

INDEX TO SHEETS

Title Sheet	1
Plan & Profile Sheets	2-3
Grading Plan & Intersection Details	4-5
Detail Sheets	6-8
Soil Erosion & Sedimentation Control Detail Sheet	9



Know what's below.
Call before you dig.

VISTA VERDE SECTION FIVE

SECTION 3&9, TOWN 2, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO
SEPTEMBER, 2019



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 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.
- 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 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 enclosed 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.

JOB LOG	
DATE	COMMENT
8-16-19	Submitted to Butler County Planning
9-6-19	Resubmitted to BCWS
9-26-19	Resubmitted to BCEO

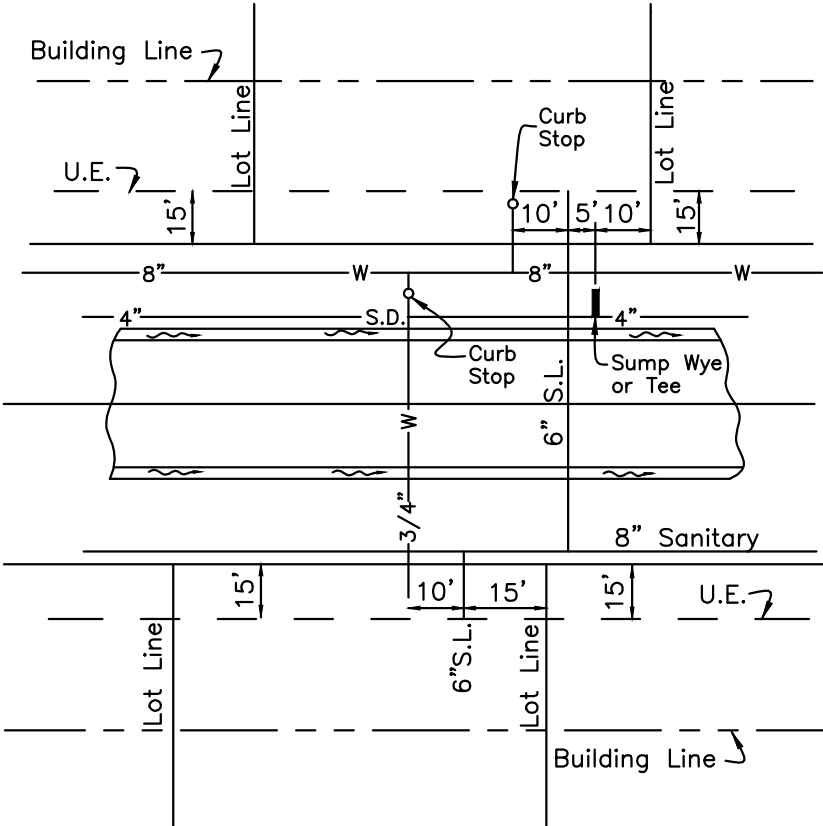
SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS	
C-1	
Std.MH-1A	
Std.HW-D	
CB-3	
CB-3A	
CB-3A(MOD.)	
CB-2-2-A(O.D.O.T.)	
CB-2-2-B(O.D.O.T.)	
Std.R-1	

CONSTRUCTION APPROVAL	
Butler Co. Water & Sewer Dept.	Date
Butler Co. Engineer's Office	

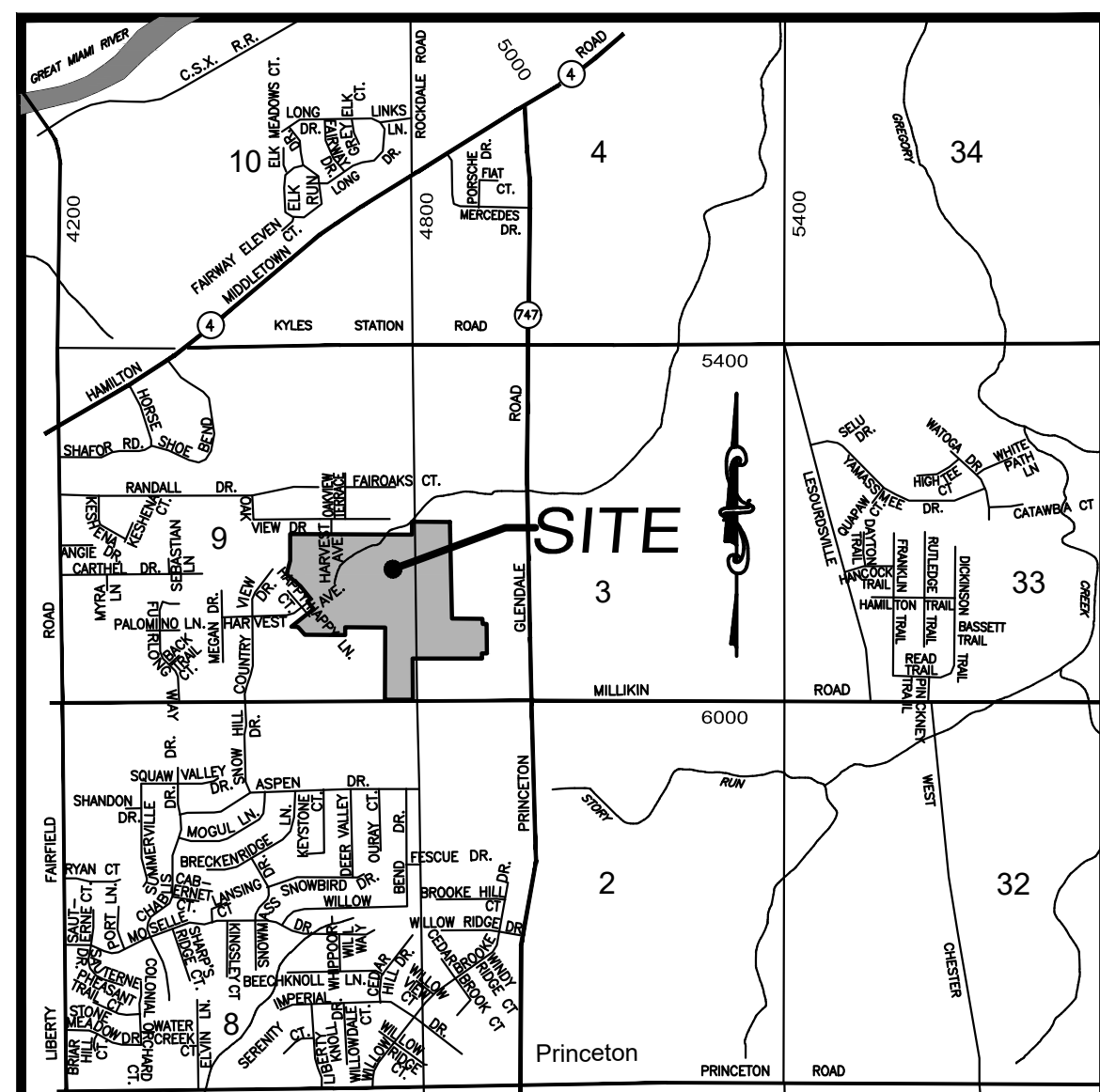
These plans are not for construction until ALL approval dates have been filed in.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- CENTERLINE
- PROPERTY LINE
- EXISTING SANITARY SEWER & MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE
- EXISTING WATER MAIN
- FIRE HYDRANT
- WATER VALVE
- PROPOSED WATER MAIN
- EXISTING GAS MAIN
- SUMP DRAIN LINE
- EXISTING STORM PIPE & CATCH BASIN
- STORM CATCH BASIN
- STORM MANHOLE
- PROPOSED STORM PIPE
- EXISTING TELEPHONE
- EXISTING CABLE
- DIRECTION OF DRAINAGE
- PROPOSED SWALE
- LOT SWALE



STANDARD SERVICE DETAIL



VICINITY MAP

OWNER/DEVELOPER

Welsh Development Company
5780 S.R. 128
Cleveland, OH 45002
(513) 353-5380

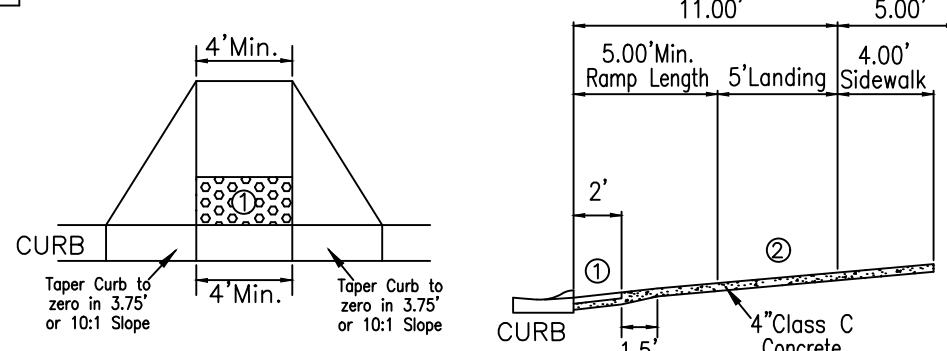
BENCHMARK

Butler County Control Monument
#99FC61
Elevation = 721.15

NOTE:
STORM STRUCTURES THAT PROVIDE WATER QUALITY ARE TO BE INSPECTED AND MAINTAINED FOUR (4) TIMES PER YEAR

STRUCTURE TYPE	INNER STRUCTURE FLOOR AREA
48" MANHOLE	12.57 S.F.
CB-3A	4.87 S.F.
CB-3A(MOD.)	14.44 S.F.
CB-3	10.69 S.F.
CB-3(MOD.)	31.68 S.F.
CB-2-2	4.00 S.F.
CB-2-3	9.00 S.F.
CB-2-4	16.00 S.F.
CB-2-5	25.00 S.F.
CB-2-6	36.00 S.F.

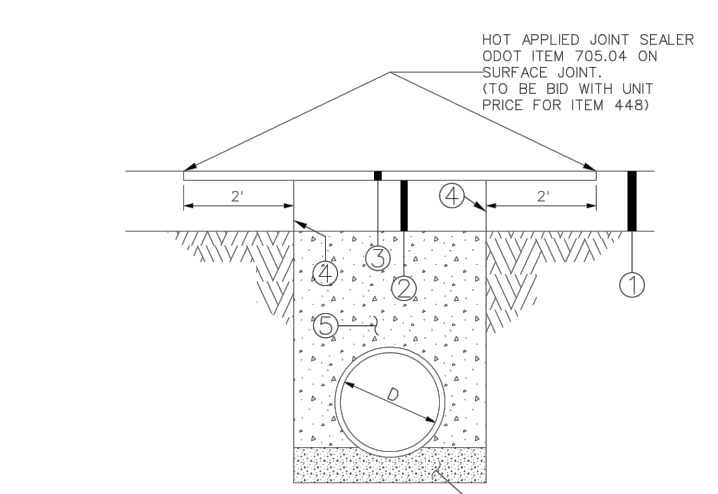
4" PER ODOT # BUTLER COUNTY STANDARD DETAILS



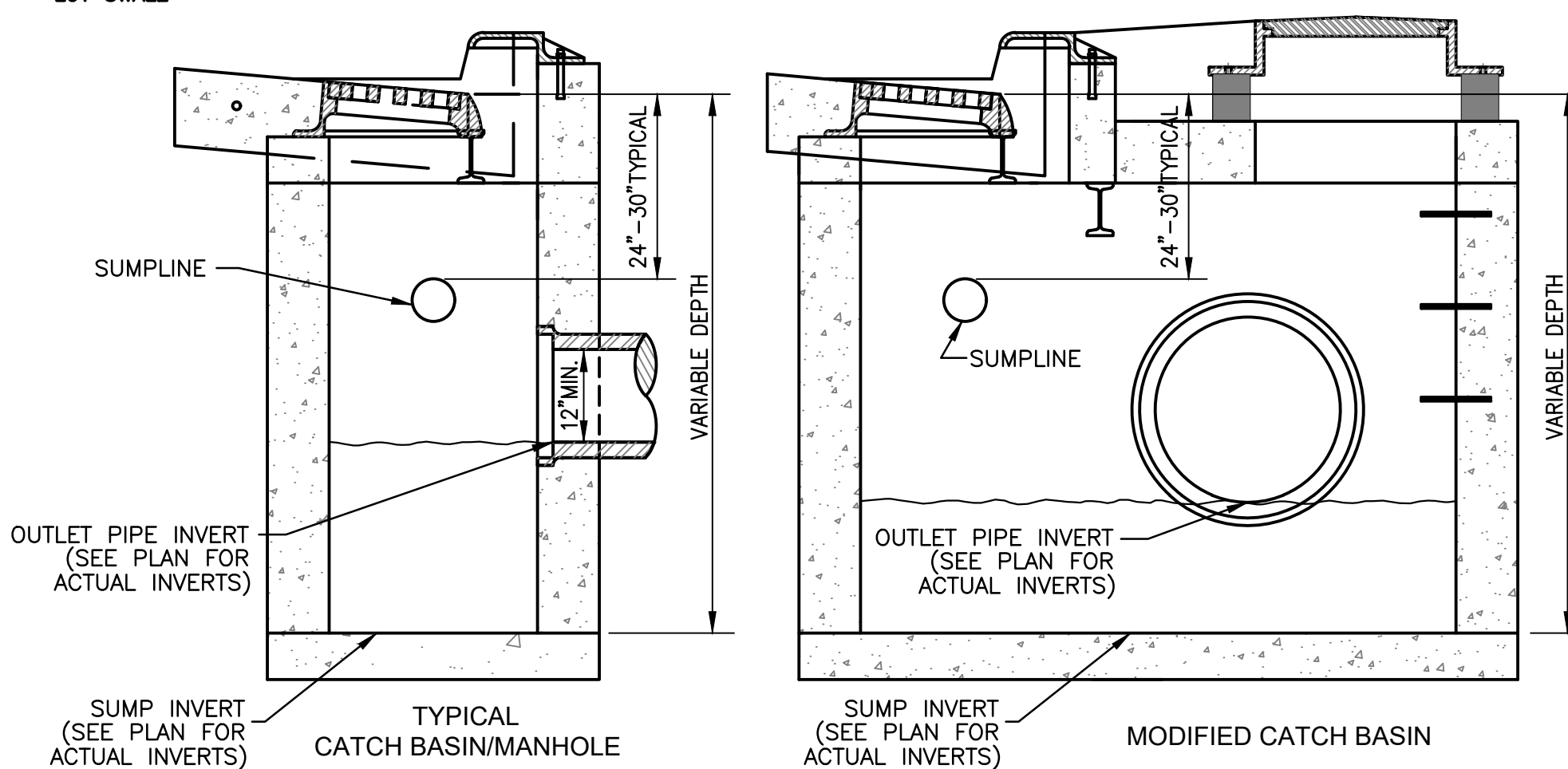
CURB RAMP DETAIL

- Detectable Warning (Truncated Domes) are to be installed in the location shown. Dimensions of the domes are 24" from the back of the curb by the width of the ramp.
- Minimum Landing is to be 4' by 5' is preferred. The slope of the ramp is preferred to be 1:21 or flatter related to the horizontal, but the minimum slope shall be 12:1 relative to the existing or proposed walk slope.
- Curb ramps shall be design A or design B per ODOT Drawing 7-12-02, sheets 1 thru 3. Truncated domes are to meet the specifications of ODOT drawing 7-12-02 sheet 3.

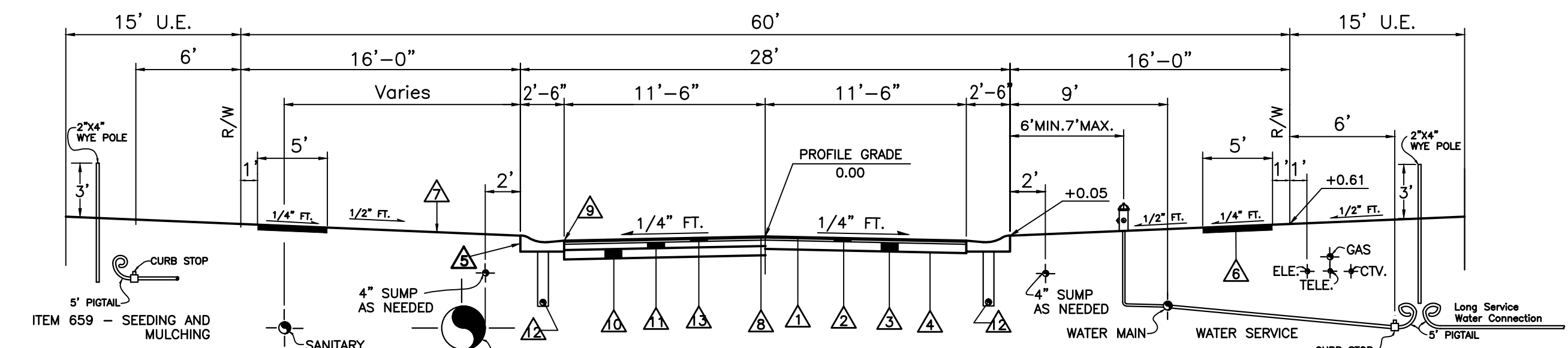
BUTLER COUNTY ENGINEER'S OFFICE STANDARD DETAIL FOR ROADWAY PAVEMENT RESTORATION



- EXISTING PAVEMENT
- 8" ITEM 301 BITUMINOUS AGGREGATE BASE IN TWO 4" LIFTS
- 2" ITEM 448 ASPHALT CONCRETE SURFACE COURSE MIN. 2" EACH SIDE OF CUT
- ITEM 407 TACK COAT APPLIED AT 0.10 GAL/SY
- LOW STRENGTH MORTAR BACKFILL MATERIAL CLASS L3M 50
- MIN. 6" GRANULAR PIPE BEDDING (OPTION - USE GRANULAR BEDDING EXTENDED 12" ABOVE PIPE FOR FULL WIDTH OF TRENCH)



STORM WATER QUALITY STRUCTURE DETAILS (Not to Scale)



- 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
- COMPACTED SUBGRADE - ITEM 204
- ROLL TYPE CURB & GUTTER - ITEM 609 (BUTLER COUNTY STANDARD C-1)
- FOUR INCH THICK CLASS "C" CONCRETE SIDEWALK, FOUR FEET WIDE ITEM 608 WALK TO BE 1/2" HIGHER THAN SOD.
- 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 SECTION

THIS DOCUMENT AND ALL RELATED DETAIL DRAWINGS, SPECIFICATIONS, AND ELECTRONIC MEDIA PREPARED OR FURNISHED BY BAYER BECKER (BB), ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND IS THE EXCLUSIVE PROPERTY OF BB. NO DISCLOSURE, USE, REPRODUCTION, OR REPLICATION 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.

VISTA VERDE SECTION FIVE
SECTION 3&9, TOWN 2, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO
TITLE SHEET

Item	Revision Description	Date	Drawn	Checked
1	Revised as per BCWS	8-6-19	TAC	
2	Revised as per BCEO	9-26-19	TAC	
3				
4				
5				
6				
7				
8				
9				

Drawing: 15M069-005 CD
Drawn by: TAC
Checked by: EMR
Issue Date: 8-16-19
Sheet: 1/9

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

Plot time: Sep 25, 2019 - 4:25pm
Drawing name: J:\2015\15M069-005\15M069-005 CD.dwg - Layout Tab: 1 TLT

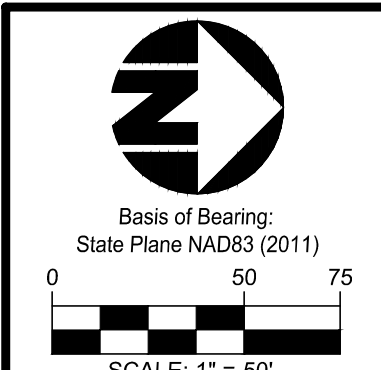
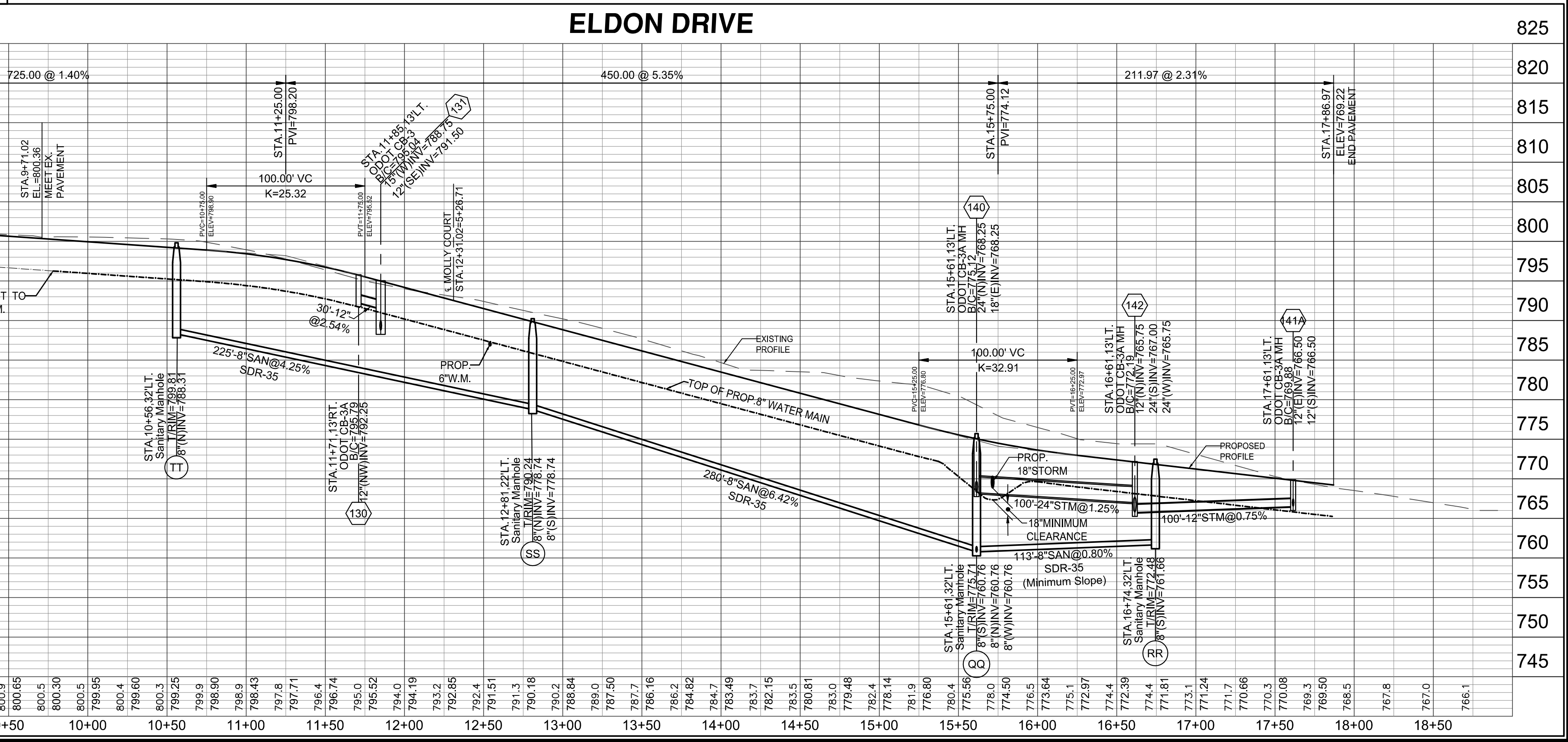
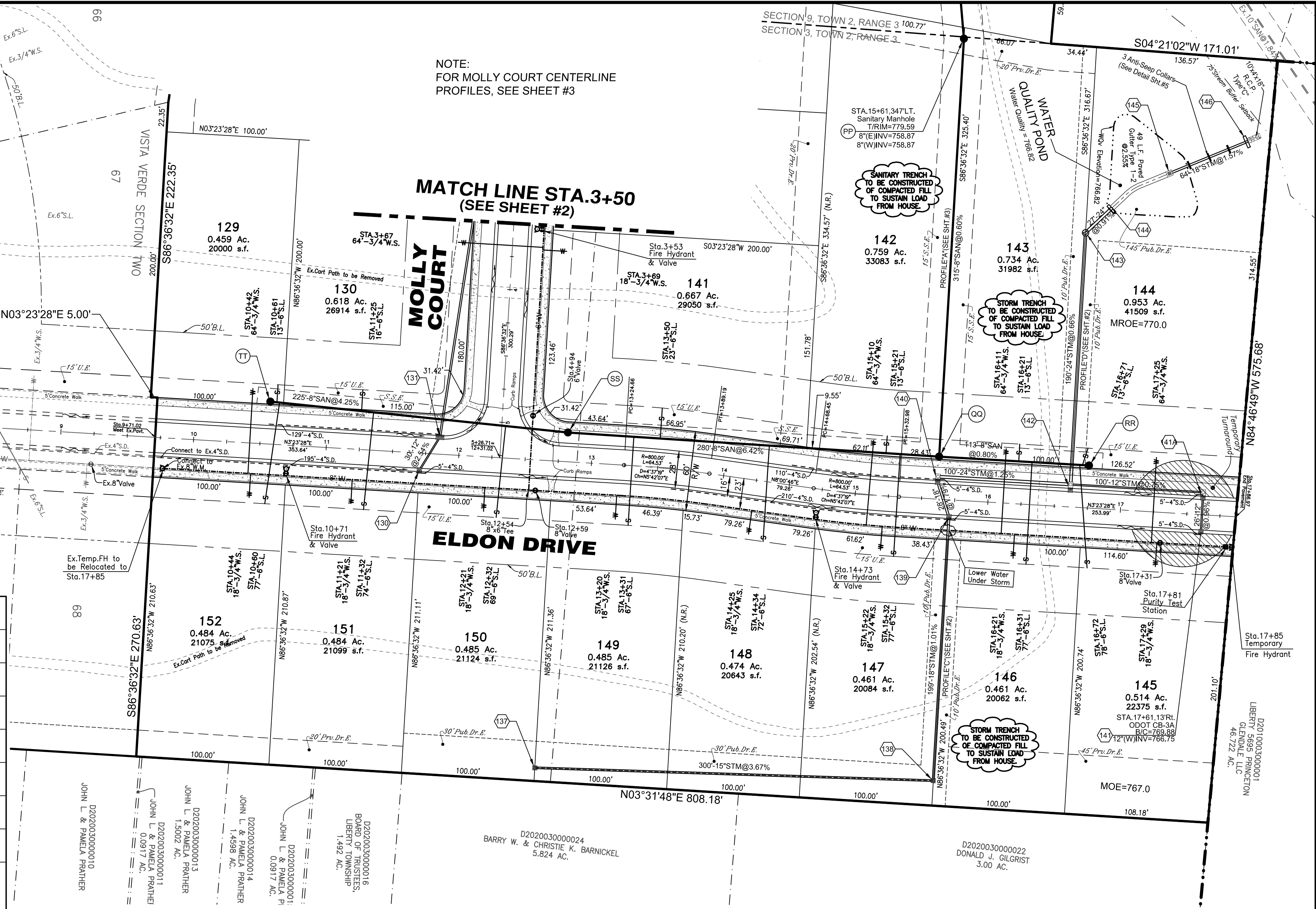
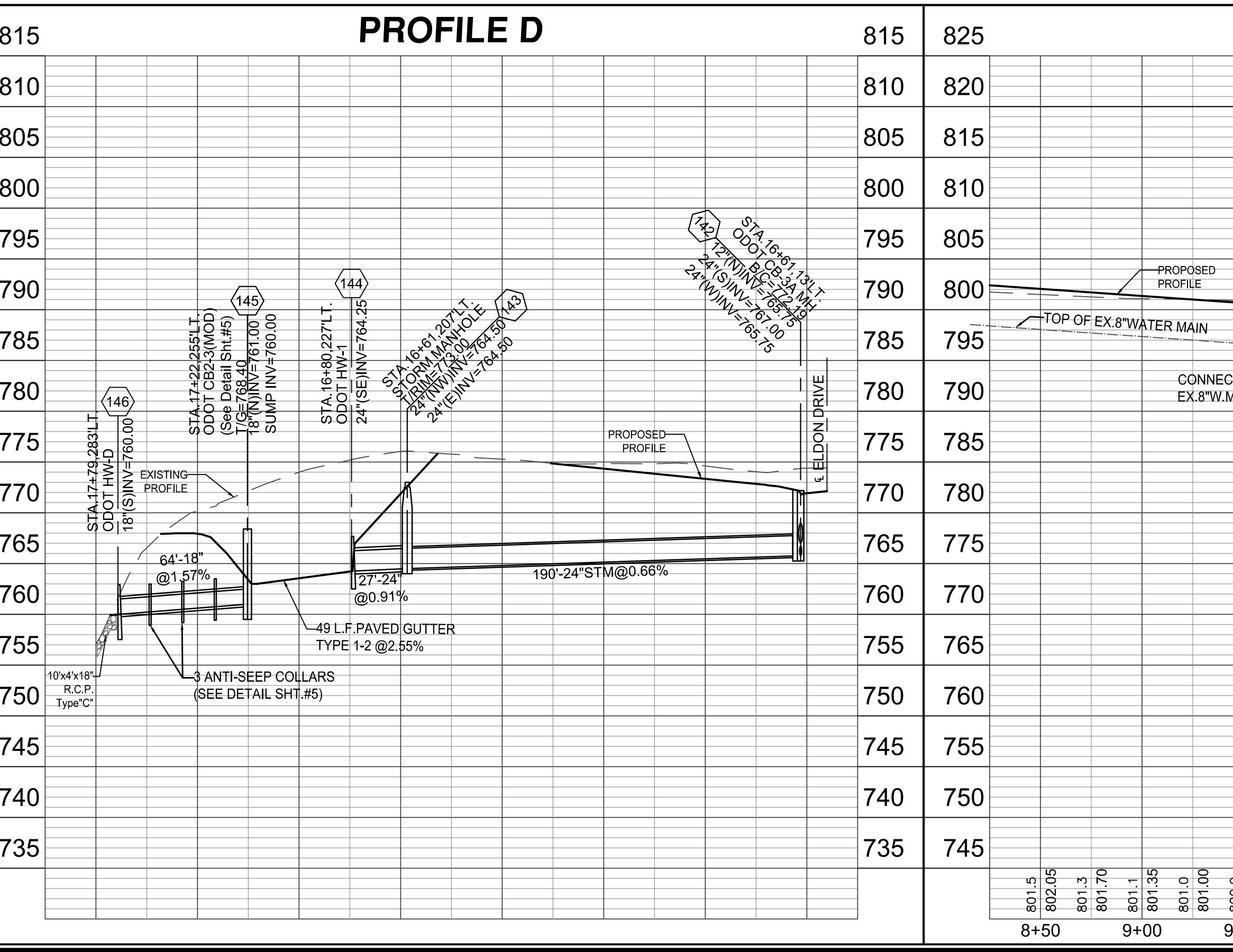
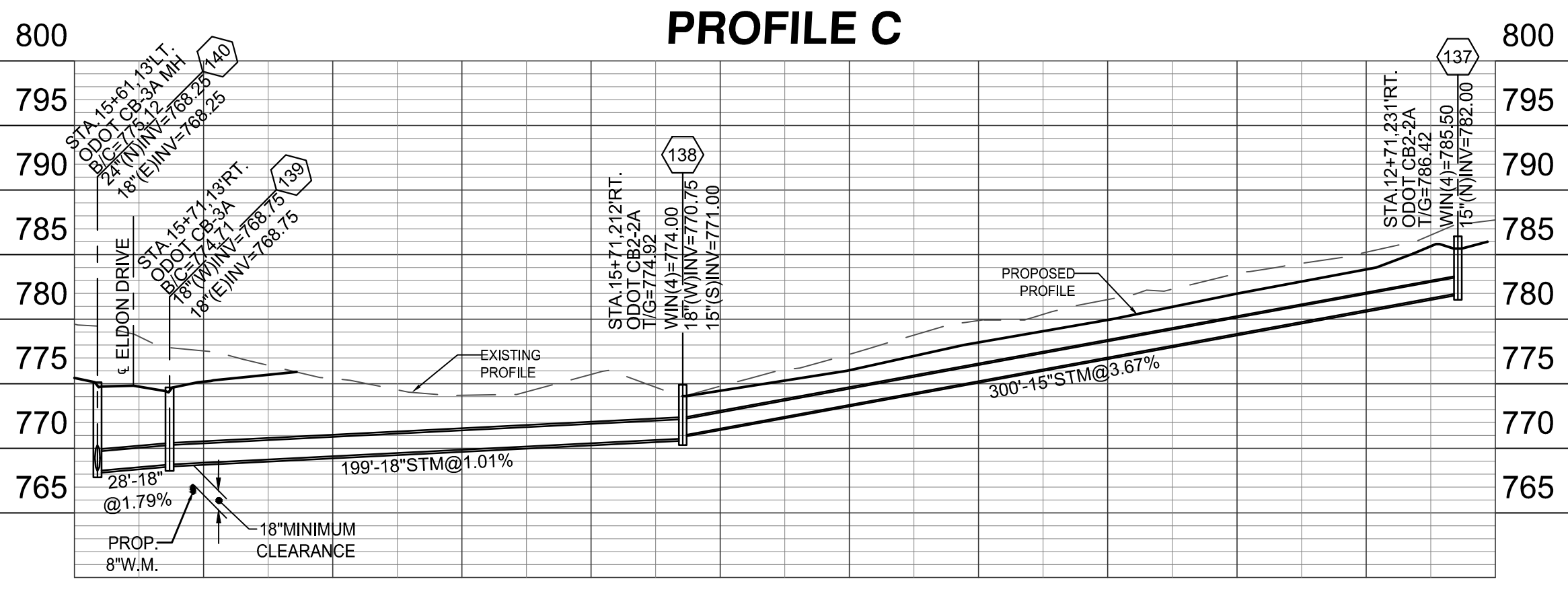
Plot time: Sep 25, 2019 - 4:29pm
 Drawing name: J:\2015\15M069-005\CD.dwg - Layout Tab: 2 PP

- NOTES:
- 48 hours notice to be given to affected residents before construction begins.
 - All Catch Basin B/C Elevations located within the curb are set to the Back of Curb Elevations.
 - 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.

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.

WATER MAIN RESTRAINT JOINT LOCATION CHART

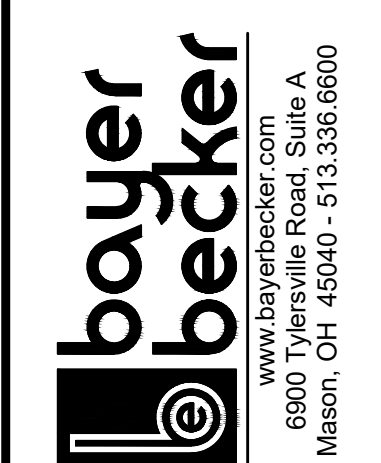
Water Main Dia.	Horizontal 45° Bends	Vertical 45° Bends Up (Lower Water Under...)	Vertical 45° Bends Down (Lower Water Under...)	Dead Ends (Permanent & Temporary)	Tees (for Tee Branch)
6"	18' both sides	18' both sides	36' both sides	72' Back	54'
8"	18' both sides	36' both sides	36' both sides	90' Back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



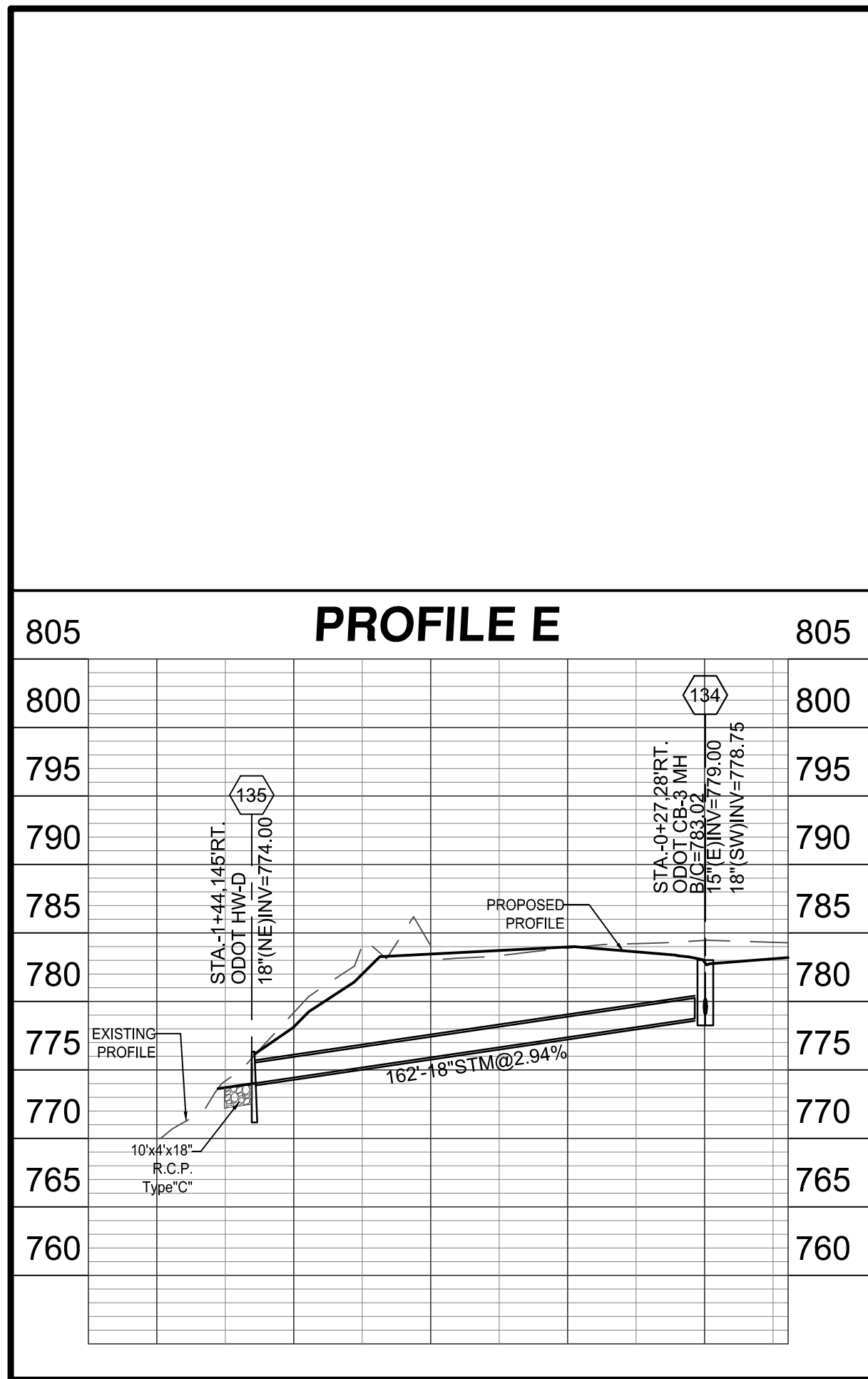
Revision Description

Item	Date	Drawn	Checked	Revision Description
1	9/26/19	TAC		Revised as per BCOVS
2	9/26/19	TAC		Revised as per BCOVS
3				
4				
5				
6				
7				
8				
9				

VISTA VERDE SECTION FIVE
 SECTION 3&9, TOWN 2, RANGE 3
 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO



Drawing: 15M069-005 CD
 Drawn by: TAC
 Checked by: EMR
 Issue Date: 8-16-19

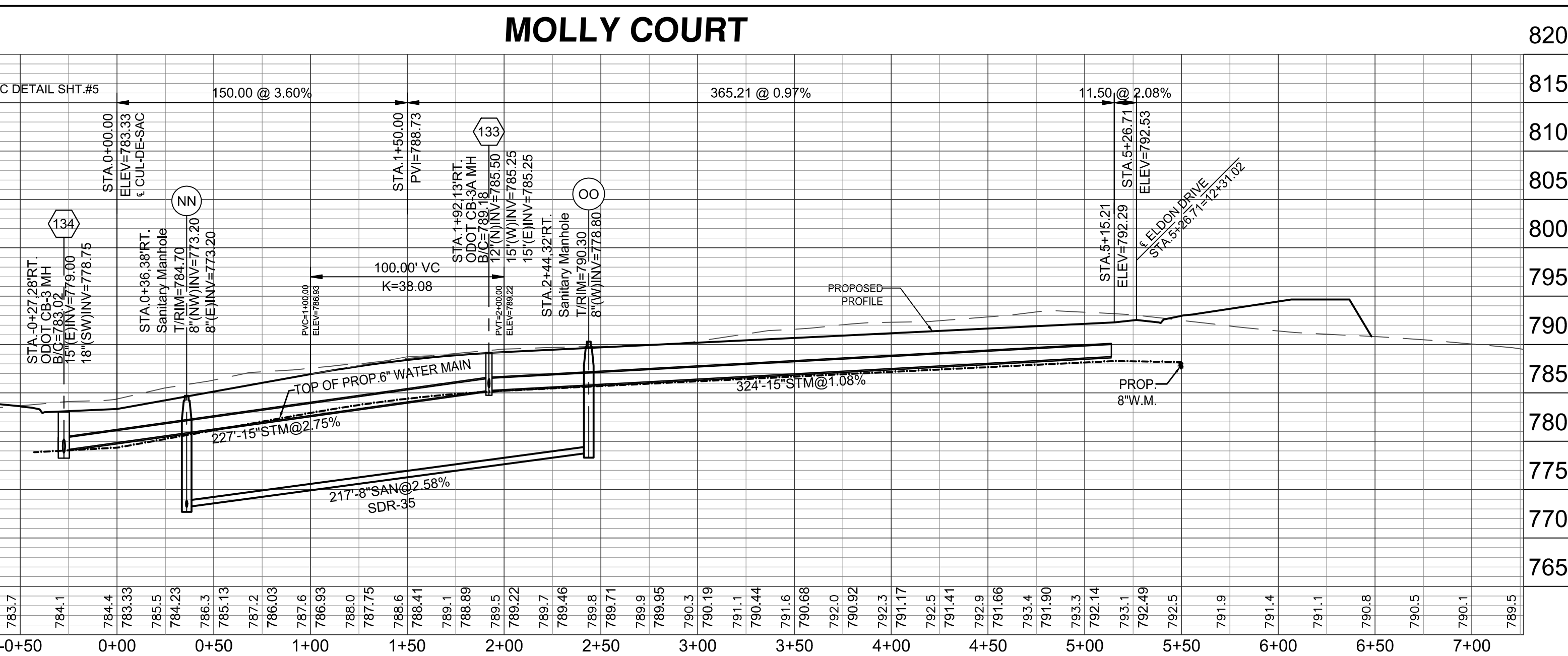
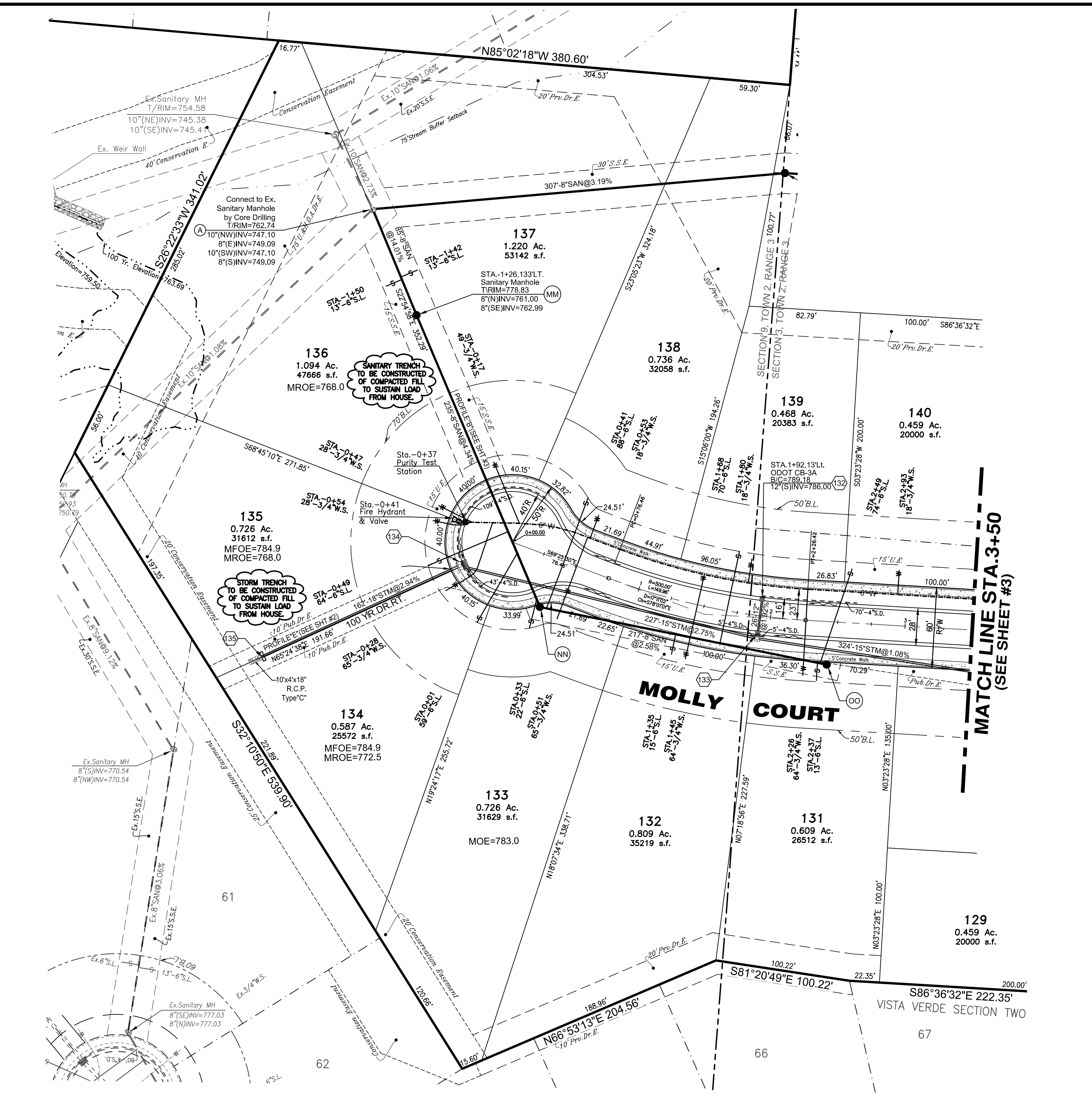
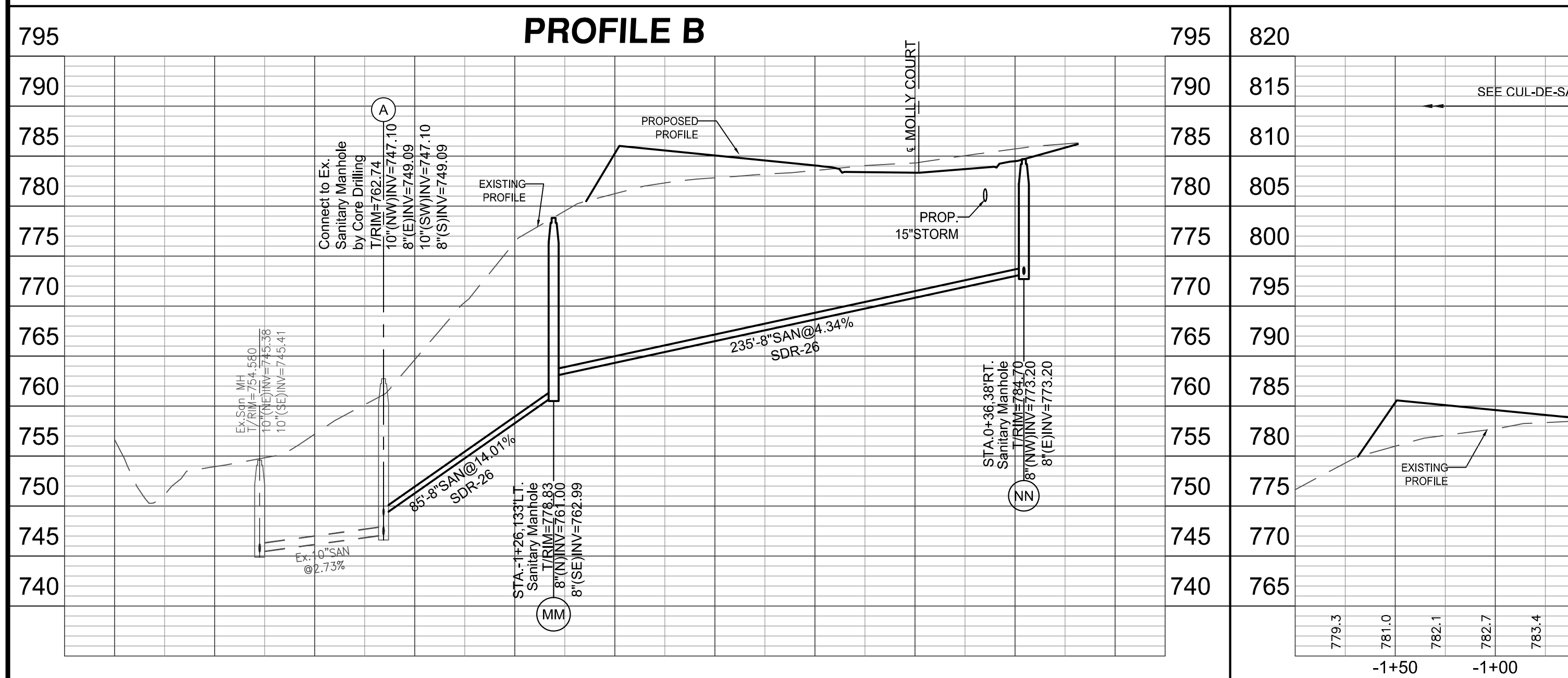
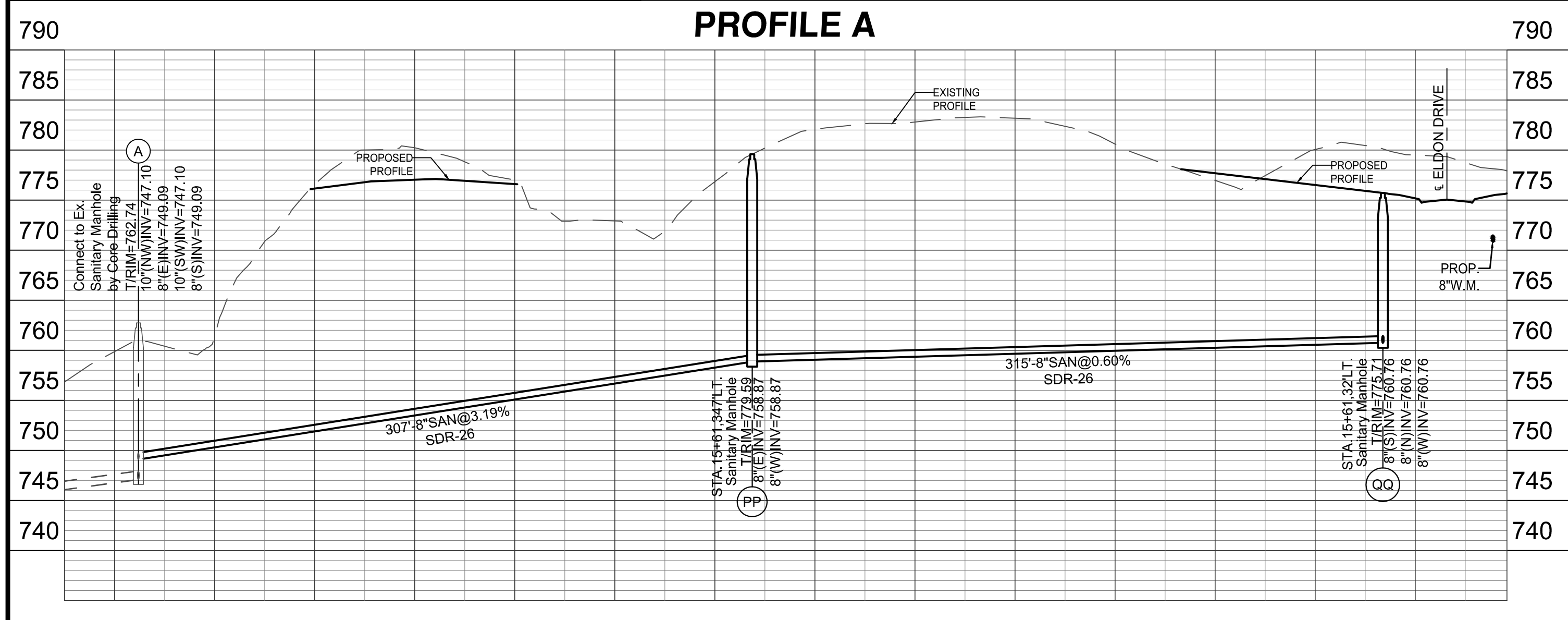


- NOTES:**
- 48 hours notice to be given to affected residents before construction begins.
 - All Catch Basin B/C Elevations located within the curb are set to the Back of Curb Elevations.
 - Lower 3/4" Water Services as needed to avoid conflicts with Storm with Min. 4' Cover.
 - Location of existing 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.

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.

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' 6" 8" 10"
8"	18" both sides	36" both sides	36" both sides	90' Back	54' 72' 90'
10"	36" both sides	36" both sides	54" 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'



Scale: 1" = 50'

Date	Drawn	Chk
8-6-19	TAC	

Item	Revision Description
1	Revised as per BCMS
2	
3	
4	
5	
6	
7	
8	
9	

VISTA VERDE SECTION FIVE

SECTION 3 & 9, TOWN 2, RANGE 3
 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO

PLAN & PROFILE

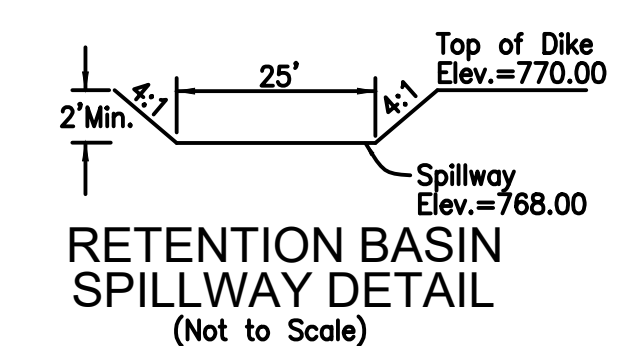
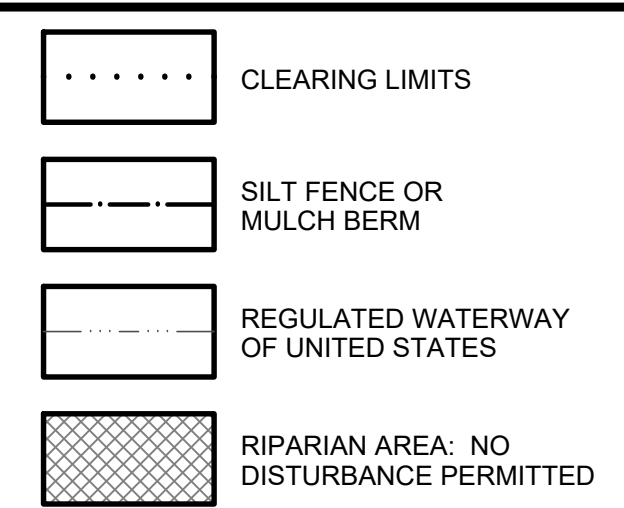
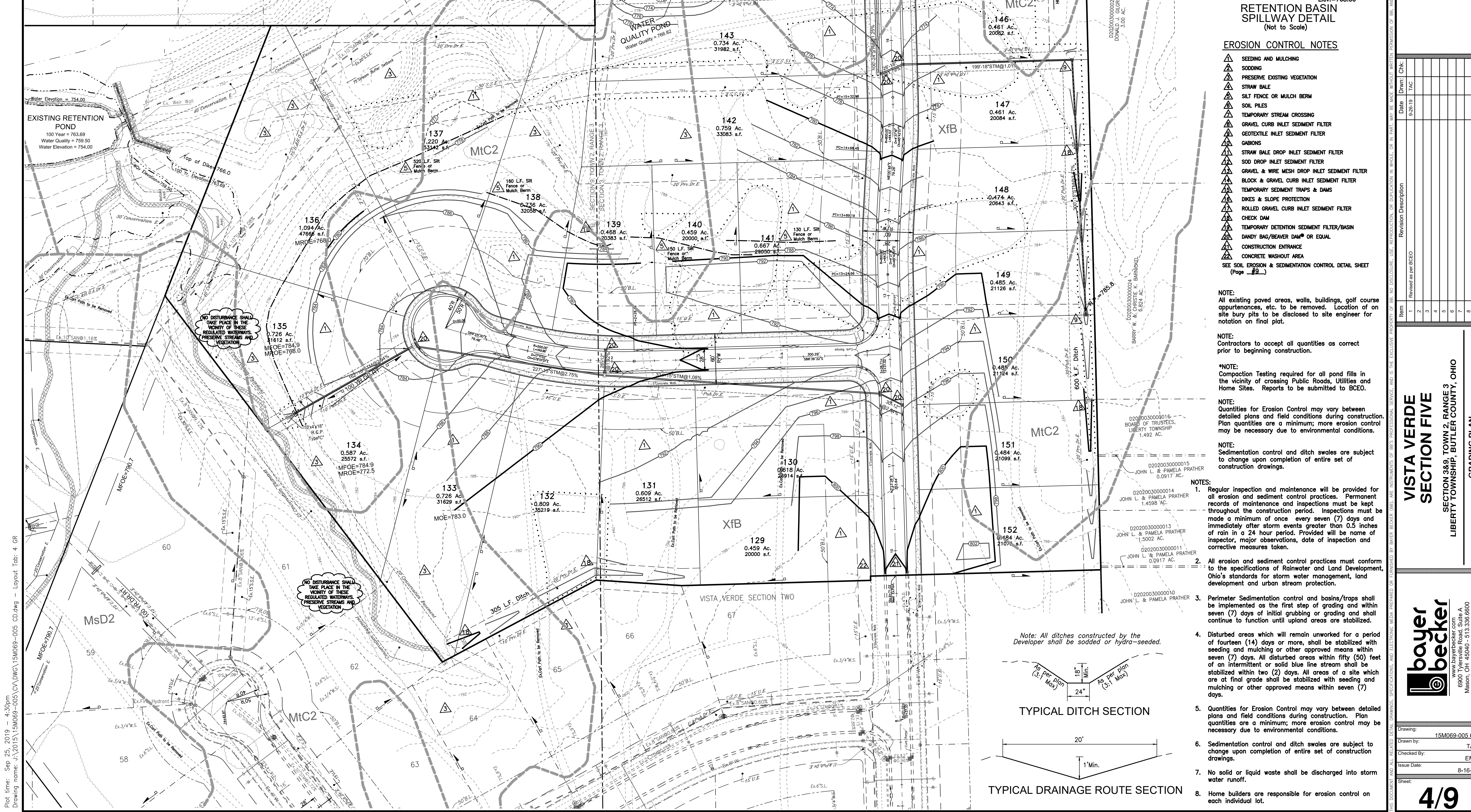
bayer becker
 www.bayerbecker.com
 6900 Tyersville Road, Suite A
 Mason, OH 45040 - 513.336.6600

Drawing:	15M069-005 CD
Drawn by:	TAC
Checked by:	EMR
Issue Date:	8-16-19

3/9

PROJECT DATA		
Total Area	17.40 Ac.	
Disturbed Tributary Area	10.30 Ac.	
Required Sediment Storage	2,830 c.f.	
Drainage Area	8.30 Ac.	
Required Dewatering Storage	14,940 c.f.	
Pre-Developed Runoff Coefficient	0.30	
Post-Developed Runoff Coefficient	0.50	
Estimated Proposed Impervious Area	1.80 Ac.(10.3%)	
Immediate Receiving Waters	Unnamed Tributary to Great Miami River	
Subsequent Receiving Waters	Great Miami River	

SOIL TYPES		
Symbol	Name	Type
HeE2	Hennepin-Miamian silt loams 18 to 25 percent slopes, moderately eroded	B
MtC2	Miamian-Russell silt loams, bedrock substratum 6 to 12 percent slopes, moderately eroded	C
XtB	Xenia silt loam, bedrock substratum 2 to 6 percent slopes	B



EROSION CONTROL NOTES

- ▲ SEEDING AND MULCHING
 - ▲ SODDING
 - ▲ PRESERVE EXISTING VEGETATION
 - ▲ STRAW BALE
 - ▲ SILT FENCE OR MULCH BERM
 - ▲ SOIL PILES
 - ▲ TEMPORARY STREAM CROSSING
 - ▲ GRAVEL CURB INLET SEDIMENT FILTER
 - ▲ GEOTEXTILE INLET SEDIMENT FILTER
 - ▲ GABIONS
 - ▲ STRAW BALE DROP INLET SEDIMENT FILTER
 - ▲ SOD DROP INLET SEDIMENT FILTER
 - ▲ GRAVEL & WIRE MESH DROP INLET SEDIMENT FILTER
 - ▲ BLOCK & GRAVEL CURB INLET SEDIMENT FILTER
 - ▲ TEMPORARY SEDIMENT TRAPS & DAMS
 - ▲ DIKES & SLOPE PROTECTION
 - ▲ ROLLED GRAVEL CURB INLET SEDIMENT FILTER
 - ▲ CHECK DAM
 - ▲ TEMPORARY DETENTION SEDIMENT FILTER/BASIN
 - ▲ DANDY BAG/BEAVER DAM® OR EQUAL
 - ▲ CONSTRUCTION ENTRANCE
 - ▲ CONCRETE WASHOUT AREA
- SEE SOIL EROSION & SEDIMENTATION CONTROL DETAIL SHEET (Page #8)

NOTE:
All existing paved areas, walls, buildings, golf course appurtenances, etc. to be removed. Location of on site bury pits to be disclosed to site engineer for notation on final plan.

NOTE:
Contractors to accept all quantities as correct prior to beginning construction.

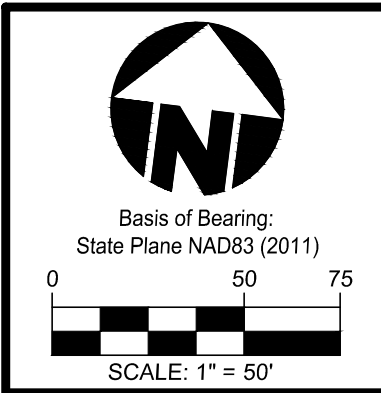
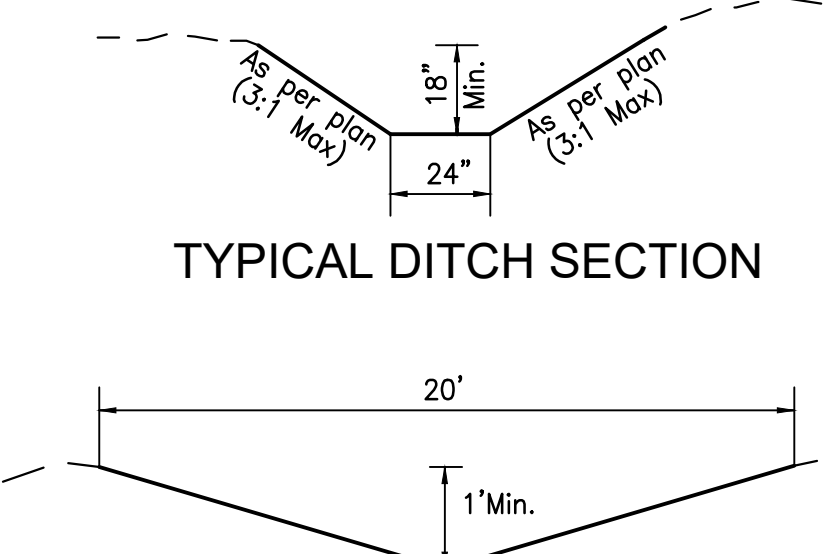
***NOTE:**
Compaction Testing required for all pond fills in the vicinity of crossing Public Roads, Utilities and Home Sites. Reports to be submitted to BCEO.

NOTE:
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.

NOTE:
Sedimentation control and ditch swales are subject to change upon completion of entire set of construction drawings.

- 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 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 or grading 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 within 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 seven (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.

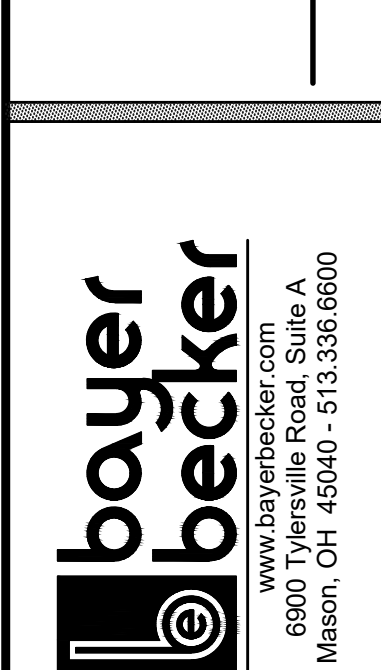
Note: All ditches constructed by the Developer shall be sodded or hydro-seeded.



Date	Drawn	Chk
9/26/19	TAC	

Item	Revision Description
1	Revised as per BCEO
2	
3	
4	
5	
6	
7	
8	
9	

VISTA VERDE SECTION FIVE
SECTION 389, TOWN 2, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO
GRADING PLAN



Drawing:	15M069-005 CD
Drawn by:	TAC
Checked by:	EMR
Issue Date:	8-16-19
Sheet:	

Plot time: Sep 25, 2019 - 4:30pm
Drawing name: J:\2015\15M069-005\CD\DWG\15M069-005 CD.dwg - Layout Tab: 4 GR



Basis of Bearing:
State Plane NAD83 (2011)

0 50 75

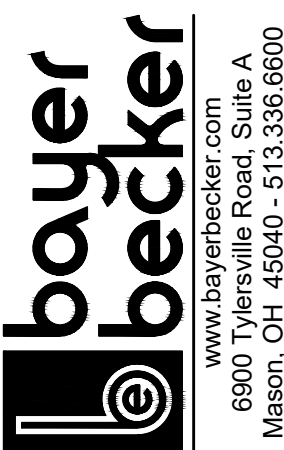
SCALE: 1" = 50'

Date: _____
Dwnt: _____
Chk: _____

Revision Description

Item

**VISTA VERDE
SECTION FIVE**
SECTION 3.8.9, TOWN 2, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO
INTERSECTION DETAILS



Drawing: 15M069-005 CD

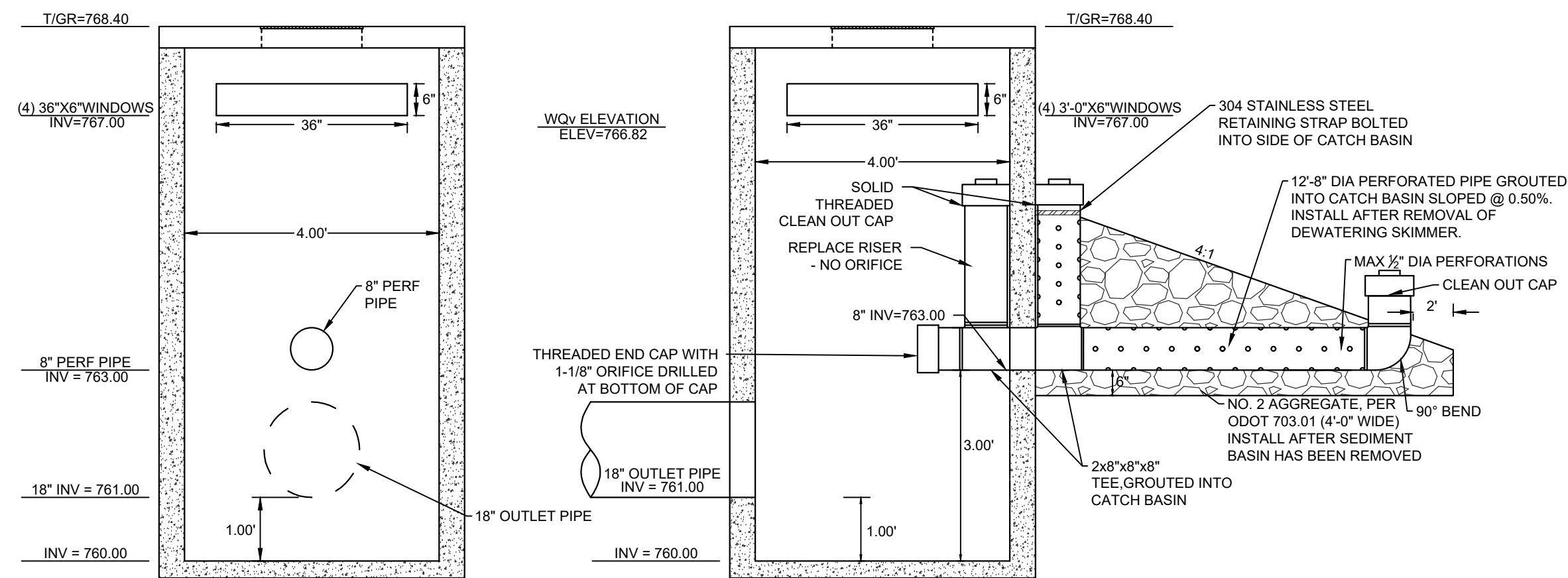
Drawn by: TAC

Checked by: EMR

Issue Date: 8-16-19

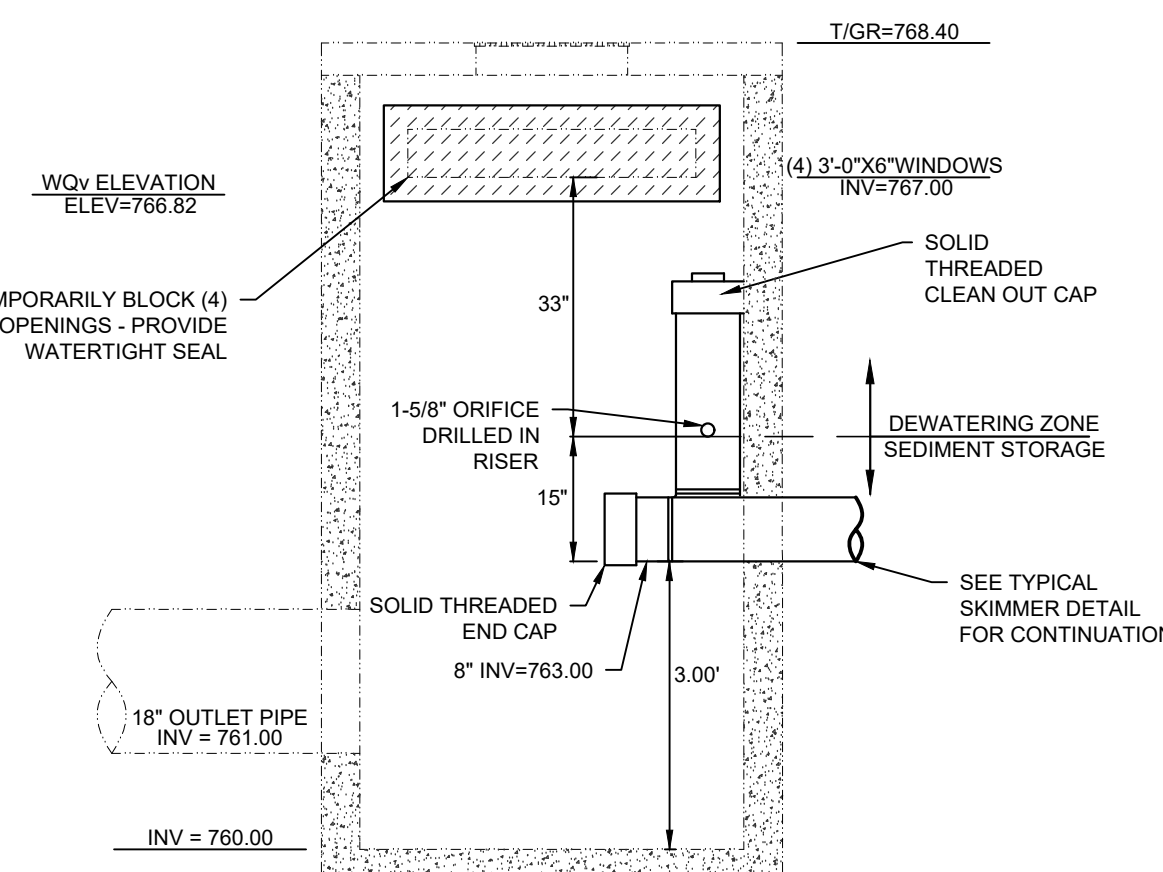
Sheet:
5/9

THIS DOCUMENT AND ALL RELATED DETAIL DRAWINGS, SPECIFICATIONS, AND ELECTRONIC MEDIA PREPARED OR FURNISHED BY BAYER BECKER (BB), ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND IS THE EXCLUSIVE PROPERTY OF BB. NO DISCLOSURE, USE, REPRODUCTION, OR DUBLICATION 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.



EAST BASIN OUTLET STRUCTURE #145 - ODOT CB2-4

NOT TO SCALE



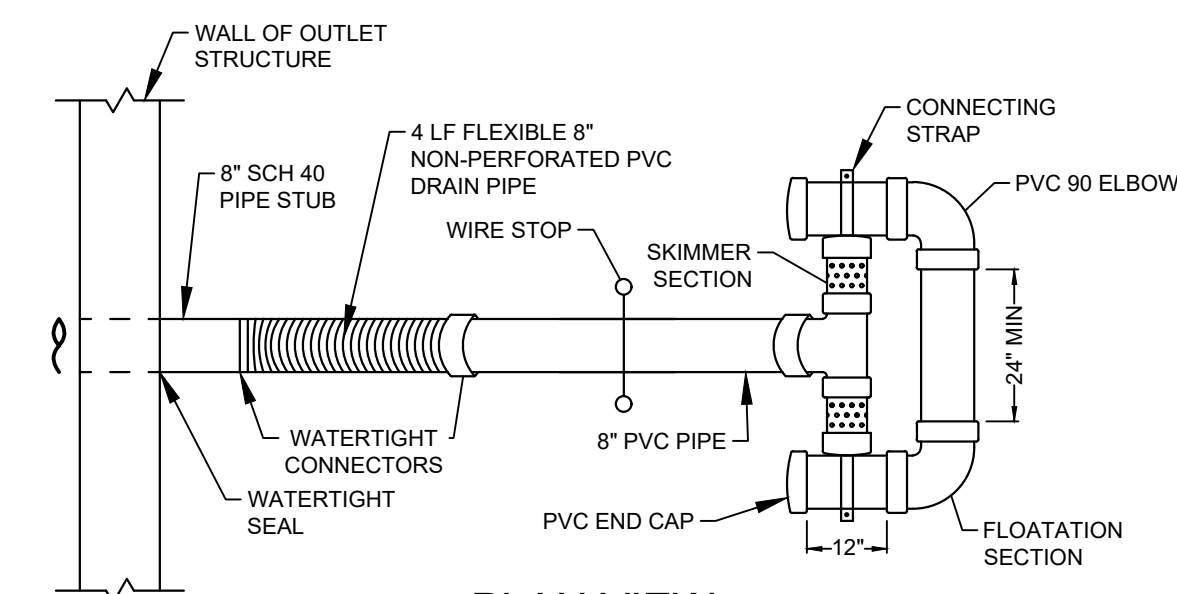
EAST BASIN OUTLET STRUCTURE #145 - ODOT CB2-4 TEMPORARY DEWATERING DETAIL

NOT TO SCALE

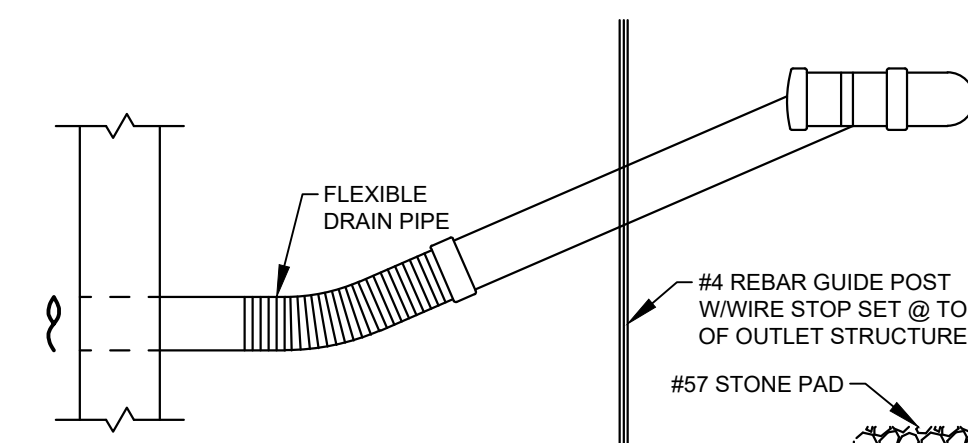
TYPICAL SKIMMER DEWATERING DEVICE

NOT TO SCALE

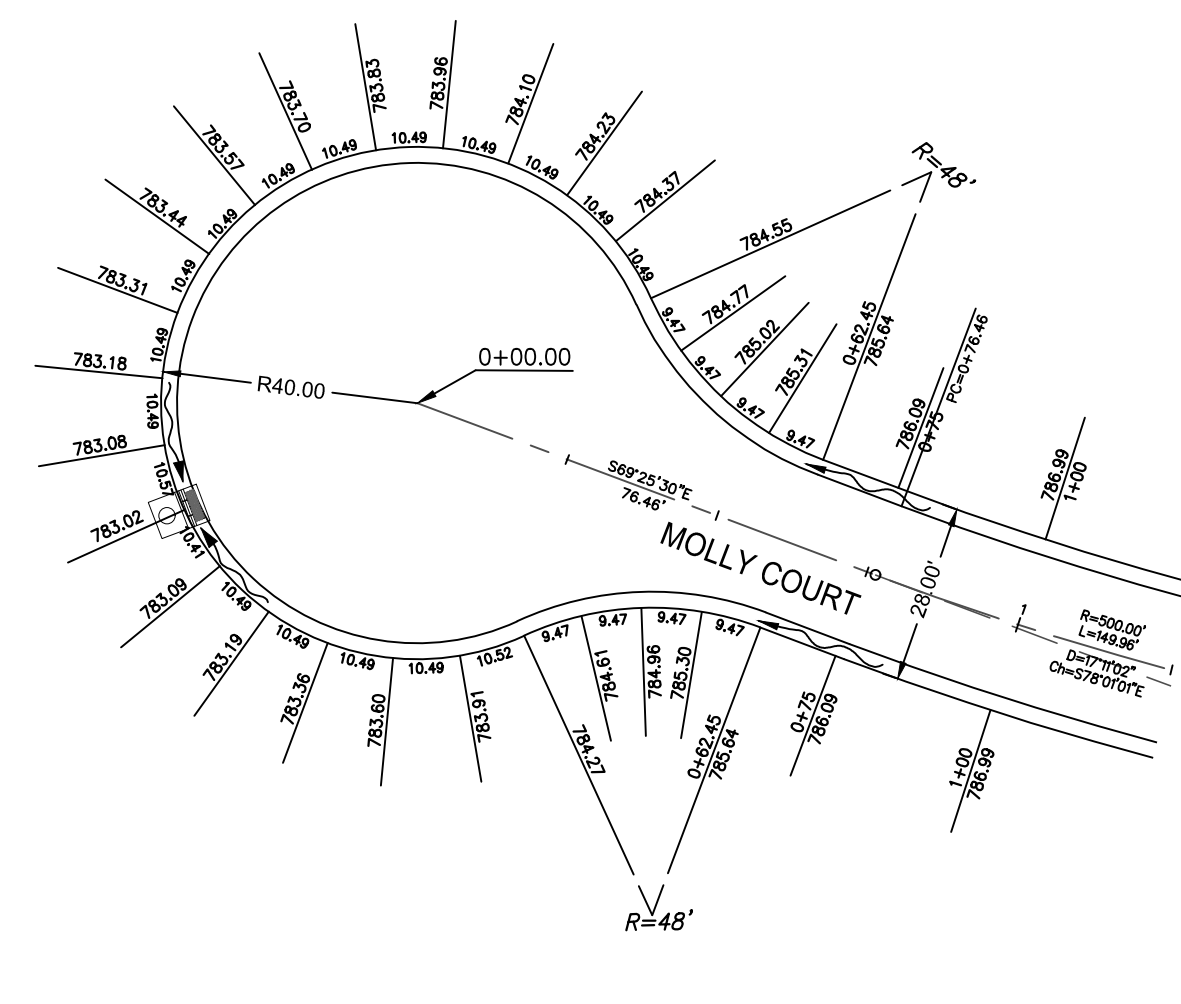
- NOTES:
- ALL JOINTS OF THE FLOTATION SECTION SHALL BE GLUED TOGETHER AND WATERTIGHT. JOINTS OF THE SKIMMER SECTION NEED NOT BE WATERTIGHT.
 - TO INSTALL DEWATERING PIPE STUB:
 - FOR CORRUGATED METAL RISER, STUB SHALL BE SCH 40 STEEL PIPE TACK WELDED TO CREATE A WATERTIGHT SEAL.
 - FOR CONCRETE RISER,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



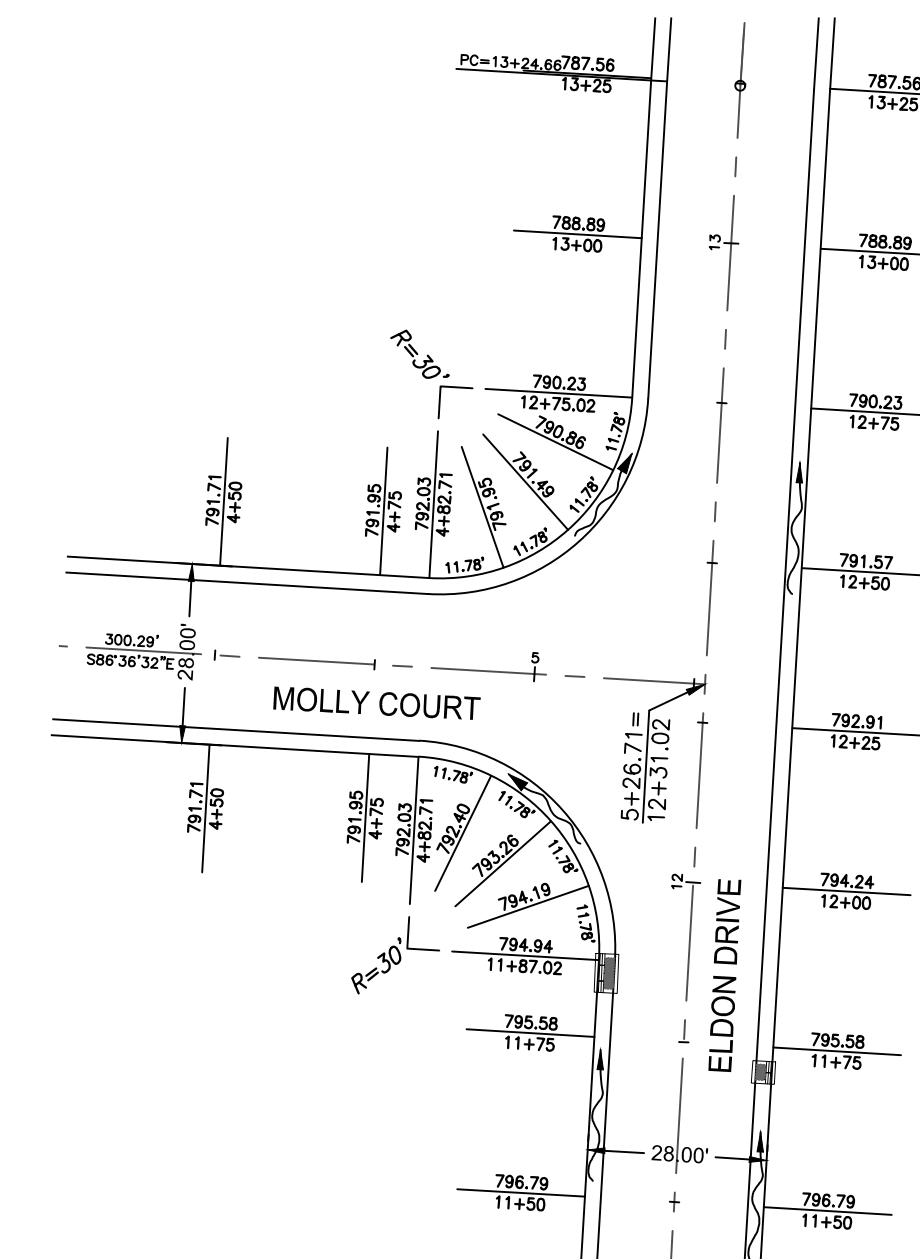
PLAN VIEW

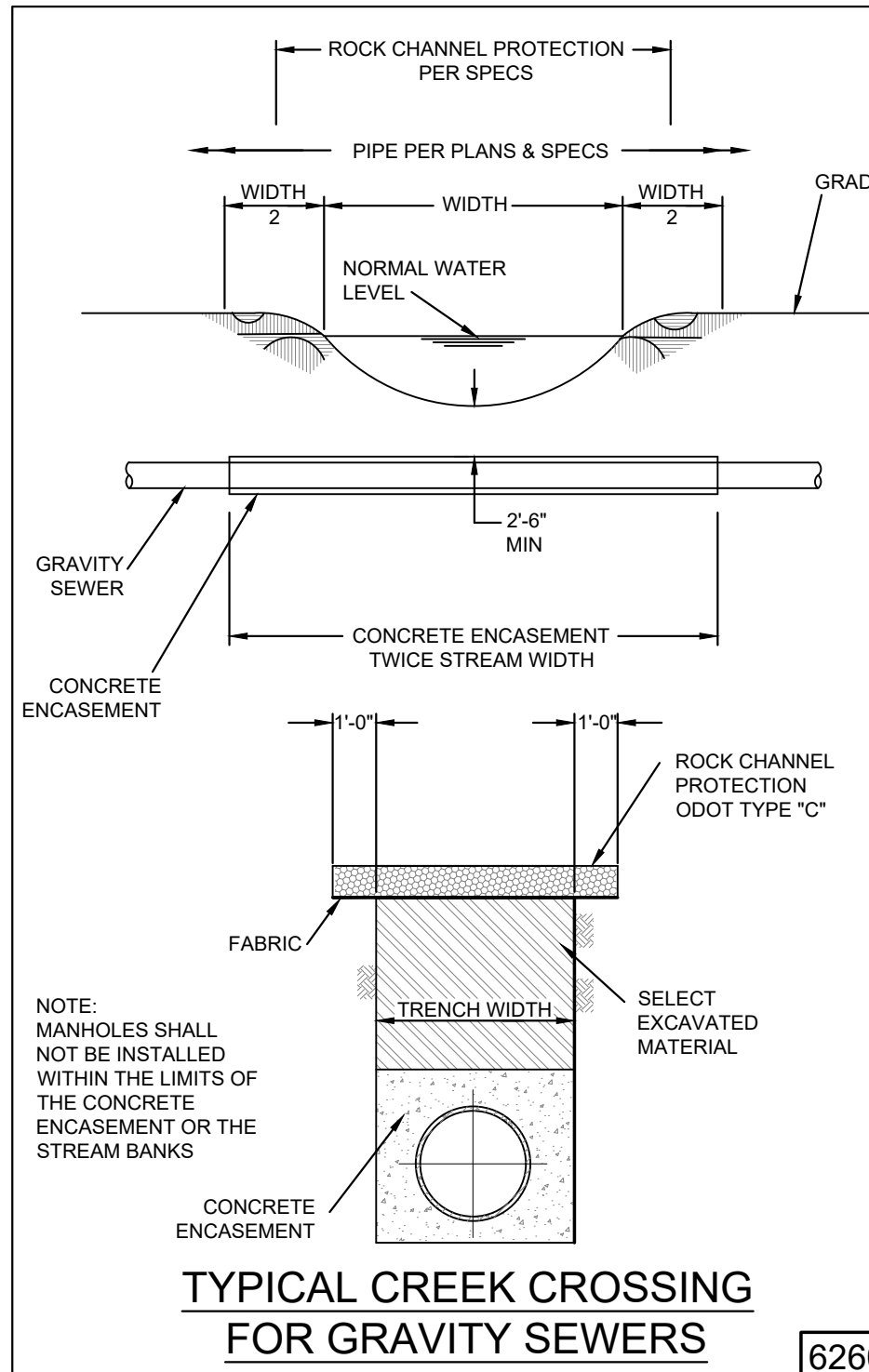


PROFILE VIEW

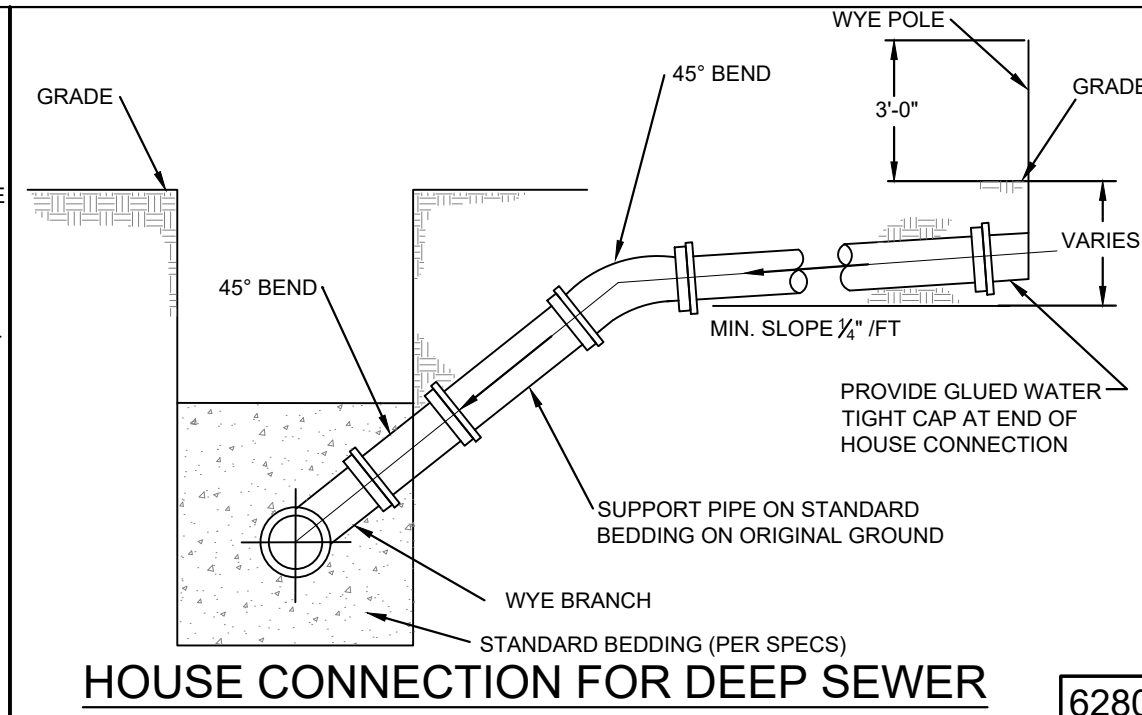


DETAIL SCALE: 1"=30'

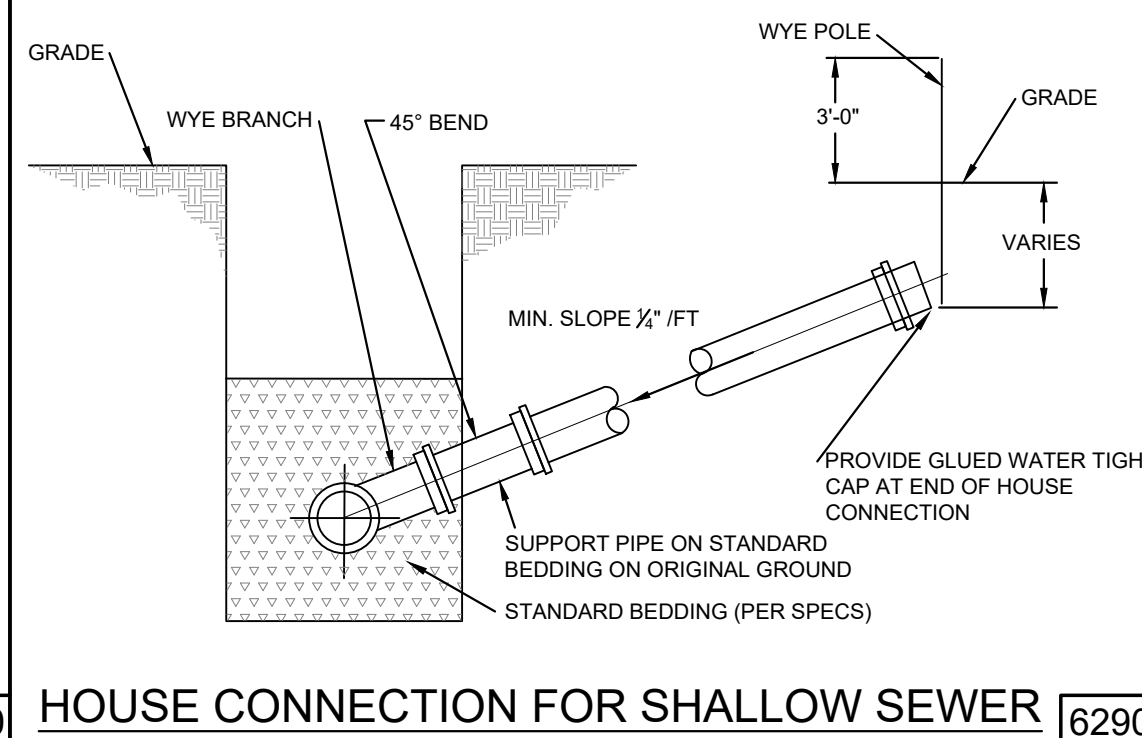




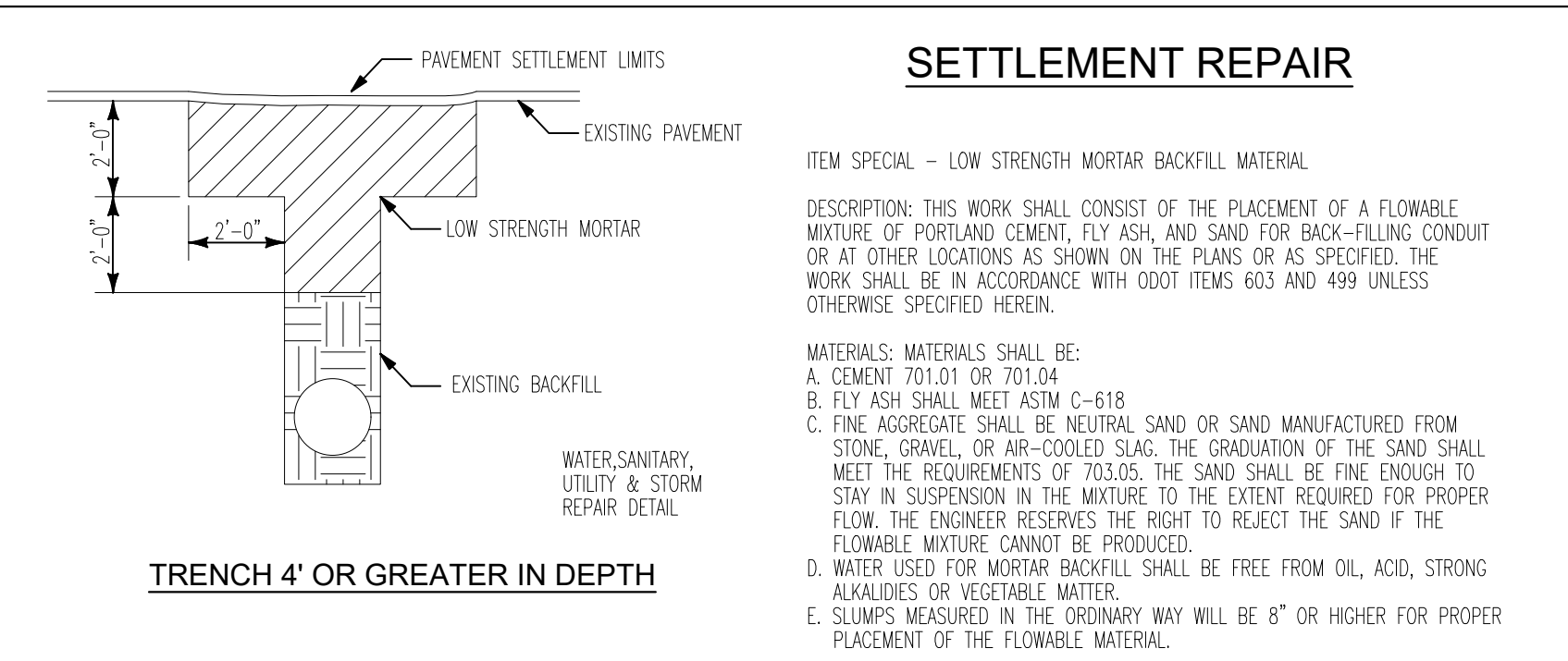
TYPICAL CREEK CROSSING FOR GRAVITY SEWERS [6260]



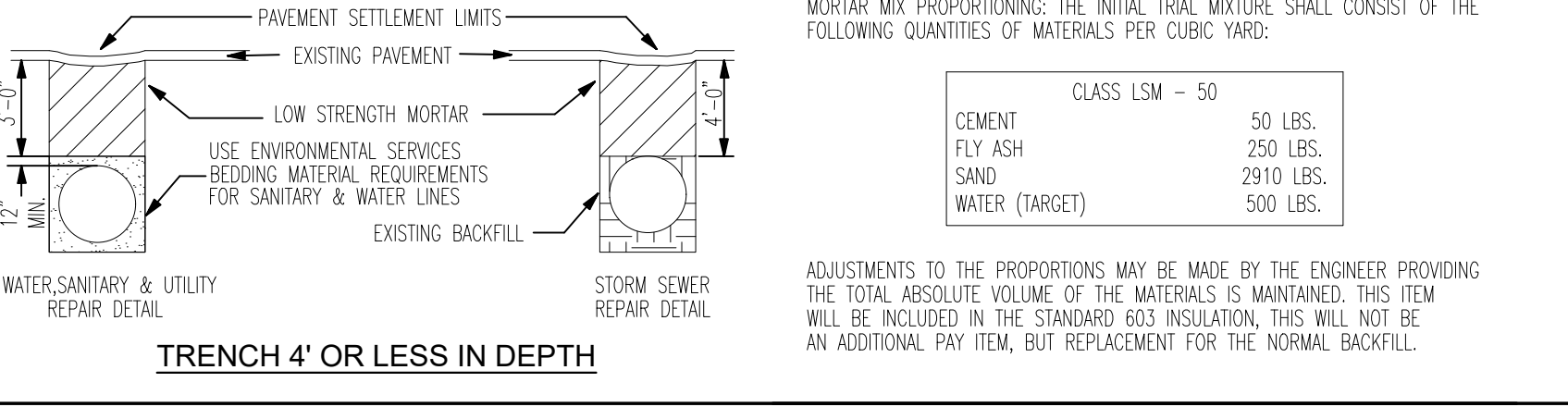
HOUSE CONNECTION FOR DEEP SEWER [6280]



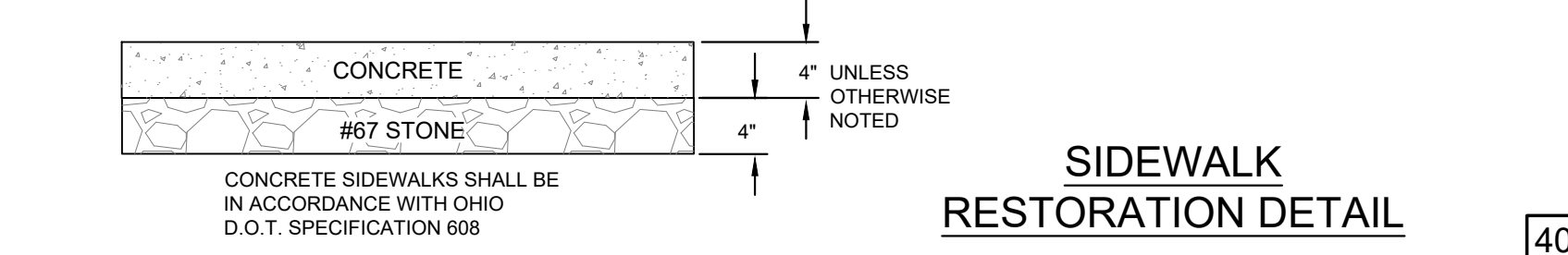
HOUSE CONNECTION FOR SHALLOW SEWER [6290]



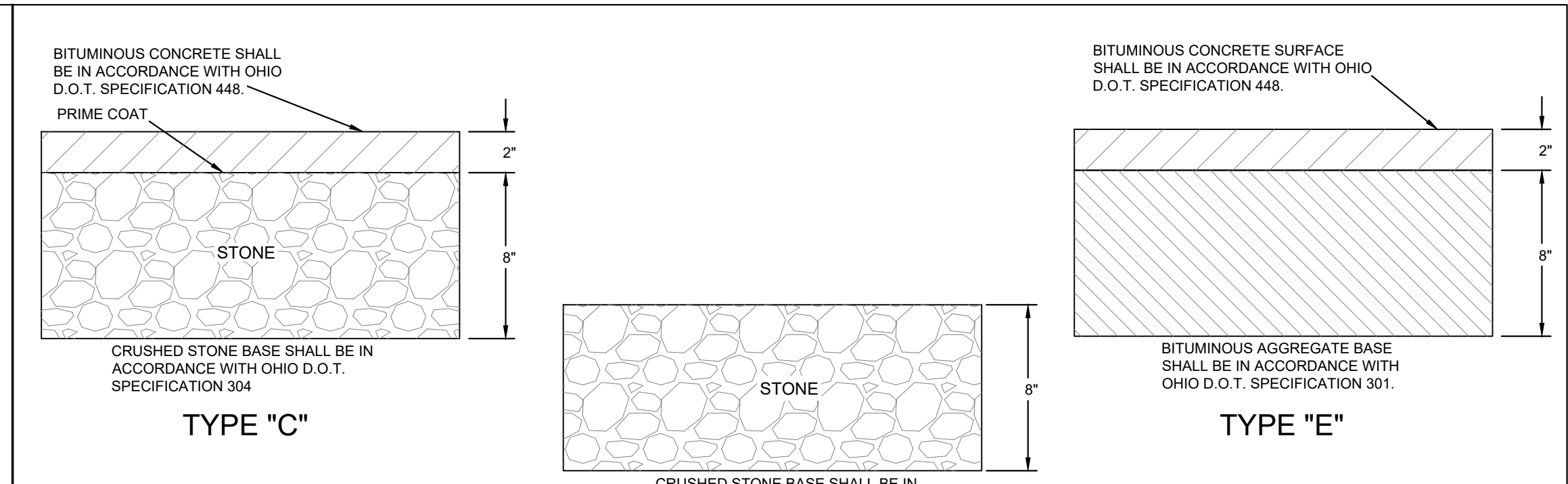
TRENCH 4' OR GREATER IN DEPTH



TRENCH 4' OR LESS IN DEPTH

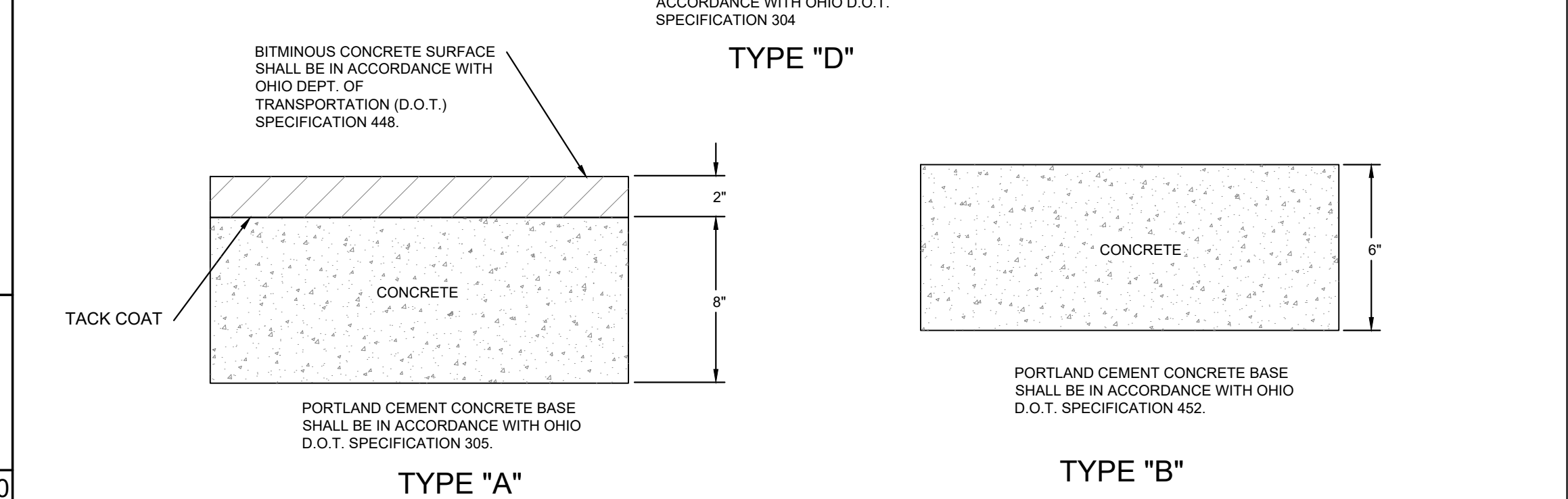


SIDEWALK RESTORATION DETAIL [4010]



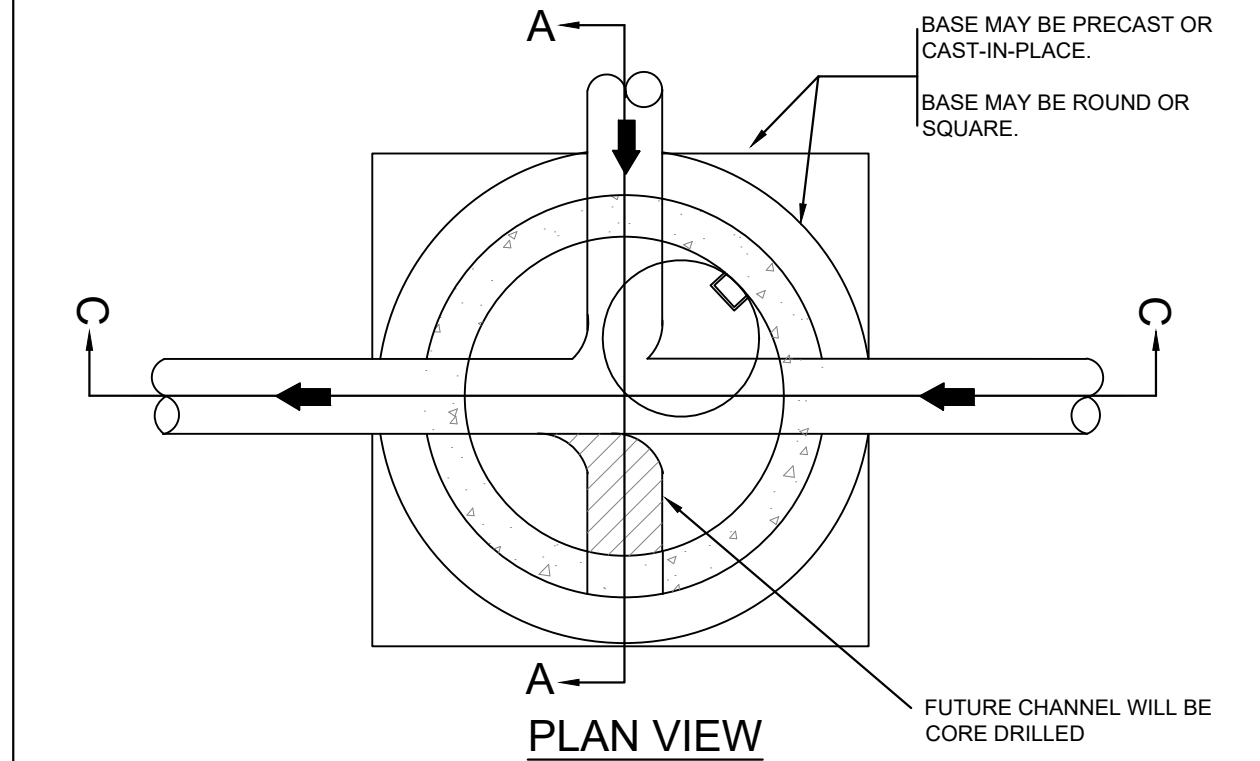
TYPE "C"

TYPE "E"

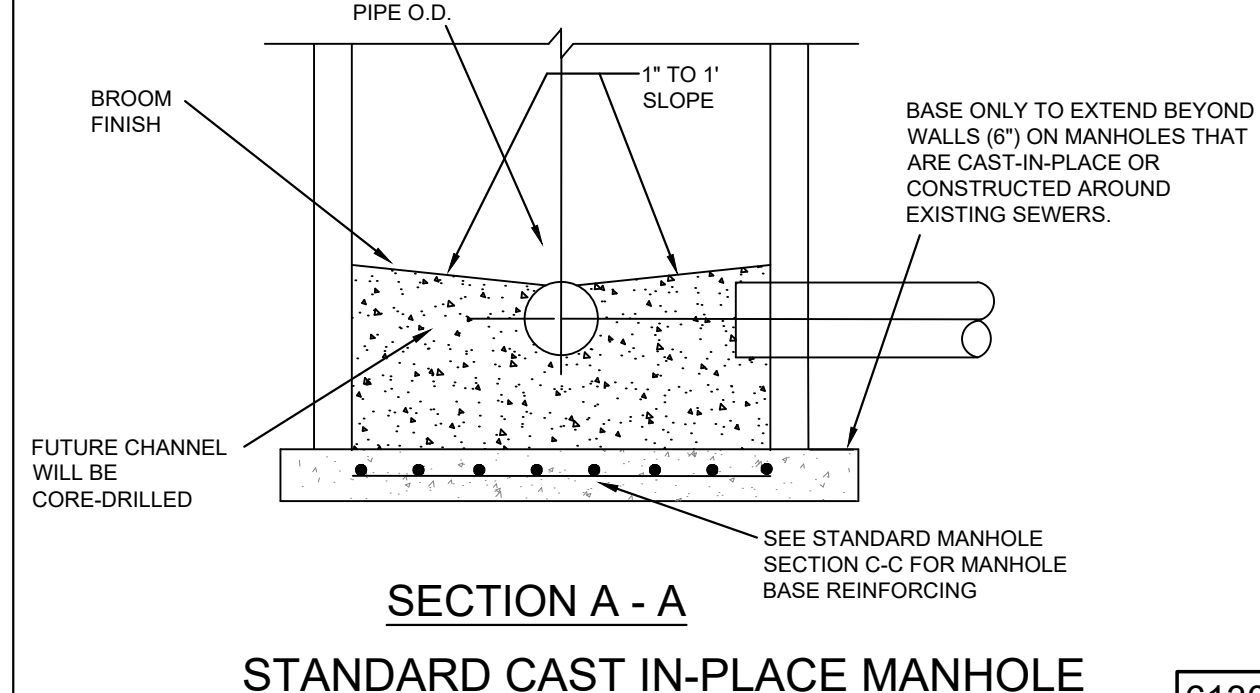


TYPE "A"

TYPE "B"

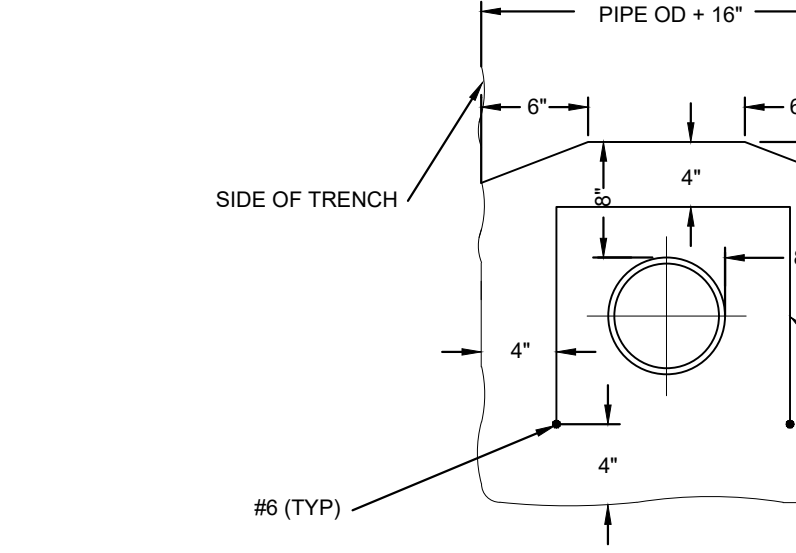


PLAN VIEW



SECTION A - A

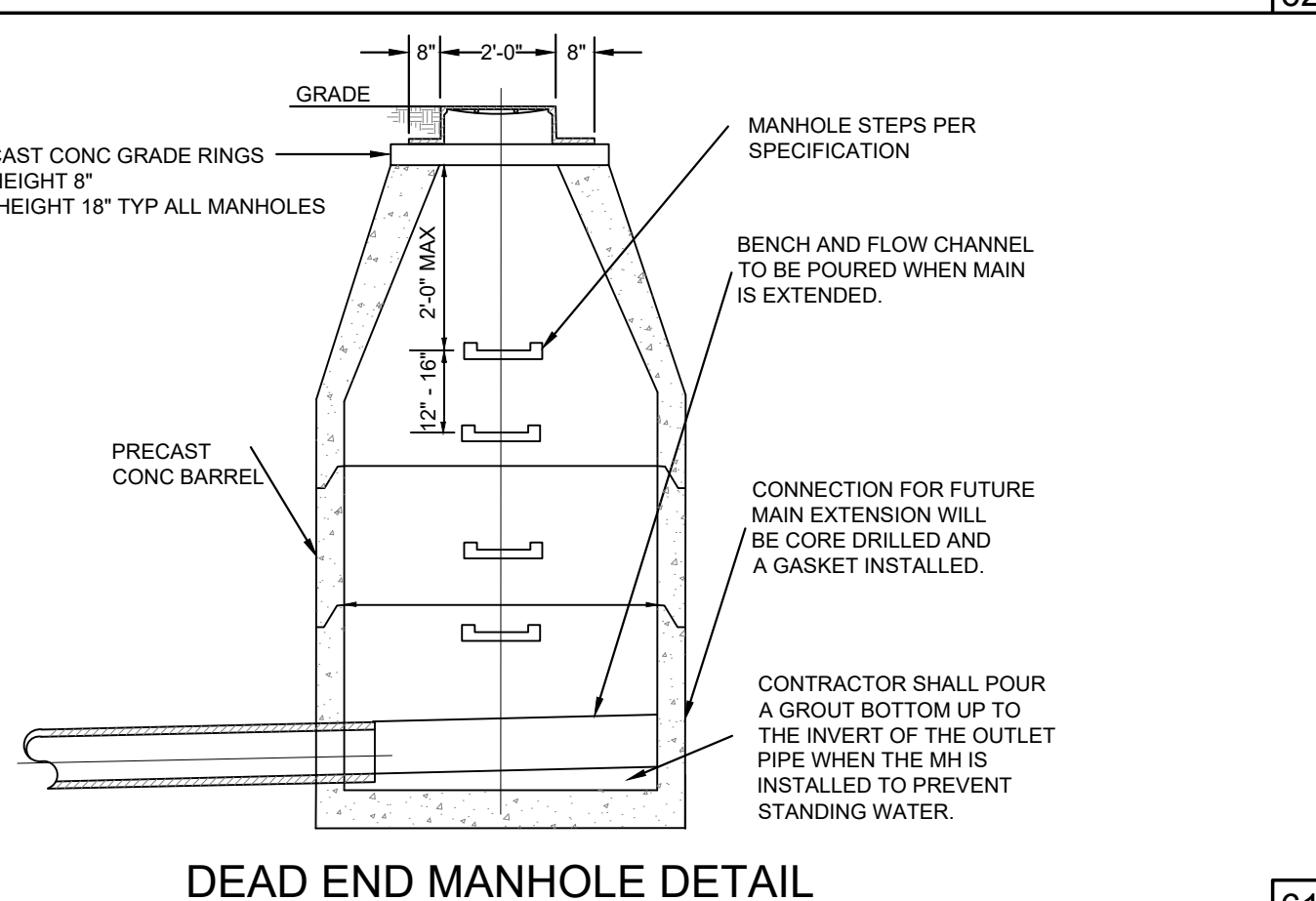
STANDARD CAST-IN-PLACE MANHOLE [6130]



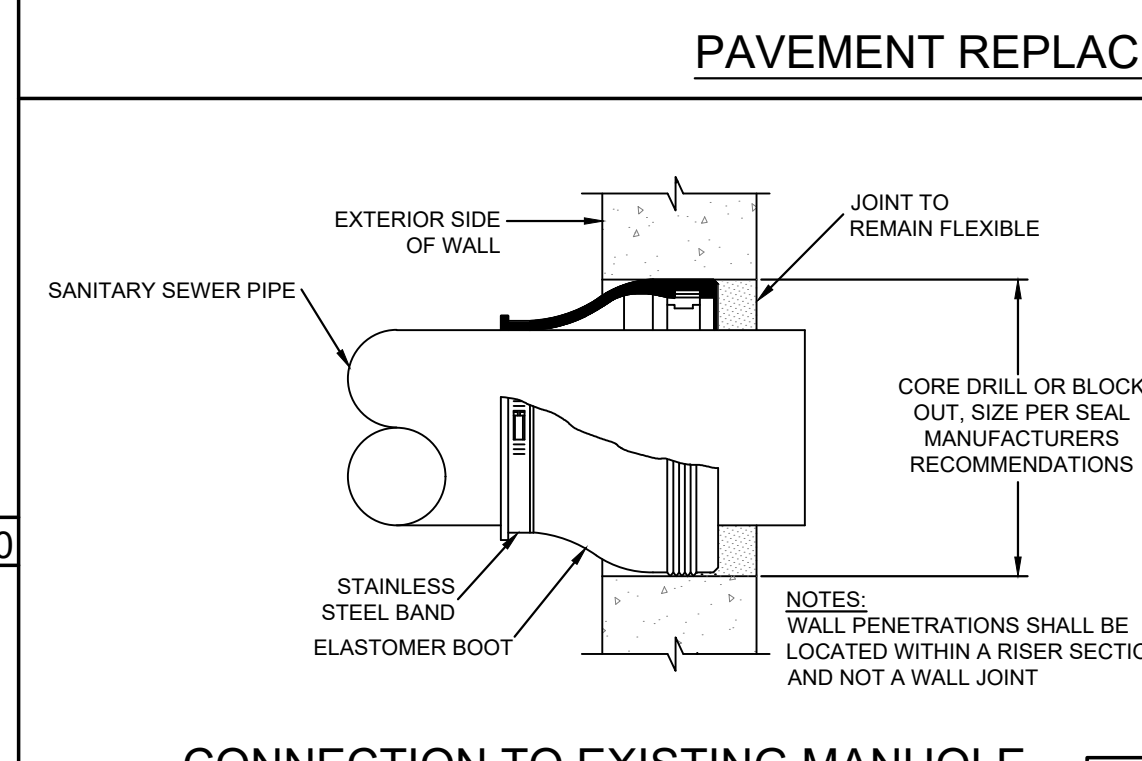
TYPICAL TRENCH DETAIL SEWER INSTALLATION [6270]

CONCRETE ENCASEMENT DETAIL [6240]

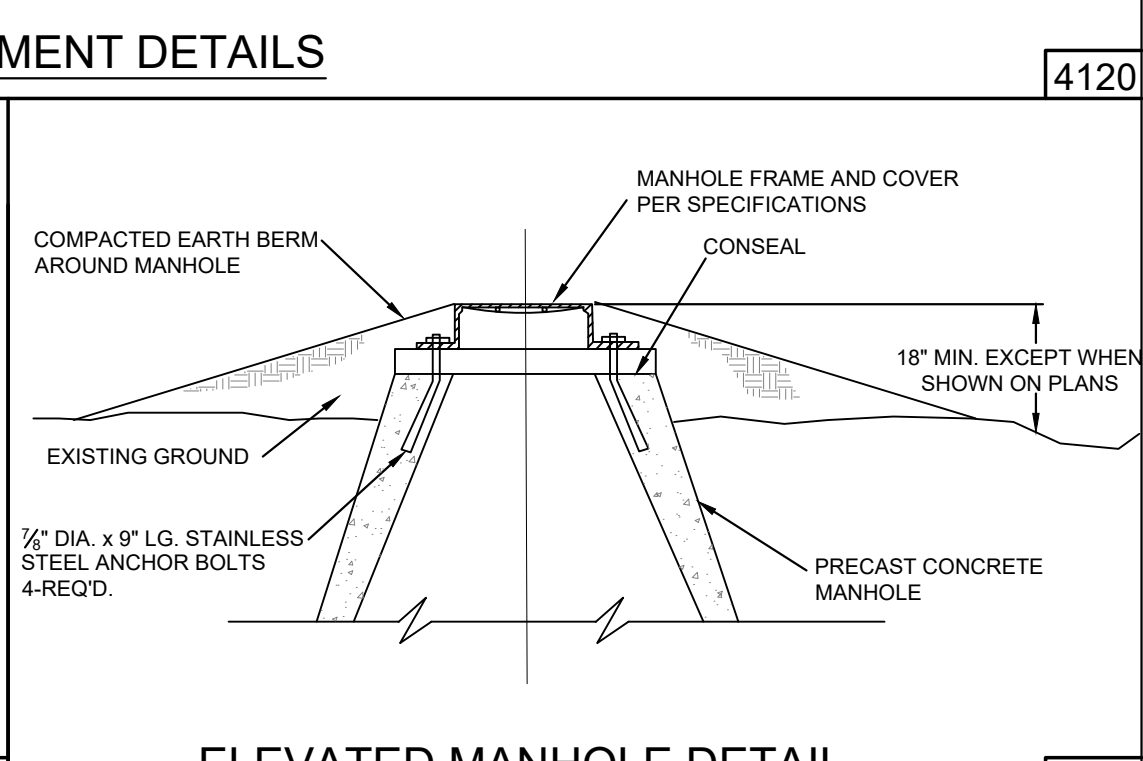
PIPE SIZE	CY CONC PER LIN FT	LENGTH OF NO 3 BARS	SPACING (FT) BETWEEN NO 3 BARS
6"	0.121	3'-9"	1.64
8"	0.139	4'-3"	1.25
10"	0.157	4'-9"	1.12
12"	0.177	5'-3"	1.02
16"	0.200	6'-3"	0.85
18"	0.247	6'-10"	0.78
20"	0.270	7'-5"	0.72
24"	0.315	8'-6"	0.63
30"	0.540	10'-0"	0.57



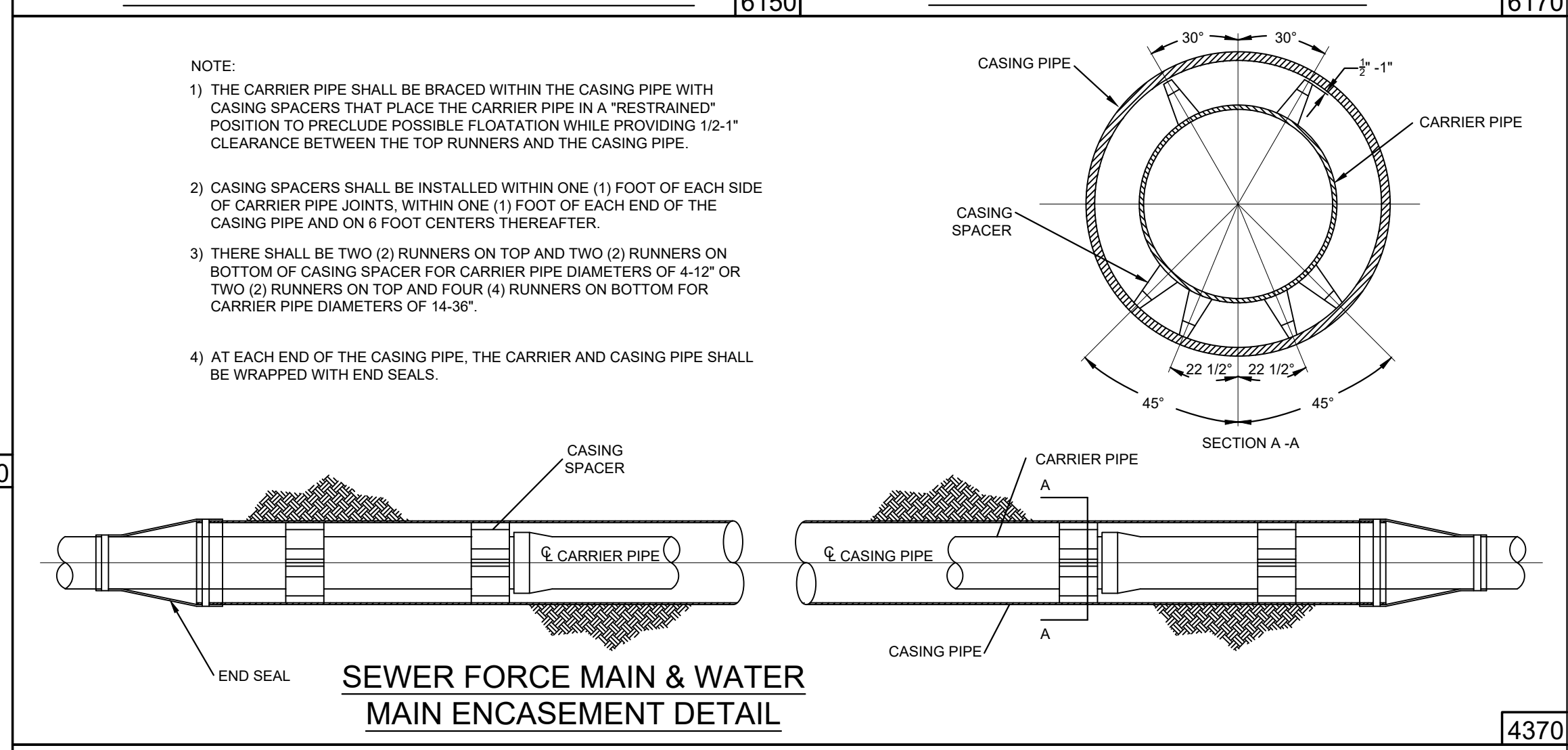
DEAD END MANHOLE DETAIL [6190]



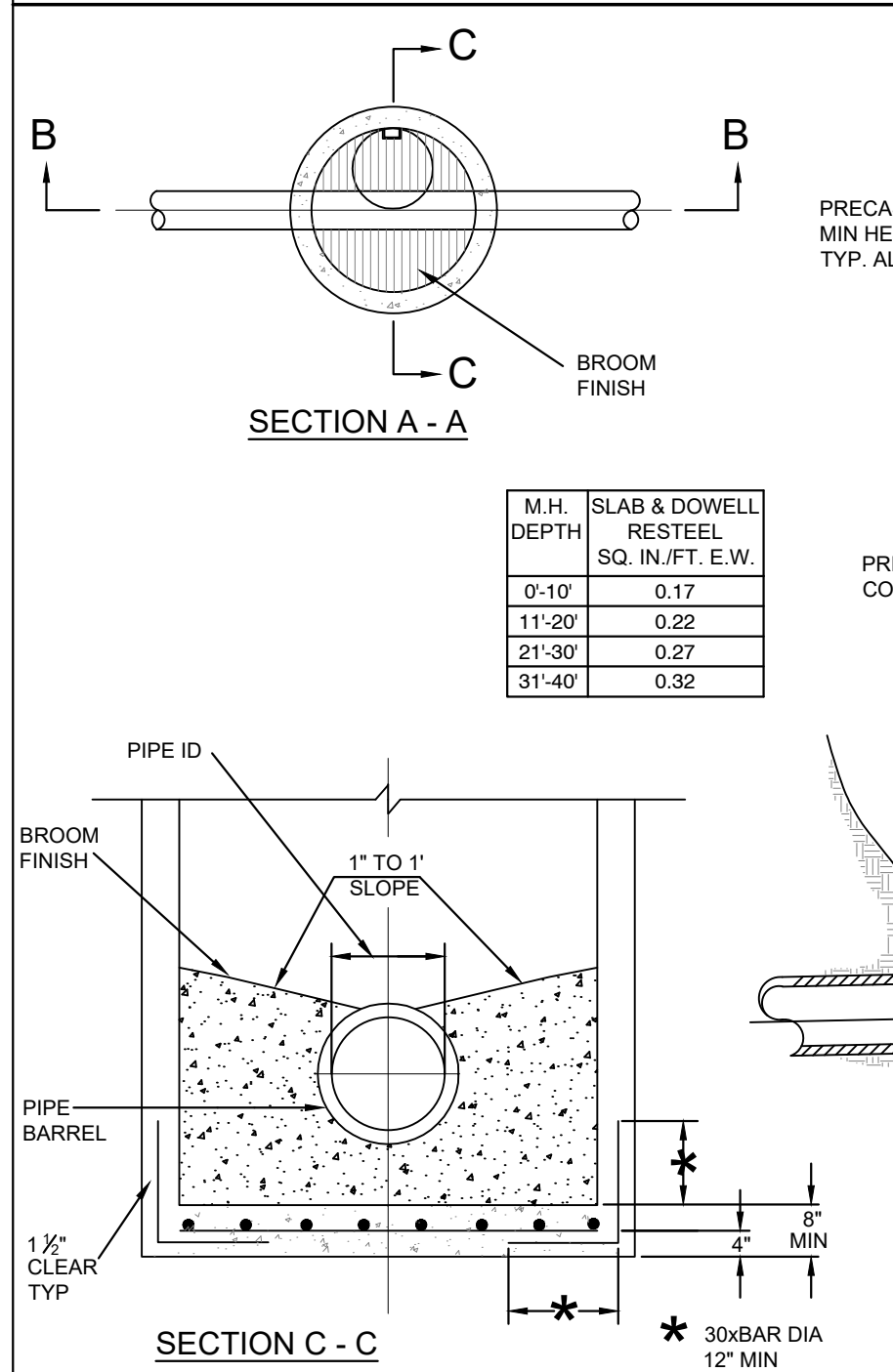
CONNECTION TO EXISTING MANHOLE [6150]



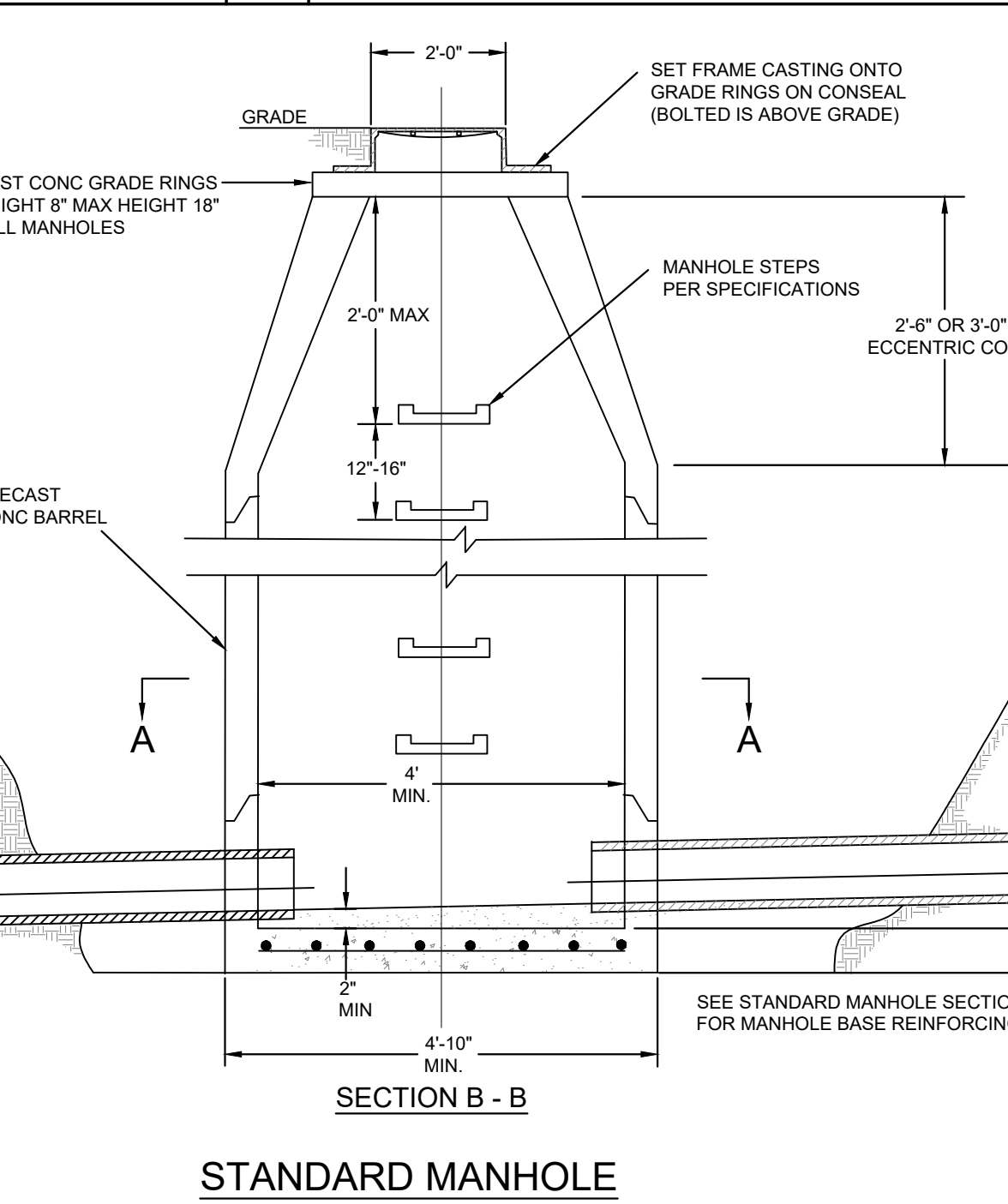
ELEVATED MANHOLE DETAIL [6170]



SEWER FORCE MAIN & WATER MAIN ENCASEMENT DETAIL [4370]

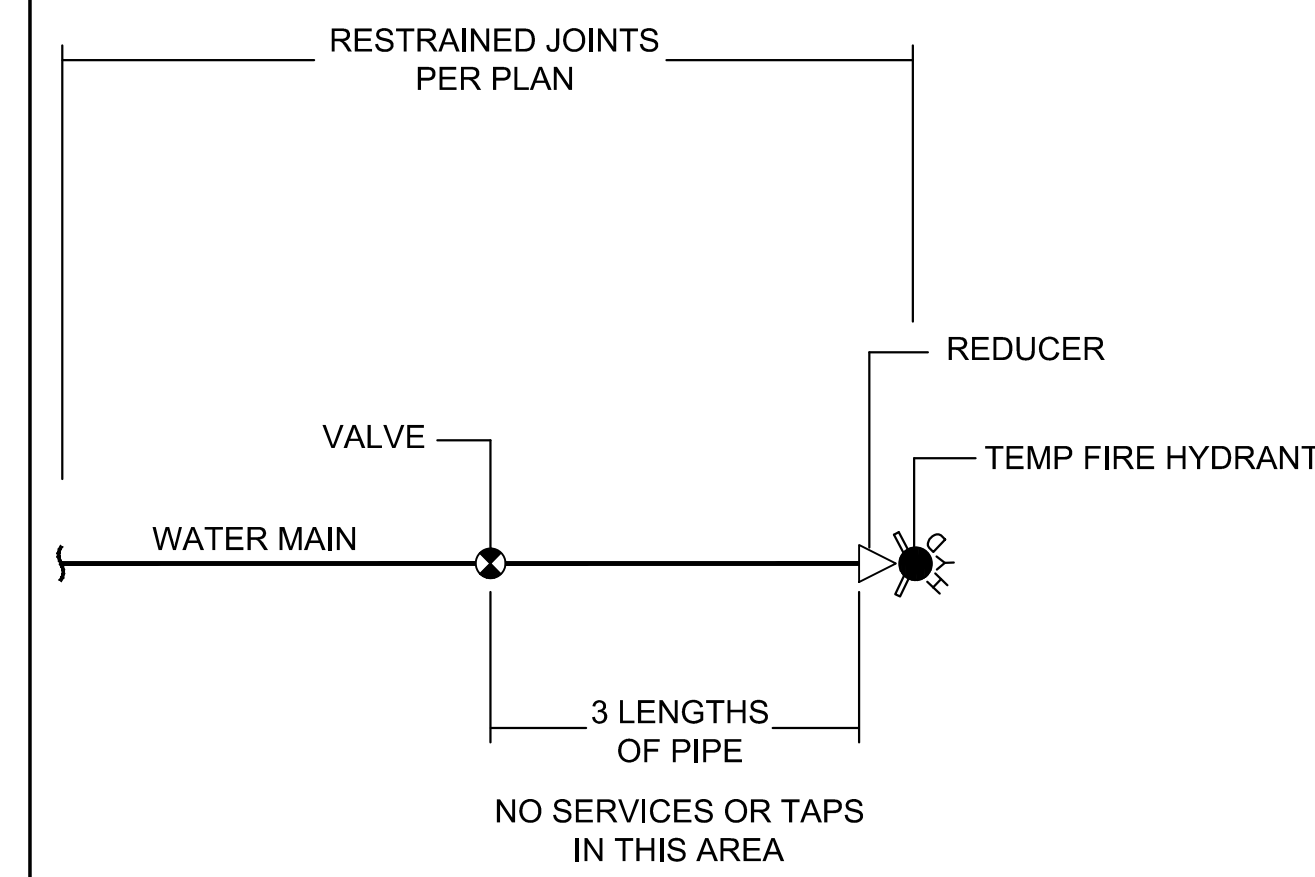


STANDARD MANHOLE [6200]



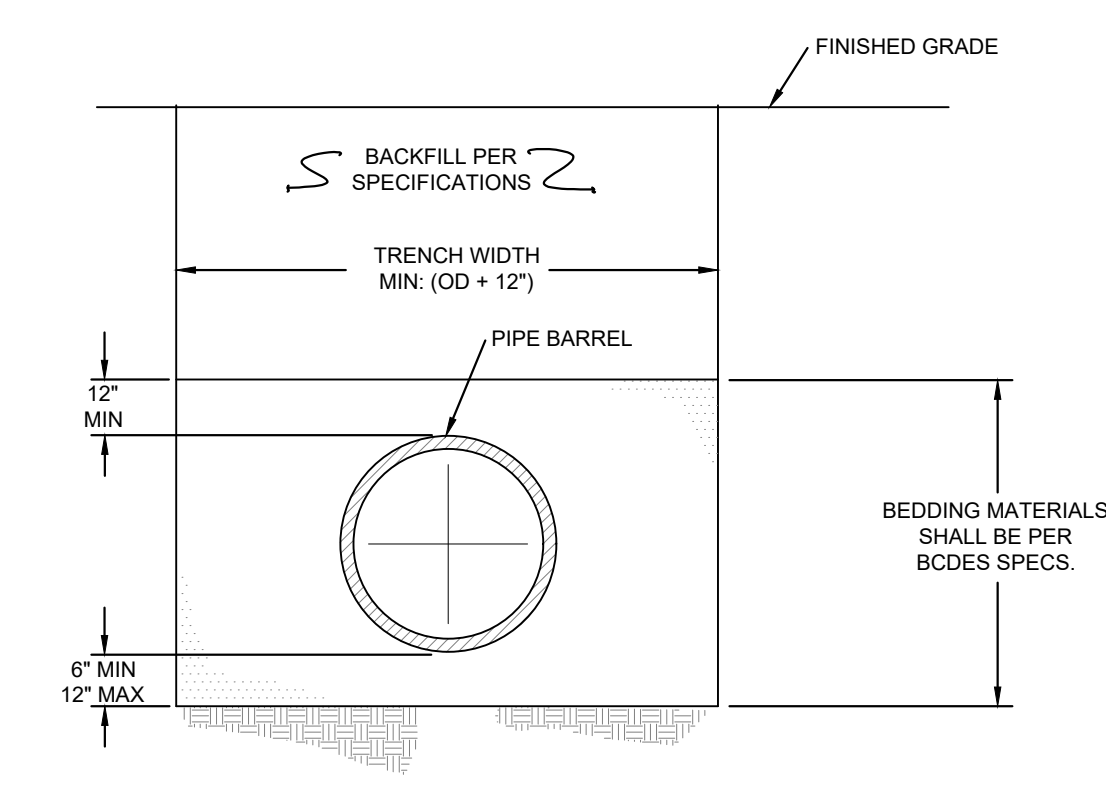
MANHOLE WITH WITH SLAB TOP DETAIL [6210]

Plot time: Aug 16, 2019 10:58am
 Drawing name: K:\OLD-K\Mason\WFF BLOCKS DETAILS\BUTLER\BC WAT.DWG - Layout Tab: WAT



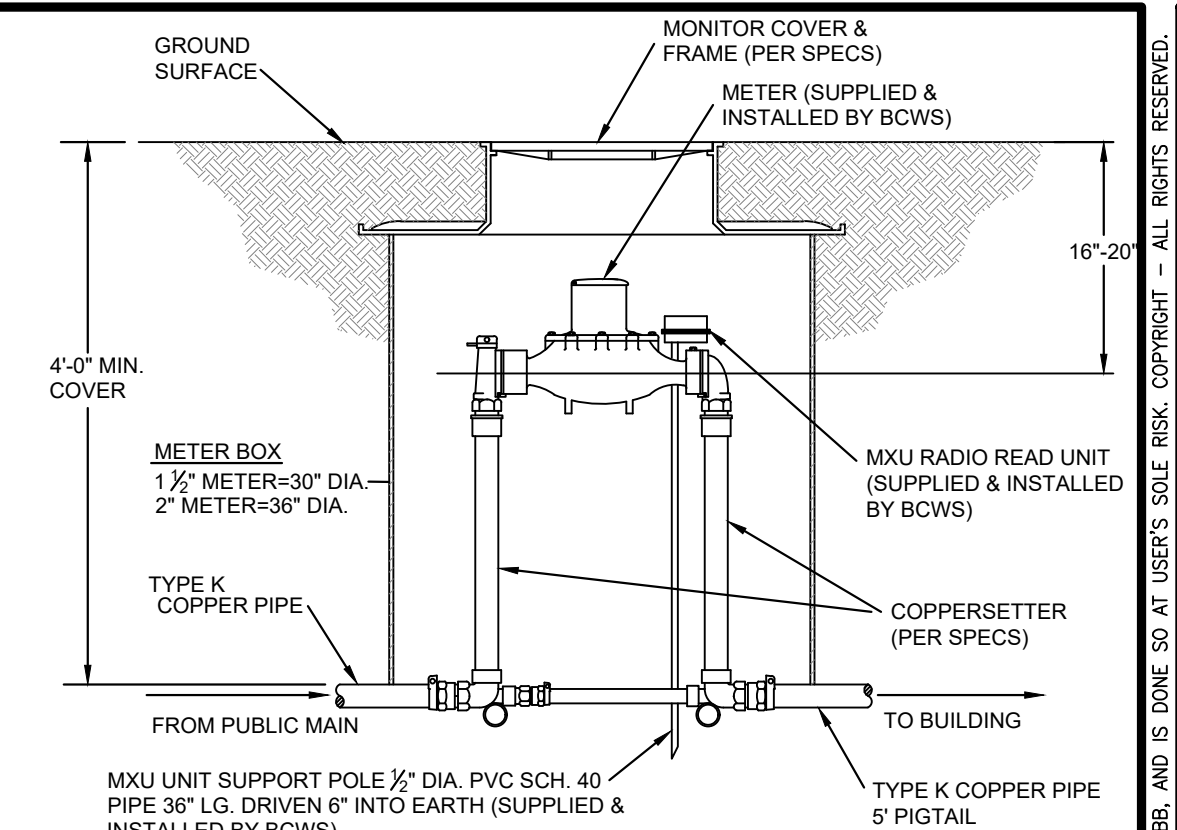
DEAD END DETAIL WITH TEMPORARY FIRE HYDRANT

5140



TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION

5280

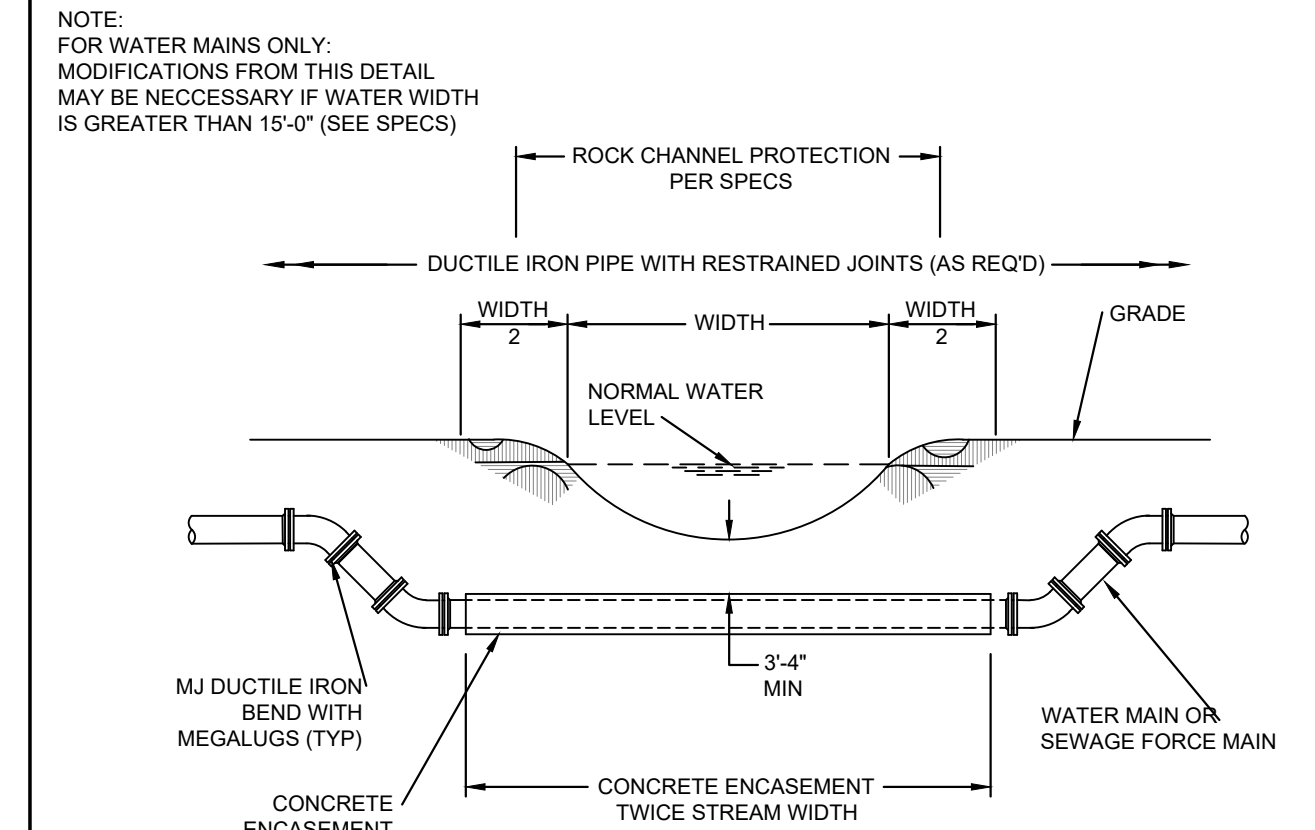


METER TYPE	LAYING LENGTH
1 1/2" C2 OMNI	13'
1 1/2" T2 OMNI	13'
2" C2 OMNI AS SUPPLIED BY BUTLER COUNTY SEE NOTE 3	17'
2" C2 OMNI FACTORY ORDERED	15 1/2'
2" T2 OMNI	17'

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 (I.E. DUCT, 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.

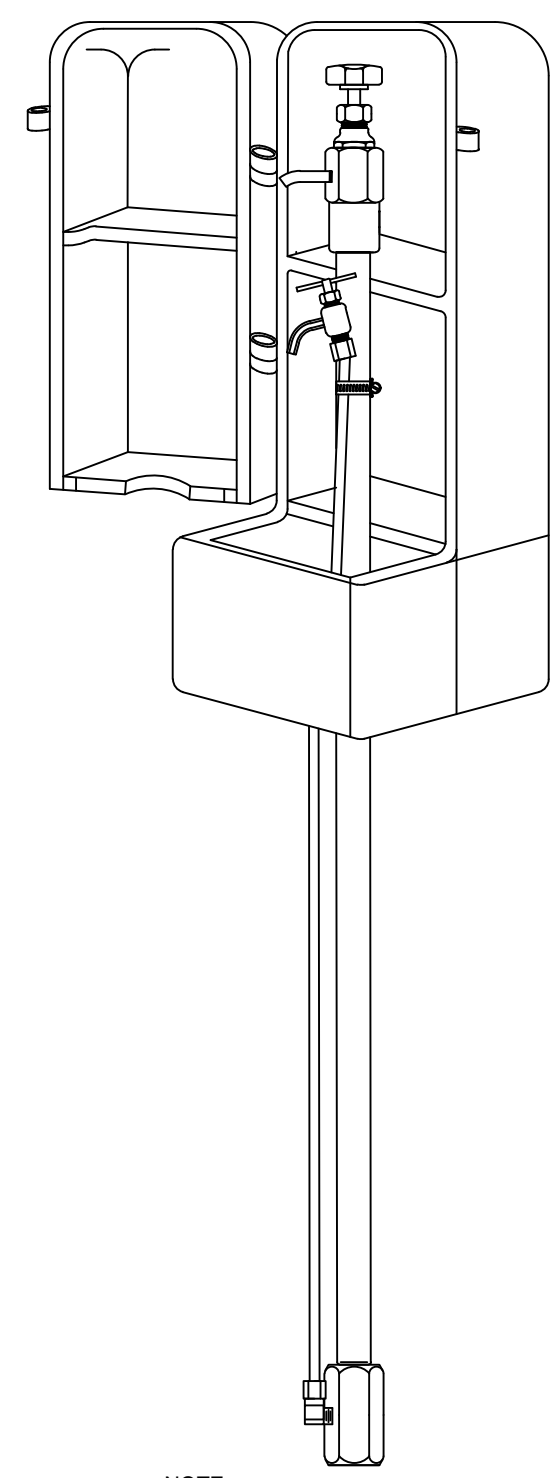
STANDARD INSTALLATION FOR 1-1/2" & 2" WATER METER SETTINGS

5170



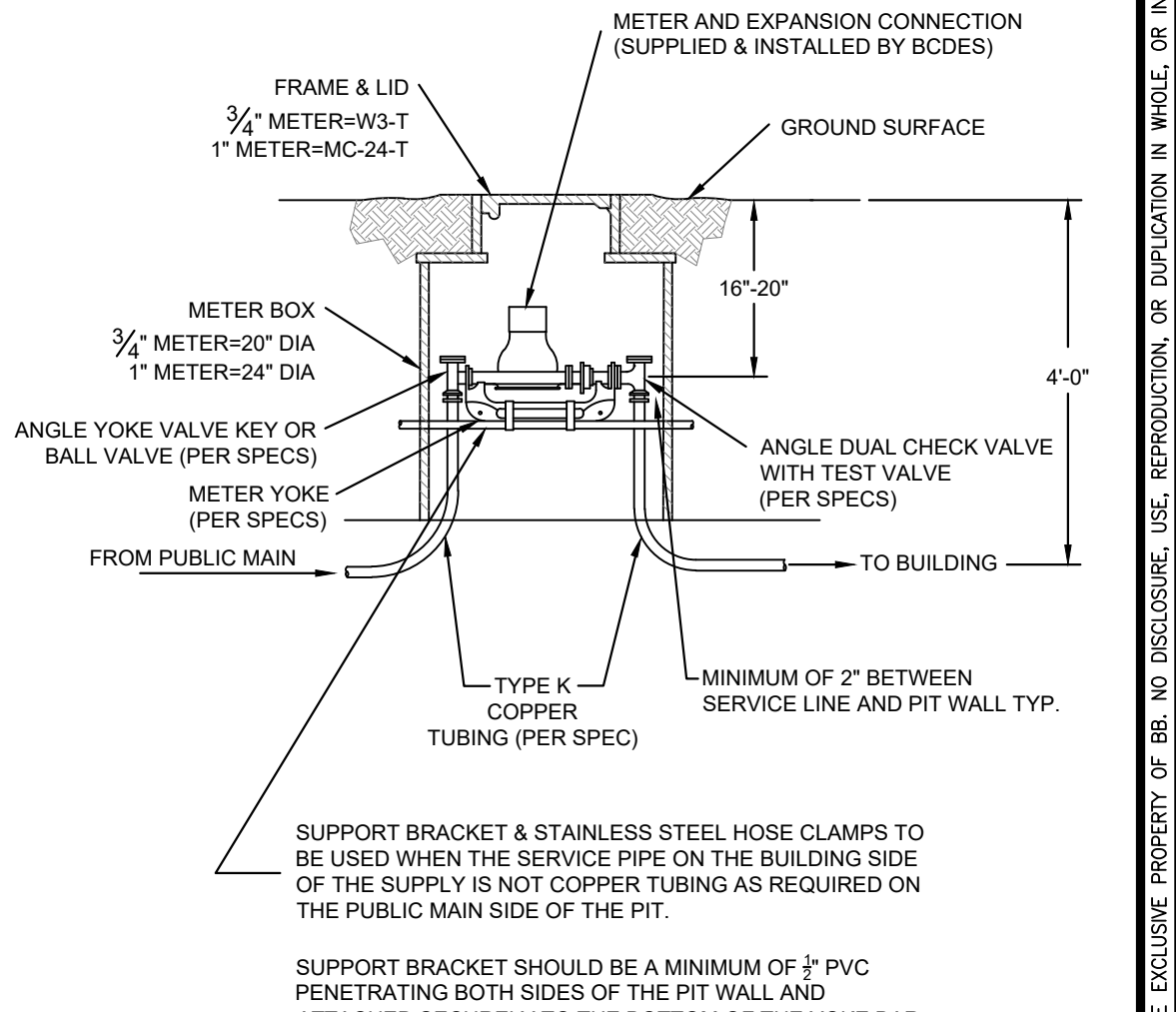
TYPICAL CREEK CROSSING & TRENCH DETAIL FOR WATER & SEWER FORCE MAINS

4170



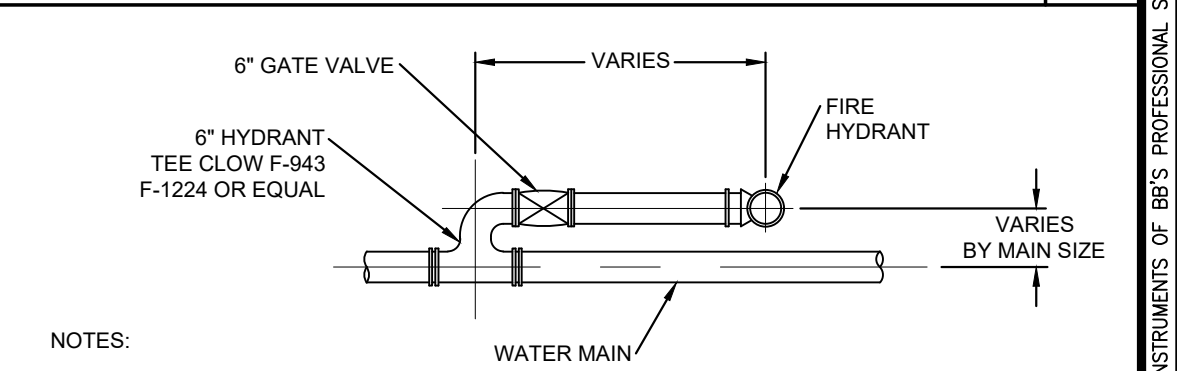
PERMANENT LAB SAMPLING STATION

5270



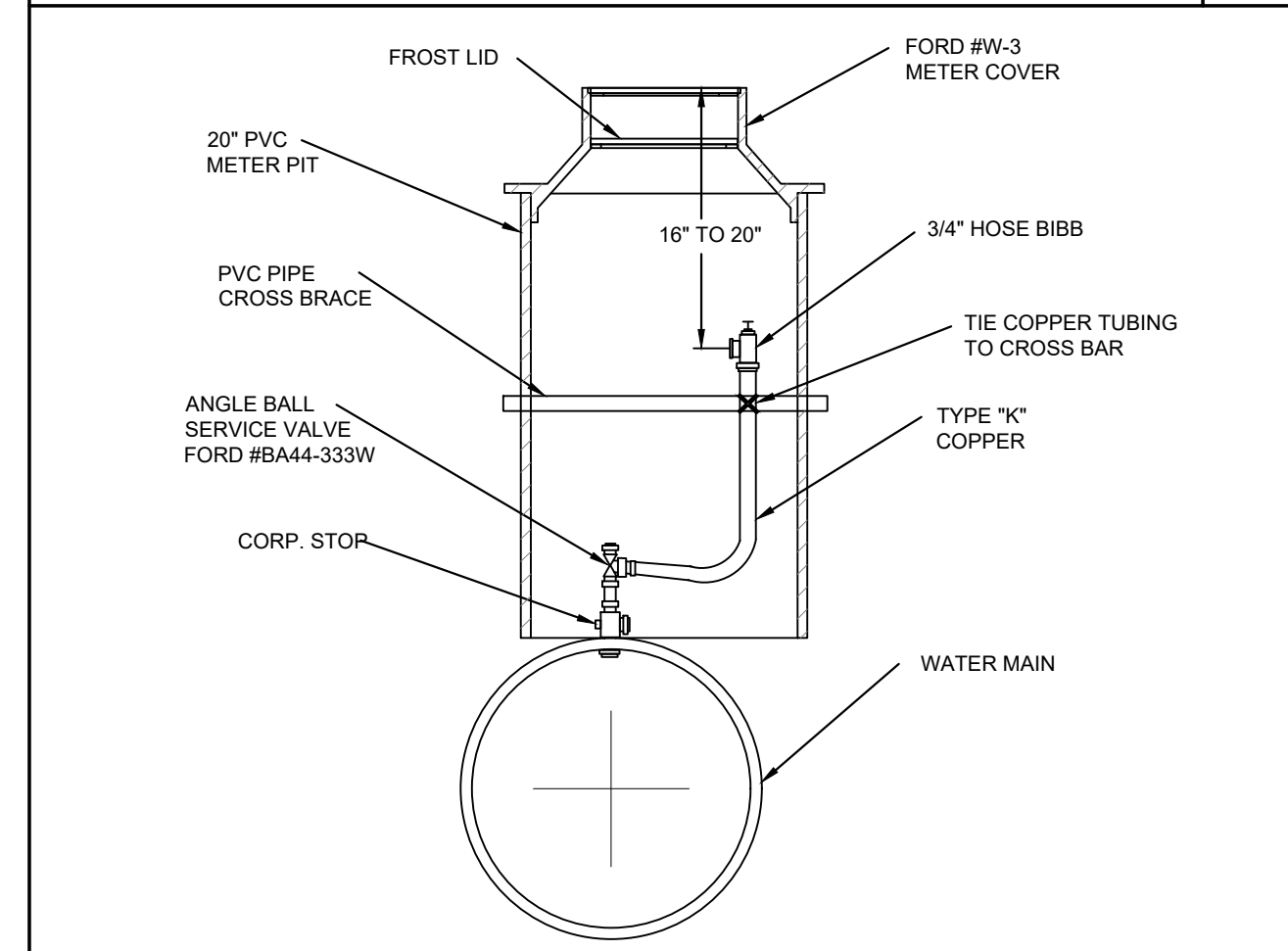
STANDARD INSTALLATION FOR 3/4" AND 1" WATER METER SETTINGS

5150



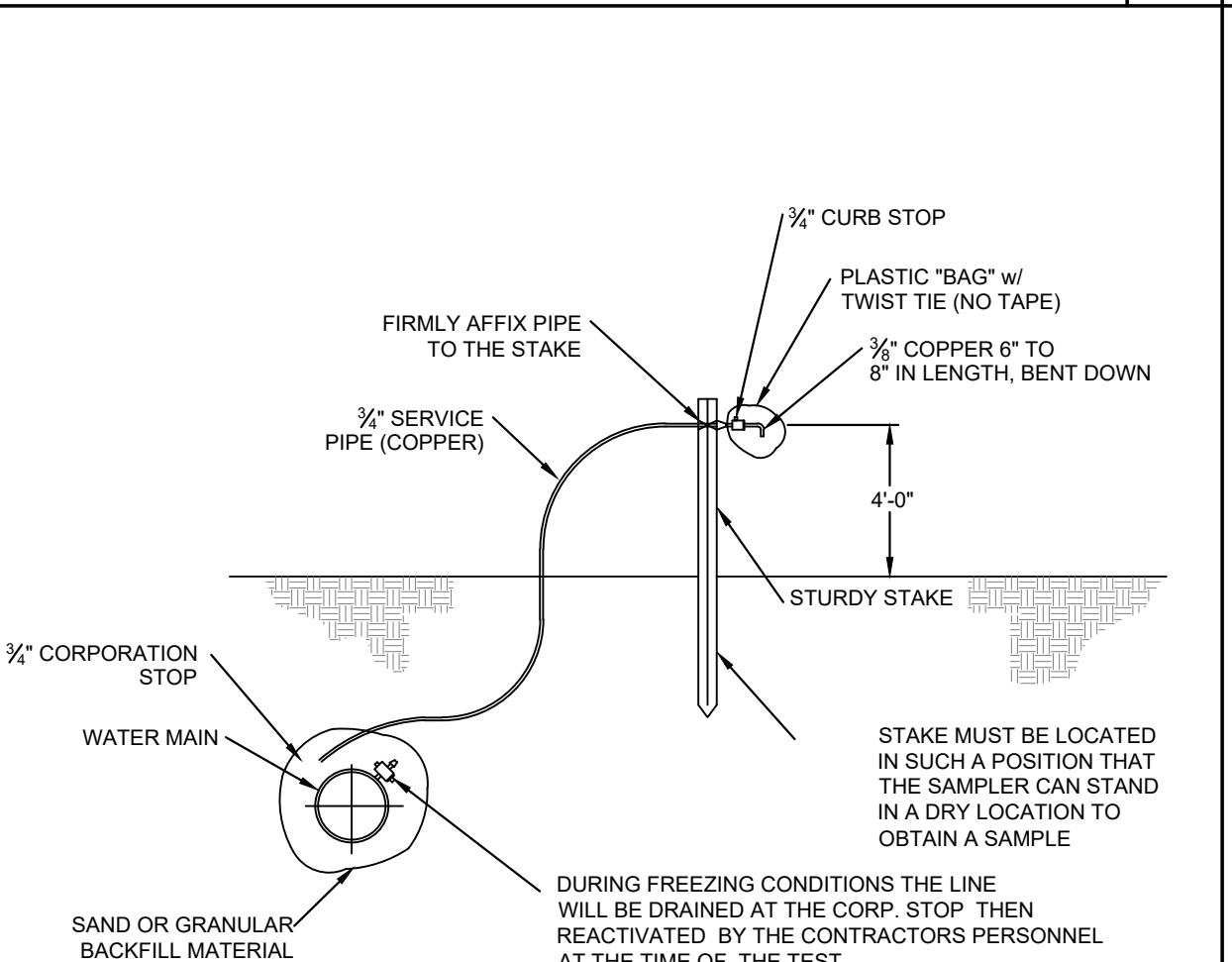
SETTING FOR HYDRANT ADJACENT TO MAIN

5120



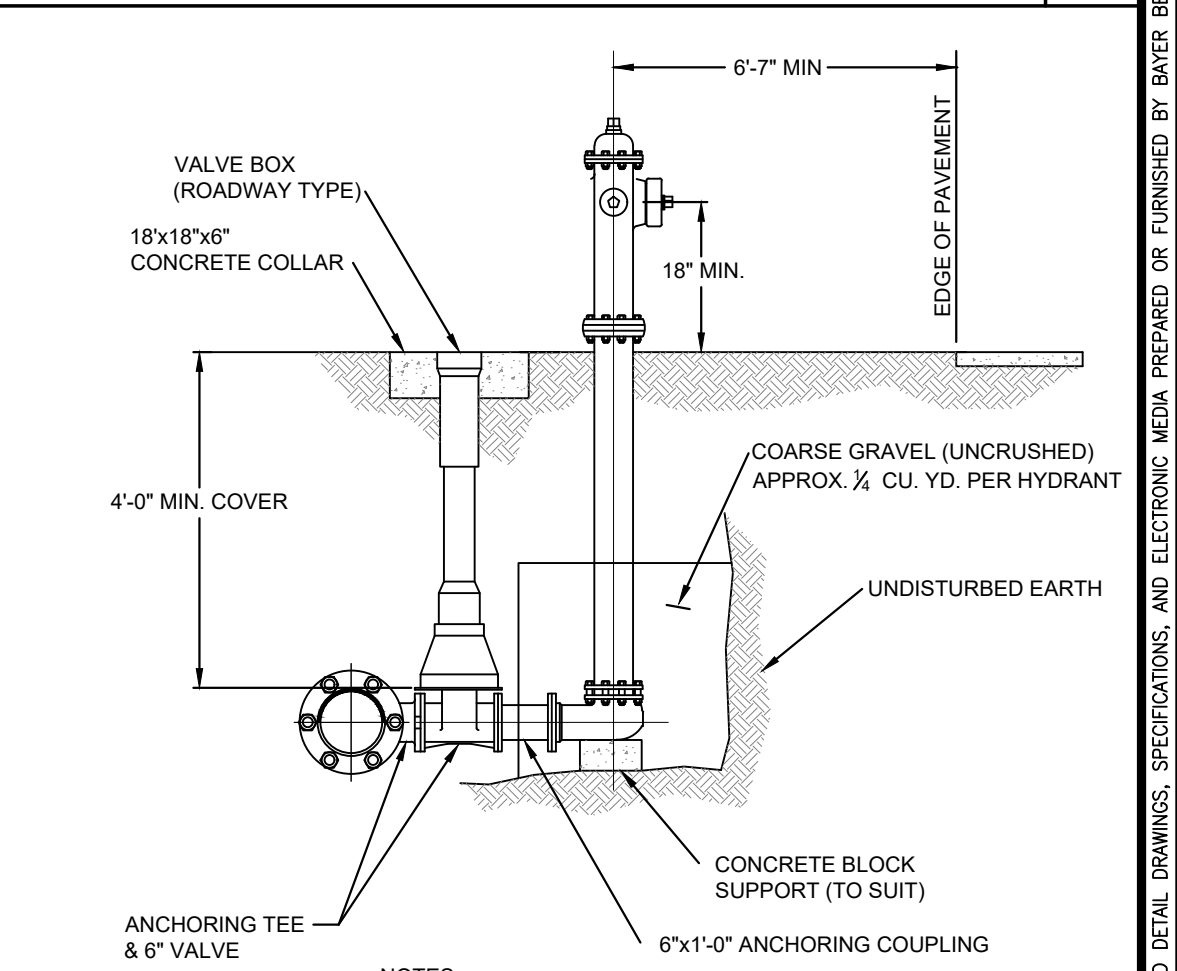
AIR RELEASE VALVE DETAIL

5290



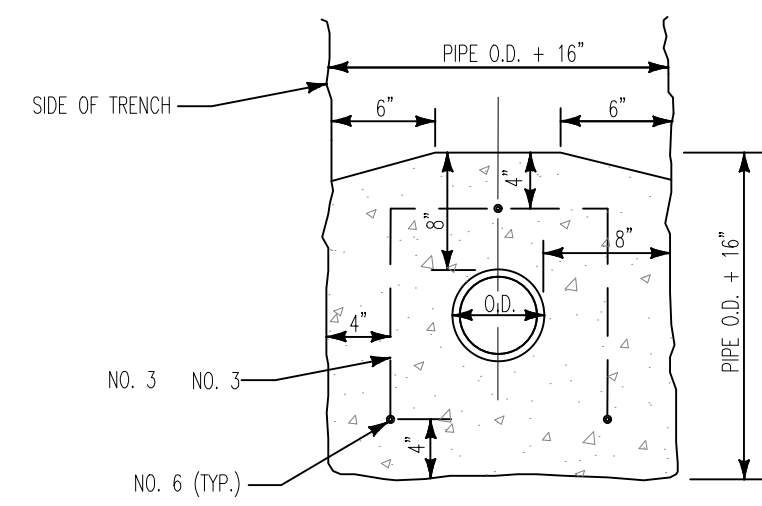
TEMPORARY PURITY TEST STATION

5260

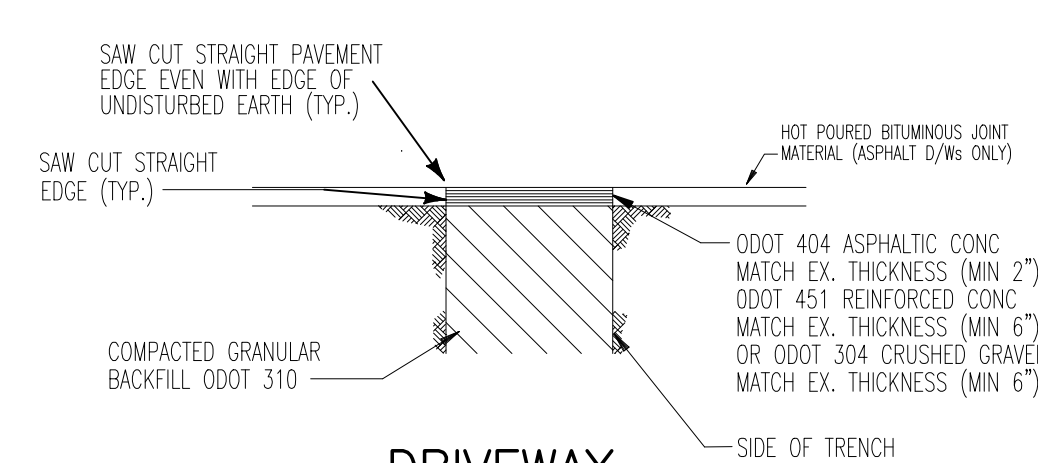


TYPICAL FIRE HYDRANT INSTALLATION

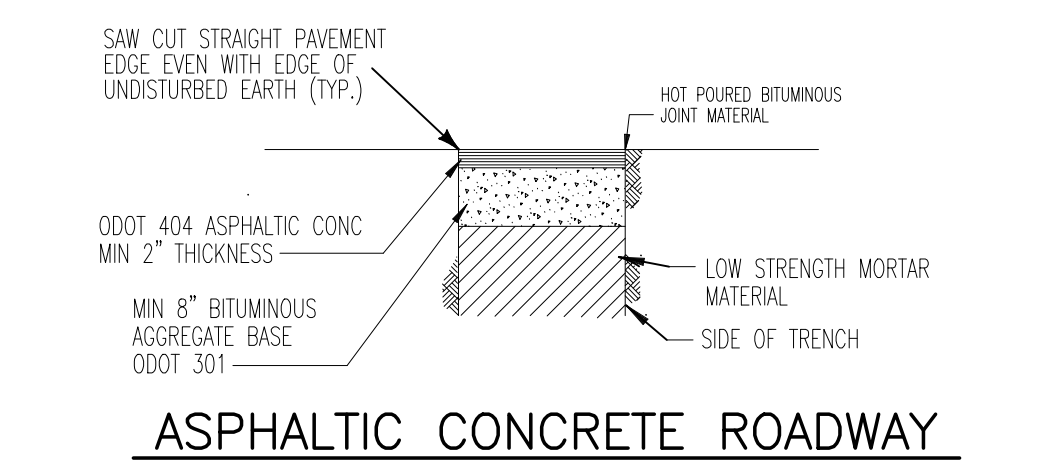
5110



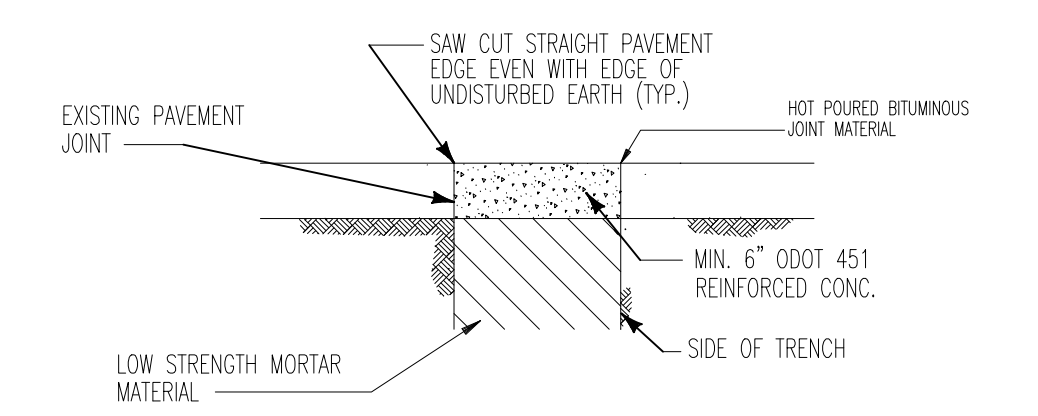
CONCRETE ENCASUREMENT



DRIVEWAY



ASPHALTIC CONCRETE ROADWAY



CONCRETE ROADWAY

PAVEMENT REPLACEMENT DETAILS

PIPE SIZE	C.Y. CONC. PER LIN. FT.	LENGTH OF NO. 3 BARS	SPACING (FT) BETWEEN NO. 3 BARS
6"	0.121	3'-0"	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"	0.241	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

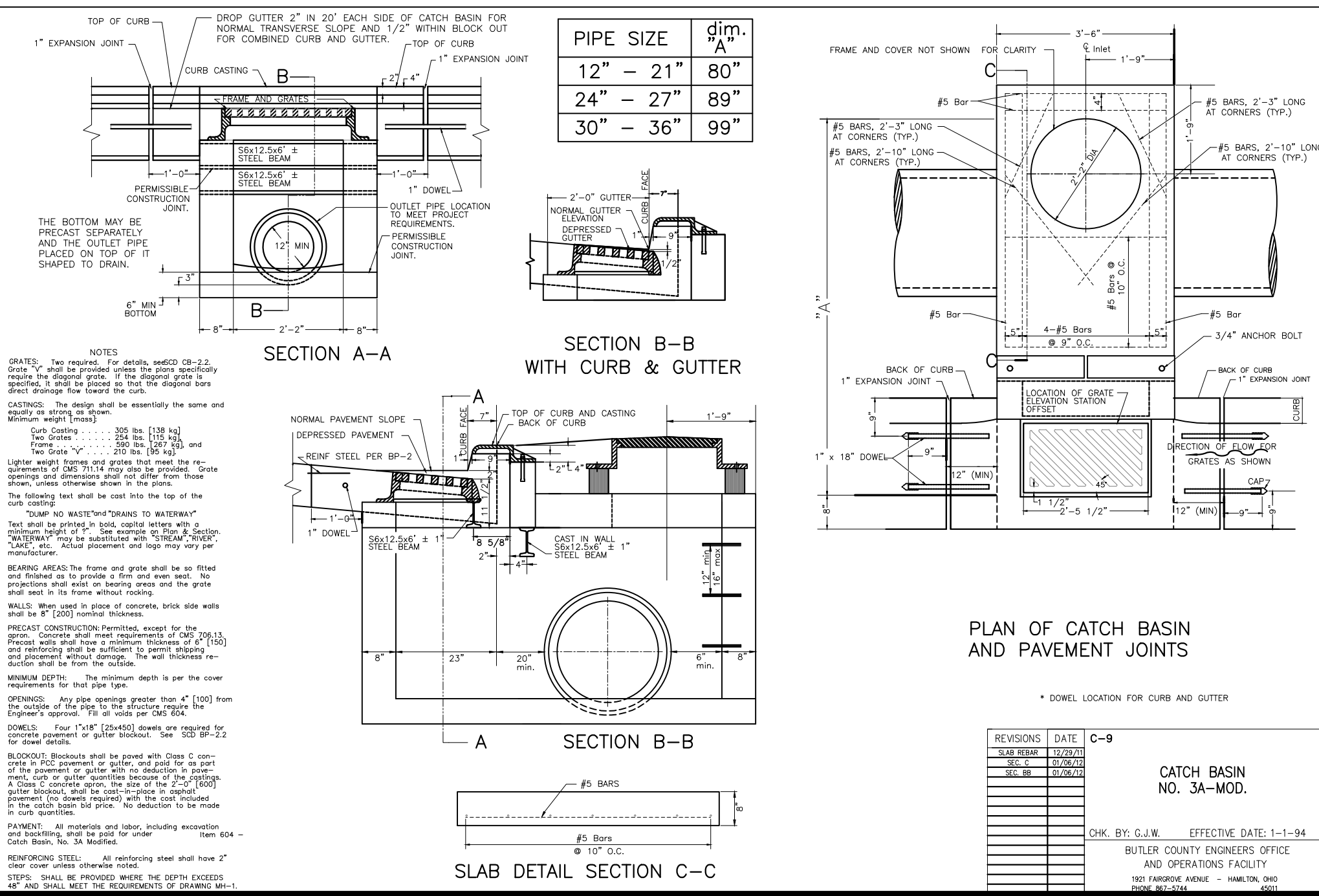
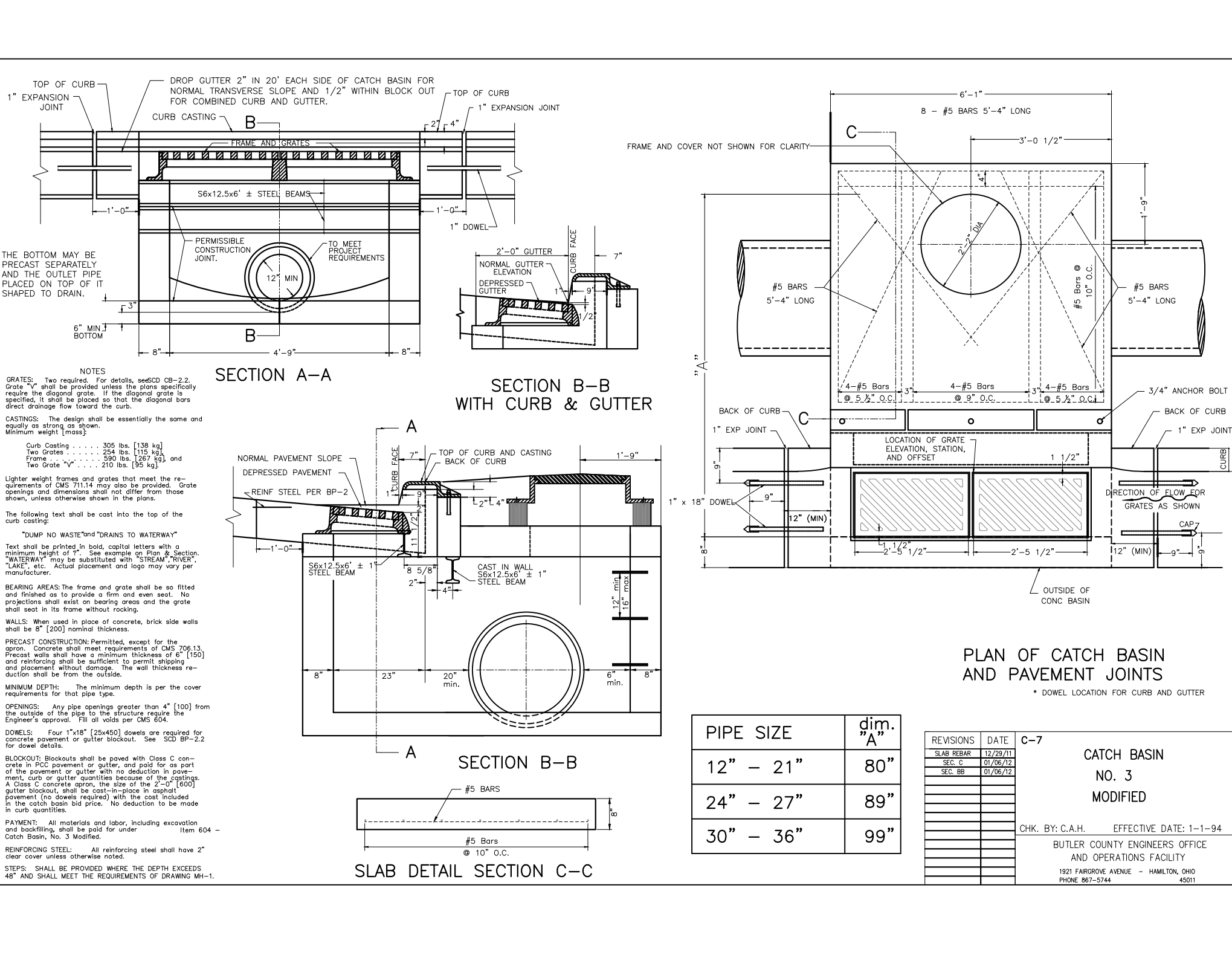
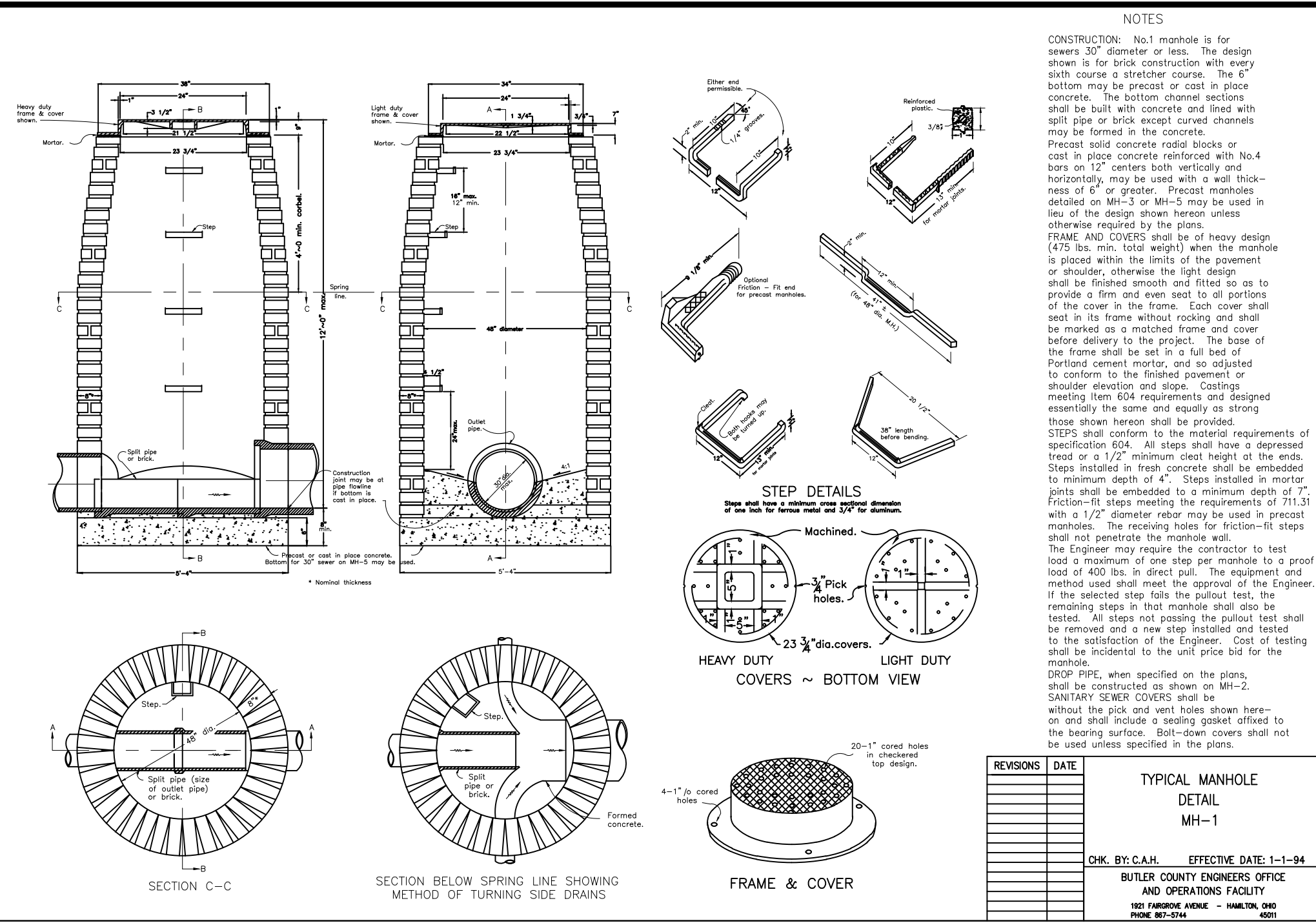
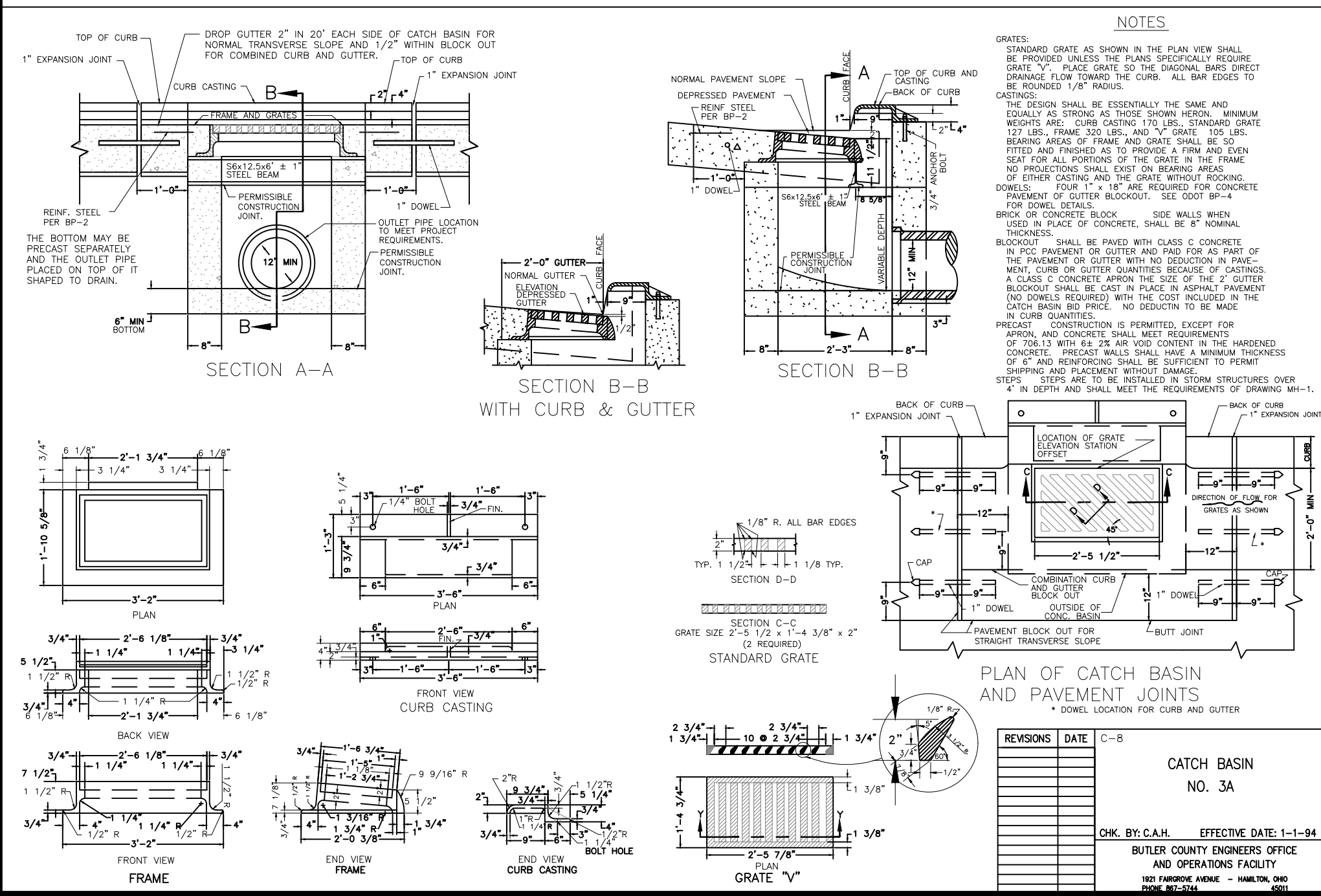
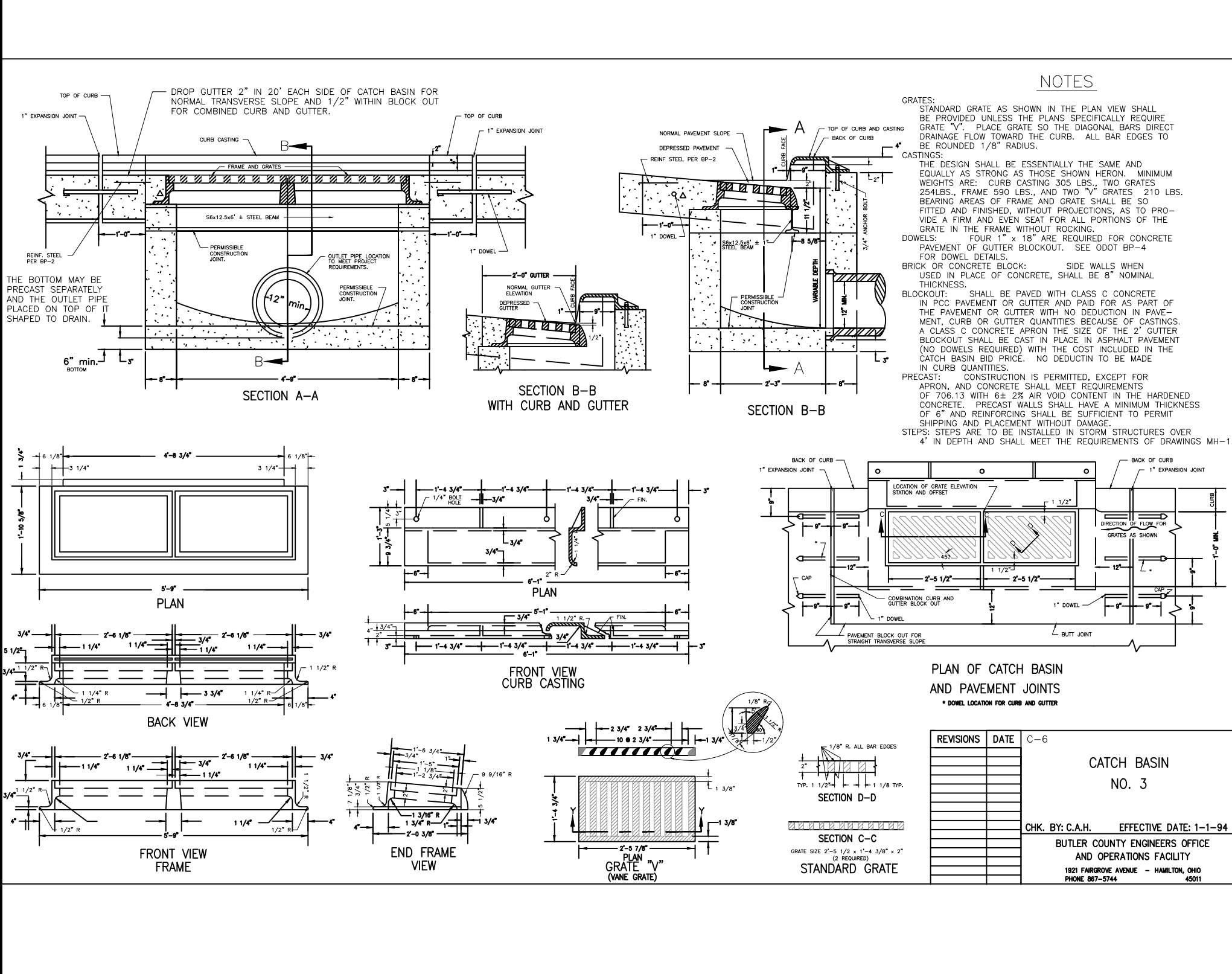
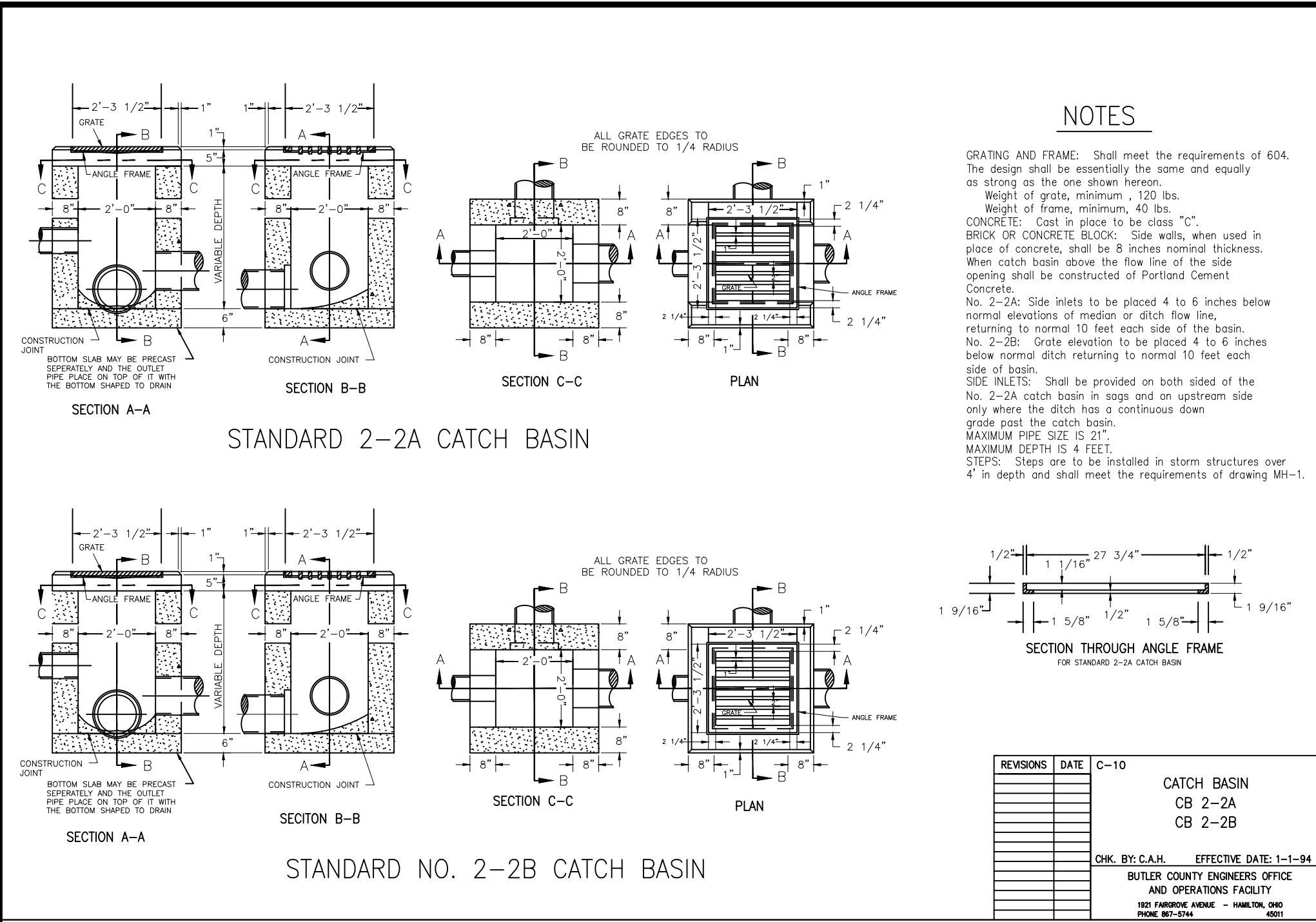
THIS DOCUMENT AND ALL RELATED DETAIL DRAWINGS, SPECIFICATIONS, AND ELECTRONIC MEDIA PREPARED OR FURNISHED BY BAYER BECKER (BB), ARE INSTRUMENTS OF BB'S PROFESSIONAL SERVICE, AND IS THE EXCLUSIVE PROPERTY OF BB. NO DISCLOSURE, USE, REPRODUCTION, OR DUPLICATION IN WHOLE OR IN PART, MAY BE MADE WITHOUT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

Date: _____
 Drawn: _____
 Item: _____
 Revision Description: _____

BUTLER COUNTY, OHIO
WATER DETAILS

bayer becker
 www.bayerbecker.com
 6800 Tyler Road, Suite A
 Mason, Ohio 45040-3135, 513.355.6600

Drawing: BC WAT
 Checked By: _____
 Issue Date: 12-28-17
 Sheet: **7/9**



NOTES

CONSTRUCTION: No. 1 construction is for slopes 2% or less. The design shown is for brick construction with every sixth course a structural course. The 6" bottom may be precast or cast in place concrete. The bottom channel section shall be built with concrete and lined with asphalt or brick. The bottom channel section may be formed in the concrete.

Precast concrete blocks or cast in place concrete reinforced with No. 4 bars on 12" centers shall be used horizontally. No. 1 or No. 2 may be used in lieu of the design shown herein unless otherwise required by the plans.

FRAME AND COVER: The frame and cover shall be cast in place concrete. The frame shall be finished with a smooth surface and shall be finished with a smooth surface. The frame shall be finished with a smooth surface and shall be finished with a smooth surface.

STEPS: Steps shall conform to the material requirements of specification 604. All steps shall have a depressed tread or a 1/2" minimum clear height at the ends. Steps installed in fresh concrete shall be embedded to a minimum depth of 2 inches. Steps installed in masonry shall be embedded to a minimum depth of 2 inches. Steps installed in concrete shall be embedded to a minimum depth of 2 inches.

REINFORCING STEEL: Reinforcing steel shall be as specified in the notes and shall be installed in accordance with the requirements of specification 604. All reinforcing steel shall be installed in accordance with the requirements of specification 604.

CONCRETE: Cast in place to be class "C".

BRICK OR CONCRETE BLOCK: Side walls, when used in place of concrete, shall be 8 inches nominal thickness. When catch basin above the flow line of the side opening shall be constructed of Portland Cement Concrete.

No. 2-2A: Side inlets to be placed 4 to 6 inches below normal elevations of normal or ditch flow line, referring to normal 10 feet each side of the basin.

No. 2-2B: Grate elevation to be placed 4 to 6 inches below normal ditch reference to normal 10 feet each side of basin.

SIZE INLETS: Shall be provided on both sides of the No. 2-2A catch basin in sags and on upstream side only where the ditch has a continuous down grade past the catch basin.

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4' in depth and shall meet the requirements of drawing MH-1.

DIAMETER OF PIPE

DIAMETER	30"	36"	42"	48"	54"	60"	66"	DIAMETER
A	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	A
B	1'-3"	1'-6"	1'-9"	2'-0"	2'-3"	2'-6"	2'-9"	B
C	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	C
D	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	D
E	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	E
F	4'-4"	4'-9"	5'-4"	5'-9"	6'-4"	6'-9"	7'-4"	F
G	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	G
H	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	H
I	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	I
J	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	J
K	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	K
L	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	L
M	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	M
N	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	N
O	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	O
P	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	P
Q	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	Q
R	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	R
S	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	S
T	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	T
U	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	U
V	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	V
W	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	W
X	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	X
Y	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	Y
Z	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	Z

REVISIONS

NO.	DATE	DESCRIPTION
1	11-1-14	ISSUED FOR PERMITS

DIAMETER OF PIPE

DIAMETER	30"	36"	42"	48"	54"	60"	66"	DIAMETER
A	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	A
B	1'-3"	1'-6"	1'-9"	2'-0"	2'-3"	2'-6"	2'-9"	B
C	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	C
D	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	D
E	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	E
F	4'-4"	4'-9"	5'-4"	5'-9"	6'-4"	6'-9"	7'-4"	F
G	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	G
H	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	H
I	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	I
J	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	J
K	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	K
L	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	L
M	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	M
N	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	N
O	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	O
P	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	P
Q	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	Q
R	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	R
S	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	S
T	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	T
U	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	U
V	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	V
W	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	W
X	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	X
Y	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	Y
Z	3'-9"	4'-6"	5'-3"	6'-0"	6'-9"	7'-6"	8'-3"	Z

REVISIONS

NO.	DATE	DESCRIPTION
1	11-1-14	ISSUED FOR PERMITS

GENERAL NOTES

EROSION AND SEDIMENT CONTROLS

Vegetative Practices
Such practices may include: temporary seeding, permanent seeding, mulching, mowing, soil 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 waste disposal 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.

Dormant Seeding
1. Seedlings 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 or 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 fertilize, 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 formed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

REVEGETATION
Seed, sod or mulch bare soil as soon as possible
SEEDING AND MULCHING
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.) Rake 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.

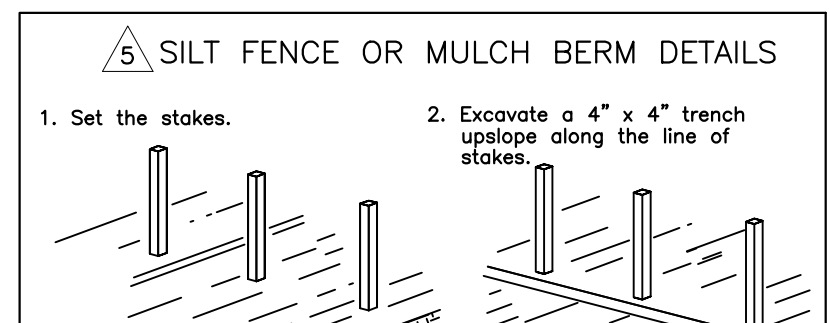
SODDING
Spread 4 to 6 inches of topsoil. Fertilize according to soil test (or apply 10 lb./1000 sq. ft. of 20-10-10 or 10-10-10 fertilizer.) Lightly water the soil. Lay sod, Tamp or roll lightly. On slopes, lay sod starting at the bottom and work toward the top. Peg each piece down in several places. 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.

INSTALLATION NOTES AND SPECIFICATIONS FOR MULCH BERM:
1. Mulch berm should be placed along a level contour so that it will not channel runoff and create concentrated flows.
2. Upland drainage limitations (sheet flow)
Design Criteria:
- particle sizes (99% passing 1 inch sieve etc.)
- moisture content
- no less than 70% organics
3. Planning considerations: most effective when combined with vegetated buffer.

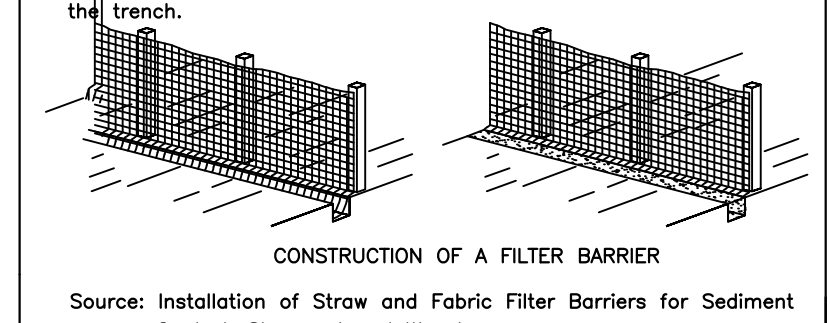
MULCH BERM
Wherever possible, preserve existing trees, shrubs, and other vegetation. To prevent root damage, do not grade, plant soil piles, or park vehicles near trees marked for preservation. Place plastic mesh or snow fence barriers around trees to protect the area below their branches.

SOIL PILES
Located away from any downslope street, driveway, stream, lake, wetland, ditch or drainageway. 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.

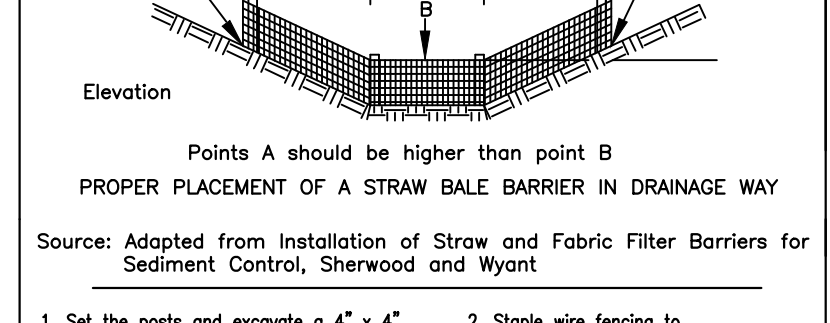
SEDIMENT CLEANUP
By the end of each work day, sweep or scrape up soil tracked onto the road. By the end of the next work day after a storm, clean up soil washed off-site, and check straw bales and silt fence for damage or sediment buildup. DOWNSLOUT EXTENDERS
Not required, but highly recommended. Install as soon as gutters and downspouts are completed. Route water to a grassed or paved area. Maintain until a lawn is established.



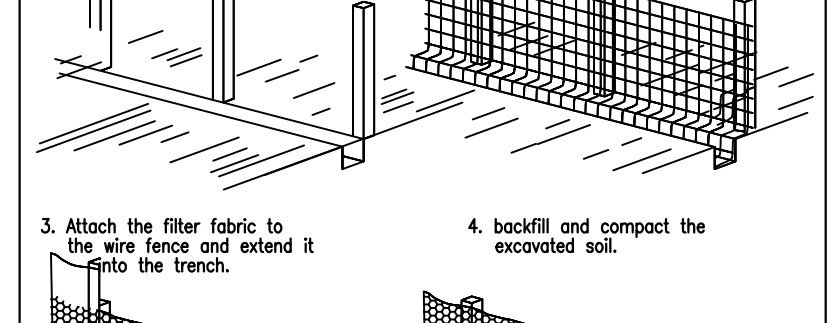
19. TEMPORARY DETENTION SEDIMENT FILTER



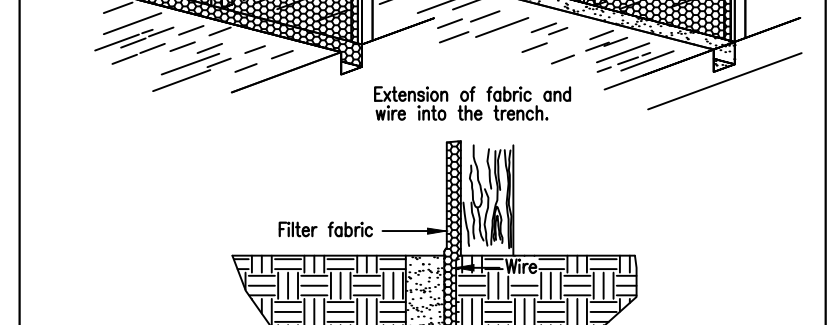
20. DANDY BAG®/BEAVER DAM



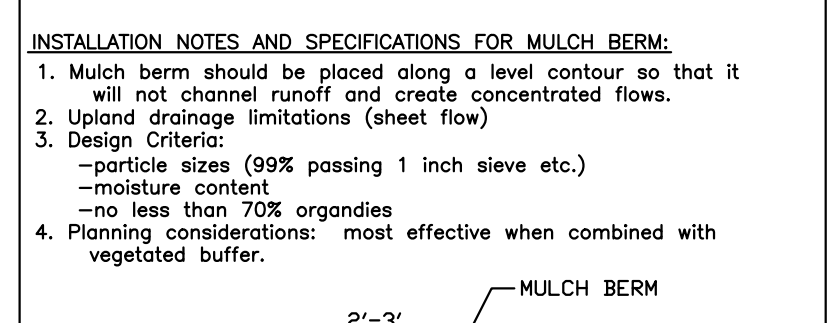
11. STRAW BALE DROP INLET SEDIMENT FILTER



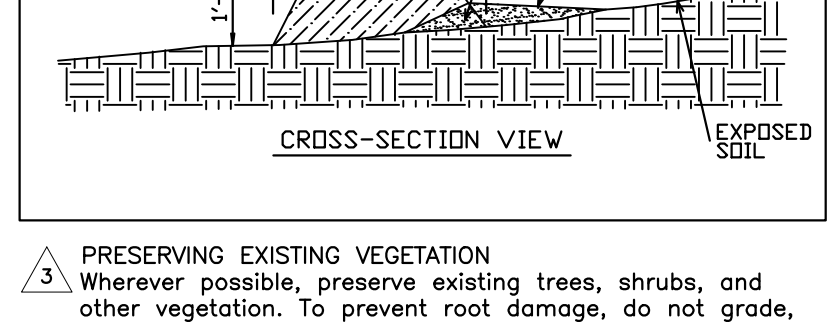
8. GRAVEL CURB INLET SEDIMENT FILTER



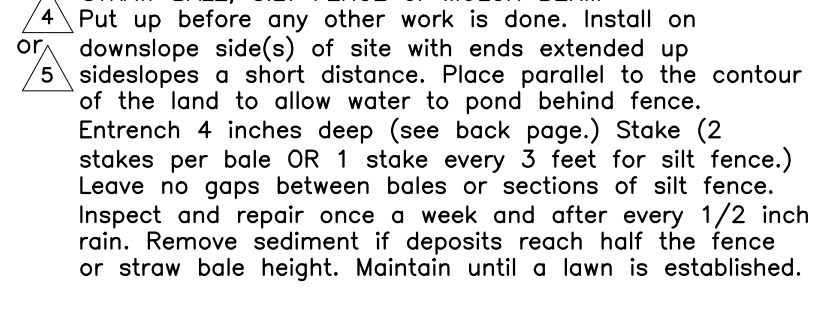
9. BLOCK AND DROP INLET SEDIMENT FILTER



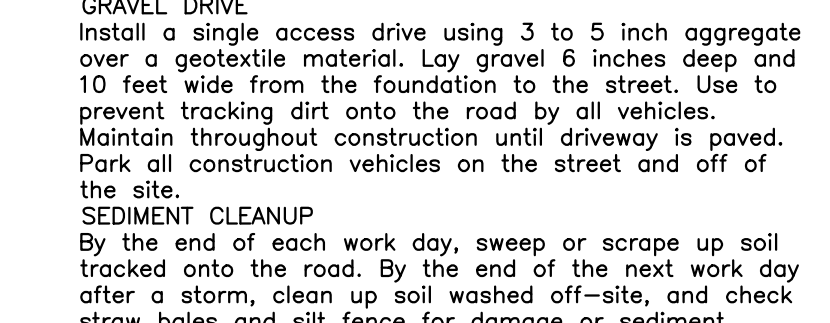
13. GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



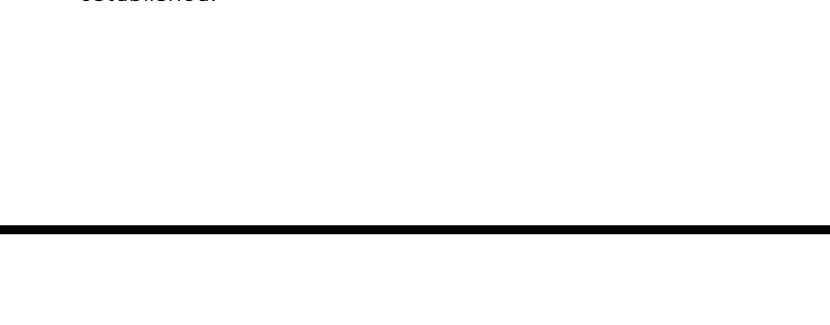
14. BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



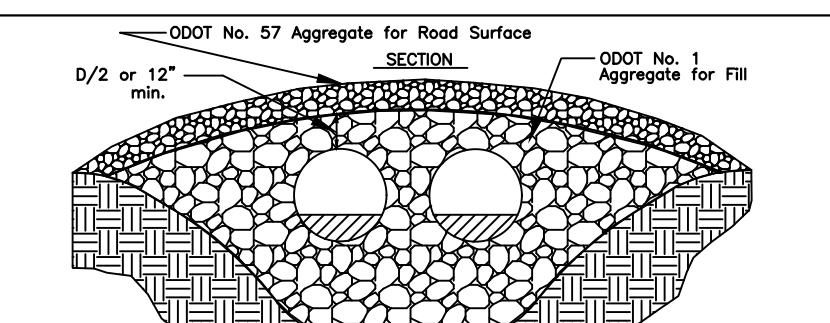
15. TEMPORARY EROSION CONTROL



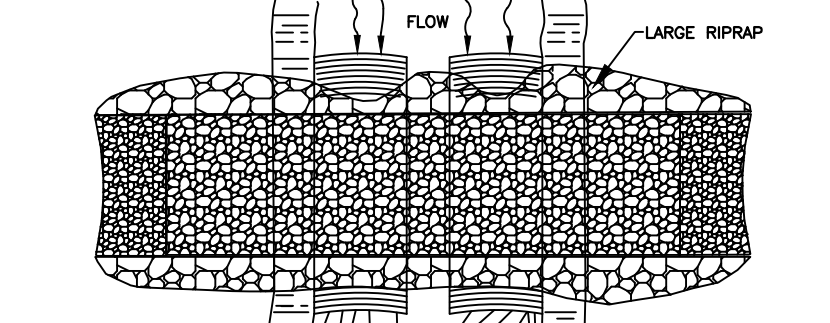
16. TEMPORARY EROSION CONTROL



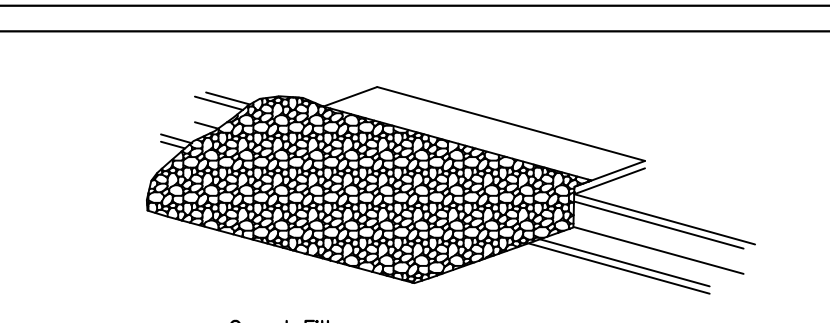
17. WRAPPED GRATE, ROLLED GRAVEL CURB INLET FILTER



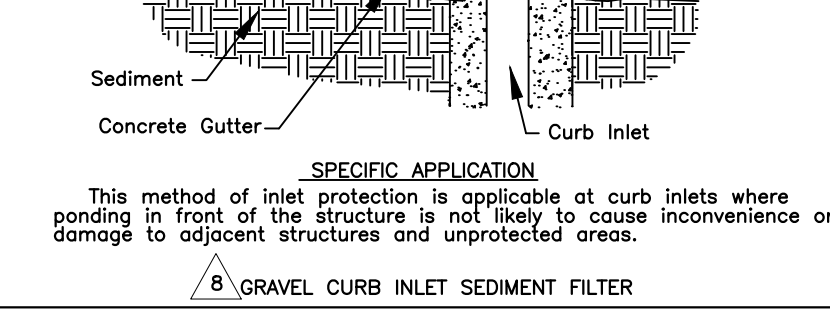
10. GABIONS



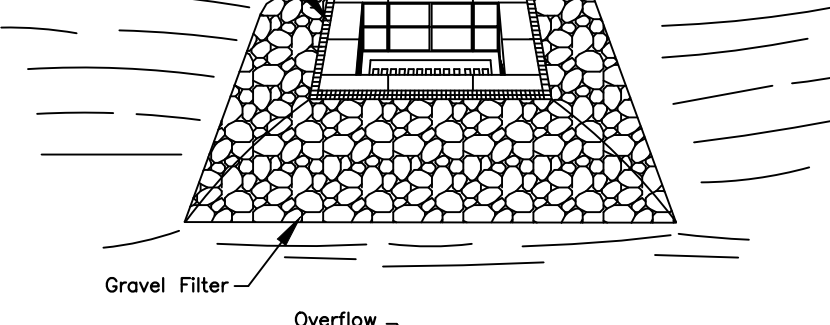
12. SOD DROP INLET SEDIMENT FILTER



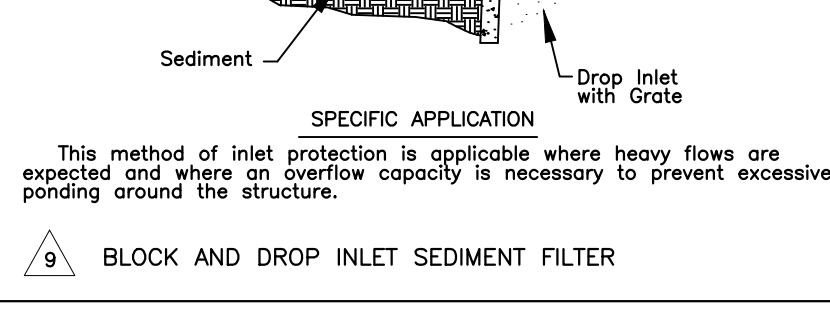
13. GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



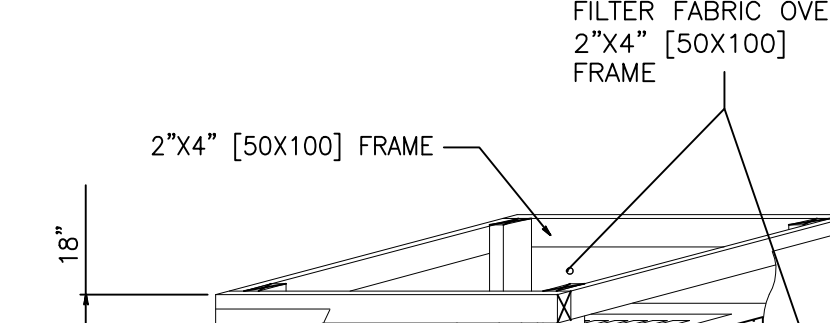
14. BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



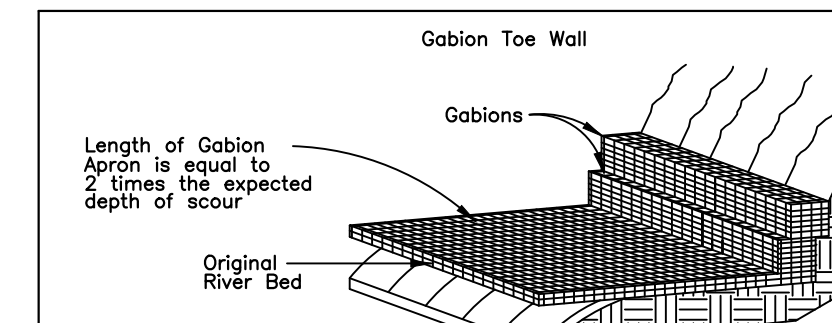
15. TEMPORARY EROSION CONTROL



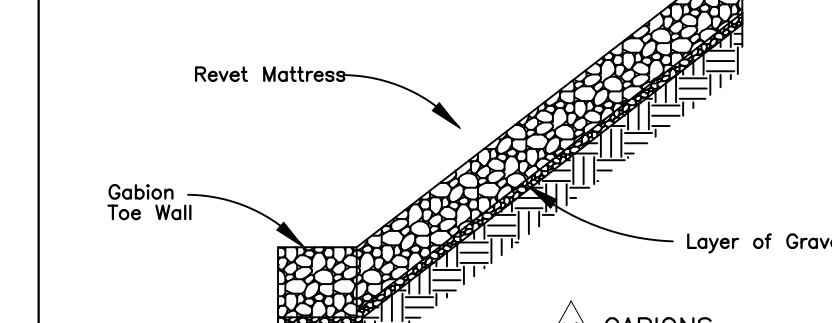
16. TEMPORARY EROSION CONTROL



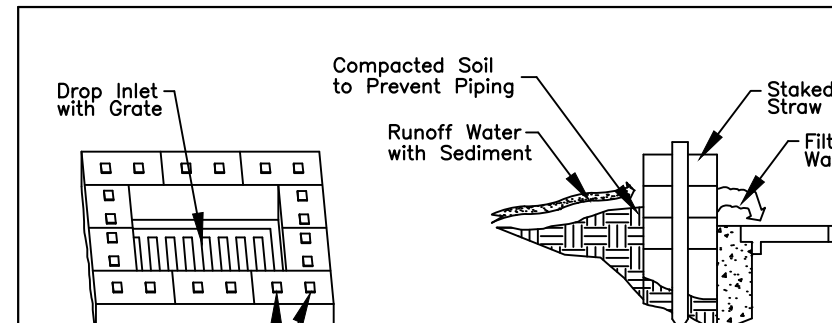
17. WRAPPED GRATE, ROLLED GRAVEL CURB INLET FILTER



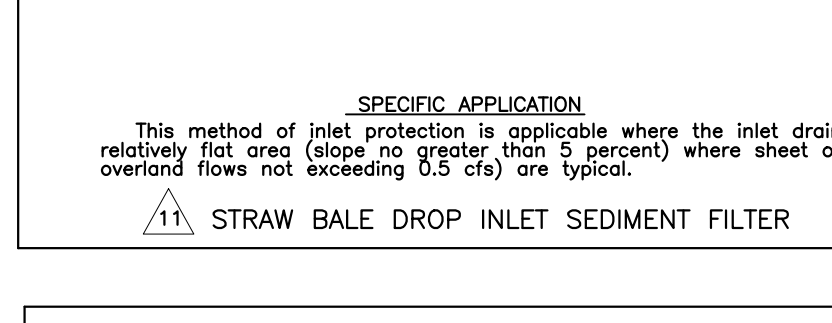
18. CHECK DAM DETAILS



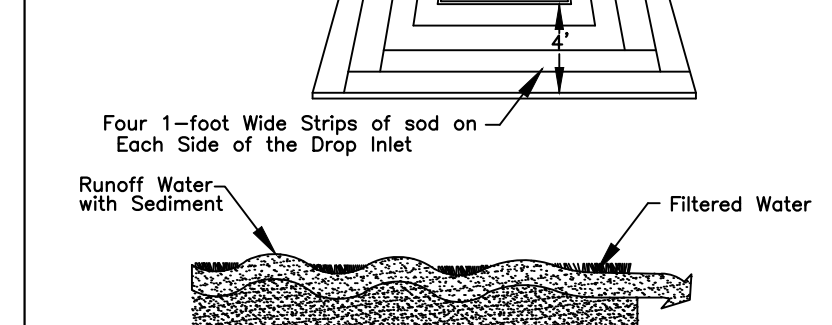
19. TEMPORARY DETENTION SEDIMENT FILTER



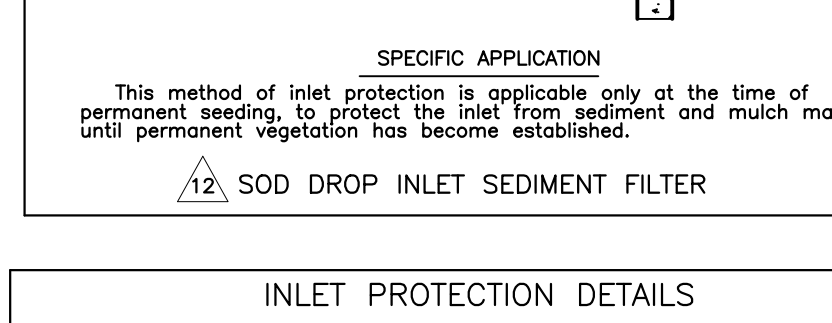
20. DANDY BAG®/BEAVER DAM



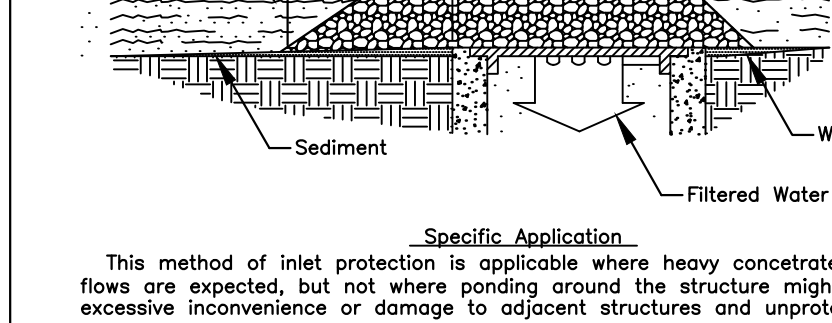
11. STRAW BALE DROP INLET SEDIMENT FILTER



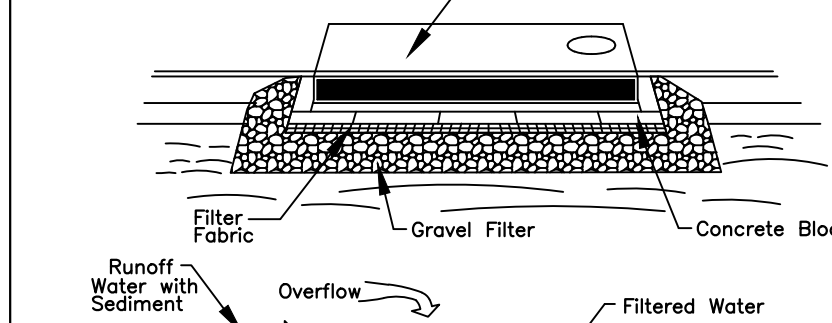
8. GRAVEL CURB INLET SEDIMENT FILTER



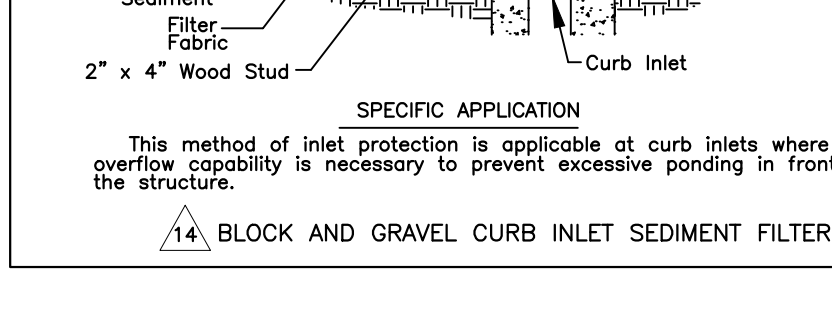
9. BLOCK AND DROP INLET SEDIMENT FILTER



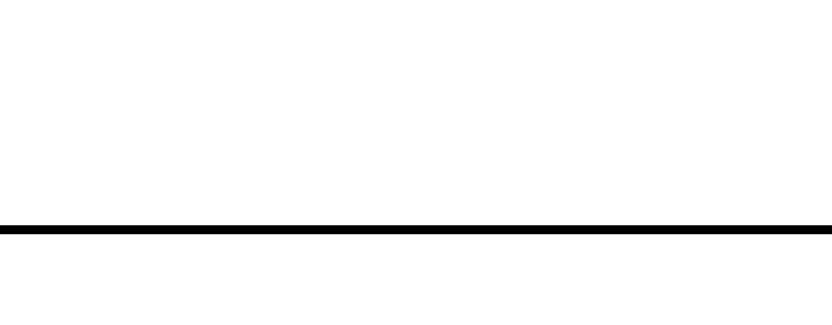
13. GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



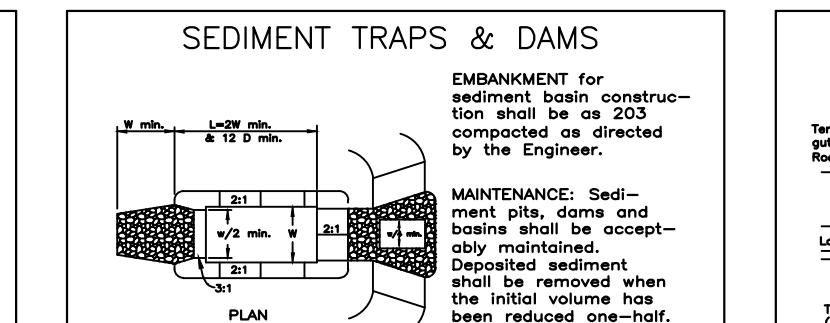
14. BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



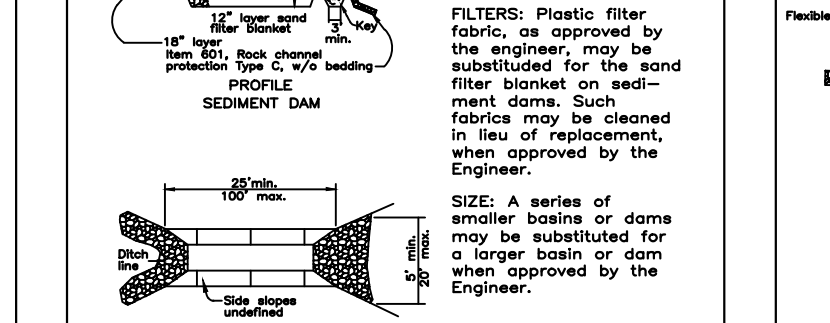
15. TEMPORARY EROSION CONTROL



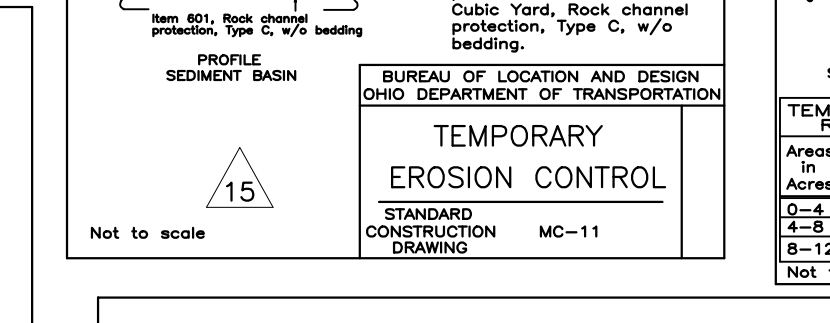
16. TEMPORARY EROSION CONTROL



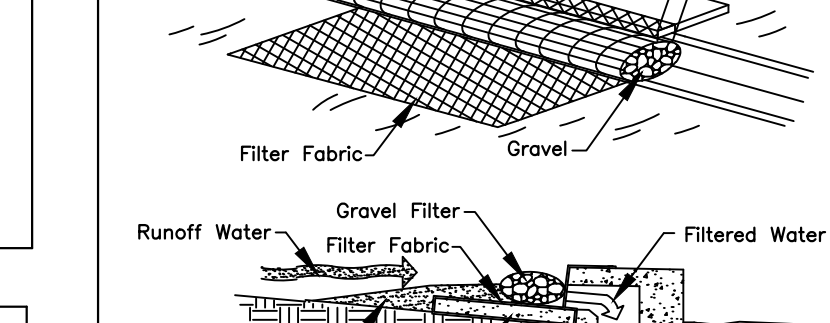
18. CHECK DAM SPACING



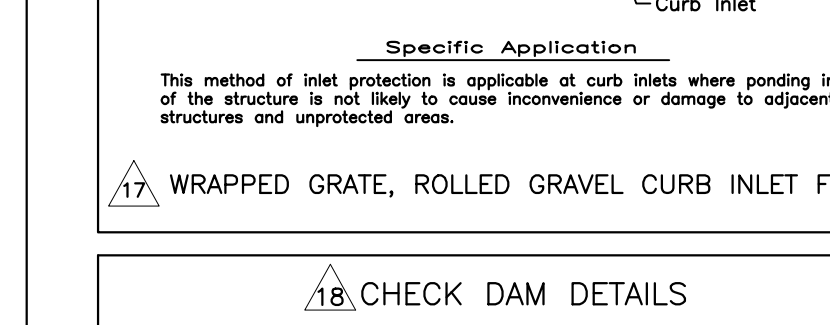
19. TEMPORARY DETENTION SEDIMENT FILTER



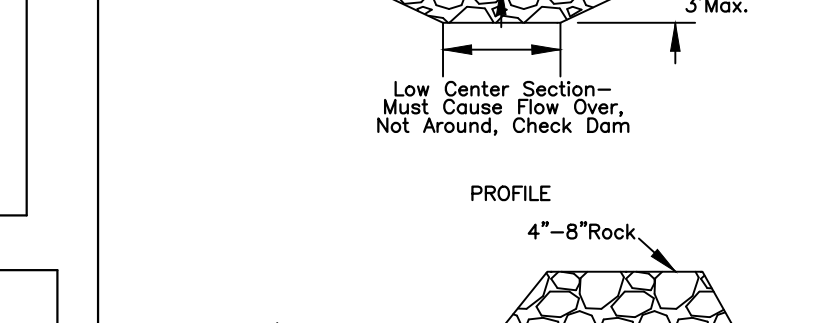
20. DANDY BAG®/BEAVER DAM



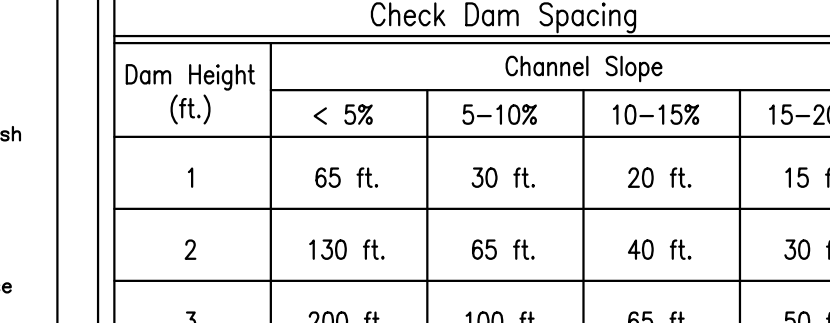
11. STRAW BALE DROP INLET SEDIMENT FILTER



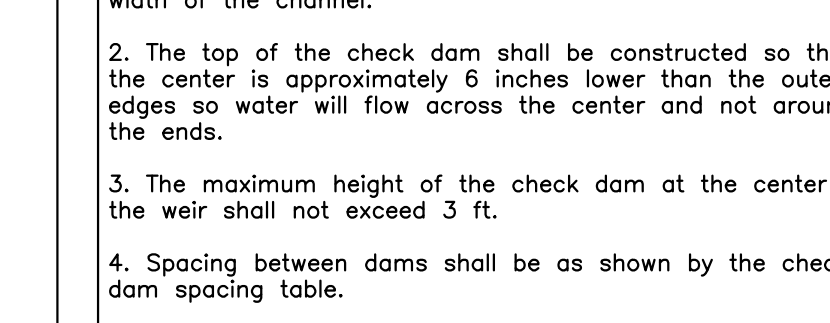
8. GRAVEL CURB INLET SEDIMENT FILTER



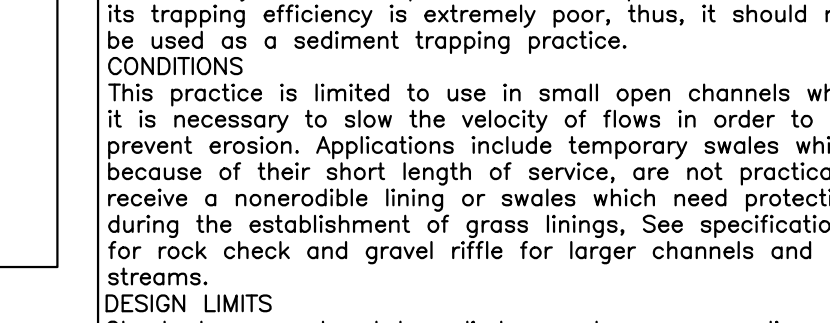
9. BLOCK AND DROP INLET SEDIMENT FILTER



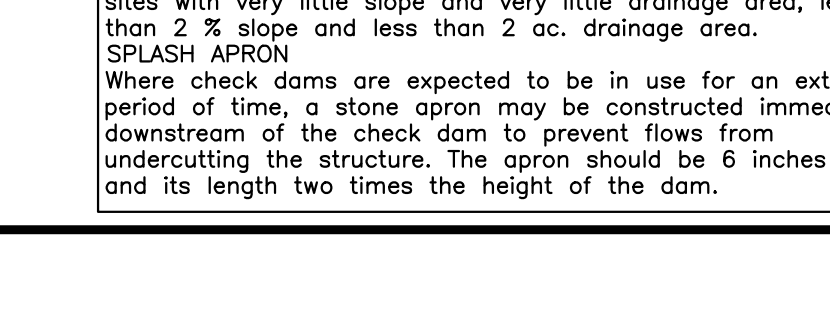
13. GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



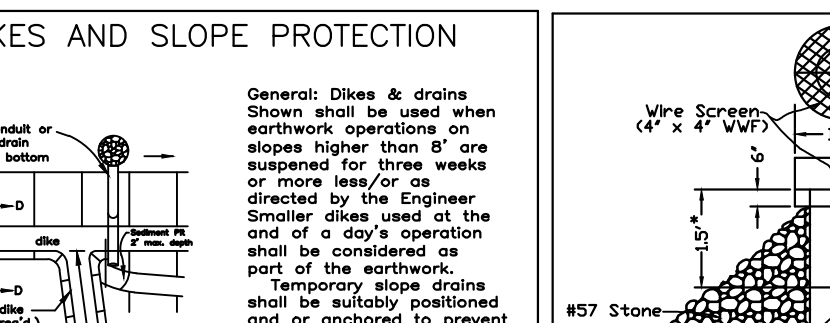
14. BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



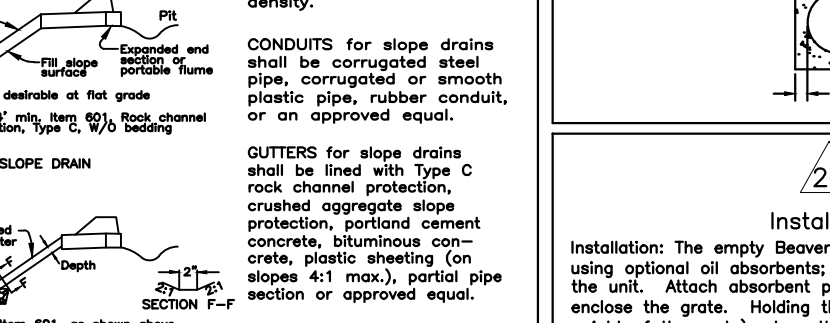
15. TEMPORARY EROSION CONTROL



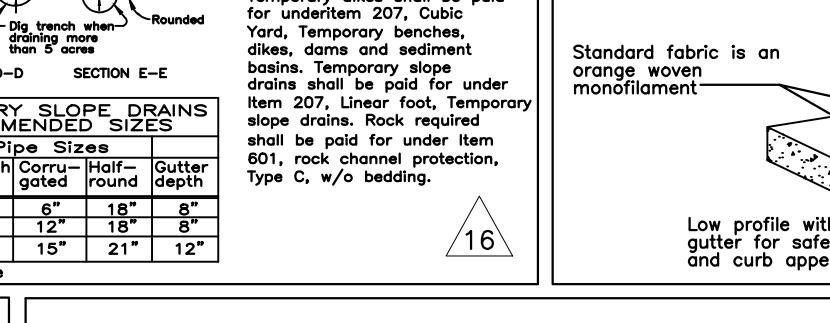
16. TEMPORARY EROSION CONTROL



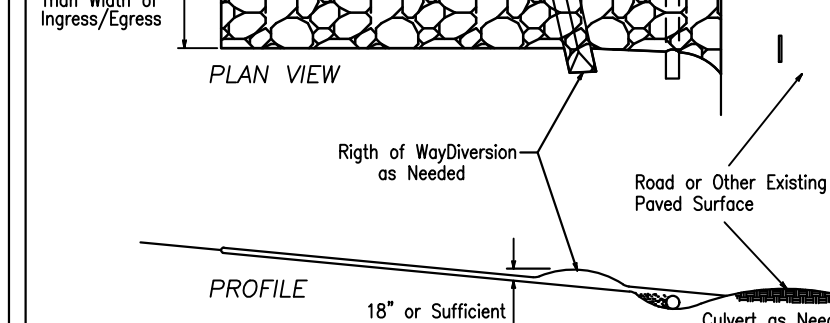
18. CHECK DAM SPACING



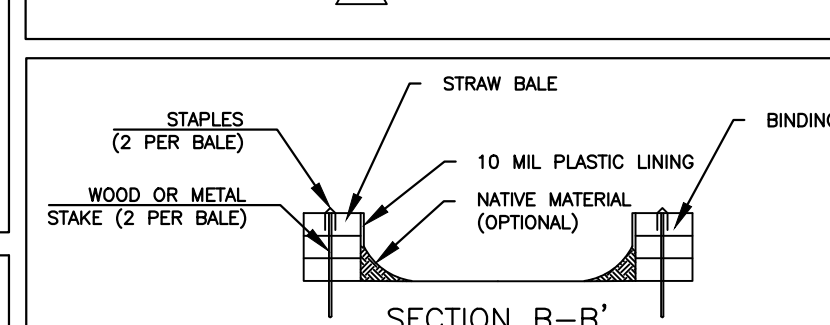
19. TEMPORARY DETENTION SEDIMENT FILTER



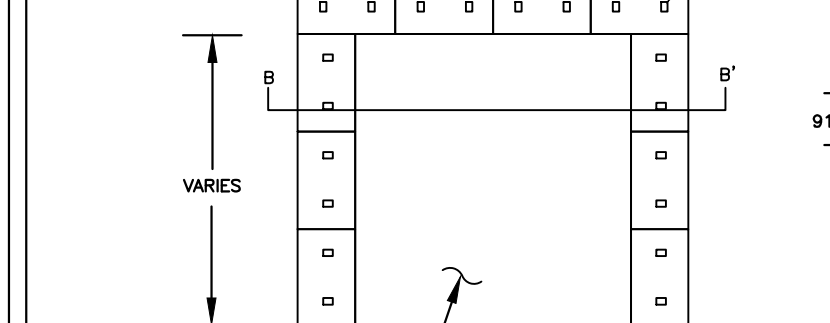
20. DANDY BAG®/BEAVER DAM



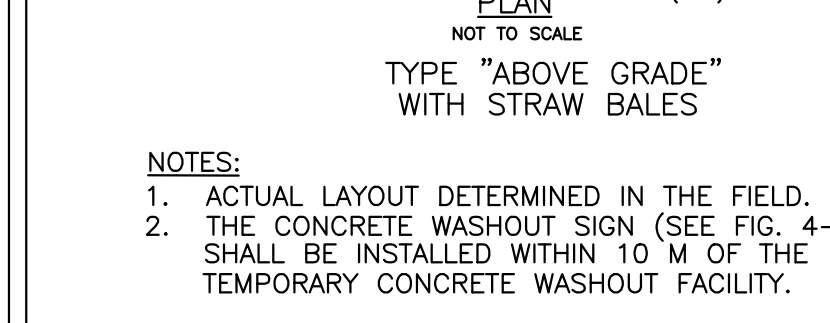
11. STRAW BALE DROP INLET SEDIMENT FILTER



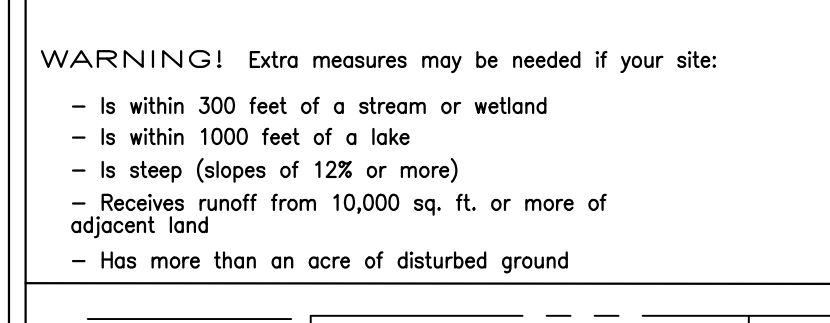
8. GRAVEL CURB INLET SEDIMENT FILTER



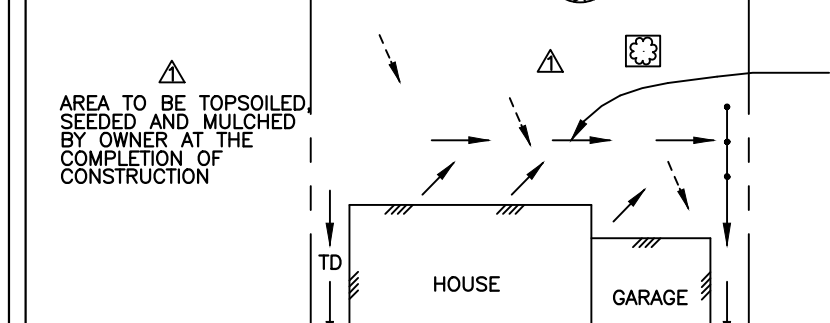
9. BLOCK AND DROP INLET SEDIMENT FILTER



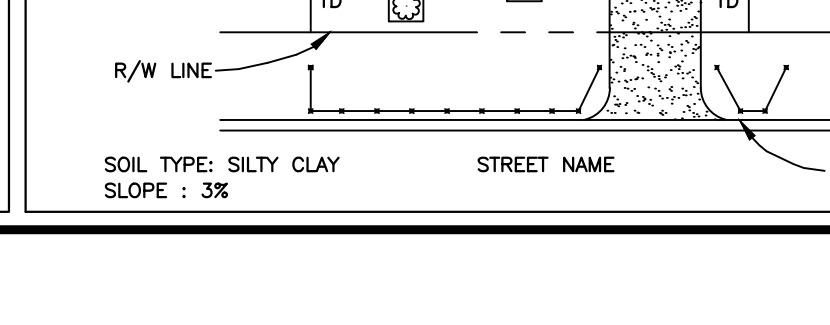
13. GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



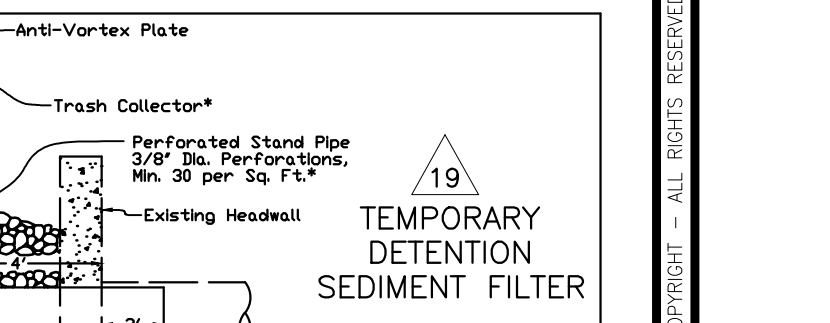
14. BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



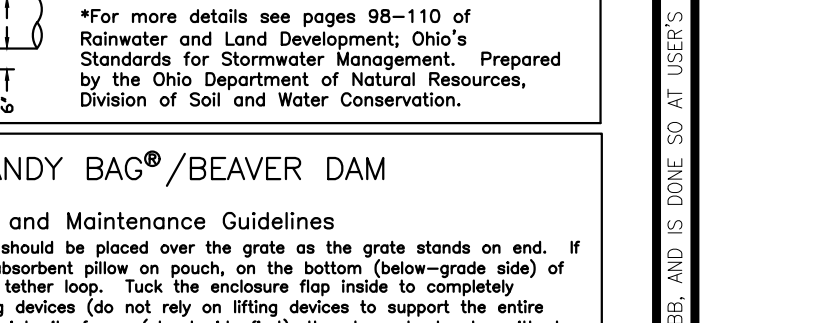
15. TEMPORARY EROSION CONTROL



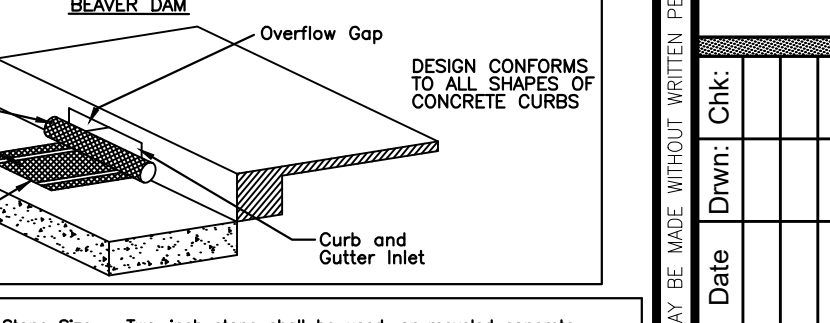
16. TEMPORARY EROSION CONTROL



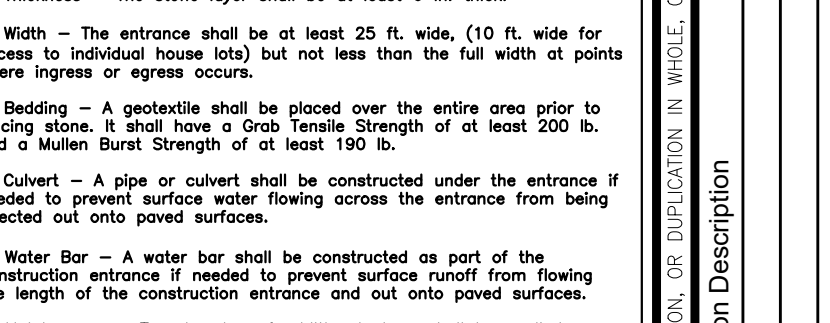
18. CHECK DAM SPACING



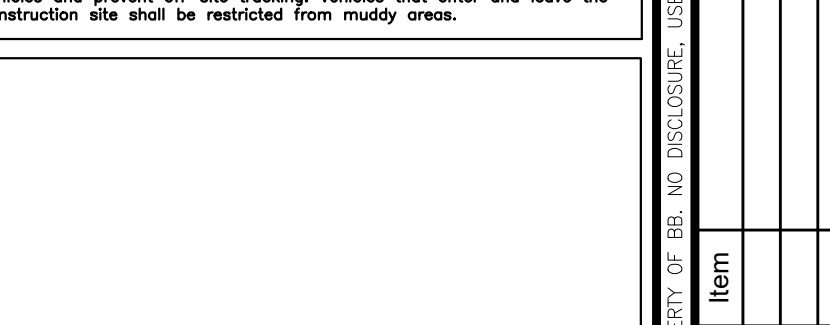
19. TEMPORARY DETENTION SEDIMENT FILTER



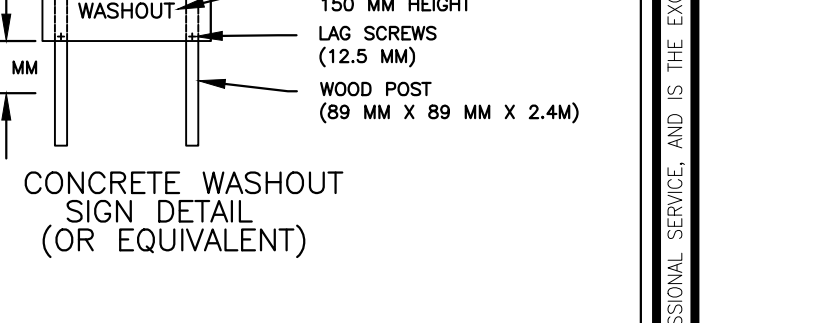
20. DANDY BAG®/BEAVER DAM



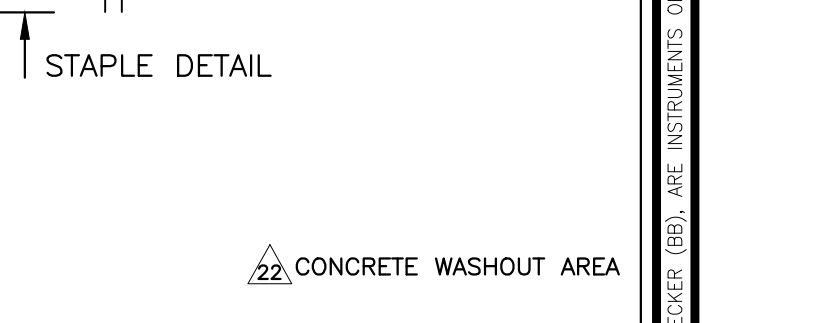
11. STRAW BALE DROP INLET SEDIMENT FILTER



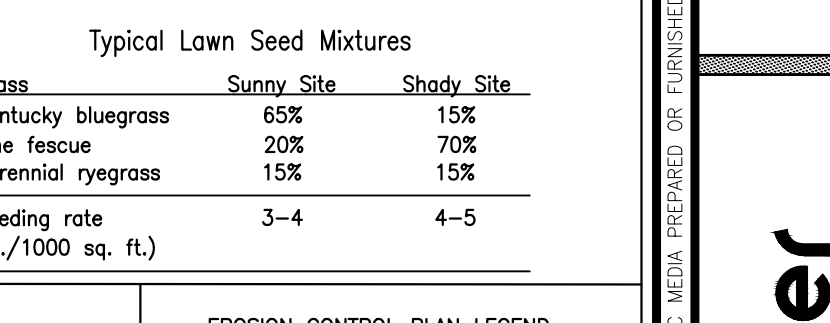
8. GRAVEL CURB INLET SEDIMENT FILTER



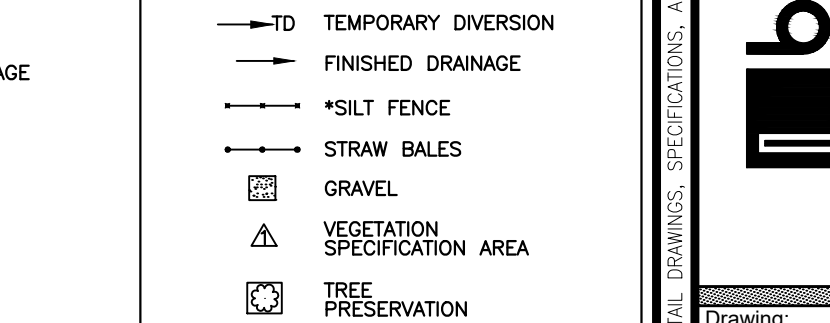
9. BLOCK AND DROP INLET SEDIMENT FILTER



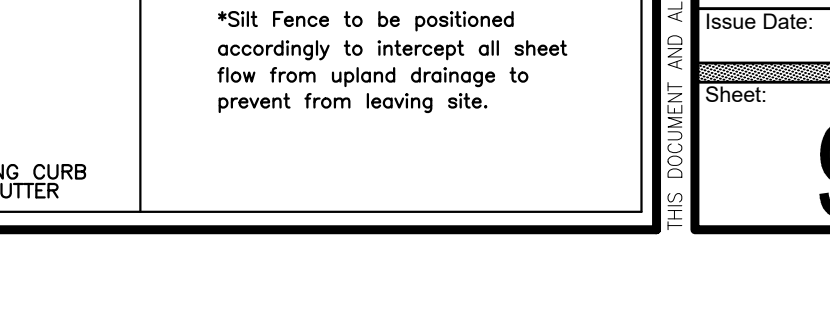
13. GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



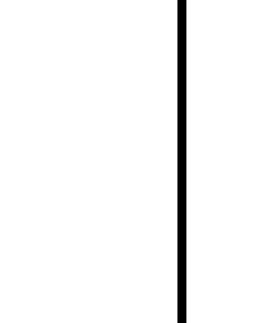
14. BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



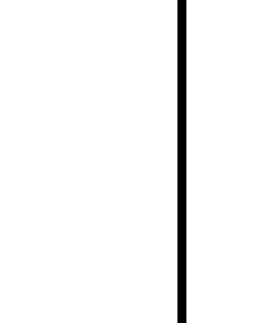
15. TEMPORARY EROSION CONTROL



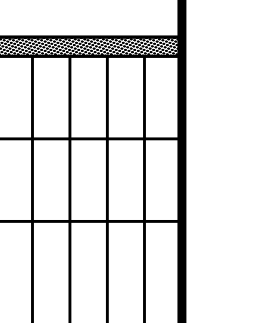
16. TEMPORARY EROSION CONTROL



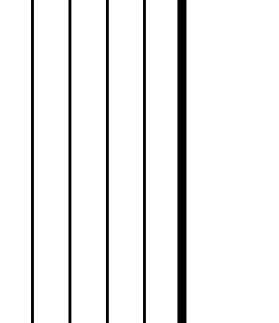
18. CHECK DAM SPACING



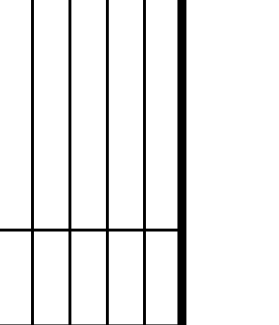
19. TEMPORARY DETENTION SEDIMENT FILTER



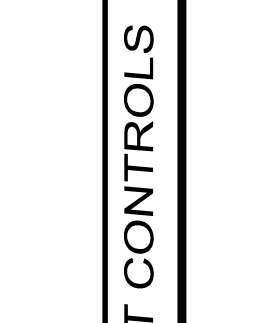
20. DANDY BAG®/BEAVER DAM



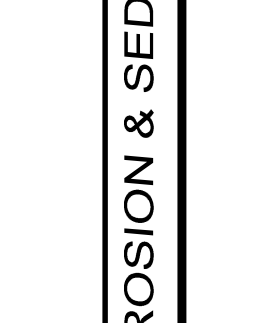
11. STRAW BALE DROP INLET SEDIMENT FILTER



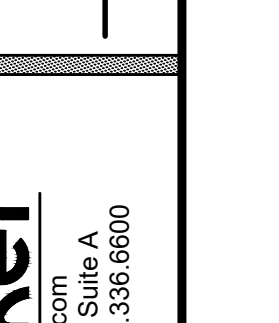
8. GRAVEL CURB INLET SEDIMENT FILTER



9. BLOCK AND DROP INLET SEDIMENT FILTER



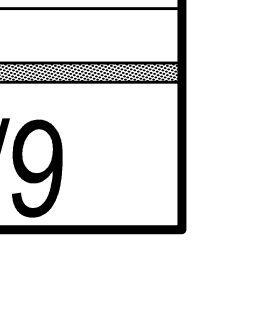
13. GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



14. BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



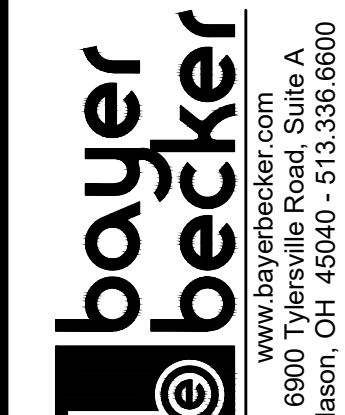
15. TEMPORARY EROSION CONTROL



16. TEMPORARY EROSION CONTROL

Plot time: Aug 16, 2019 11:00am Drawing name: K:\OLD-K\Mason\FF BLOCKS DETAILS\SOILEROS\SOL.DWG - Layout Tab: Layout1

Revision Description: Item: Date: Drawn: Chk: Item: Drawing: SOIL Drawn by: Issue Date: Sheet: 9/9



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