOT HAVE GRAVITY SANITARY SEWER SERVICE. EJECTOR PUMPS REQUIRED TO SERVE LOWER LEVEL.

UTILITY NOTES:

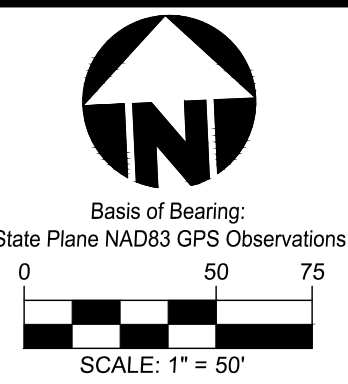
- 48 hours notice to be given to affected residents before construction begins.
- All Catch Basin T/G Elevations located within the curb are set to the Gutter Line Elevations.
- Lower 1" Water Services as needed to avoid conflicts with Storm with Min. 4" Cover.
- 1" water services to be installed with Type K Copper per BCWS specifications.
- 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. Wytes or Tees are to be placed ten feet past lot line, on the low side of specified lots, and marked with Wye poles.
- All roof drains for lots 83-85, and 92-94 to be directed to the storm sewer system.
- Contractors to accept all quantities as correct prior to beginning construction.
- Contractor end deep connection sanitary sewer laterals at 12' below grade. See detail on sheet C8.0.
- Trench Backfill for the storm system constructed along the slope north of lots 83-85, 92-94, and 104-106, and the trenches between lots 84 & 85, 93 & 104, and 105 & 106 shall be compacted to at least 95% Standard Proctor (ASTM D698).
- Trench Backfill for the sanitary system between manholes CC-DD-EE-FF-GG, EE-OO-PP-QQ-RR, RR-TT-UU, RR-SS, and TT-VV shall be compacted to at least 95% Standard Proctor (ASTM D698).

LEGEND

SANITARY BACKFILL COMPACTION, SEE NOTE #12 ON THIS SHEET

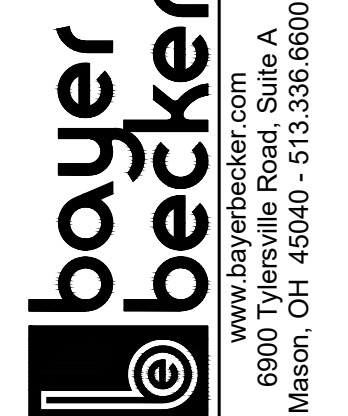
NOTE:
At Crossings, the water main shall have a minimum vertical distance of eighteen (18") inches from storm and sanitary sewers. Also, one full length of water main shall be located so the joints are as far from the storm and sanitary sewers as possible.

WATER MAIN RESTRAINT JOINT LOCATION CHART



Item	Revision Description	Date	Drawn	Chk
1	REVISED PER ZONING COMMENTS	07-09-20	JSD	
2	BUTLER COUNTY COMMENTS	08-05-20	JSD	
3				
4				

THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)
SECTION 23 TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO



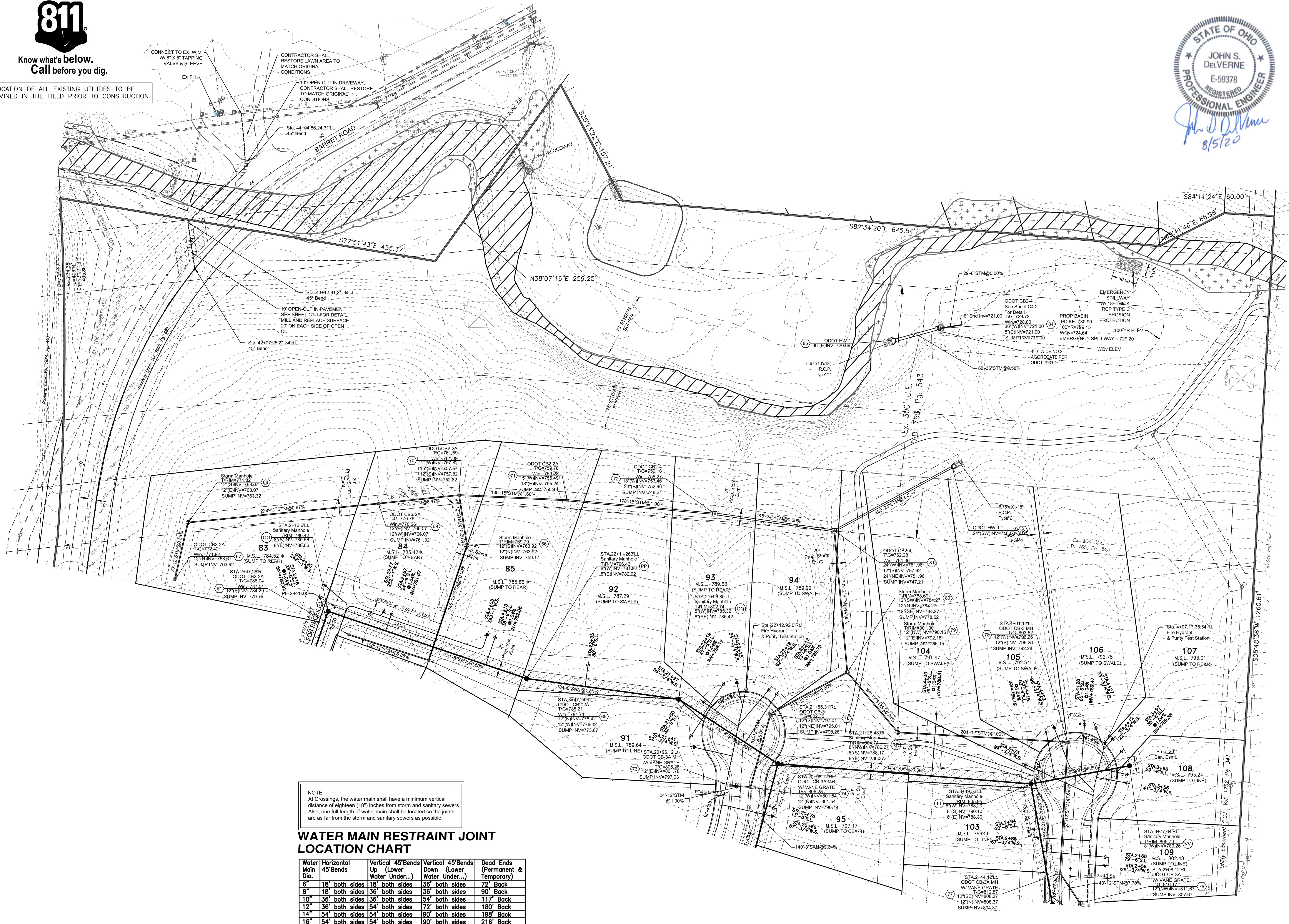
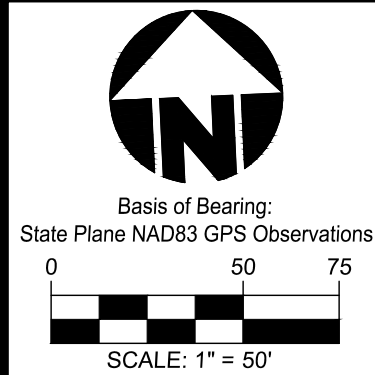
Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20
Sheet:

C3.0



Know what's below.
Call before you dig.

LOCATION OF ALL EXISTING UTILITIES TO BE
DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION



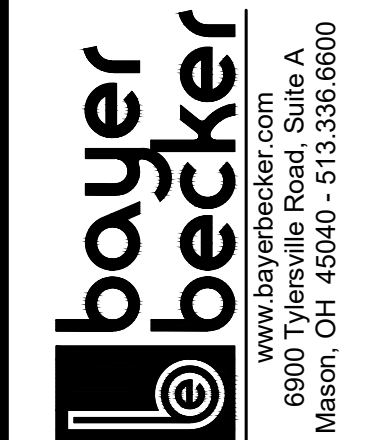
NOTE:
At Crossings, the water main shall have a minimum vertical
distance of eighteen (18) inches from storm and sanitary sewers.
Also, one full length of water main shall be located so the joints
are as far from the storm and sanitary sewers as possible.

**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)
6"	18' both sides	18' both sides	36' both sides	72' Back
8"	18' both sides	36' both sides	36' both sides	90' Back
10"	36' both sides	36' both sides	54' both sides	117' Back
12"	36' both sides	54' both sides	72' both sides	180' Back
14"	54' both sides	54' both sides	90' both sides	198' Back
16"	54' both sides	54' both sides	90' both sides	216' Back

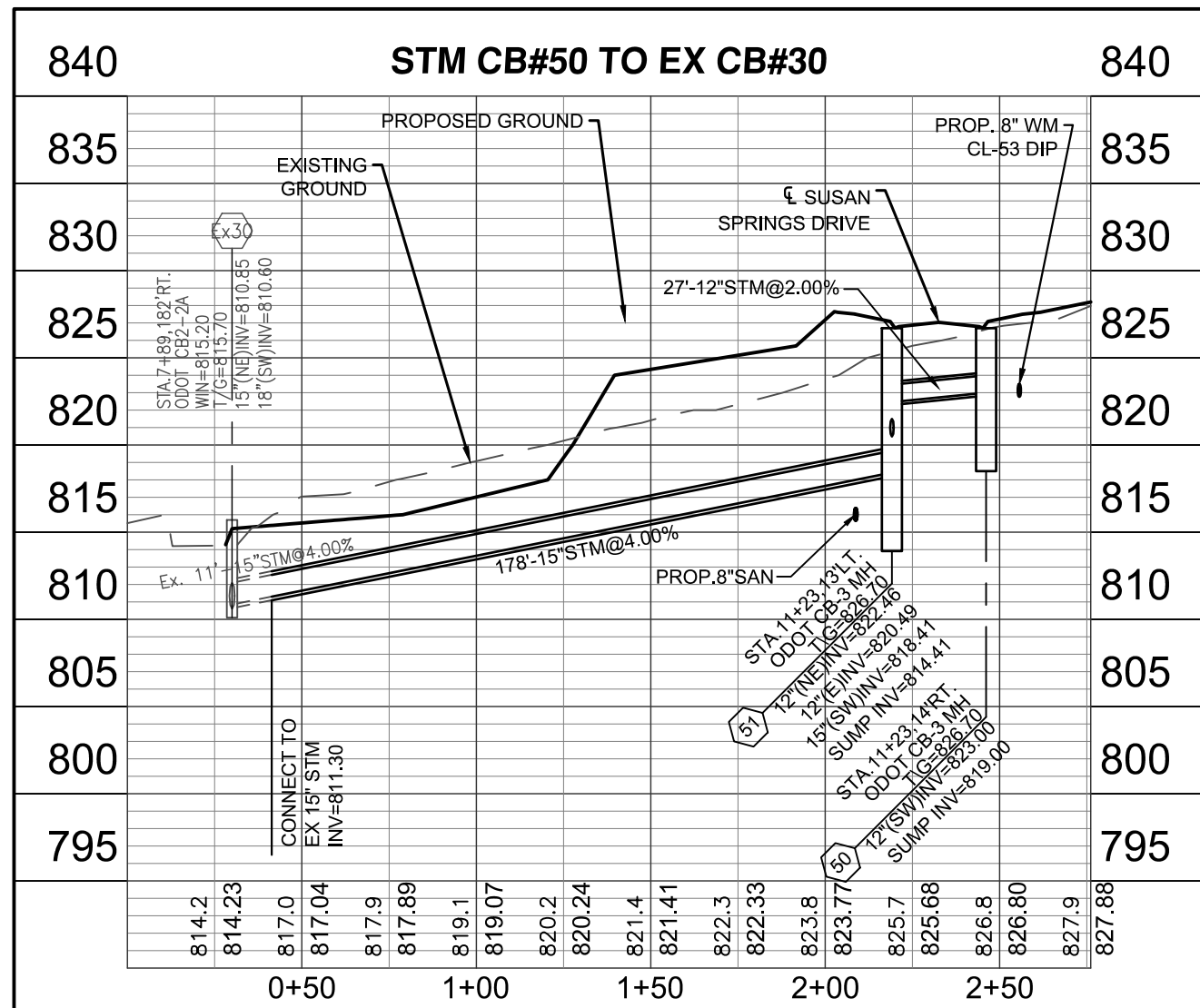
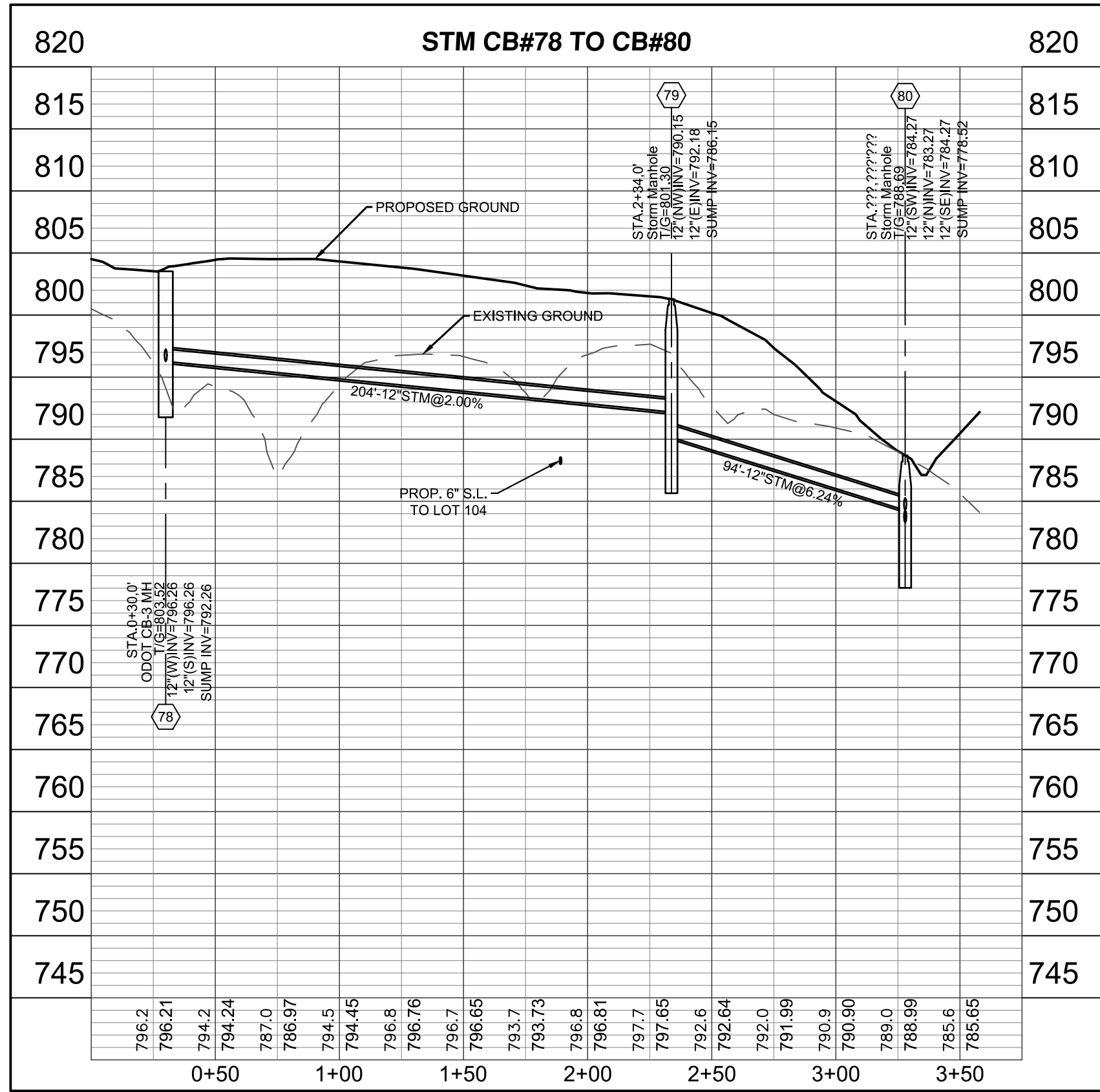
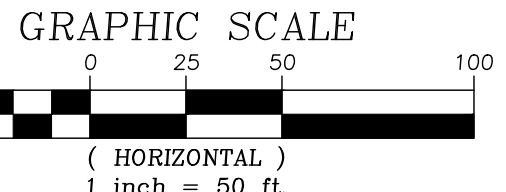
**THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)**
SECTION 22, TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO

UTILITY PLAN



Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20
Sheet:

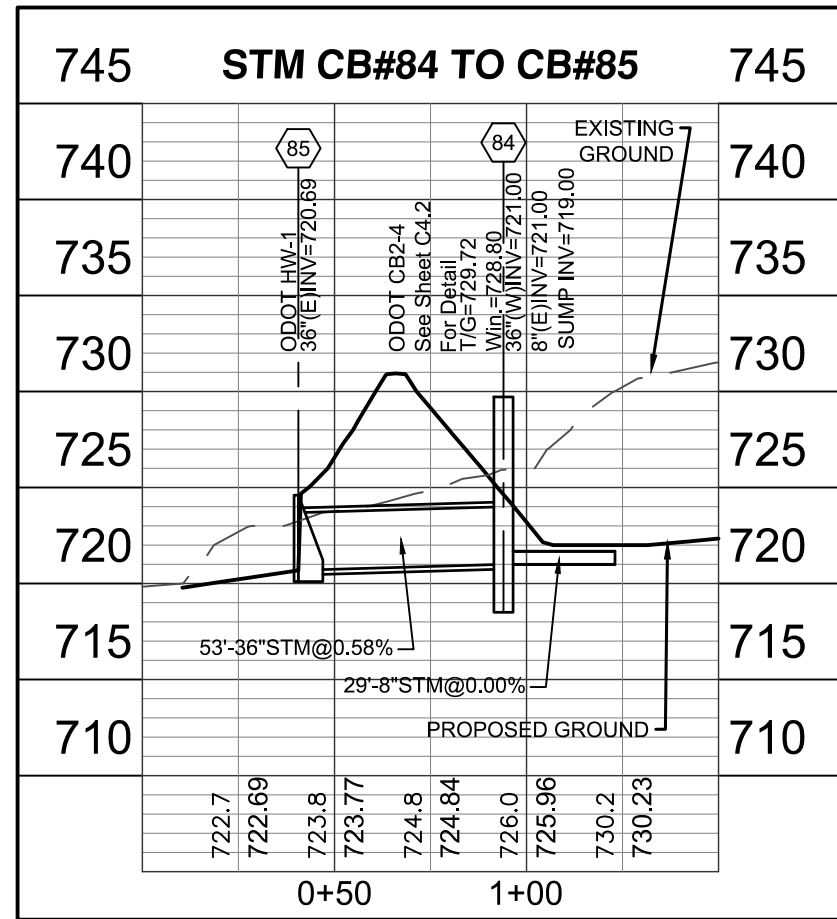
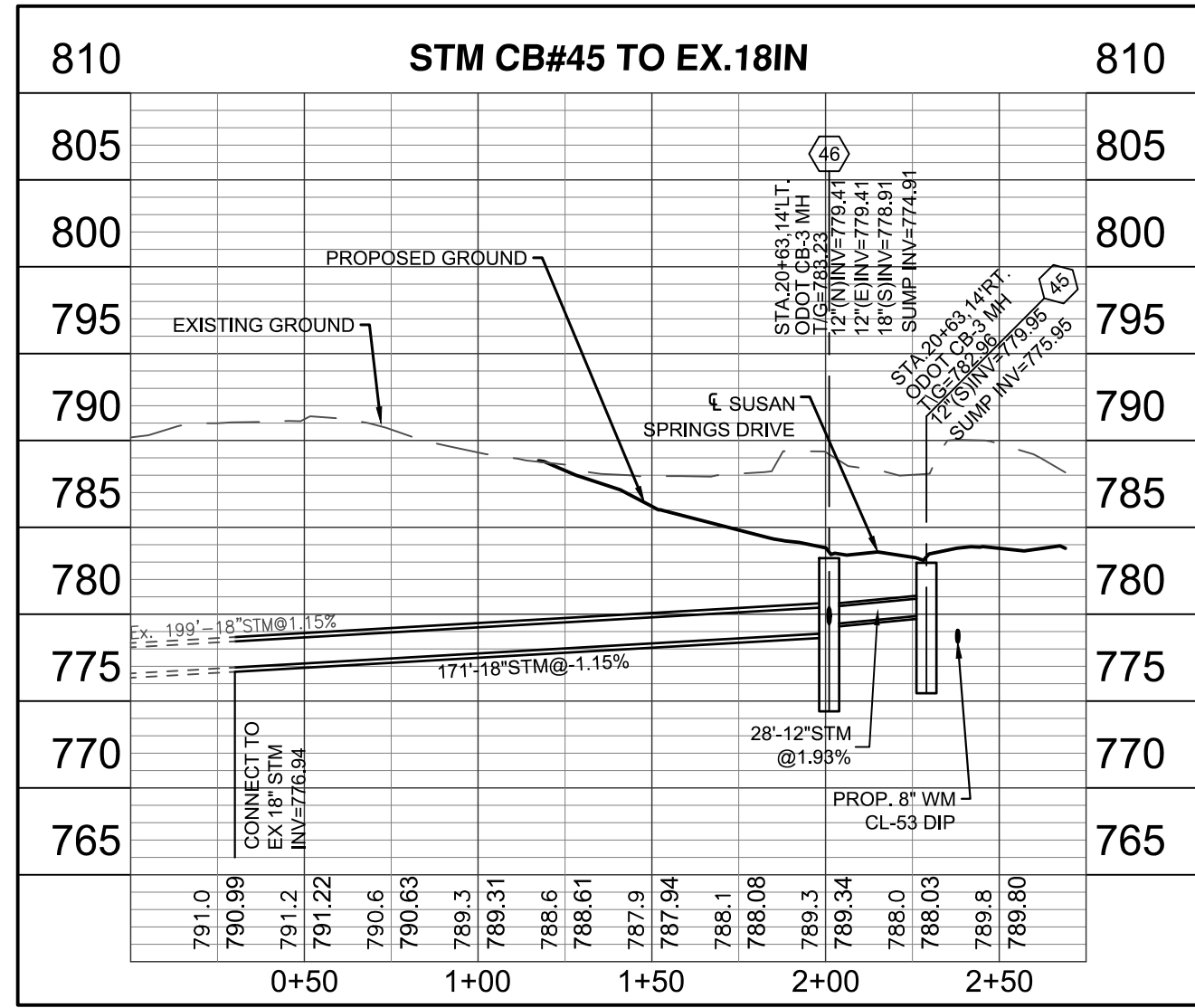
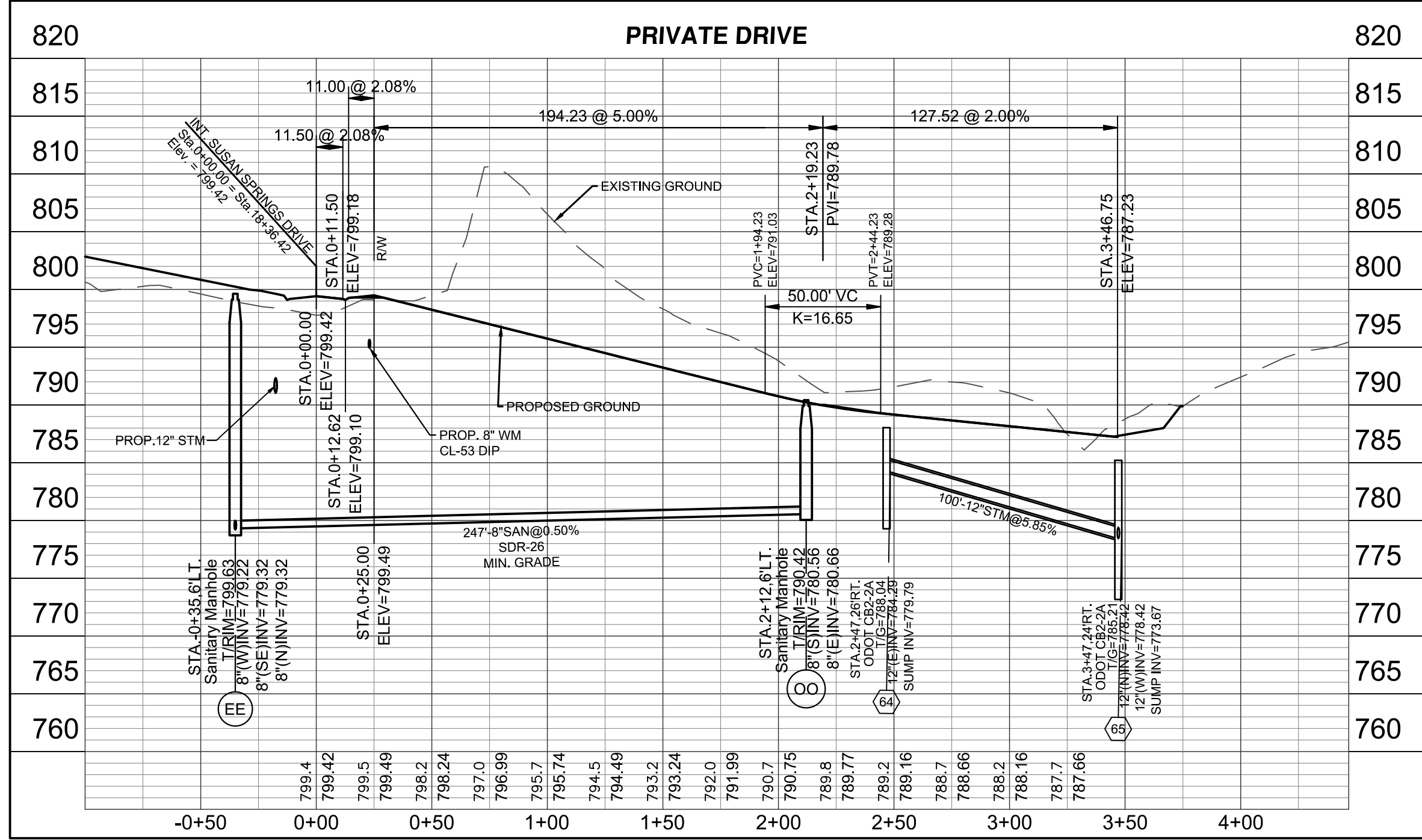
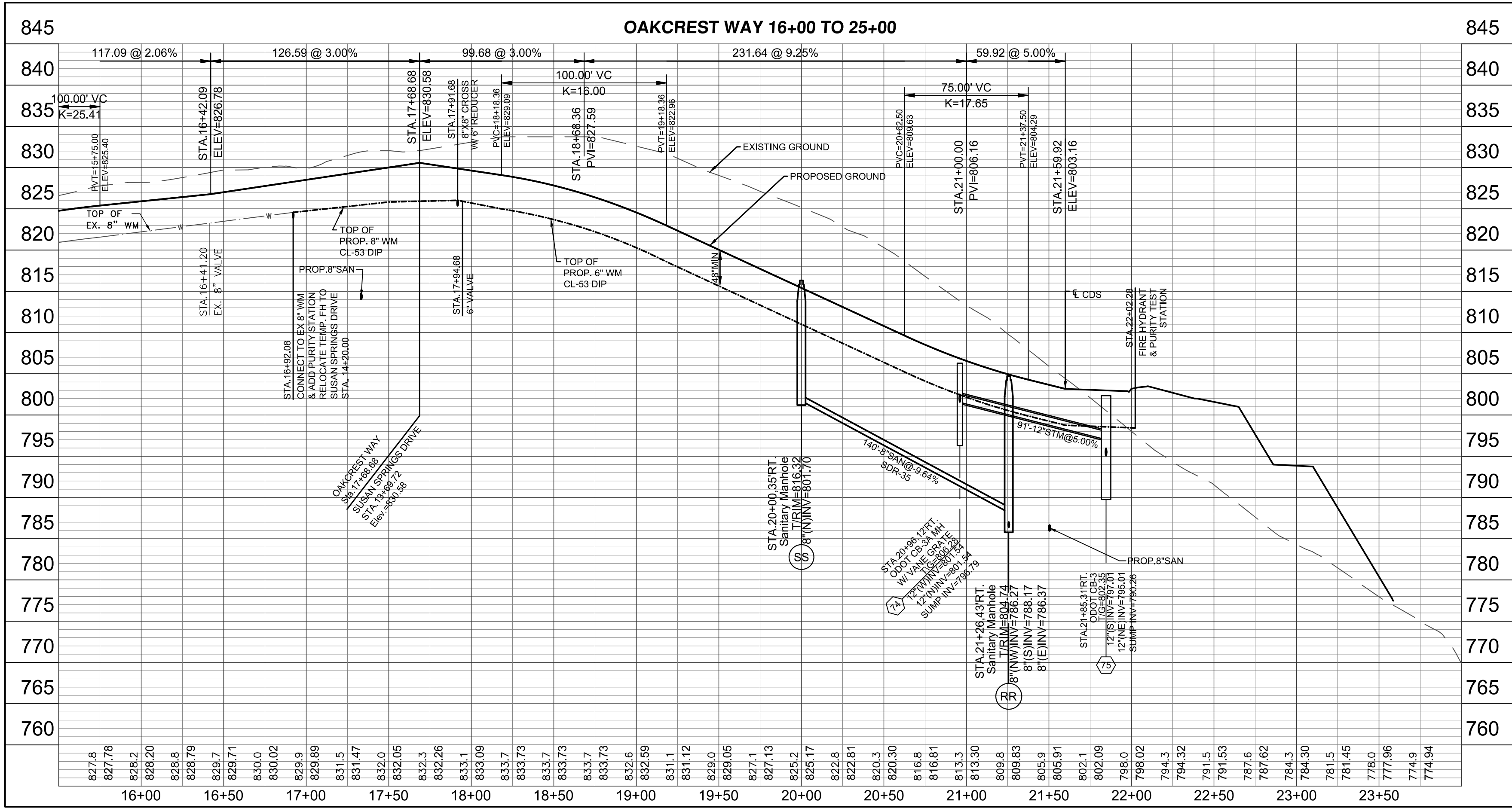
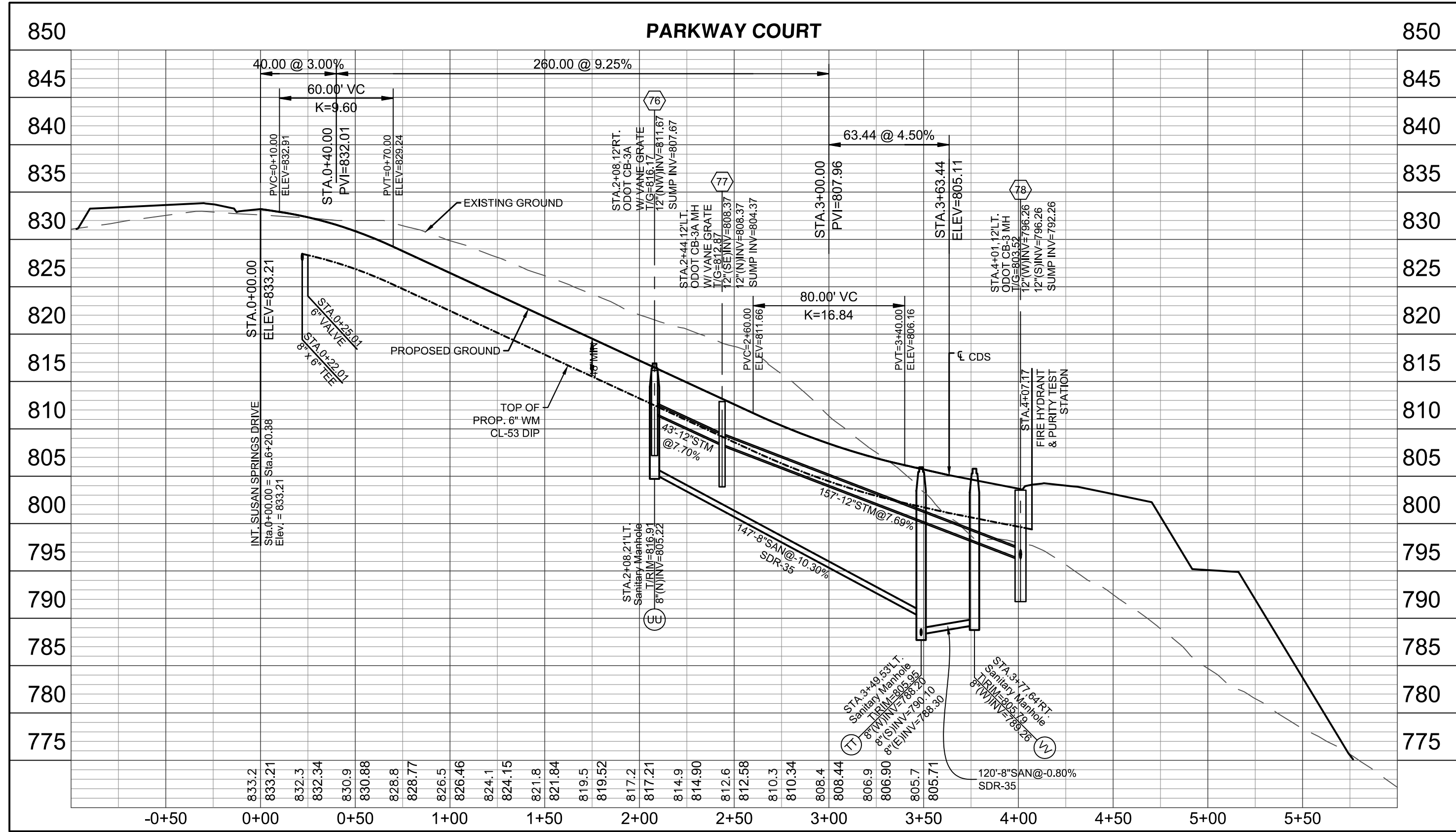
C3.1



Plot time: Aug 05, 2020 - 12:03pm
Drawing name: J:\2006\06F158-006\CD\WG08F158-006 CD.dwg - Layout Tab: C4.1 PROFILES



GRAPHIC SCALE
(HORIZONTAL)
1 inch = 50 ft.



THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)
SECTION 22, TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO



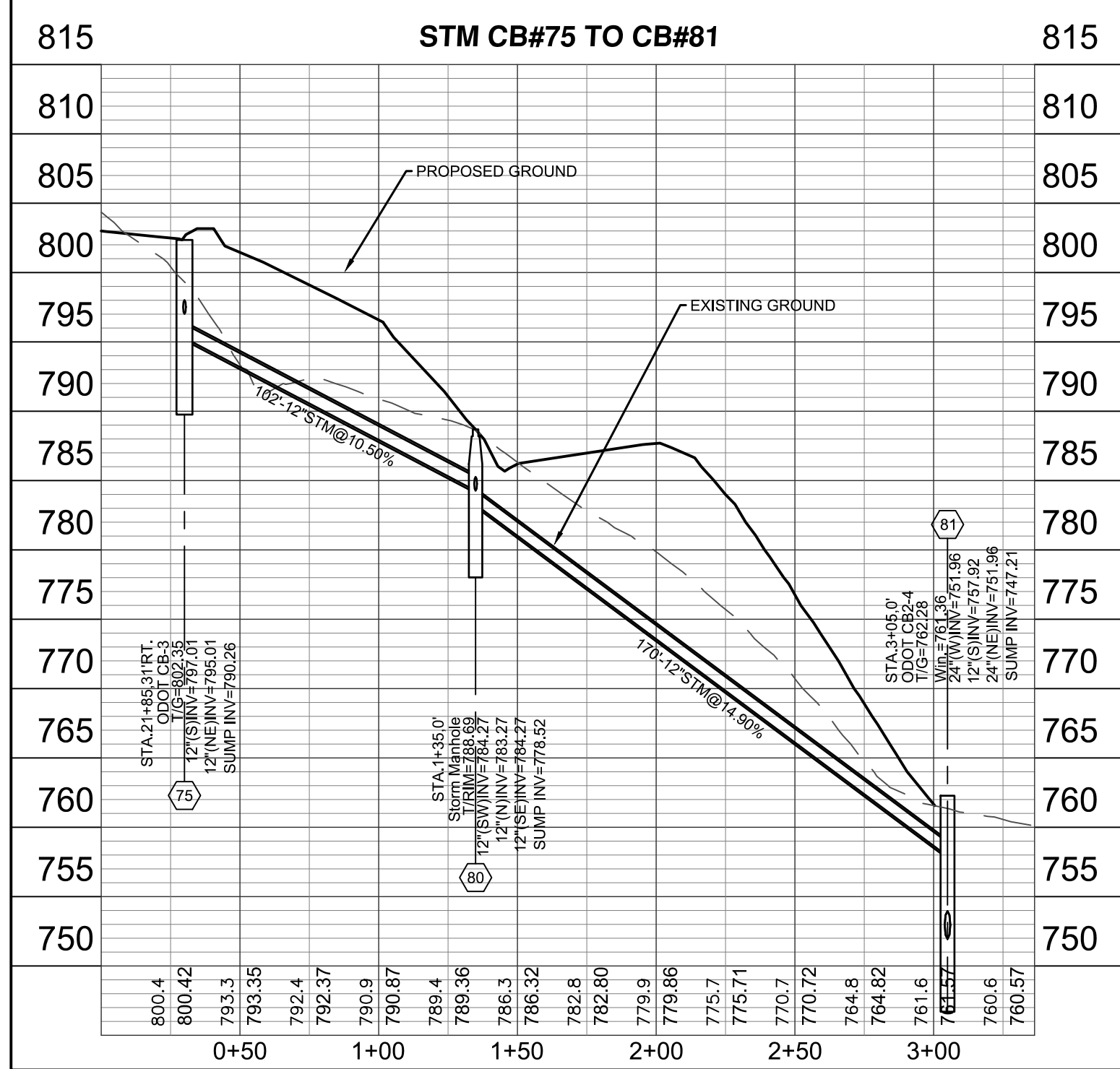
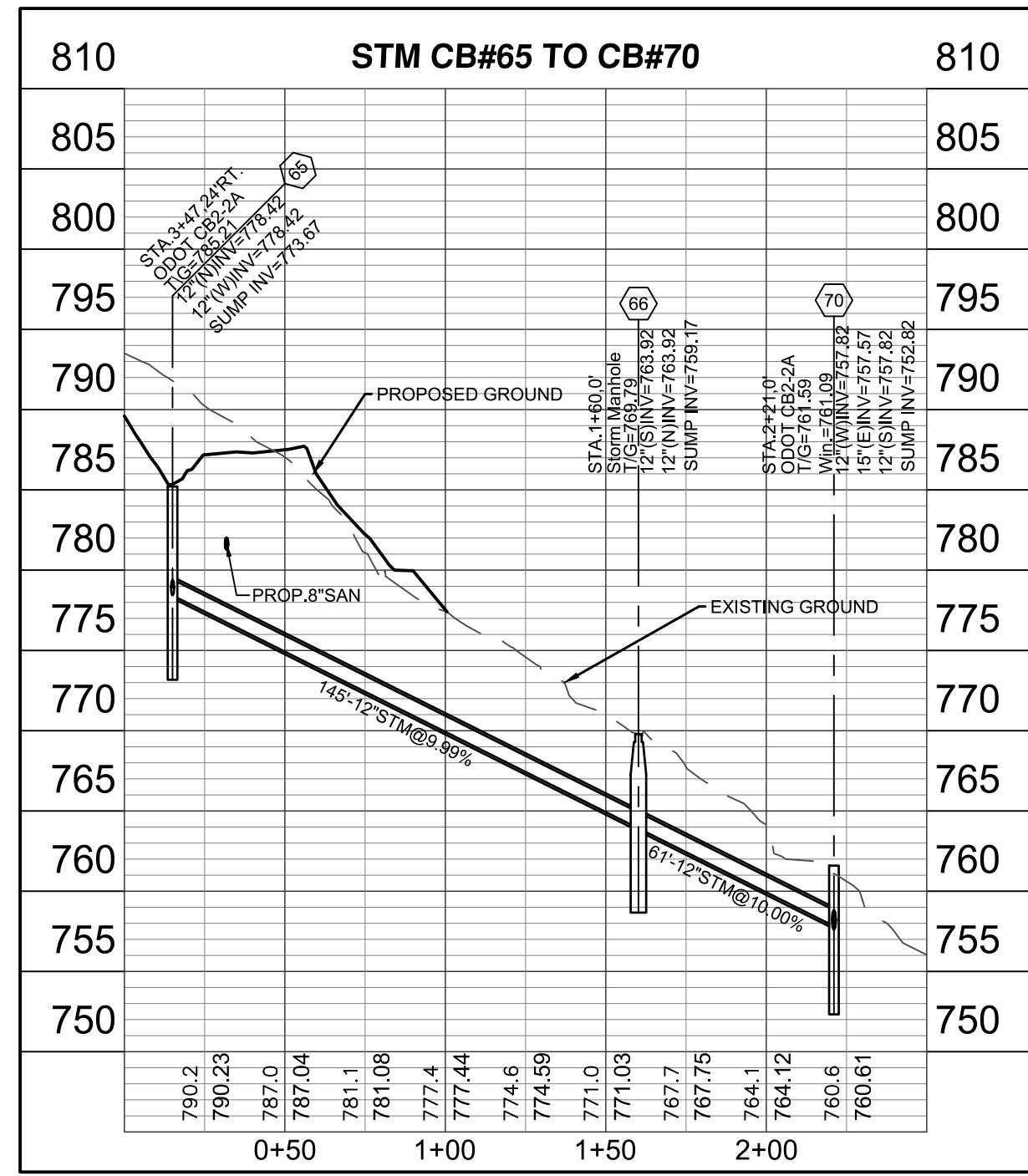
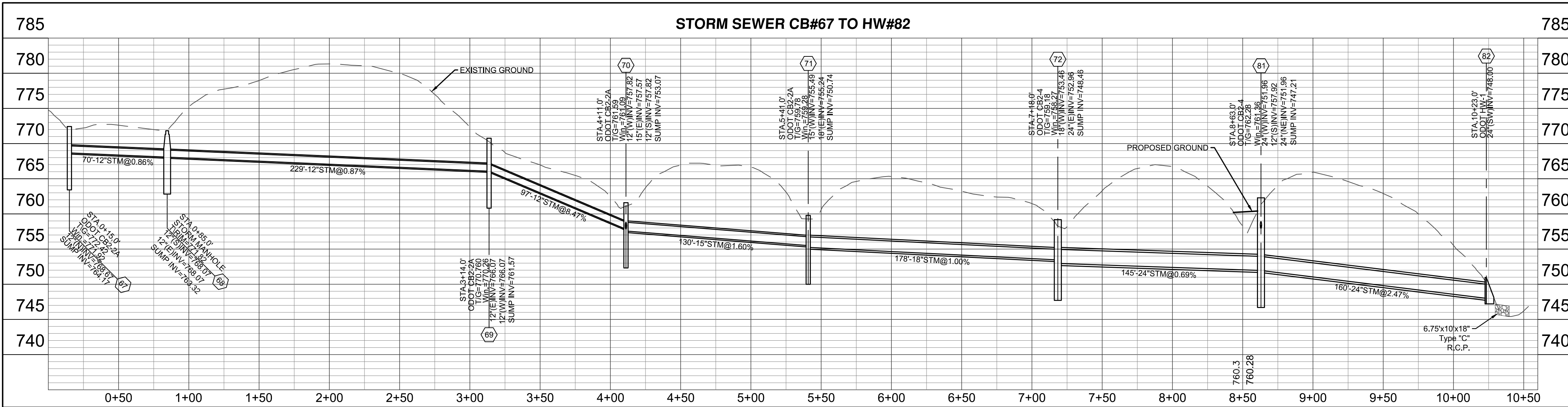
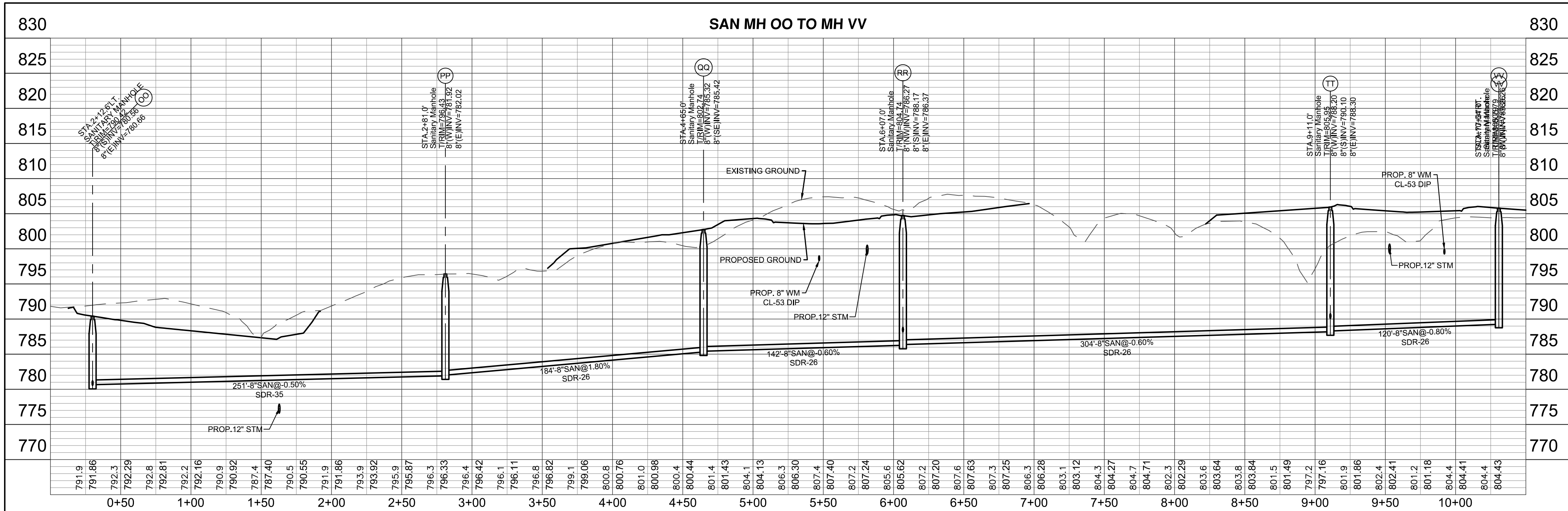
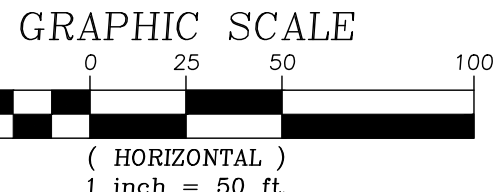
Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20
Sheet:

C4.1

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

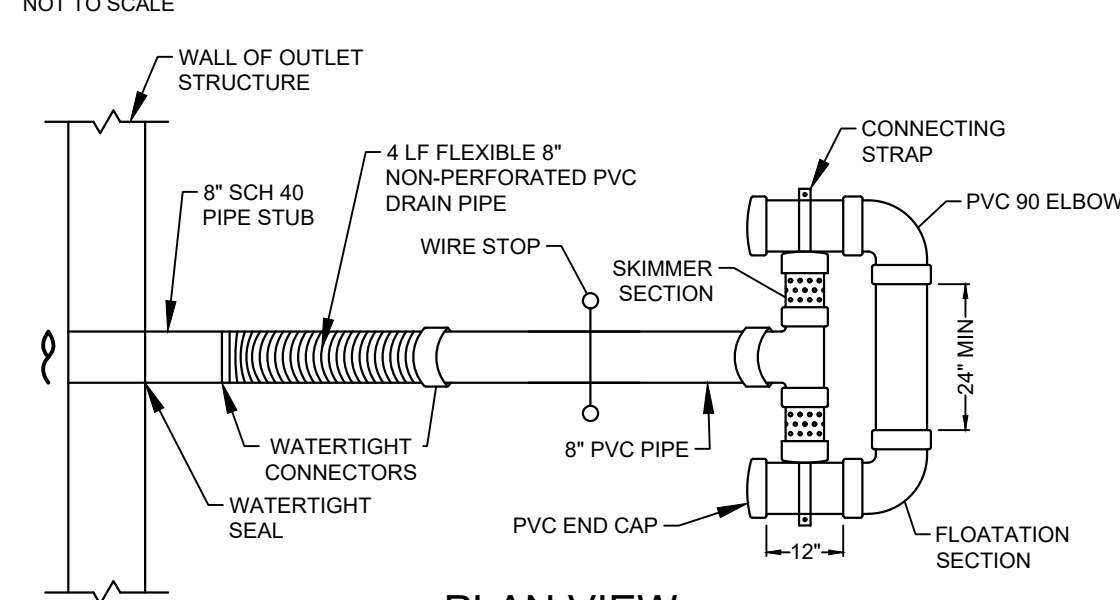
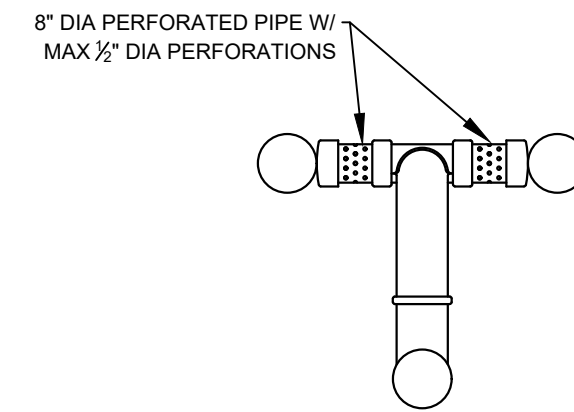
Item: 1 2
Revision Description: BUTLER COUNTY COMMENTS

Date: 08-05-20
Drawn: JSD

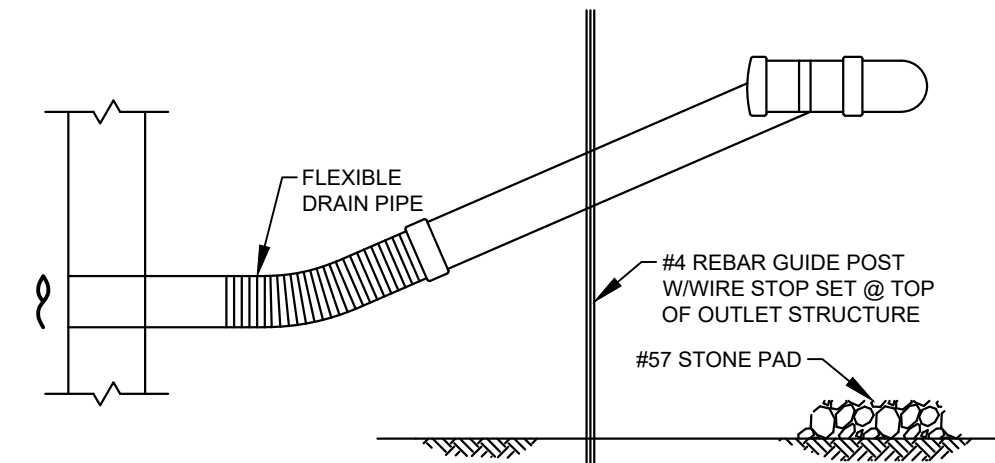


TYPICAL SKIMMER DEWATERING DEVICE

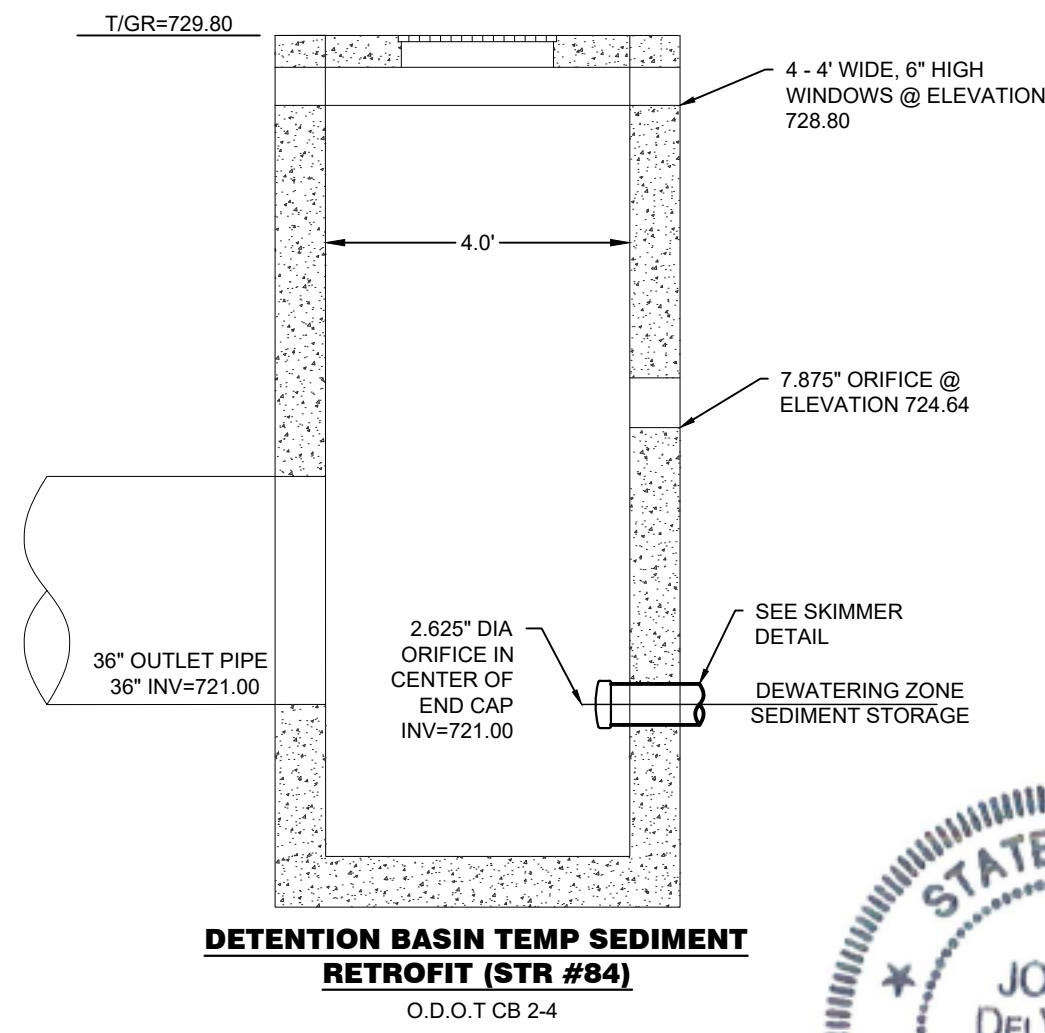
- NOTES:
1. ALL JOINTS OF THE FLOATATION SECTION SHALL BE GLUED TOGETHER AND WATERTIGHT. JOINTS OF THE SKIMMER SECTION NEED NOT BE WATERTIGHT.
 2. TO INSTALL DEWATERING PIPE STUB:
 - 2.1. FOR CORRUGATED METAL RISER, STUB SHALL BE SCH 40 STEEL PIPE TACK WELDED TO CREATE A WATERTIGHT SEAL.
 - 2.2. FOR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



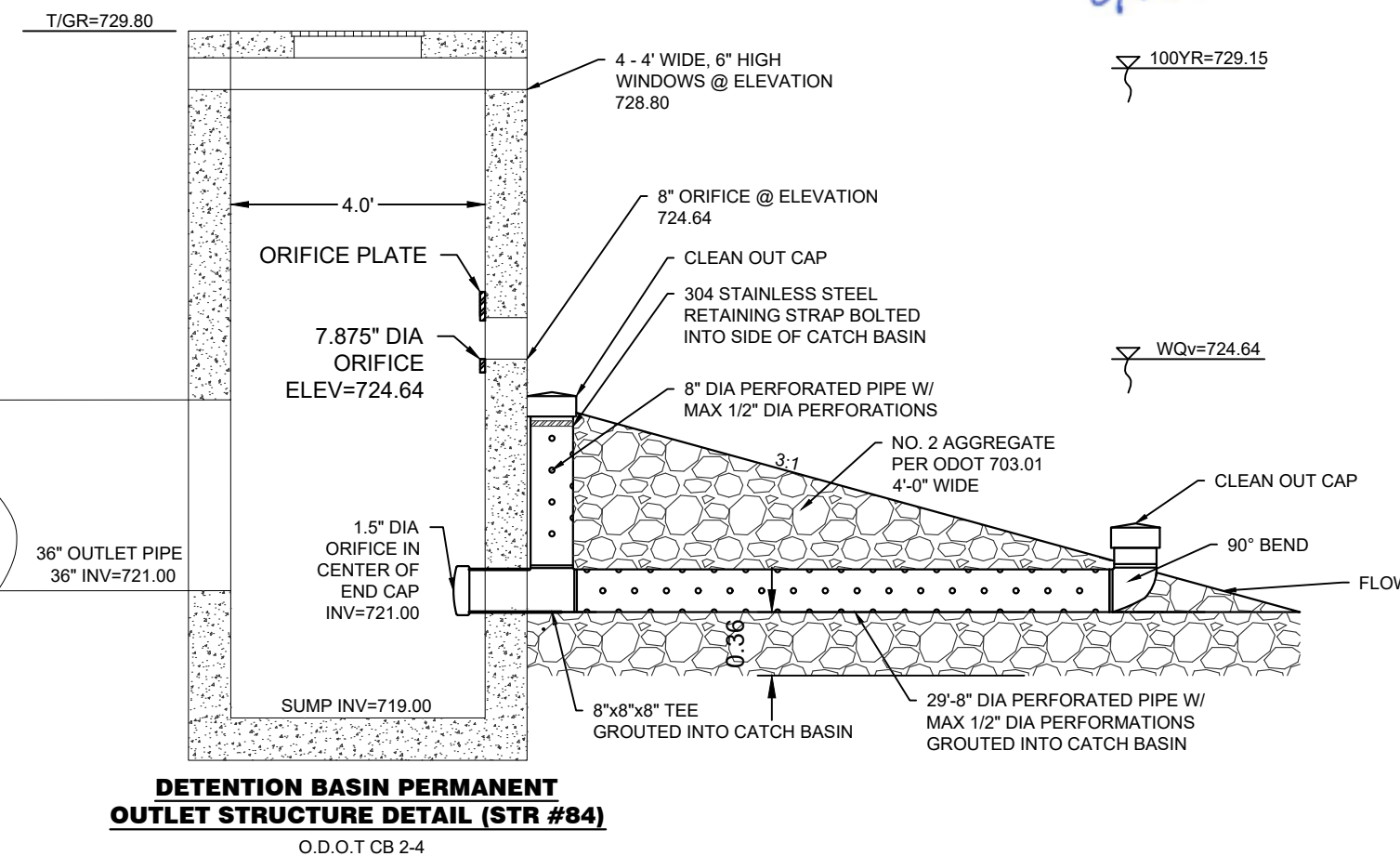
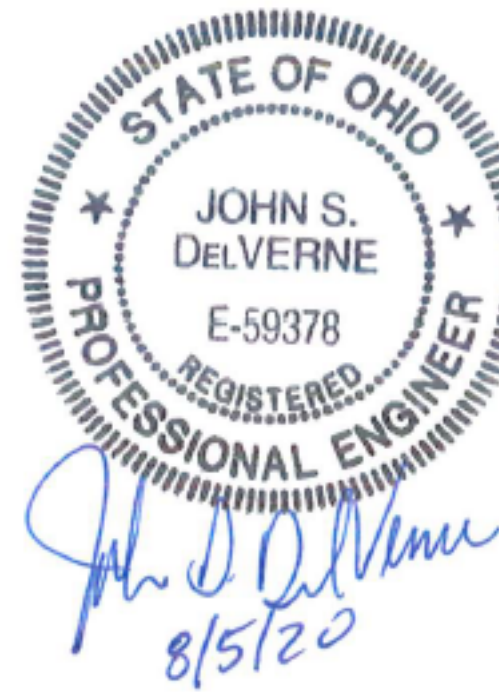
PLAN VIEW



PROFILE VIEW



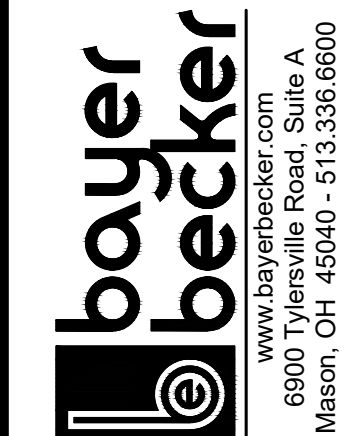
DETENTION BASIN TEMP SEDIMENT RETROFIT (STR #84)
O.D.O.T CB 2-4



DETENTION BASIN PERMANENT OUTLET STRUCTURE DETAIL (STR #84)
O.D.O.T CB 2-4

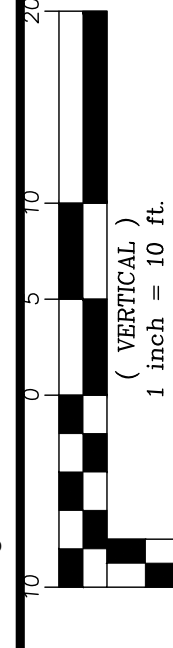
1/2"x12"x12" ORIFICE PLATE
STAINLESS STEEL, TYPE 304
BOLTED TO STRUCTURE
7.875" DIA ORIFICE INV = 724.64

**THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)**

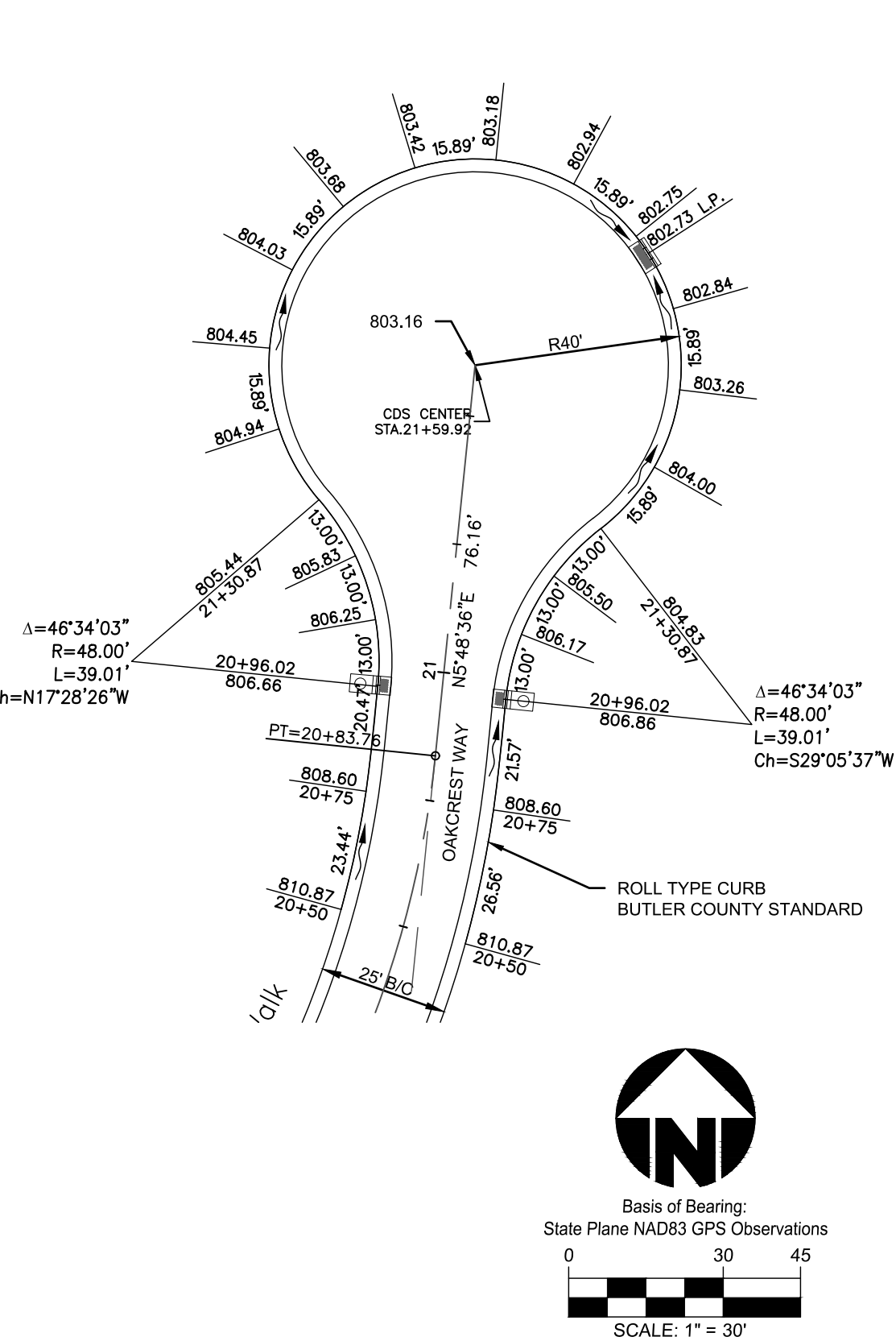
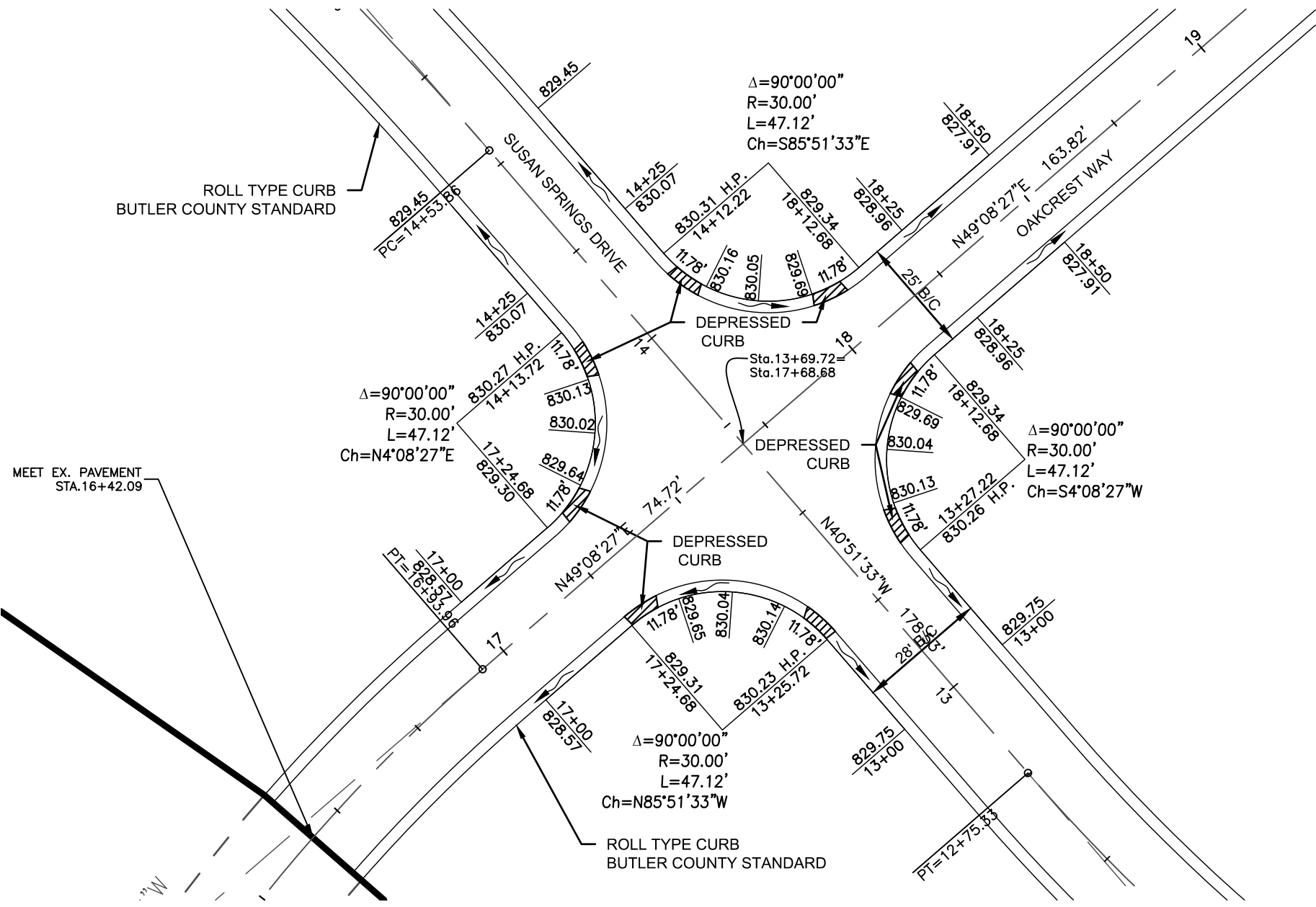
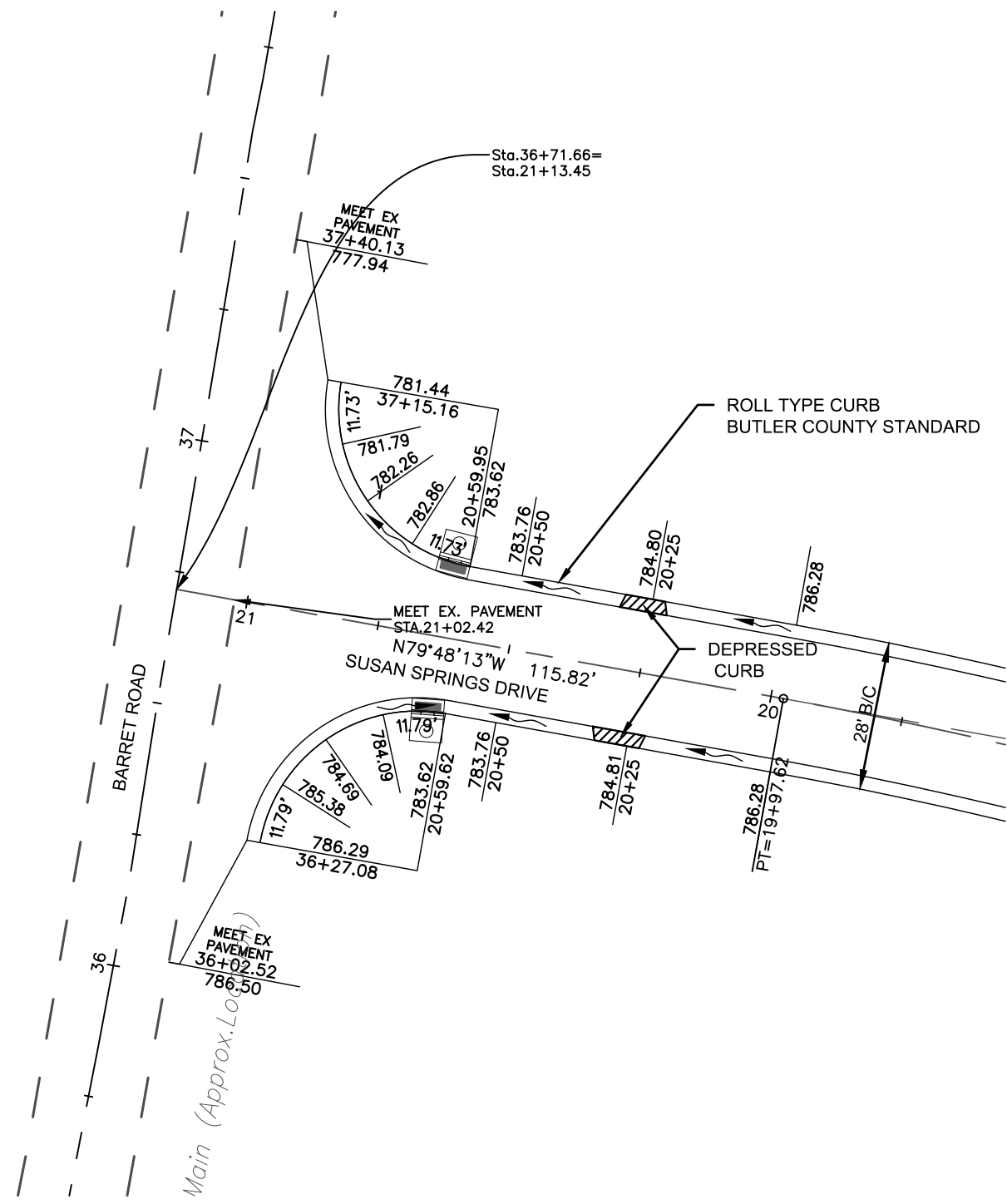
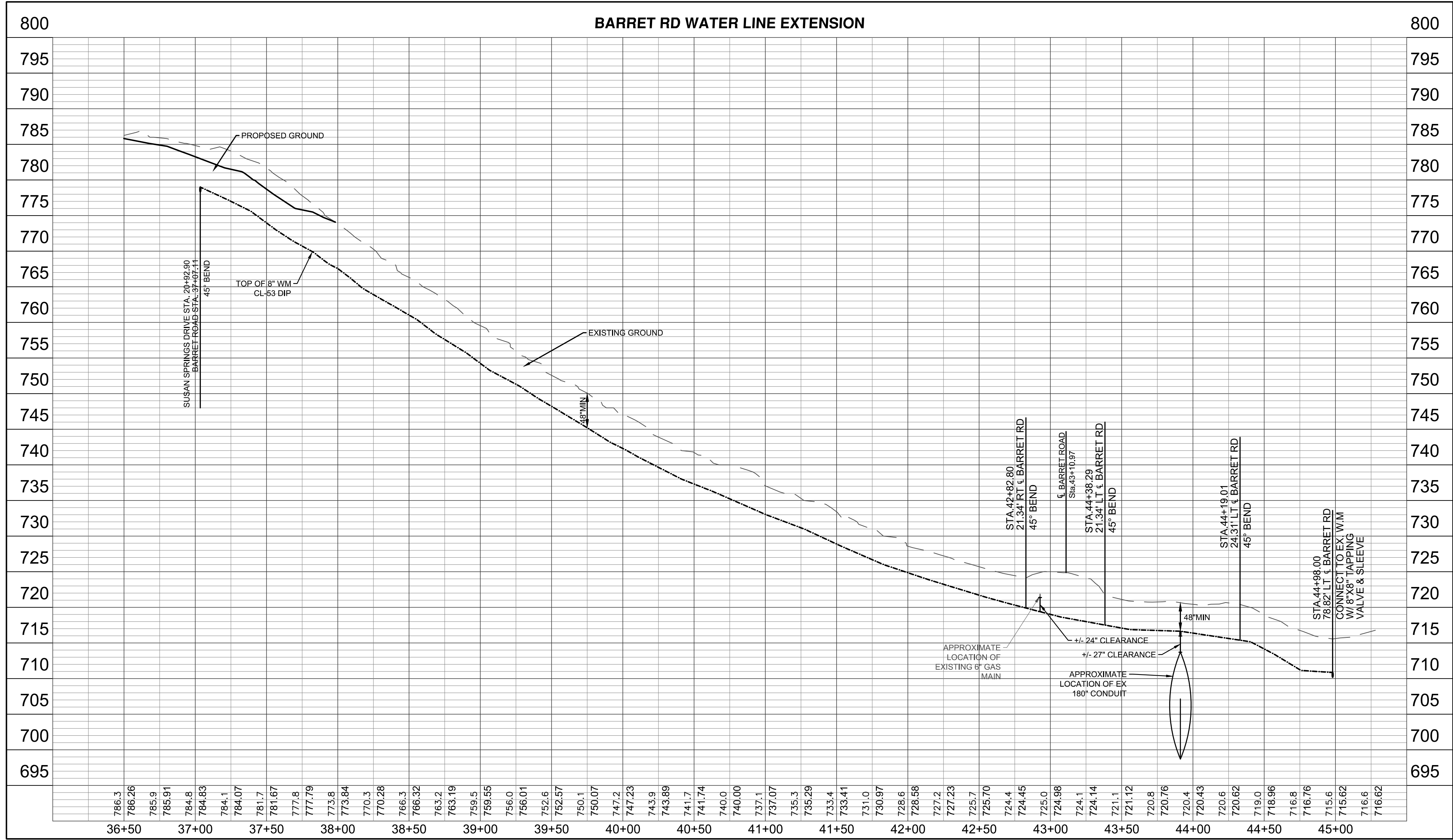


Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20

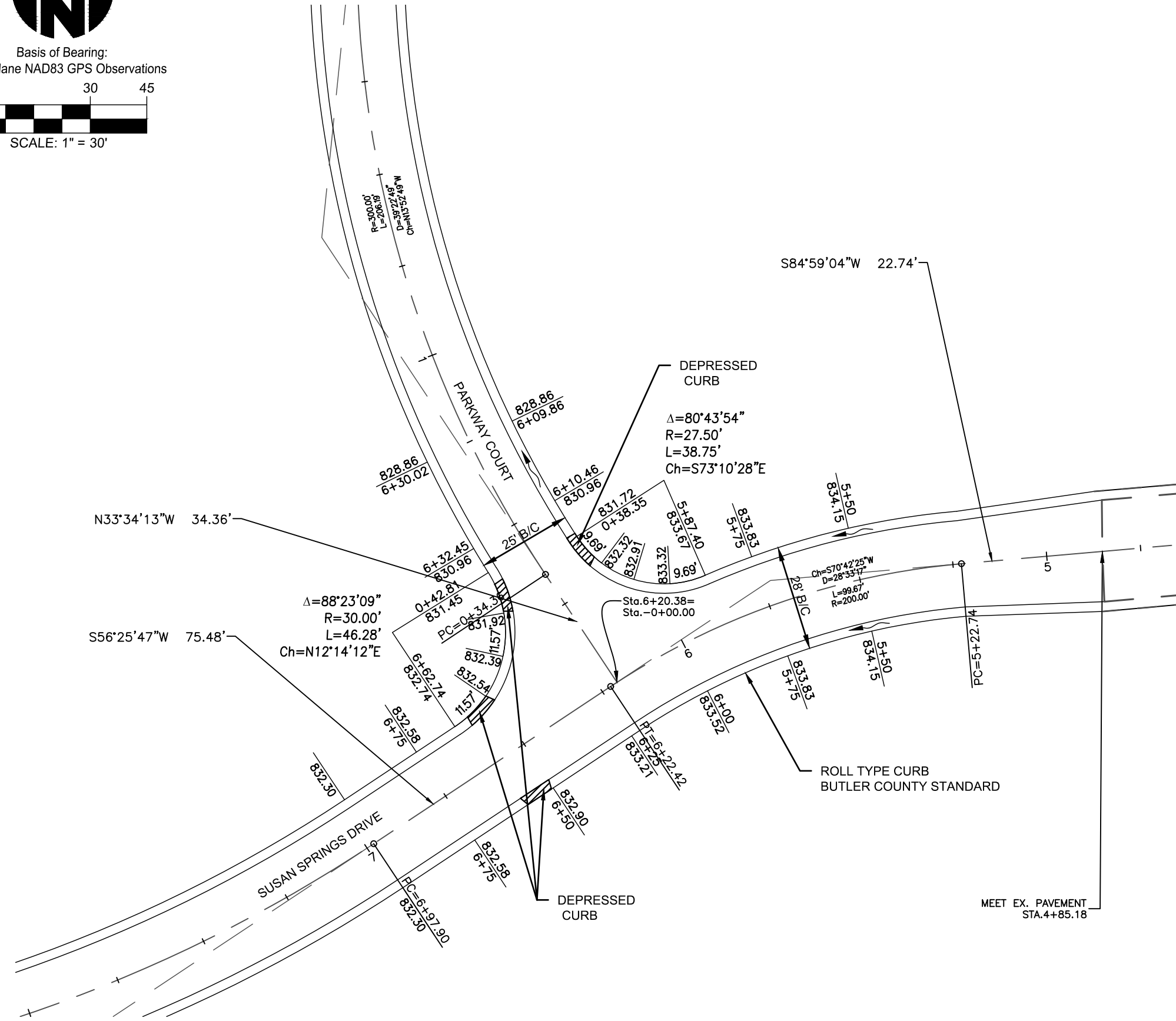
Plot time: Aug 05, 2020 - 10:10am
Drawing name: J:\2006\06F158-006\CD\WG06F158-006 CD.dwg - Layout Tab: C4.3 PROFILE & INT DETAILS



GRAPHIC SCALE
(HORIZONTAL)
1 inch = 50 ft.
(VERTICAL)
1 inch = 10 ft.



Basis of Bearing:
State Plane NAD83 GPS Observations
0 30 45
SCALE: 1" = 30'



THE OAKS OF WEST CHESTER SECTION SIX (PHASES 5, 6, & 7)

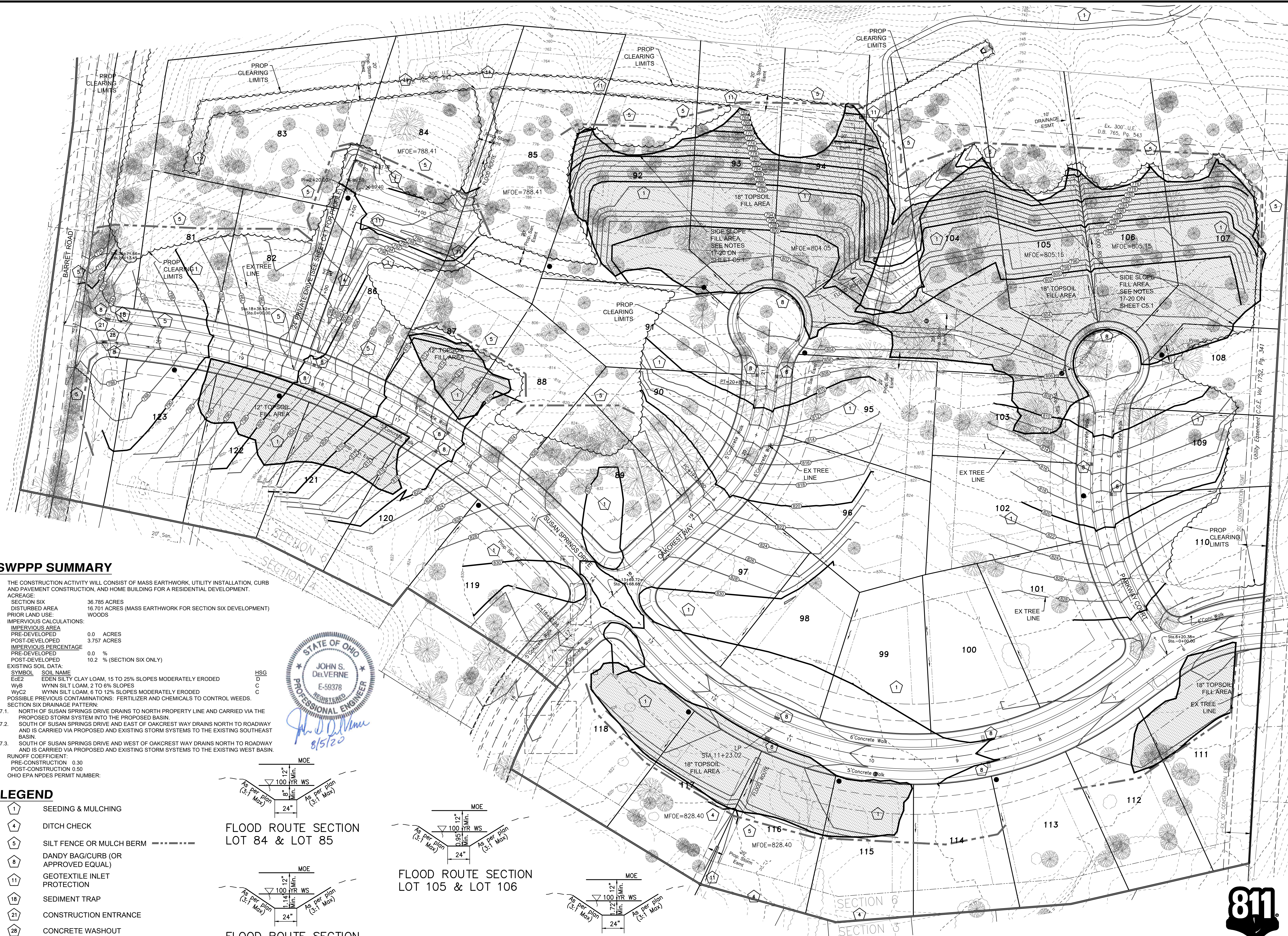
SECTION 23, TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO

UTILITY PROFILES & INTERSECTION DETAILS



Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20
Sheet:

C4.3



SWPPP SUMMARY

1. THE CONSTRUCTION ACTIVITY WILL CONSIST OF MASS EARTHWORK, UTILITY INSTALLATION, CURB AND PAVEMENT CONSTRUCTION, AND HOME BUILDING FOR A RESIDENTIAL DEVELOPMENT.
2. ACREAGE:

SECTION SIX	36.785 ACRES
DISTURBED AREA	16.701 ACRES (MASS EARTHWORK FOR SECTION SIX DEVELOPMENT)
3. PRIOR LAND USE:

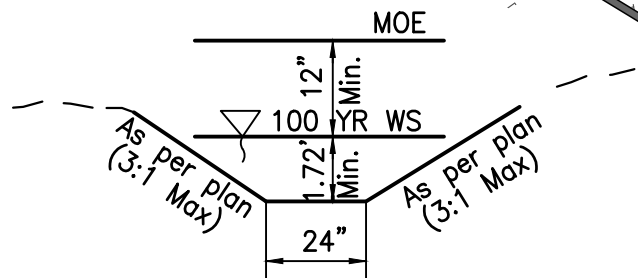
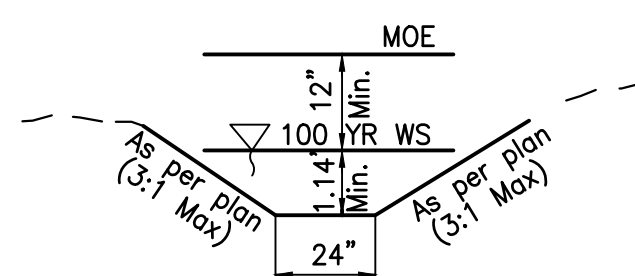
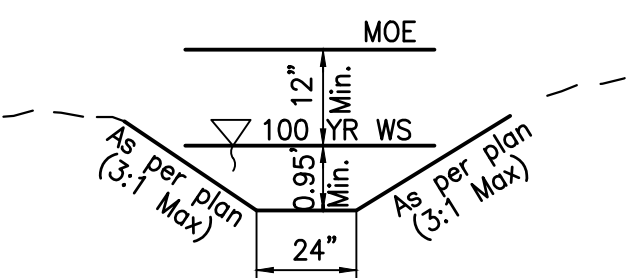
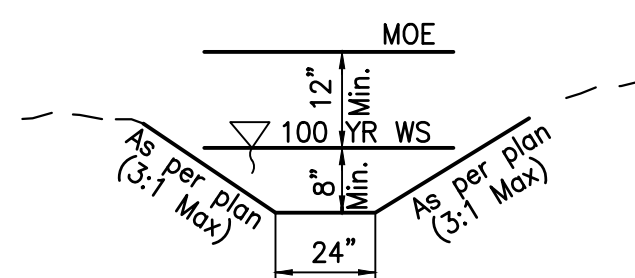
IMPERVIOUS CALCULATIONS:	WOODS
IMPERVIOUS AREA	
PRE-DEVELOPED	0.0 ACRES
POST-DEVELOPED	3.757 ACRES
IMPERVIOUS PERCENTAGE	
PRE-DEVELOPED	0.0 %
POST-DEVELOPED	10.2 % (SECTION SIX ONLY)
5. EXISTING SOIL DATA:

<u>SYMBOL</u>	<u>SOIL NAME</u>	
EC2E	EDEN SILTY CLAY LOAM, 15 TO 25% SLOPES MODERATELY ERODED	HSG
WYB	WYNN SILT LOAM, 2 TO 6% SLOPES	D
WYC2	WYNN SILT LOAM, 6 TO 12% SLOPES MODERATELY ERODED	C
	POTENTIAL PREVIOUS CONTAMINATIONS: FERTILIZER AND CHEMICALS TO CONTROL WEEDS.	C
7. SECTION SIX DRAINAGE PATTERN:
 - 7.1. NORTH OF SUSAN SPRINGS DRIVE DRAINS TO NORTH PROPERTY LINE AND CARRIED VIA THE PROPOSED STORM SYSTEM INTO THE PROPOSED BASIN.
 - 7.2. SOUTH OF SUSAN SPRINGS DRIVE AND EAST OF OAKCREST WAY DRAINS NORTH TO ROADWAY AND IS CARRIED VIA PROPOSED AND EXISTING STORM SYSTEMS TO THE EXISTING SOUTHEAST BASIN.
 - 7.3. SOUTH OF SUSAN SPRINGS DRIVE AND WEST OF OAKCREST WAY DRAINS NORTH TO ROADWAY AND IS CARRIED VIA PROPOSED AND EXISTING STORM SYSTEMS TO THE EXISTING WEST BASIN.
8. RUNOFF COEFFICIENT:

PRE-CONSTRUCTION	0.30
POST-CONSTRUCTION	0.50
9. OHIO EPA NPDES PERMIT NUMBER:

STATE OF OHIO
JOHN S. DEVERNE
E-59378
REGISTERED
PROFESSIONAL ENGINEER

- ## LEGEND
- | | |
|------|------------------------------------|
| 1 | SEEDING & MULCHING |
| 4 | DITCH CHECK |
| 5 | SILT FENCE OR MULCH BERM |
| 8 | DANDY BAG/CURB (OR APPROVED EQUAL) |
| 11 | GEOTEXTILE INLET PROTECTION |
| 18 | SEDIMENT TRAP |
| 21 | CONSTRUCTION ENTRANCE |
| 28 | CONCRETE WASHOUT |
| MFOE | MINIMUM FRONT OPENING ELEVATION |



LOCATION OF ALL EXISTING UTILITIES TO BE
DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

Know what's below.
Call before you dig.

GRADING NOTES

1. LOCATION OF EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO BEGINNING WORK.
2. THE GRADING PLAN IS TO BE USED FOR GRADING PURPOSES ONLY.
3. CONTRACTOR SHALL OBTAIN A COPY OF THE COMPLETE GEOTECHNICAL REPORT PREPARED BY THELEN ASSOCIATES, INC. DATED JANUARY 3, 2007 AND ALL ADDENDUMS PRIOR TO BIDDING THE PROJECT.
4. 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.
5. CONTRACTOR SHALL ASSUME THE TOP 8" OF EXISTING GROUND IS TOPSOIL. TOPSOIL REMOVED TO DEPTHS GREATER THAN 8" SHALL BE DONE ONLY AFTER CONSULTATION WITH THE PROJECT GEOTECHNICAL ENGINEER AND APPROVAL OF THE DEVELOPER.
6. 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.
7. 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.
8. CONTRACTOR TO PROVIDE SILT FENCE AT STORM SEWER OUTLETS (ALONG WITH ROCK CHANNEL PROTECTION AS SPECIFIED ON UTILITY PLAN) TO PREVENT EROSION.
9. CONTRACTOR SHALL INSTALL AND MAINTAIN A CONCRETE WASHOUT FACILITY PER BUTLER COUNTY STANDARDS.
10. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION.
11. BEST MANAGEMENT PRACTICES (BMPs) SHOWN ON PLANS SHALL BE REVISED OR IMPLEMENTED AS REQUIRED. CONTRACTOR SHALL MONITOR CONSTRUCTION BMPs AND PROVIDE ADDITIONAL BMPs AS REQUIRED TO PREVENT SEDIMENT RUNOFF FROM CONSTRUCTION SITE ONTO PAVEMENT AND NON-WORK AREAS.
12. AT A MINIMUM, ALL EROSION AND SEDIMENT CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD. QUALIFIED INSPECTION PERSONNEL (THOSE WITH KNOWLEDGE AND EXPERIENCE IN THE INSTALLATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROLS) SHALL CONDUCT THESE INSPECTIONS TO ENSURE THAT THE CONTROL PRACTICES ARE FUNCTIONAL AND TO EVALUATE WHETHER THE EROSION CONTROL IS ADEQUATE AND PROPERLY IMPLEMENTED OR WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.
13. SITE STABILIZATION SHALL BEGIN WITHIN 7 DAYS ON AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED FOR 14 DAYS.
14. ALL MUD OR DEBRIS TRACKED ON EXISTING STREETS SHALL BE CLEANED AT THE END OF EACH DAY OR AS DIRECTED BY BUTLER COUNTY OR THE OWNER. PERIODIC STREET SWEEPING MAY BE REQUIRED.
15. IN ADDITION TO ANY TEMPORARY EROSION, MUD, AND DEBRIS CONTROL DETAILS AND NOTES SHOWN ON THE PLANS, THE CONTRACTOR SHOULD PLACE TEMPORARY OR PERMANENT SEEDING, MULCHING AND/OR MULCH NETTING OR ANY OTHER GENERALLY ACCEPTED METHODS TO PREVENT EROSION, MUD, AND DEBRIS FROM BEING DEPOSITED ON OTHER PROPERTY, ON NEWLY CONSTRUCTED OR EXISTING ROADS, OR INTO EXISTING SEWERS OR NEW SEWERS WITHIN THE DEVELOPMENT. THE CONTRACTOR SHOULD CONTINUALLY MONITOR THE CONSTRUCTION PROGRESS AND MAKE ANY NECESSARY TEMPORARY ADJUSTMENTS TO MAINTAIN THIS CONTROL. AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, TEMPORARY EROSION AND SEDIMENT CONTROLS CAN BE REMOVED.
16. TOPSOIL WASTING AREAS ARE DESIGNATED ON THE PLAN IN 12" AND 18" DEPTHS IN FILL AREAS.
17. A PRECONSTRUCTION GEOTECHNICAL REVIEW OF PROPOSED GRADING SHALL BE REQUIRED FOR LOTS 83-85, 92-94, AND 104-107 TO ASSESS THE IMPACT OF THE GRADING ON THE STABILITY OF THE SLOPES ALONG THE NORTH PROPERTY LINE.
18. LOTS 92-94, AND 104-107 WILL HAVE MORE THAN FIVE (5) OF FILL AND WILL REQUIRE A COMPACTION TEST, WHICH MUST BE APPROVED BY THE BUTLER SWCD OFFICE PRIOR TO FINAL PLAT APPROVAL.
19. SIDE SLOPE FILLS FOR LOTS 83-85, 92-94, AND 104-107 SHALL REQUIRE HORIZONTAL LEVEL BENCHING INTO BEDROCK, INTERBEDDED SHALE AND LIMESTONE TO PROVIDE LONG TERM STABILITY (SEE 2-1/2" W/18" TOPSOIL FILL AREA). CONTRACTOR SHALL PROVIDE LONG TERM PERMANENT UNDERDRAINS SHALL BE REQUIRED TO RELIEVE THE POTENTIAL BUILDUP OF HYDROSTATIC PRESSURES BEHIND THE FILL ZONES FOR LOTS 83-85, 92-94, AND 104-107. OUTLETS FOR THE UNDERDRAINS SHOULD BE WELL MARKED IN THE FIELD AND SHOULD BE PLOTTED AS DRAINAGE EASEMENTS TO ASSURE THEIR LONG-TERM FUNCTIONALITY. THE UNDERDRAINS MAY ALSO BE CONNECTED DIRECTLY TO THE STORM SEWER SYSTEM.

SWPPP NOTES

1. CONTRACTOR TO PROVIDE SILT FENCE AT STORM SEWER OUTLETS (ALONG WITH ROCK CHANNEL PROTECTION AS SPECIFIED ON UTILITY PLAN) TO PREVENT EROSION.
2. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION.
3. BEST MANAGEMENT PRACTICES (BMPs) SHOWN ON PLANS SHALL BE REVISED OR IMPLEMENTED AS REQUIRED. CONTRACTOR SHALL MONITOR CONSTRUCTION BMPs AND PROVIDE ADDITIONAL BMPs AS REQUIRED TO PREVENT SEDIMENT RUNOFF FROM CONSTRUCTION SITE ONTO PAVEMENT AND NON-WORK AREAS.
4. AT A MINIMUM, ALL EROSION AND SEDIMENT CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD. QUALIFIED INSPECTION PERSONNEL (THOSE WITH KNOWLEDGE AND EXPERIENCE IN THE INSTALLATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROLS) SHALL CONDUCT THESE INSPECTIONS TO ENSURE THAT THE CONTROL PRACTICES ARE FUNCTIONAL AND TO EVALUATE WHETHER THE EROSION CONTROL IS ADEQUATE AND PROPERLY IMPLEMENTED OR WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.
5. SITE STABILIZATION SHALL BEGIN WITHIN 7 DAYS ON AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED FOR 14 DAYS.
6. ALL MUD OR DEBRIS TRACKED ON EXISTING STREETS SHALL BE CLEANED AT THE END OF EACH DAY OR AS DIRECTED BY BUTLER COUNTY OR THE OWNER. PERIODIC STREET SWEEPING MAY BE REQUIRED.
7. IN ADDITION TO ANY TEMPORARY EROSION, MUD, AND DEBRIS CONTROL DETAILS AND NOTES SHOWN ON THE PLANS, THE CONTRACTOR SHOULD PLACE TEMPORARY OR PERMANENT SEEDING, MULCHING AND/OR MULCH NETTING OR ANY OTHER GENERALLY ACCEPTED METHODS TO PREVENT EROSION, MUD, AND DEBRIS FROM BEING DEPOSITED ON OTHER PROPERTY, ON NEWLY CONSTRUCTED OR EXISTING ROADS, OR INTO EXISTING SEWERS OR NEW SEWERS WITHIN THE DEVELOPMENT. THE CONTRACTOR SHOULD CONTINUALLY MONITOR THE CONSTRUCTION PROGRESS AND MAKE ANY NECESSARY TEMPORARY ADJUSTMENTS TO MAINTAIN THIS CONTROL. AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, TEMPORARY EROSION AND SEDIMENT CONTROLS CAN BE REMOVED.

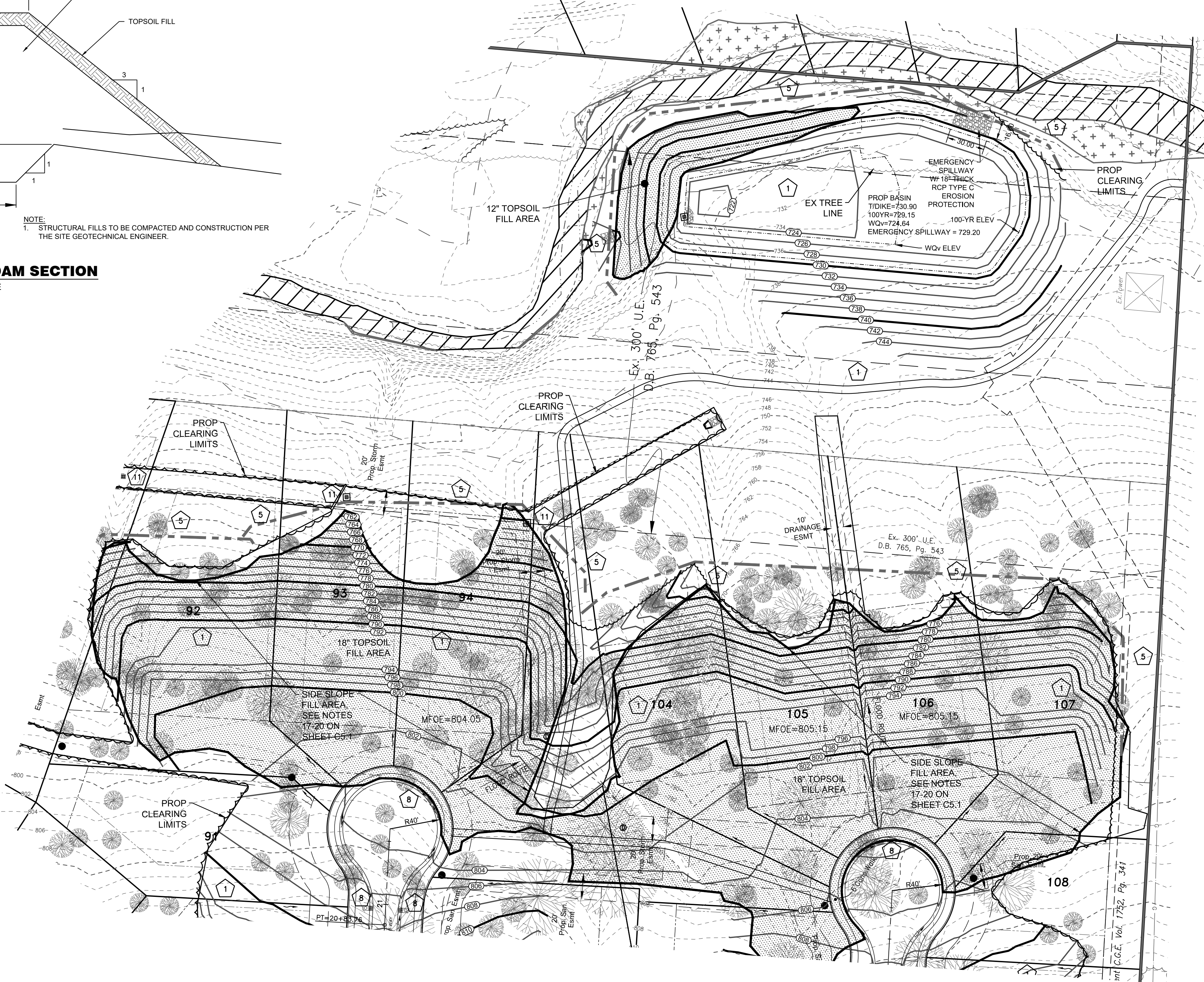
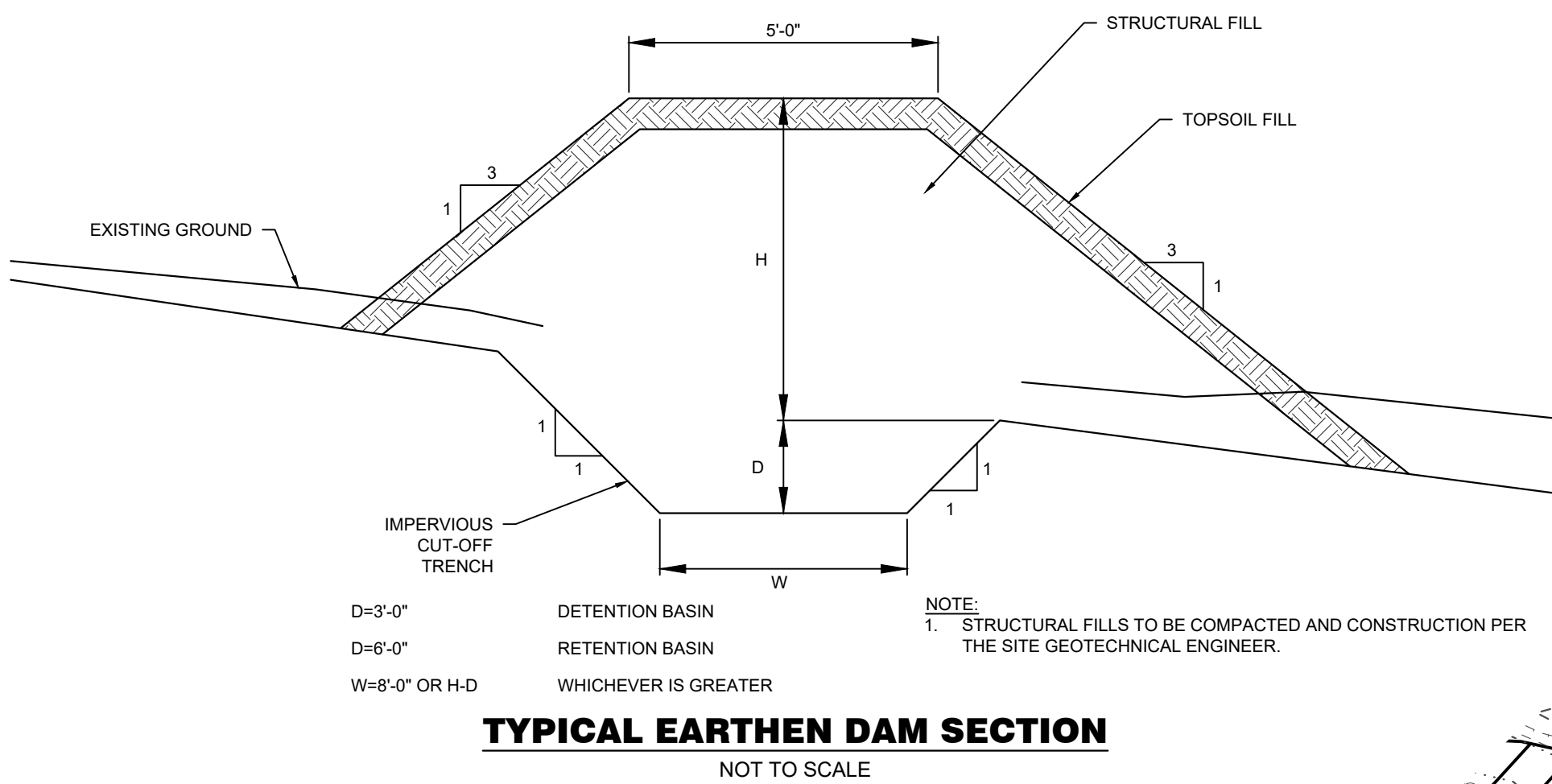
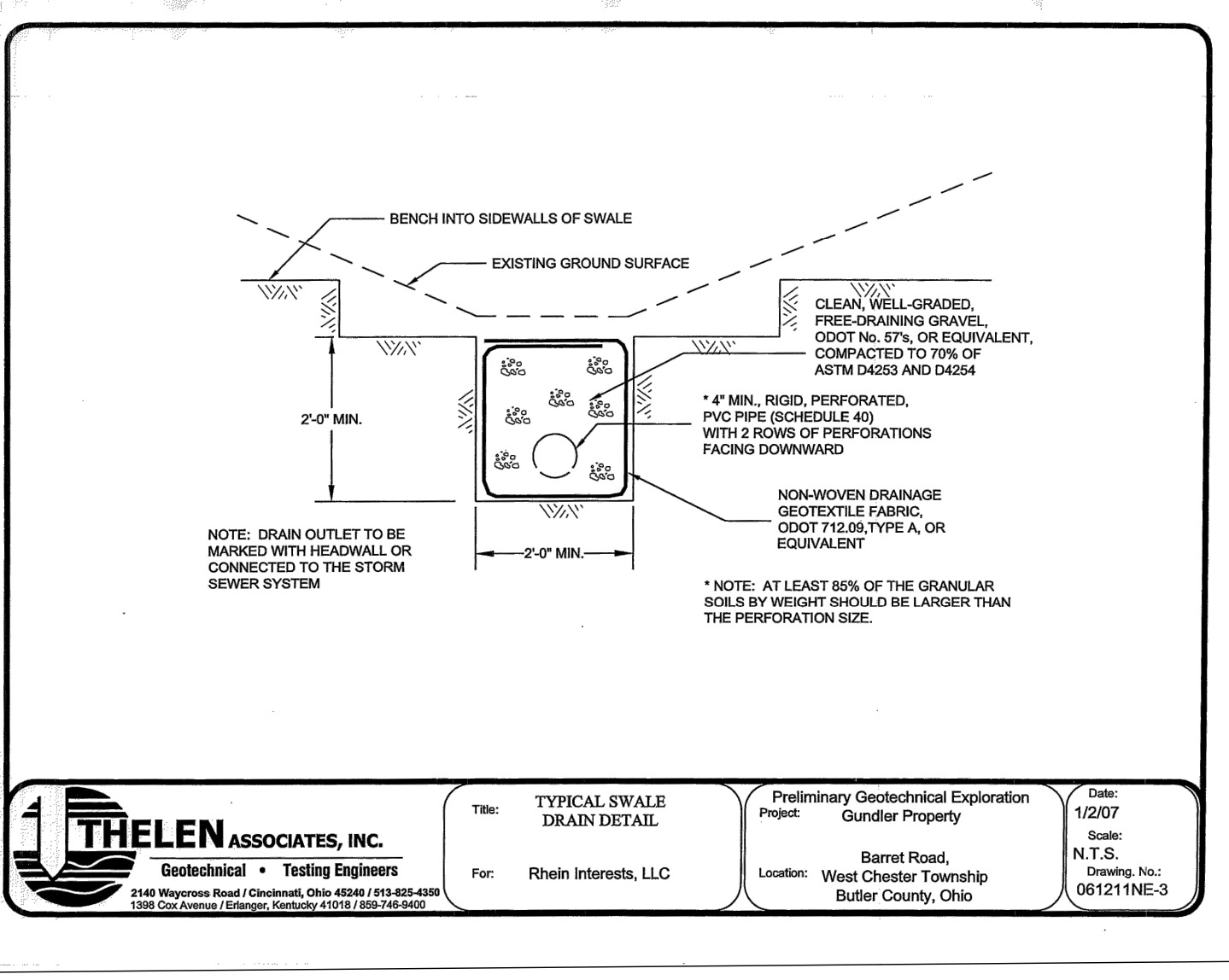
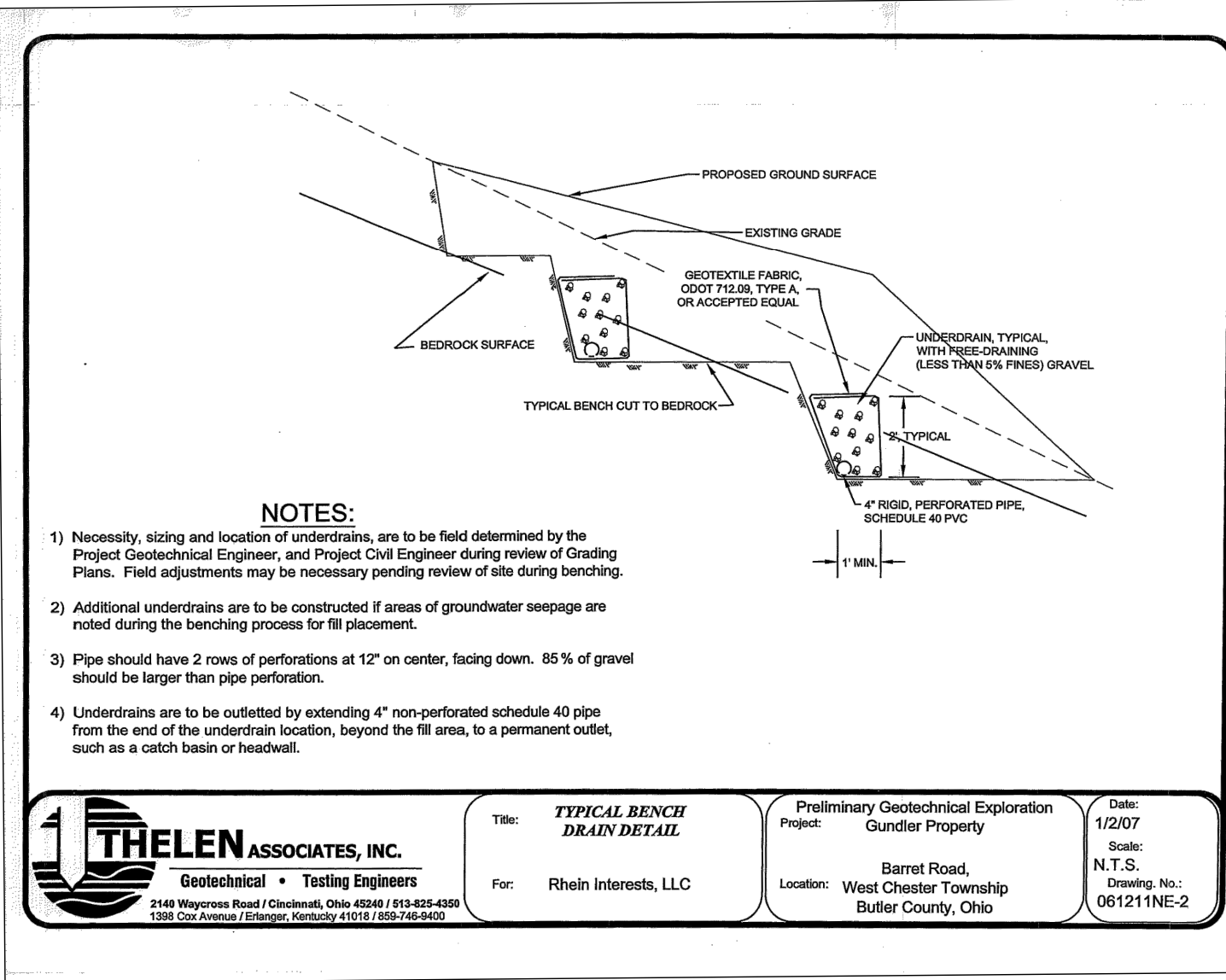
LEGEND

- | | |
|------|------------------------------------|
| 1 | SEEDING & MULCHING |
| 4 | DITCH CHECK |
| 5 | SILT FENCE OR MULCH BERM |
| 8 | DANDY BAG/CURB (OR APPROVED EQUAL) |
| 11 | GEOTEXTILE INLET PROTECTION |
| 18 | SEDIMENT TRAP |
| 21 | CONSTRUCTION ENTRANCE |
| 28 | CONCRETE WASHOUT |
| MFOE | MINIMUM FRONT OPENING ELEVATION |



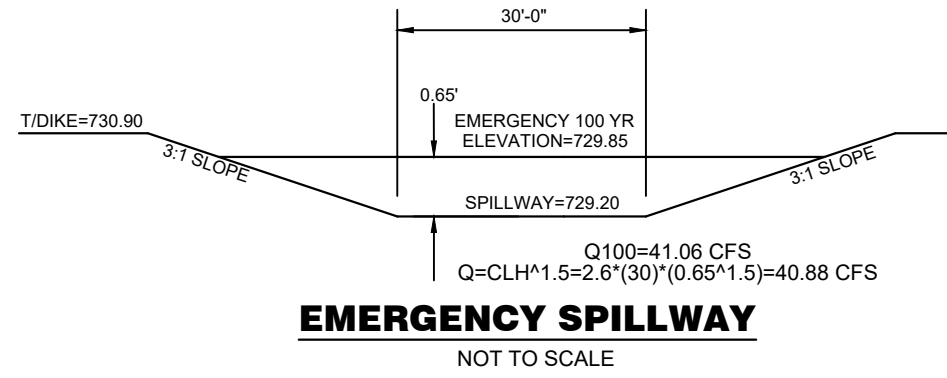
Know what's below.
Call before you dig.

LOCATION OF ALL EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION



SWPPP SUMMARY

1. THE CONSTRUCTION ACTIVITY WILL CONSIST OF MASS EARTHWORK, UTILITY INSTALLATION, CURB AND PAVEMENT CONSTRUCTION, AND HOME BUILDING FOR A RESIDENTIAL DEVELOPMENT.
2. ACREAGE: SECTION SIX 36.785 ACRES
DISTURBED AREA 16.701 ACRES (MASS EARTHWORK FOR SECTION SIX DEVELOPMENT)
3. PRIOR LAND USE: WOODS
4. IMPERVIOUS CALCULATIONS:
IMPERVIOUS AREA
PRE-DEVELOPED 0.0 ACRES
POST-DEVELOPED 3.757 ACRES
IMPERVIOUS PERCENTAGE
PRE-DEVELOPED 0.0 %
POST-DEVELOPED 10.2 % (SECTION SIX ONLY)
5. EXISTING SOIL DATA:
SYMBOL SOIL NAME
Ee2 EDEN SILTY CLAY LOAM, 15 TO 25% SLOPES MODERATELY ERODED
Wb8 WYNN SILT LOAM, 2 TO 6% SLOPES
Wyc2 WYNN SILT LOAM, 6 TO 12% SLOPES MODERATELY ERODED
6. POSSIBLE PREVIOUS CONTAMINATIONS: FERTILIZER AND CHEMICALS TO CONTROL WEEDS.
7. SECTION SIX DRAINAGE PATTERN:
7.1. NORTH OF SUSAN SPRINGS DRIVE DRAINS TO NORTH PROPERTY LINE AND CARRIED VIA THE PROPOSED STORM SYSTEM INTO THE PROPOSED BASIN.
7.2. SOUTH OF SUSAN SPRINGS DRIVE DRAINS SOUTH AND IS CARRIED VIA PROPOSED AND EXISTING STORM SYSTEMS TO THE EXISTING WEST BASIN.
8. RUNOFF COEFFICIENT:
PRE-CONSTRUCTION 0.30
POST-CONSTRUCTION 0.50
9. OHIO EPA NPDES PERMIT NUMBER:



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, REUSE, REPRODUCTION OR DUPLICATION IN WHOLE OR IN PART MAY BE MADE WITHOUT WRITTEN PERMISSION OF BB, AND IS DONE SO AT USER'S SOLE RISK. COPYRIGHT - ALL RIGHTS RESERVED.

THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)
SECTION 22, TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO

GRADING PLAN

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

Plot time: Aug 05, 2020 - 10:11 am
Drawing name: J:\2006\06F158-006\CD\DWG08F158-006 CD.dwg - Layout Tab: C5.0 GRADING

Item	Revision Description	Date	Drawn	Chk
1	REVISED PER ZONING COMMENTS	07-09-20	JSD	
2	BUTLER COUNTY COMMENTS	08-05-20	LDF	
3				
4				

Drawing:	06F158-006 CD
Drawn by:	LDF
Checked by:	JSD
Issue Date:	06-15-20
Sheet:	

C5.1

GENERAL NOTES

EROSION AND SEDIMENT CONTROLS

Vegetative practices

Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing and protection of trees. The contractor shall initiate appropriate vegetative practices on all disturbed areas within seven (7) days if they are to remain dormant (undisturbed) for more than fourteen (14) days. Permanent or temporary soil stabilization shall be applied to disturbed areas within seven (7) days after final grade is reached on any portion of the site.

Structural Practices

Structural practices shall be used to control erosion and trap sediment from all sites remaining disturbed for more than fourteen (14) days.

Timing

Sediment control structures shall be functional throughout earth disturbing activity. Sediment ponds and perimeter sediment barriers shall be implemented as the first step of grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is reestablished.

Sediment Barriers

Sheet flow runoff from denuded areas shall be intercepted by sediment barriers. Sediment barriers, such as sediment fences or diversions direction runoff to settling facilities, shall protect adjacent properties and water resources from sediment transported by sheet flow.

Erosion and sediment control practices used to satisfy the conditions of this plan shall meet the standards and specifications in the current edition of Water Management and Sediment Control in Urbanized Areas (Soil Conservation Service.)

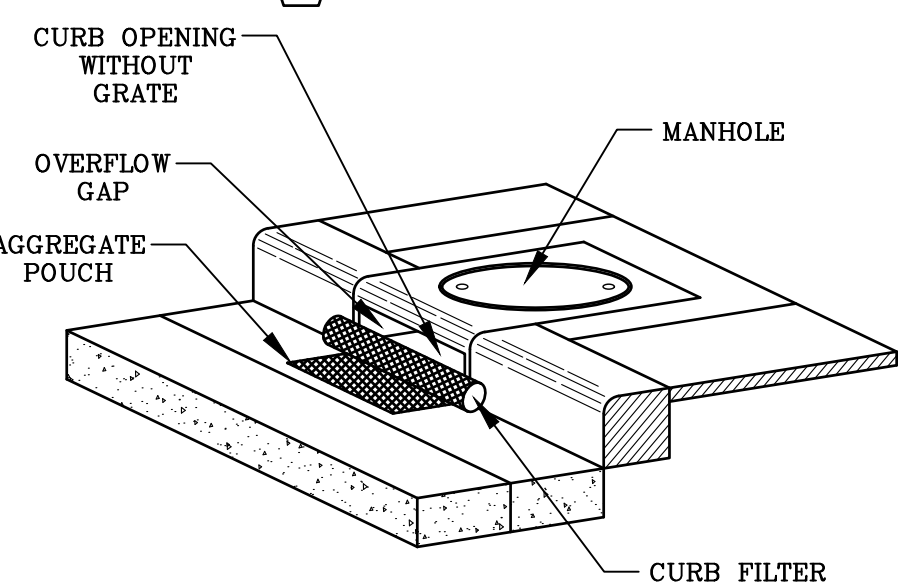
Waste Disposal

No solid or liquid waste, including building materials, shall be discharged in storm water runoff. Off-site vehicle tracking of sediments shall be minimized. The plan shall ensure and demonstrate compliance and applicable State of local waste disposal, sanitary sewer or septic system regulations.

Maintenance

All temporary and permanent control practices shall be maintained and repaired as needed to assure continued performance of their intended function. The contractor shall be responsible for the maintenance described above.

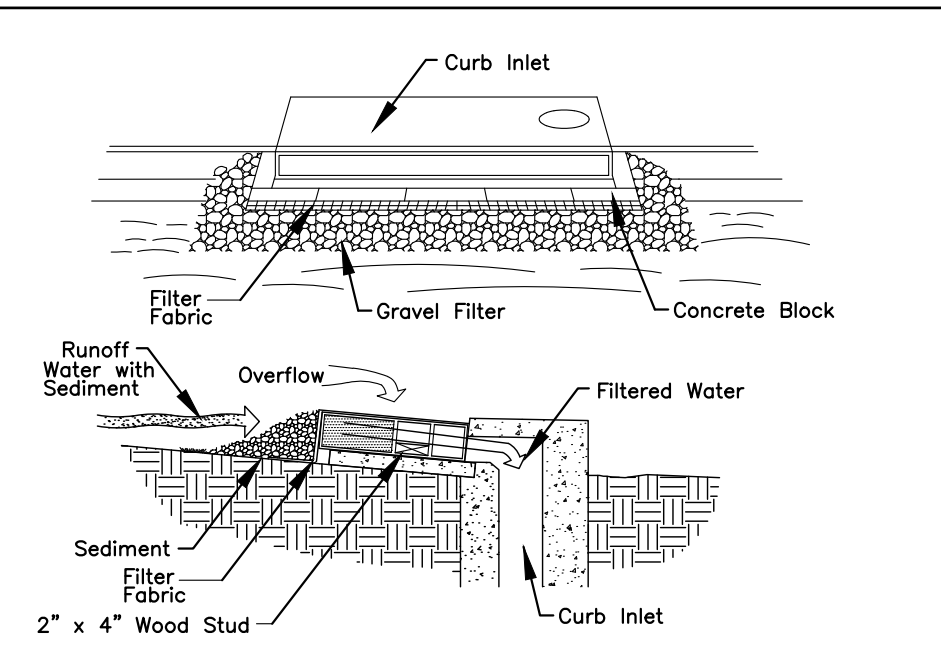
8 DANDY CURB™



NOTE: THE DANDY CURB™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

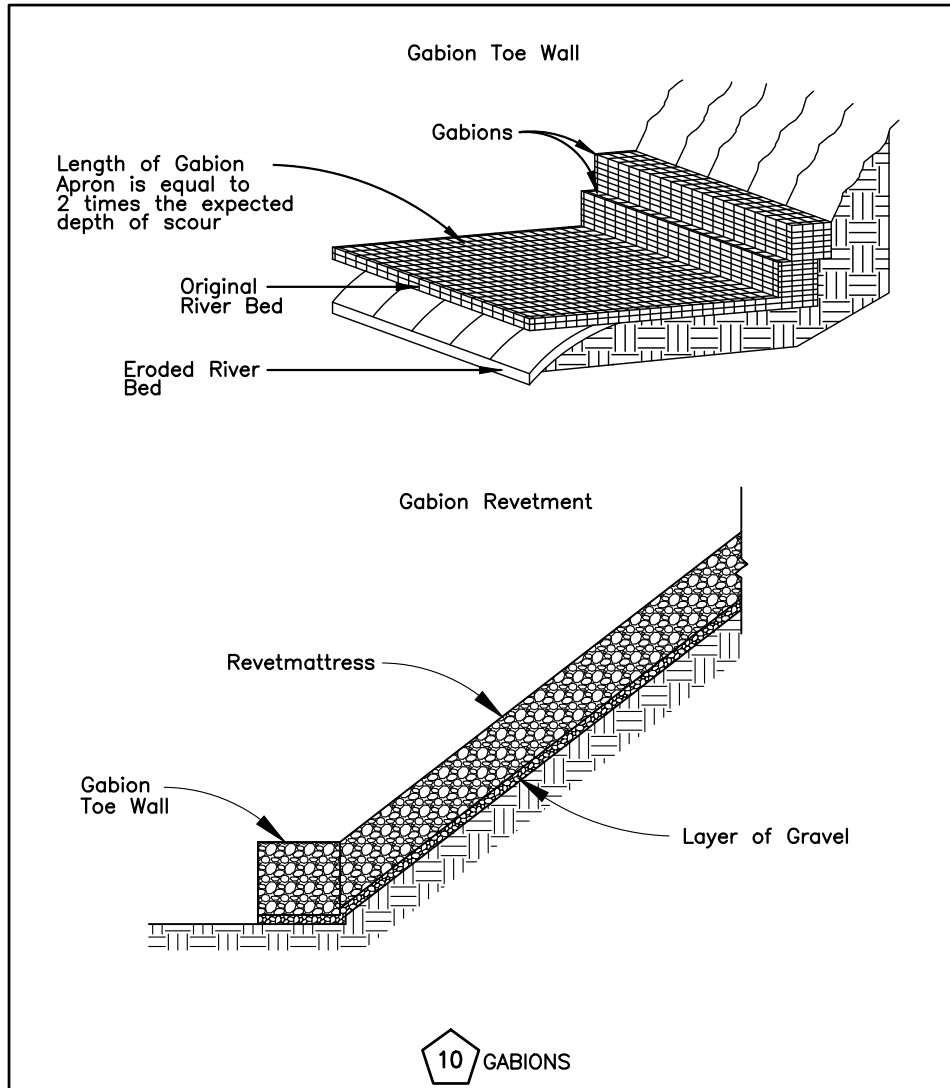
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	KN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	KN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	KPa (psi)	3697 (450)
Trapezoidal Tear Strength	ASTM D 4533	KN (lbs)	0.51 (115) X 0.33 (75)
UV Resistance	ASTM D 4355	%	60
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4461	l/min/m² (gal/min/ft²)	5907 (145)
Permeability	ASTM D 4461	Sec	2.1

*Note: All Dandy Curbs™ can be ordered with our optional oil absorbents

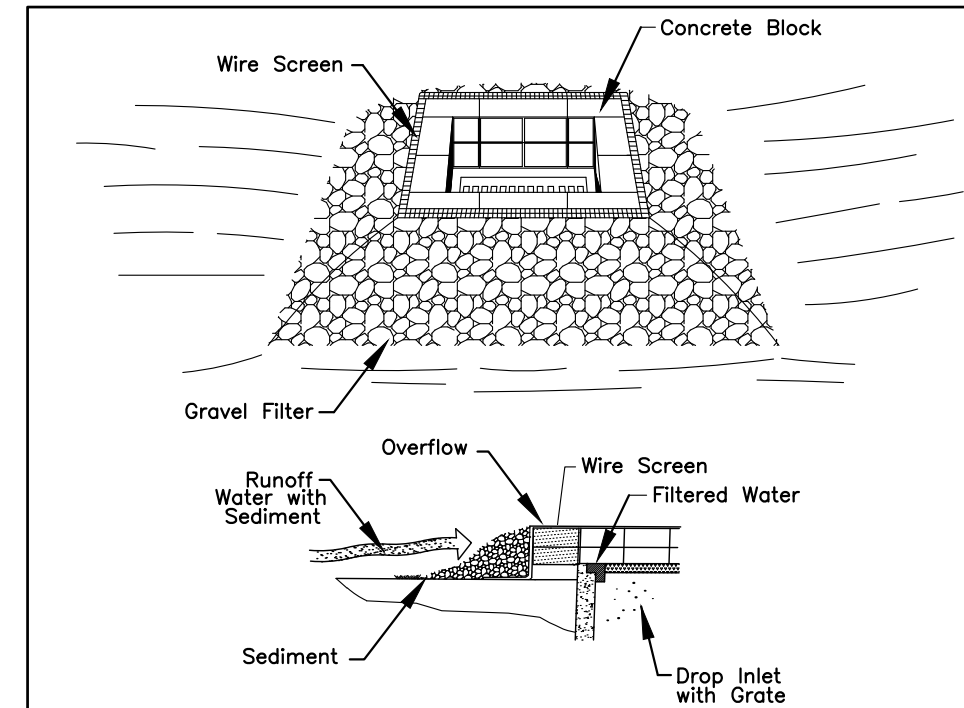


This method of inlet protection is applicable at curb inlets where an overflow capability is necessary to prevent excessive ponding in front of the structure.

14 BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



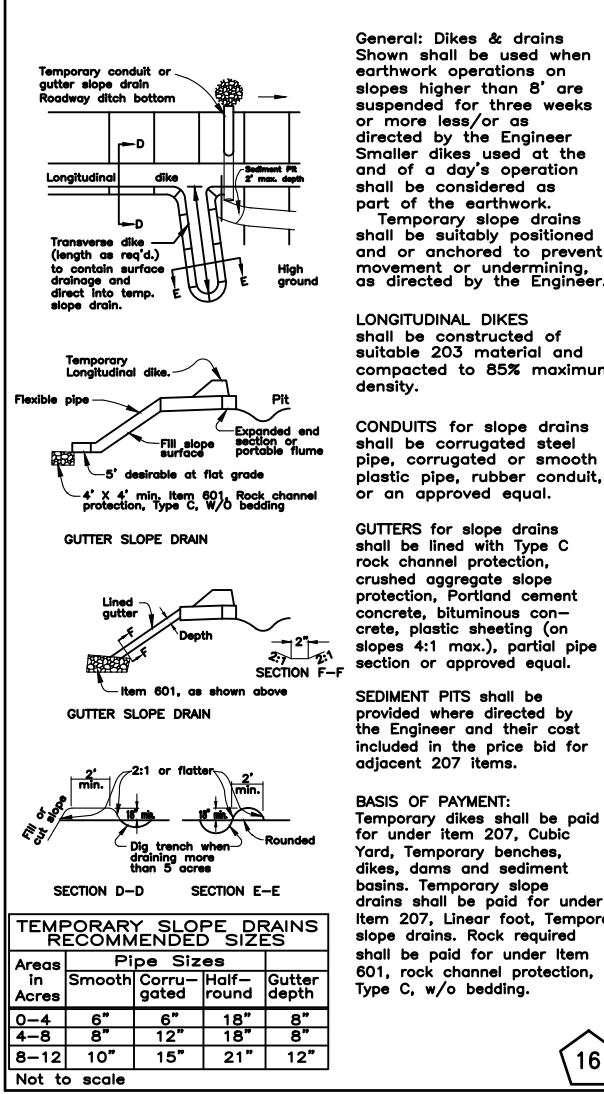
Source: Adapted from product literature of Bekoet Gabions.



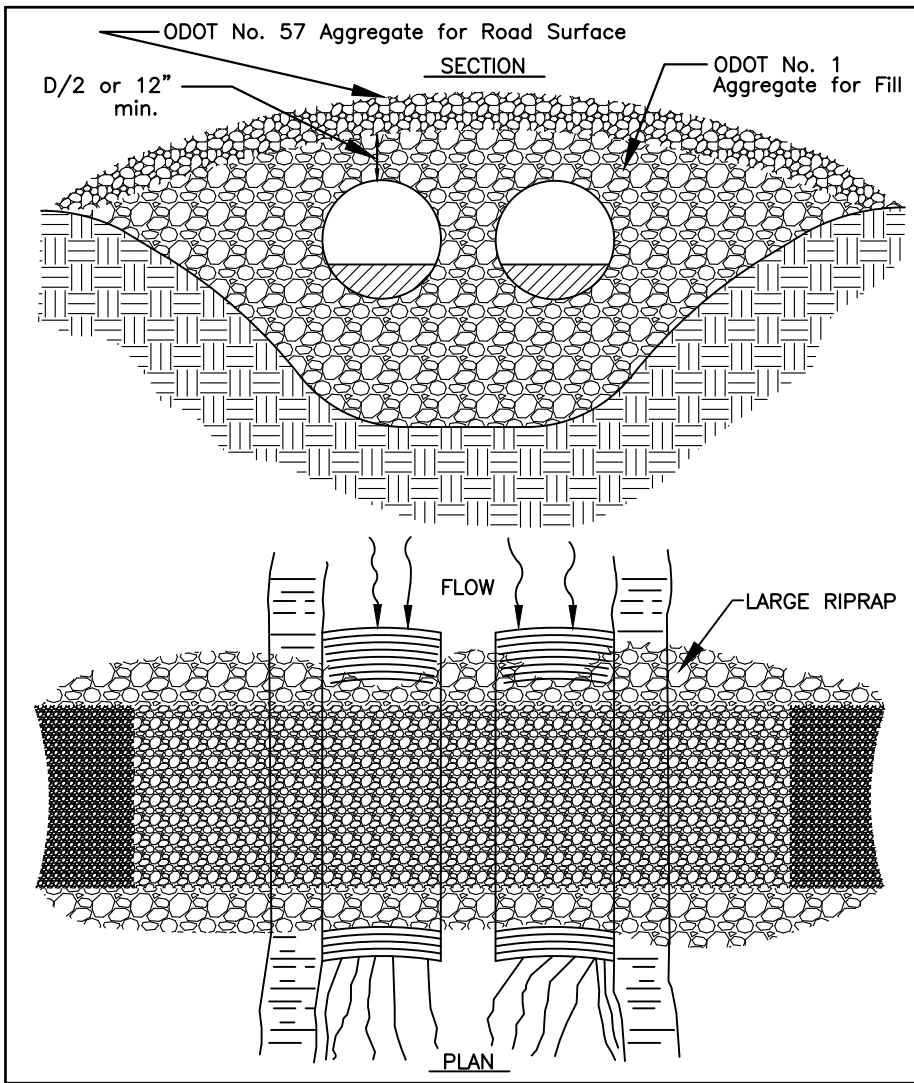
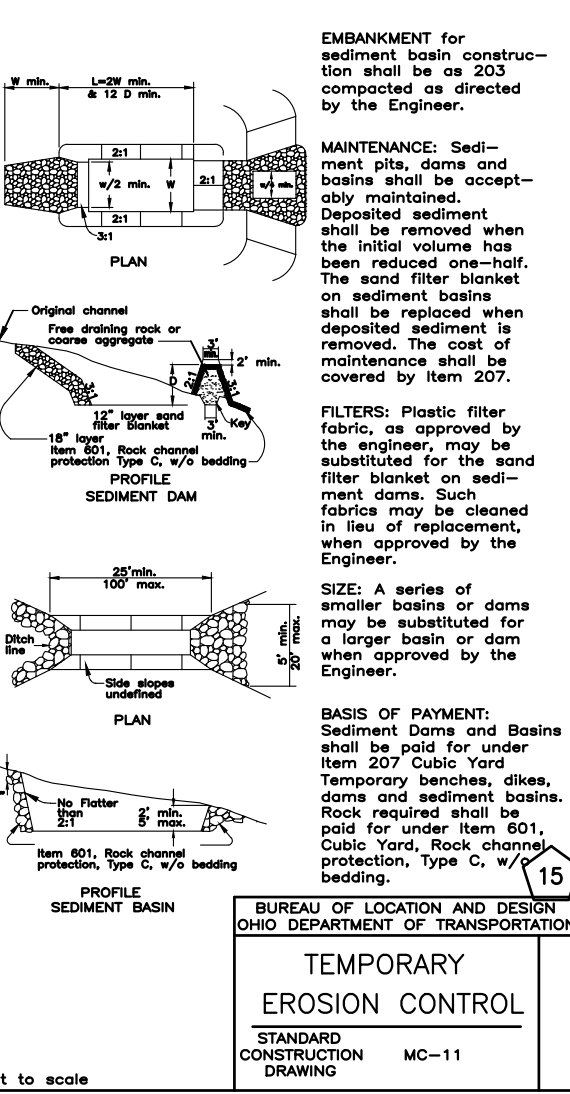
This method of inlet protection is applicable where heavy flows are expected and where an overflow capacity is necessary to prevent excessive ponding around the structure.

9 BLOCK AND DROP INLET SEDIMENT FILTER

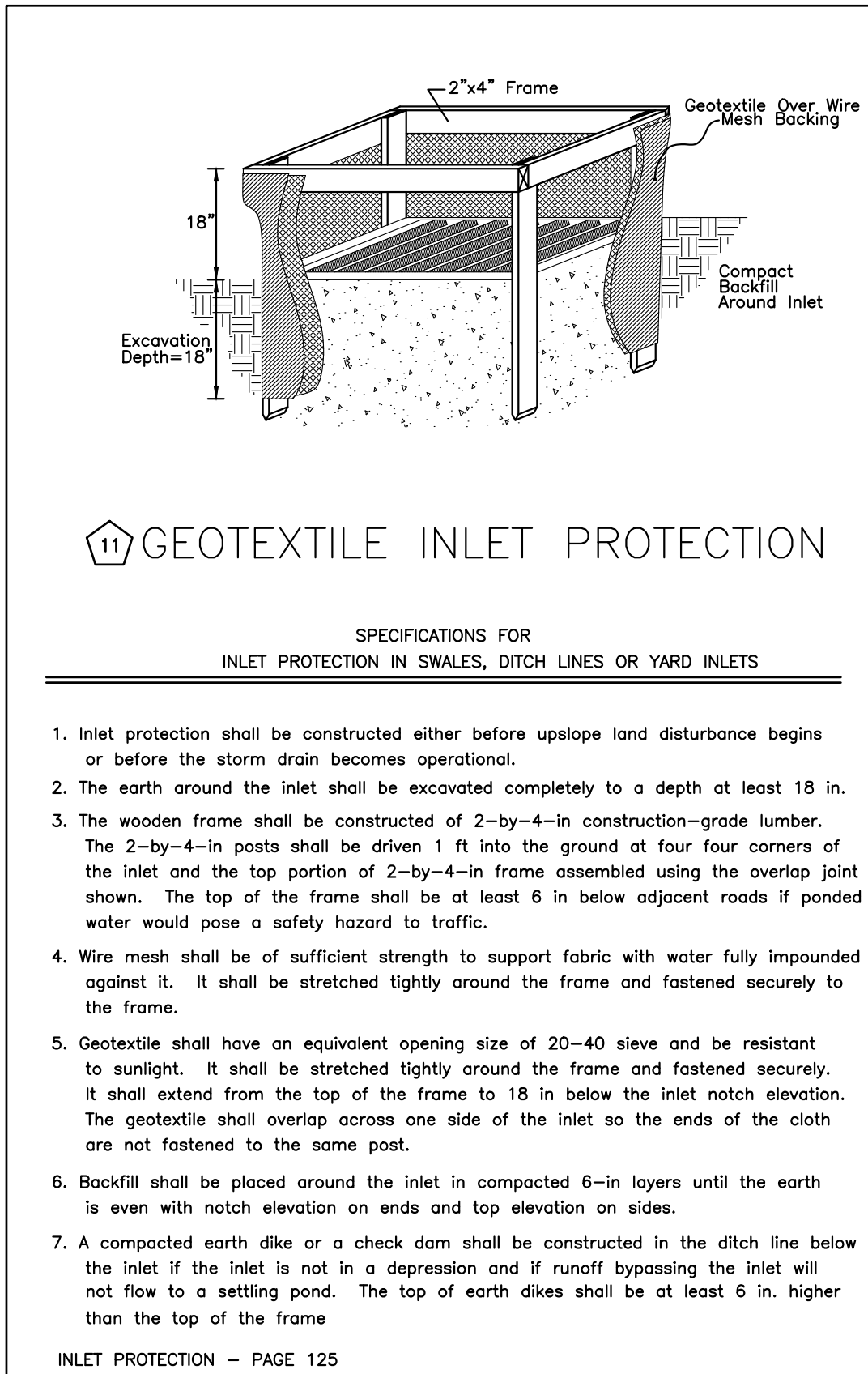
DIKES AND SLOPE PROTECTION



SEDIMENT BASINS & DAMS



7 TEMPORARY STREAM CROSSING



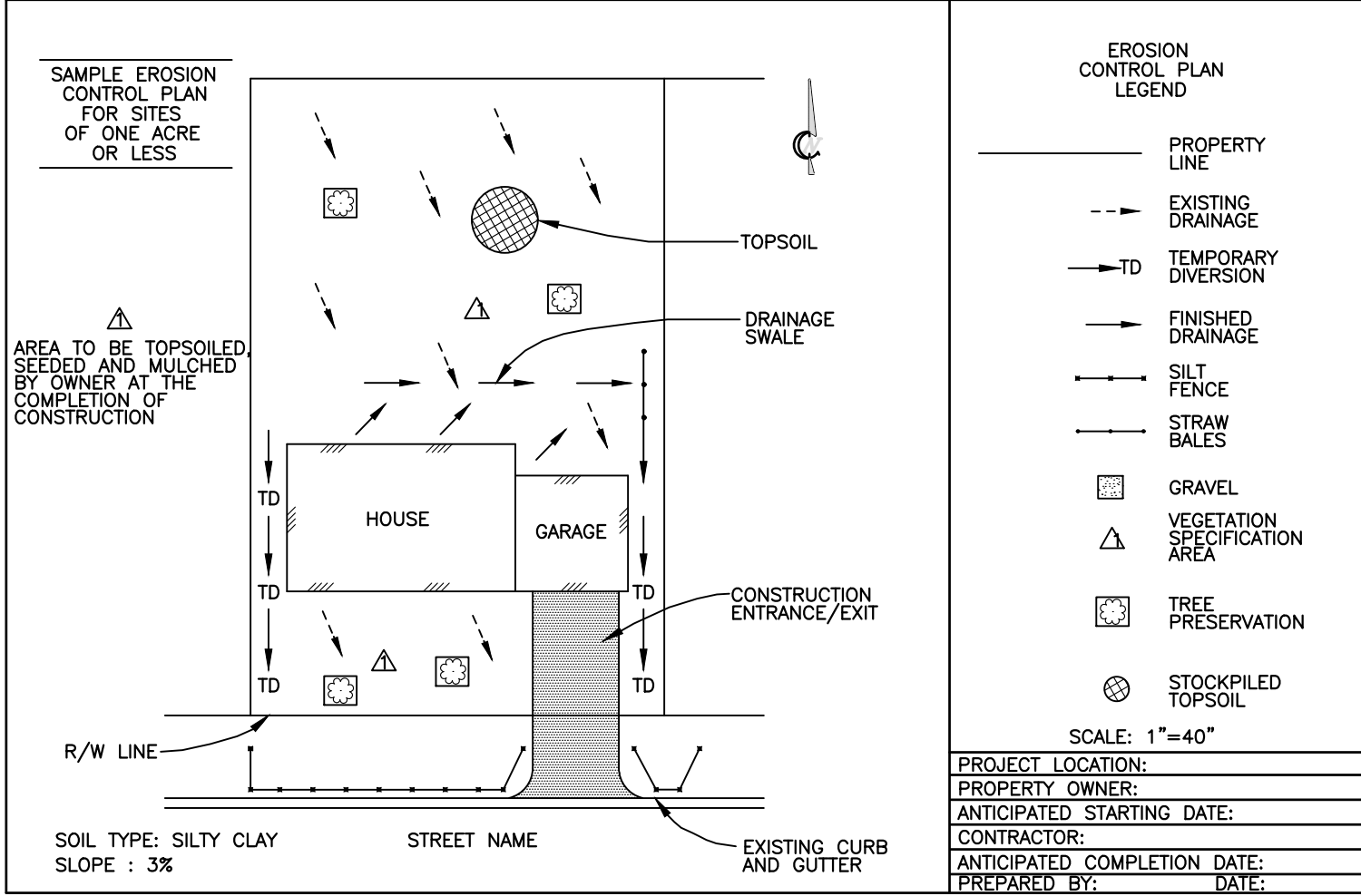
11 GEOTEXTILE INLET PROTECTION

SPECIFICATIONS FOR INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS

- Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
- The earth around the inlet shall be excavated completely to a depth of at least 18 in.
- The wooden frame shall be constructed of 2-by-4-in construction-grade lumber. The 2-by-4-in posts shall be driven 1 ft into the ground at four corners of the inlet and the top portion of 2-by-4-in frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in below adjacent roads if ponded water would pose a safety hazard to traffic.
- Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
- Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
- Backfill shall be placed around the inlet in compacted 6-in layers until the earth is even with notch elevation on ends and top elevation on sides.
- A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame

Source: Rainwater and Land Development, Ohio's Standards for Stormwater Management, Land Development, and Urban Stream Protection. Second Edition—1996

EROSION CONTROL FOR SMALL SITES



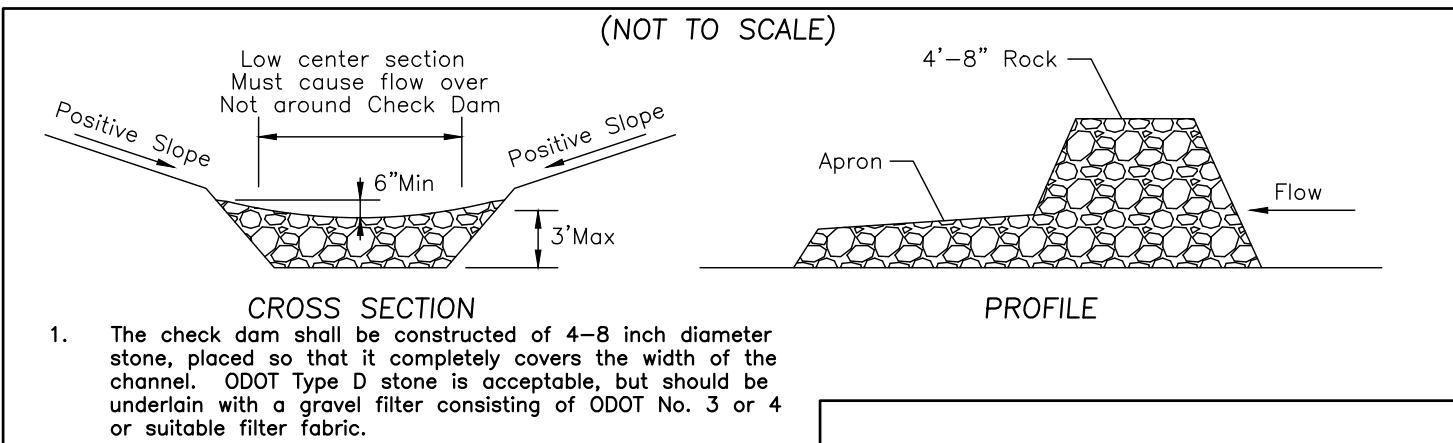
WARNING! Extra measures may be needed if your site:

- Is within 300 feet of a stream or wetland
- Is within 1000 feet of a lake
- Is steep (slopes of 12% or more)
- Receives runoff from 10,000 sq. ft. or more of adjacent land
- Has more than an acre of disturbed ground

Typical Lawn Seed Mixtures

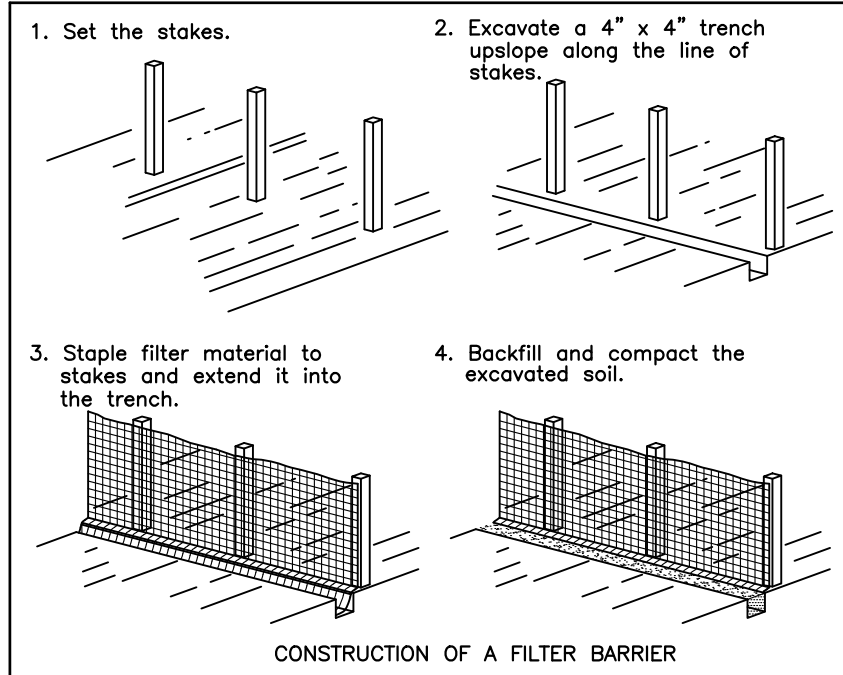
	Sunny Site	Shady Site
Grass		
Kentucky bluegrass	65%	15%
Fine fescue	20%	70%
Perennial ryegrass	15%	15%
Seeding rate (lb./1000 sq. ft.)	3-4	4-5

7 ROCK CHECK DAM

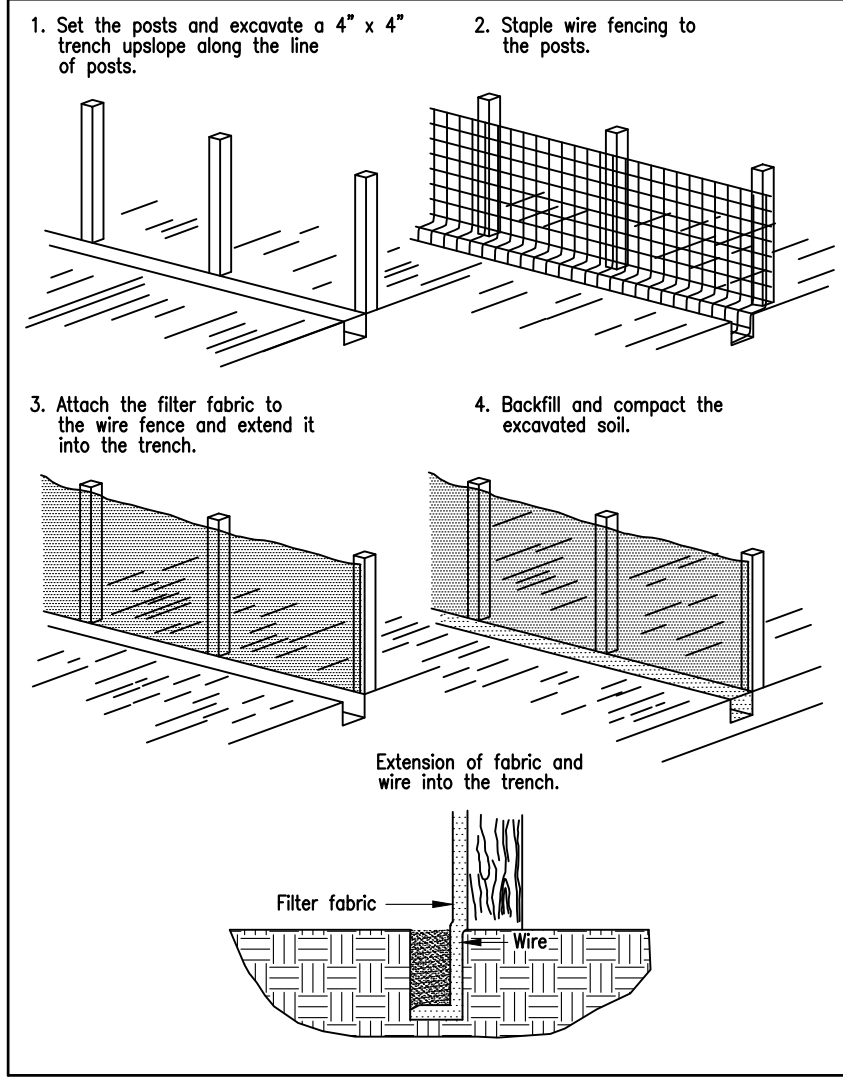


- The check dam shall be constructed of 4-8 inch diameter stone, placed so that it completely covers the width of the channel. ODOT Type D stone is acceptable, but should be underlain with a gravel filter consisting of ODOT No. 3 or 4 suitable filter fabric.
- Maximum height of check dam shall not exceed 3.0 feet.
- The midpoint of the rock check dam shall be a minimum of 6 inches lower than the sides in order to direct across the center and away from the channel sides.
- The base of the check dam shall be entrenched approximately 6 inches.
- Spacing of check dams shall be in a manner such that the toe of the upstream dam is at the same elevation as the top of the downstream dam.
- A Splash Apron shall be constructed where check dams are expected to be in use for an extended period of time, a stone apron shall be constructed immediately downstream of the check dam to prevent flows from undercutting the structure. The apron should be 6 in. thick and its length two times the height of the dam.
- Stone placement shall be performed either by hand or mechanically as long as the center of check dam is lower than the sides and extends across entire channel.
- Side slopes shall be a minimum of 2:1.

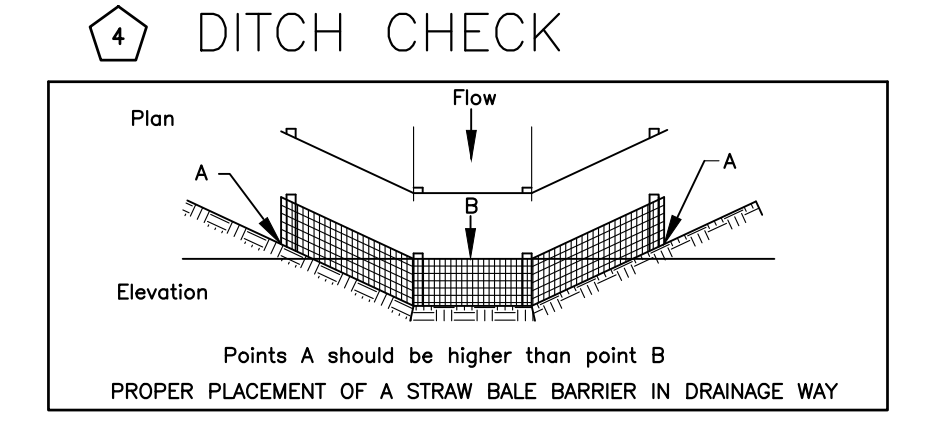
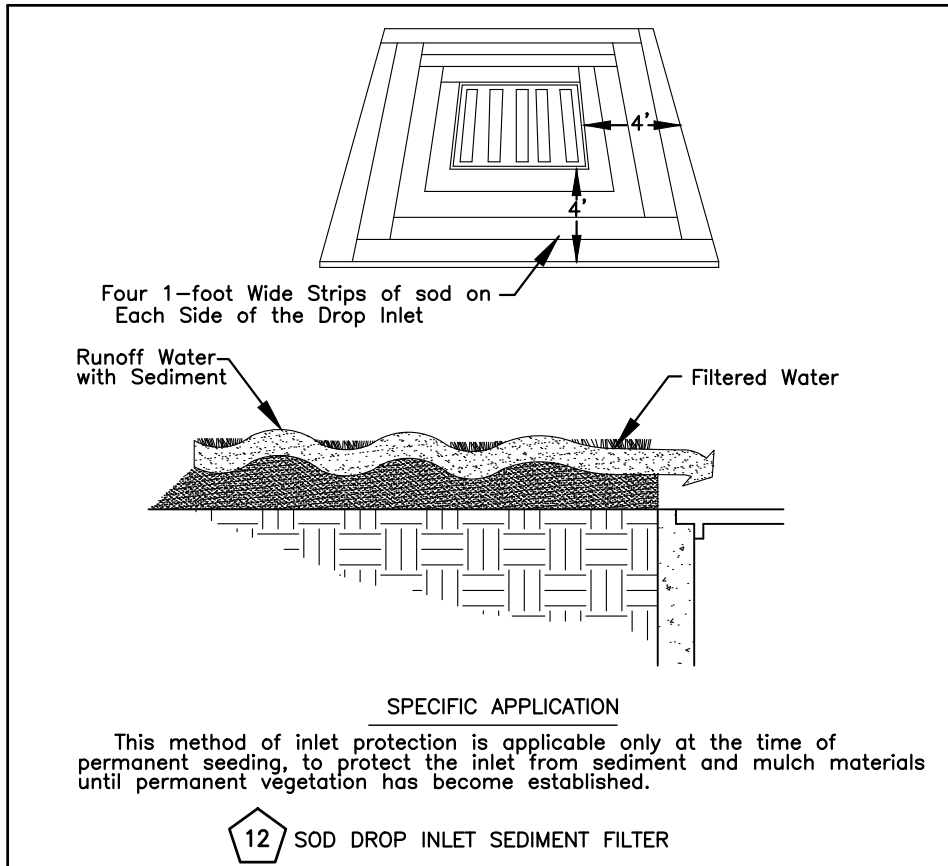
5 SILT FENCE DETAILS



Source: Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant



Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant



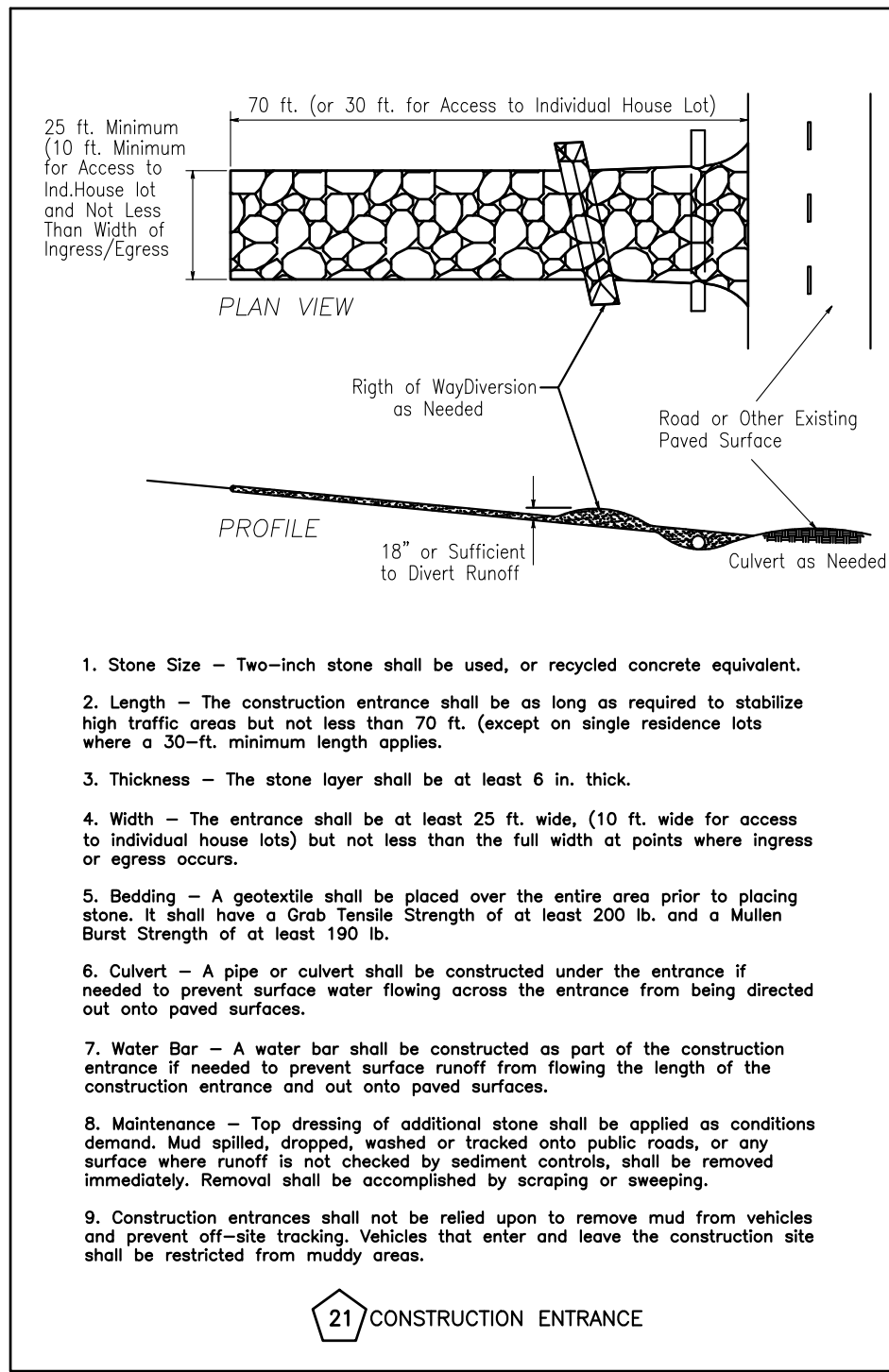
Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

- SEEDING AND MULCHING
Seed, sod or mulch bare soil as soon as possible
Spread 4 to 6 inches of topsoil. Fertilize according to soil test (or apply 10 lb./1000 sq. ft. of 20-10-10 or 10-10-10 fertilizer.) Seed with an appropriate mix for the site (see table.) Rate lightly to cover seed with 1/4" of soil. Roll lightly. Mulch with straw (70-90 lb. or one bale per 1000 sq. ft.) Anchor mulch by punching 2 inches into the soil with a dull, weighted disk or by using netting or other measures on steep slopes, or windy areas. Water gently every day or two to keep soil moist. Less watering is needed once grass is 2 inches tall.
- SODDING
Spread 4 to 6 inches of topsoil. Fertilize according to soil test (or apply 10lb./1000 sq. ft. of 20-10-10 or 10-10-10 fertilizer.) Lightly water the soil. Lay sod Temp or roll lightly. On slopes, lay sod starting at the bottom and work toward the top. Peg each piece down in several places. Initial watering should wet soil 6 inches deep (or until water stands 1 inch deep in a straight-sided container.) Then water lightly every day or two for 2 weeks. If construction is completed after October 31, seeding or sodding may be delayed. Applying mulch or temporary seed (such as rye or winter wheat) is recommended if weather permits. Straw bale or silt fences must be maintained until final seeding or sodding is completed in spring March 15- May 31.

- PRESERVING EXISTING VEGETATION
Wherever possible, preserve existing trees, shrubs, and other vegetation. To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation. Place plastic mesh or snow fence barriers around trees to protect the area below their branches.

- STRAW BALE, SILT FENCE OR MULCH BERM
Put up before any other work is done. Install on downslope side(s) of site with ends extended up sideslopes a short distance. Place parallel to the contour of the land to allow water to pond behind fence. Entrench 4 inches deep (see back page.) Stake (2 stakes per bale OR 1 stake every 3 feet for silt fence.) Leave no gaps between bales or sections of silt fence. Inspect and repair once a week and after every 1/2 inch rain. Remove sediment if deposits reach half the fence or straw bale height. Maintain until a lawn is established.

- SOIL PILES
Located away from any downslope street, driveway, stream, lake, wetland, ditch or drainage way. Temporary seed such as annual rye is recommended for topsoil piles. Surround with straw bales or silt fence.
GRAVEL DRIVE
Install a single access drive using 3 to 5 inch aggregate over a geotextile material. Lay gravel 6 inches deep and 10 feet wide from the foundation to the street. Use to prevent tracking dirt onto the road by all vehicles. Maintain throughout construction until driveway is paved. Park all construction vehicles on the street and off of the site.
SEDIMENT CLEANUP
By the end of each work day, sweep or scrape up soil tracked onto the road. By the end of the next work day after a storm, clean up soil washed off-site and clog straw bales and silt fence for damage or sediment buildup.
DOWNSPOUT EXTENDERS
Not required, but highly recommended. Install as soon as gutters and downslopes are completed. Route water to a grassed or paved area. Maintain until a lawn is established.



- Stone Size - Two-inch stone shall be used, or recycled concrete equivalent.
- Length - The construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (except on single residence lots where a 30-ft. minimum length applies).
- Thickness - The stone layer shall be at least 6 in. thick.
- Width - The entrance shall be at least 25 ft. wide, (10 ft. wide for access to individual house lots) but not less than the full width at points where ingress or egress occurs.
- 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.
- Culvert - A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flowing across the entrance from being directed out onto paved surfaces.
- Water Bar - A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
- Maintenance - Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked into public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
- 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.

21 CONSTRUCTION ENTRANCE

THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)
SECTION 22 TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO

SOIL AND EROSION CONTROL DETAILS

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

Plot time: Jul 15, 2020 - 12:59pm
Drawing name: J:\2006\06F158-006\CVDW06F158-006 CD.dwg - Layout Tab: C5.2 EROSION DETAILS

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

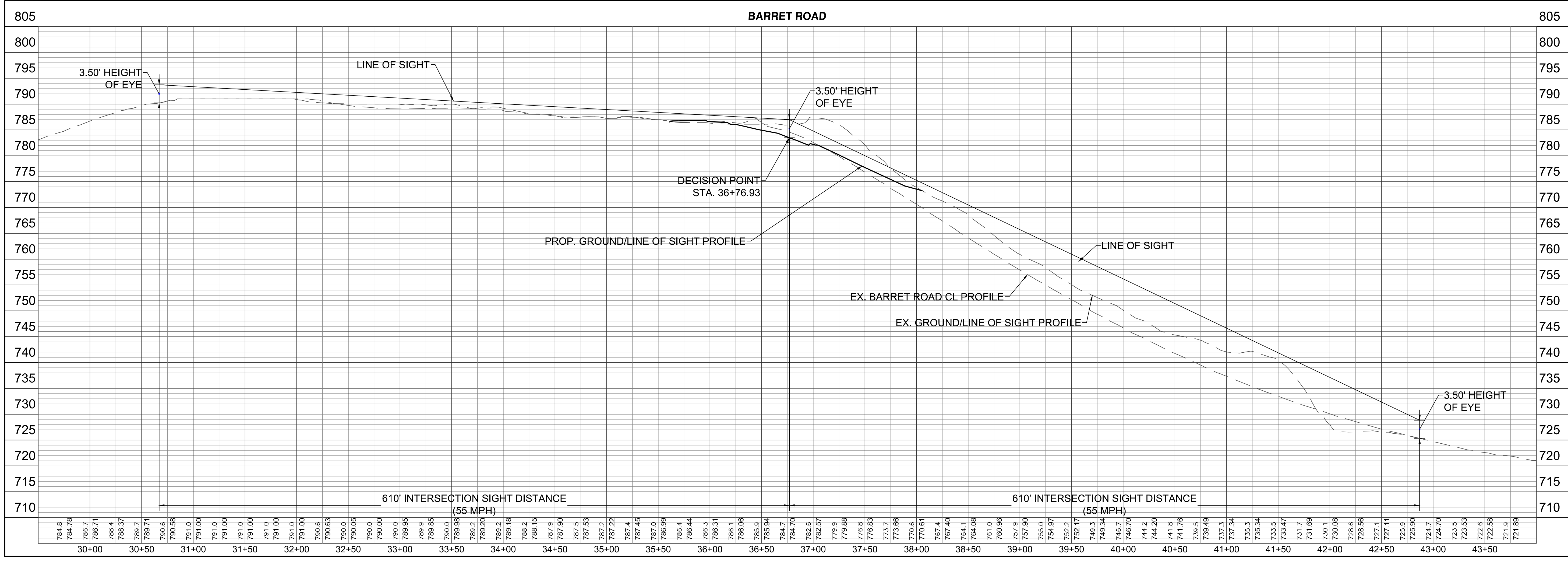
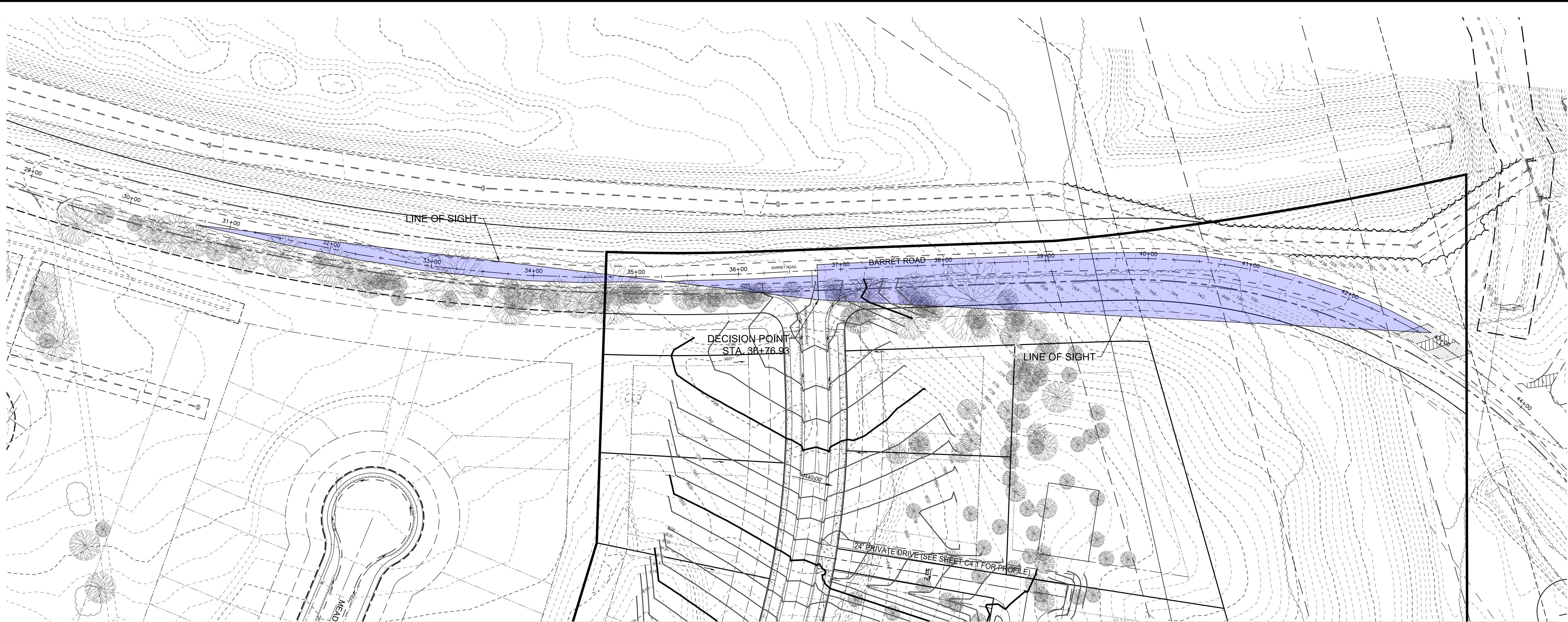
Revision Description

Item	1	2	3	4	5	6	7	8	9
Date									
Drawn									
Chk									

Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20
Sheet:

C5.2

Plot time: Aug 05, 2020 - 9:23am
Drawing name: J:\2006\06F158-006\TRIDWG\06F158-006 ISD.dwg - Layout Tab: ISD



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, USE, REPRODUCTION OR DUPLICATION IN WHOLE OR IN PART MAY BE MADE WITHOUT WRITTEN PERMISSION OF BB, AND IS DONE SO AT USER'S SOLE RISK. COPYRIGHT - ALL RIGHTS RESERVED.

THE OAKS OF WEST CHESTER
SECTION SIX (PHASE 5, 6, & 7)
SECTION 22, TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO

INTERSECTION SIGHT DISTANCE ANALYSIS

bayer becker
www.bayerbecker.com
6800 Tyersville Road, Suite A
Mason, OH 45040 - 513.336.6600

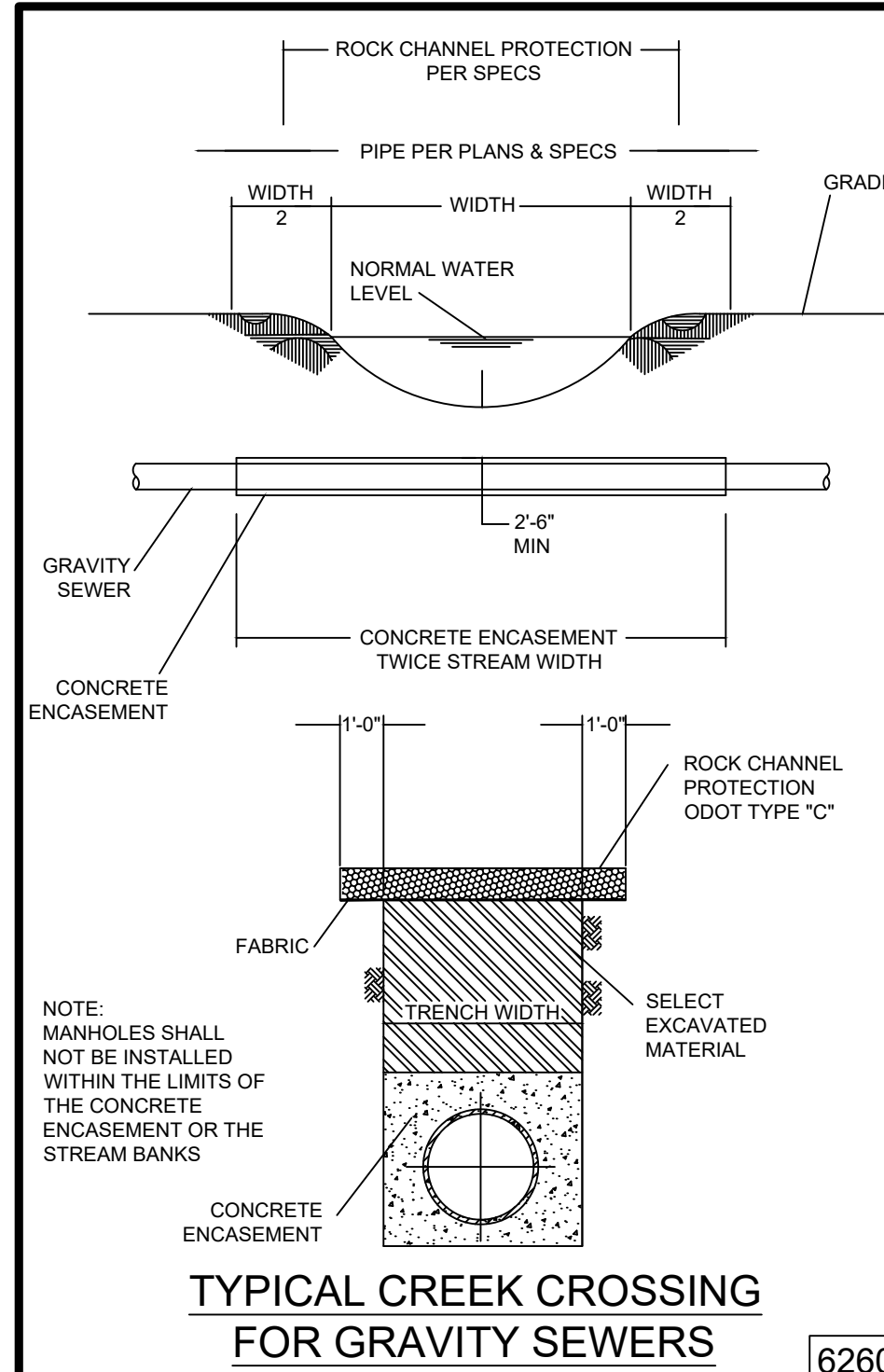
Drawing: 06F158-006 ISD
Drawn by: KMD
Checked by:
Issue Date: 04-30-20
Sheet: **C6.0**

North Arrow
Basis of Bearing:
State Plane NAD83 GPS Observations
0 50 75
SCALE: 1" = 50'

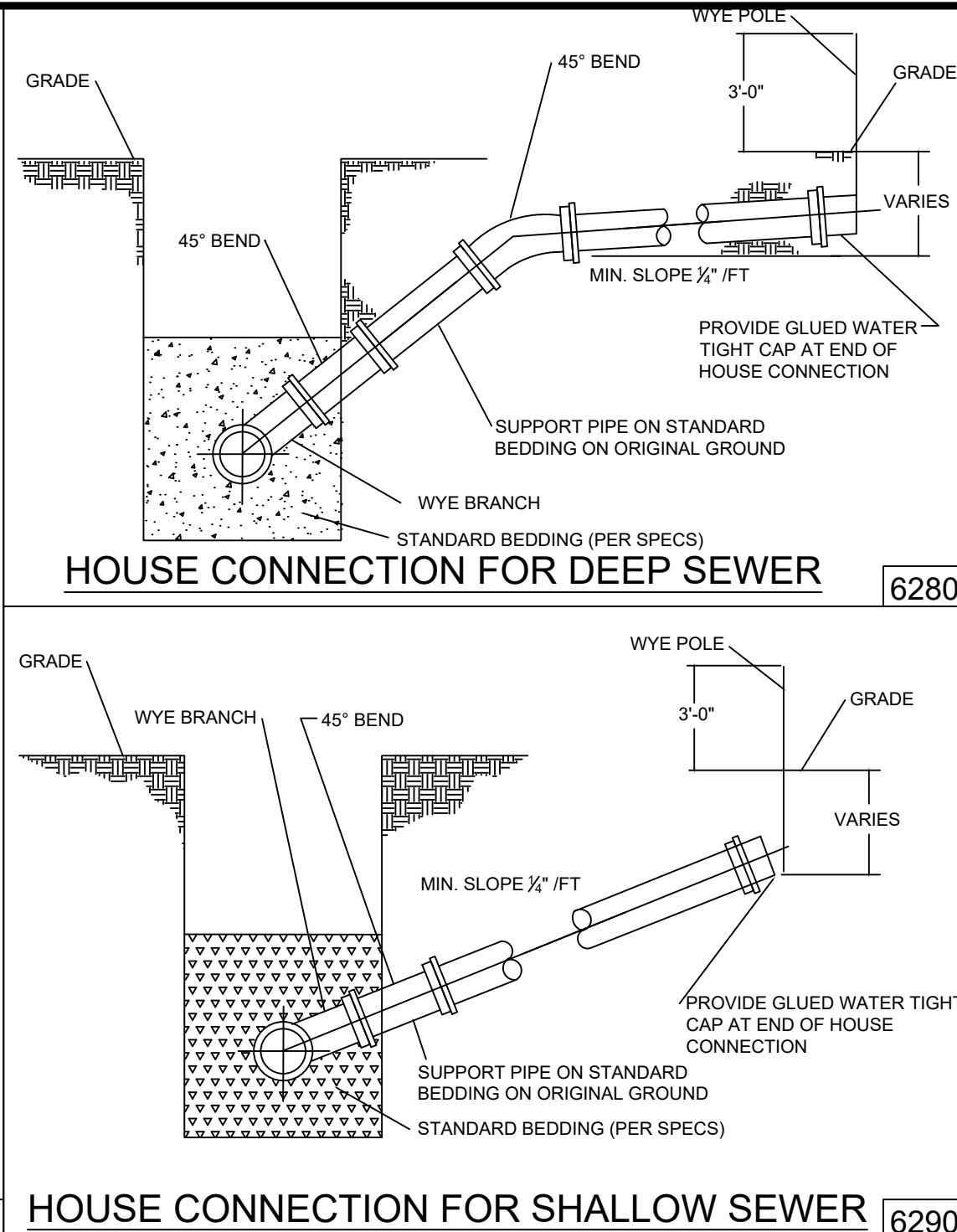
STATE OF OHIO
JOHN S. DELVERNE
E-59378
REGISTERED PROFESSIONAL ENGINEER
8/5/20

Item	Revision Description	Date	Drawn	Check
1	BUTLER COUNTY COMMENTS	08-05-20	LD	JSD

Plot time: Aug 05, 2020 - 10:13am
Drawing name: J:\2006\06F158-006\CD.dwg - Layout Tab: C7.0 SANITARY DETAILS



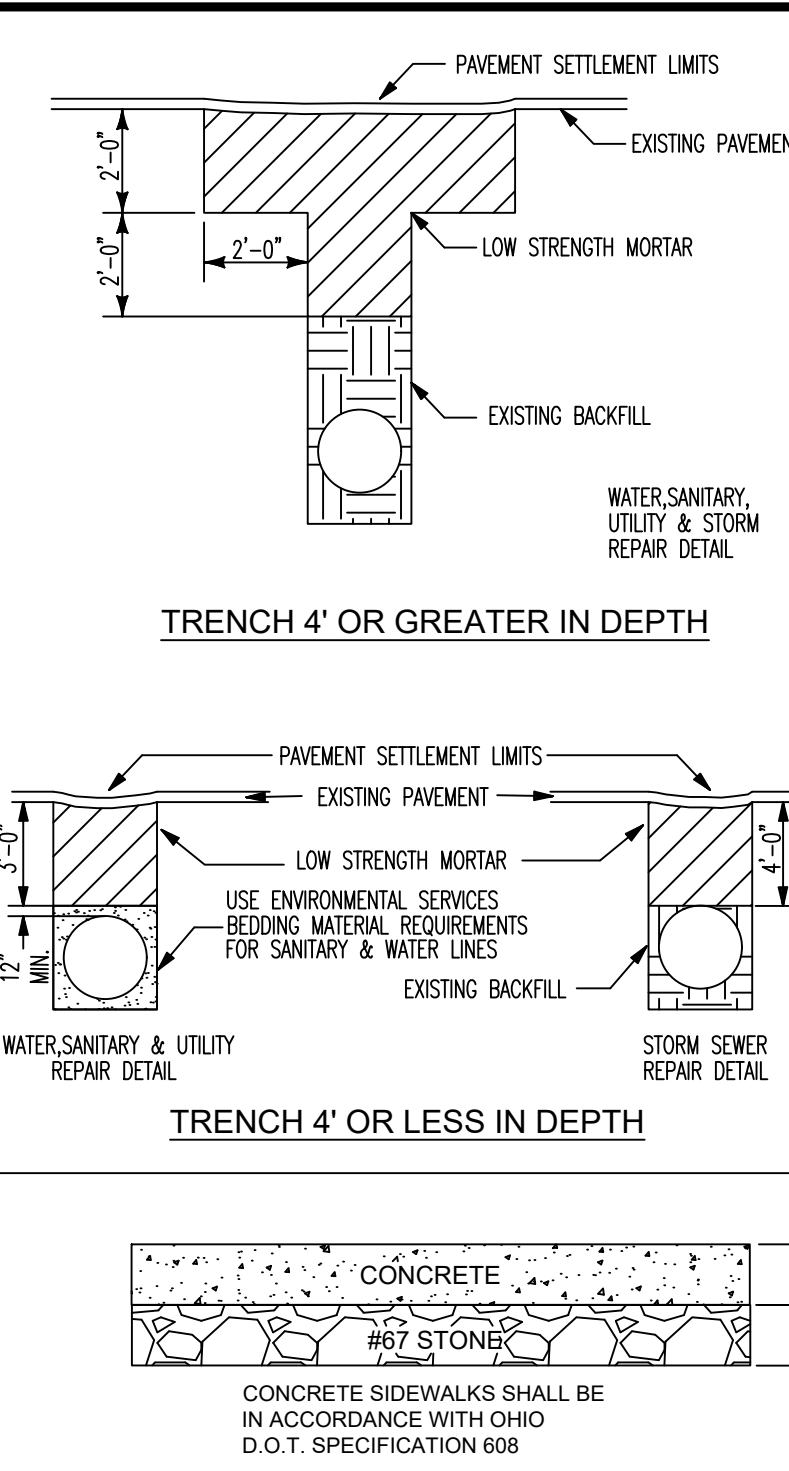
TYPICAL CREEK CROSSING FOR GRAVITY SEWERS



HOUSE CONNECTION FOR DEEP SEWER



HOUSE CONNECTION FOR SHALLOW SEWER



SETTLEMENT REPAIR

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:

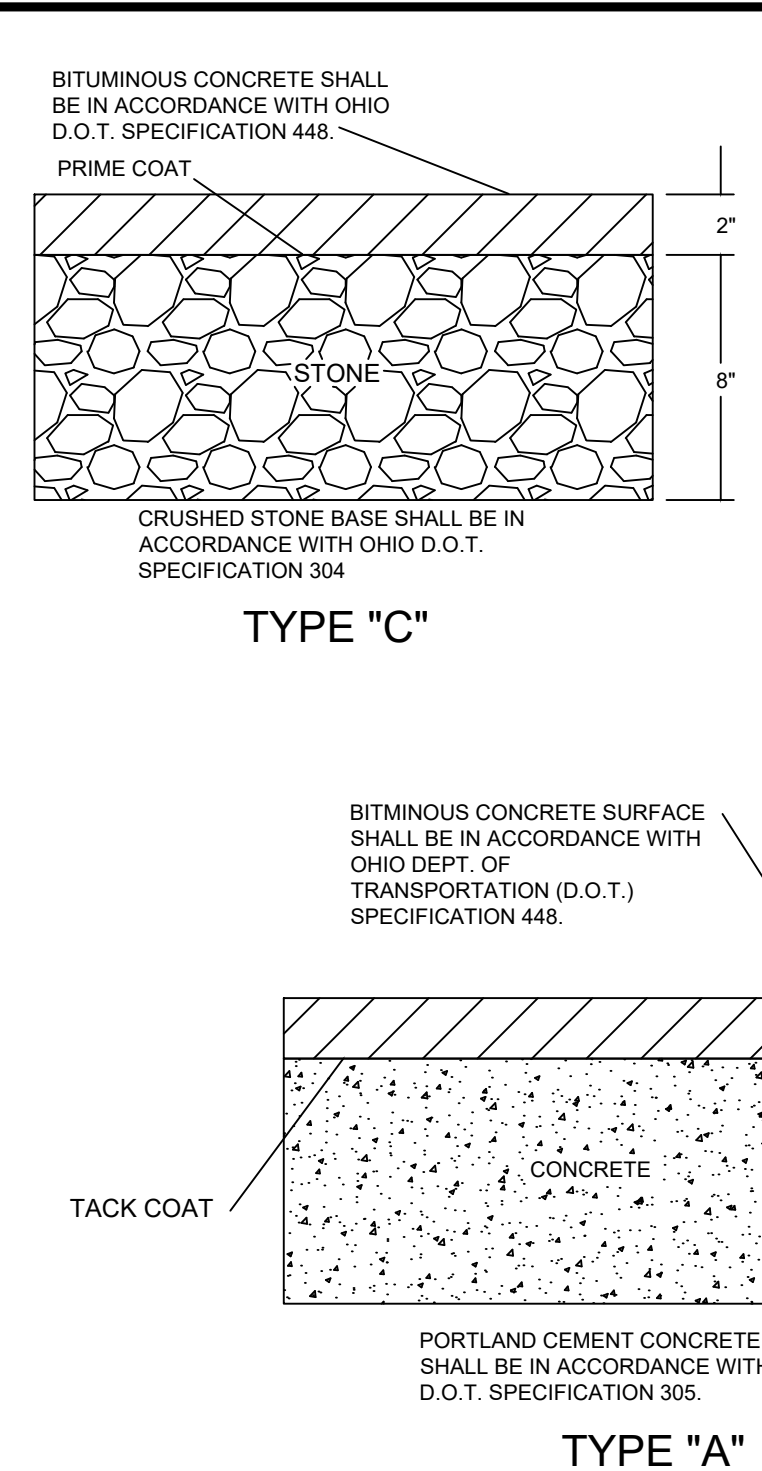
- CEMENT 701.01 OR 701.04
- FLY ASH SHALL MEET ASTM C-618
- FINE AGGREGATE SHALL BE NEUTRAL SAND OR SAND MANUFACTURED FROM STONE, GRAVEL, OR AIR-COOLED SLAG. THE GRADATION OF THE SAND SHALL MEET THE REQUIREMENTS OF 703.05. THE SAND SHALL BE FINE ENOUGH TO STAY IN SUSPENSION IN THE MIXTURE TO THE EXTENT REQUIRED FOR PROPER FLOW. THE ENGINEER RESERVES THE RIGHT TO REJECT THE SAND IF THE FLOWABLE MIXTURE CANNOT BE PRODUCED.
- WATER USED FOR MORTAR BACKFILL SHALL BE FREE FROM OIL, ACID, STRONG ALKALIDIES OR VEGETABLE MATTER.
- SUMPS MEASURED IN THE ORDINARY WAY WILL BE 8" OR HIGHER FOR PROPER PLACEMENT OF THE FLOWABLE MATERIAL.

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

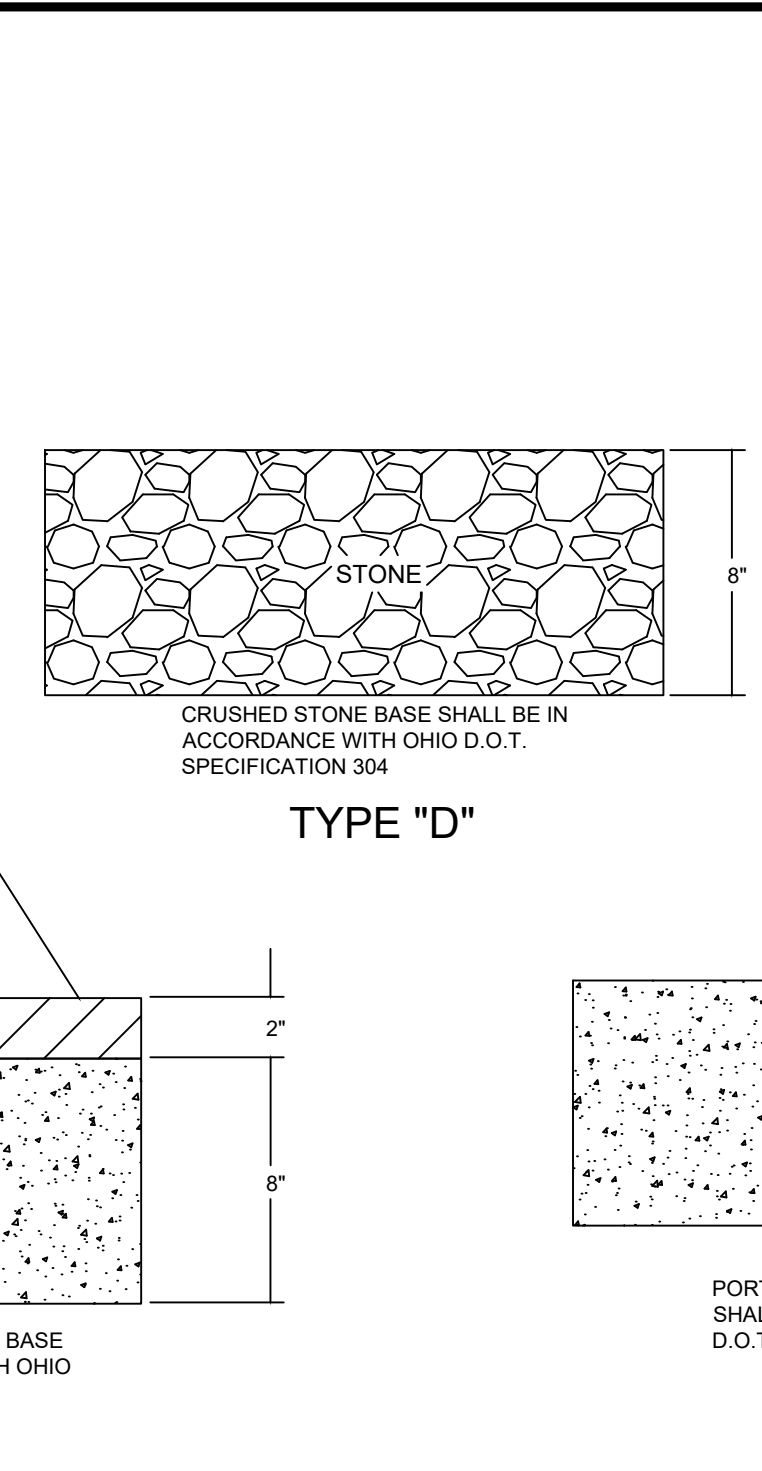
CLASS	LSM - 50
CEMENT	50 LBS.
FLY ASH	250 LBS.
SAND	2910 LBS.
WATER (TARGET)	500 LBS.

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.

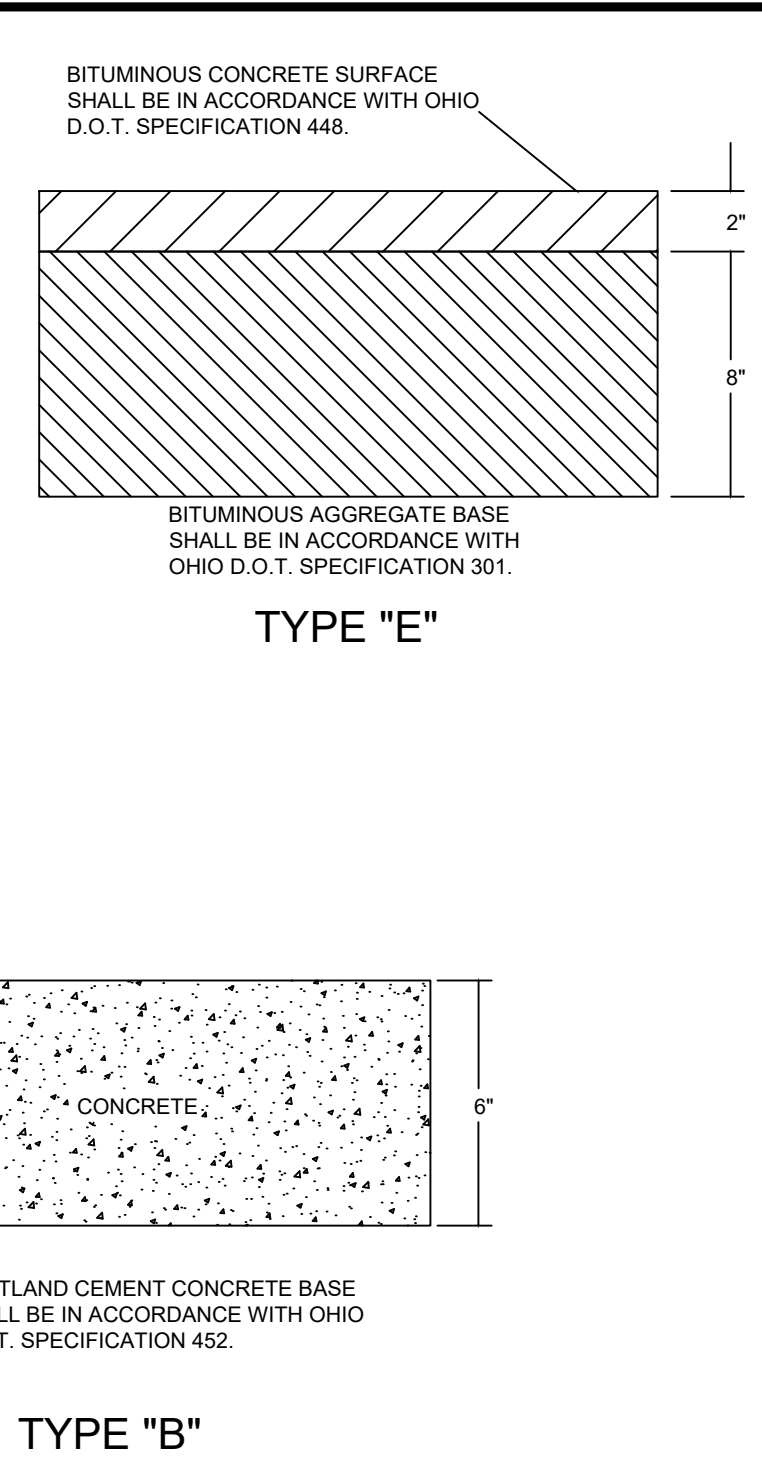
SIDEWALK RESTORATION DETAIL



TYPE "C"



TYPE "D"



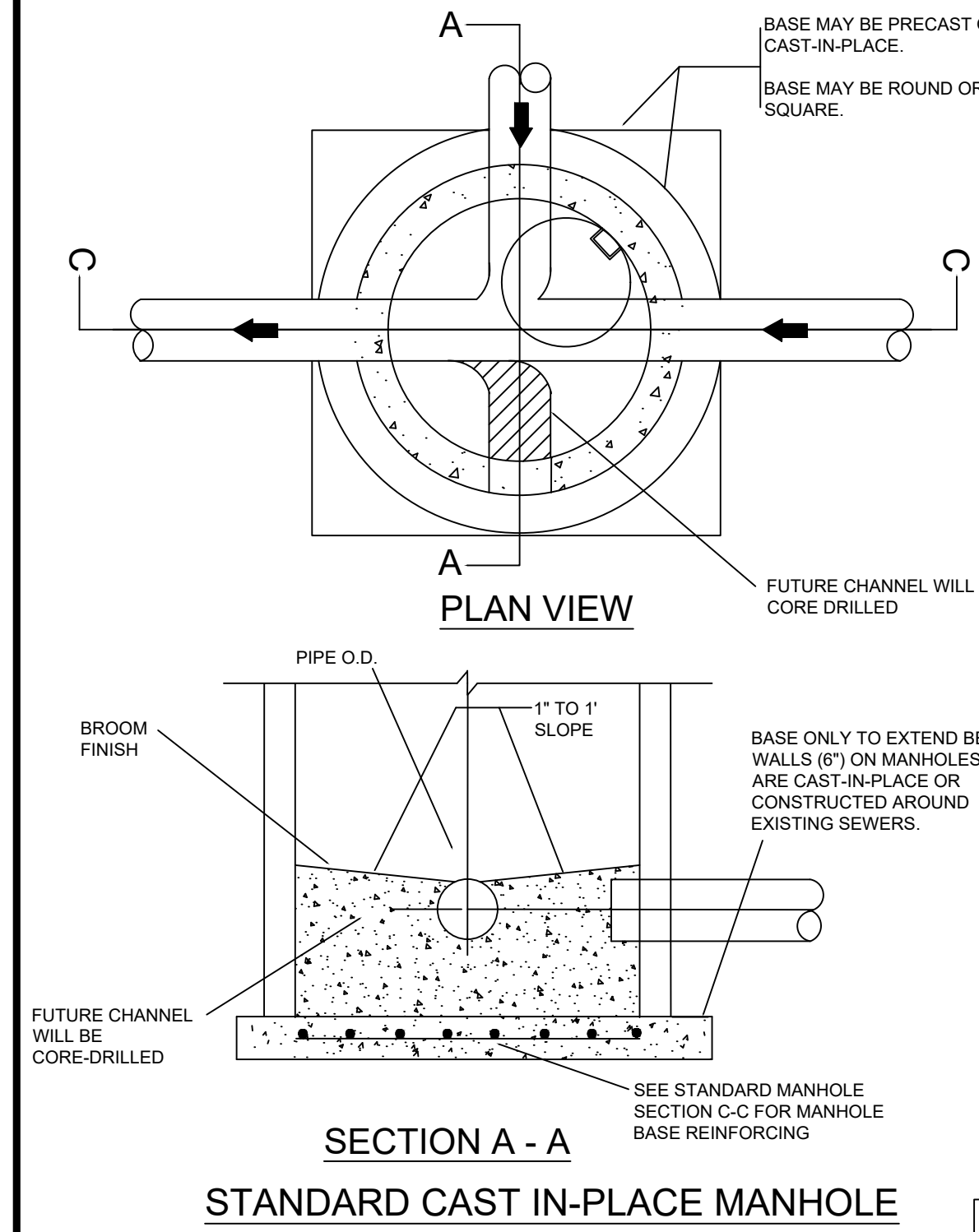
TYPE "E"



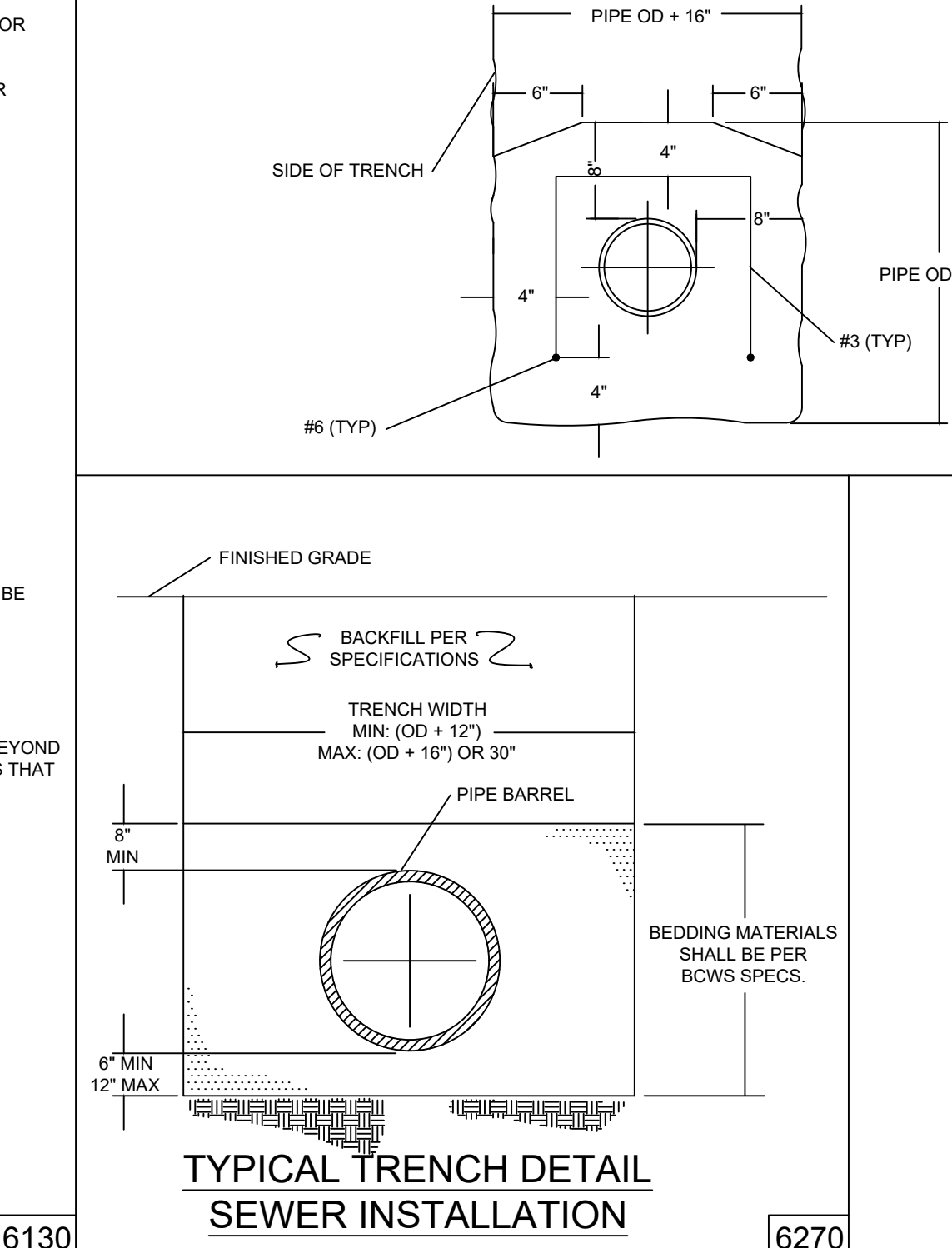
TYPE "A"



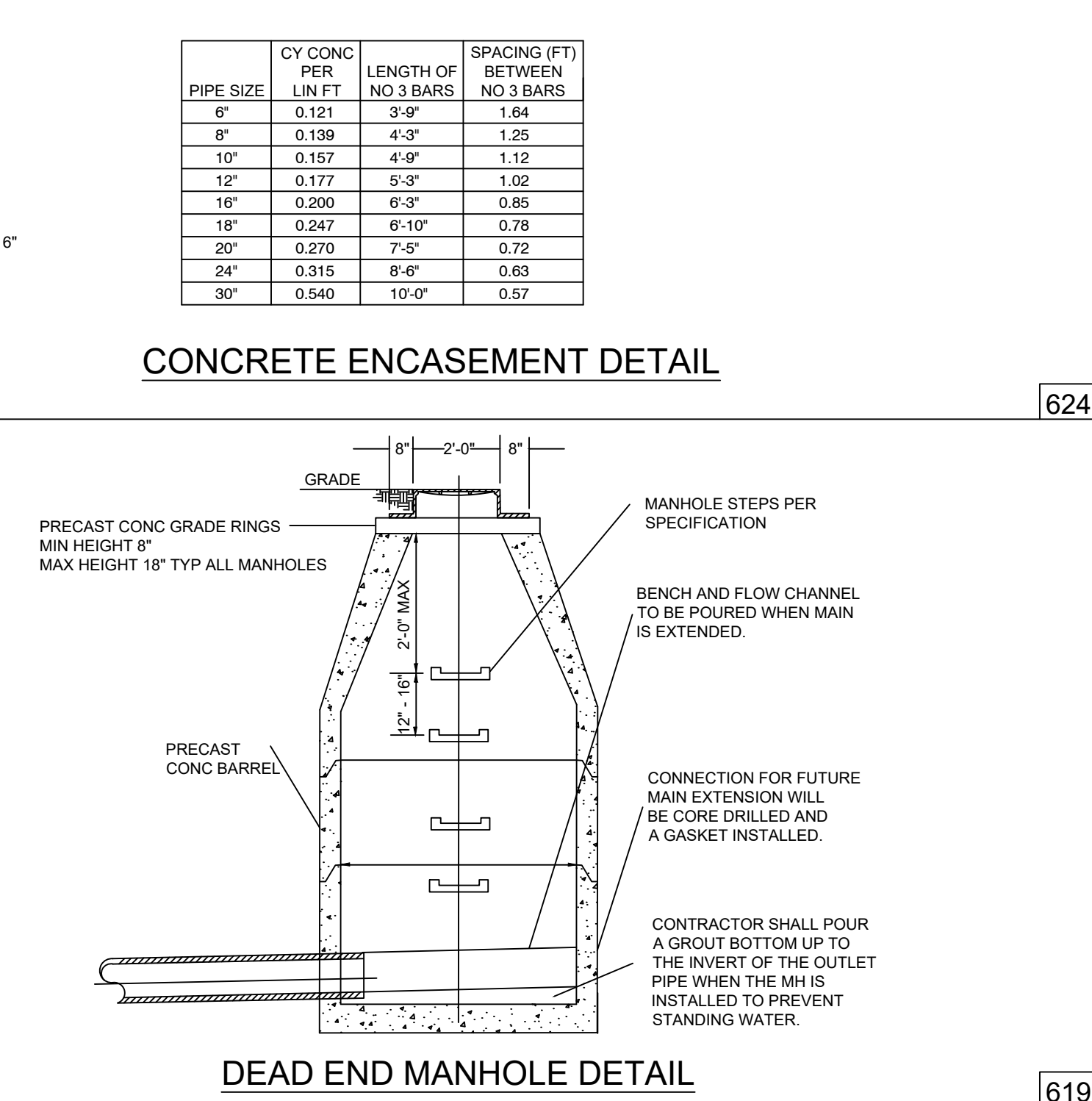
TYPE "B"



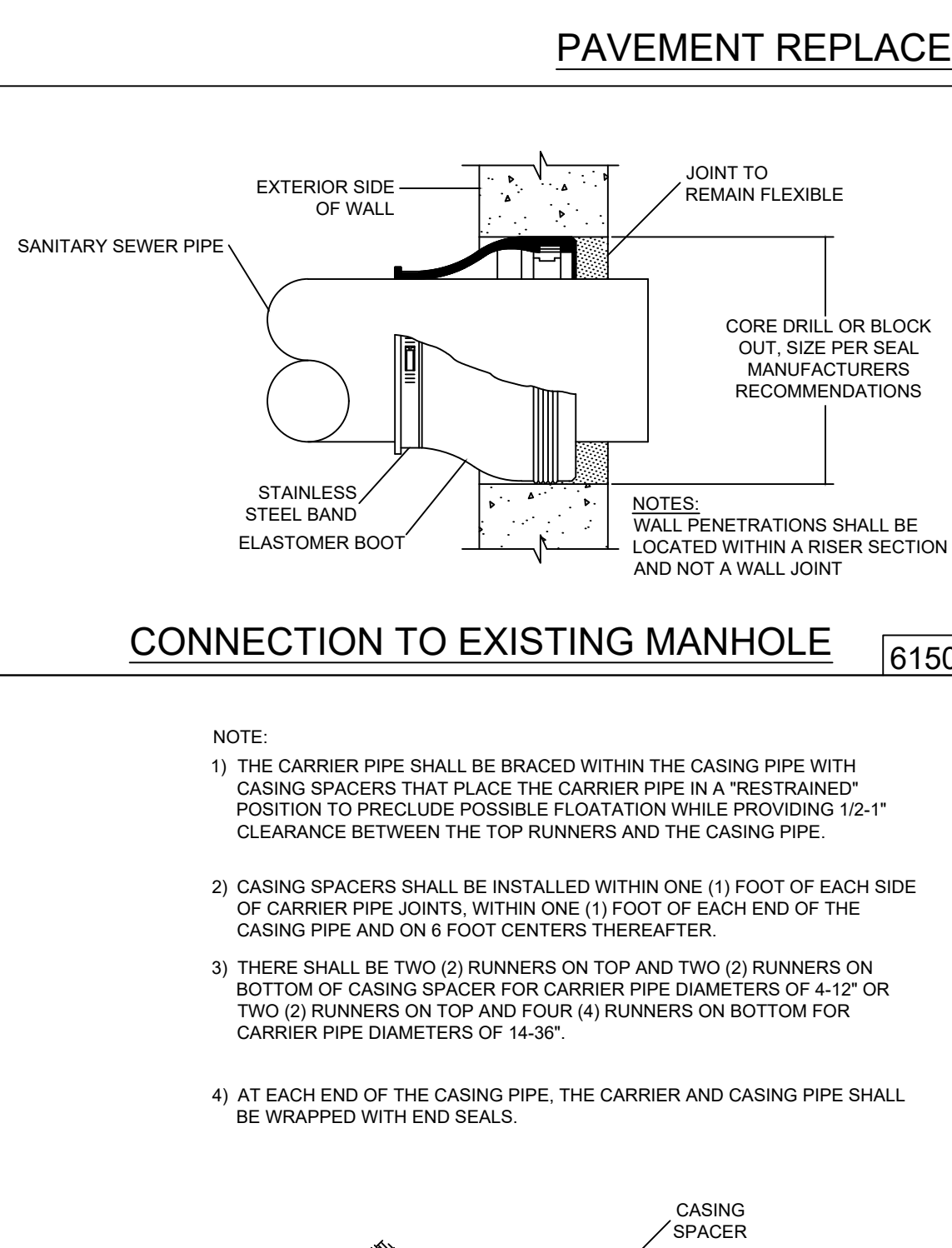
SECTION A - A
STANDARD CAST IN-PLACE MANHOLE



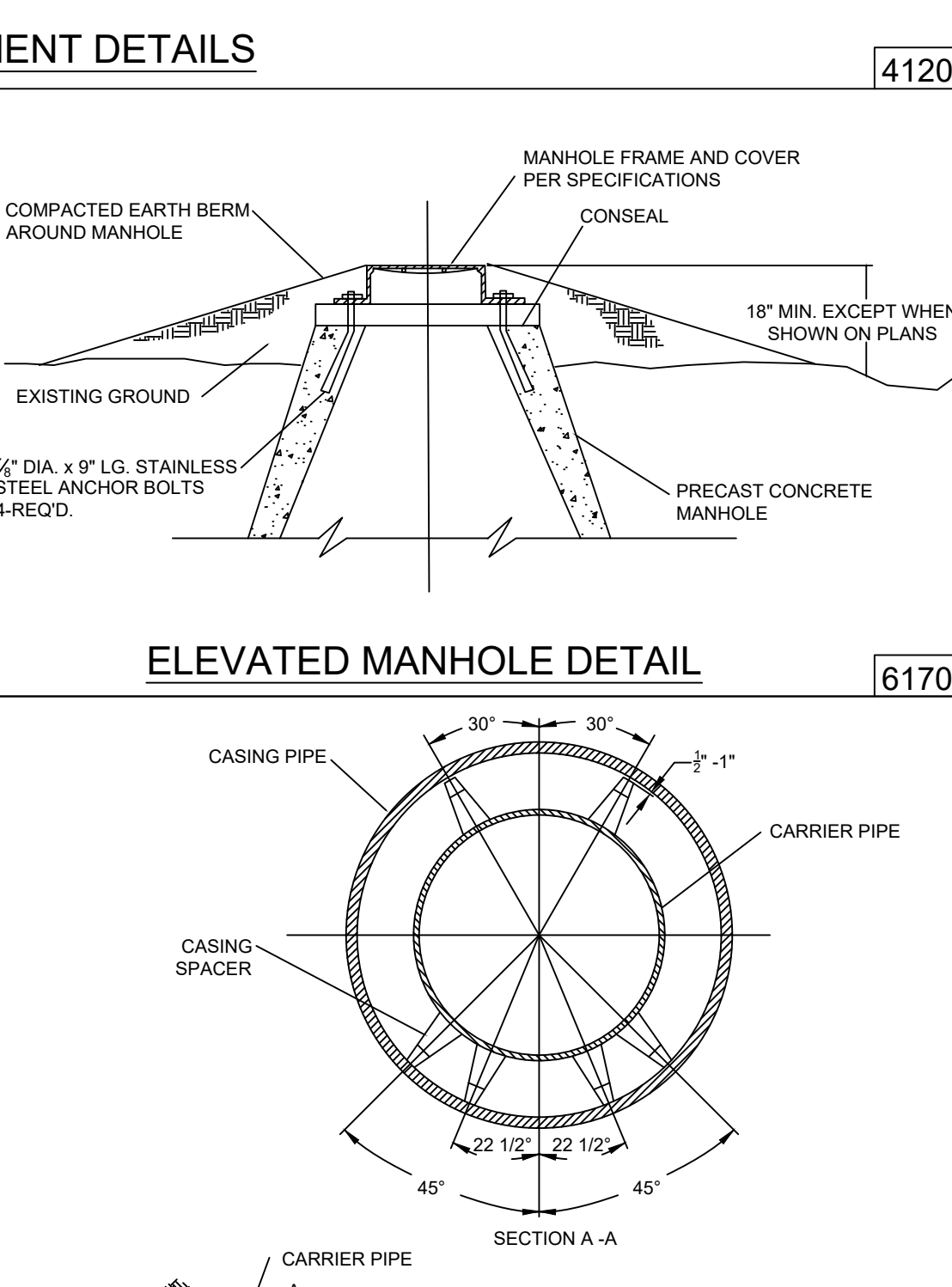
TYPICAL TRENCH DETAIL SEWER INSTALLATION



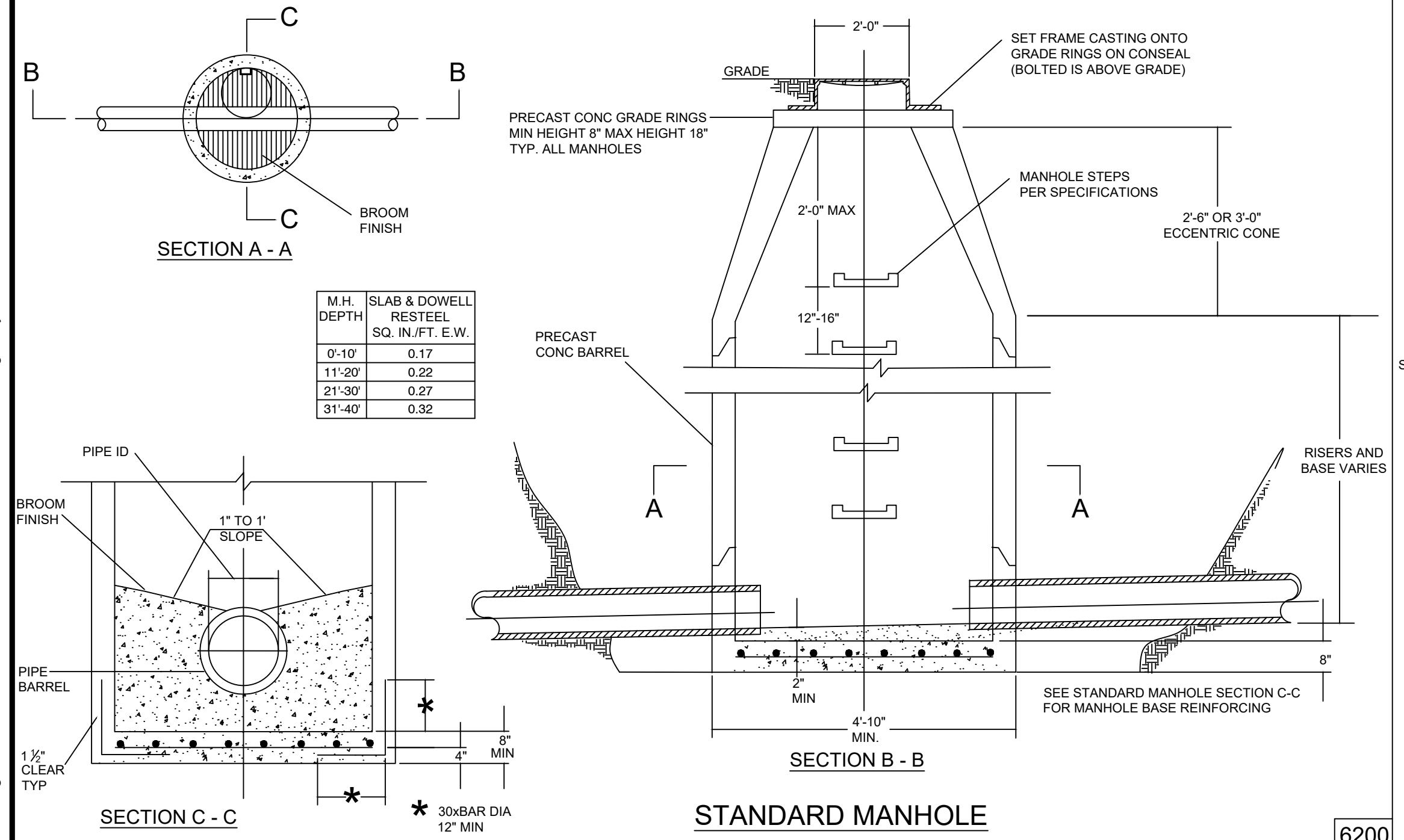
DEAD END MANHOLE DETAIL



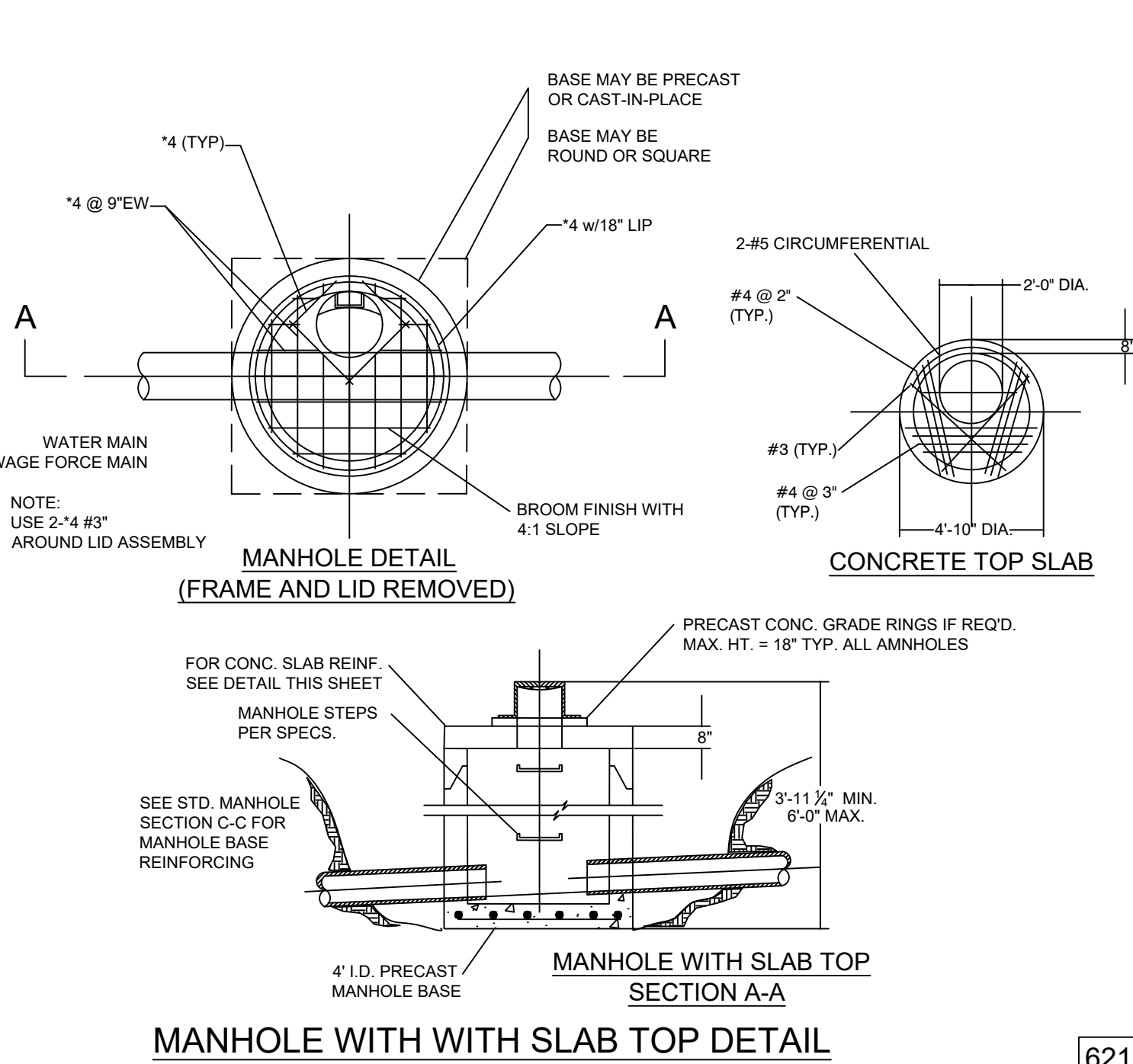
CONNECTION TO EXISTING MANHOLE



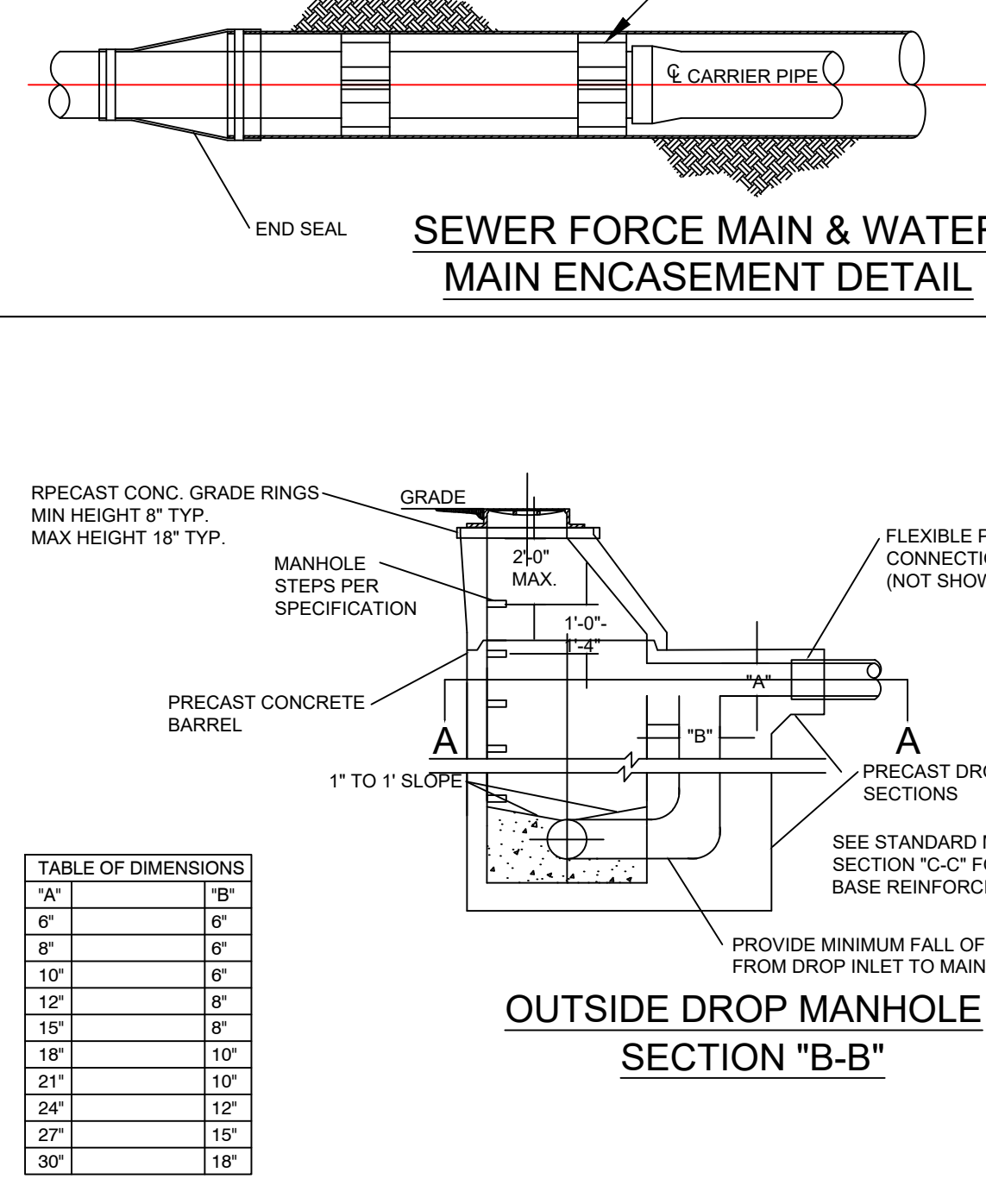
ELEVATED MANHOLE DETAIL



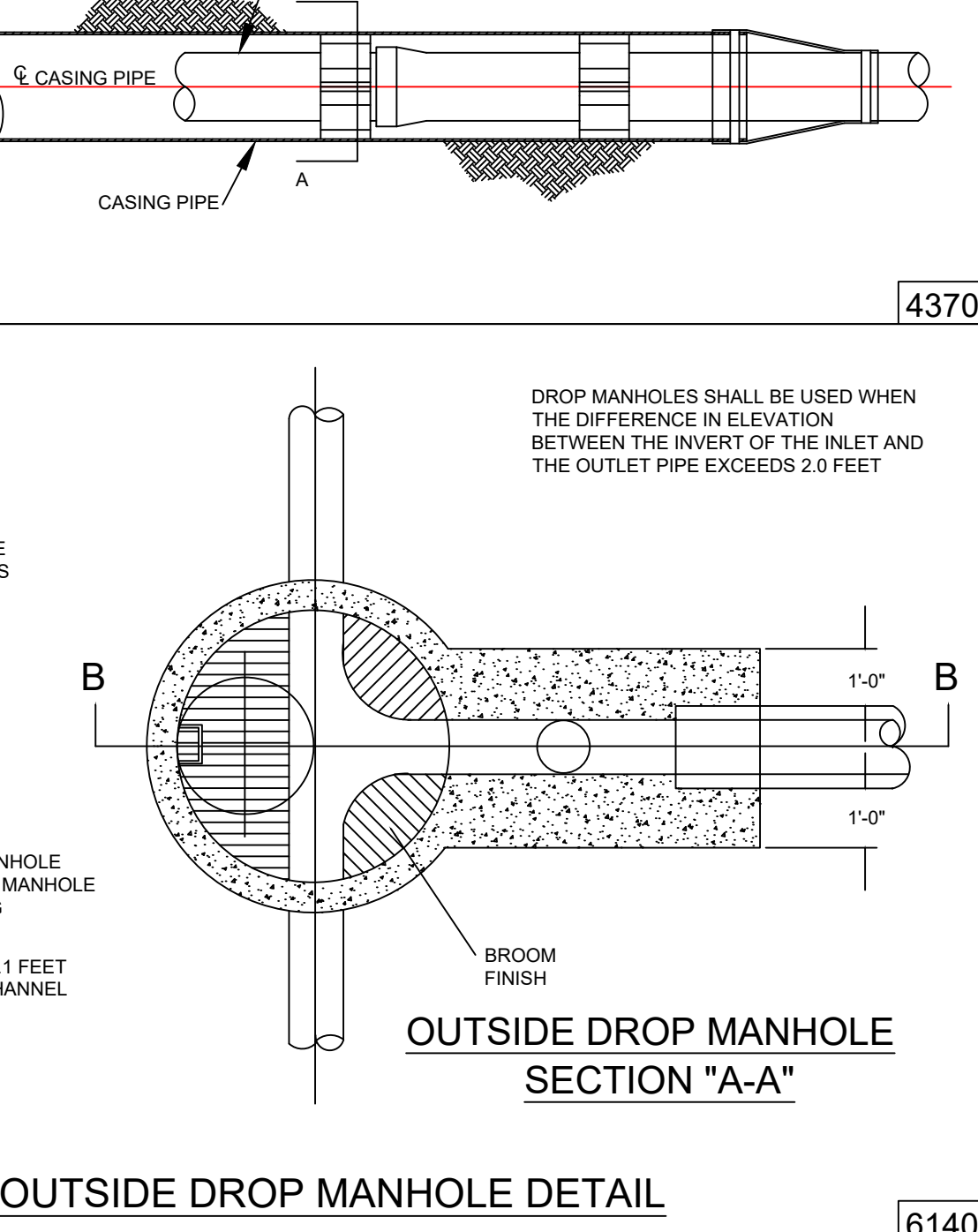
STANDARD MANHOLE



MANHOLE WITH WITH SLAB TOP DETAIL



OUTSIDE DROP MANHOLE SECTION "B-B"



OUTSIDE DROP MANHOLE SECTION "A-A"

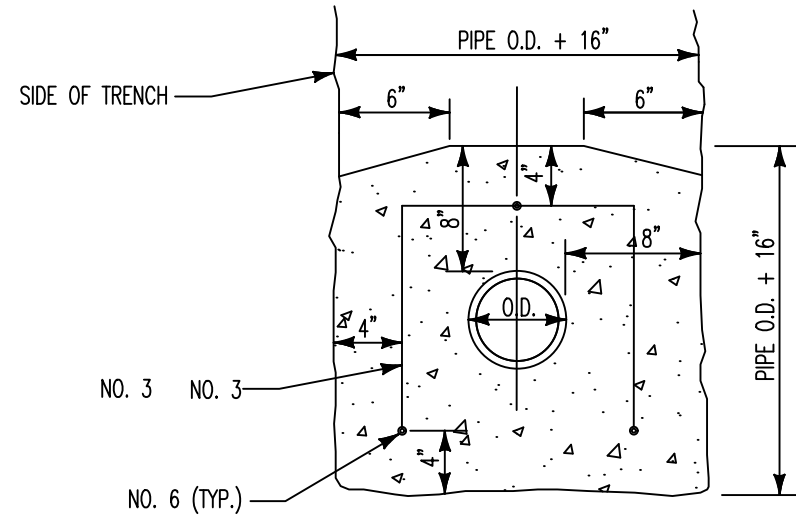
THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)
SECTION 22 TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO

BUTLER COUNTY SANITARY DETAILS

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

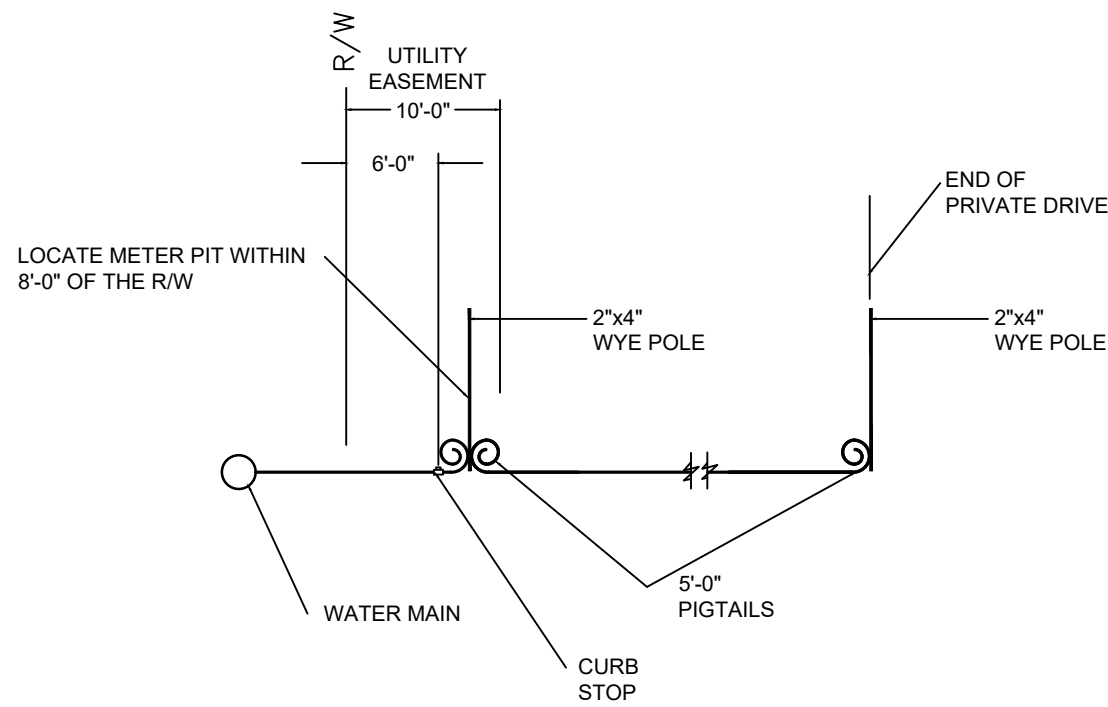
Drawing: 06F158-006 CD
Drawn by: LDF
Checked by: JSD
Issue Date: 06-15-20
Sheet: C7.0

Plot time: Aug 05, 2020 - 10:12am
Drawing name: J:\2006\06F158-006\CDWG\06F158-006 CD.dwg - Layout Tab: C7.0 SANITARY DETAILS



PIPE SIZE	C.Y. CONC. PER LIN. FT.	LENGTH OF NO. 3 BARS	SPACING BETWEEN NO. 3 BARS
6"	0.121	3'-9"	1.64
8"	0.139	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'-0"	0.57

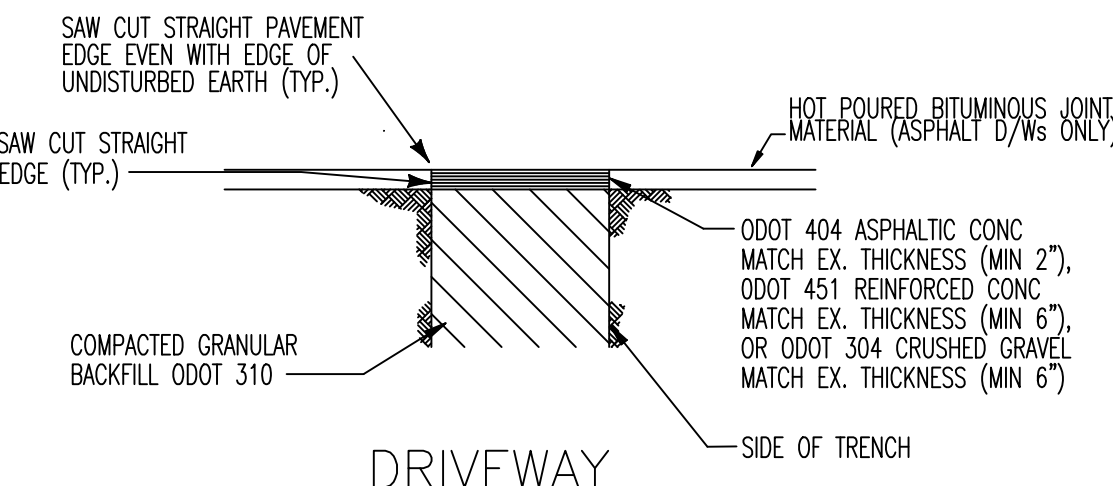
CONCRETE ENCASEMENT



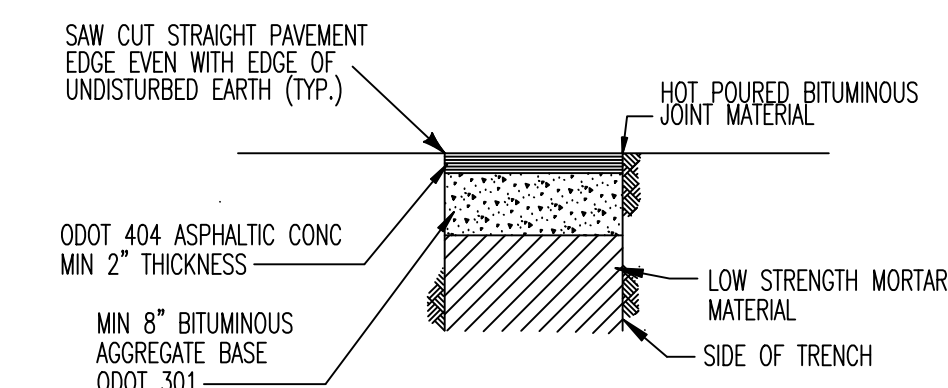
WATER SERVICE DETAIL FOR "PANHANDLE" LOTS

BUTLER COUNTY
WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

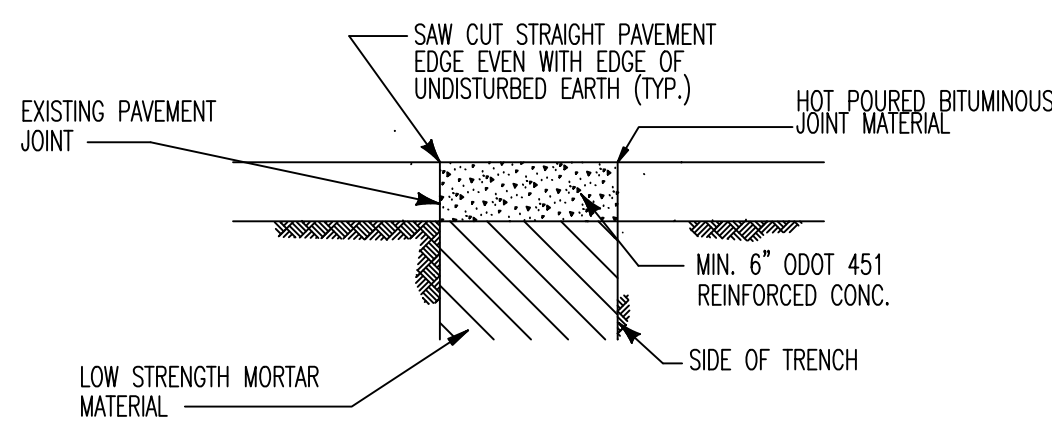
5300



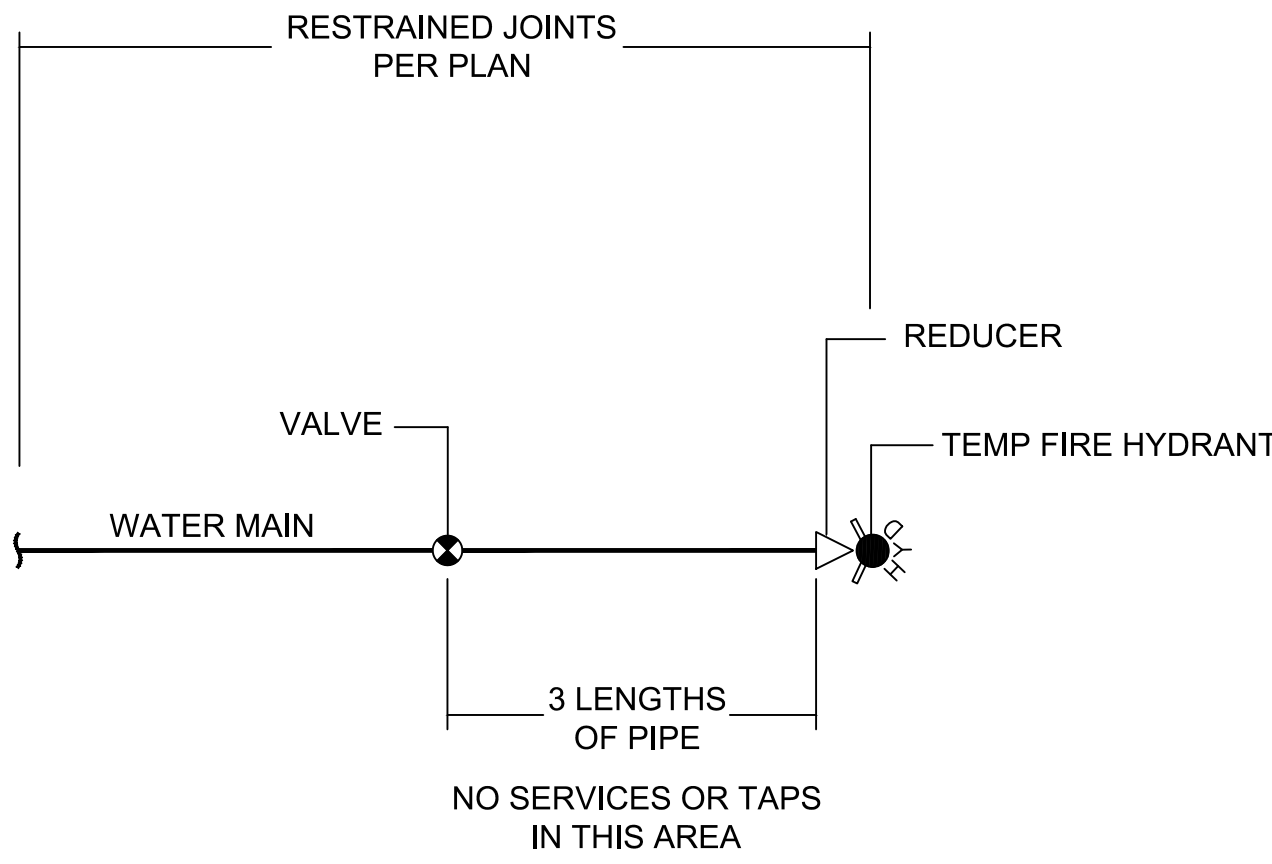
DRIVEWAY



ASPHALTIC CONCRETE ROADWAY

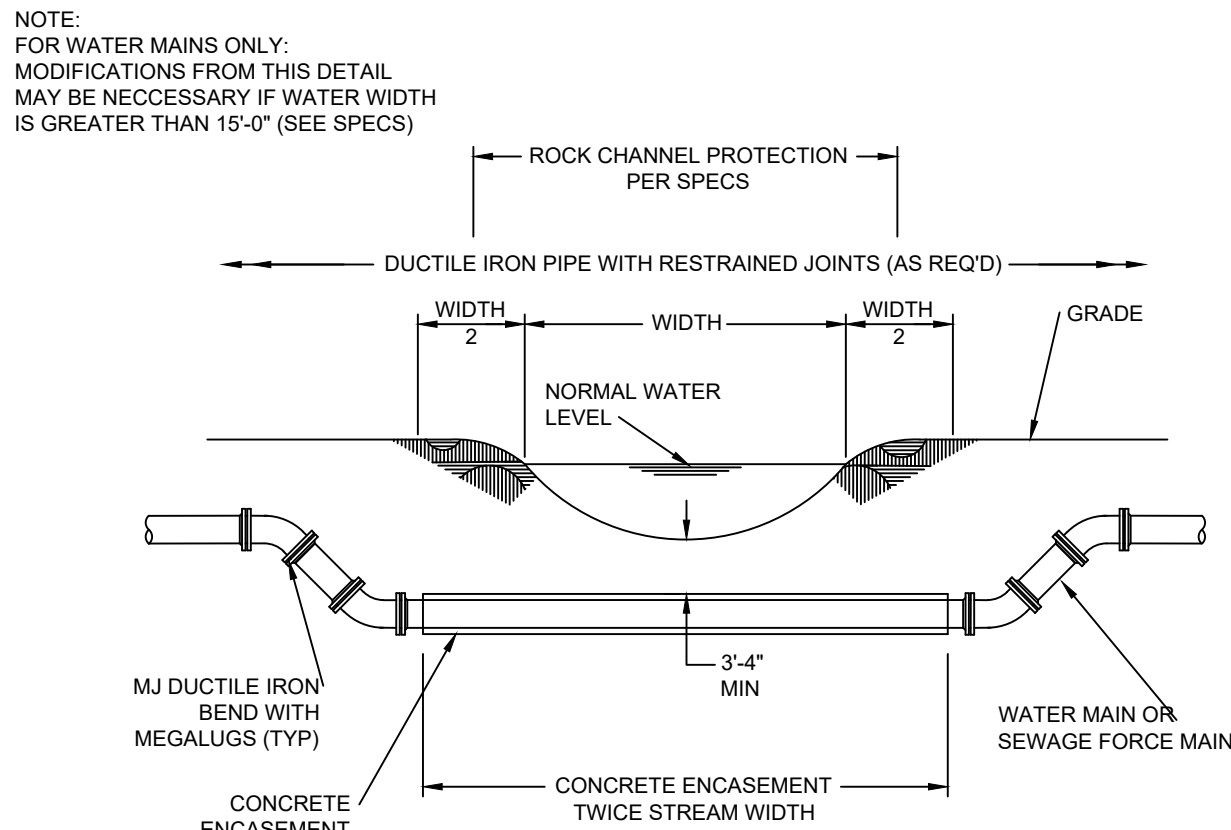


CONCRETE ROADWAY
PAVEMENT REPLACEMENT DETAILS



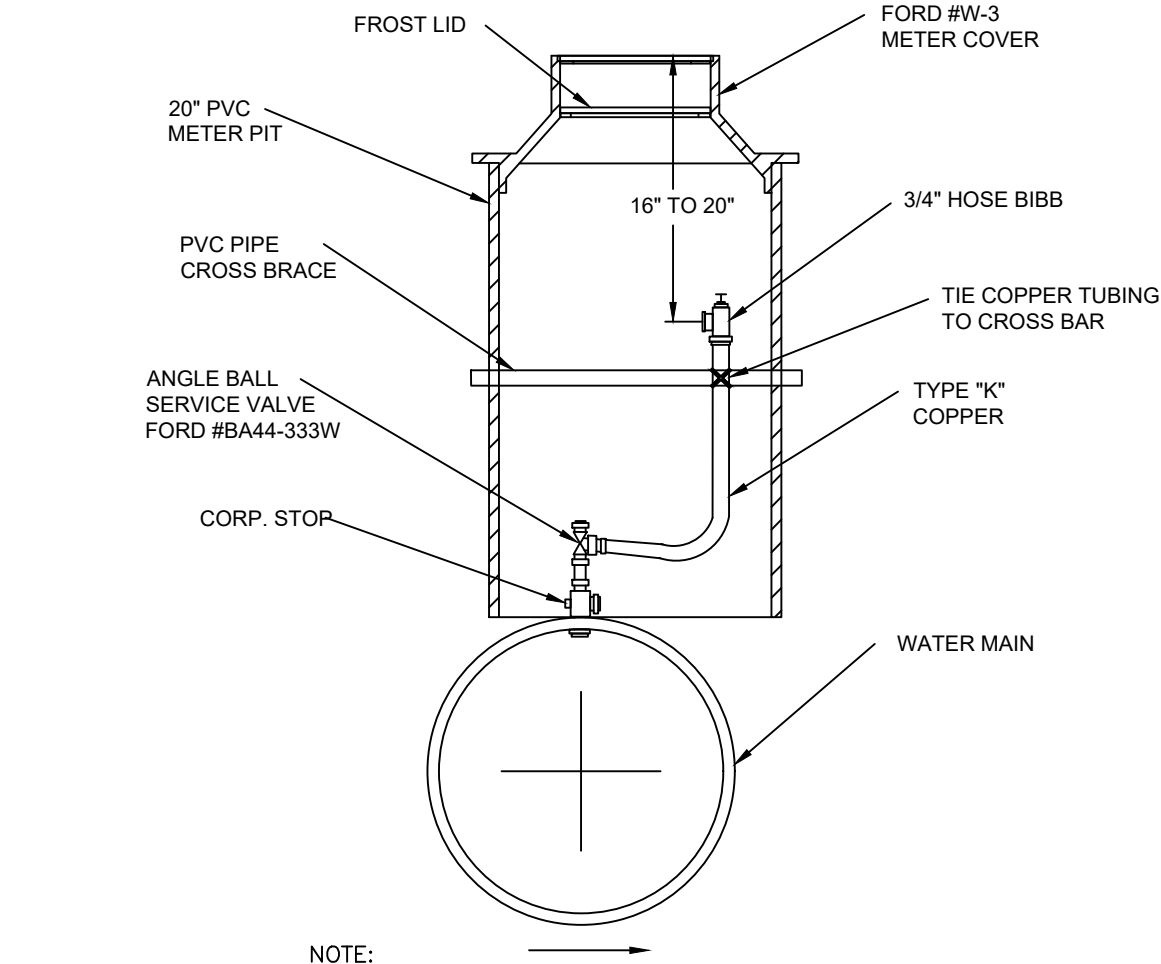
DEAD END DETAIL WITH TEMPORARY FIRE HYDRANT

5140



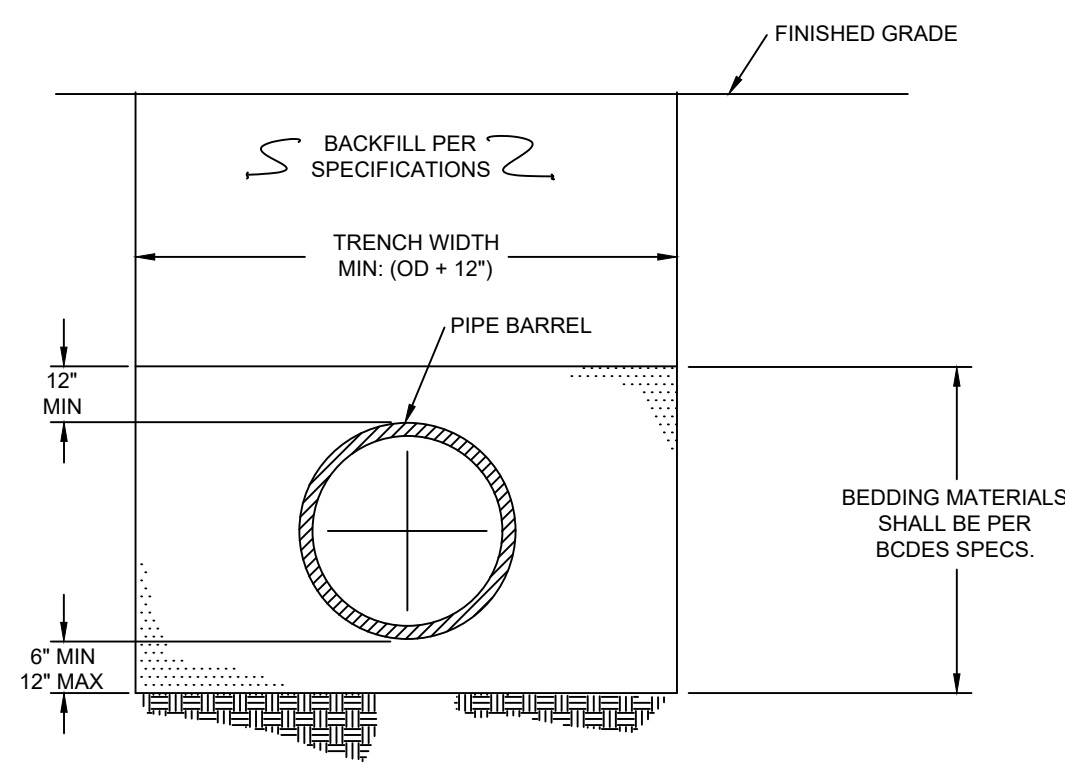
TYPICAL CREEK CROSSING & TRENCH DETAIL FOR WATER & SEWER FORCE MAINS

4170



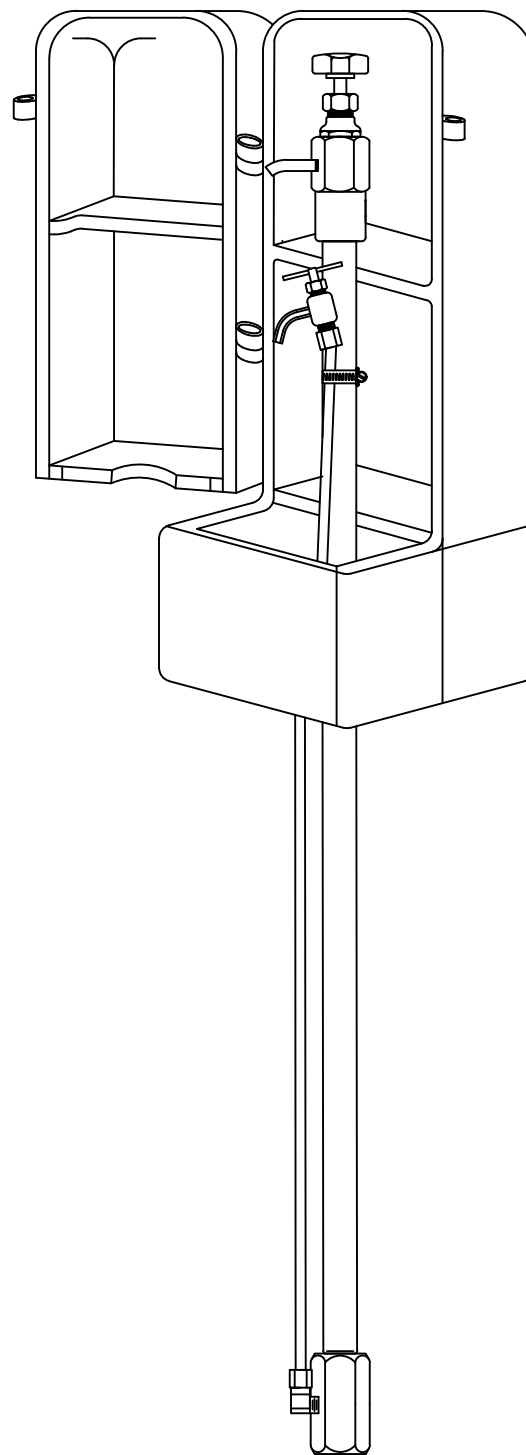
AIR RELEASE VALVE DETAIL

5290



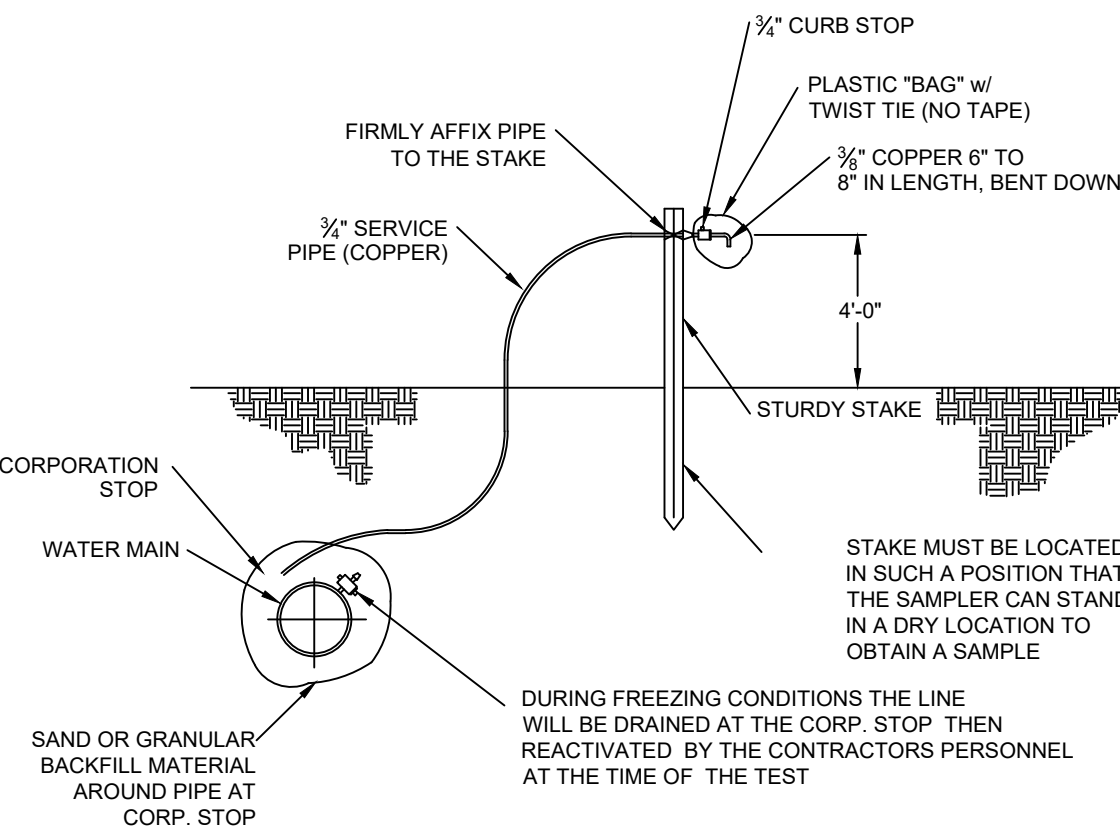
TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION

5280



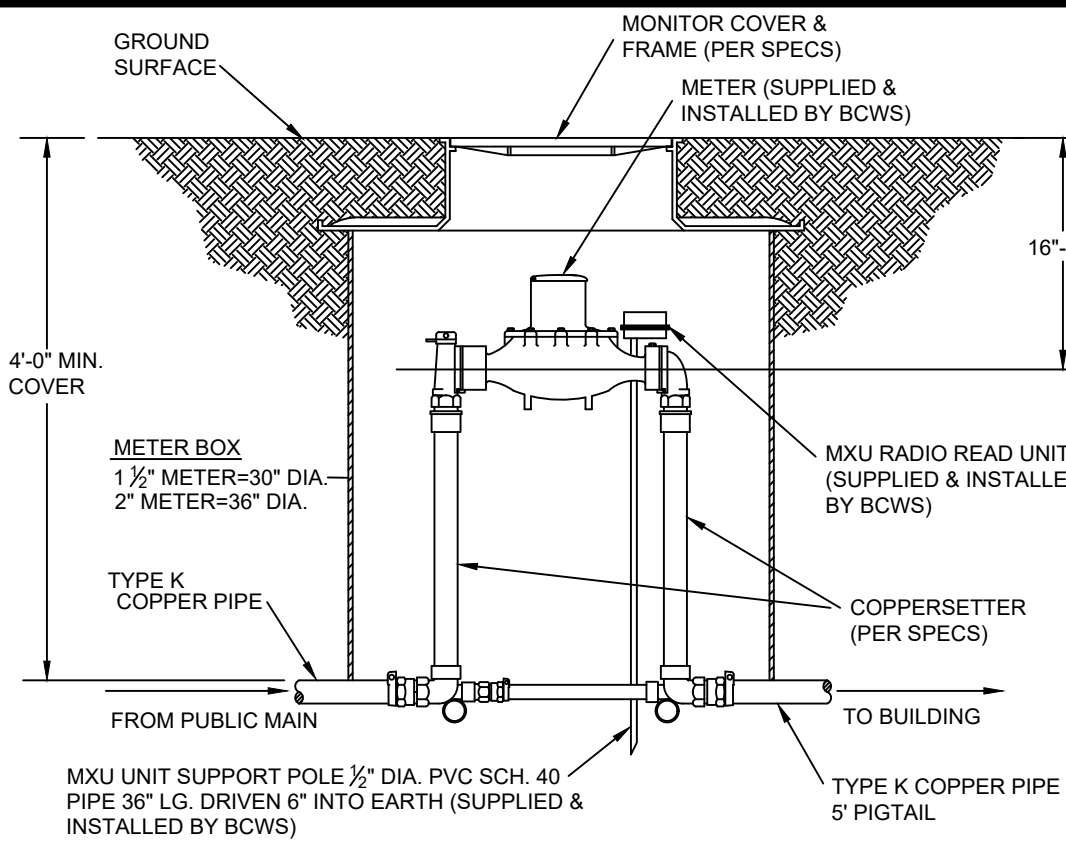
PERMANENT LAB SAMPLING STATION

5270



TEMPORARY PURITY TEST STATION

5260

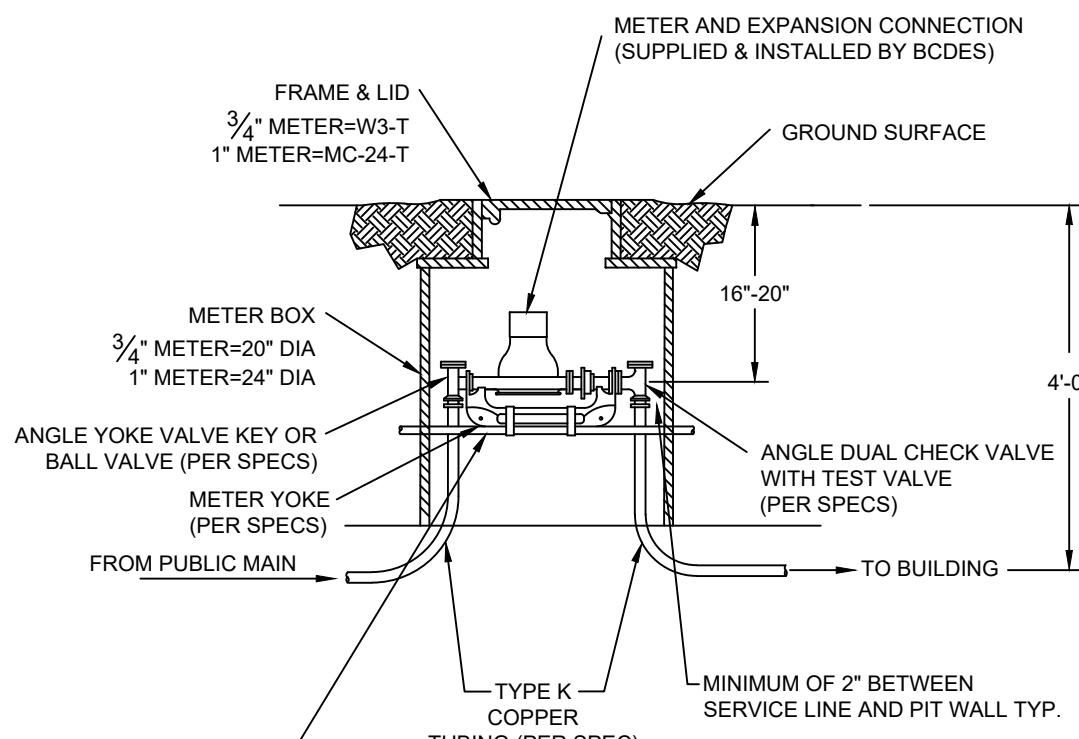


METER TYPE	LAYING LENGTH
1 1/2" C2 OMNI	13'
1 1/2" T2 OMNI	13'
2" C2 OMNI AS SUPPLIED BY BUTLER COUNTY SEE NOTE 3	17'
2" C2 OMNI FACTORY ORDERED	15 1/2'
2" T2 OMNI	17'

NOTE:
1) FOR METERS 3" AND LARGER, REFER TO THE STD. INSTALLATION FOR 3" AND LARGER WATER METERS.
2) ALL DOMESTIC WATER METERS SHALL BE SENSUS OMNI C2 TYPES FOR SIZES OF 1 1/2" AND LARGER. NON-DOMESTIC, (IE. DEDUCT, IRRIGATION), MAY BE EITHER SENSUS OMNI T2 OR C2 TYPES FOR SIZES OF 1 1/2" AND LARGER.
3) BUTLER COUNTY ORDERS 2" C2 OMNI METERS WITH A 17' LAYING LENGTH TO ACCOMMODATE THE STANDARD COPPERSETTER. IF THE FACTORY ORDERED SIZE IS UTILIZED AN ADAPTER FLANGE PLATE WILL BE REQUIRED.

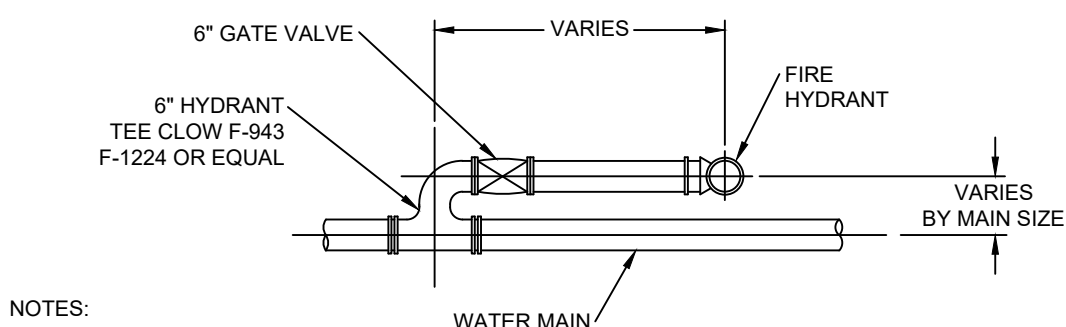
STANDARD INSTALLATION FOR 1-1/2" & 2" WATER METER SETTINGS

5170



STANDARD INSTALLATION FOR 3/4" AND 1" WATER METER SETTINGS

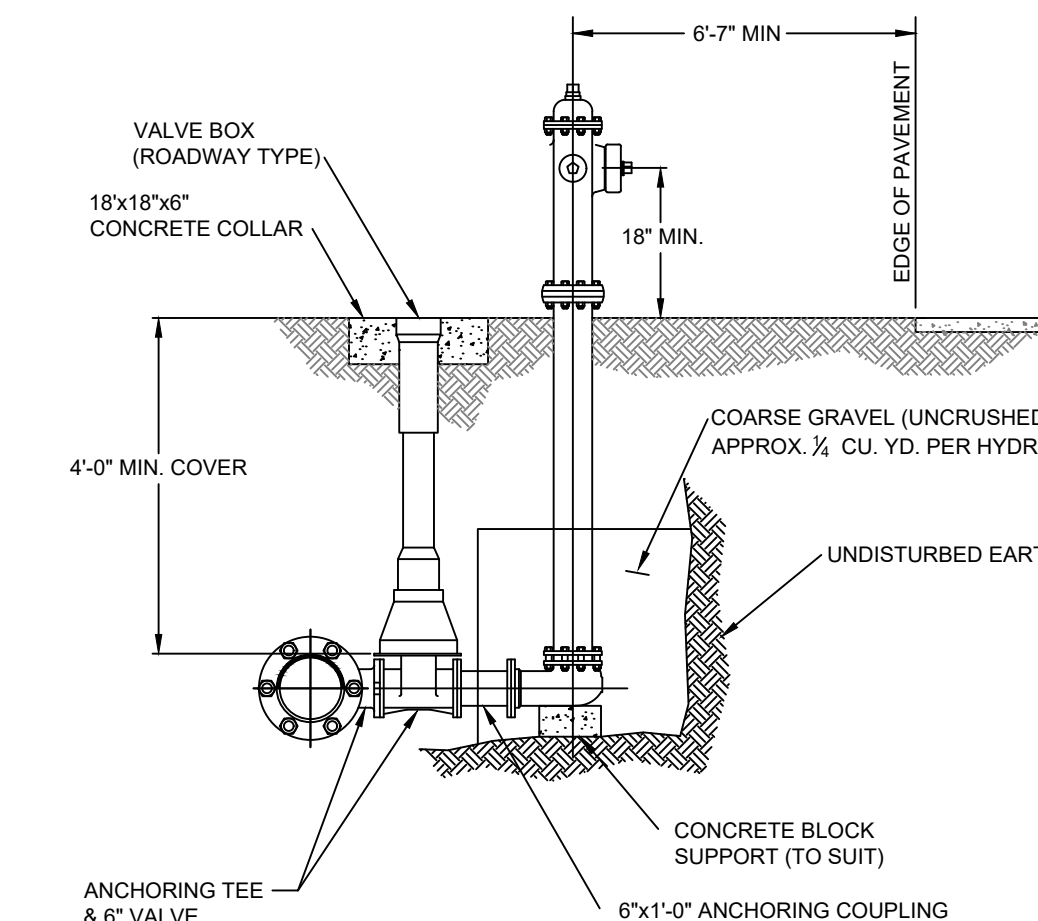
5150



NOTES:
1) FITTINGS TO BE MECHANICAL JOINT HYDRANT ANCHOR FITTINGS.
2) SEE TYPICAL FIRE HYDRANT INSTALLATION DETAIL FOR ADDITIONAL DETAILS (#5110)

SETTING FOR HYDRANT ADJACENT TO MAIN

5120



NOTES:
1) VERIFY LOCATION OF F.H. RELATIVE TO WATER MAIN ON PLANS.
2) CHECK STREET DETAILS FOR RELATIONSHIP BETWEEN MAIN, STREET AND F.H.

TYPICAL FIRE HYDRANT INSTALLATION

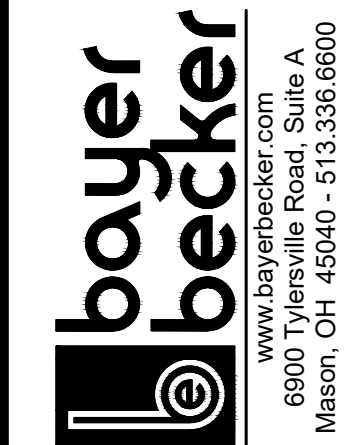
5110



Date	Drawn	Chk	Item	Revision Description
08-05-20	JSD		1	BUTLER COUNTY COMMENTS

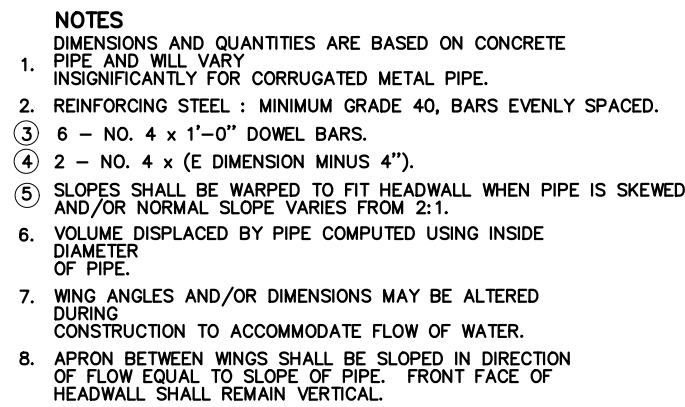
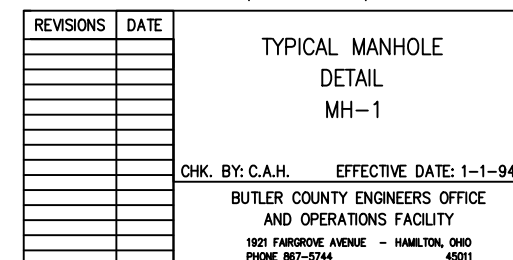
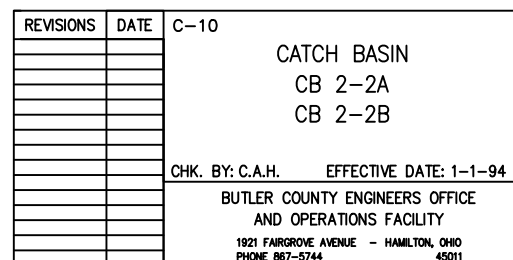
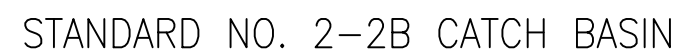
THE OAKS OF WEST CHESTER
SECTION SIX (PHASES 5, 6, & 7)
SECTION 22 TOWN 3, RANGE 2
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO

BUTLER COUNTY WATER DETAILS



Drawing:	06F158-006 CD
Drawn by:	LDF
Checked by:	JSD
Issue Date:	06-15-20
Sheet:	

C7.1



BILL OF REINFORCEMENT NO. 1 OF 1 SHEETS CIRCULAR PILE HEADS/US P258									
ONE HALF-PIE					SPREADING DATE: 11-1-2003				
BLVD. CLAYTON ENGINEERING OFFICE 10000 W. 10TH AVE. - SUITE 100 - DENVER, CO 80231 TEL: 303-751-1100 FAX: 303-751-1101									
USE WITH SHEET 2 OF 6									

K A K K	NO.	LOTH	K						
	1	F	T	I	N	F	T	I	N
	30"								
C1	5	4	4	4	8				
C2	4	2	4	4	4				
C3	4	2	2	2	2				
E1	5	2	6	6	4	3	4		
E2	4	3	4	6	4				
E3	4	3	4	6	2	4			
G1	4	2	2	10					
G2	4	2	2	10					
H1	4	4	5	1	3	5			
H2	4	4	5	6					
H3	4	4	5	6					
H4	4	3	0	8					
V1	4	4	4	3	1	10			
V2	5	4	4	1	2	10			

36"									
------------	--	--	--	--	--	--	--	--	--

