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LEGEND

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CENTERLINE	---
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EXISTING SANITARY SEWER & MANHOLE	○
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EXISTING WATER MAIN	Ex. 8" W
FIRE HYDRANT	⊙
WATER VALVE	⊕
PROPOSED WATER MAIN	8" W
EXISTING GAS MAIN	Ex. 4" G
SUMP DRAIN LINE	4" S.D.
EXISTING STORM PIPE & CATCH BASIN	---
STORM CATCH BASIN	■
STORM MANHOLE	●
PROPOSED STORM PIPE	---
EXISTING TELEPHONE	---
EXISTING CABLE	---
DIRECTION OF DRAINAGE	→
PROPOSED SWALE	~
LOT SWALE	□

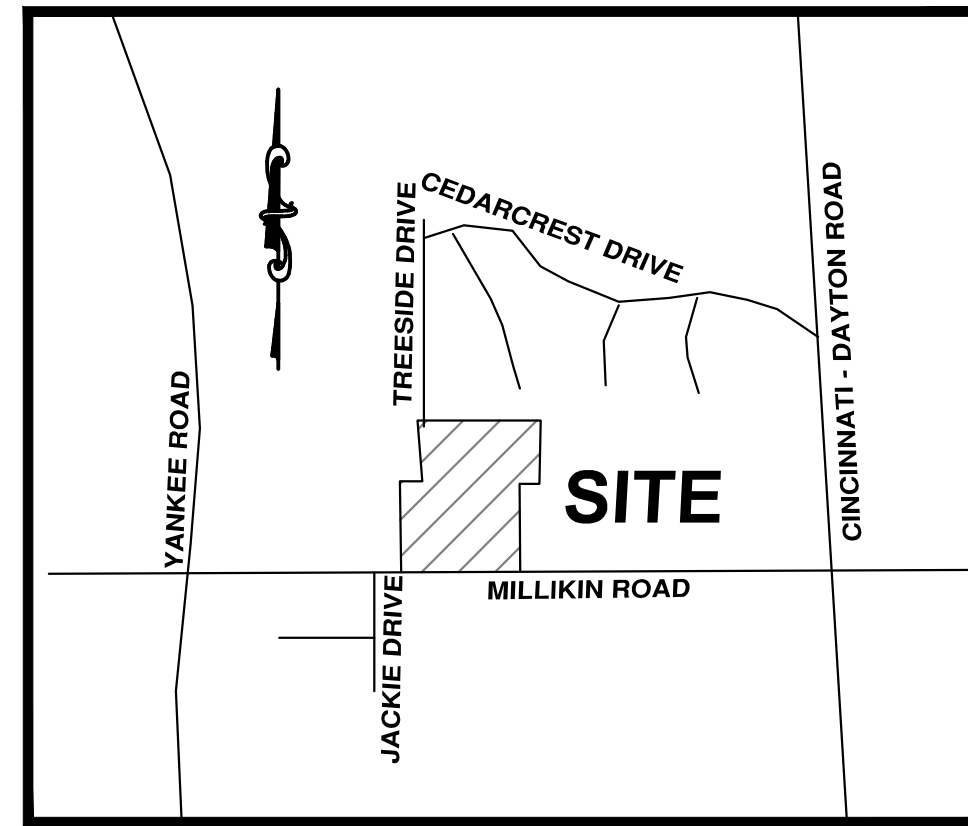
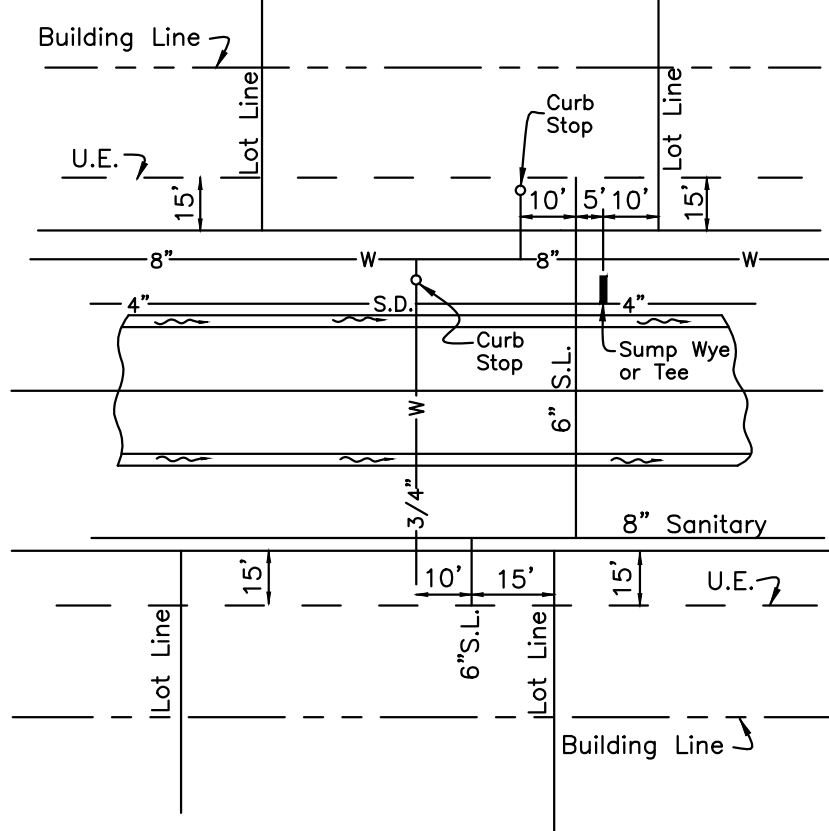
FIELDSTONE FARMS SECTION ONE, BLOCKS A&B SINGLE FAMILY

SECTION 15, TOWN 3, RANGE 3 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO AUGUST, 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
 - A. 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.
 - 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.
 - C. Minimum 10' horizontal, 18" vertical separation between water main and sanitary and/or storm sewer.
 - 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.
- SANITARY SEWER
 - 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.
 - 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:
 - 1. 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.
 - 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.
 - 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.
 - C. Sanitary laterals shall be extended to at least ten (10) feet beyond the Property / Right-of-Way to the edge of the easement, whichever is greater.
 - D. 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 will be any piping that extends out from the main barrel of the sewer main.
 - 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 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 in file in the office of the Butler County Department of Environmental Services.
- Butler County Water and Sewer Department does not accept any responsibility for the relocation, repair, or replacement of any other utility installed within five (5) feet of the center line of any sanitary sewer main or water main.
- Private driveways, parking lots and other paved areas, earthen berms or structures should not be constructed over private water or sewer service lines within the public road right of way or within the easement areas for public utilities. Should this occur, the property owner shall be responsible for the protection and repair and for providing access to any curbs stops, meter pits, manholes, clean-outs, etc. installed in conjunction with these private service lines and for any damage or restoration of the paved surfaces or structures that may result from the future operation, maintenance, repair or replacement of said service lines and appurtenances.
- STORM SEWER
 - A. Storm sewer pipe shall meet the requirements as follows:
 - 1. PVC pipe as per ODOT Specification 707.42 for all diameters
 - 2. HDPE pipe as per ODOT Specification 707.33
 - 3. Corrugated steel pipe as per ODOT Specification 707.01 or 707.02 for all diameters
 - 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, Durocrete or equal).
 - 5. Bituminous coated corrugated steel pipe as per ODOT Specification 707.05 or 707.07
 - 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 prong mandrel, a ball or a cylinder or another manner acceptable to the Butler County Engineer or his designated representative. The testing will be accomplished from manhole to manhole or catchbasin to catchbasin, following the complete flushing of the line. The contractor shall furnish all equipment required to complete the deflection testing. The deflection test shall be witnessed by the County Engineer or his designated representative. Any section of pipe that fails to meet the aforementioned requirements shall be reworked by a procedure acceptable to the County or be excavated and either be relayed or replaced, and retested until the requirements are met.
 - 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.
 - D. Headwall: HW-4A to be used with Corrugated Metal pipe or HW-4B to be used with Concrete Pipe.
- Roof drains, foundation drains, and other clean water connections to the sanitary sewer system are prohibited.
- Any detention basin on site should be constructed prior to the clearing of topsoil and grading of the site. All trees and vegetation shall be removed from all proposed detention basins regardless of maintenance responsibility.
- SEDIMENTATION CONTROL
 - The project has been designed to control erosion and prevent damage to other property. All stripping, earthwork, and grading shall be performed to minimize erosion. Natural vegetation shall be retained wherever possible. The proposed plan will allow almost all eroded material to be retained on site.
 - All areas disturbed by the construction of the roadways, ditches and sediment basins shall be seeded and strawed as soon as possible to limit the erosion and stabilize the soil. Payment will be by the number of square yards disturbed as per the grading plan. For additional sedimentation control details, see grading plan.
- Butler County will not be responsible for any pavement or storm sewer repairs resulting from water main and sanitary sewer repairs. Butler County also will not be responsible for adjusting manholes, valves, fire hydrants, meter pits, etc. as a result of grade changes. The 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.
- A typical five (5) foot drainage easement is to be provided on both sides of every lot line.
- Any roadway settlement greater than one inch will be required to be repaired with Item 613 Low Strength Mortar Backfill (Type 1). See Detail on Sheet #10.
- Provide the Butler County Engineer's Office with a forty-eight (48) hour notice prior to the start of any construction, including sanitary installation. Phone 785-4145.
- Contractors to accept all quantities as correct prior to beginning construction.
- Contractor shall include the cost of County inspection and extension fees in unit price bid.
- Existing Zoning: R-PUD
Frontage: 52'
Setbacks: Front = 25', unless otherwise noted on plan
Side = 5' Min., 11' Total
Rear = 25' Typical, 20' on lots that adjoin Open Space, unless otherwise noted on plan
- Total Acreage: 10.5336 Acres
- Total # Single Family Lots: 37



JOB LOG	
DATE	COMMENT
5-21-18	Submitted to Butler County Planning
6-15-18	Resubmitted to BCWS
6-27-18	Resubmitted to BCWS
7-31-18	Resubmitted to BCEO
10-24-18	Resubmitted to BCWS & BCEO
10-25-18	Resubmitted to BCEO
5-28-19	Resubmitted to BCEO
8-9-19	Resubmitted to BCEO

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

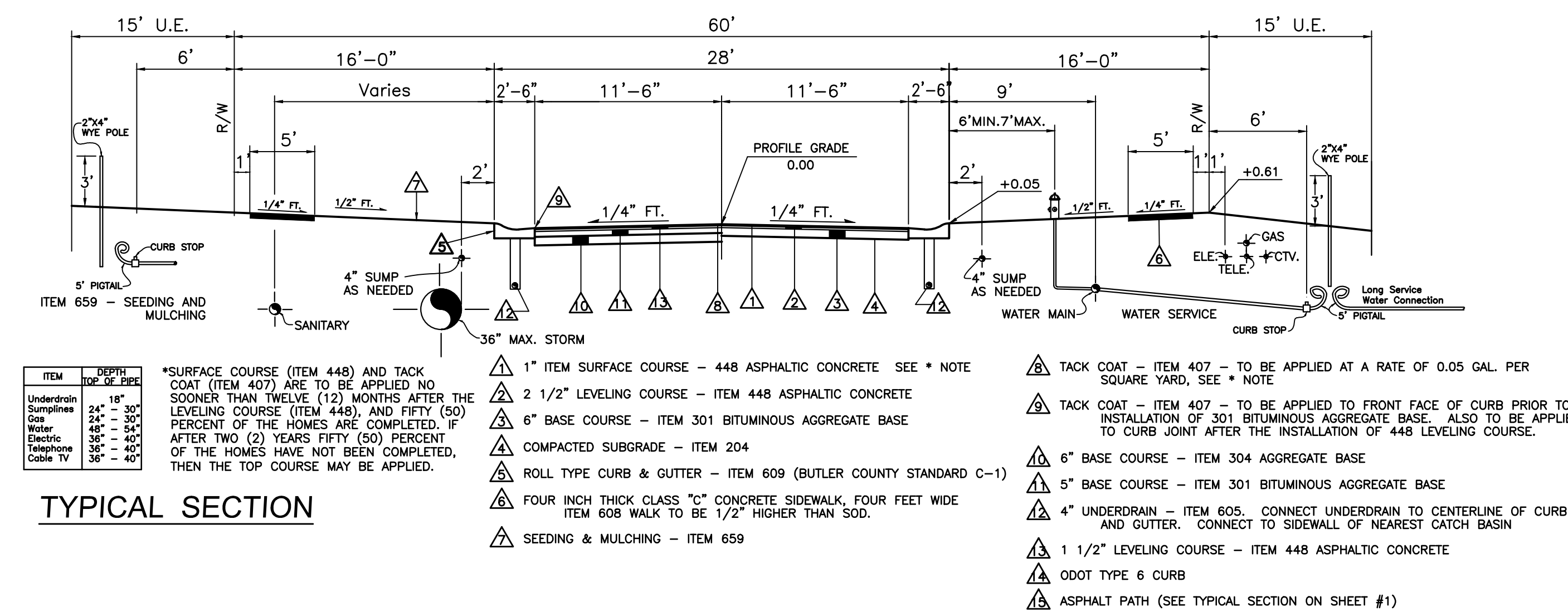
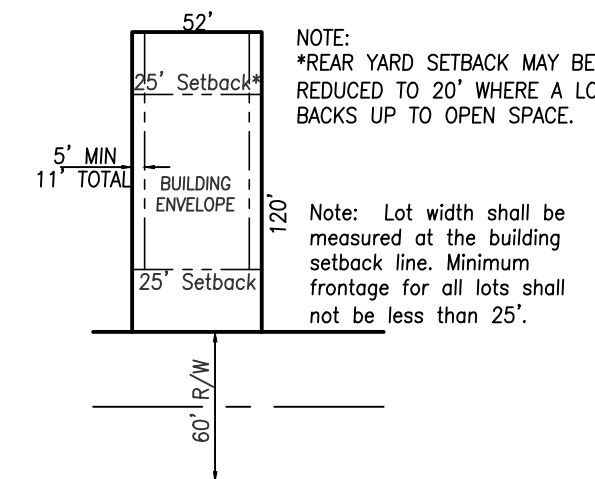
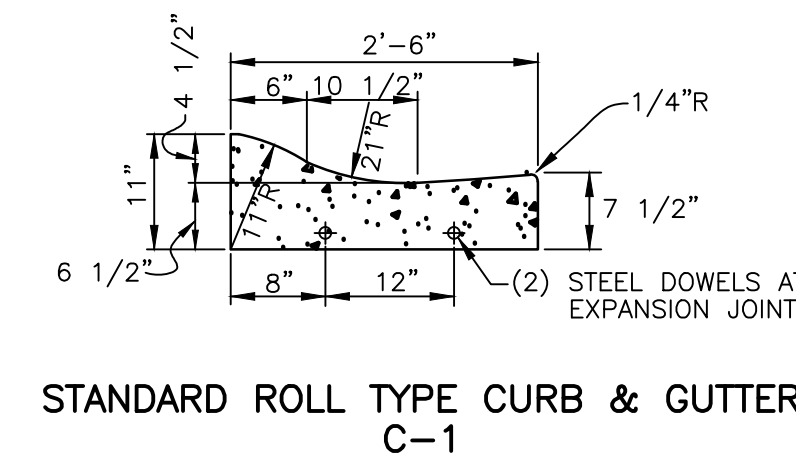
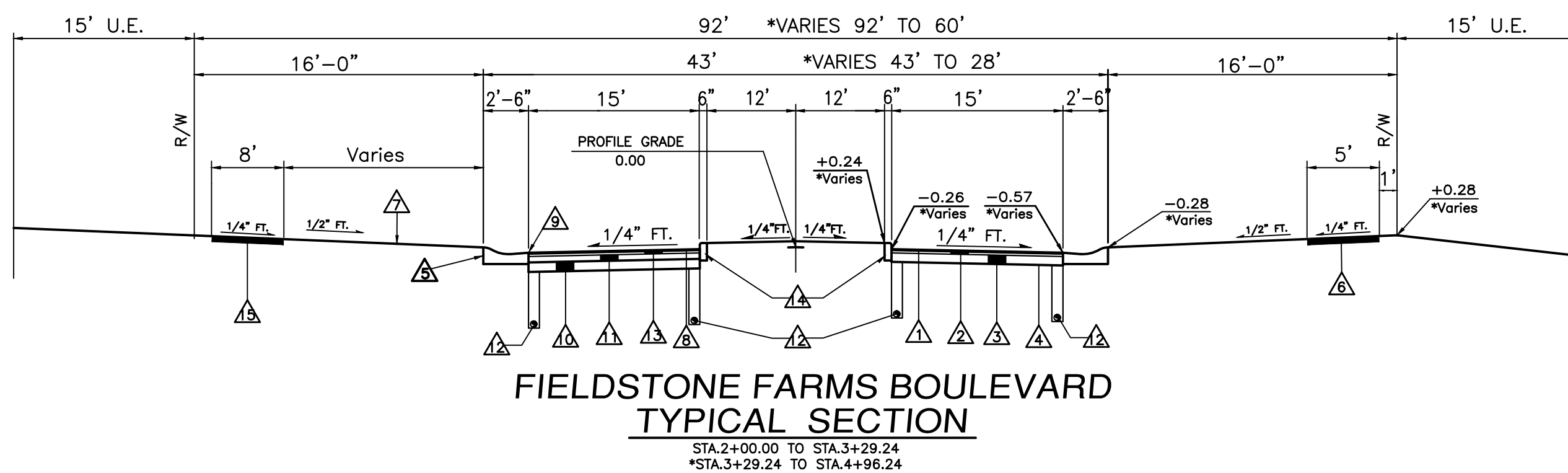
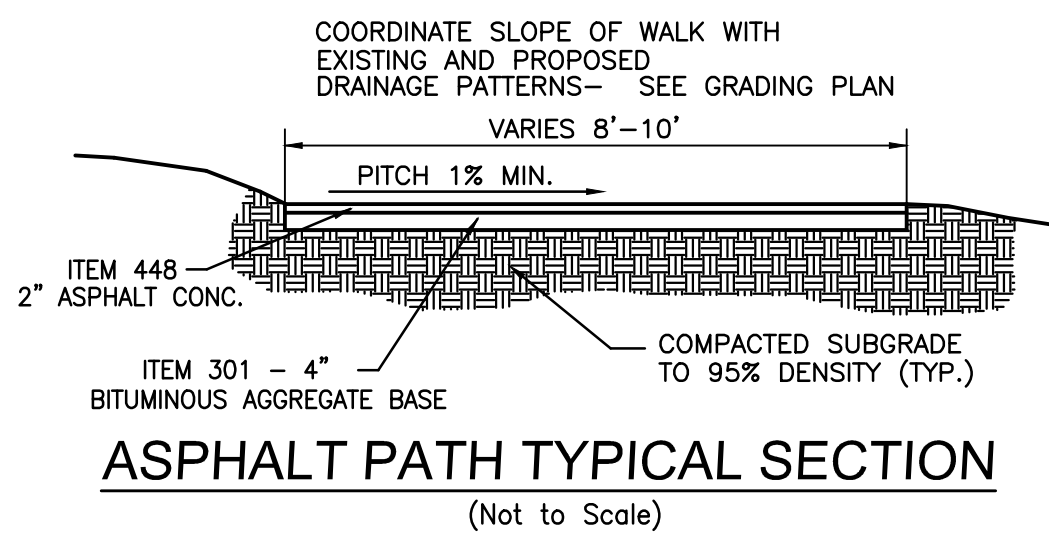
VICINITY MAP

OWNER/DEVELOPER

Sunesis Properties, LLC
2610 Crescentville Road
West Chester, Ohio 45069
513-326-6000

BENCHMARK

Existing Sanitary Manhole Rim
near Fieldstone Farms Boulevard
N515371.46
E1437777.20
Elevation = 836.57



- ITEM DEPTH TOP OF PIPE
 - Underdrain 24" 18"
 - Surface 24" 18"
 - Gas 24" 18"
 - Electric 24" 18"
 - Telephone 24" 18"
 - Cable TV 24" 18"
- *SURFACE COURSE (ITEM 448) AND TACK COAT (ITEM 407) ARE TO BE APPLIED NO SOONER THAN TWELVE (12) MONTHS AFTER THE LEVELING COURSE (ITEM 448), AND FIFTY (50) PERCENT OF THE HOMES ARE COMPLETED. IF AFTER TWO (2) YEARS FIFTY (50) PERCENT OF THE HOMES HAVE NOT BEEN COMPLETED, THEN THE TOP COURSE MAY BE APPLIED.
- 1" ITEM SURFACE COURSE - 448 ASPHALTIC CONCRETE SEE * NOTE
 - 2 1/2" LEVELING COURSE - ITEM 448 ASPHALTIC CONCRETE
 - 6" BASE COURSE - ITEM 301 BITUMINOUS AGGREGATE BASE
 - 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
 - ODOT TYPE 6 CURB
 - ASPHALT PATH (SEE TYPICAL SECTION ON SHEET #1)

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FIELDSTONE FARMS SECTION ONE, BLOCKS A&B SINGLE FAMILY SECTION 15, TOWN 3, RANGE 3 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO

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

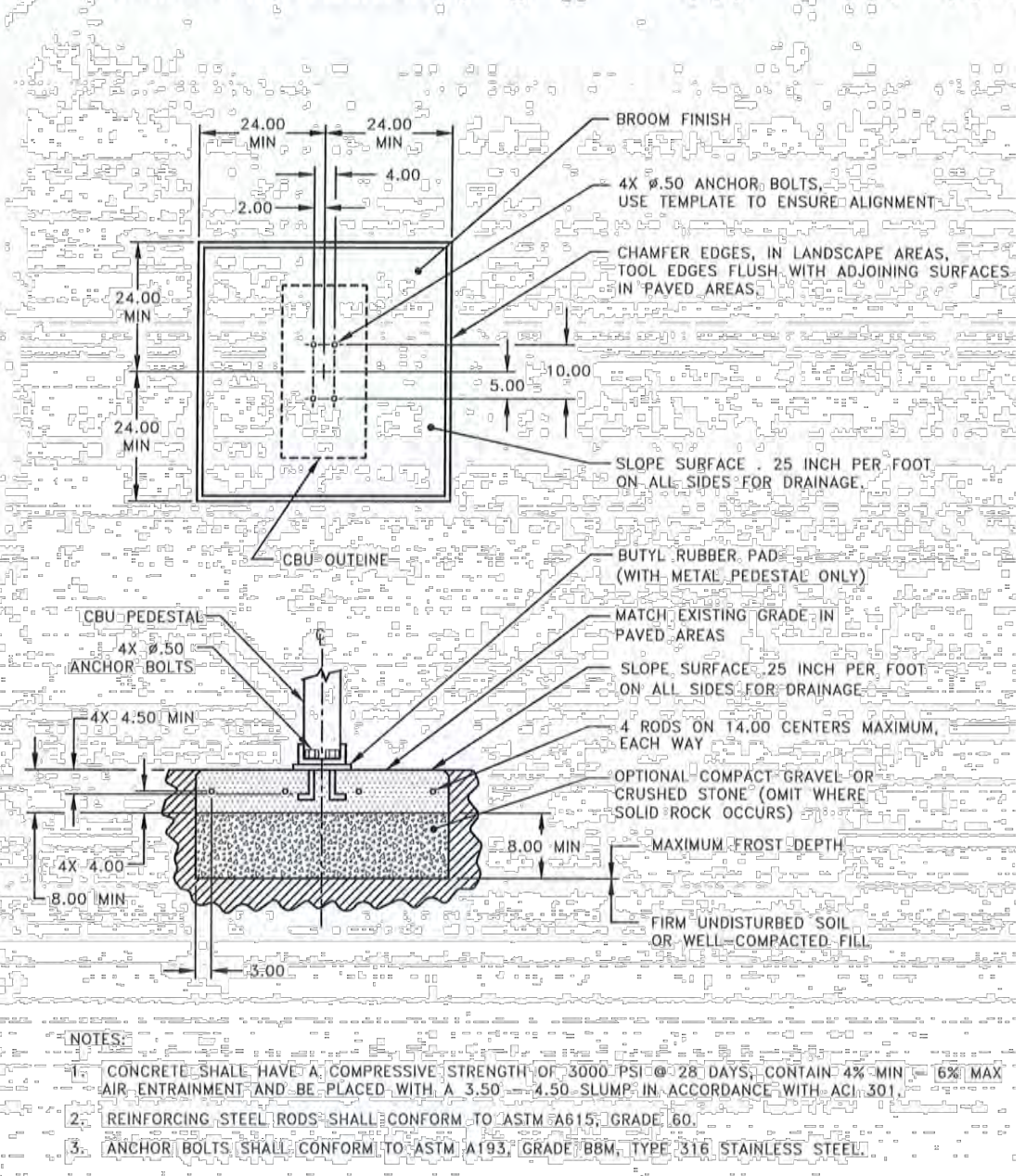
Date	Drawn	Checked	Revision Description
6-15-18	TAC		
6-27-18	TAC		
7-31-18	TAC		
10-24-18	TAC		
10-25-18	TAC		
5-28-19	TAC		
8-8-19	TAC		

Item 1: Revised as per BCWS
Item 2: Revised as per BCWS
Item 3: Revised as per BCEO
Item 4: REVISED AS PER CLIENT CHANGES TO LAYOUT
Item 5: Revised as per BCEO
Item 6: Revised as per BCEO
Item 7: Revised as per Developer - Added storm between structures 154 & 146

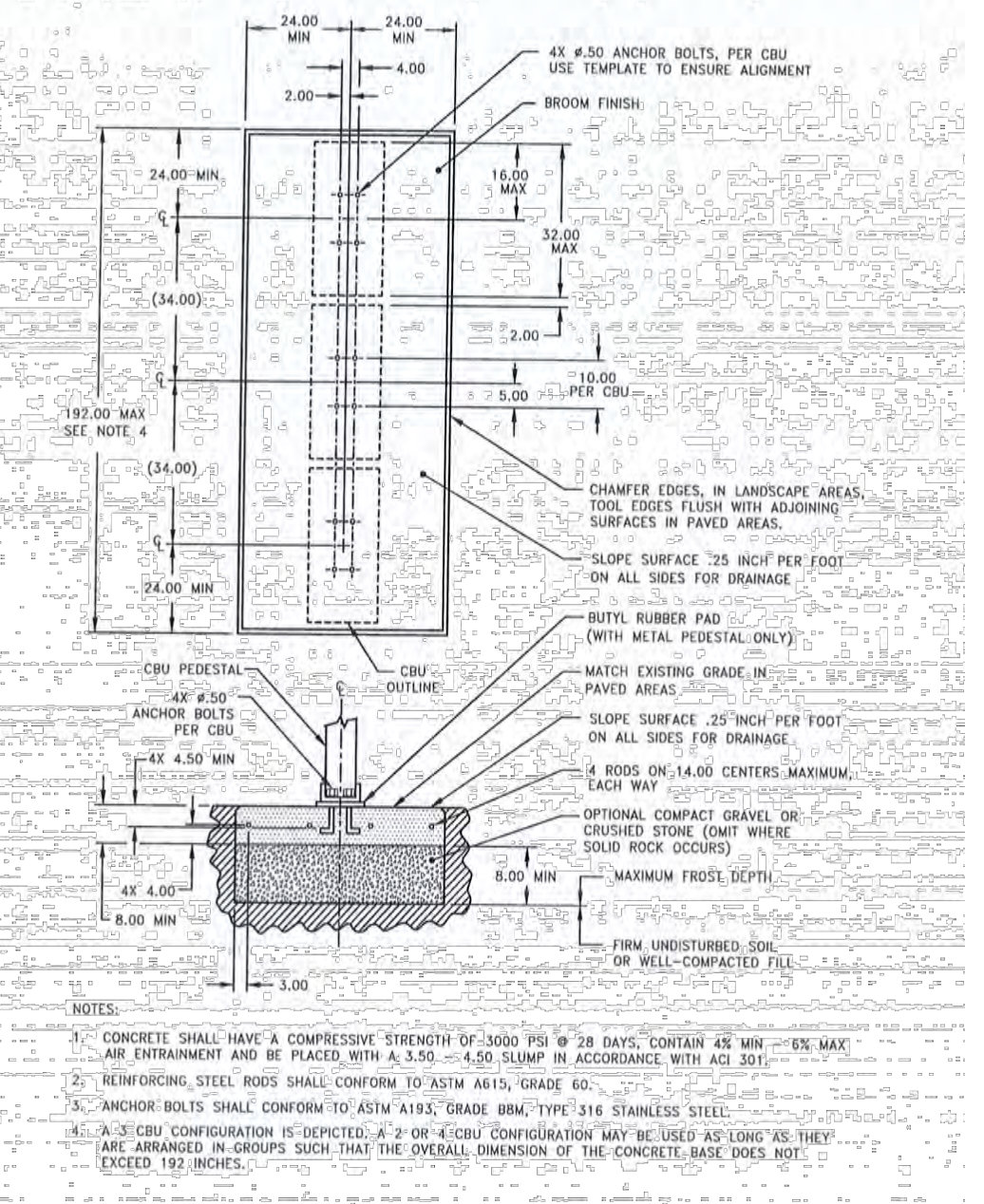
Drawing: 16-0294 S CD
Checked By: TAC
Issue Date: EMR
Sheet: 5-21-18

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USPS APPROVED SPECIFICATIONS - CONCRETE PAD (SINGLE UNIT)
(All measurements are in inches)

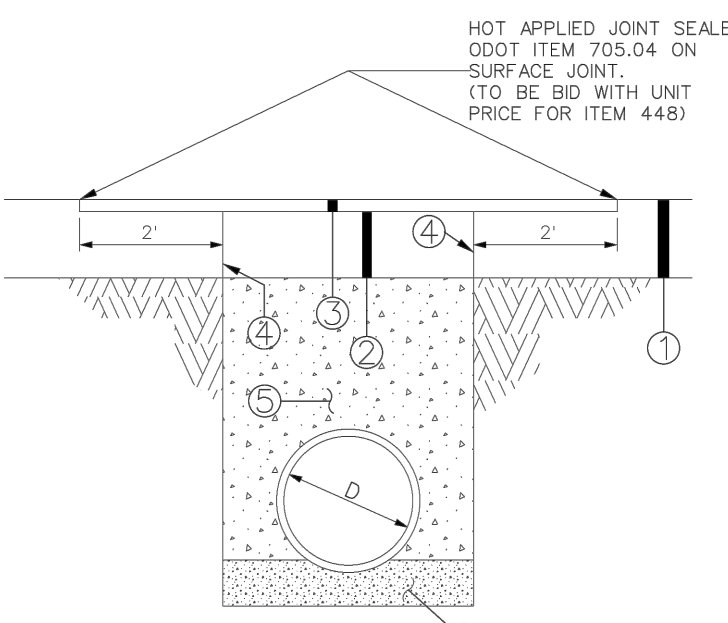


USPS APPROVED SPECIFICATIONS - CONCRETE PAD (MULTIPLE UNIT)



CLUSTER MAILBOX CONCRETE PAD DETAIL

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



- ① EXISTING PAVEMENT
- ② 2" ITEM 301 BITUMINOUS AGGREGATE BASE IN TWO 4" LIFTS
- ③ 2" ITEM 448 ASPHALT CONCRETE SURFACE COURSE MIN. 2" EACH SIDE OF CUT
- ④ ITEM 407 TACK COAT APPLIED AT 0.10 GAL/SY
- ⑤ LOW STRENGTH MORTAR BACKFILL MATERIAL CLASS LSM 50
- ⑥ MIN. 6" GRANULAR PIPE BEDDING (OPTION - USE GRANULAR BEDDING EXTENDED 12" ABOVE PIPE FOR FULL WIDTH OF TRENCH)

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Item	Revision Description	Date	Drawn	Chk
1	Revised as per BCOS	6-15-18	TAC	
2	Revised as per BCOS	6-27-18	TAC	
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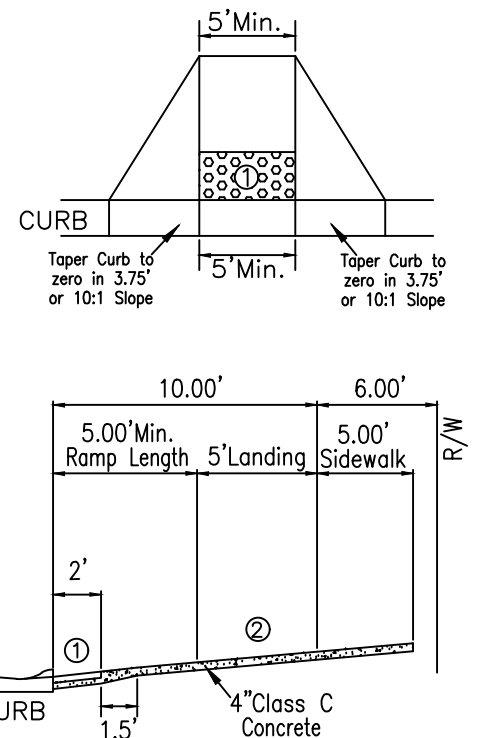
**FIELDSTONE FARMS
SECTION ONE, BLOCKS A&B
SINGLE FAMILY
SECTION 15, TOWN 3, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO**

MISCELLANEOUS DETAILS

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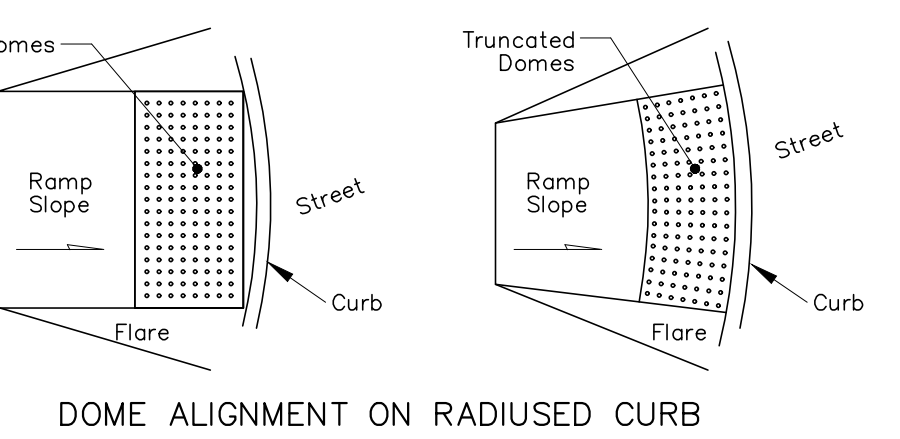
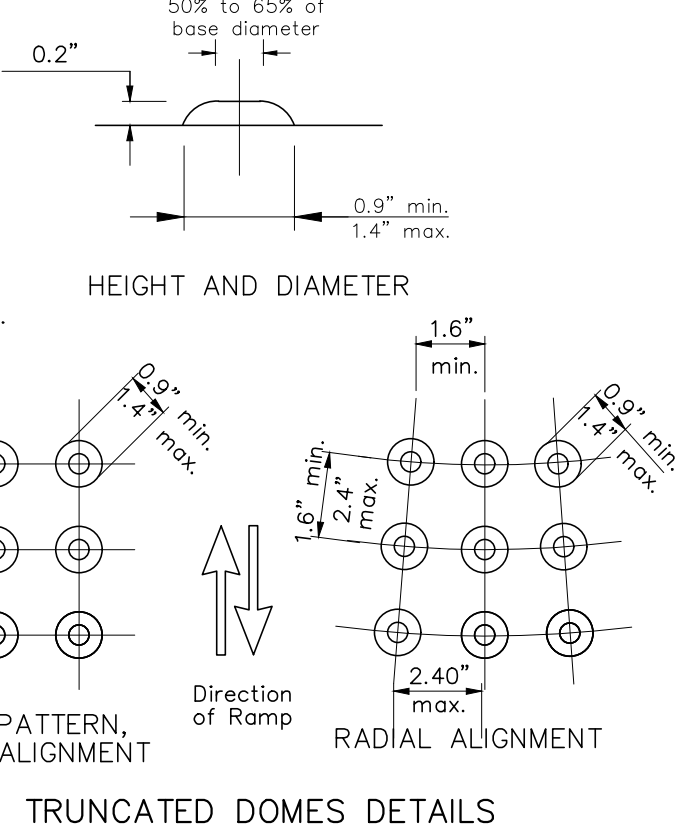
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Drawn by: TAC
Checked by: EMR
Issue Date: 5-21-18
Sheet: **2/13**

Plot time: Aug 08, 2019 - 4:37pm
Drawing name: J:\2016\16-0294\CAD\DWG\Single-Family\16-0294 S CD.dwg - Layout Tab: 2



- ① 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.
- ② Minimum Landing is to be 4' but 5' is preferred. The slope of the ramp is preferred to be 12:1 or flatter related to the horizontal, but the slope shall be relative to the existing or proposed walk slope.
- ③ 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.

CURB RAMP DETAIL



DOME ALIGNMENT ON RADIUSED CURB

CURB RAMP NOTES

DRAINAGE: Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding 1/4" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed. See Intersection Details.

SURFACE TEXTURE: Texture concrete surfaces by coarse brooming transverse to the ramp slopes to be rougher than the adjacent walk.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

DETECTABLE WARNINGS NOTES

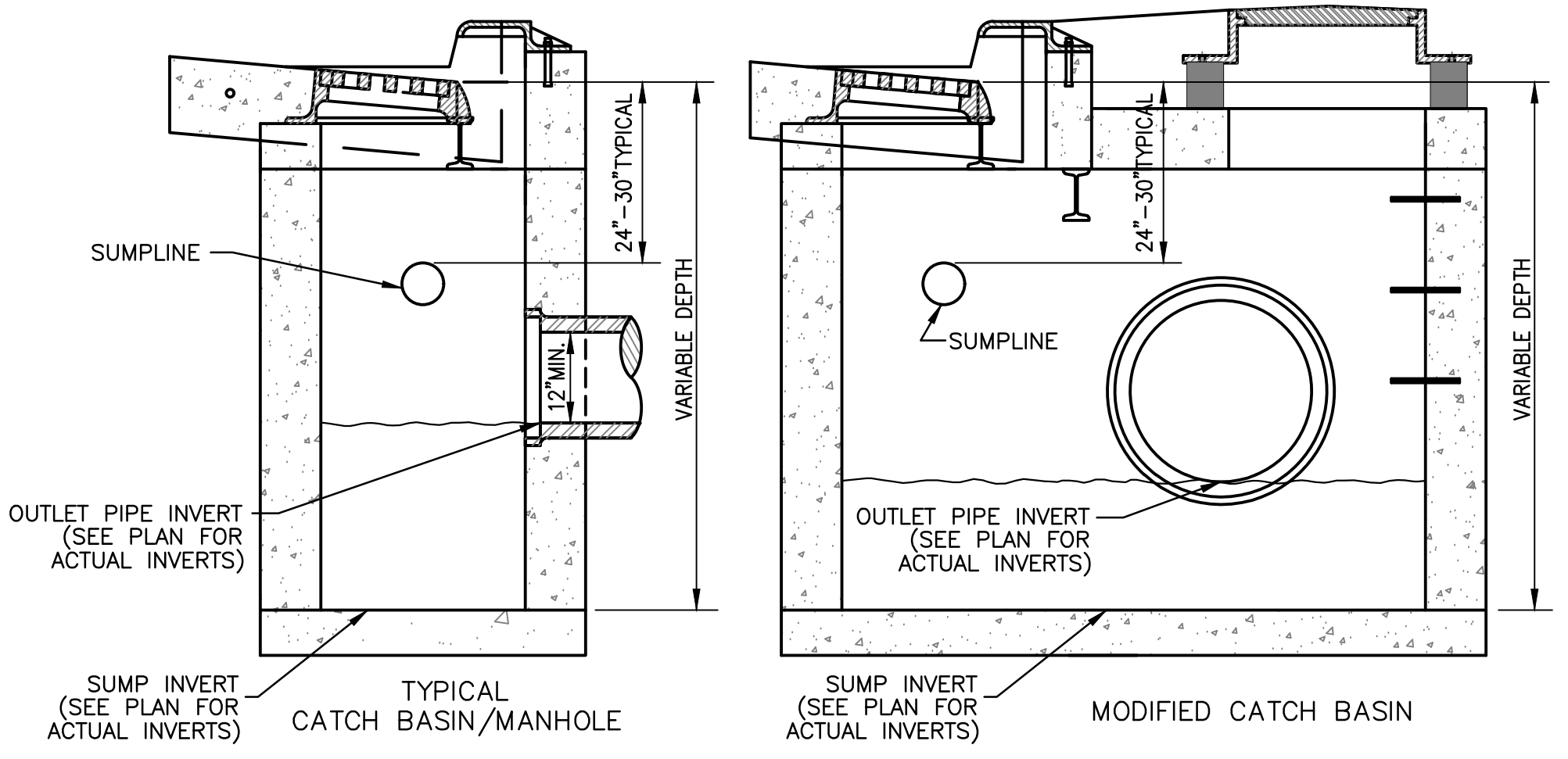
GENERAL: Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop-offs.

PLACEMENT: Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. See plan locations of curb ramps.

The depth of concrete underneath detectable warning products shall be a minimum of 4".

ALIGNMENT: Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but in skewed conditions at least one corner of the 24" strip should be adjacent to the back of curb. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.

PRODUCTS & COLORS: Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Contractor to submit Armor-Tile Detectable/Tactile Warning Surface Cast in Place Tile or approved equal cut sheets for color selection approval to Owner. Install as per manufacturer's printed instructions.



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.

* AS PER ODOT & BUTLER COUNTY STANDARD DETAILS

STORM WATER QUALITY STRUCTURE DETAILS
(Not to Scale)

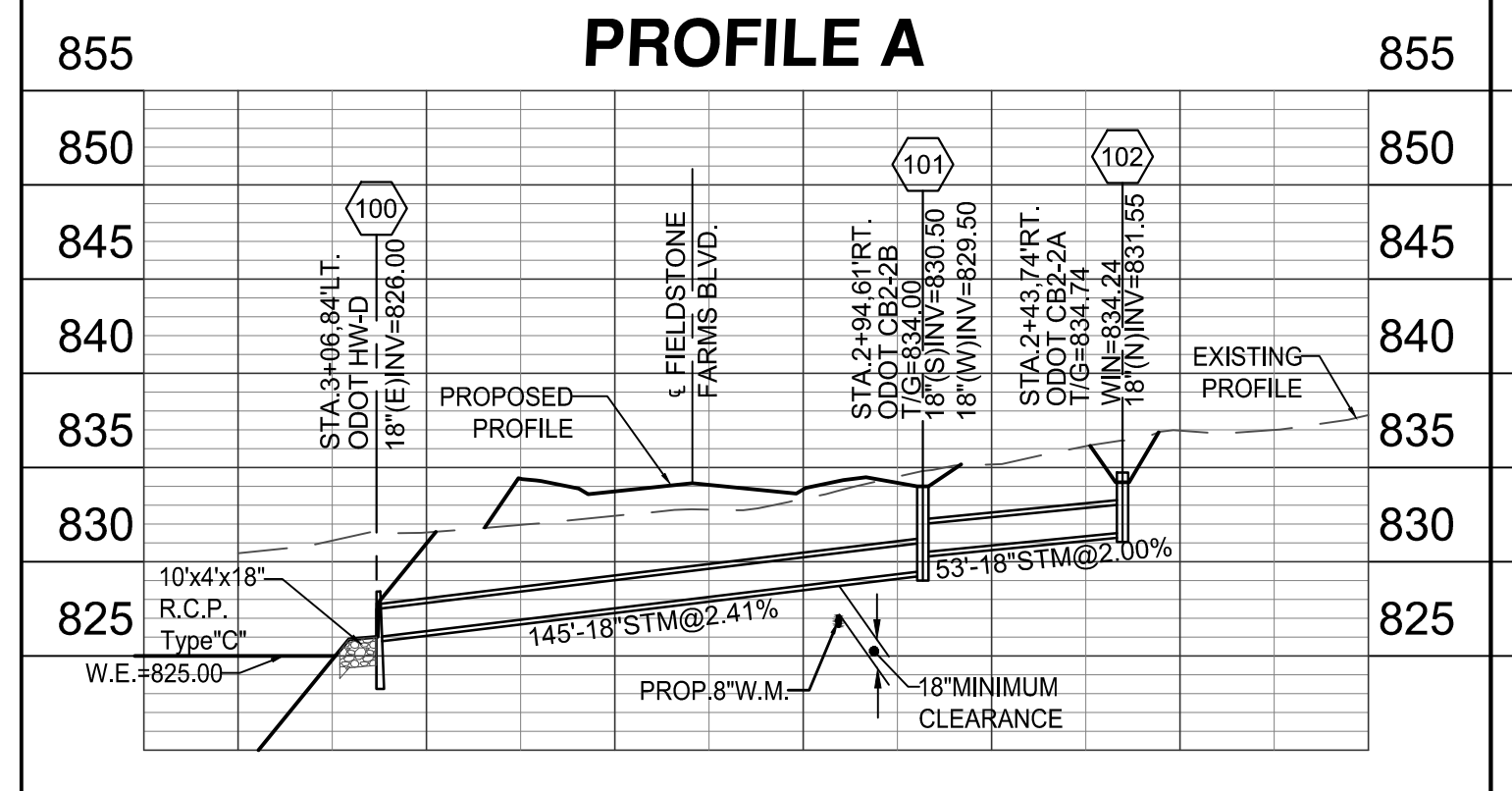
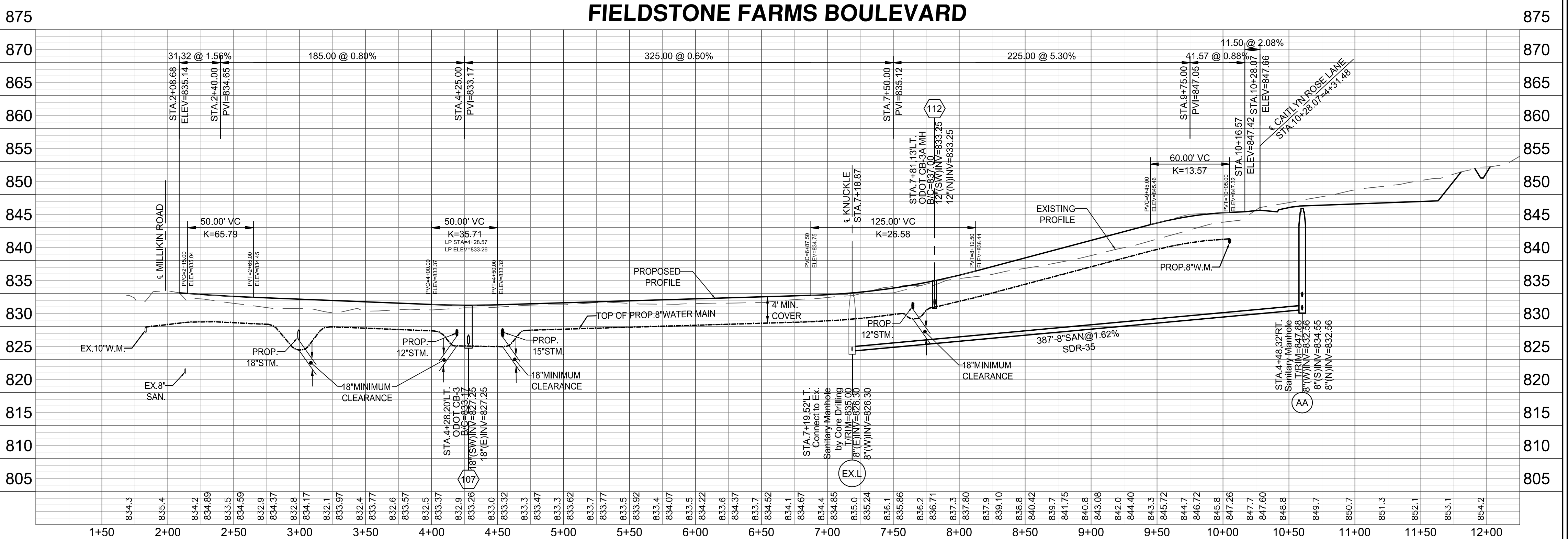
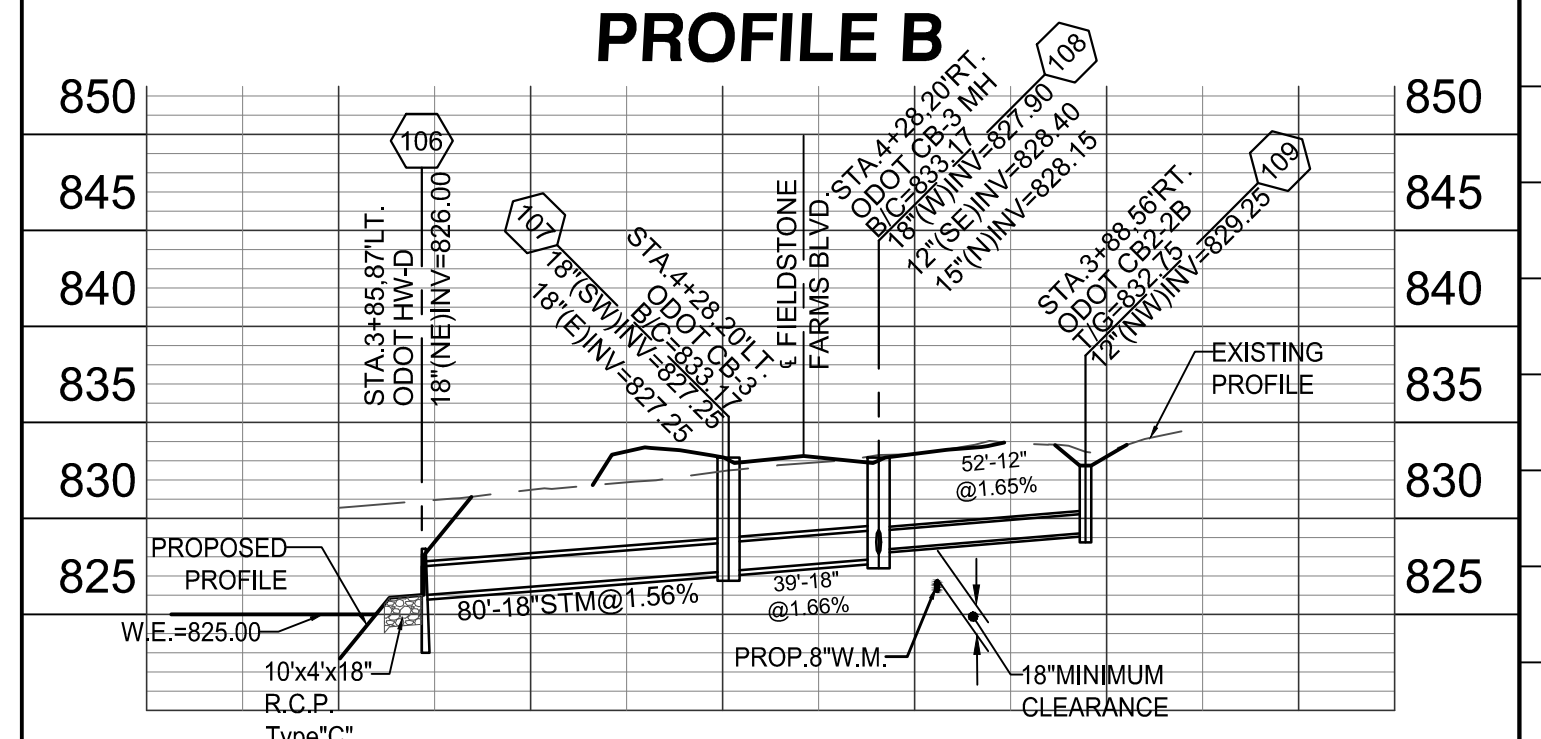
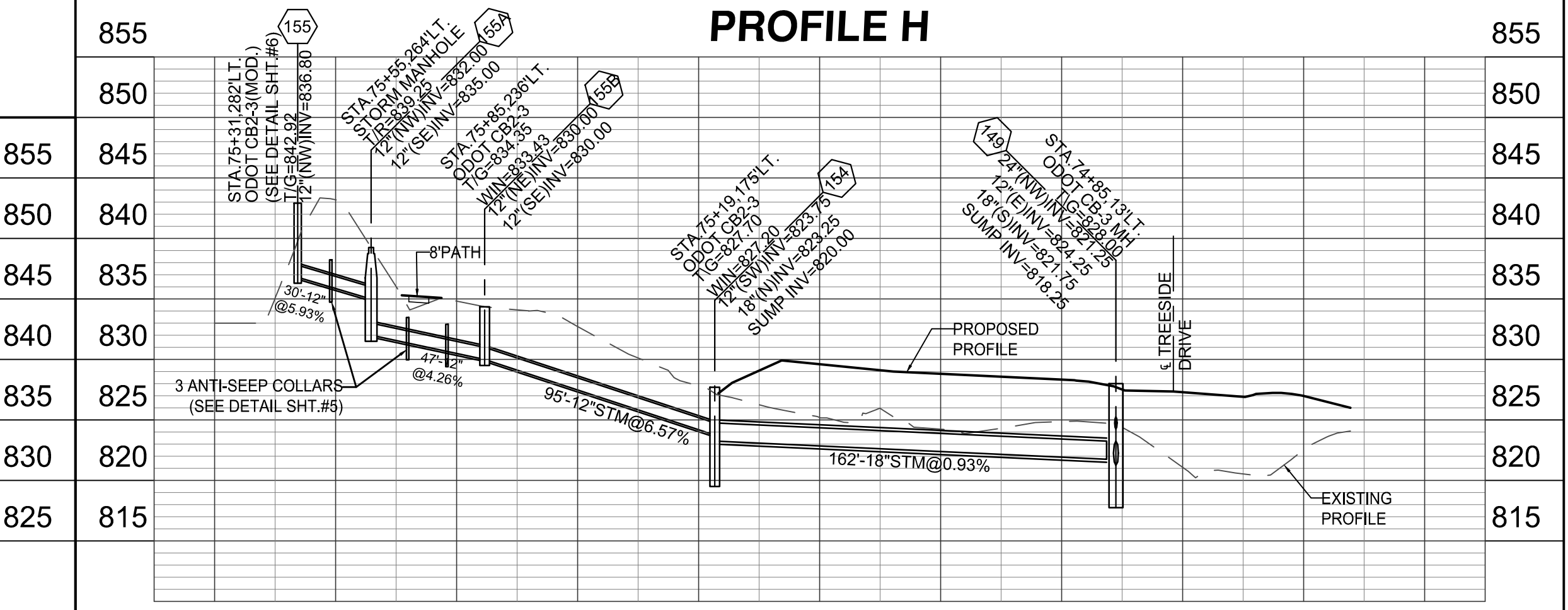
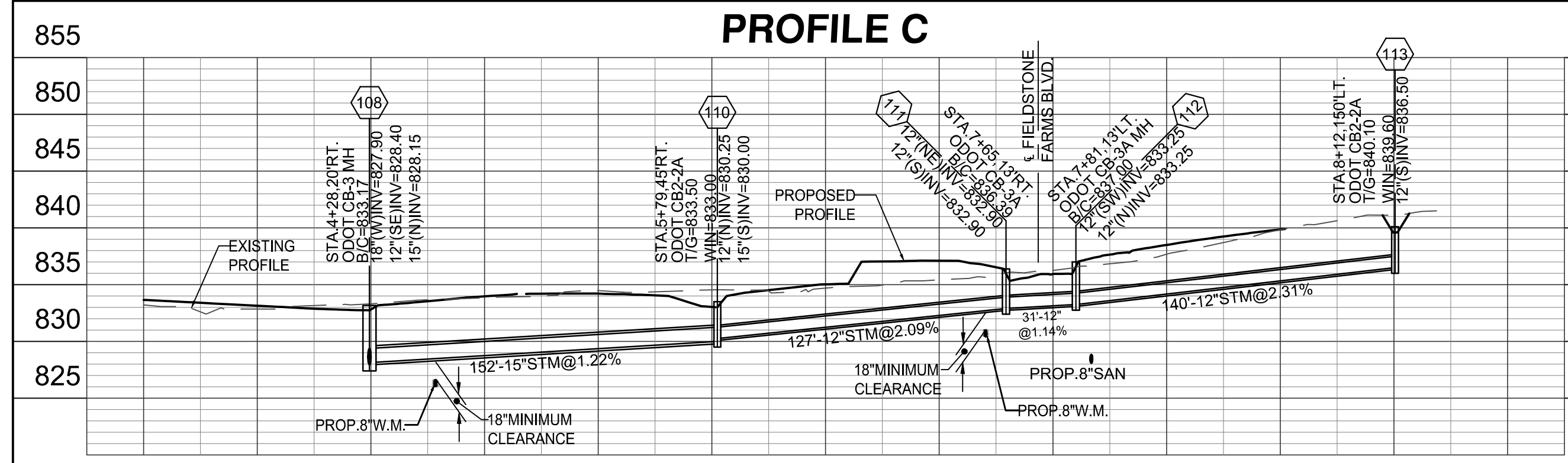
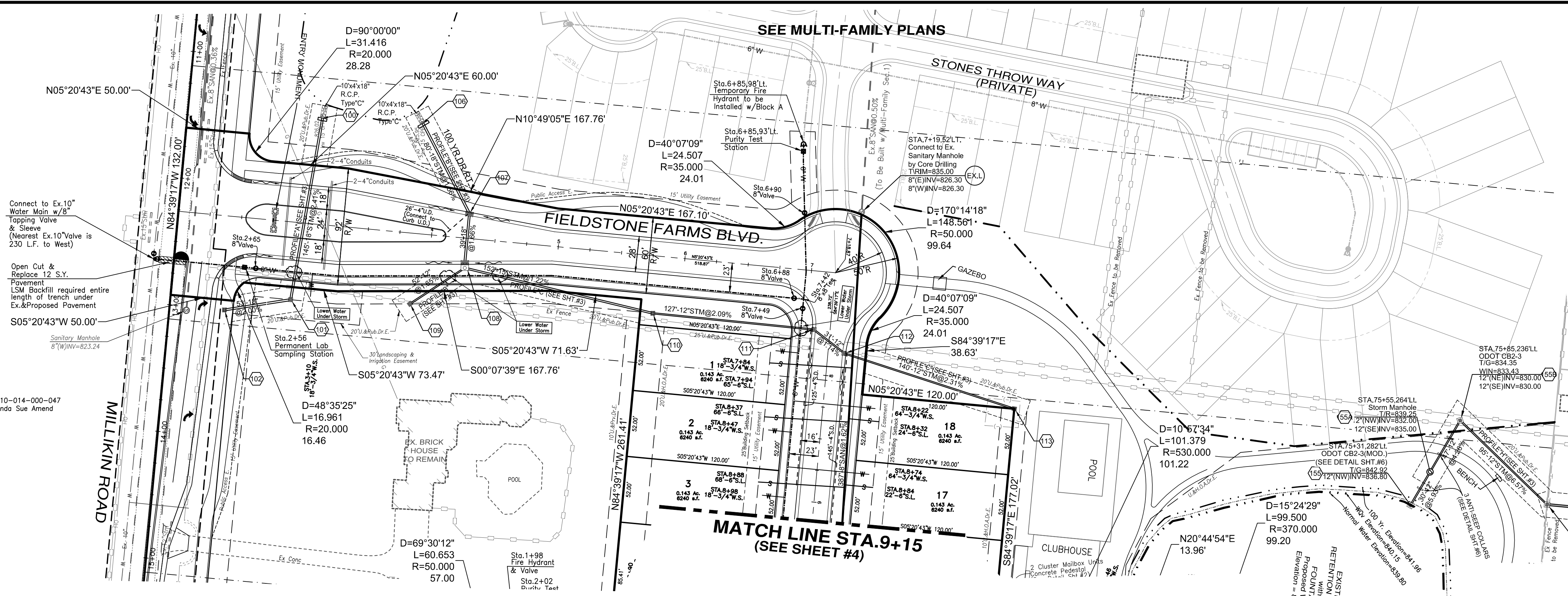
- NOTES:
- 48 hours notice to be given to affected residents before construction begins.
 - All Catch Basin B/C Elevations located within the curb are set to the Back of Curb Elevations.
 - Lower 3/4" Water Services as needed to avoid conflicts with Storm with Min. 4" Cover.
 - Location of existing utilities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

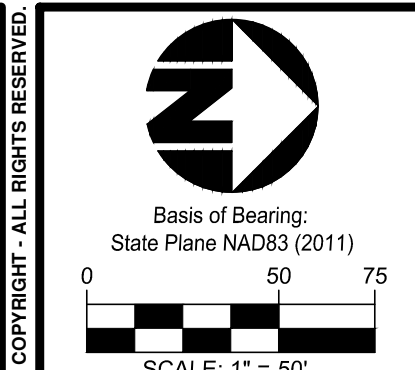
WATER MAIN RESTRAINT JOINT LOCATION CHART

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" 10"
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'

D2010-014-000-047
Linda Sue Amend

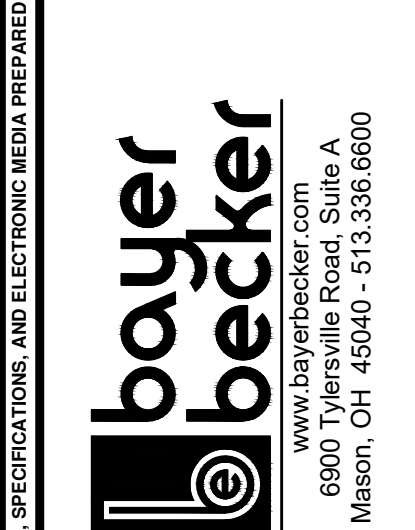


SCALES:
HOR: 1"=50'
VER: 1"=10'



Item	Revision Description	Date	Drawn	Checked
1	REVISED AS PER BCWS	6-14-18	TAC	
2	REVISED AS PER BCWS	6-27-18	TAC	
3	REVISED AS PER BCCE	7-31-18	TAC	
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FIELDSTONE FARMS
SECTION ONE, BLOCKS A&B
SINGLE FAMILY
SECTION 15, TOWN 3, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO



Drawing: 16-0294 S CD
Drawn by: TAC
Checked By:
Issue Date: 5-21-18

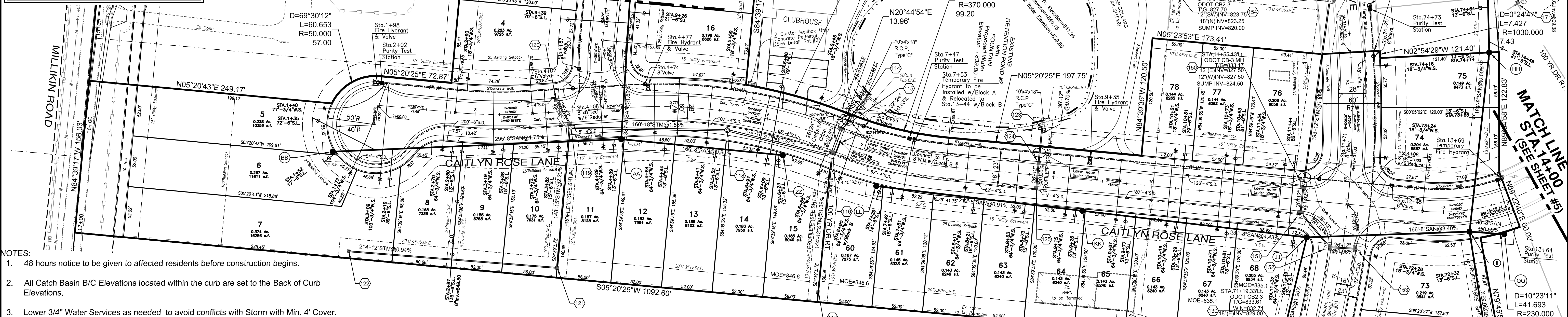
NOTE:
At Crossings, the water main shall have a minimum vertical distance of eighteen (18") inches from storm and sanitary sewers. Also, one full length of water main shall be located so the joints are as far from the storm and sanitary sewers as possible. Fittings, not joint deflection, must be used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

35'25"
361
0.000
6

NOTE:
LOTS 5-7 SHALL NOT HAVE DRIVEWAY ACCESS TO MILLIKIN ROAD.

MATCH LINE STA.9+15 (SEE SHEET #3)

MATCH LINE STA.14+00 (SEE SHEET #5)

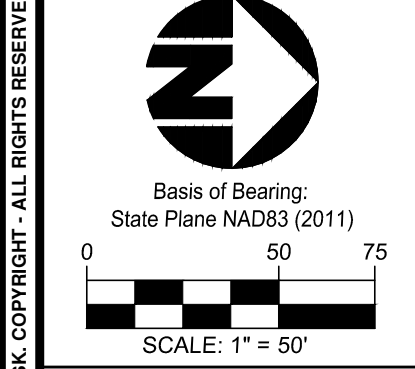
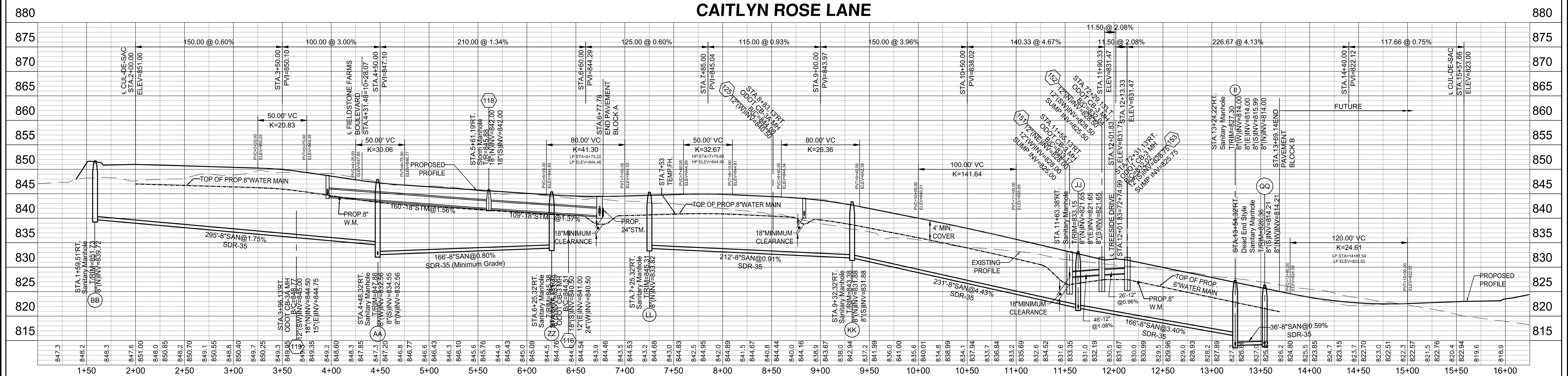
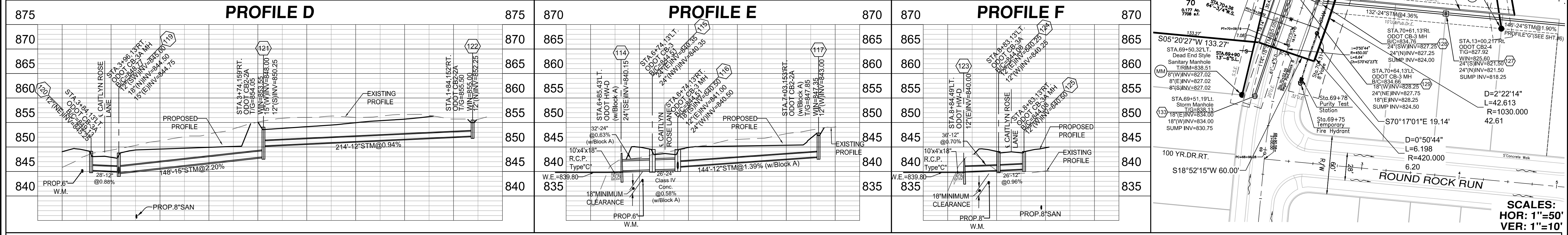


- NOTES:
- 48 hours notice to be given to affected residents before construction begins.
 - All Catch Basin B/C Elevations located within the curb are set to the Back of Curb Elevations.
 - Lower 3/4" Water Services as needed to avoid conflicts with Storm with Min. 4" Cover.
 - Location of existing utilities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

WATER MAIN RESTRAINT JOINT LOCATION CHART

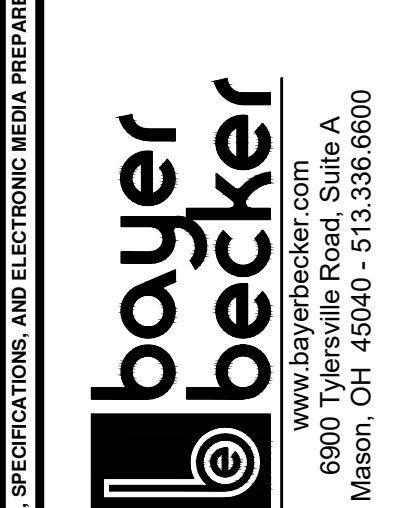
Water Main Dia.	Horizontal 45° Bends	Vertical 45° Bends Up (Lower Water Under...)	Vertical 45° Bends Down (Lower Water Under...)	Dead Ends (Permanent & Temporary)	Tees (for Tee Branch)
6"	18' both sides	18' both sides	36' both sides	72' Back	54' 6" 8" 10"
8"	18' both sides	36' both sides	36' both sides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

NOTE:
FOR FIELDSTONE FARMS BOULEVARD CENTERLINE PROFILE, SEE SHEET #3
FOR TREESIDE DRIVE CENTERLINE PROFILE, SEE SHEET #5



Date	Drawn	Chk	Revision Description
6-14-18	TAC		1 REVIS AS PER BCOE
7-31-18	TAC		2 REVIS AS PER BCOE
10-24-18	TAC		3 REVIS AS PER CLIENT CHANGES TO LAYOUT
8-6-19	TAC		4 Revised as per Developer - Added Storm between Structures 154 & 146
			5
			6
			7
			8
			9

FIELDSTONE FARMS SECTION ONE, BLOCKS A&B SINGLE FAMILY SECTION 15, TOWN 3, RANGE 3 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO



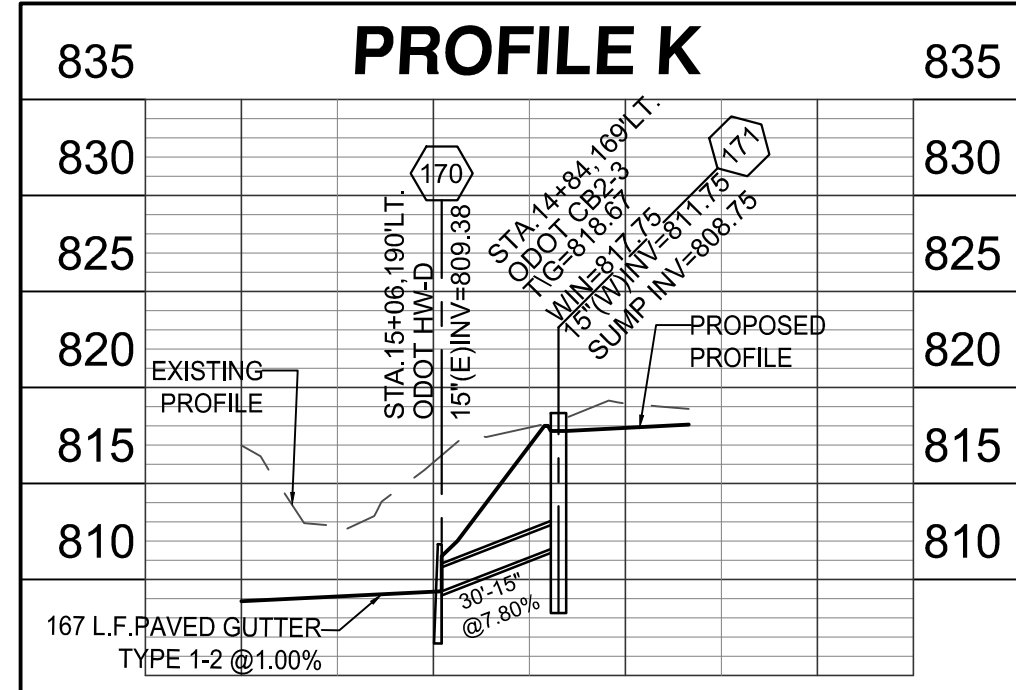
Drawing: 16-0294 S CD
Drawn by: TAC
Checked by:
Issue Date: 5-21-18
Sheet: 4/13

Plot time: Aug 08, 2019 - 4:44pm
Drawing name: J:\2016\16-0294\CD\DWG\Single-Family\16-0294 S CD.dwg - Layout Tab: PP4

- 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.
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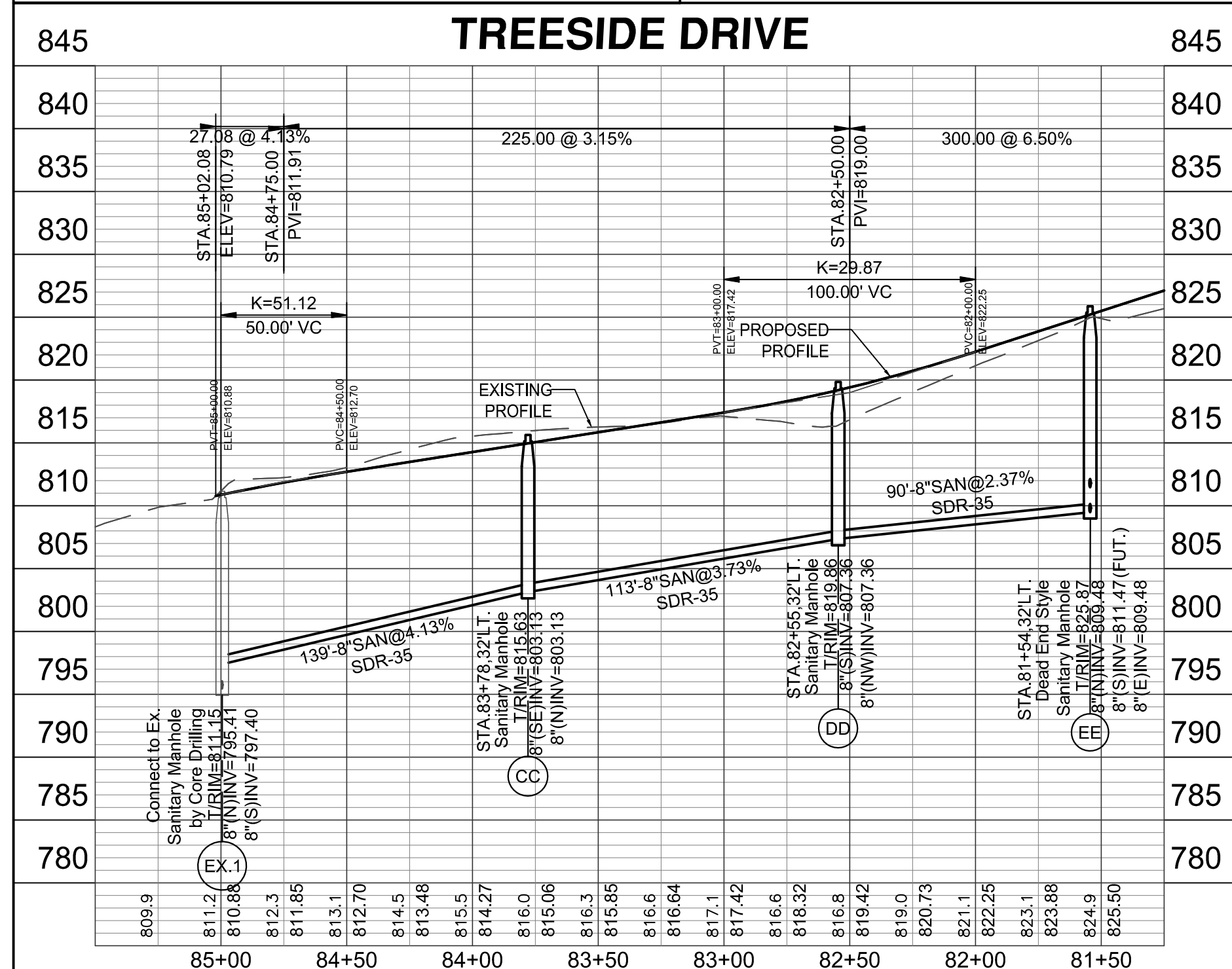
WATER MAIN RESTRAINT JOINT LOCATION CHART

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)
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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'

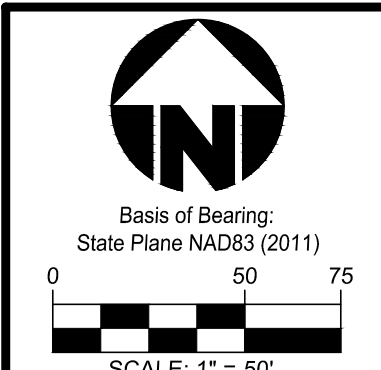
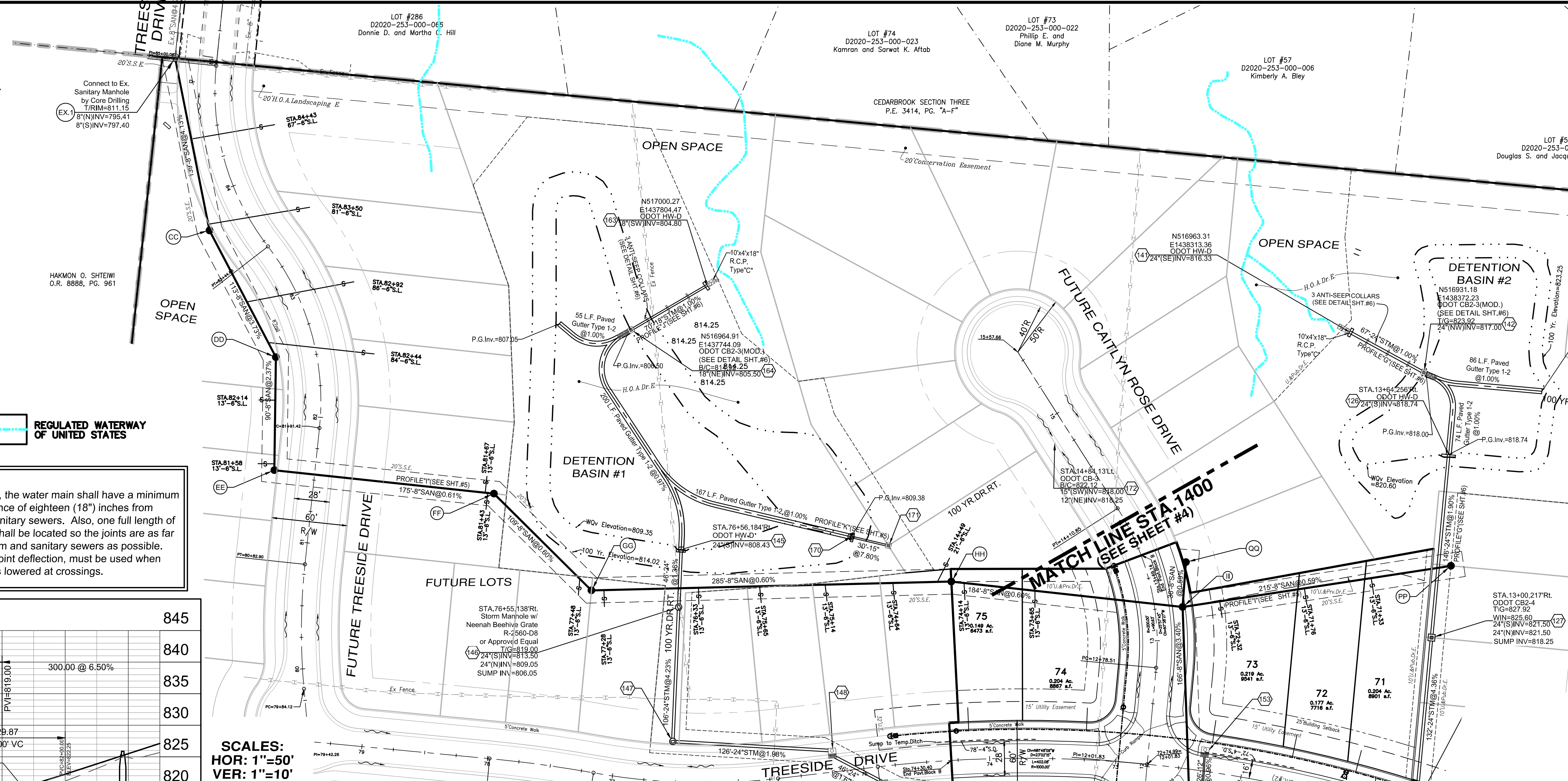
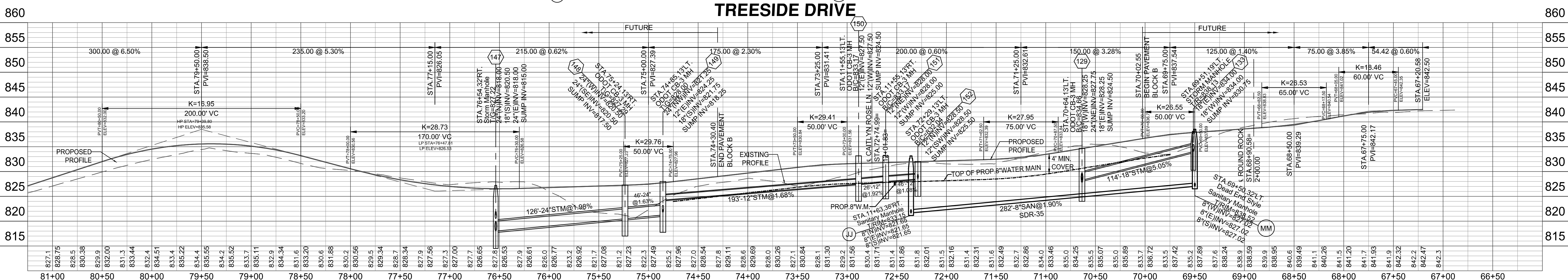
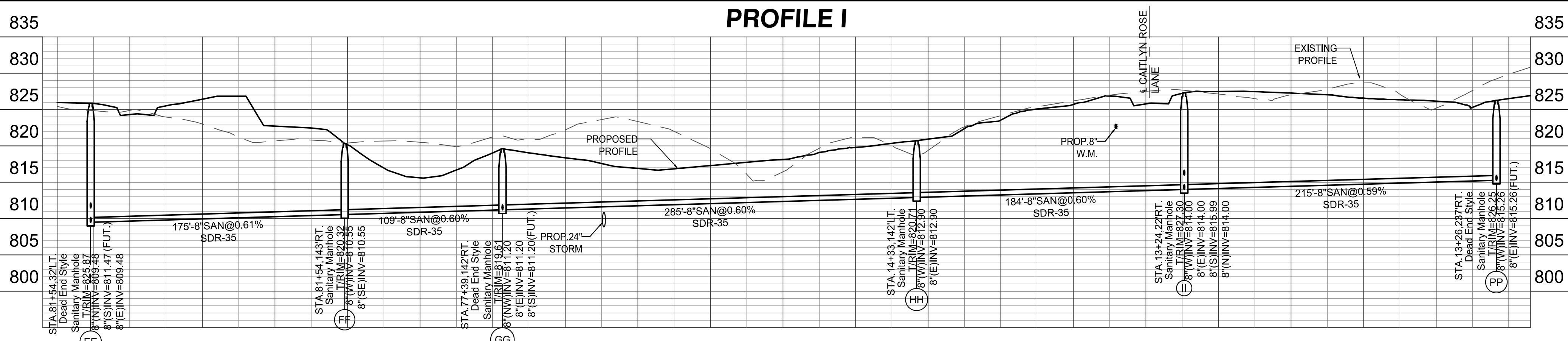


REGULATED WATERWAY OF UNITED STATES

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.



SCALES:
HOR: 1"=50'
VER: 1"=10'



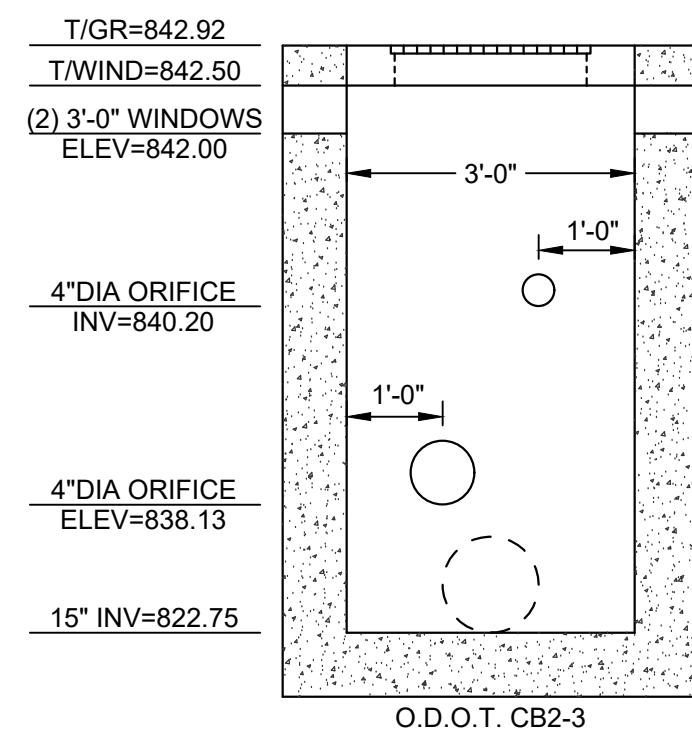
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2	Revised per BCDE	7/31/18	TAC	
3	REVISED AS PER CLIENT CHANGES TO LAYOUT	10/24/18	TAC	
4	Revised per BCDE	5/28/19	TAC	
5	Revised as per Developer - Added Storm between Structures 154 & 146	8/9/19	TAC	
6				
7				
8				
9				

FIELDSTONE FARMS
SECTION ONE, BLOCKS A & B
SINGLE FAMILY
SECTION 15, TOWN 3, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO

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

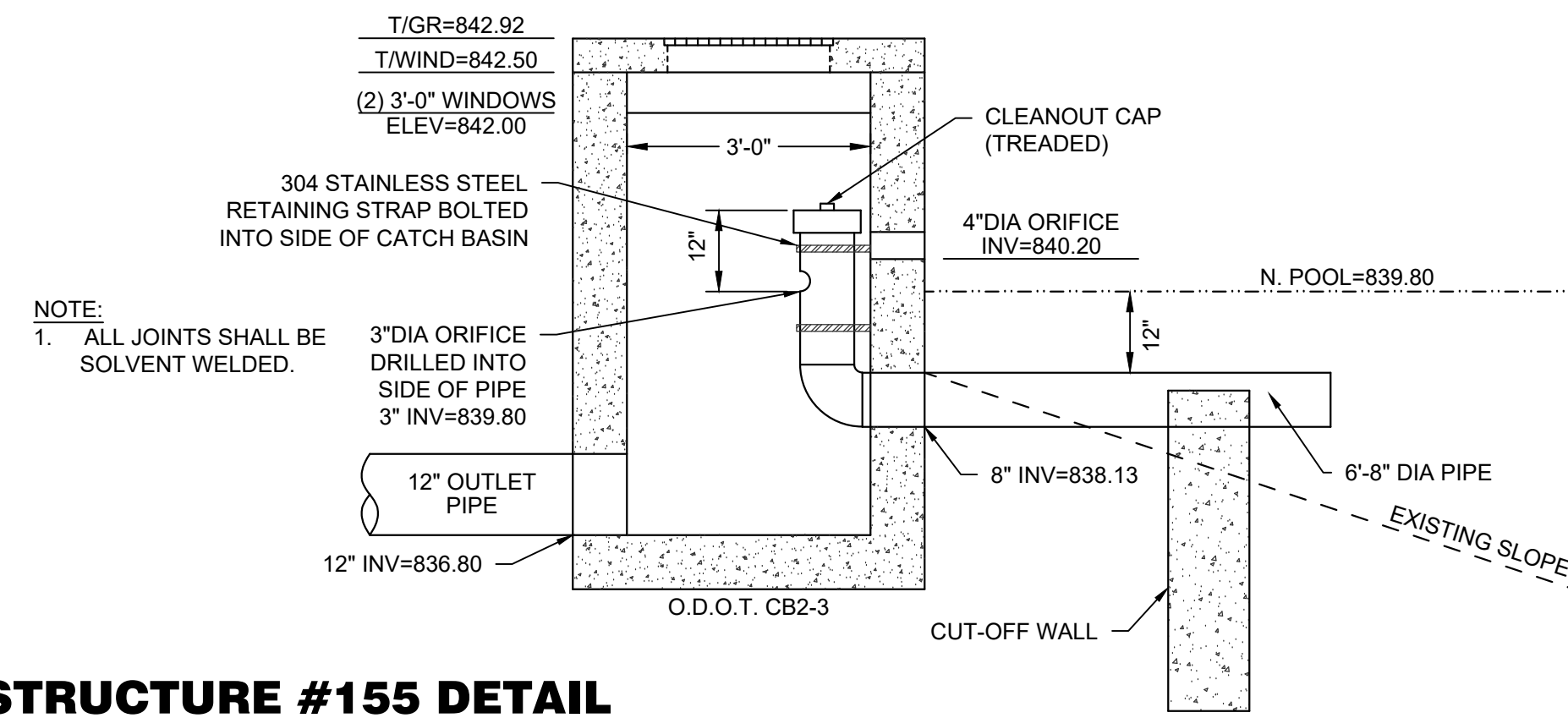
Drawing: 16-0294 S CD
Drawn by: TAC
Checked by:
Issue Date: 3-22-18

Sheet: **5/13**



LAKE #2 OUTLET STRUCTURE #155 DETAIL

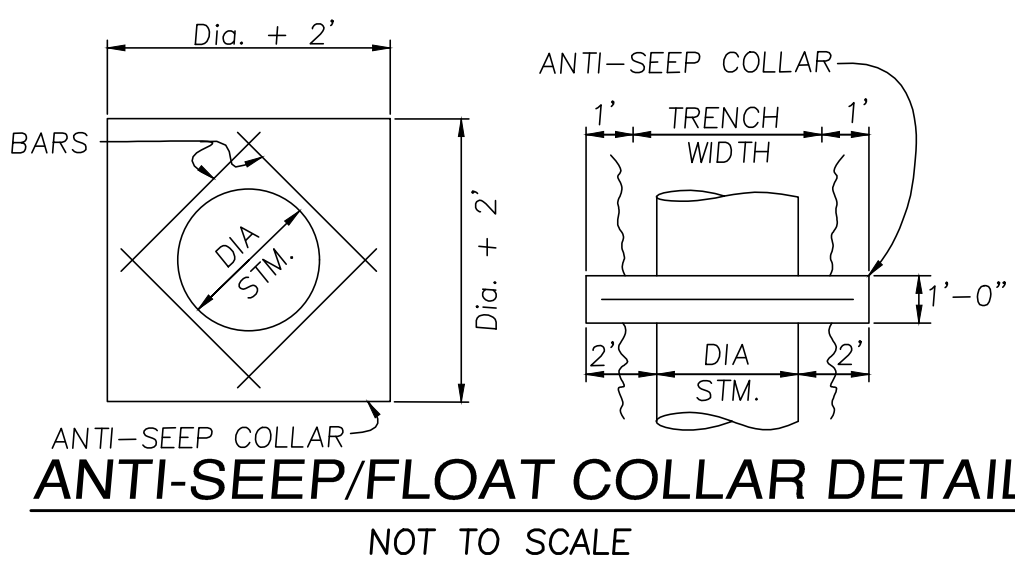
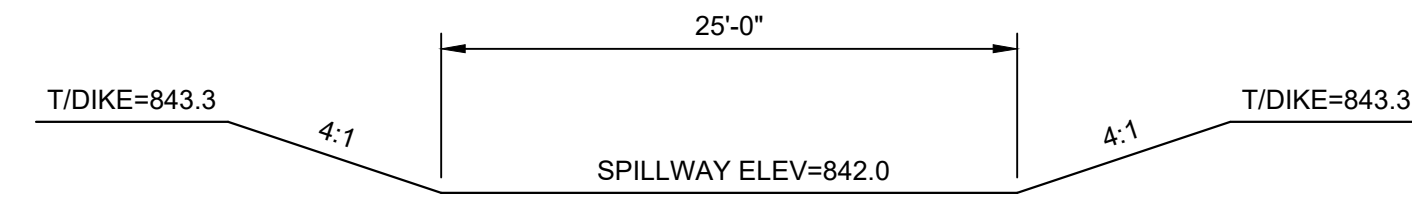
NOT TO SCALE



NOTE:
1. ALL JOINTS SHALL BE SOLVENT WELDED.

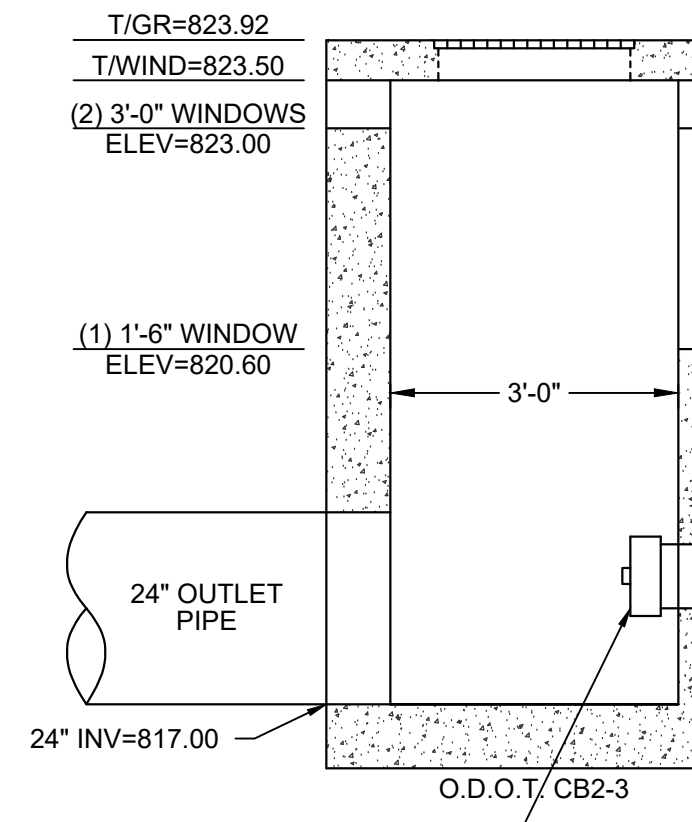
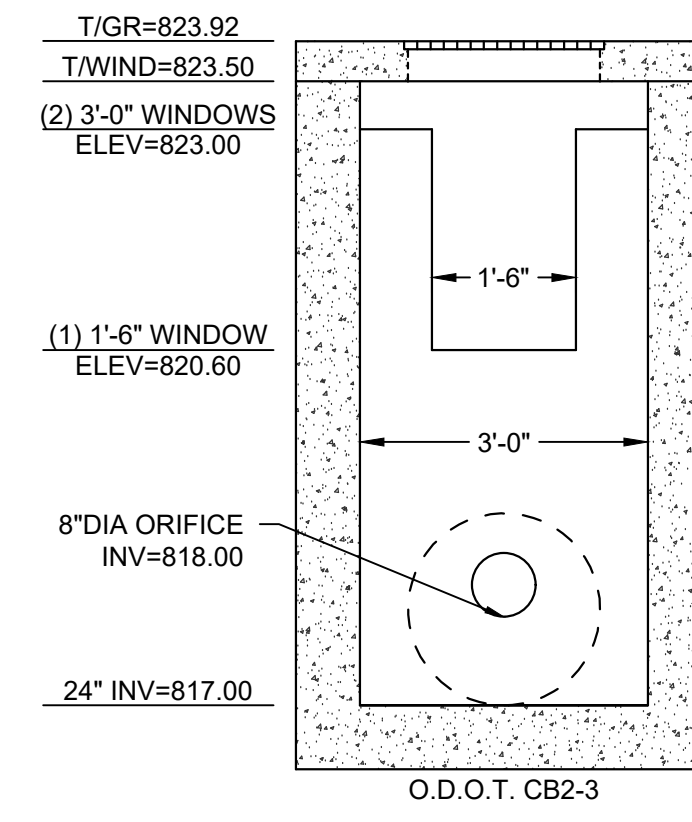
LAKE #2 SPILLWAY DETAIL

NOT TO SCALE



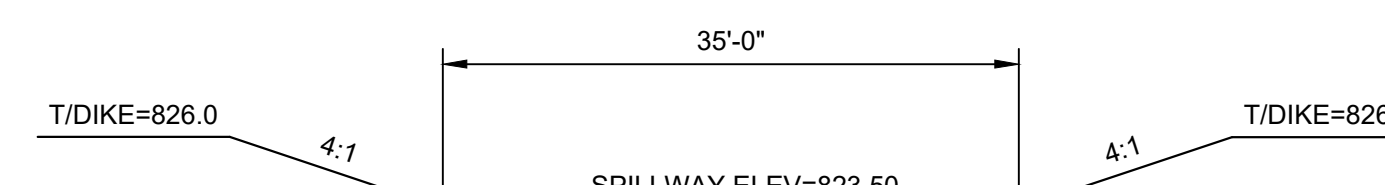
ANTI-SEEP/FLOAT COLLAR DETAIL

NOT TO SCALE



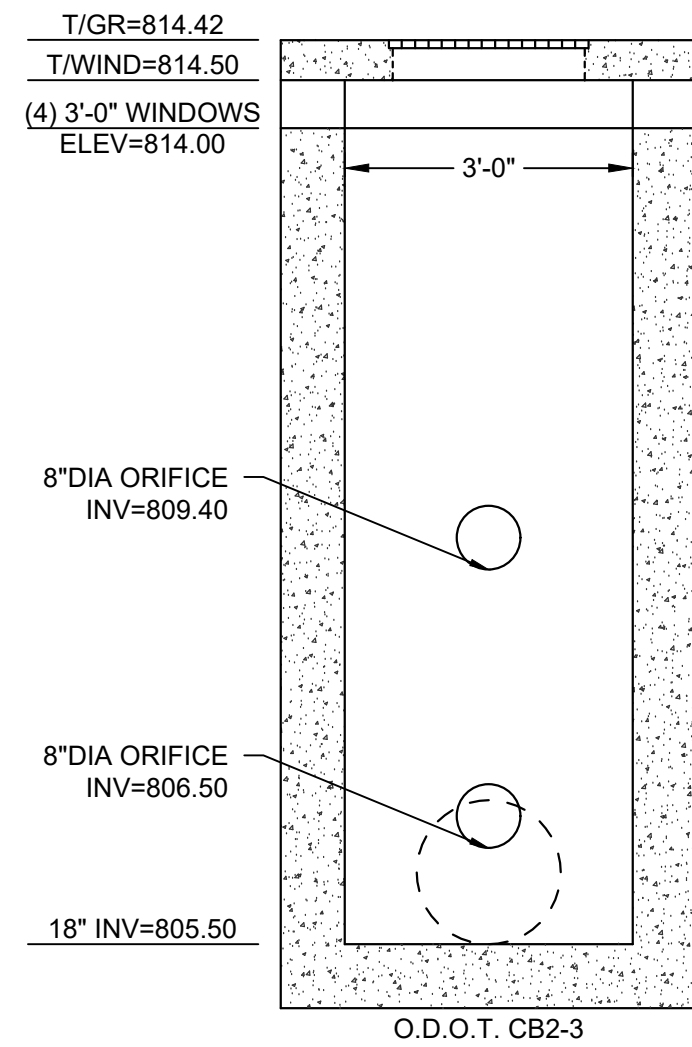
BASIN #2 OUTLET STRUCTURE DETAIL

NOT TO SCALE



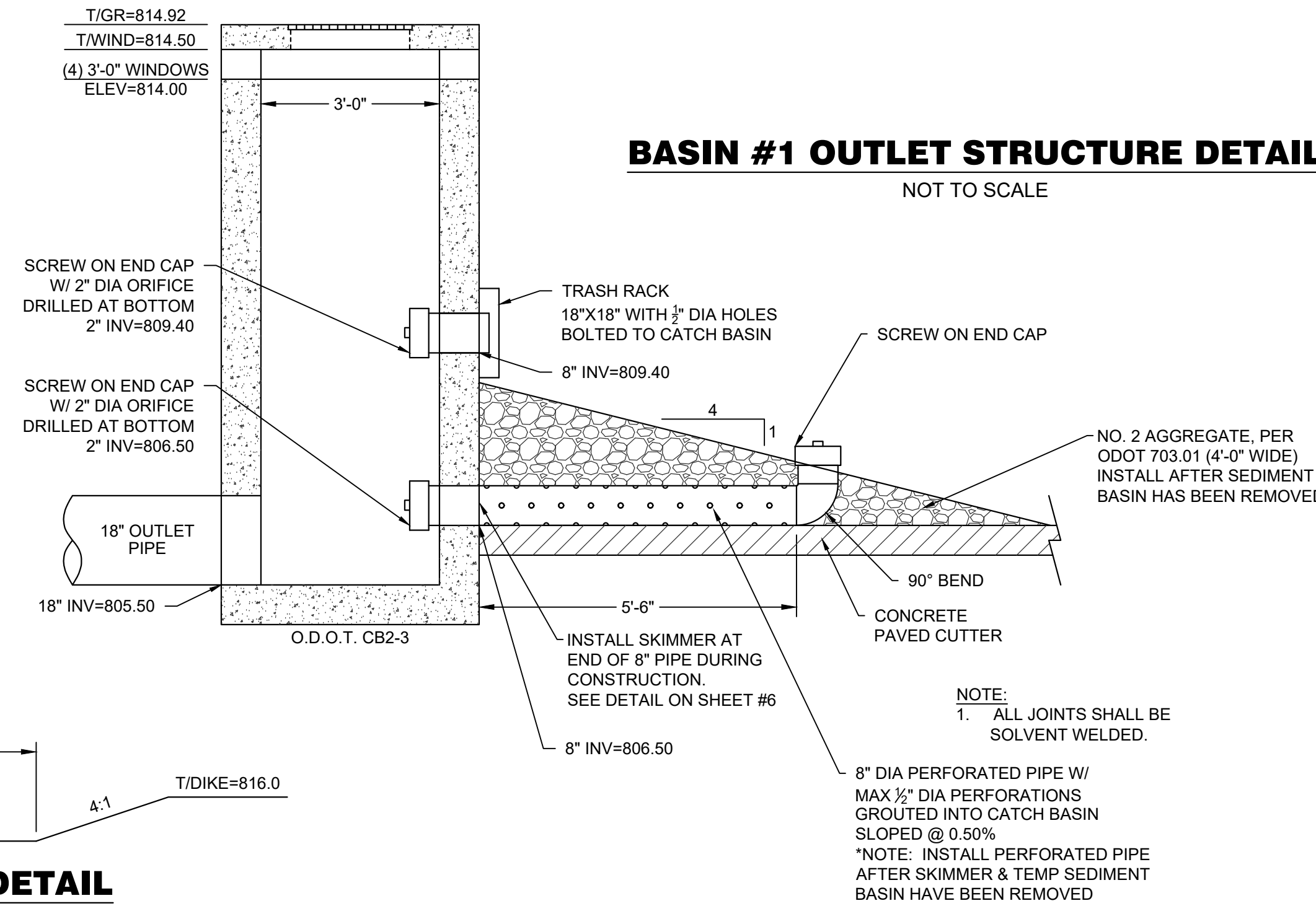
BASIN #2 SPILLWAY DETAIL

NOT TO SCALE



BASIN #1 OUTLET STRUCTURE DETAIL

NOT TO SCALE



NOTE:
1. ALL JOINTS SHALL BE SOLVENT WELDED.

BASIN #1 SPILLWAY DETAIL

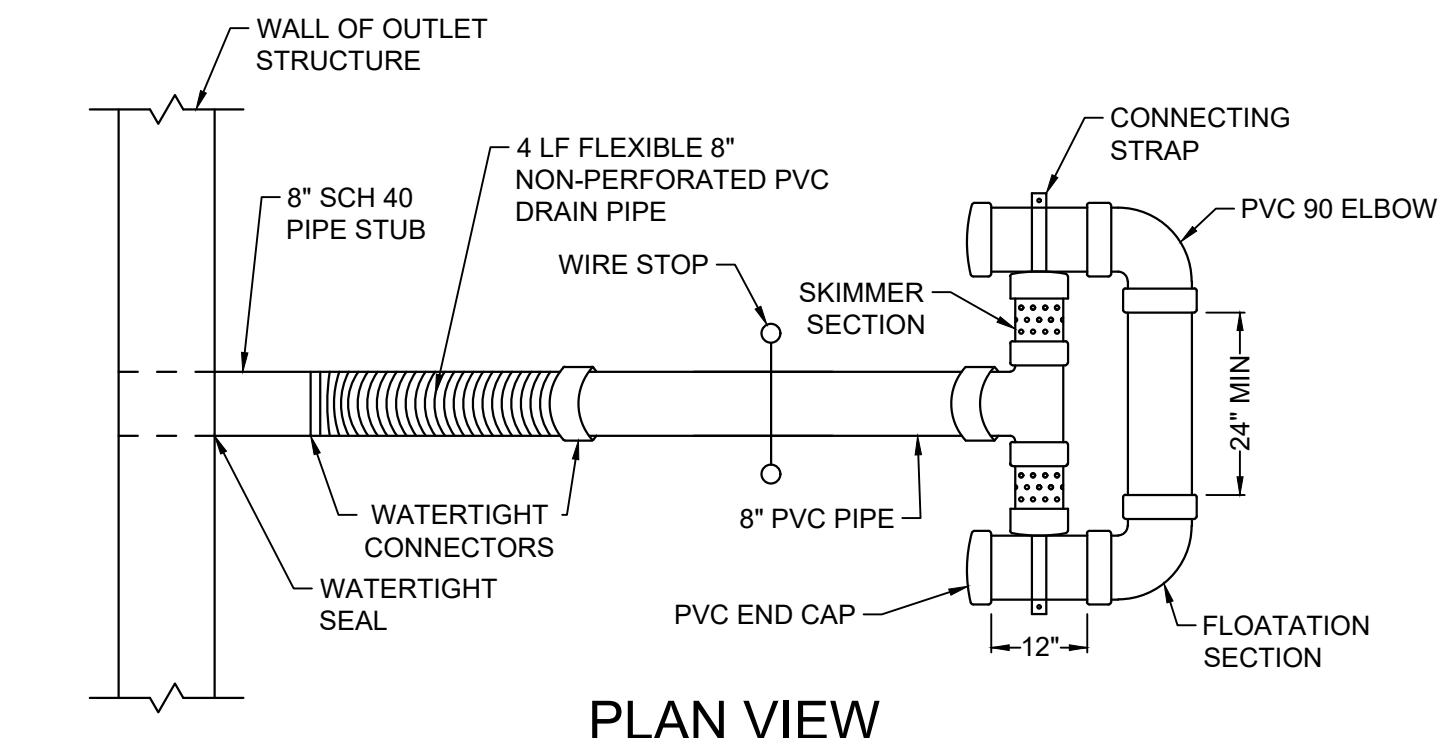
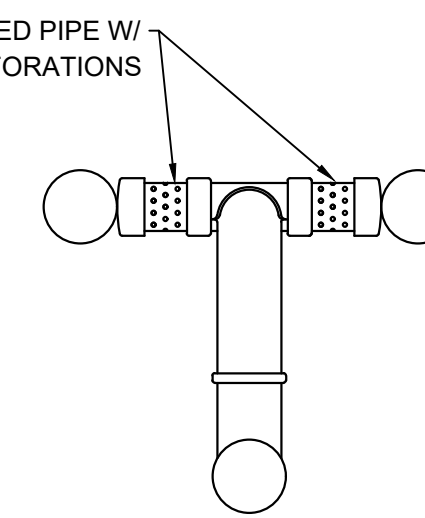
NOT TO SCALE



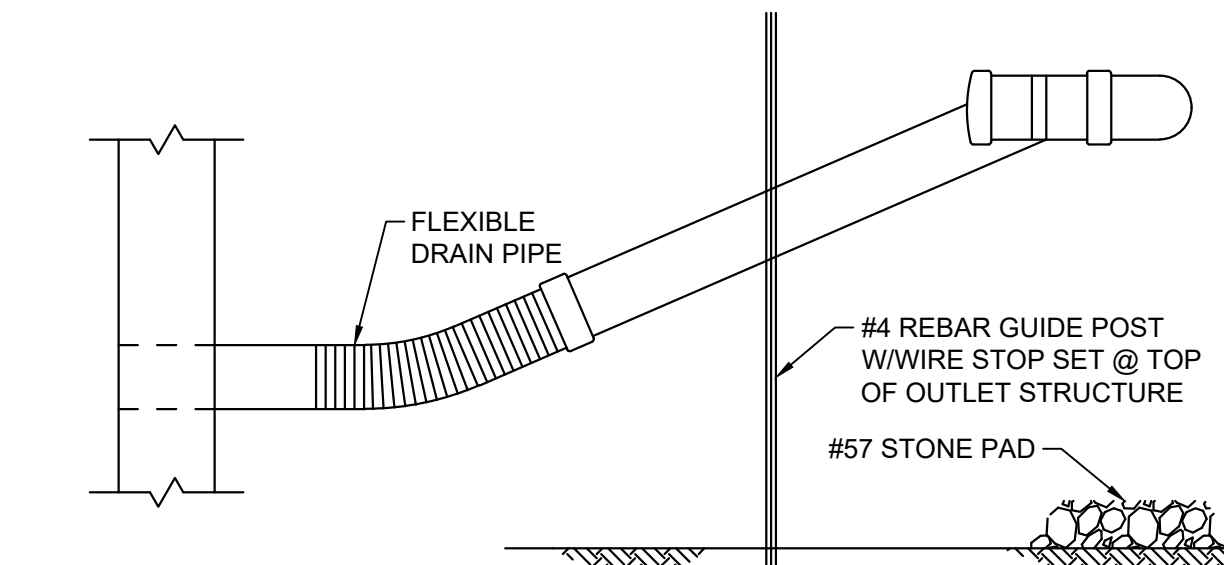
SKIMMER DEWATERING DEVICE

NOT TO SCALE

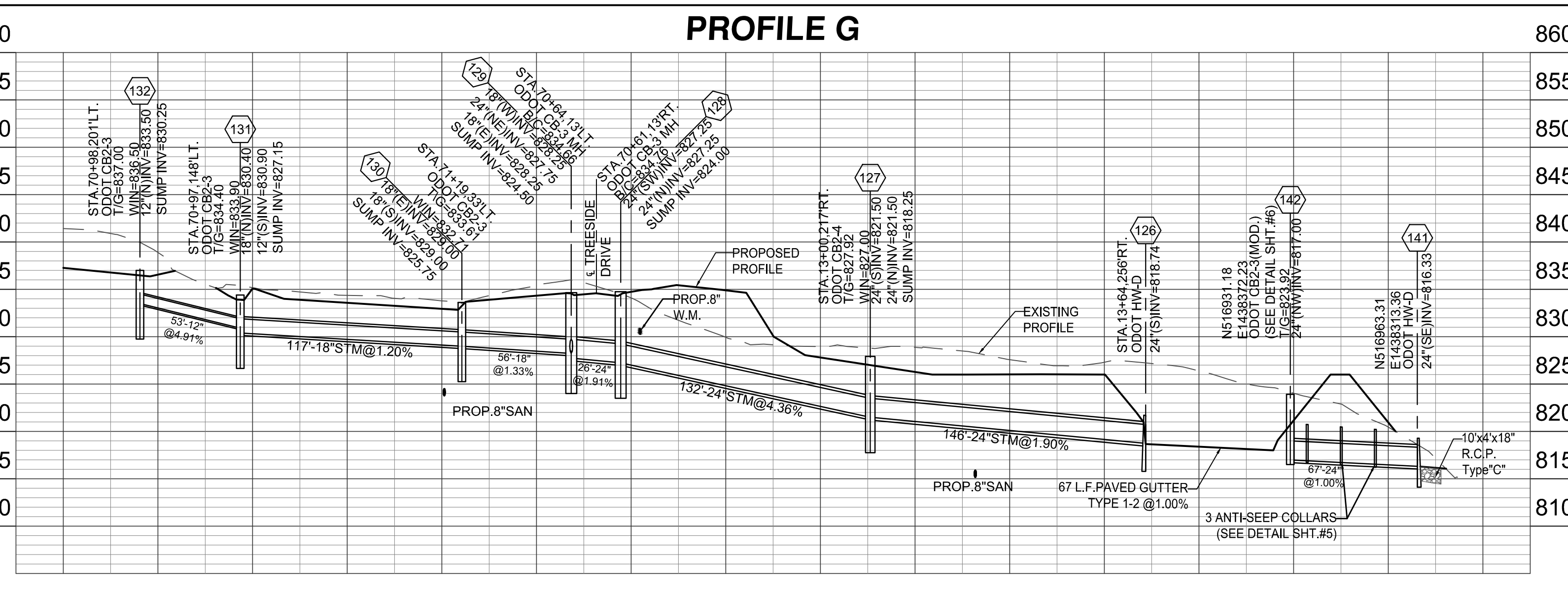
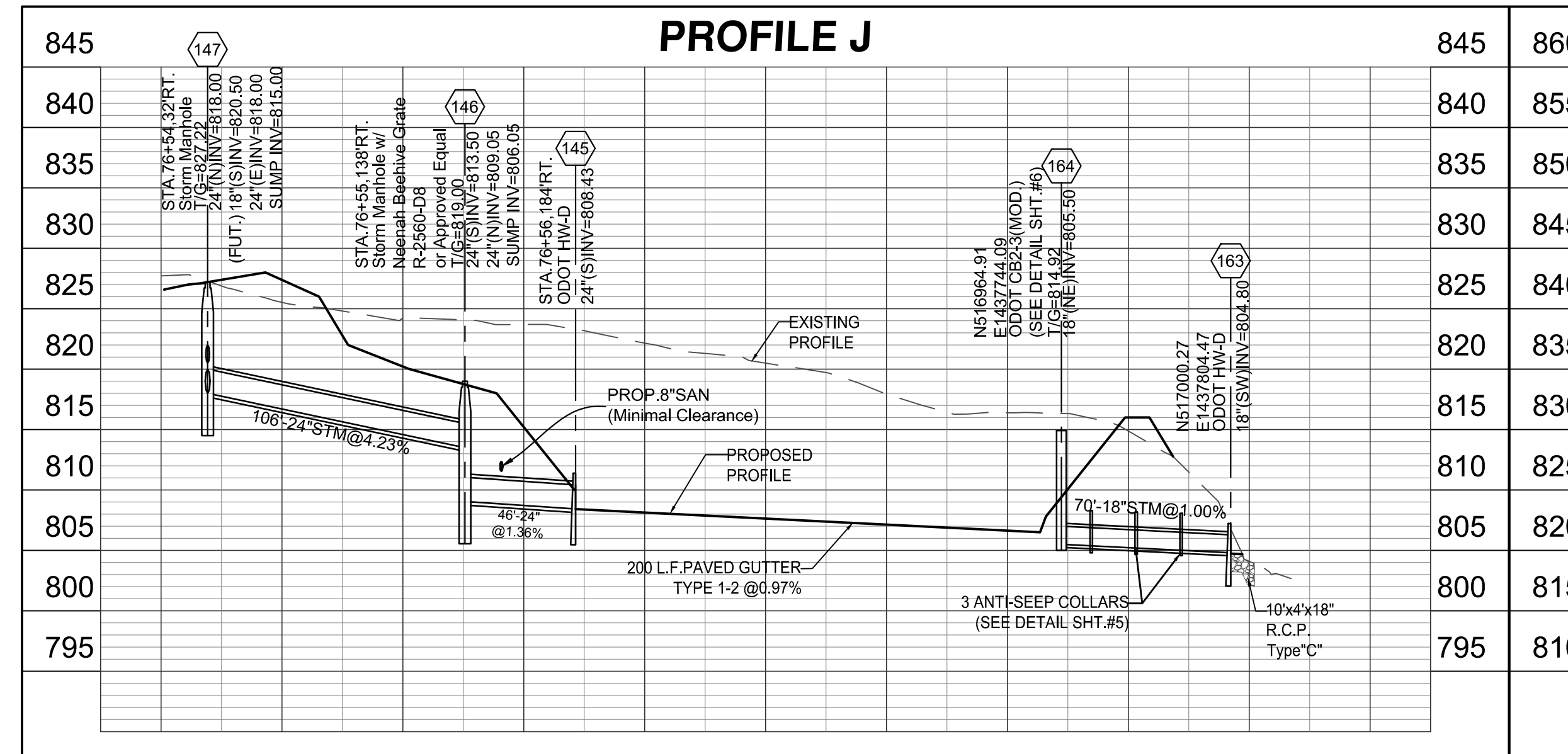
- NOTES:
- ALL JOINTS OF THE FLOATATION SECTION SHALL BE GLUED TOGETHER AND WATERTIGHT. JOINTS OF THE SKIMMER SECTION NEED NOT BE WATERTIGHT.
 - TO INSTALL DEWATERING PIPE STUB:
 - FOR CORRUGATED METAL RISER, STUB SHALL BE SCH 40 STEEL PIPE TACK WELDED TO CREATE A WATERTIGHT SEAL.
 - FOR CONCRETE RISER,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



PLAN VIEW



PROFILE VIEW



SCALES:
HOR: 1"=50'
VER: 1"=10'

FIELDSTONE FARMS SECTION ONE, BLOCKS A&B SINGLE FAMILY SECTION 15, TOWN 3, RANGE 3 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO PROFILES

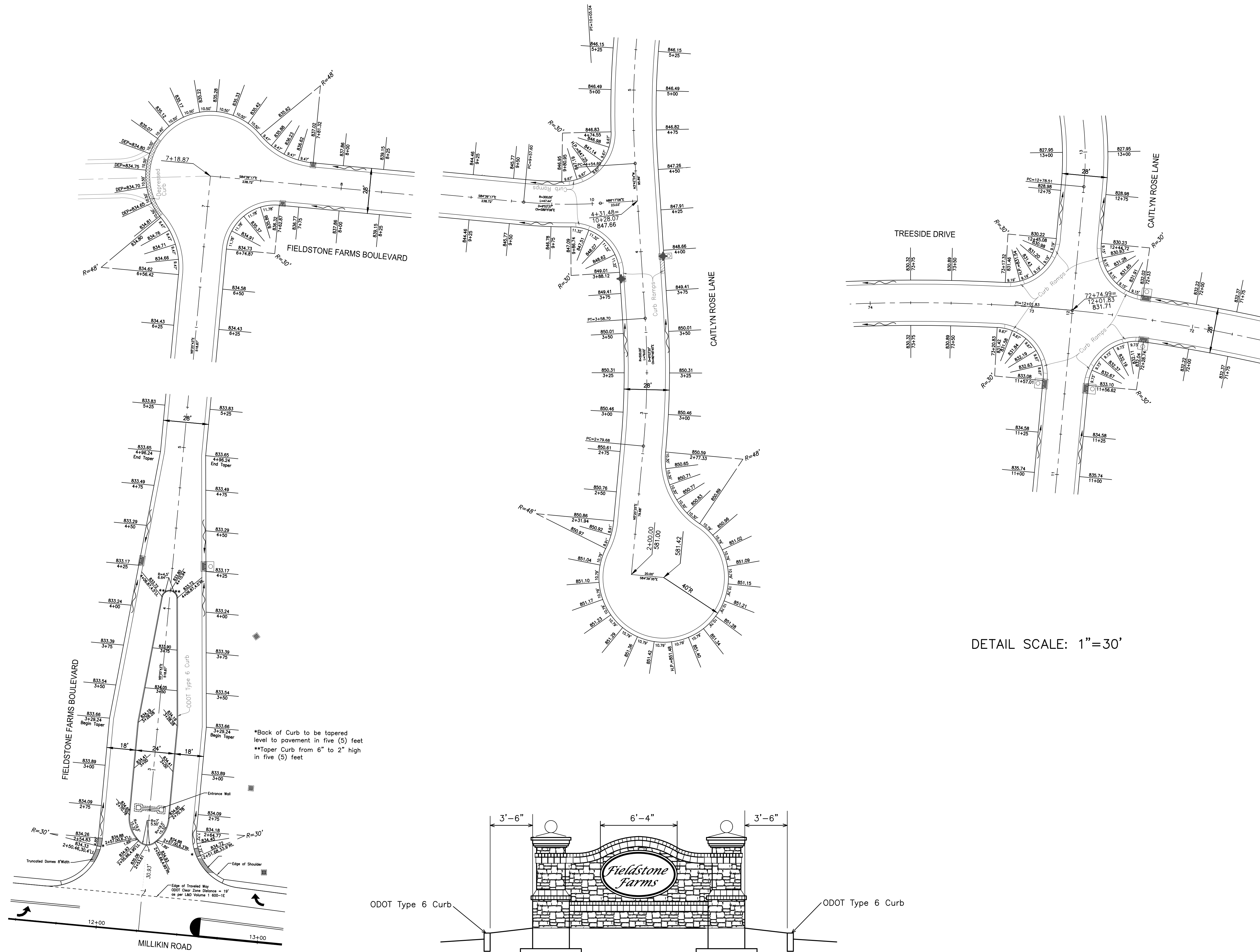
Item	Revision Description	Date	Drawn	Checked
1	REVISED AS PER BCEO	7-31-18	TAC	
2	REVISED AS PER CLIENT CHANGES TO LAYOUT	10-24-18	TAC	
3	REVISED AS PER BCEO	5-28-19	TAC	
4	Revised as per Developer - Added Storm Structures: 154 & 146	8-9-19	TAC	

Drawing: 16-0294 S.CD
 Drawn by: TAC
 Checked by:
 Issue Date: 5-21-18
 Sheet:

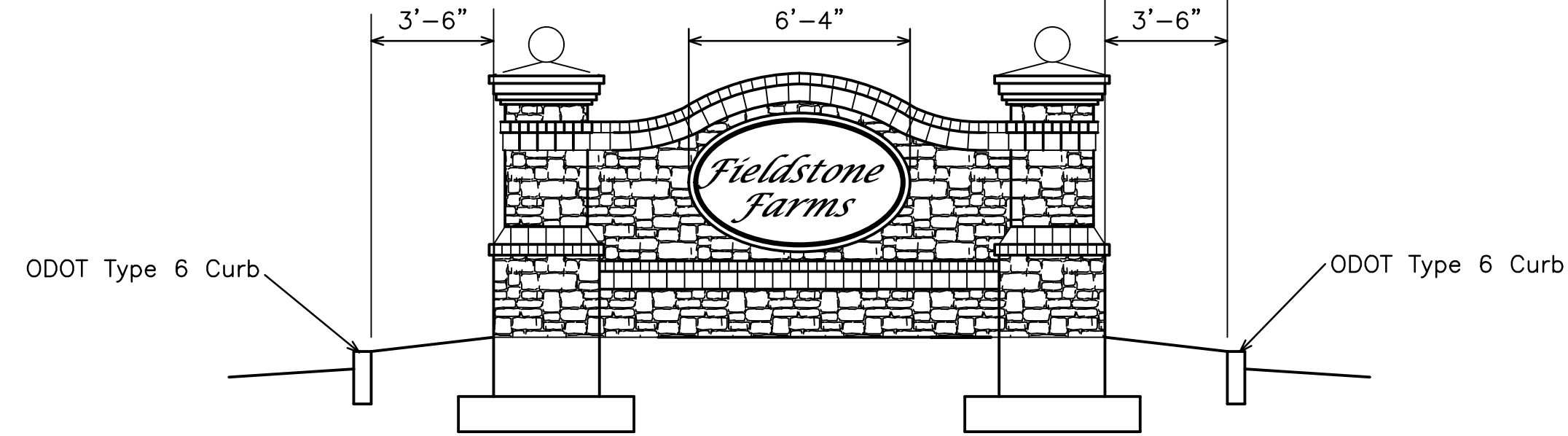
6/13

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

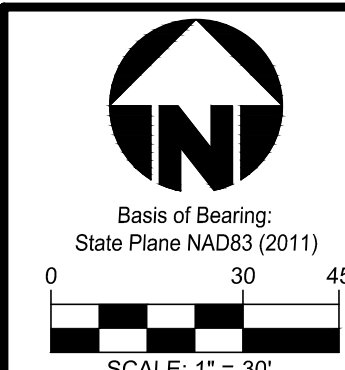
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DETAIL SCALE: 1" = 30'



FRONT ELEVATION
 1/4" = 1'-0"



Date	Drawn	Checked
10-24-18	TAC	
10-25-18	TAC	

Item	Revision Description
1	REVISED AS PER CLIENT CHANGES TO LAYOUT
2	REVISED AS PER BCCD
3	
4	
5	
6	
7	
8	
9	

FIELDSTONE FARMS
SECTION ONE, BLOCKS A&B
SINGLE FAMILY
 SECTION 15, TOWN 3, RANGE 3
 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO

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

Drawing:	16-0294 S CD
Drawn by:	TAC
Checked by:	
Issue Date:	5-21-18

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NOTES:


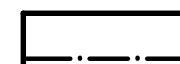


- Regular inspection and maintenance will be provided for all erosion and sediment control practices. Permanent records of maintenance and inspections must be kept throughout the construction period. Inspections must be made a minimum of once every seven (7) days and immediately after storm events greater 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:
Contractors to accept all quantities as correct prior to beginning construction.























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

WILMA & CLIFTON
CURRY
O.R. 8572, PG. 2364

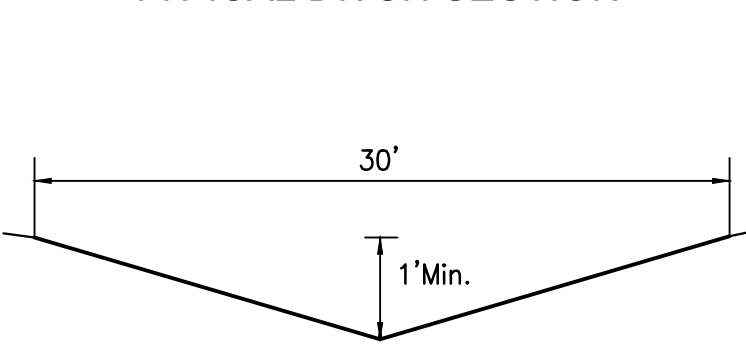
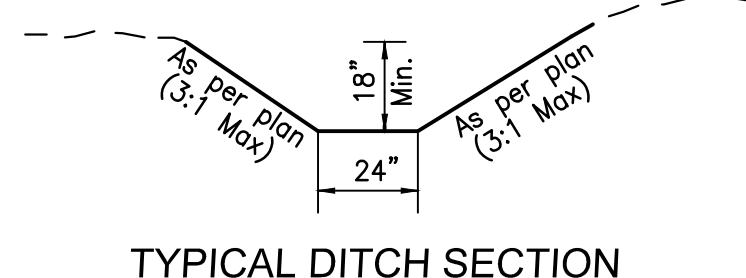
-  CLEARING LIMITS
-  SILT FENCE OR MULCH BERM
-  REGULATED WATERWAY OF UNITED STATES
-  RIPARIAN AREA: NO DISTURBANCE PERMITTED

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
 -  BLOCK & GRAVEL CURB 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 #13)

LOT #1
BEVERLY ACRES
P.E. 365, PG. 12
NICHOLAS E. &
SARAH E. RUSSO
J.R. 6938, PG. 819

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



Plot time: Aug 09, 2019 - 1:34pm
Drawing name: J:\2016\16-0294\CD\DWG\Single-Family\16-0294_S_CD.dwg - Layout.Tab: GF8

D2020-062-000-005
Steven M. Seidl

D2020-062-000-003
Daniel E. and
Julie S. Lawson

NOTE:
All Existing Structures, pavement, fencing and utilities are to be removed from site.

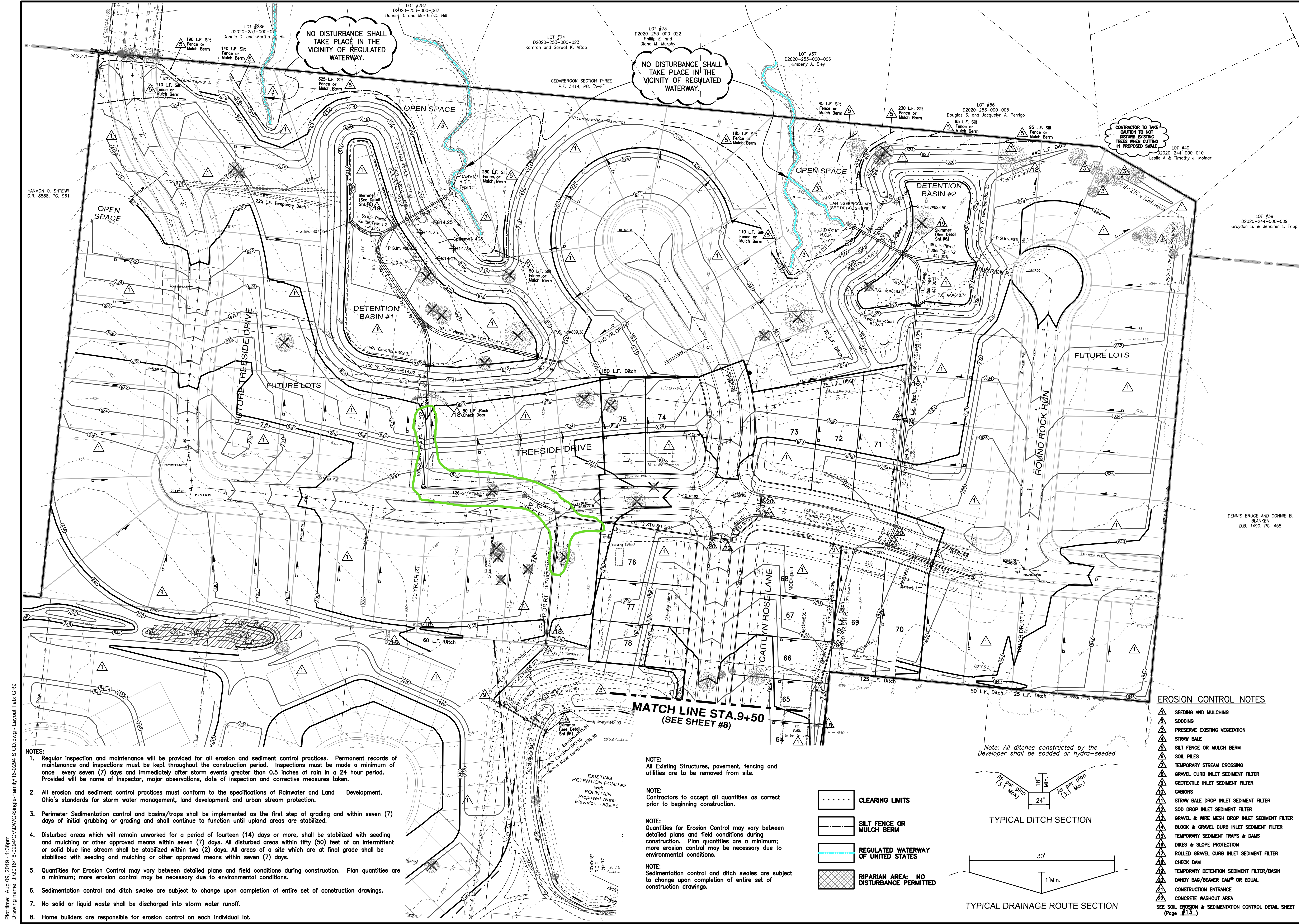
**MATCH LINE STA. 9+50
(SEE SHEET #8)**

Date	Drawn	Chk	Revision Description
7/31/18	TAC		1 REVISED AS PER BCEO
10/24/18	TAC		2 REVISED AS PER CLIENT CHANGES TO LAYOUT
			3
			4
			5
			6
			7
			8
			9

**FIELDSTONE FARMS
SECTION ONE, BLOCKS A&B
SINGLE FAMILY
SECTION 15, TOWN 3, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO
GRADING PLAN**

Drawing:	16-0294 S CD
Drawn by:	TAC
Checked by:	
Issue Date:	5-21-18
Sheet:	

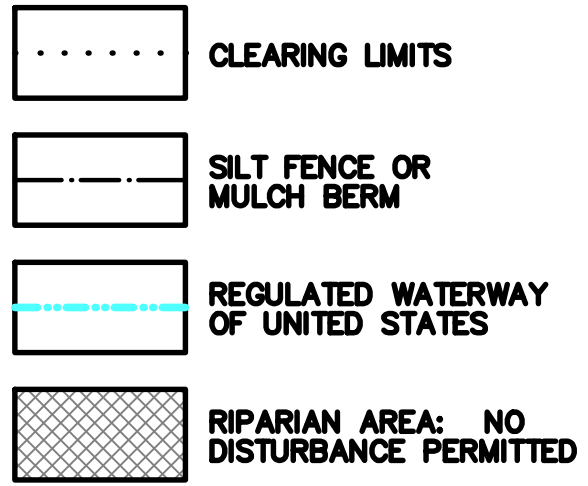
8/13



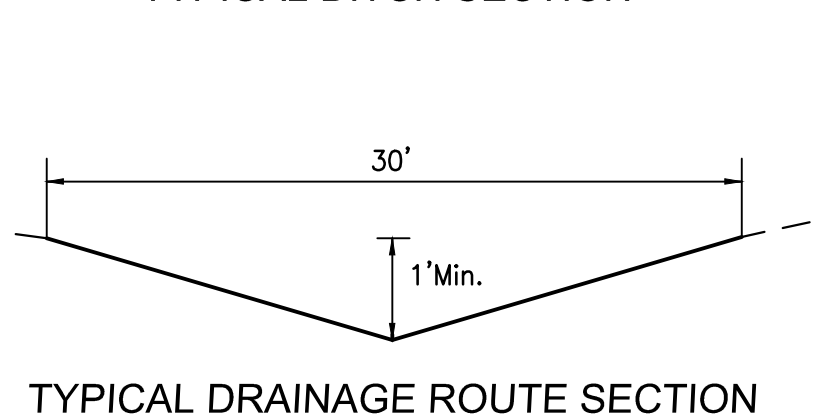
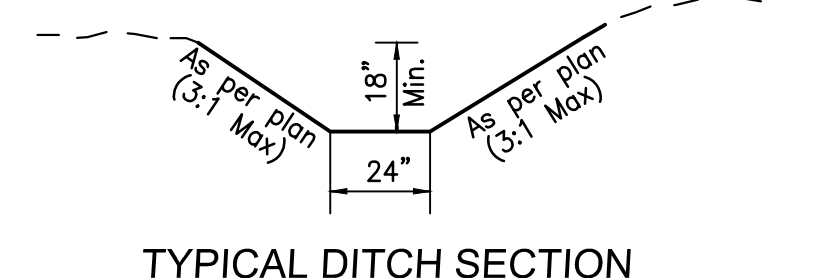
- NOTES:**
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 - All erosion and sediment control practices must conform to the specifications of Rainwater and Land Development, Ohio's standards for storm water management, land development and urban stream protection.
 - Perimeter Sedimentation control 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.
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**MATCH LINE STA. 9+50
(SEE SHEET #8)**

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



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



- 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 #13)

Basis of Bearing: State Plane NAD83 (2011)

SCALE: 1" = 50'

Date	Drawn	Checked	Revision Description
7-31-18	TAC	TAC	REVISED AS PER BICO
10-24-18	TAC	TAC	REVISED AS PER CLIENT CHANGES TO LAYOUT
5-28-19	TAC	TAC	REVISED AS PER BICO
8-9-19	TAC	TAC	Revised as per Developer - Added Storm Structures 154 & 146

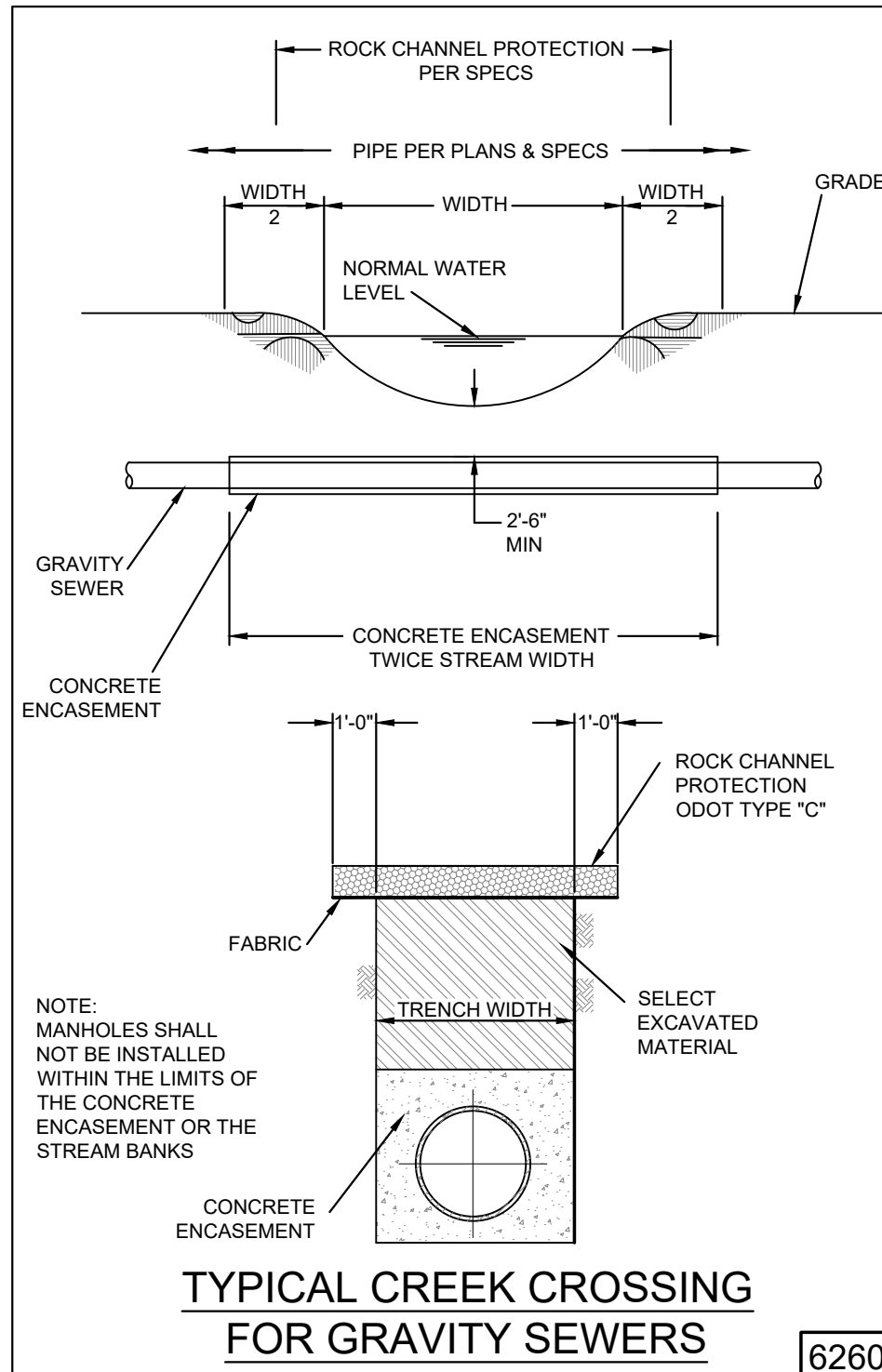
FIELDSTONE FARMS
SECTION ONE, BLOCKS A & B
SINGLE FAMILY
 SECTION 15, TOWN 3, RANGE 3
 LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO

GRADING PLAN

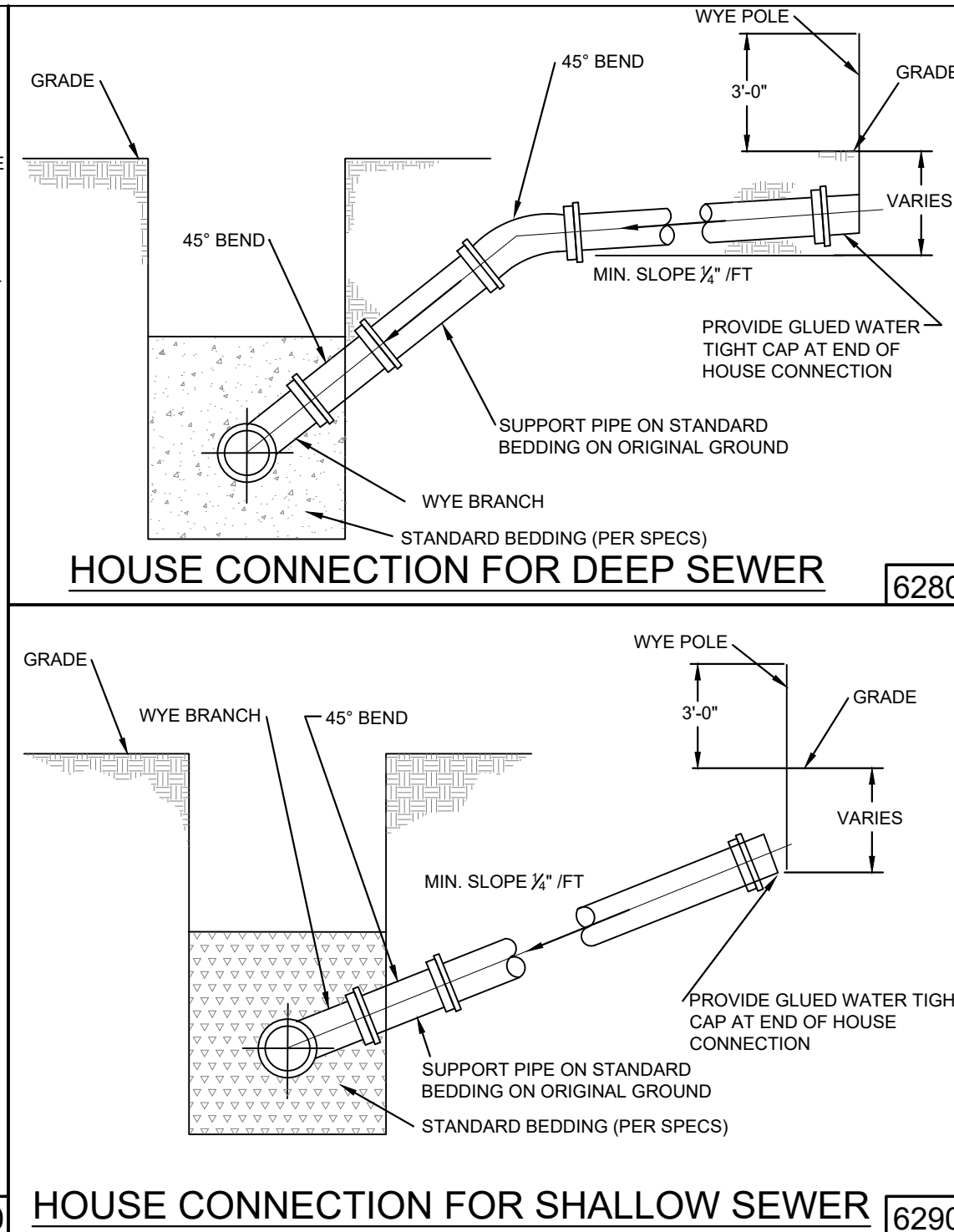
www.bayerbecker.com
 6900 Tversville Road, Suite A
 Mason, OH 45040 - 513.336.6600

Drawing:	16-0294 S.CD.
Drawn by:	TAC
Checked by:	
Issue Date:	5-21-18
Sheet:	

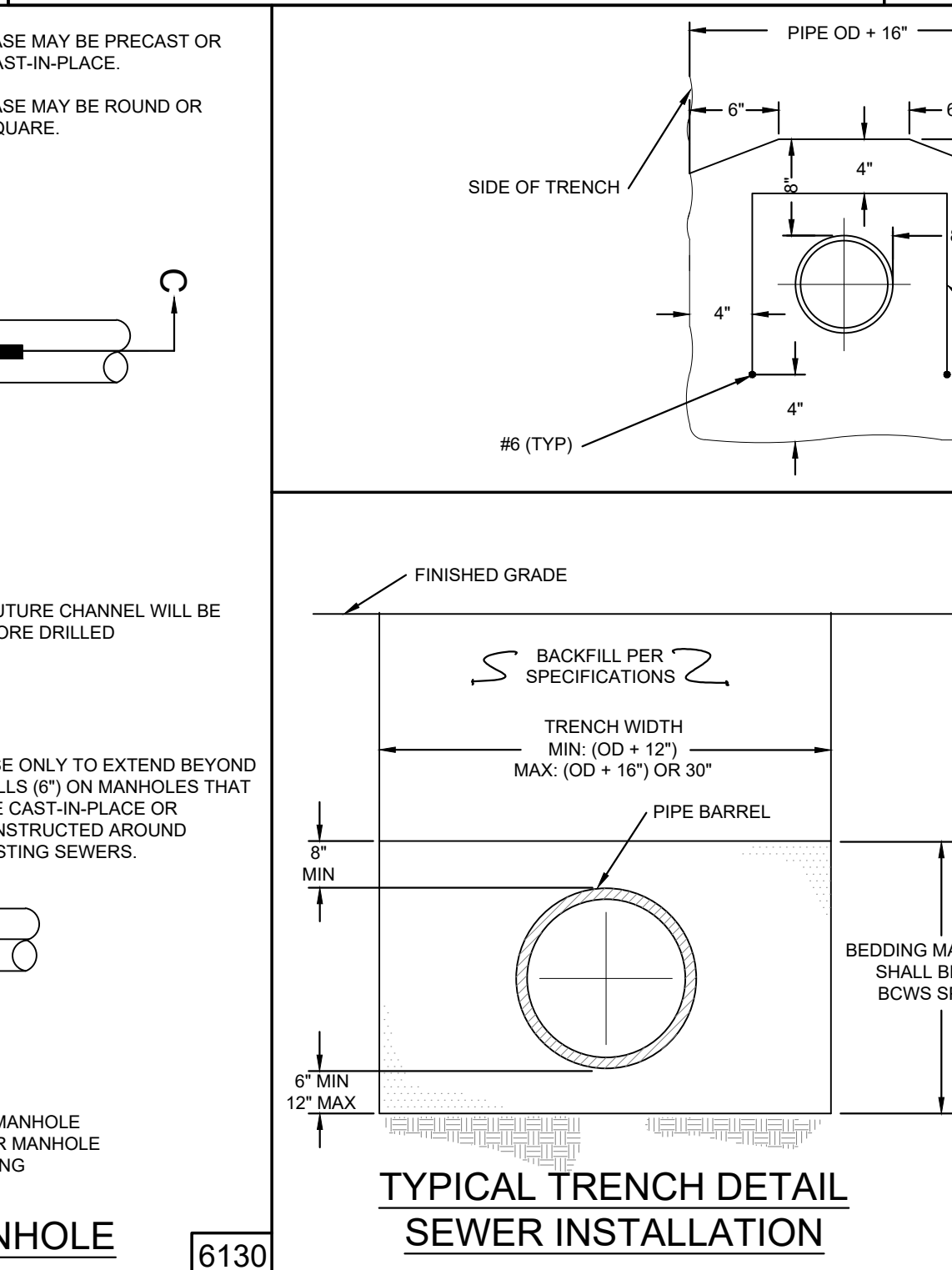
9/13



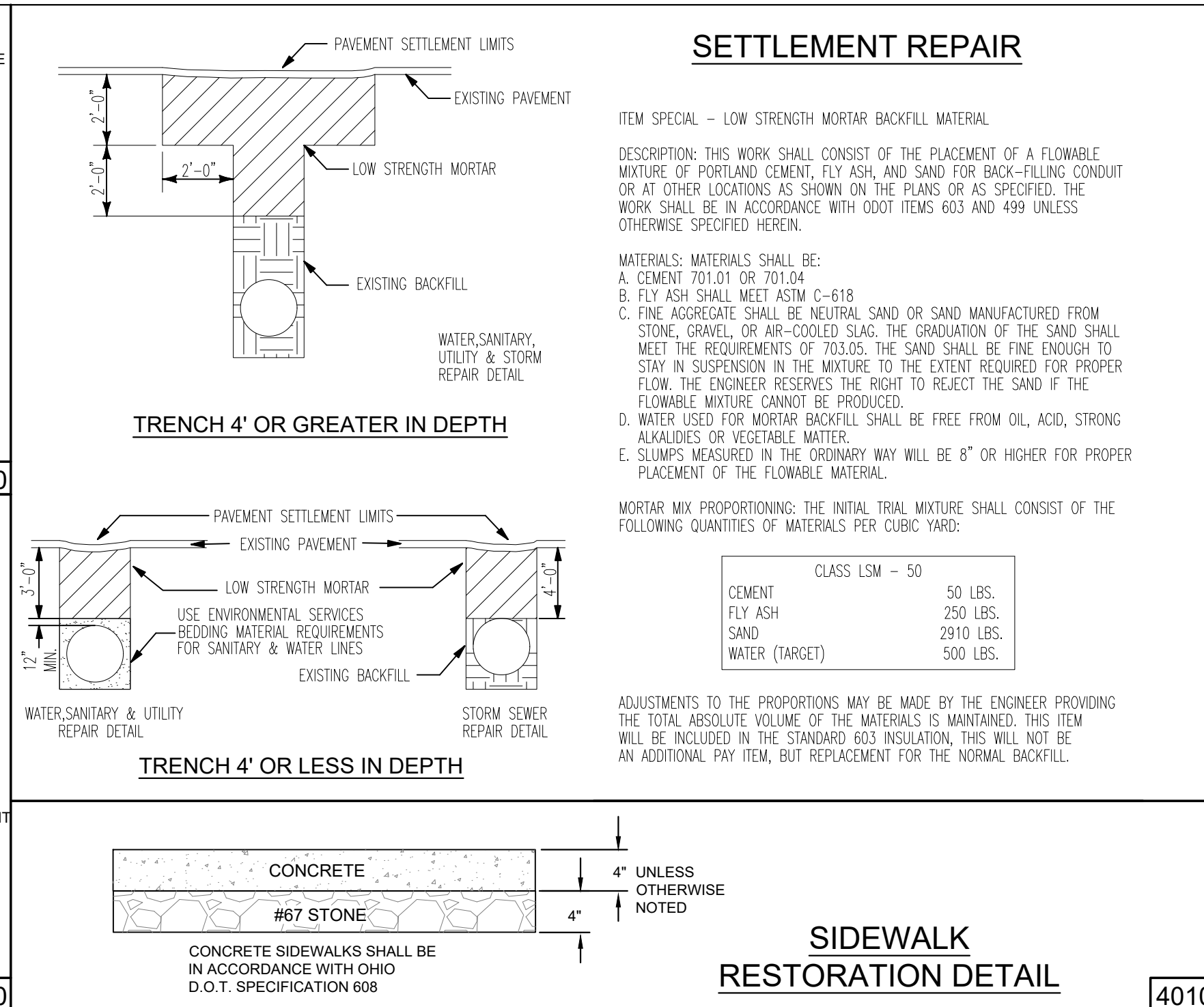
TYPICAL CREEK CROSSING FOR GRAVITY SEWERS [6260]



HOUSE CONNECTION FOR DEEP SEWER [6280]



HOUSE CONNECTION FOR SHALLOW SEWER [6290]



SETTLEMENT REPAIR

ITEM SPECIAL - LOW STRENGTH MORTAR BACKFILL MATERIAL. DESCRIPTION: THIS WORK SHALL CONSIST OF THE PLACEMENT OF A FLOWABLE MIXTURE OF PORTLAND CEMENT, FLY ASH, AND SAND FOR BACK-FILLING CONDUIT OR AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS SPECIFIED. THE WORK SHALL BE IN ACCORDANCE WITH ODOT ITEMS 603 AND 499 UNLESS OTHERWISE SPECIFIED HEREIN.

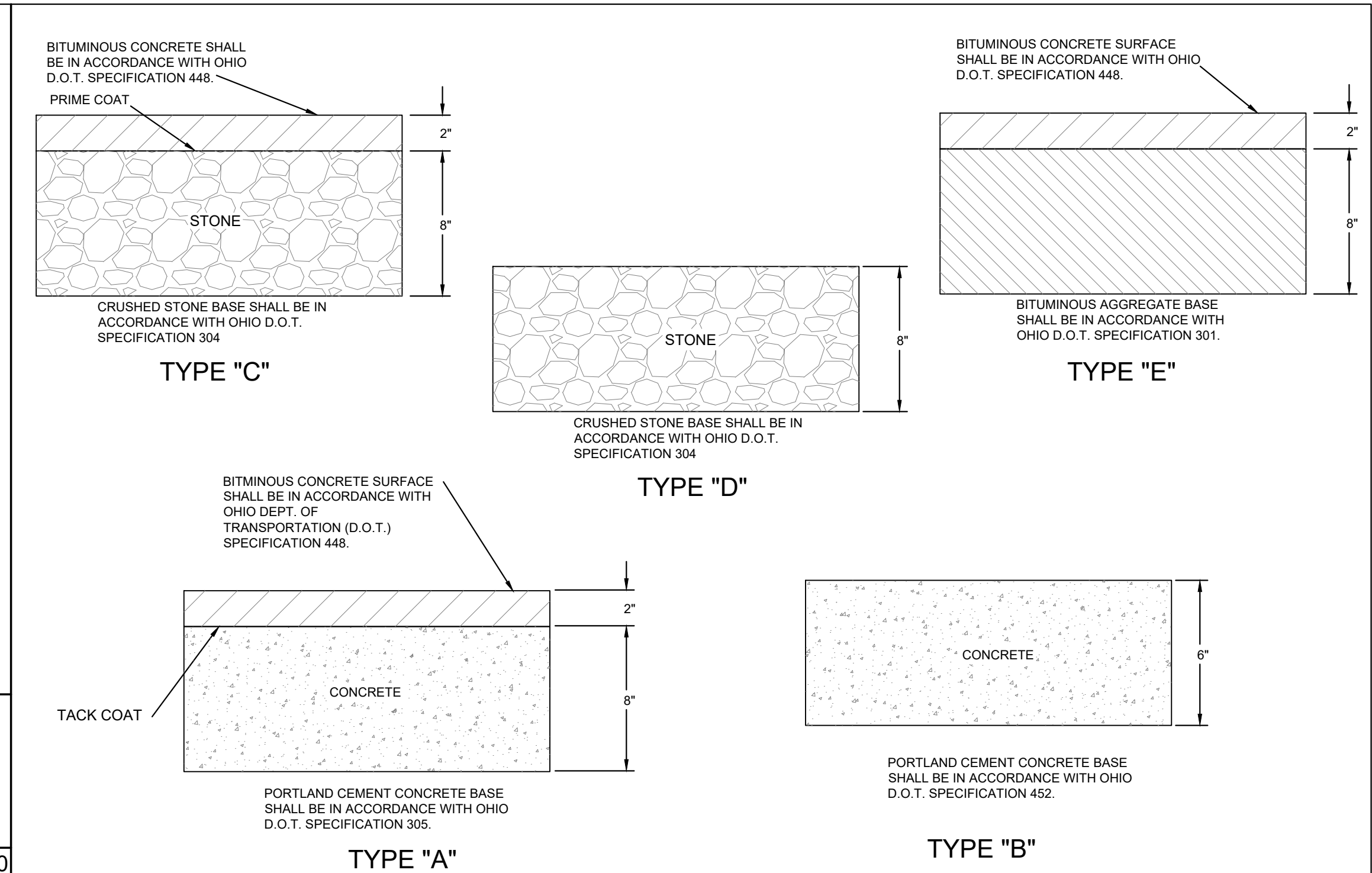
MATERIALS MATERIALS SHALL BE: A. CEMENT 701.01 OR 701.04 B. FLY ASH SHALL MEET ASTM C-618 C. FINE AGGREGATE SHALL BE NEUTRAL SAND OR SAND MANUFACTURED FROM STONE, GRAVEL OR AIR-COOLED SLAG. THE GRADATION OF THE SAND SHALL MEET THE REQUIREMENTS OF 703.05. THE SAND SHALL BE FINE ENOUGH TO STAY IN SUSPENSION IN THE MIXTURE TO THE EXTENT REQUIRED FOR PROPER FLOW. THE ENGINEER RESERVES THE RIGHT TO REJECT THE SAND IF THE FLOWABLE MIXTURE CANNOT BE PRODUCED. D. WATER USED FOR MORTAR BACKFILL SHALL BE FREE FROM OIL, ACID, STRONG ALKALOIDES OR VEGETABLE MATTER. E. SLUMPS MEASURED IN THE GROUNDWAY MAY BE 8\"/>

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

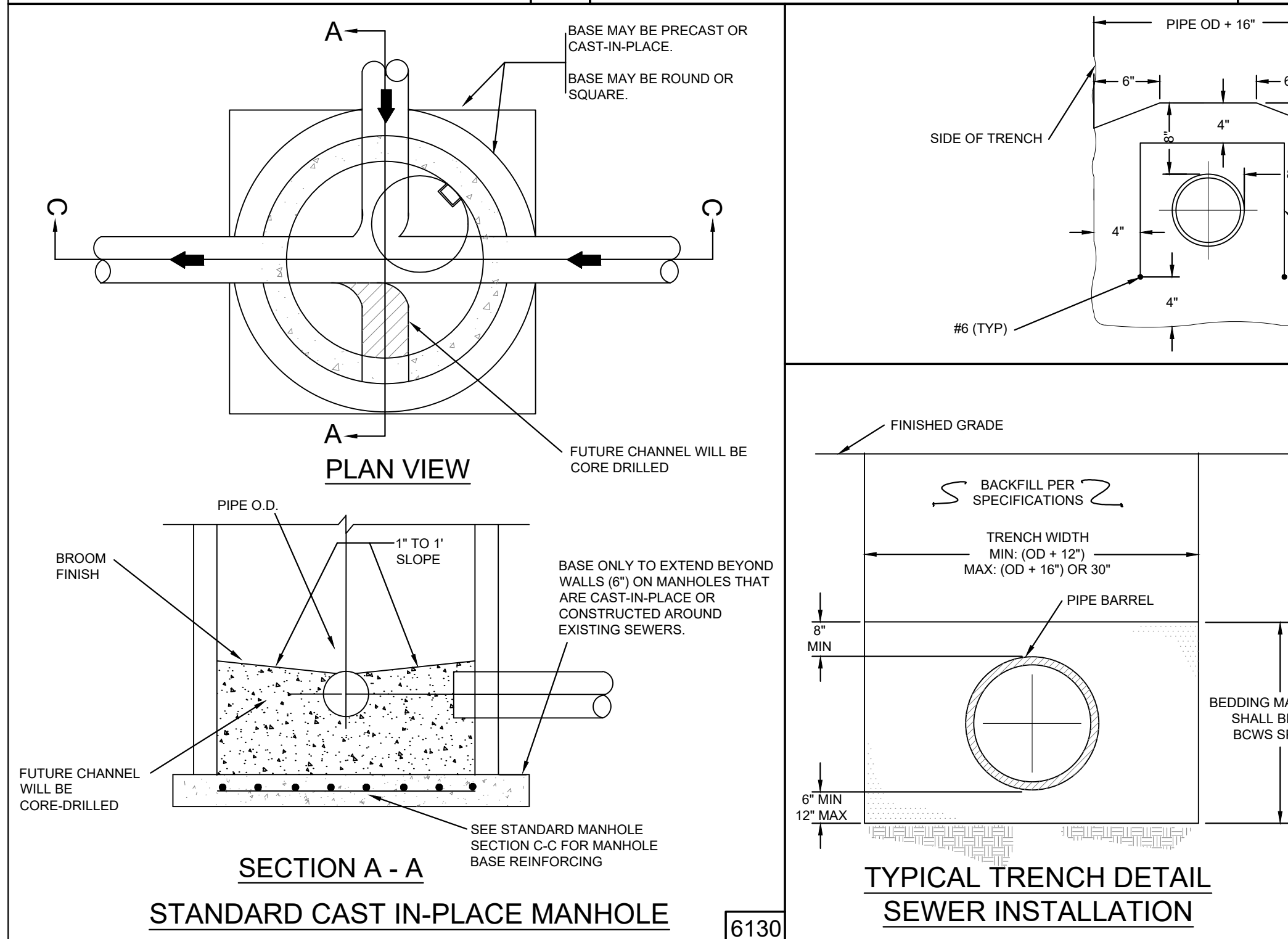
Table with 2 columns: Material, Quantity. Includes CEMENT (50 LBS.), FLY ASH (250 LBS.), SAND (2910 LBS.), WATER (TARGET) (500 LBS.).

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

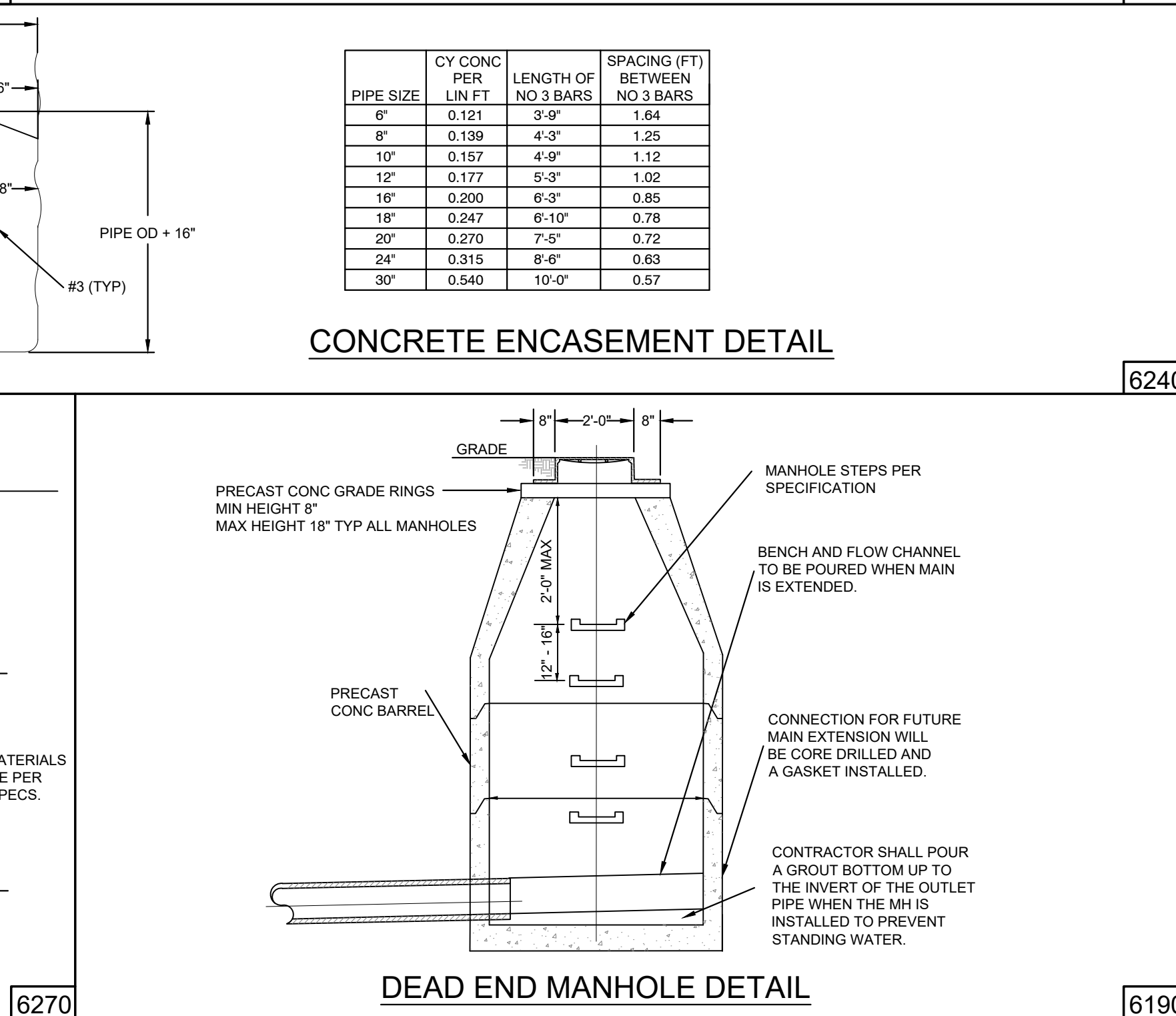
SIDEWALK RESTORATION DETAIL [4010]



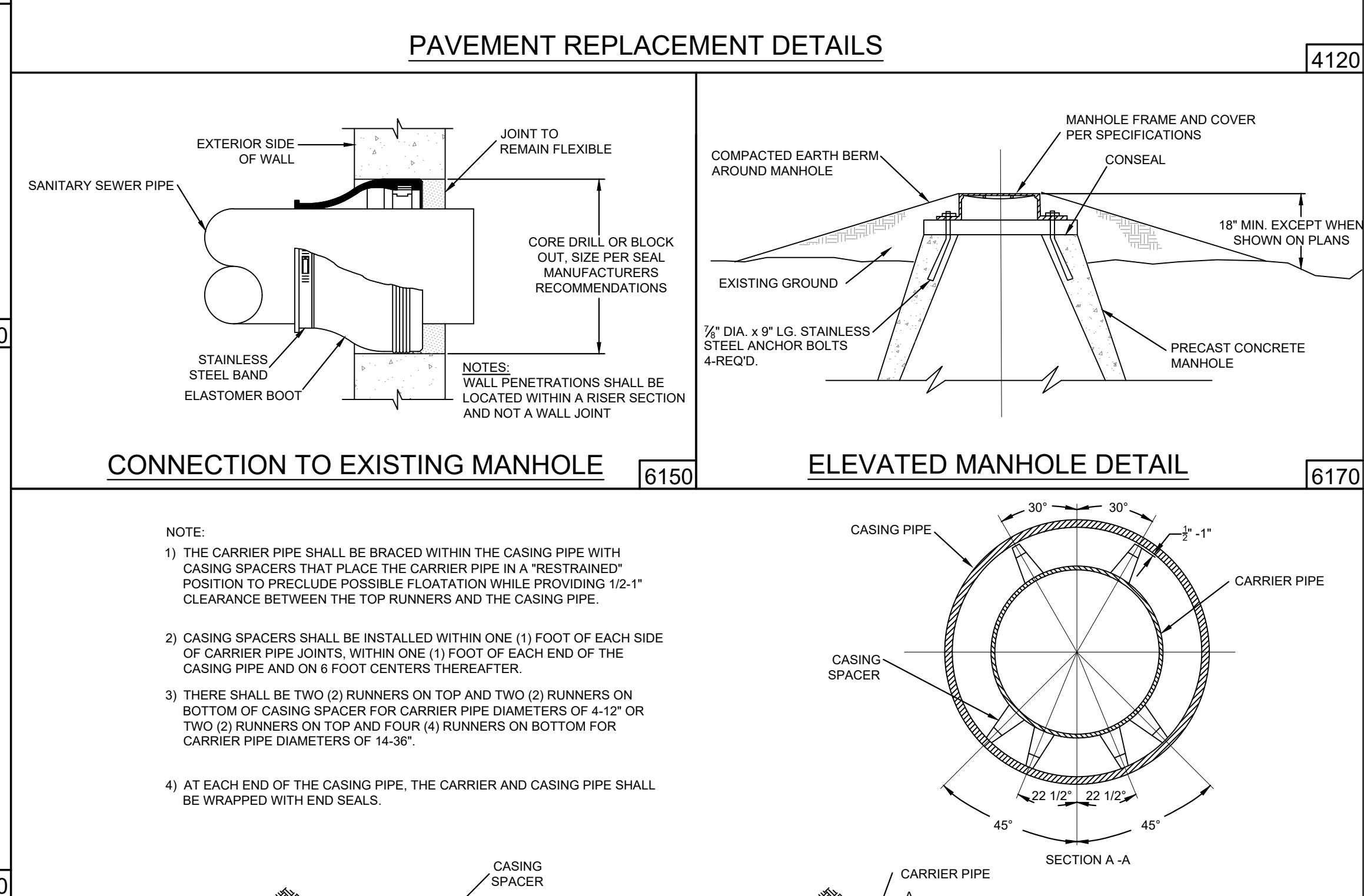
PAVEMENT REPLACEMENT DETAILS [4120]



STANDARD CAST IN-PLACE MANHOLE [6130]

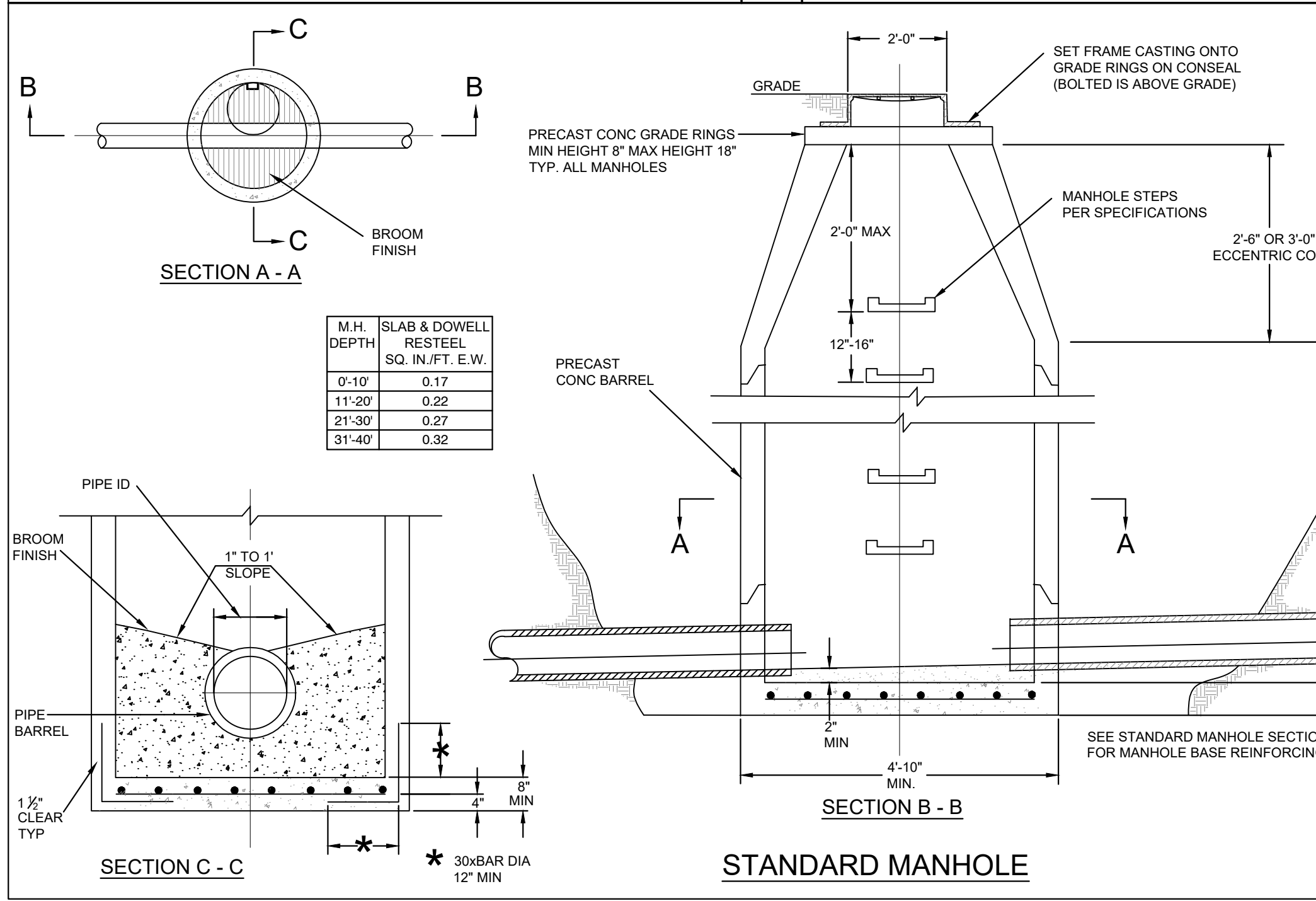


CONCRETE ENCASUREMENT DETAIL [6240]

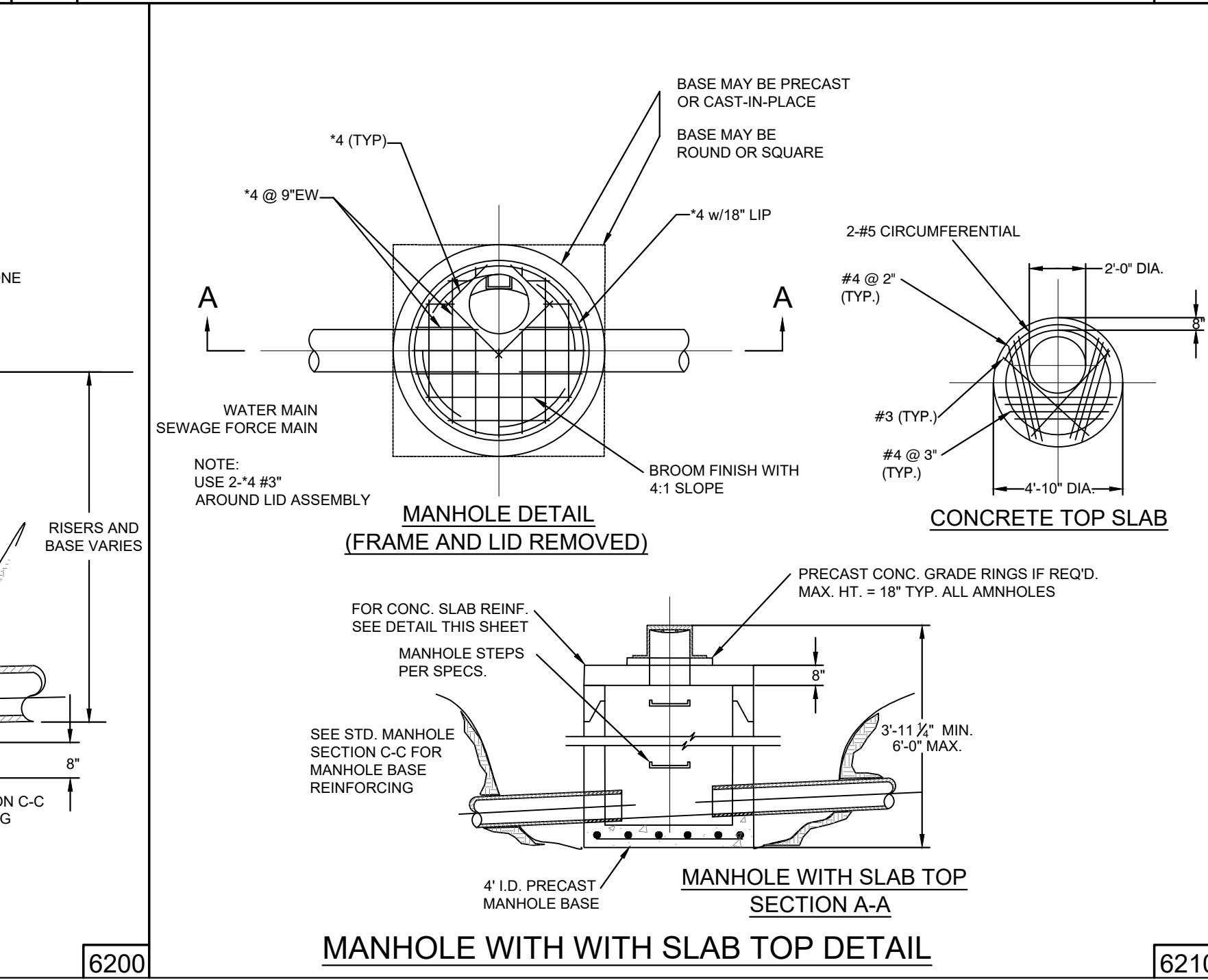


CONNECTION TO EXISTING MANHOLE [6150]

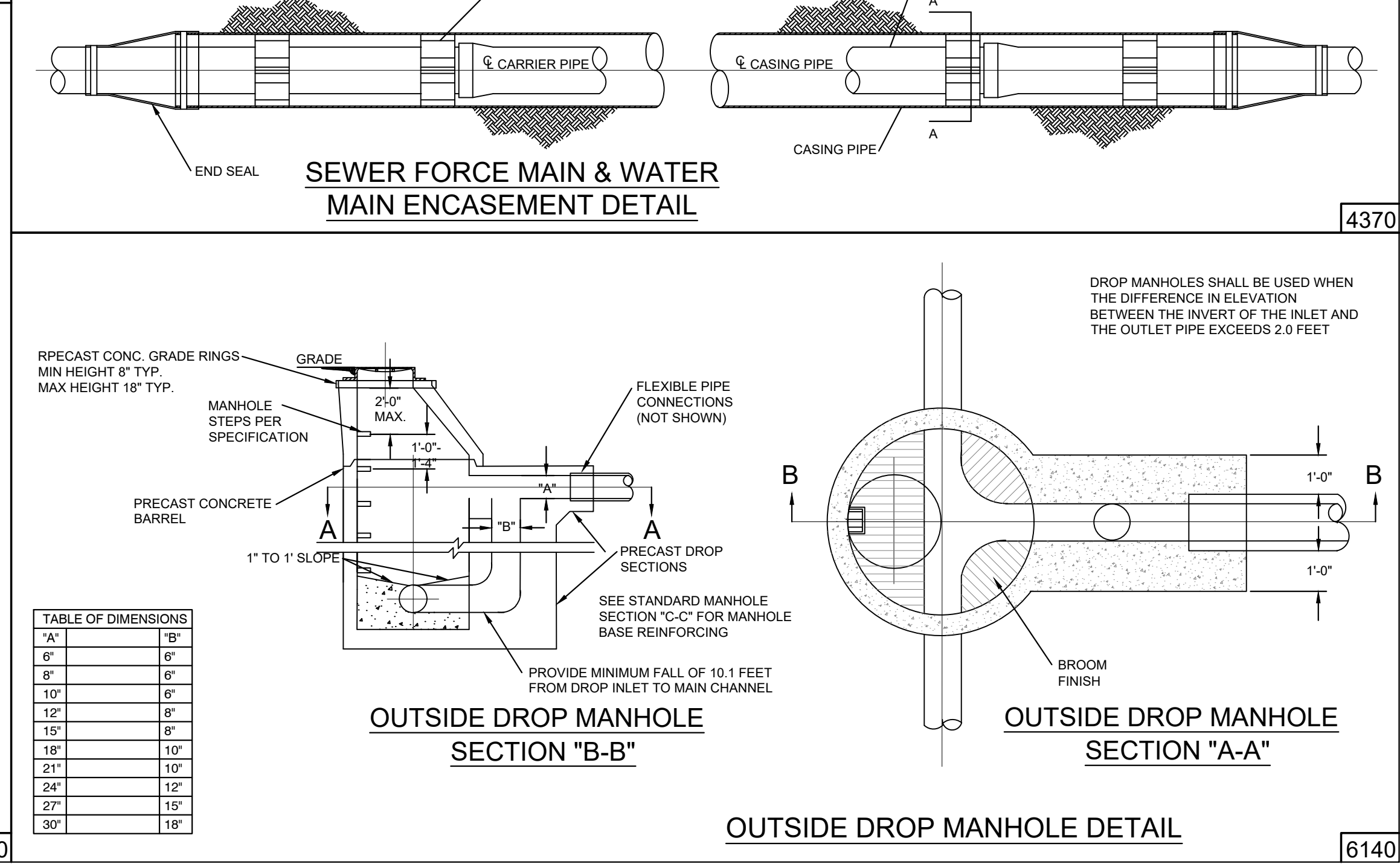
ELEVATED MANHOLE DETAIL [6170]



STANDARD MANHOLE [6200]



MANHOLE WITH WITH SLAB TOP DETAIL [6210]



SEWER FORCE MAIN & WATER MAIN ENCASUREMENT DETAIL [4370]

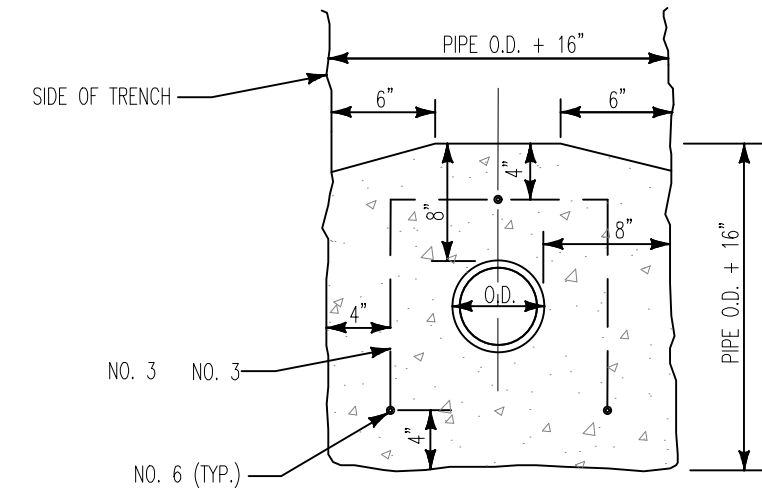
OUTSIDE DROP MANHOLE SECTION "B-B"

OUTSIDE DROP MANHOLE SECTION "A-A"

OUTSIDE DROP MANHOLE DETAIL [6140]

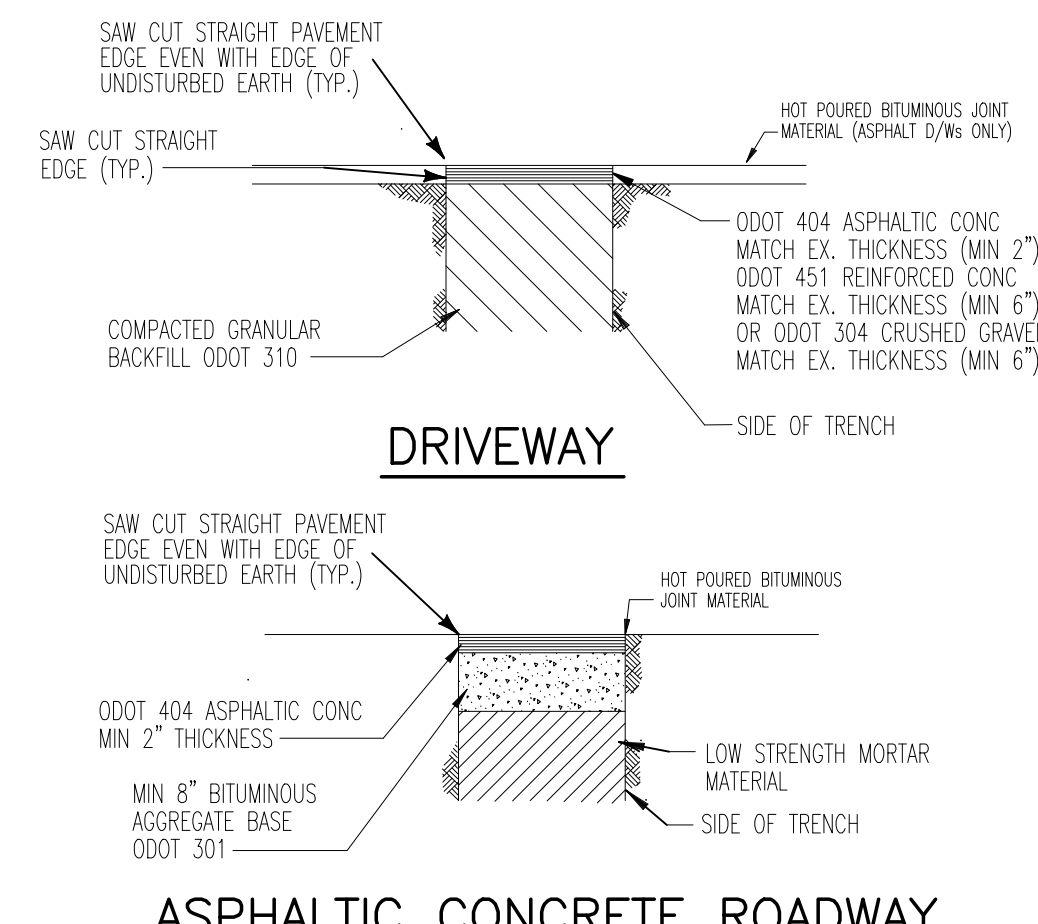
Plot time: Jul 31, 2018 3:55pm Drawing name: K:\OFF\BLOCKS\DETAILS\BUTLER BC SAN.dwg - Layout Tab: SAN

Revision Description table with columns for Item, Description, and Date. Includes company logo for 'bayer becker' and contact information: 'www.bayerbecker.com', '6800 Tyersville Road Suite A', 'Mason, Ohio 45440 - 513.336.6600'. Drawing: BC SAN. Issue Date: 12-28-17. Sheet: 10/13.

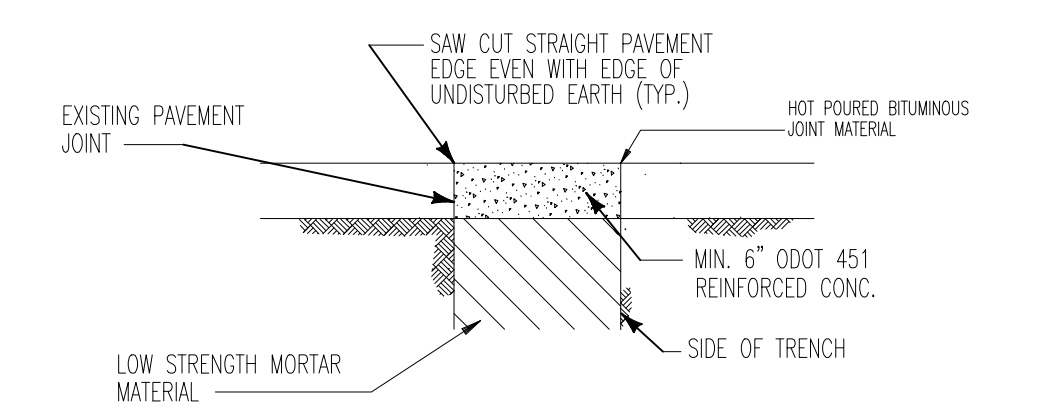


PIPE SIZE	C.Y. CONC. PER LIN. FT.	LENGTH OF NO. 3 BARS	SPACING (FT) BETWEEN NO. 3 BARS
6"	0.121	3'-0"	1.64
8"	0.139	4'-3"	1.25
10"	0.157	4'-9"	1.12
12"	0.177	5'-3"	1.02
16"	0.200	6'-3"	0.85
18"	0.241	6'-10"	0.78
20"	0.270	7'-5"	0.72
24"	0.315	8'-6"	0.63
30"	0.540	10'-0"	0.57

CONCRETE ENCASUREMENT

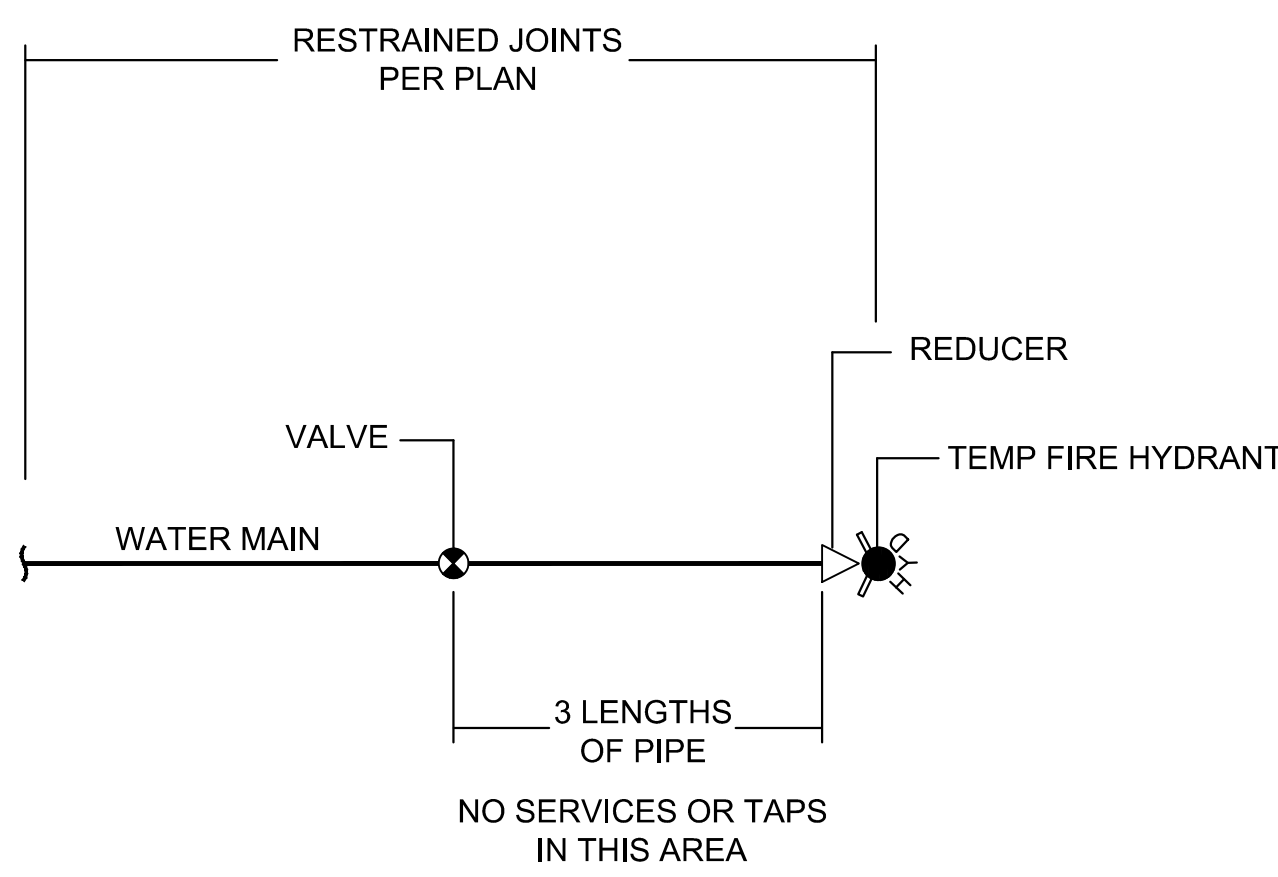


ASPHALTIC CONCRETE ROADWAY



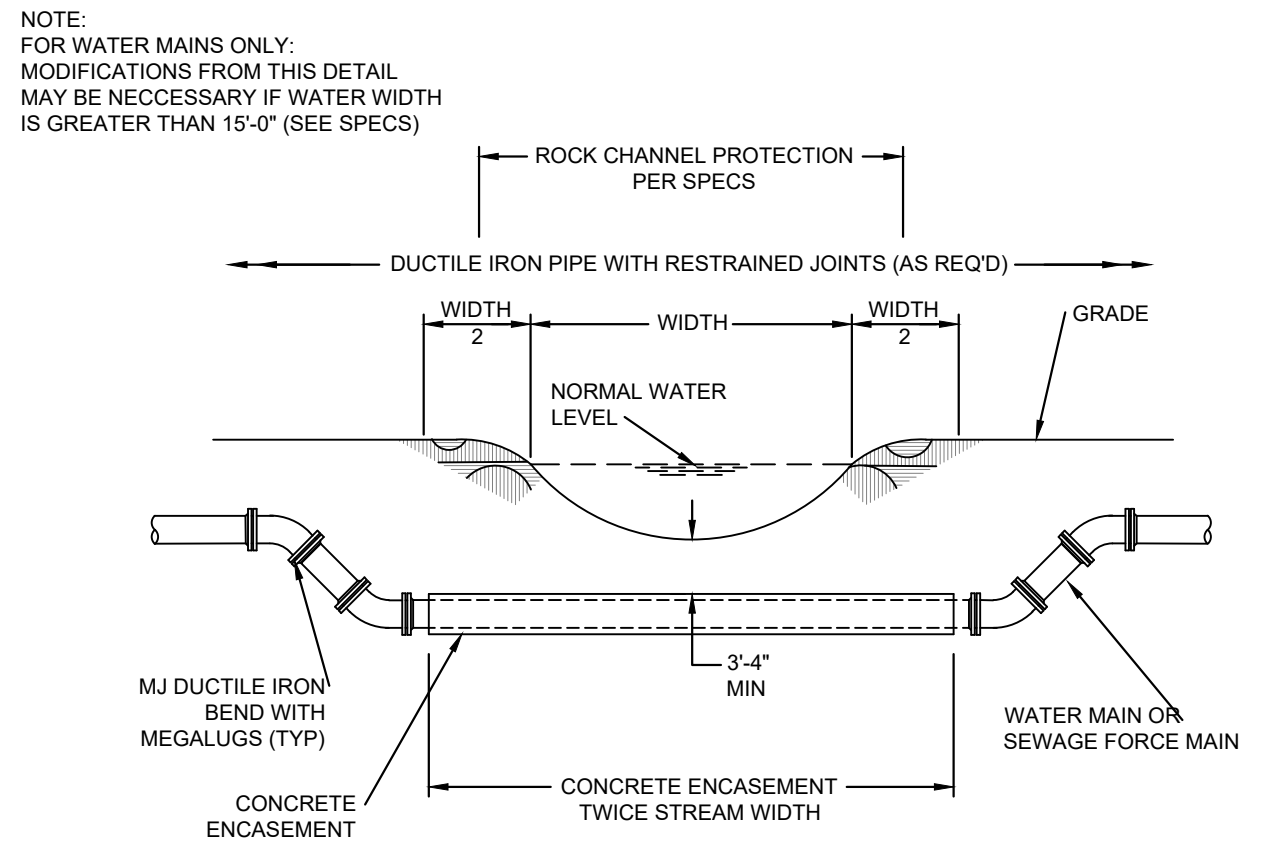
CONCRETE ROADWAY

PAVEMENT REPLACEMENT DETAILS



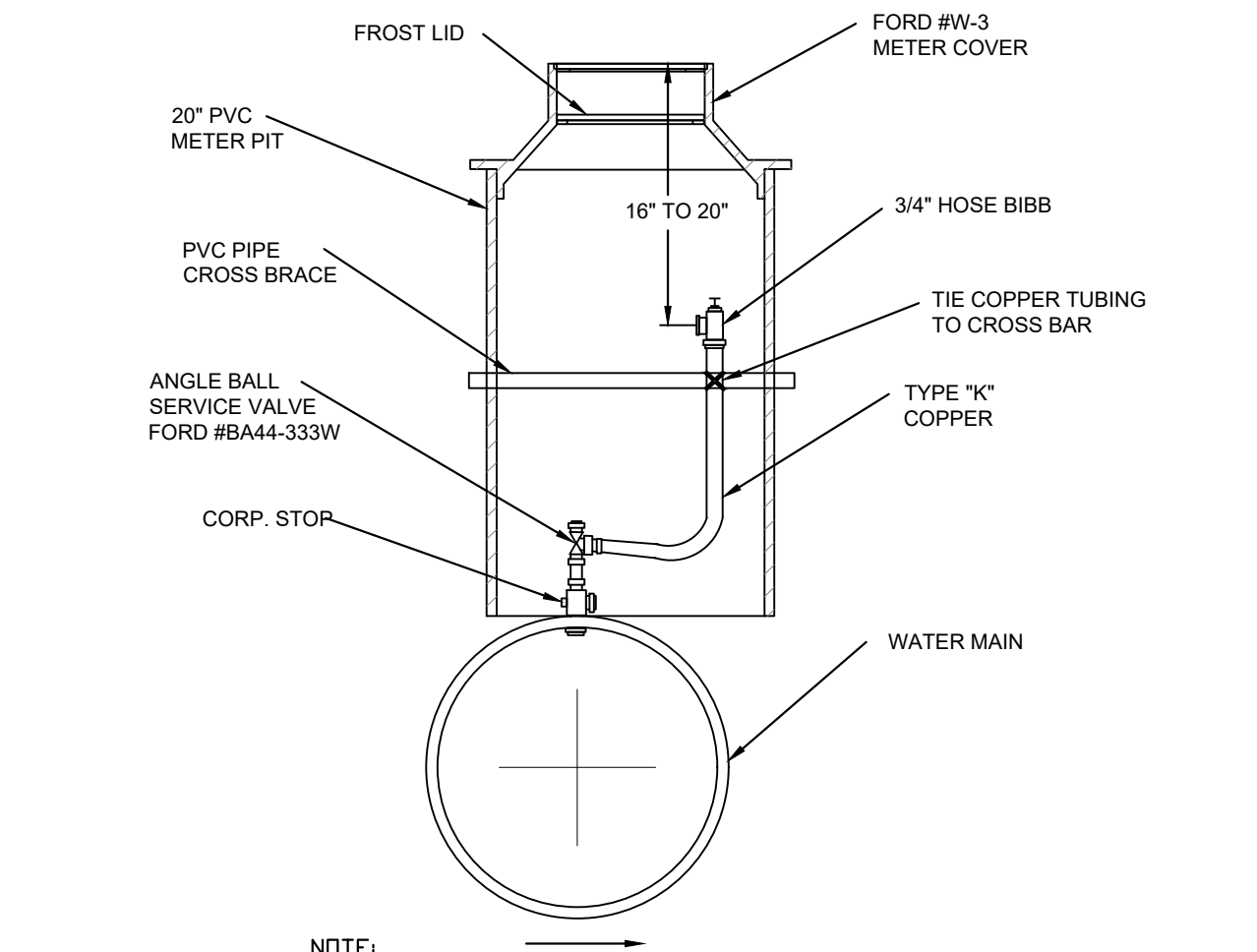
DEAD END DETAIL WITH TEMPORARY FIRE HYDRANT

5140



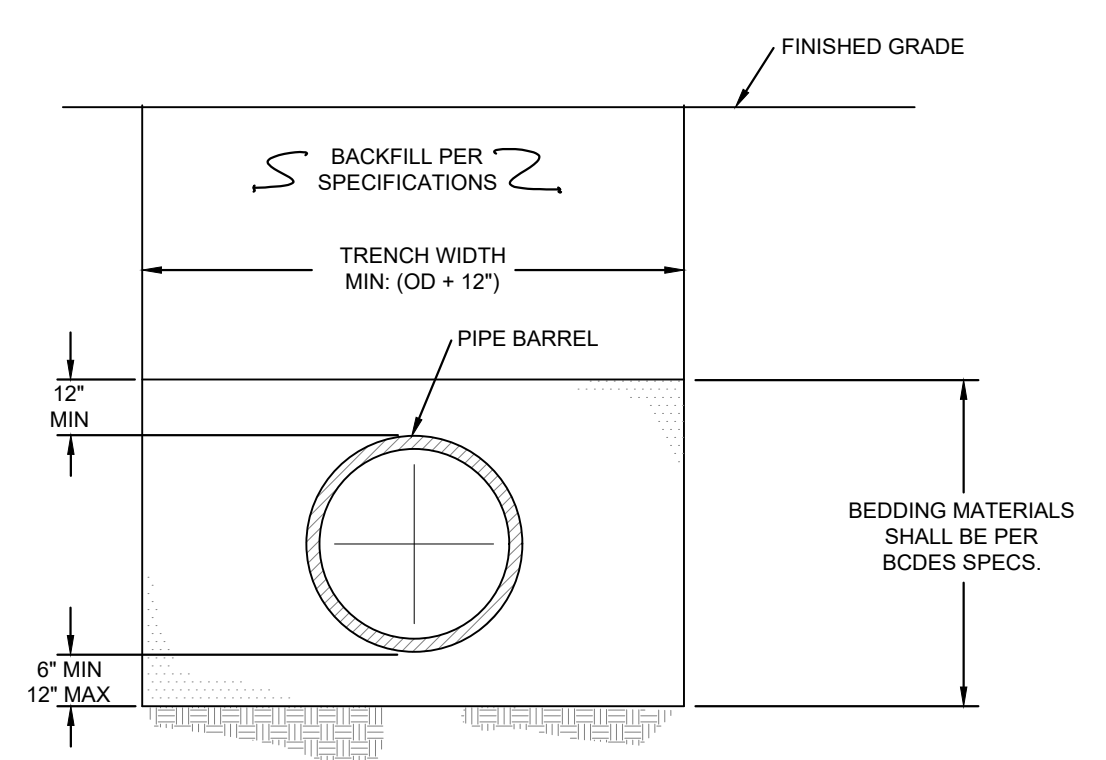
TYPICAL CREEK CROSSING & TRENCH DETAIL FOR WATER & SEWER FORCE MAINS

4170



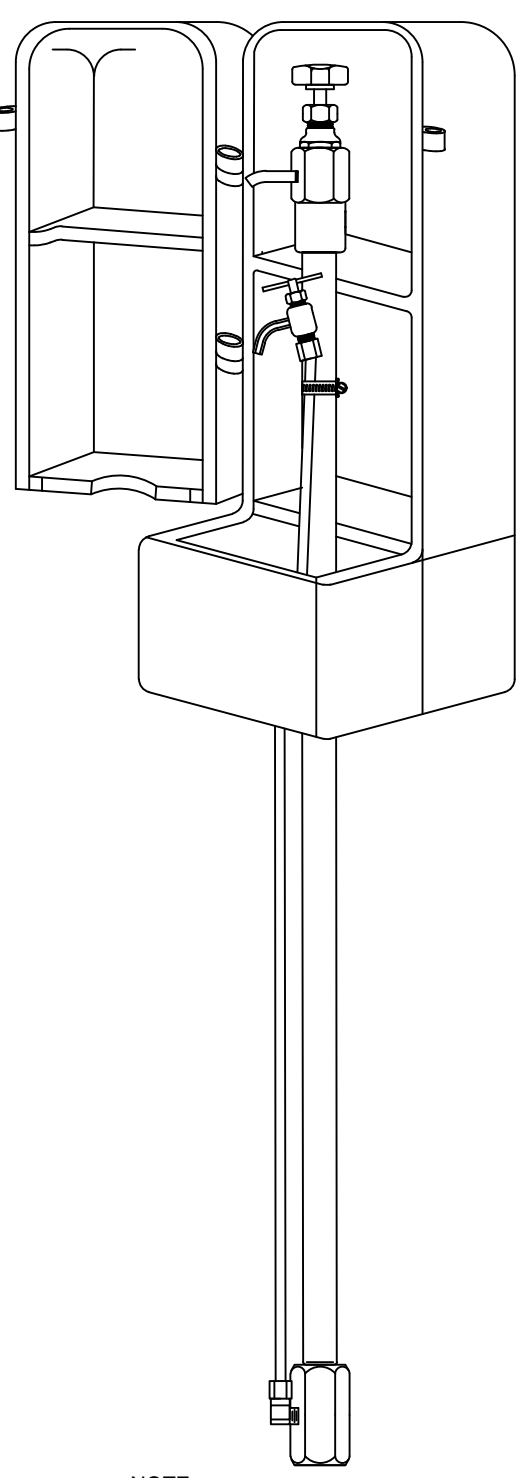
AIR RELEASE VALVE DETAIL

5290



TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION

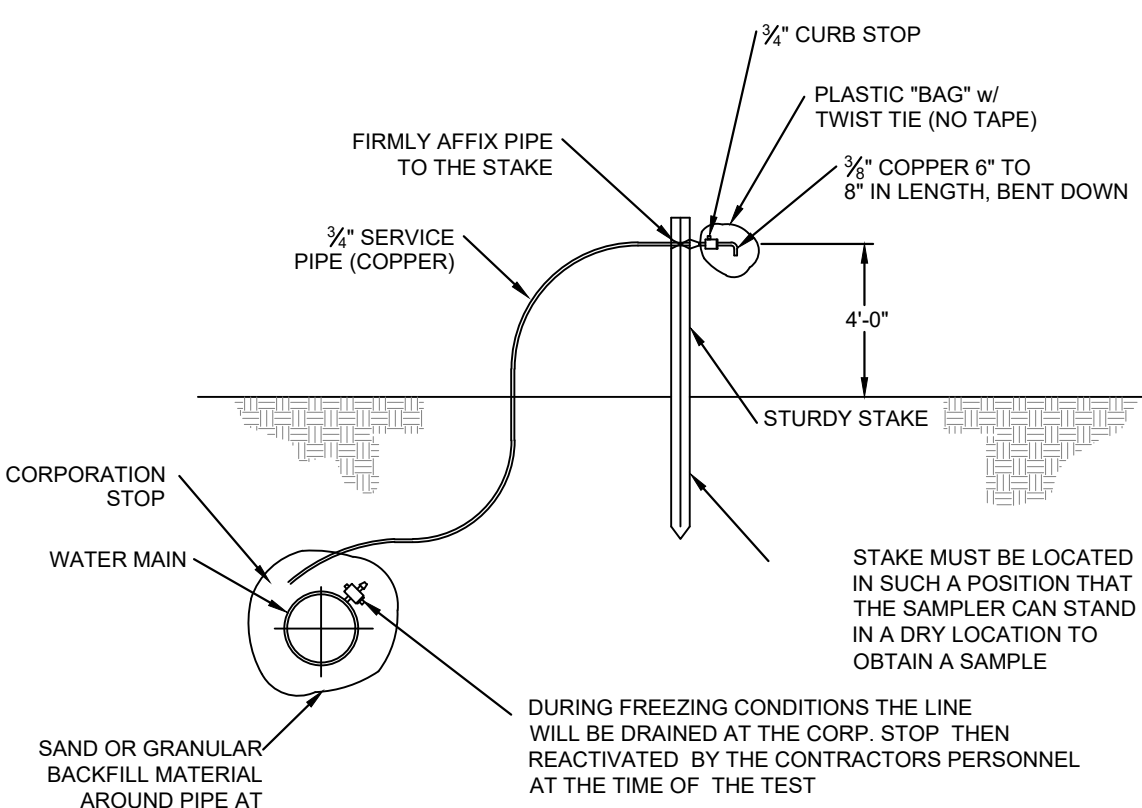
5280



STATION SHALL BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE ALUMINUM BOX WITH HINGED OPENINGS.
 ALL WORKING PARTS SHALL BE OF STAINLESS STEEL AND SERVICABLE FROM ABOVE GROUND WITH NO DIGGING OR REPLACEMENT NEEDED.
 THE STATION SHALL BE MODEL #88-SS AS MANUFACTURED BY THE KUPFERLE FOUNDRY, ST. LOUIS MO. OR APPROVED EQUAL.

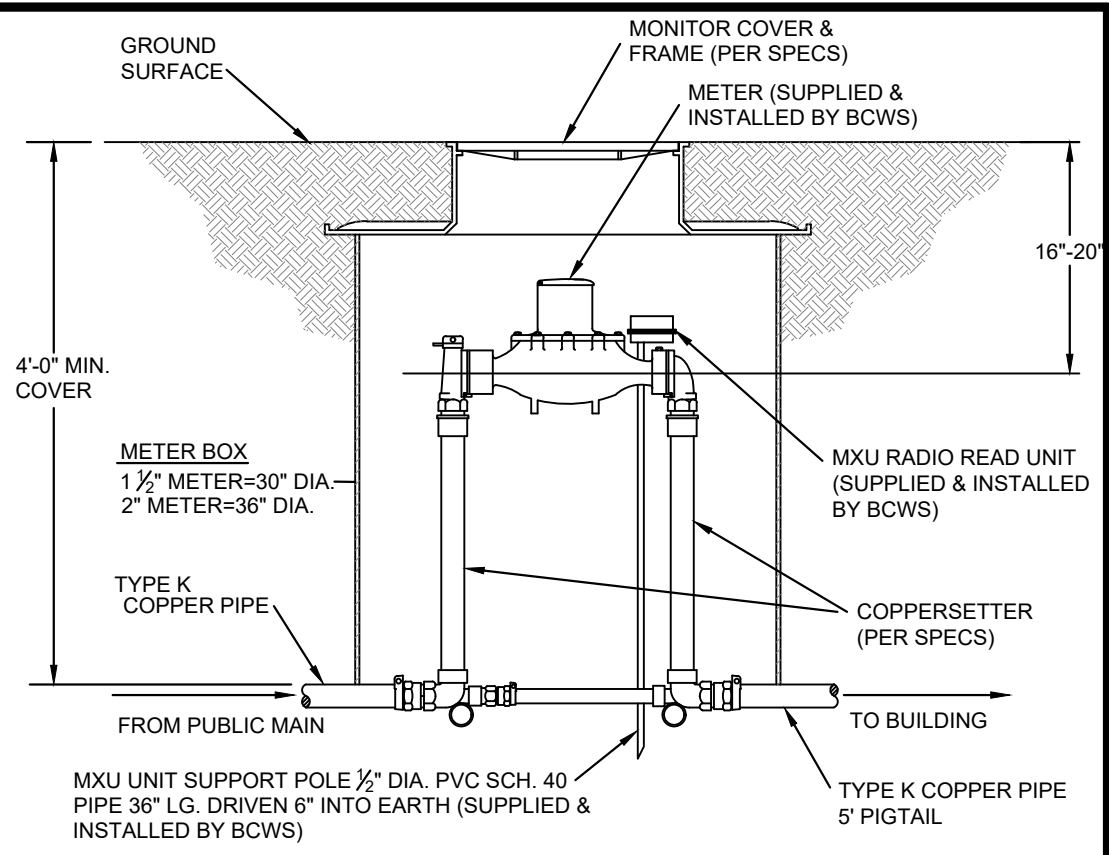
PERMANENT LAB SAMPLING STATION

5270



TEMPORARY PURITY TEST STATION

5260

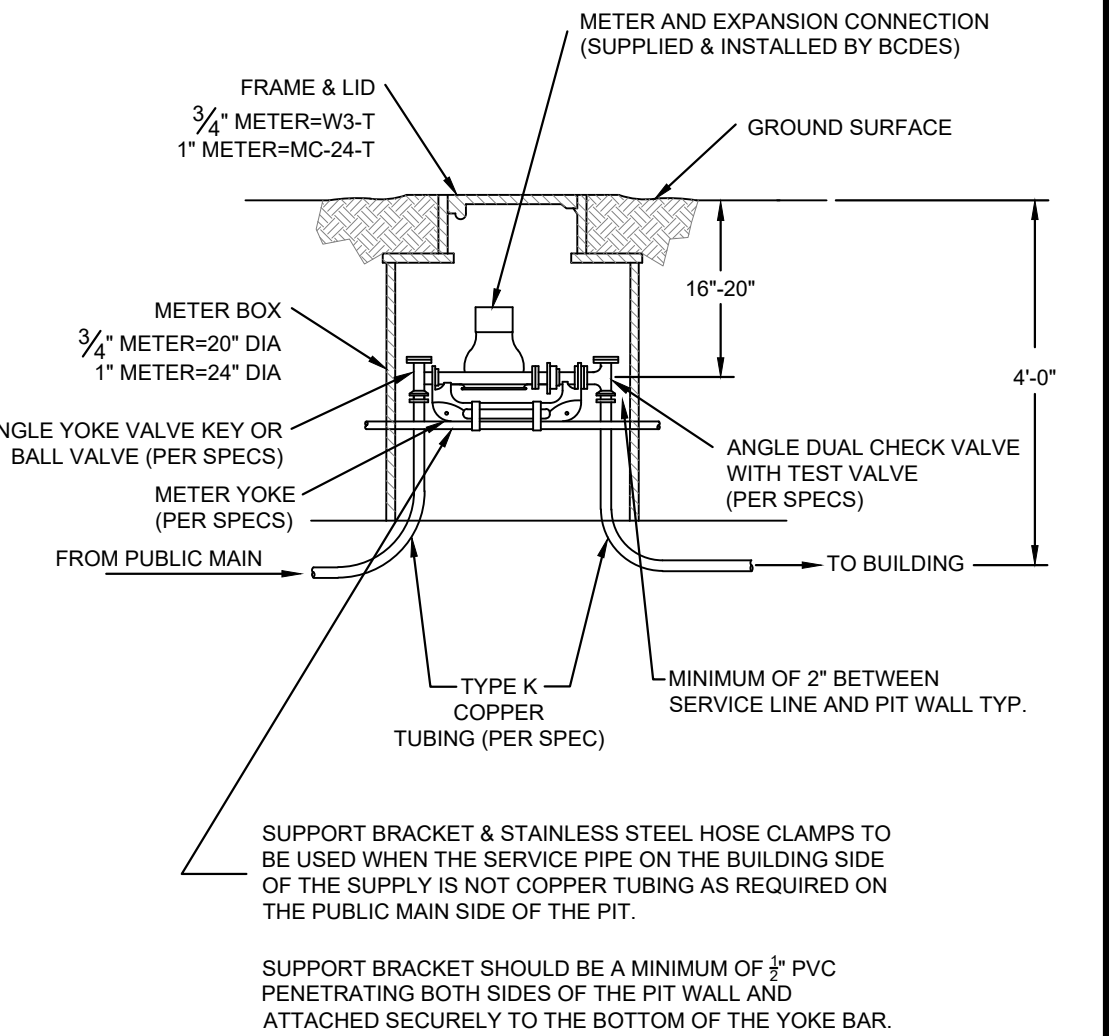


METER TYPE	LAYING LENGTH
1 1/2" C2 OMNI	13'
1 1/2" T2 OMNI	13'
2" C2 OMNI AS SUPPLIED BY BUTLER COUNTY SEE NOTE 3	17'
2" C2 OMNI FACTORY ORDERED	15 1/2'
2" T2 OMNI	17'

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, (I.E. 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.

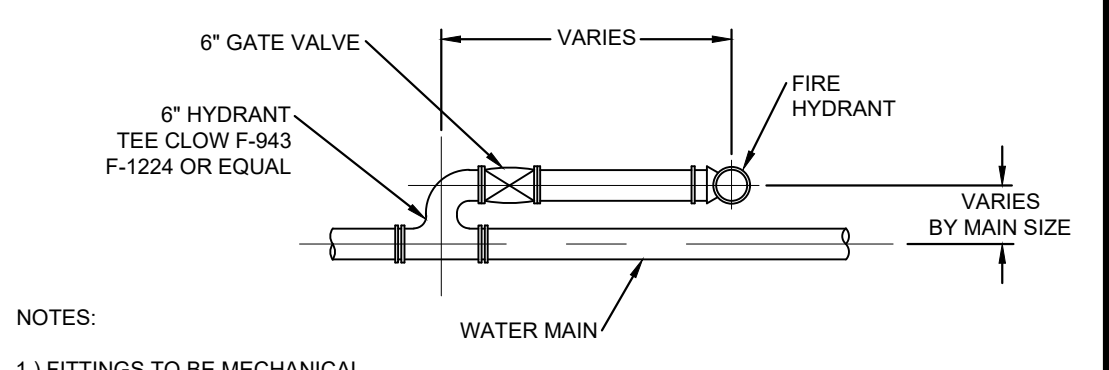
STANDARD INSTALLATION FOR 1-1/2" & 2" WATER METER SETTINGS

5170



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

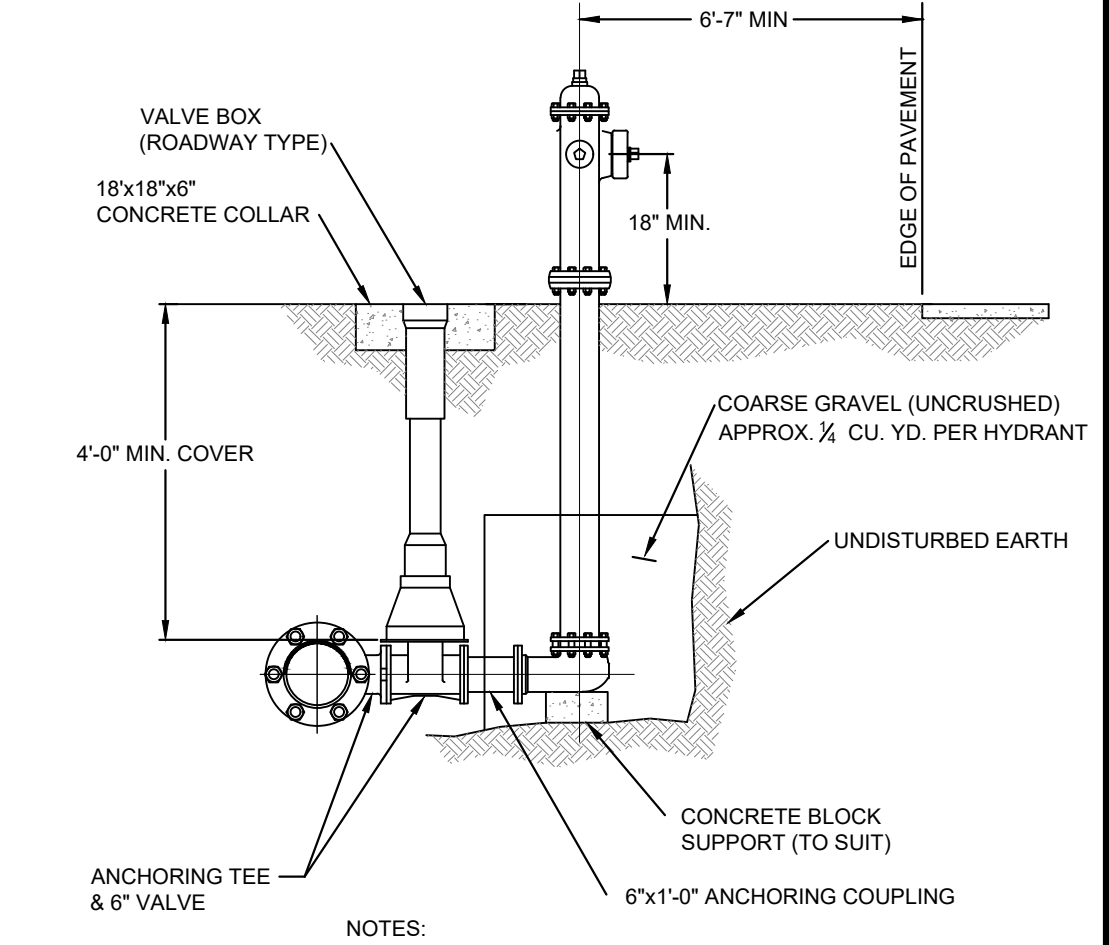
5150



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

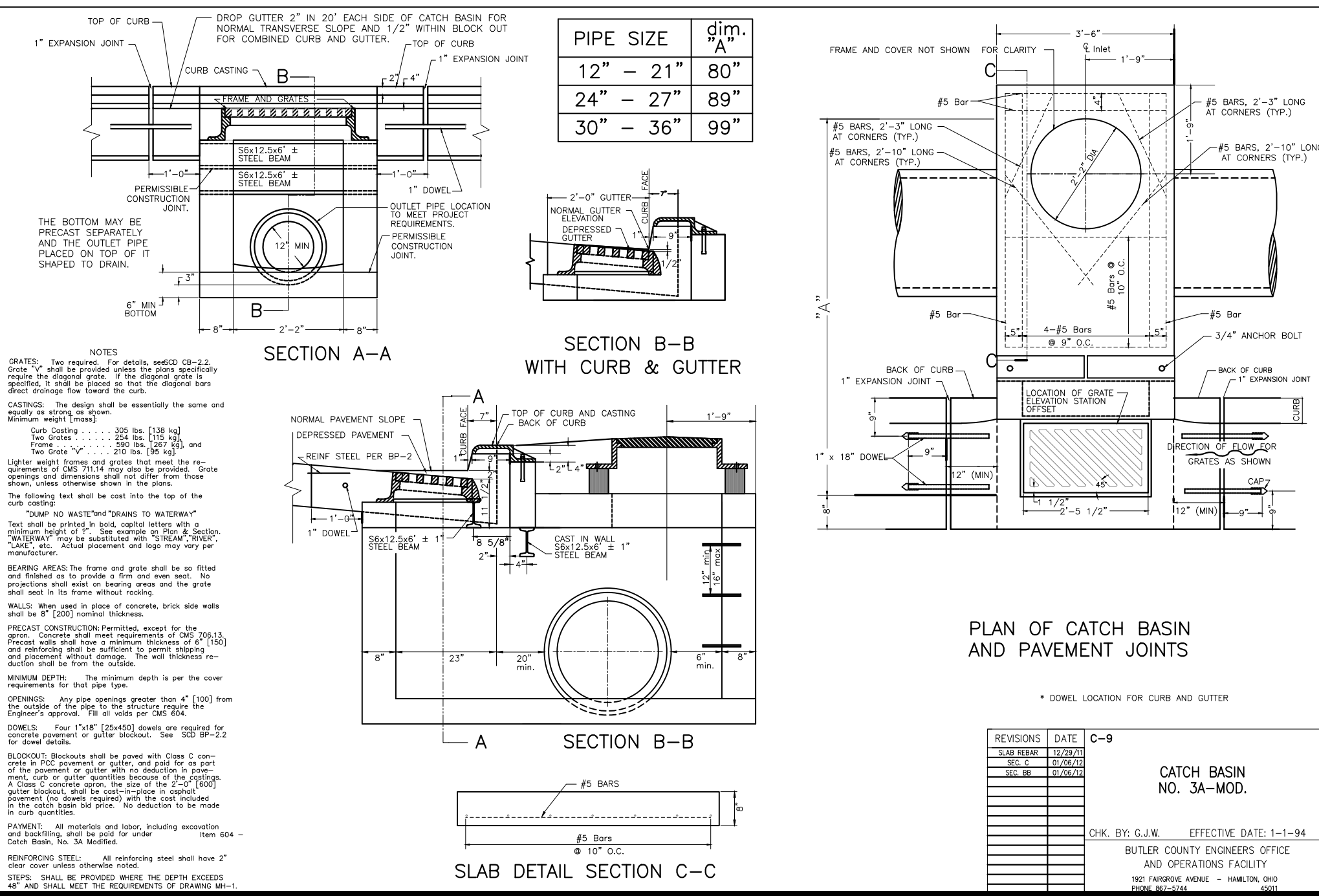
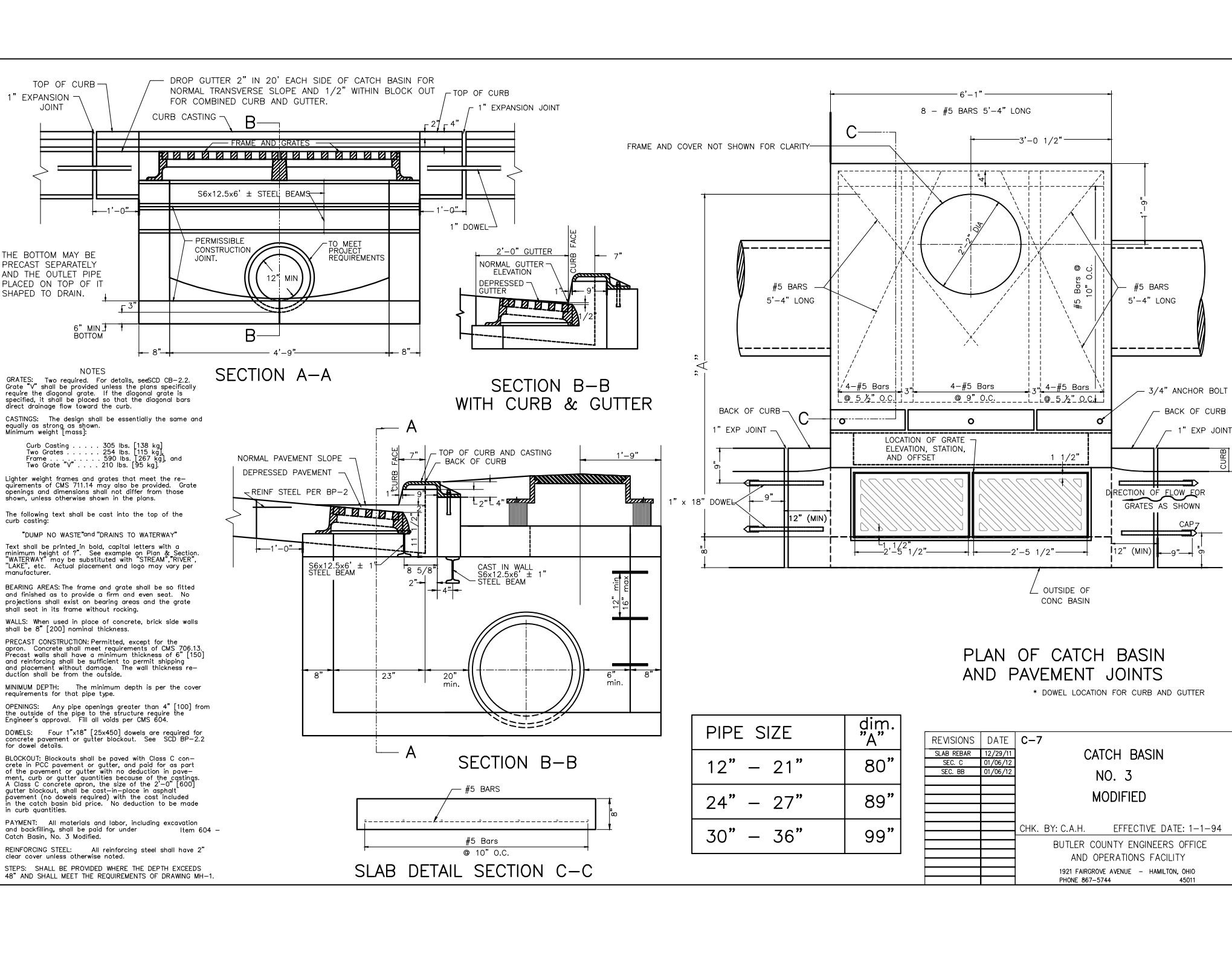
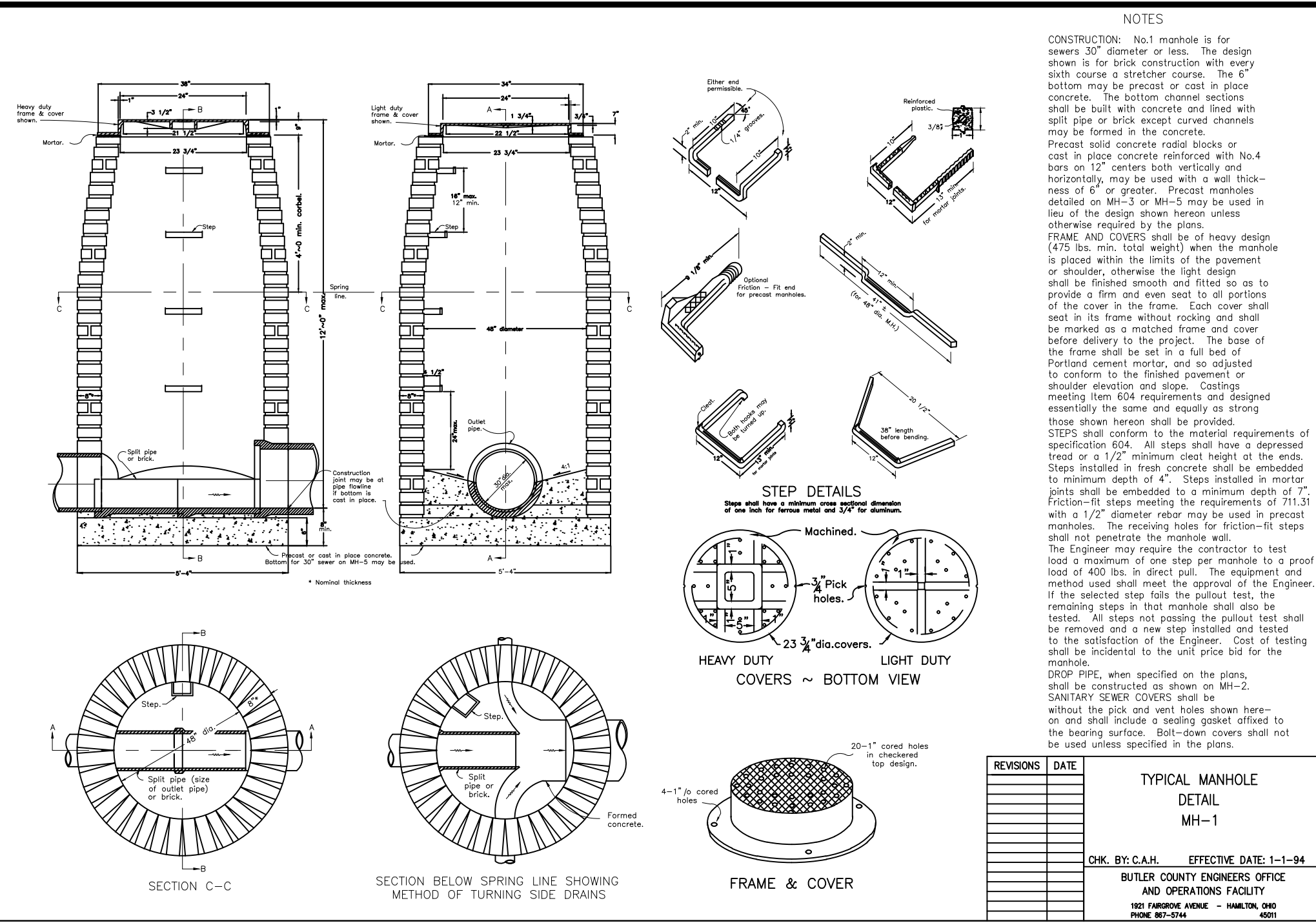
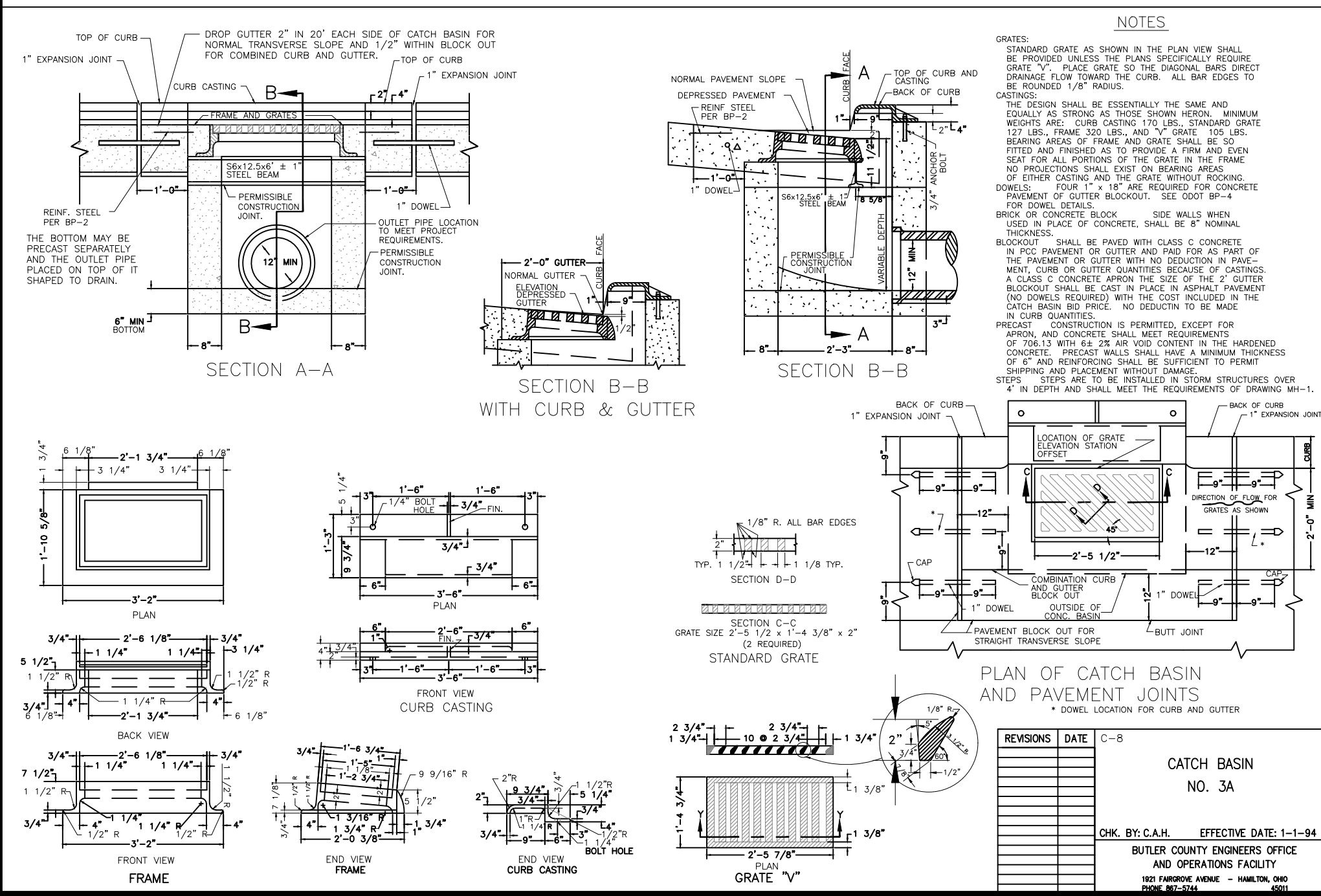
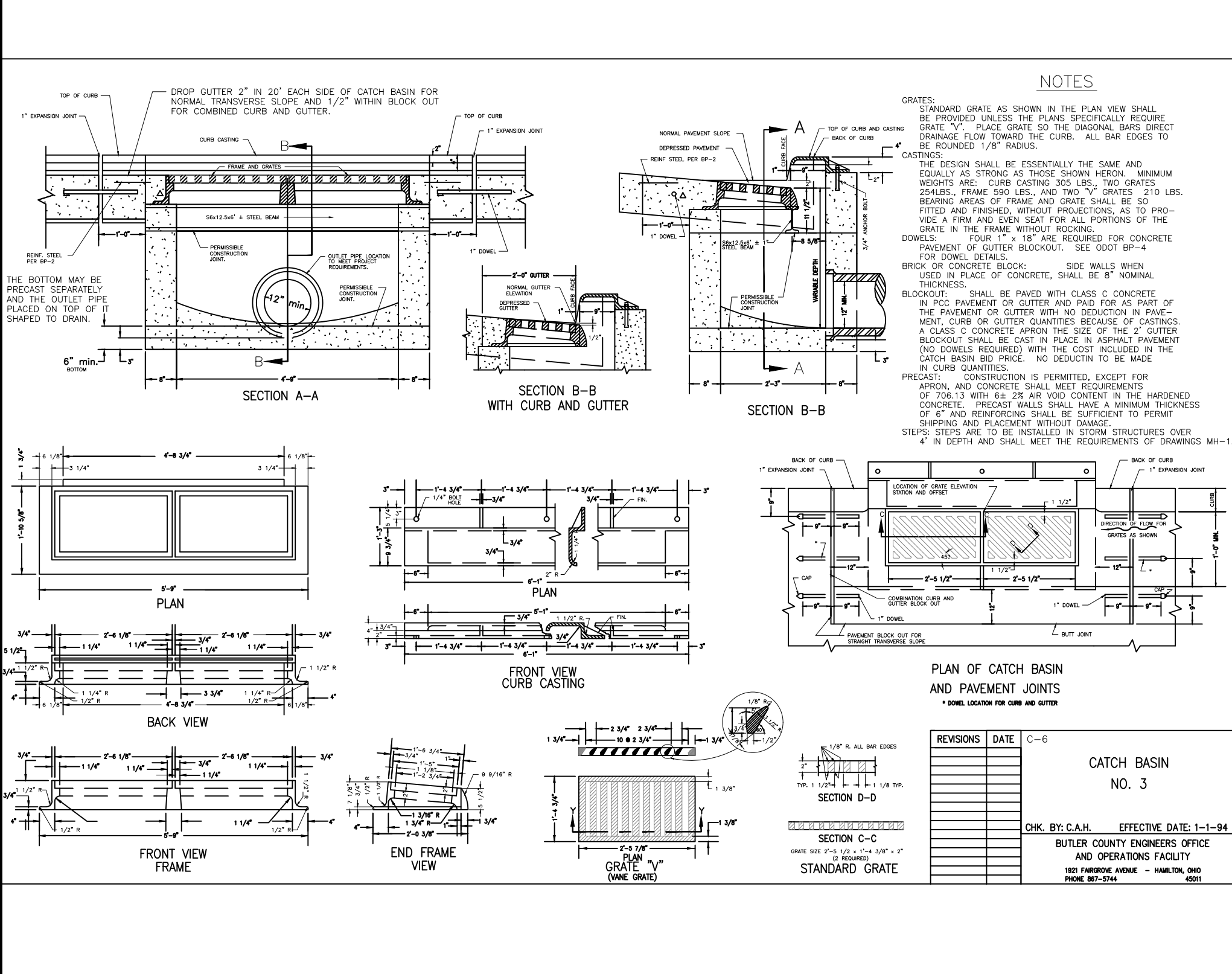
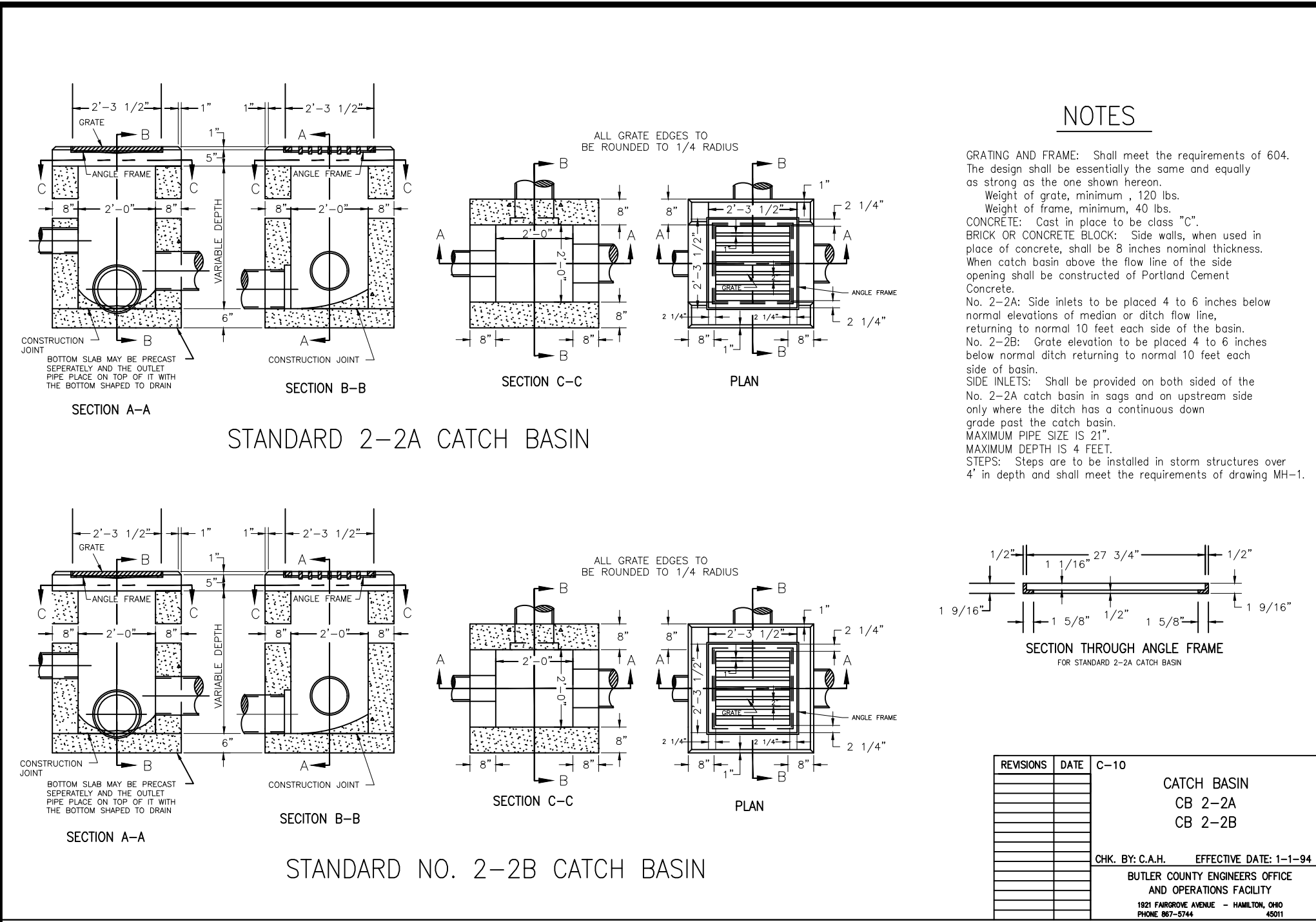
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Date: _____
 Drawn: _____
 Item: _____
 Revision Description: _____

BUTLER COUNTY, OHIO
 WATER DETAILS

bayer becker
 www.bayerbecker.com
 6800 Tyler Road, Suite A
 Mason, Ohio 45040-3135, 513.535.6600

Drawing: BC WAT
 Drawn by: _____
 Checked by: _____
 Issue Date: 12-28-17
 Sheet: 11/13



NOTES

CONSTRUCTION: No. 1 construction is for slopes 20' or greater 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. Precast manhole sections may be formed in the concrete.

Precast solid concrete road blocks or curb in place concrete reinforced with No. 4 bars on 12" centers shall be used horizontally. They may be used with a wall thickness of 6" or greater. Precast manhole sections on MH-1 or MH-5 may be used in lieu of the design shown herein unless otherwise required by the plans.

FRAME AND COVER: shall be of heavy design (475 lbs. min. total weight) when the manhole is placed above the line of the pavement or shoulder, otherwise the light design may be used. The frame and cover shall be set in a full bed of sand and cement mortar, and as adjusted to conform to the finished pavement, or other surface. The frame and cover shall meet Item 604 requirements and designed accordingly to the same load capacity as shown herein shall be provided.

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

REINFORCING STEEL: shall be provided in the concrete. The reinforcement shall be provided in the concrete. The reinforcement shall be provided in the concrete.

REVISIONS DATE: C-10

CHK. BY: C.A.H. EFFECTIVE DATE: 1-1-94

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY

NO. DRAWING AREA - HAZELTON, OHIO

DATE: 1-1-94

DIAMETER OF PIPE

1. DIAMETER OF CIRCULAR PIPE OR RISE OF NON-CIRCULAR PIPE

2. DIAMETER OF CIRCULAR PIPE OR RISE OF NON-CIRCULAR PIPE

3. DIAMETER OF CIRCULAR PIPE OR RISE OF NON-CIRCULAR PIPE

4. SEE CURRENT STANDARD DRAWINGS FOR DIMENSIONS, QUANTITIES, AND BILL OF REINFORCEMENT.

5. DIMENSIONS FROM FACE OF CONCRETE TO STEEL SHALL BE 2" CLEAR DISTANCE.

6. ENCLOSED LETTERS INDICATE STEEL BAR LOCATIONS.

7. BARS (A) THROUGH (V) ARE SPACED 1'-0" O.C. ALL OTHER BARS SHALL BE EVENLY SPACED.

8. BARS (A) THROUGH (V) ARE PLACED IN ORDER OF INCREASING LENGTHS, BEGINNING AT THE END OF EACH WING.

9. BARS (A) THROUGH (V) ARE PLACED IN ORDER OF INCREASING LENGTHS, BEGINNING AT THE END OF EACH WING.

10. HEADWALLS LOCATED AT EDGE OF SHOULDER SHALL BE PARALLEL TO CENTERLINE OF THE ROAD.

11. APRON BETWEEN WINGS SHALL BE SLOPED IN DIRECTION OF FLOW EQUAL TO SLOPE OF PIPE. FRONT FACE OF HEADWALL AND ENDS OF WINGS SHALL REMAIN VERTICAL.

DIAMETER OF PIPE

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

REVISIONS DATE: C-7

CHK. BY: C.A.H. EFFECTIVE DATE: 1-1-94

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY

NO. DRAWING AREA - HAZELTON, OHIO

DATE: 1-1-94

NOTES

CONSTRUCTION: No. 1 construction is for slopes 20' or greater 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. Precast manhole sections may be formed in the concrete.

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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 minimum depth of 2 inches in the concrete. Steps shall be embedded to a minimum depth of 2 inches in the concrete.

REINFORCING STEEL: shall be provided in the concrete. The reinforcement shall be provided in the concrete. The reinforcement shall be provided in the concrete.

REVISIONS DATE: C-13A

CHK. BY: C.A.H. EFFECTIVE DATE: 1-1-94

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY

NO. DRAWING AREA - HAZELTON, OHIO

DATE: 1-1-94

Plot time: Jul 31, 2018 1:35:56pm
 Drawing name: K:\FF\BLOCKS\DETAILS\BUTLER BC STM.dwg - Layout Tab: NewBeckerStorm

bayer becker

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

Revision Description

Rev.	Description
1	ISSUED FOR PERMIT
2	ISSUED FOR PERMIT
3	ISSUED FOR PERMIT
4	ISSUED FOR PERMIT
5	ISSUED FOR PERMIT
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50	ISSUED FOR PERMIT

Drawn by: BC STM
 Checked by:
 Issue Date: 8-13-12
 Sheet: 12/13

GENERAL NOTES
EROSION AND SEDIMENT CONTROLS

Vegetative Practices
Such practices may include: temporary seeding, permanent seeding, mulching, matted, 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 direct 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 and equipment 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. Seedings 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 fertilizer, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.

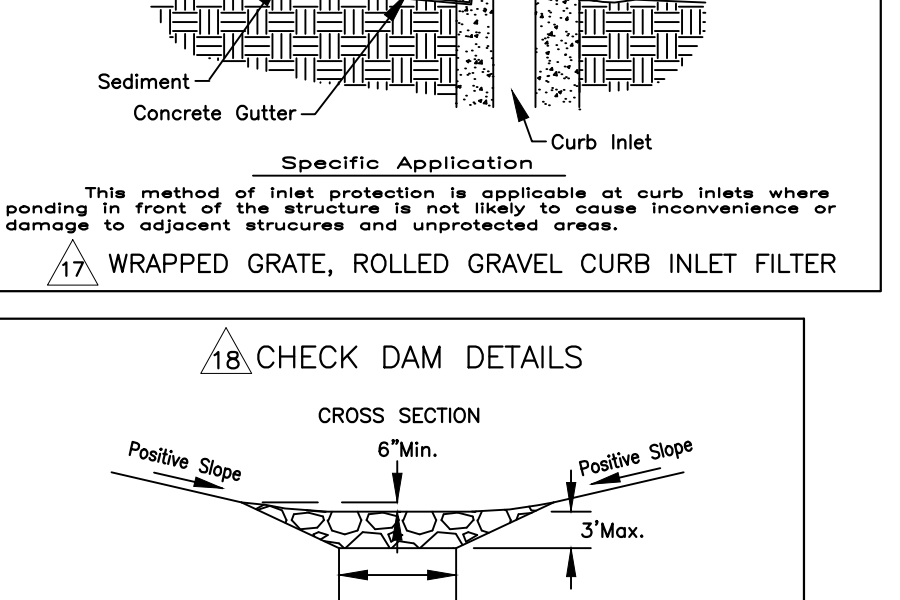
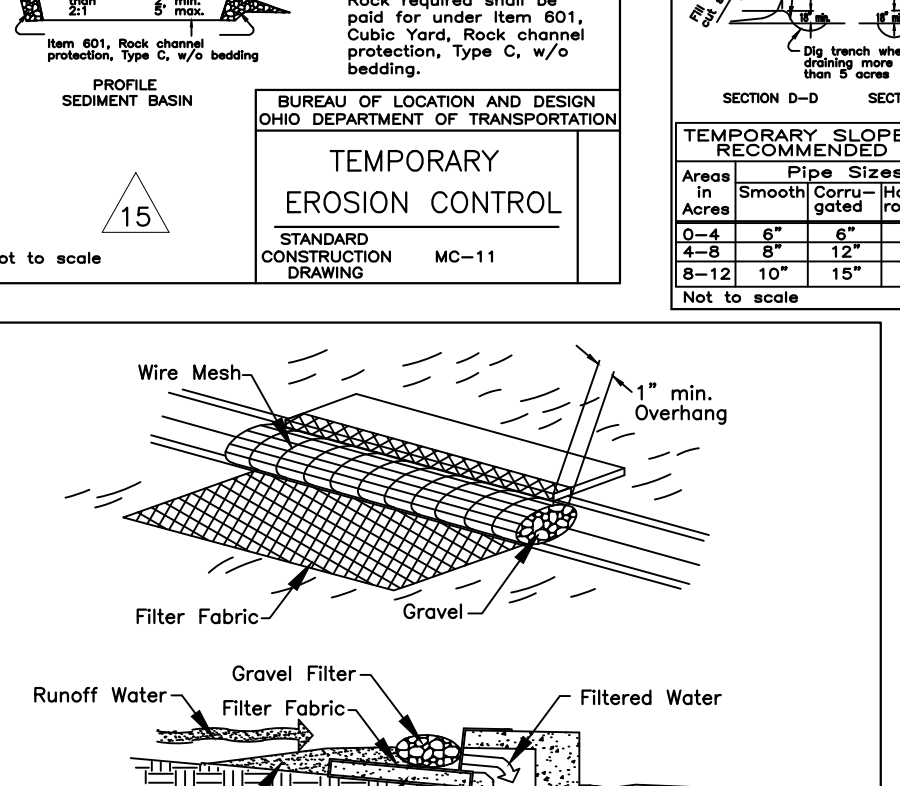
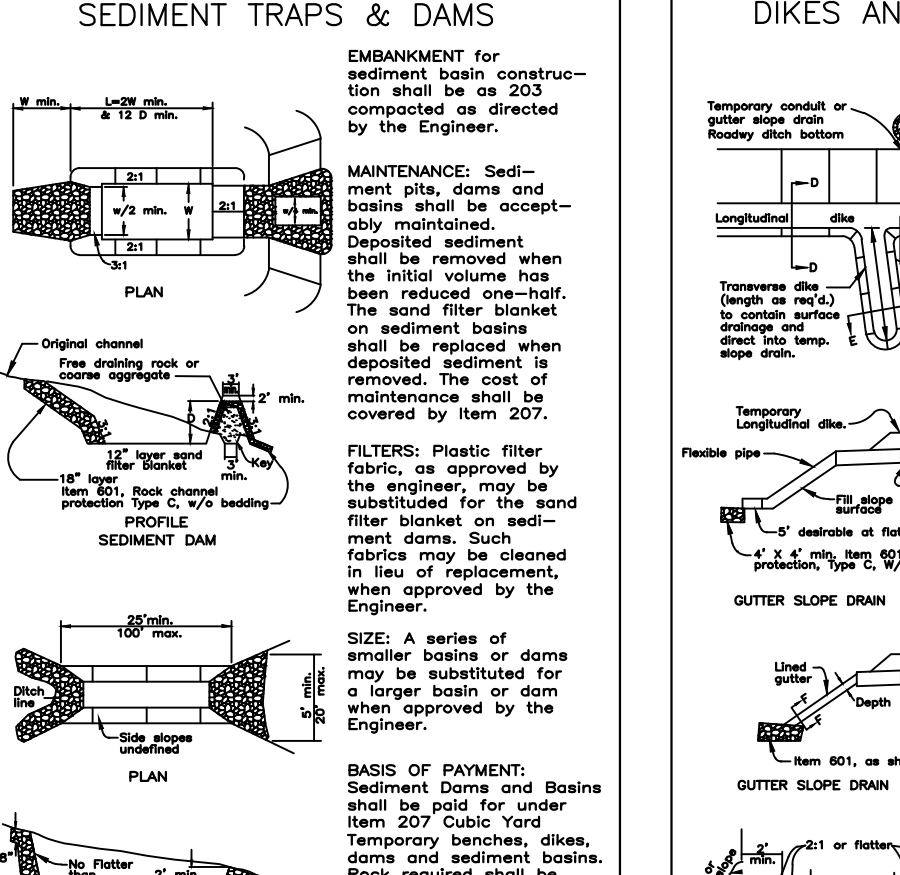
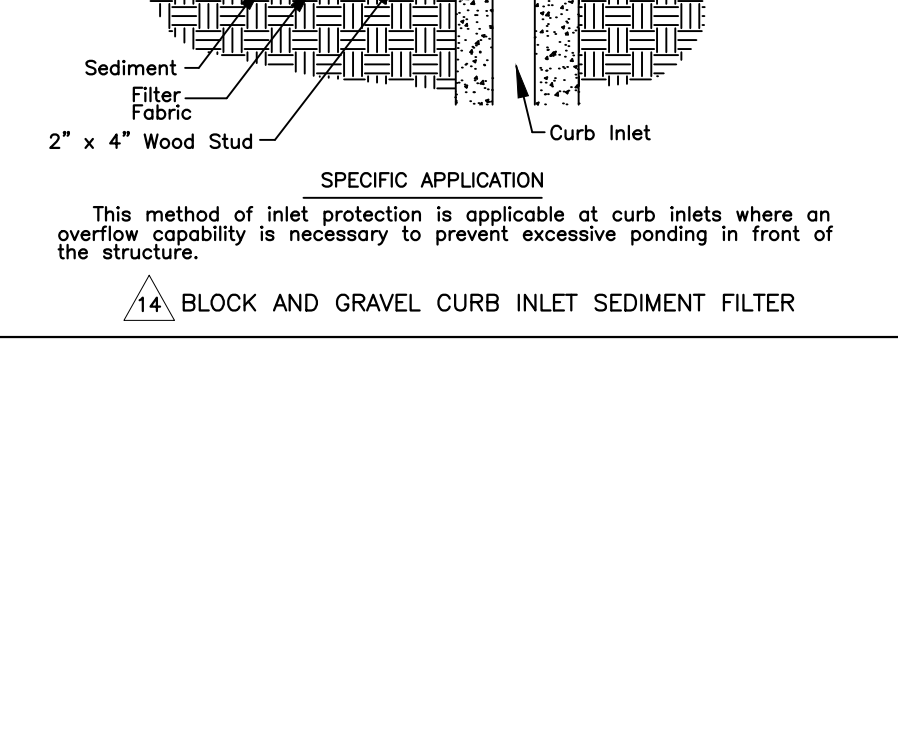
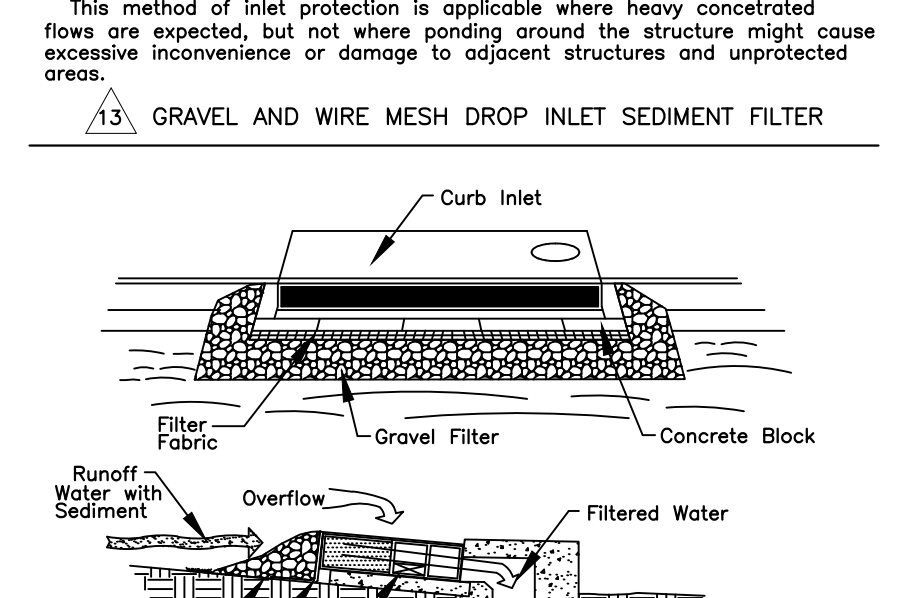
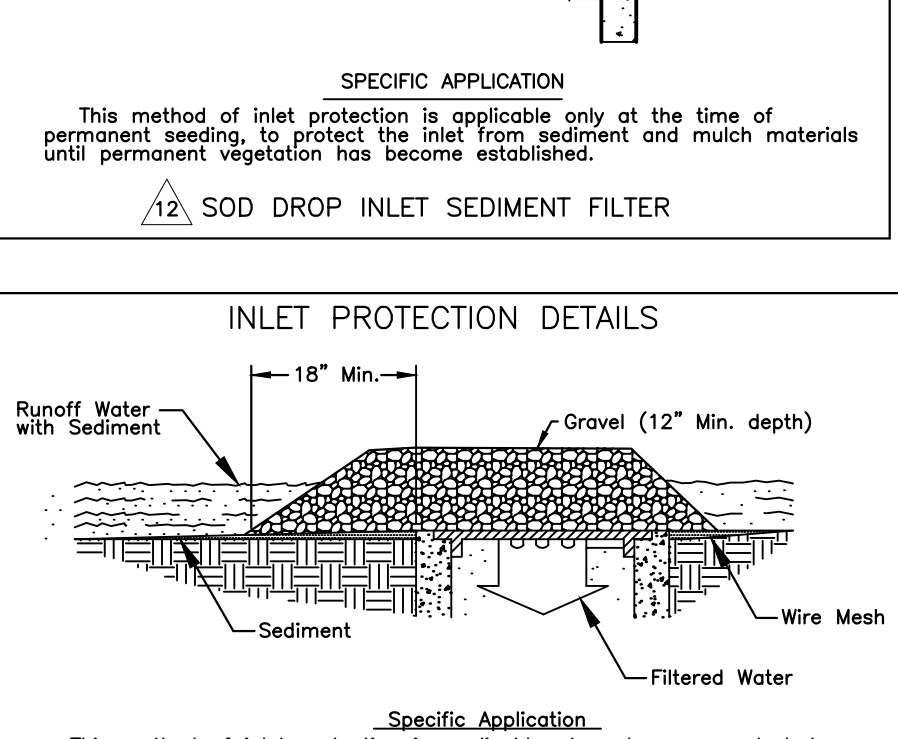
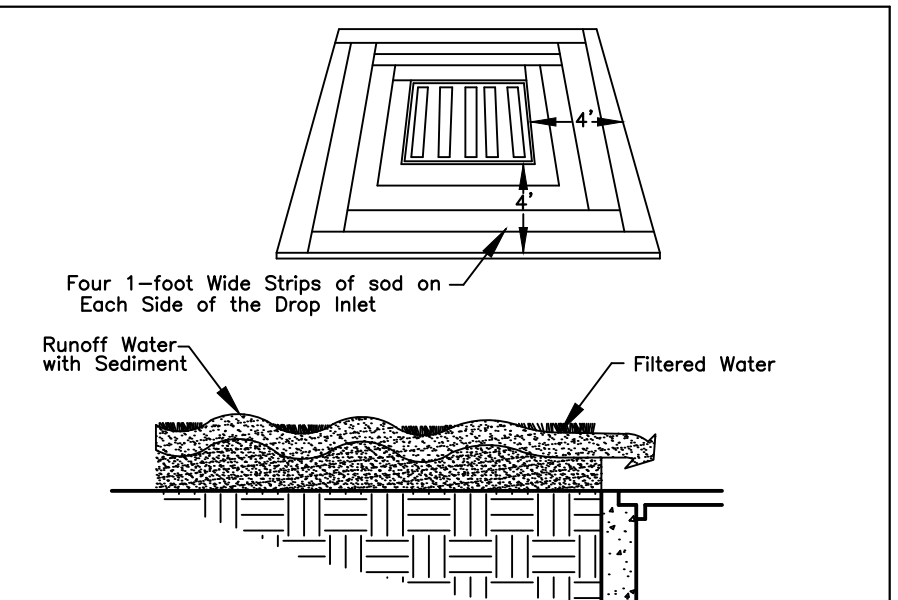
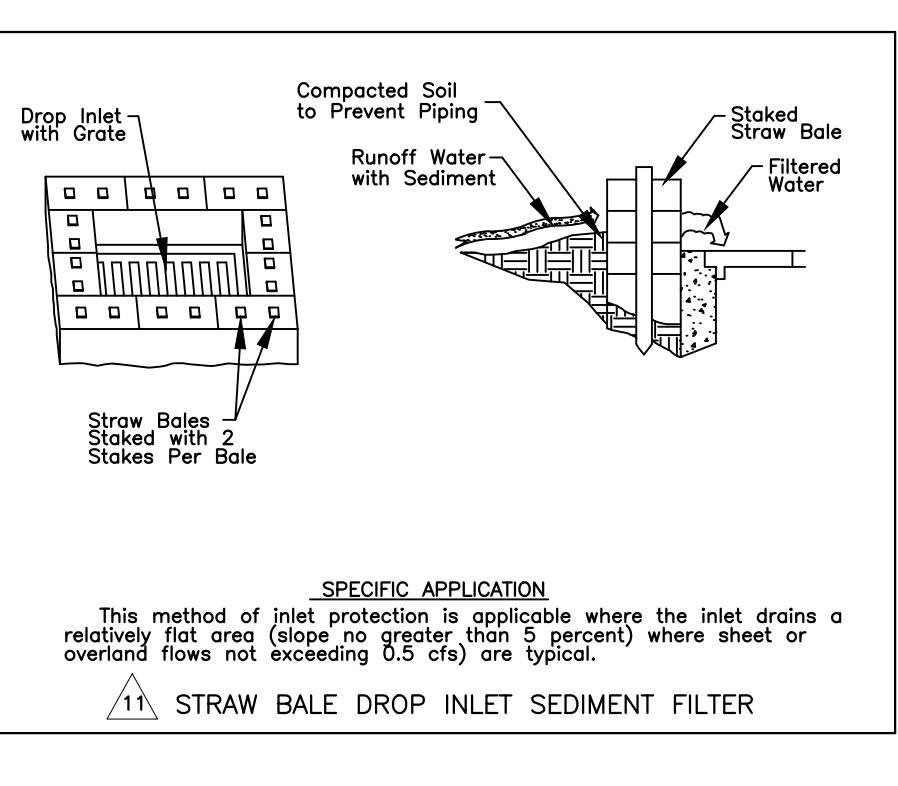
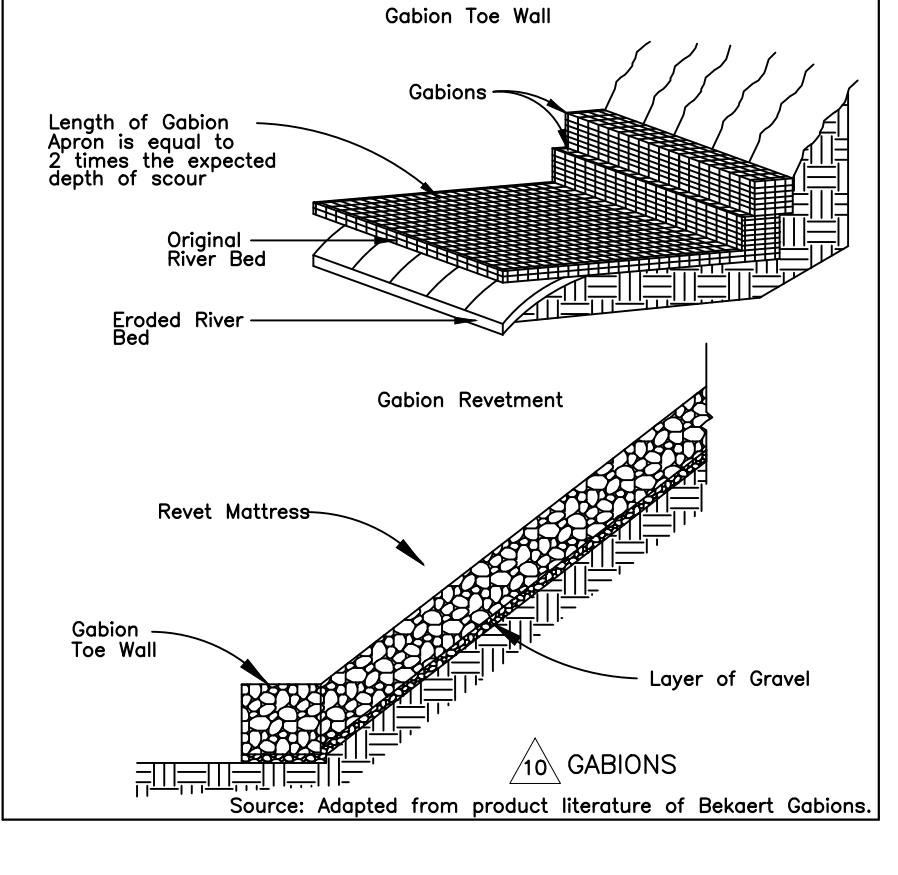
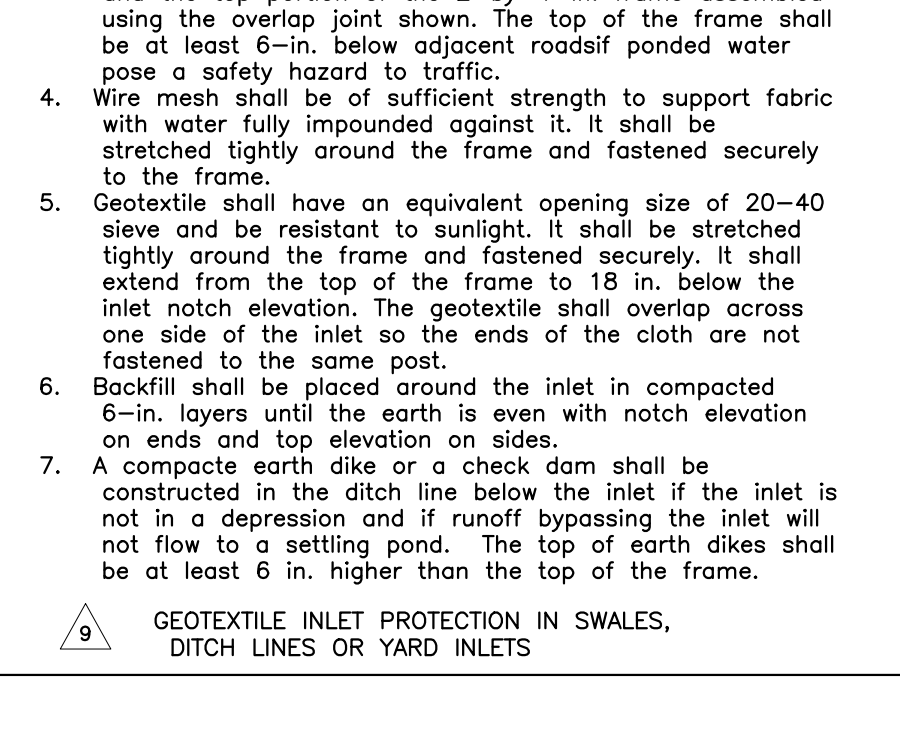
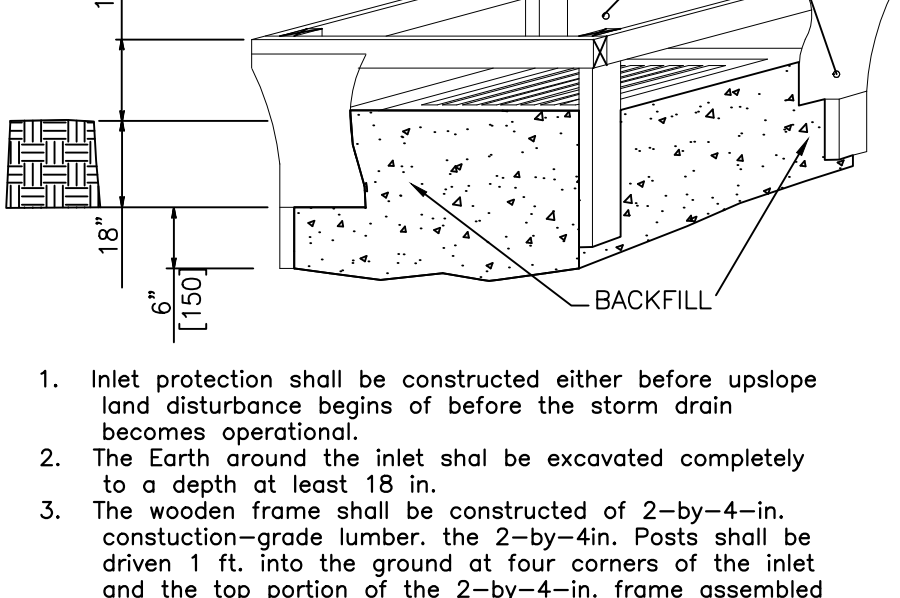
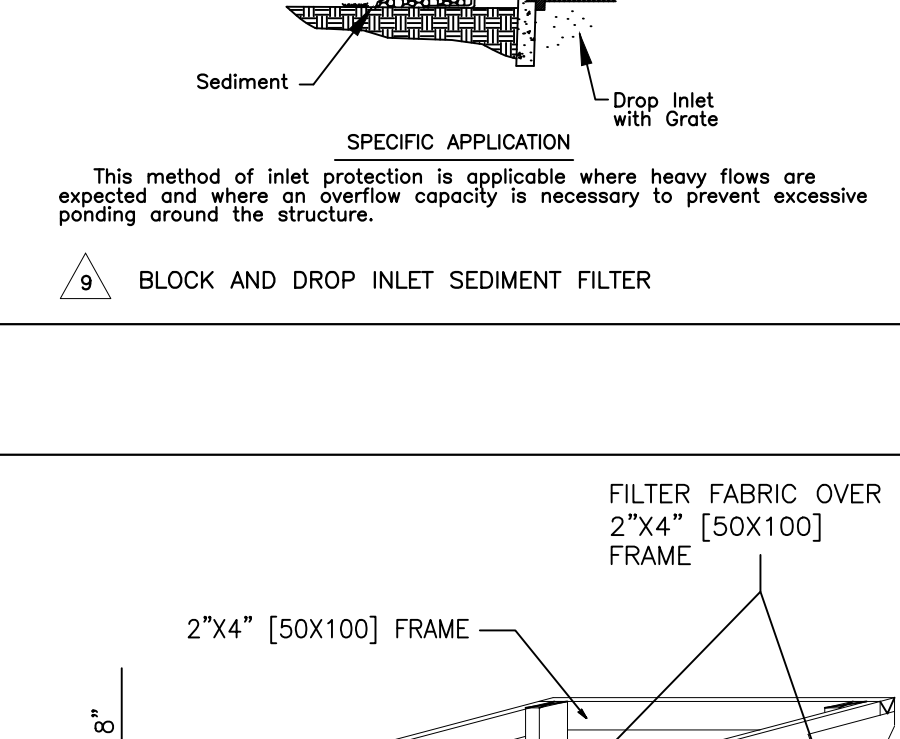
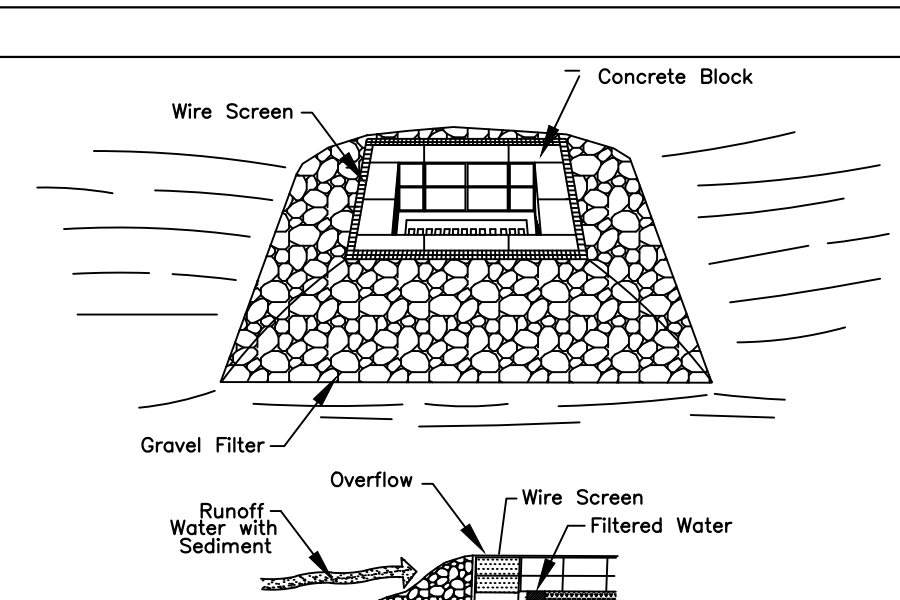
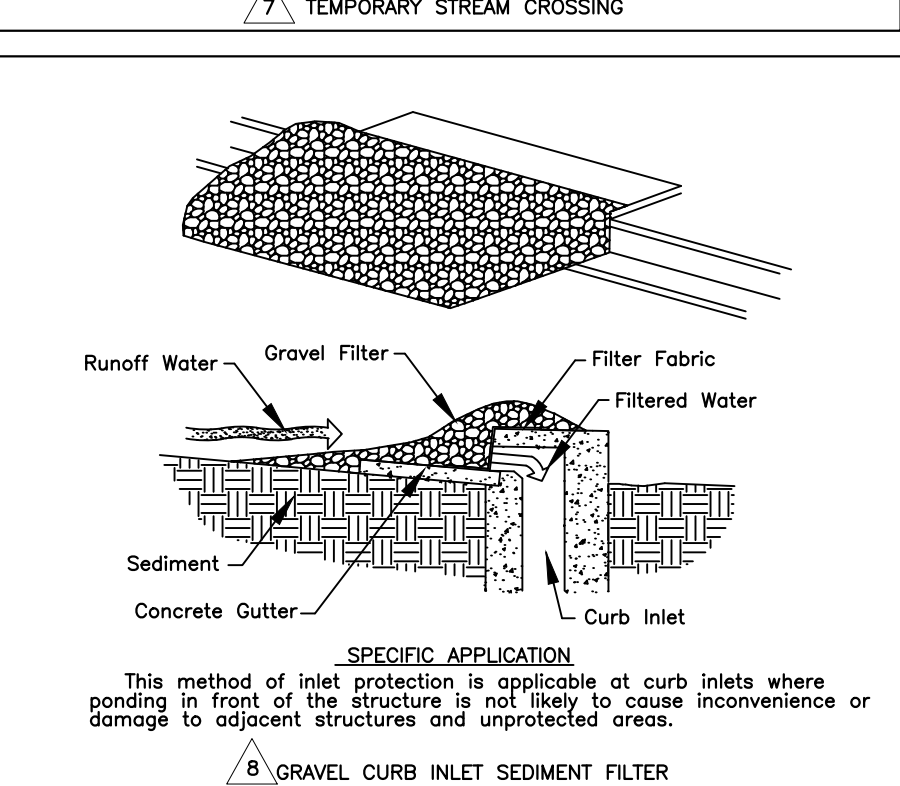
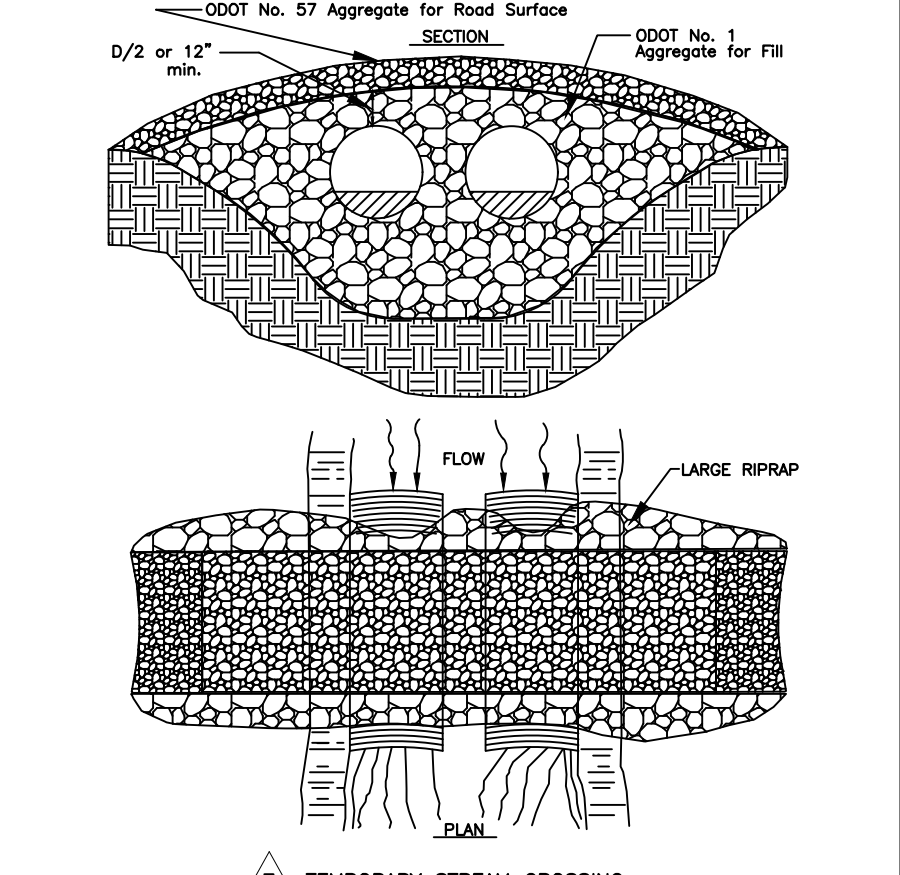
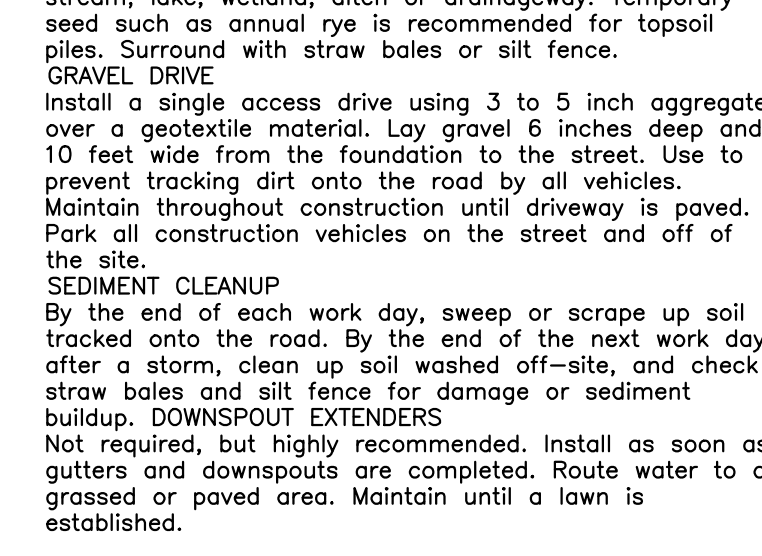
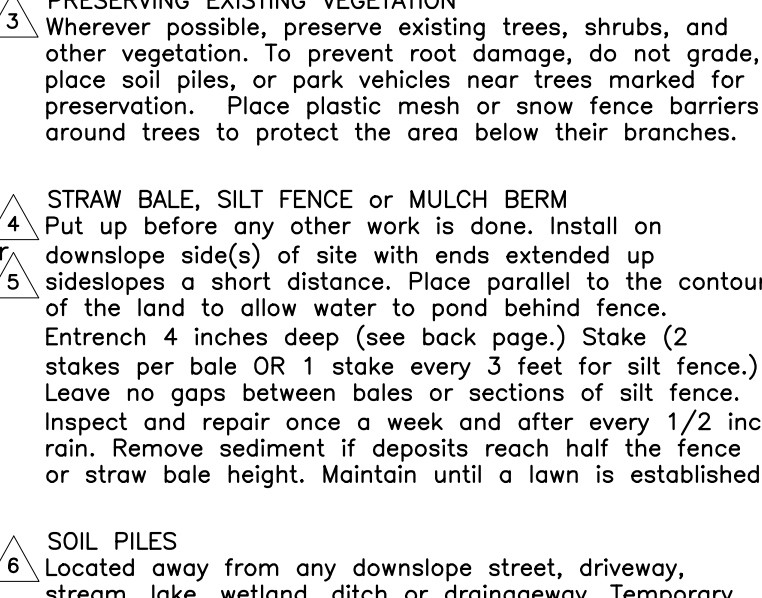
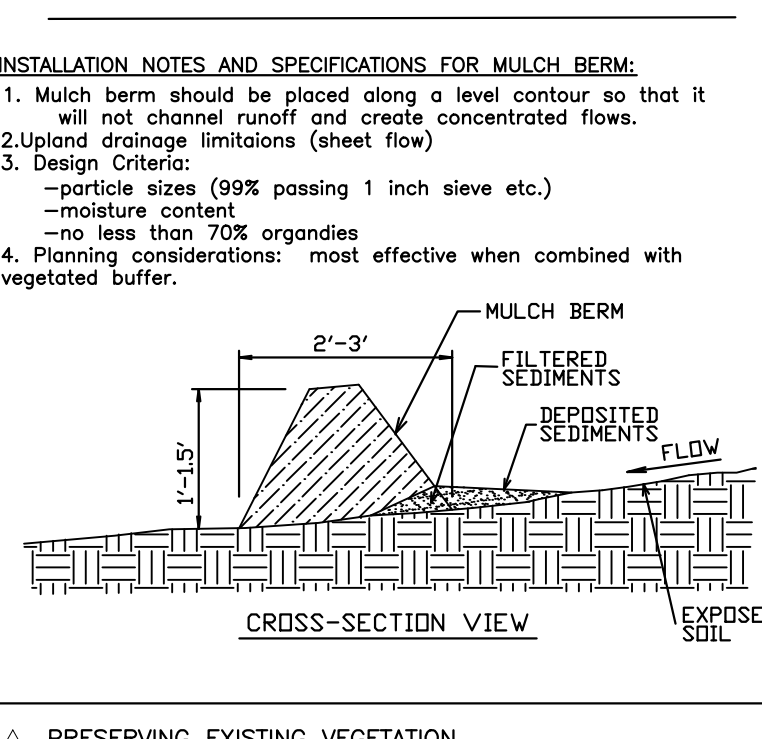
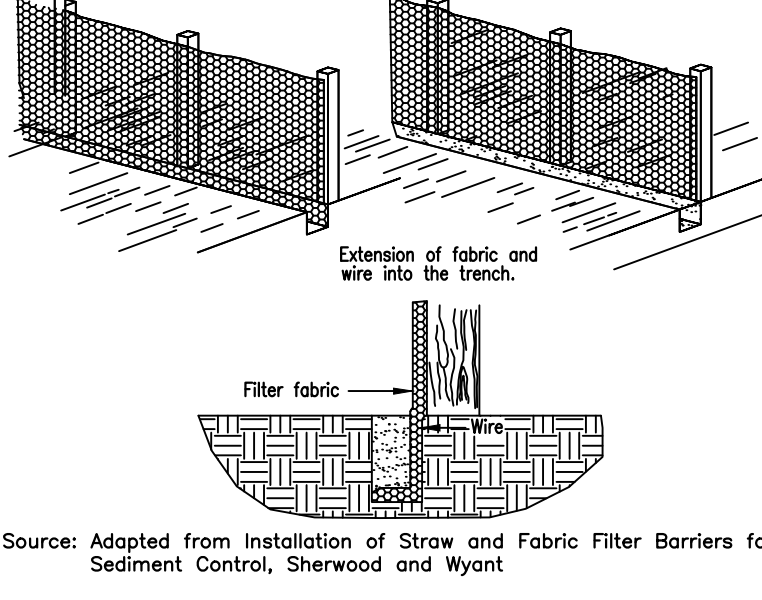
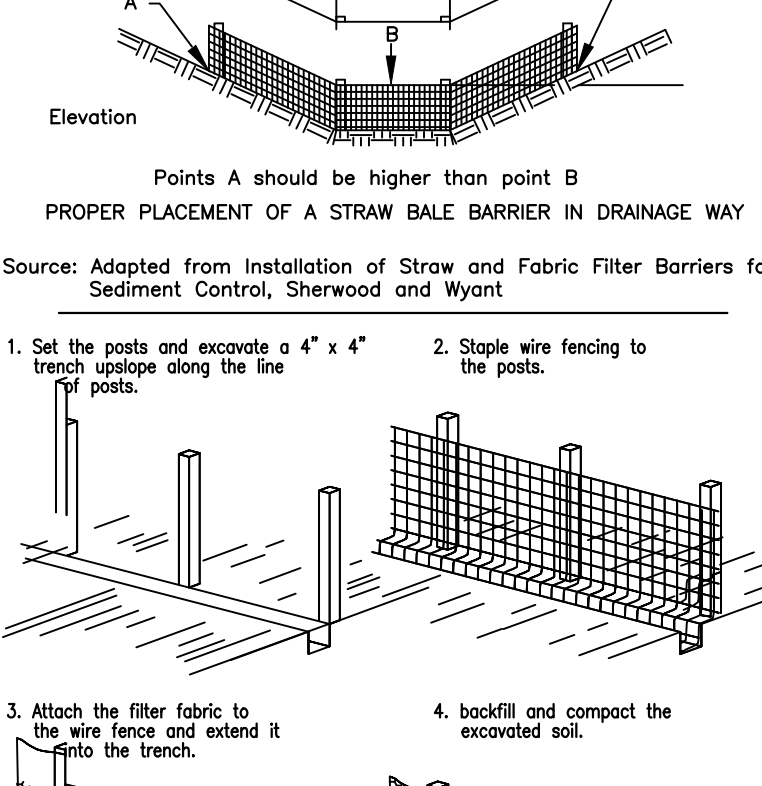
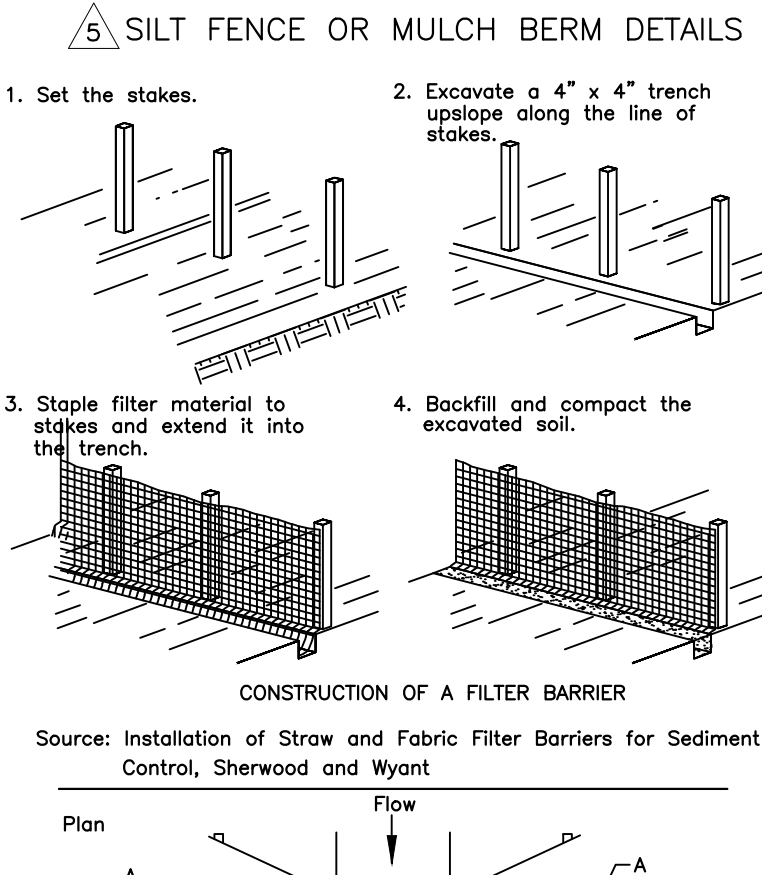
Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.

Where feasible, except when a cultipacker type seeder is used, the seedbed should be 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

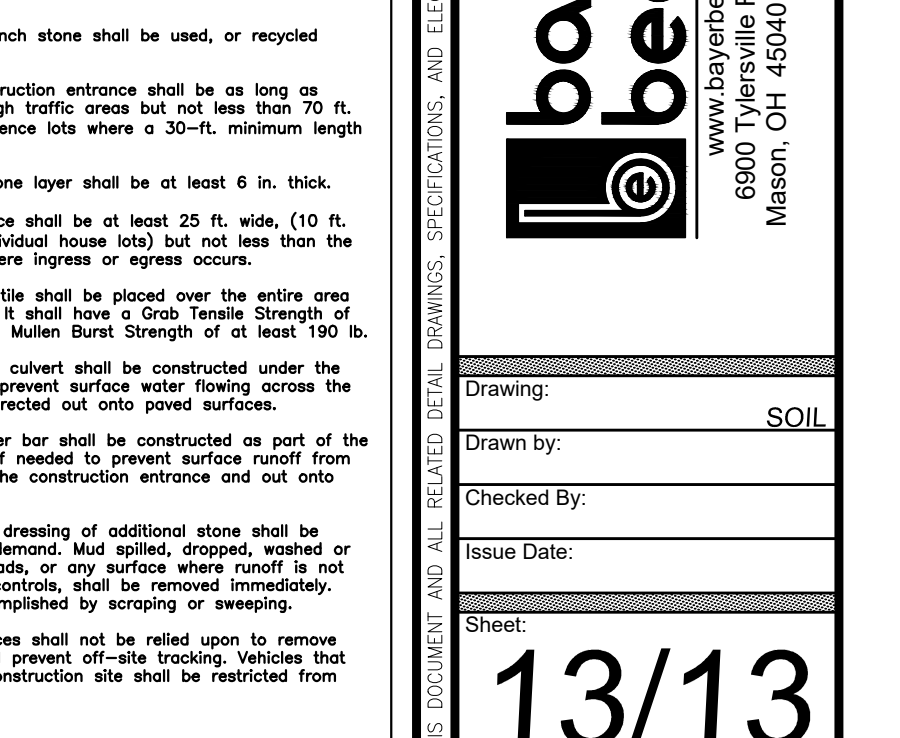
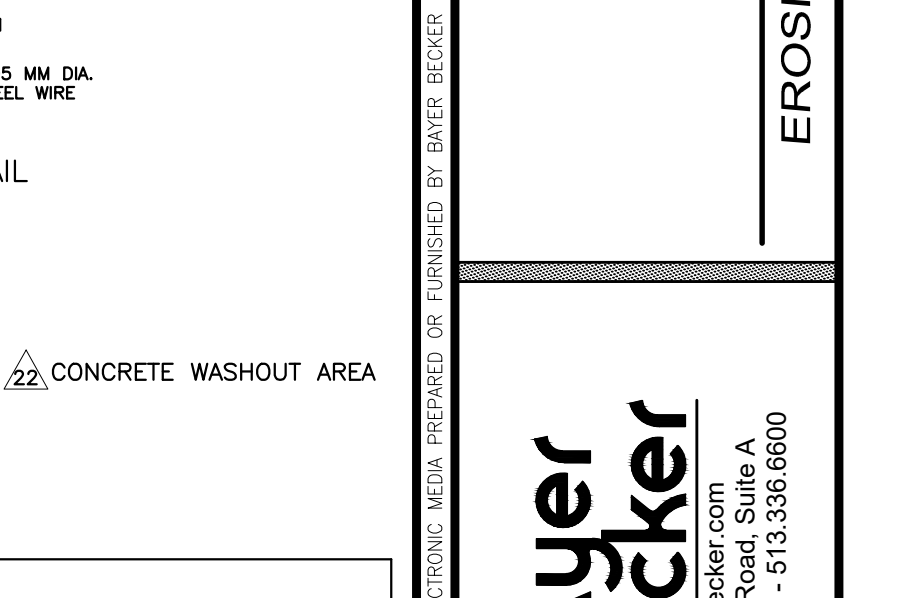
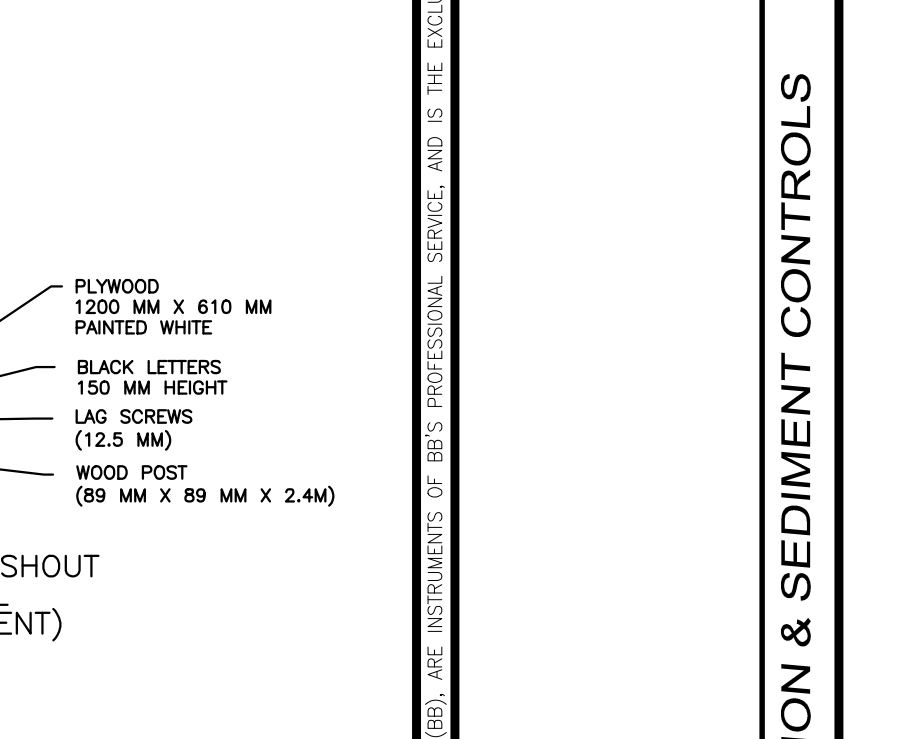
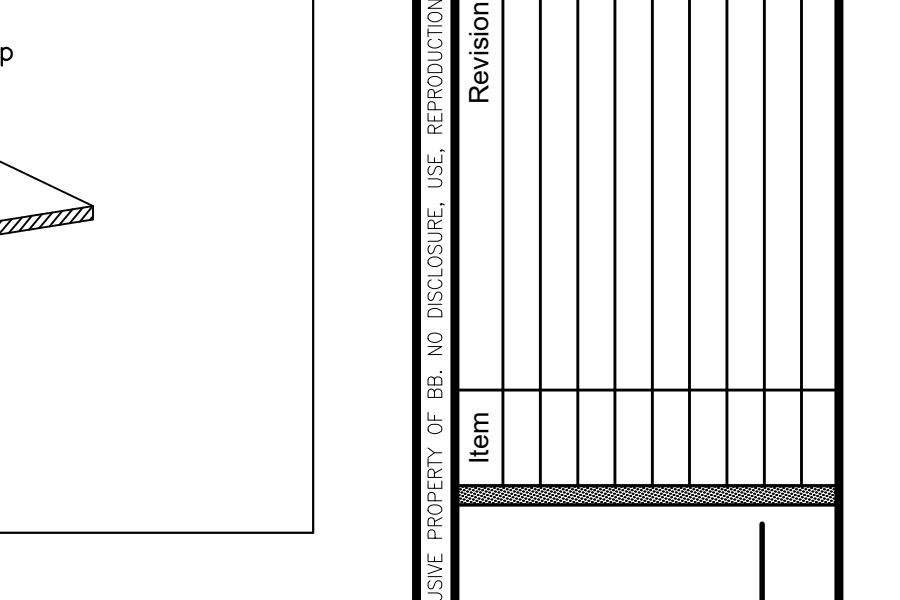
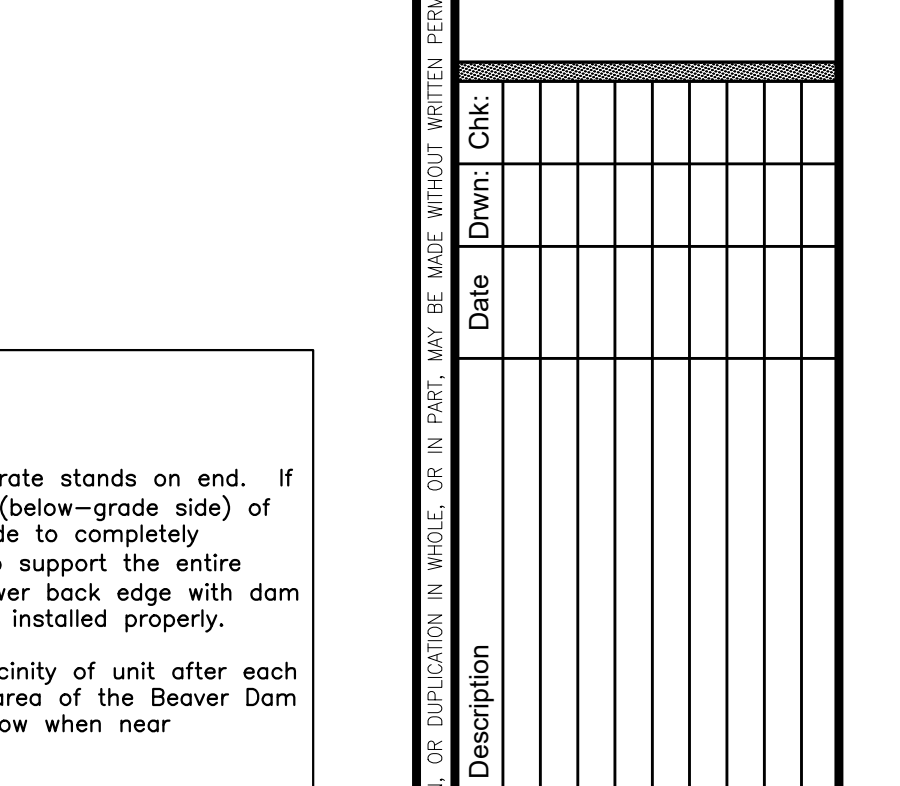
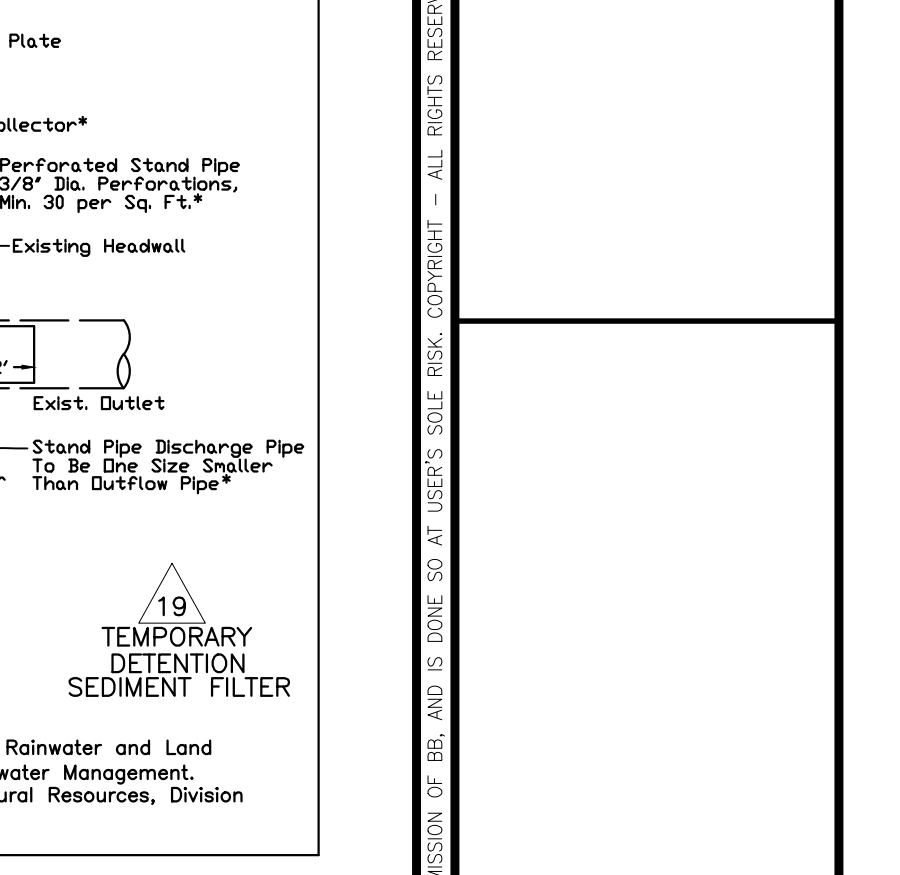
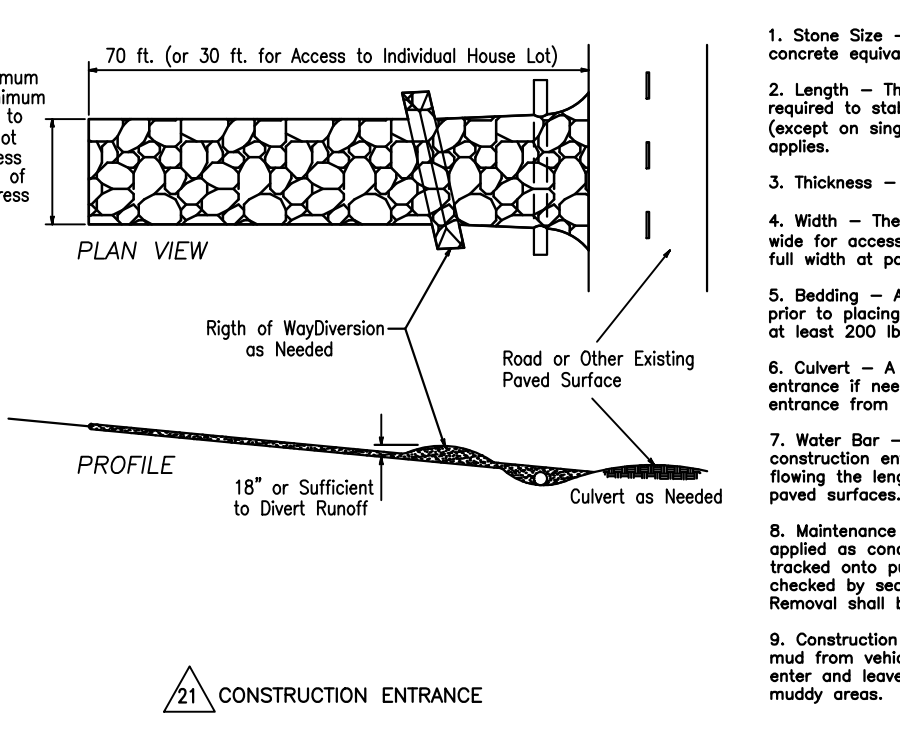
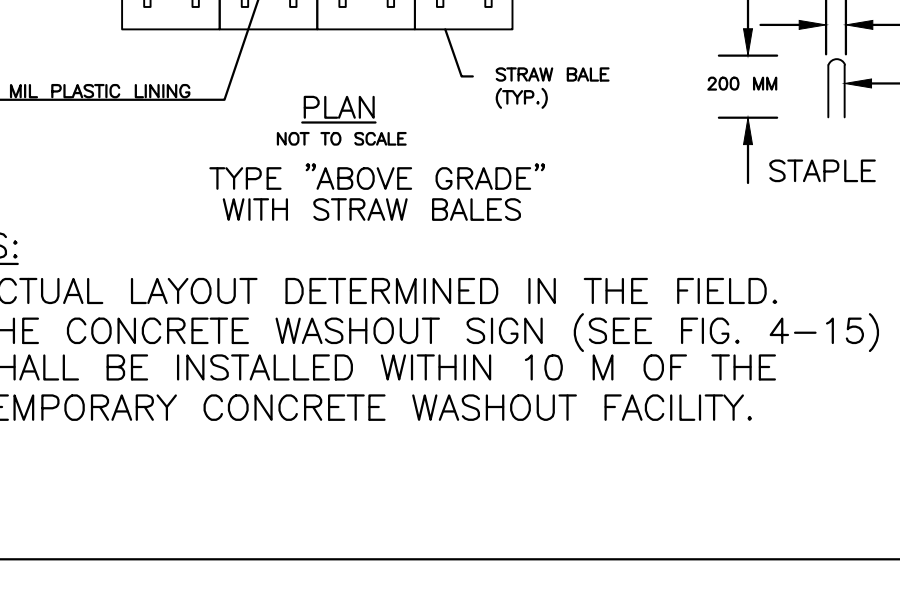
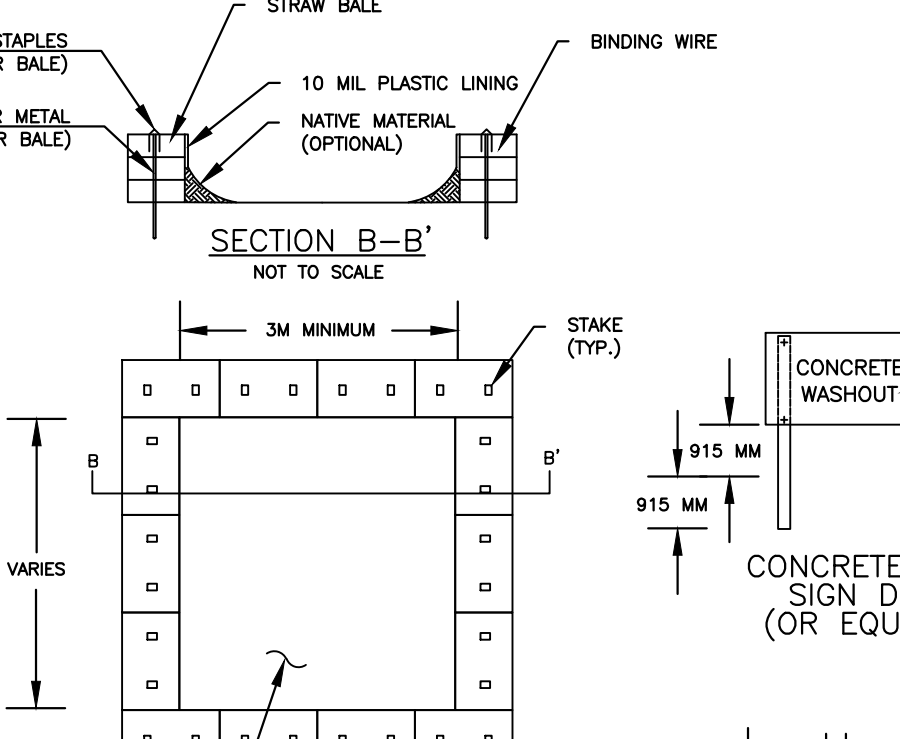
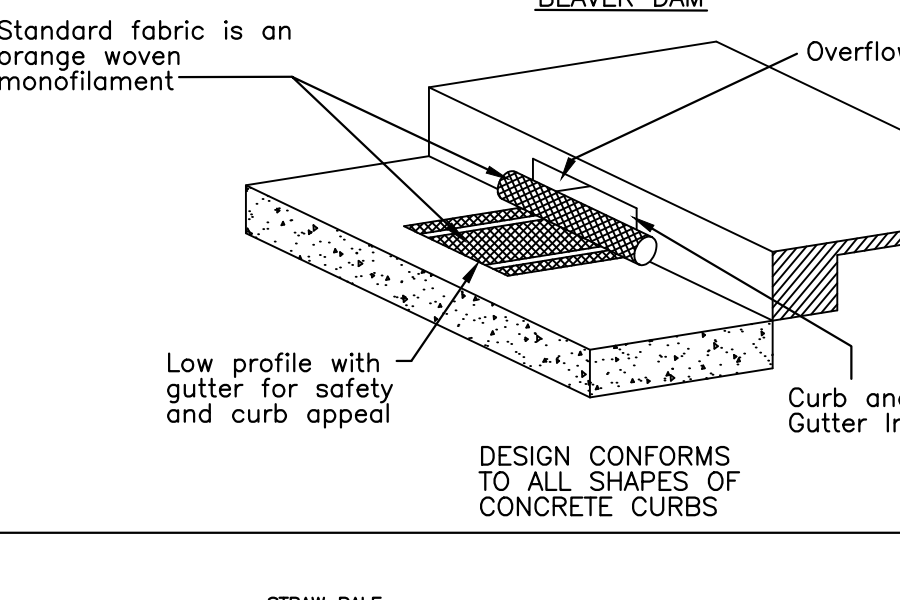
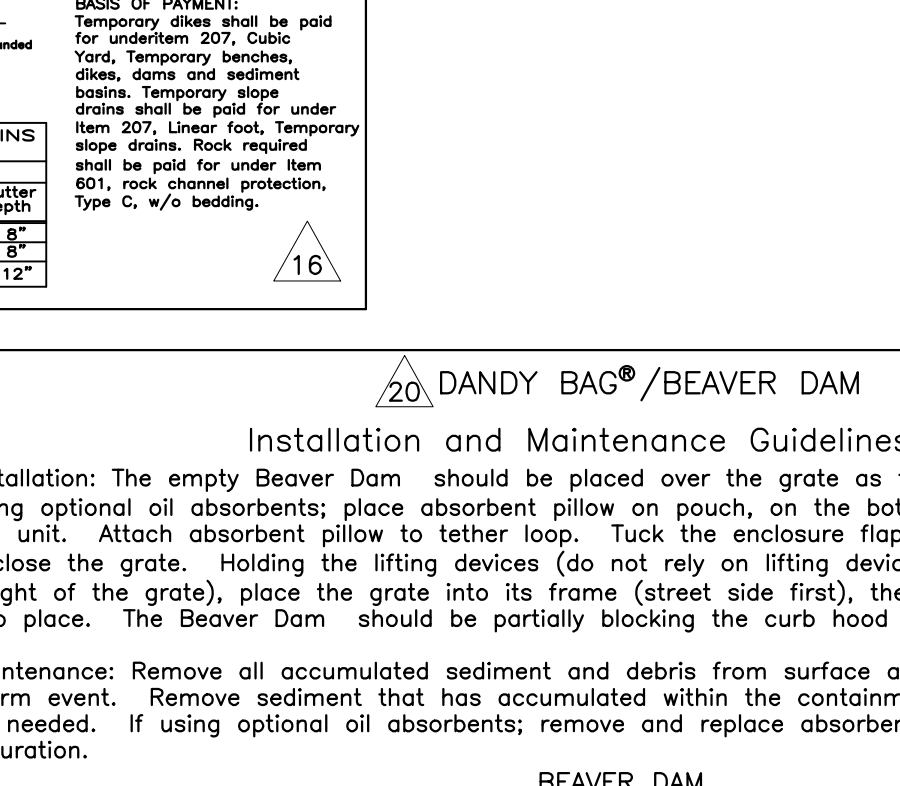
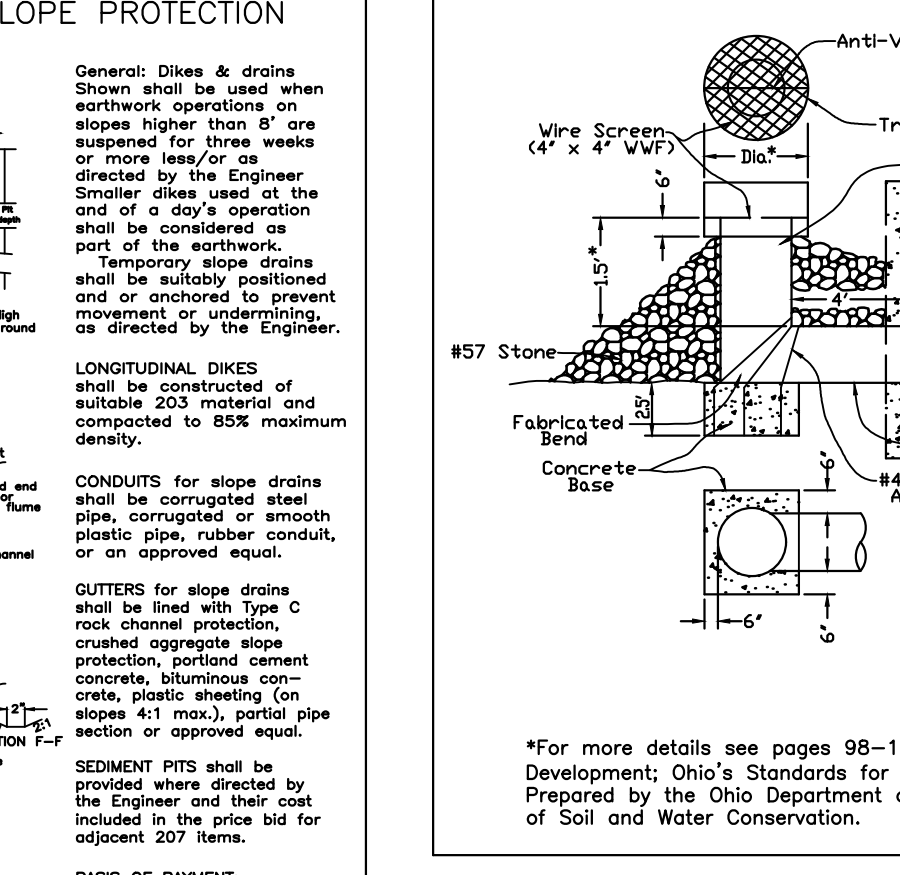
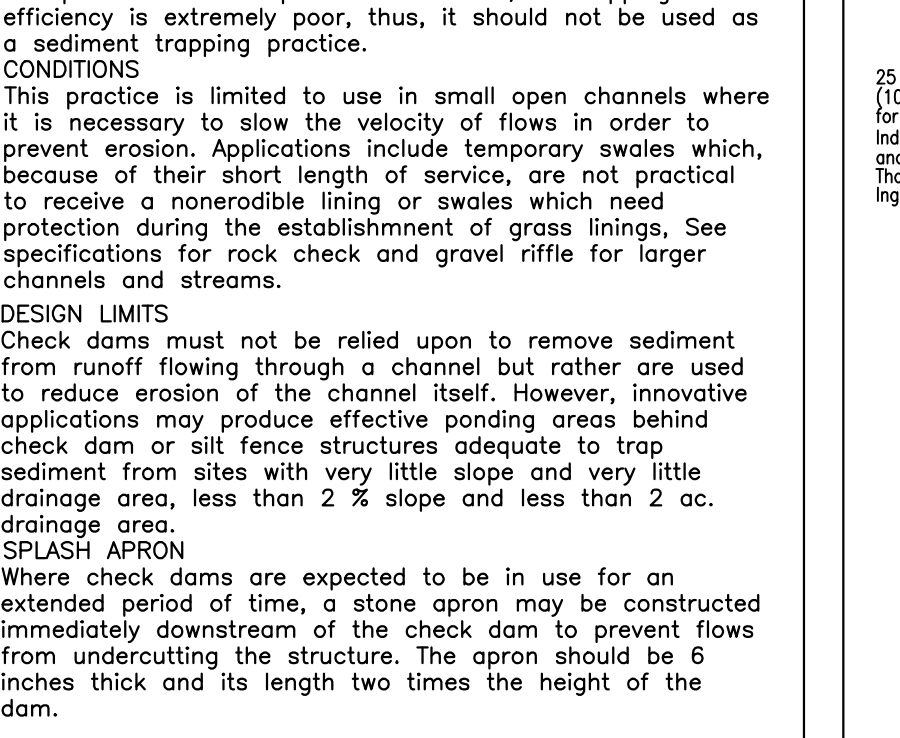
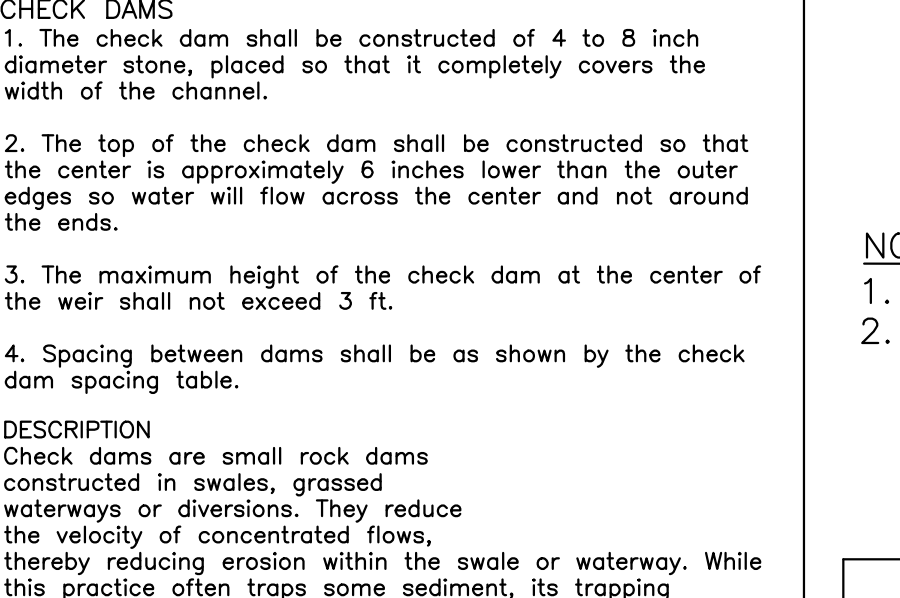
SEEDING AND MULCHING
Spread 4 to 6 inches of topsoil. Fertilize according to soil test (or apply 10 lb./1000 sq. ft. of 20-10-10 or 10-10-10 fertilizer.) Seed with an appropriate mix for the site (see table). Rake lightly to cover seed with 1/4" of soil. Roll lightly. Mulch with straw (70-90 lb. or one 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 fence must be maintained until final seeding or sodding is completed in spring March 15- May 31.



Dam Height (ft.)	< 5%	5-10%	10-15%	15-20%
1	65 ft.	30 ft.	20 ft.	15 ft.
2	130 ft.	65 ft.	40 ft.	30 ft.
3	200 ft.	100 ft.	65 ft.	50 ft.

CHECK DAM SPACING



Plot Time: Jul 31, 2018 3:56pm
Drawing name: K:\FF\BLOCKS\DETAILS\SOILEROS\SOIL.DWG - Layout Tab: Layout1

Date: _____
Drawn by: _____
Checked by: _____
Revision Description: _____

EROSION & SEDIMENT CONTROLS

