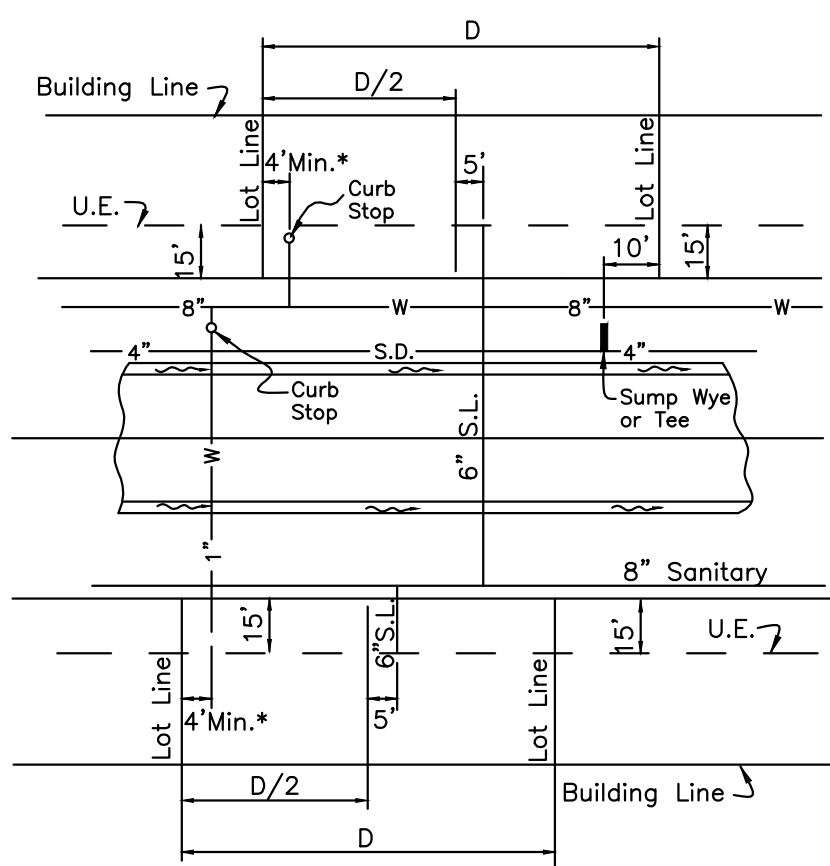
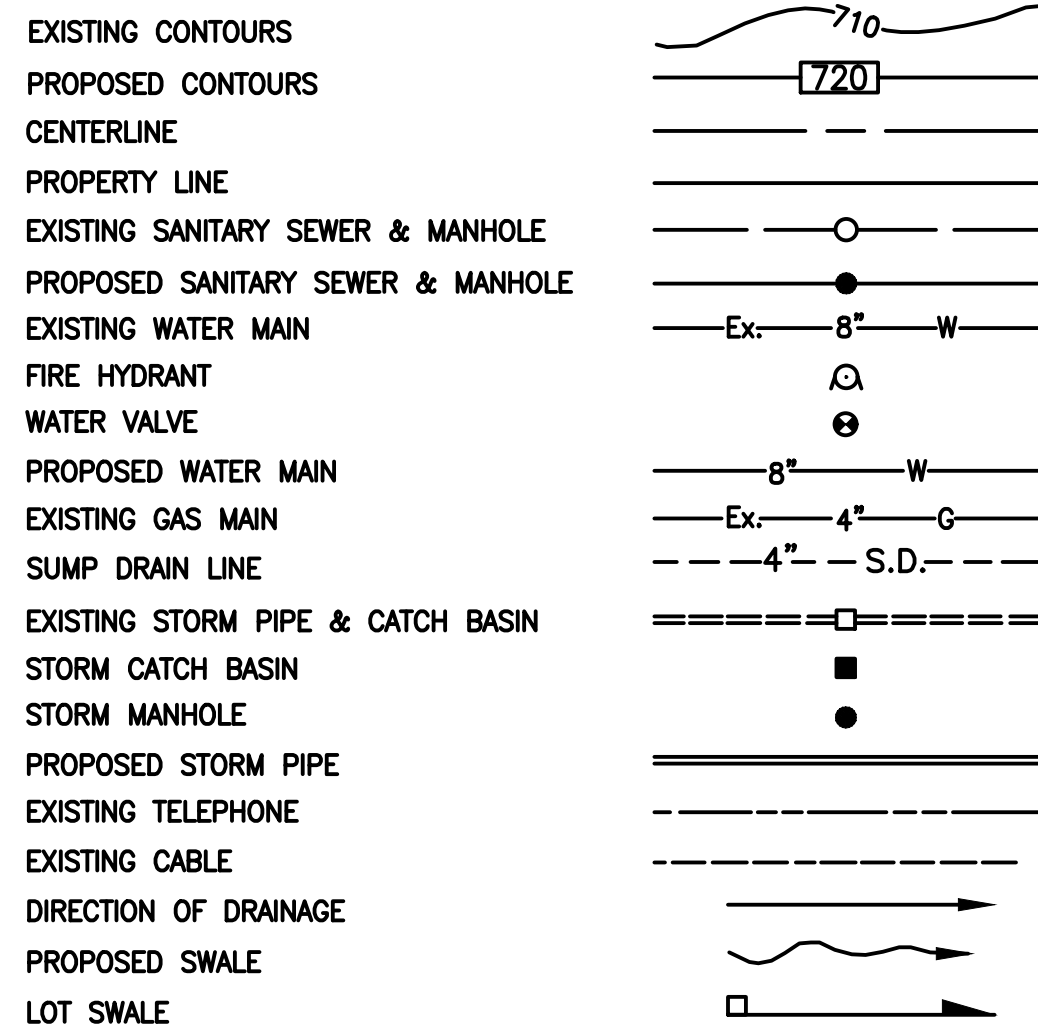


INDEX TO SHEETS

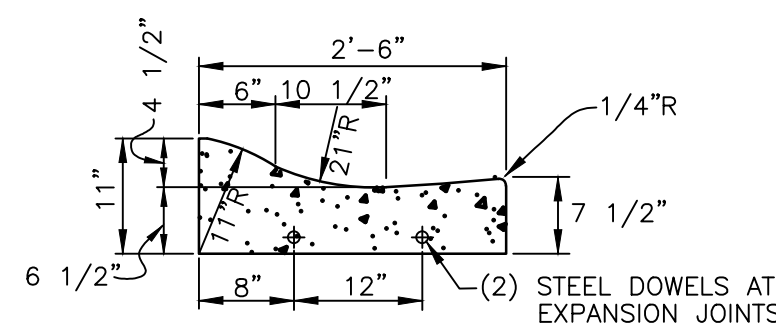
Title Sheet	1
Overall Layout	2
Plan & Profile Sheets	3-5
Profiles & Intersection Details	6
Drainage Details	7
Grading Plan	8-9
Detail Sheets	10-12
Soil Erosion & Sedimentation Control Detail Sheet	13

LEGEND

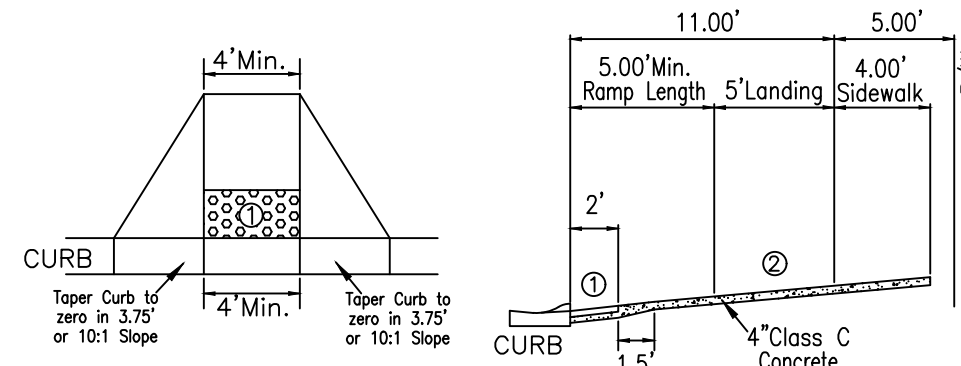


**STANDARD SERVICE
DETAIL**

*Except Otherwise shown on plan.

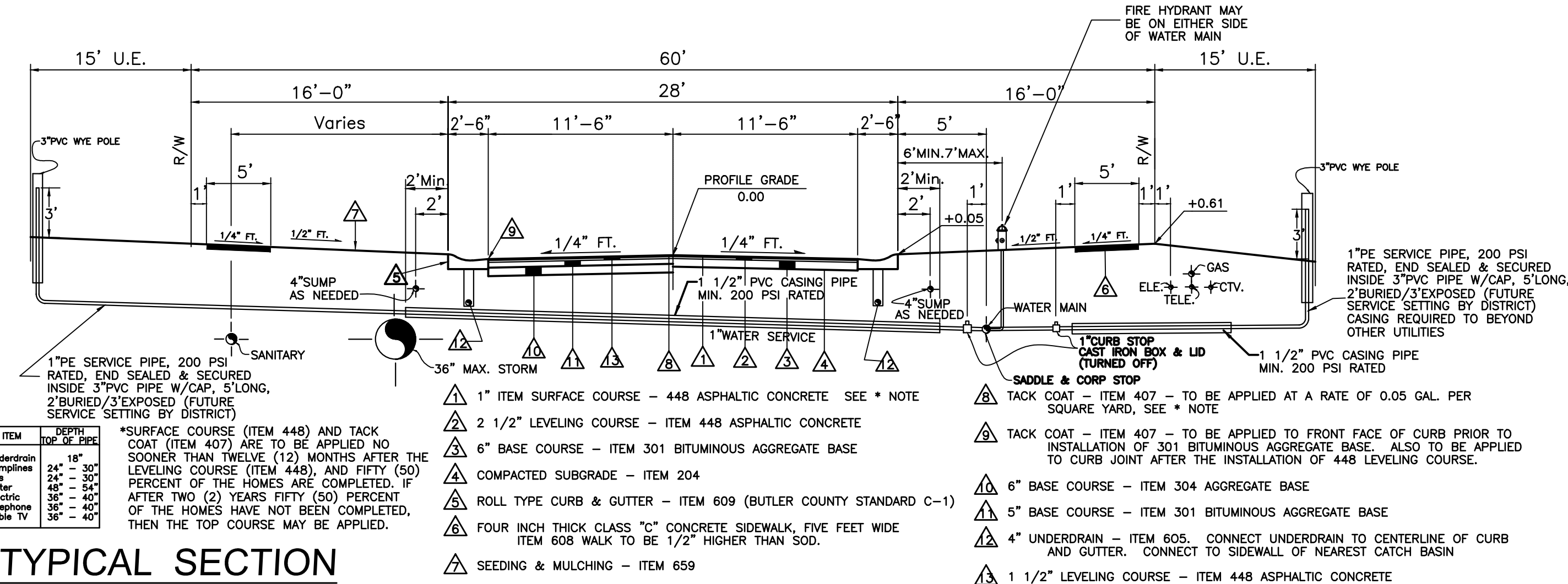


**STANDARD ROLL TYPE CURB &
GUTTER C-1**



CURB RAMP DETAIL

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 1:21 or flatter related to the horizontal, but the minimum slope shall be 1:21 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 through 5. Truncated domes are to meet the specifications of ODOT drawing 7-12-02 sheet 3.



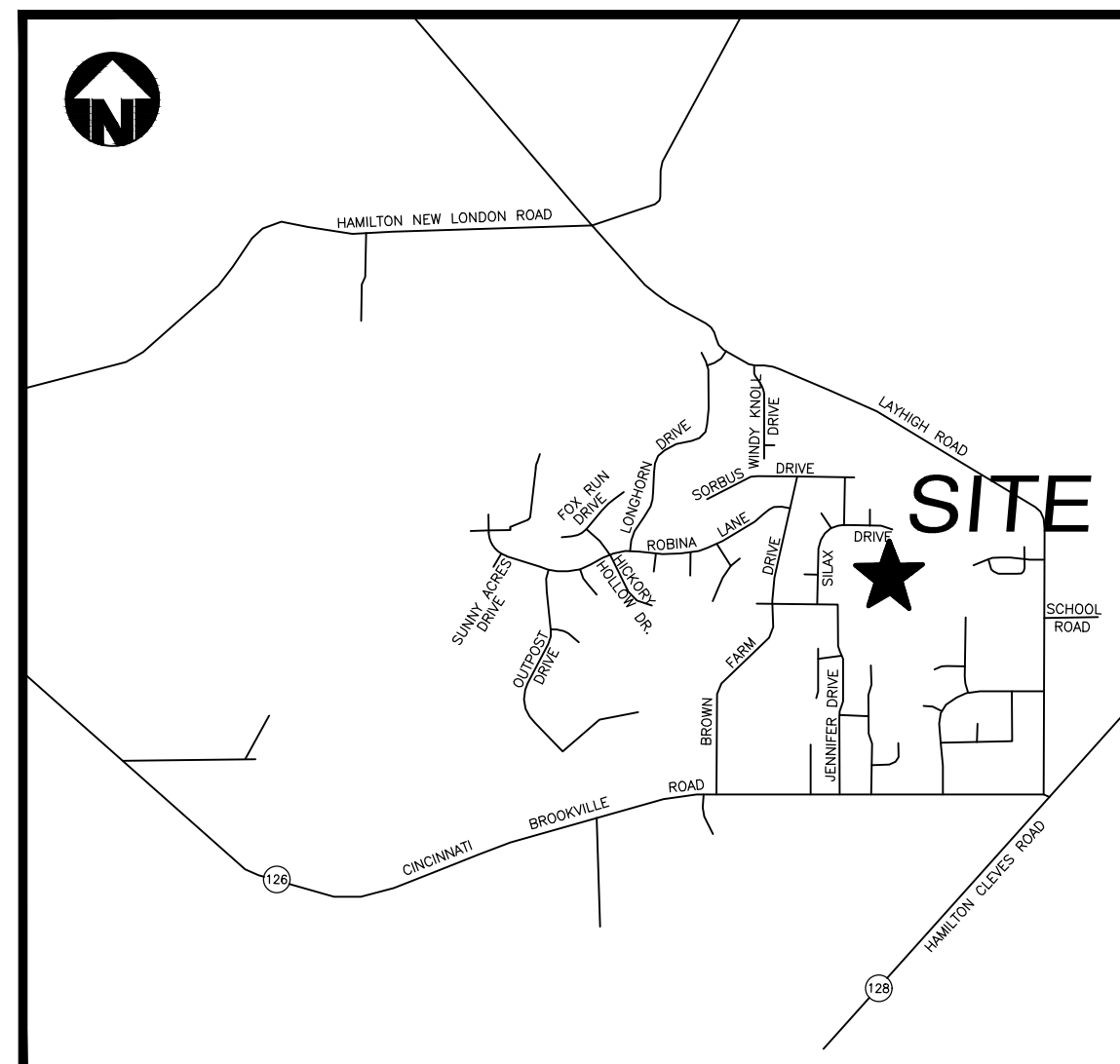
TYPICAL SECTION
VENICE CROSSING DRIVE

VENICE CROSSING SECTION THREE

SECTION 28 & 33, TOWN 3, RANGE 2 ROSS TOWNSHIP, BUTLER COUNTY, OHIO AUGUST, 2021



Know what's below.
Call before you dig.



VICINITY MAP

OWNER/DEVELOPER

Ross Trails Inc.
P.O Box 277
Ross, Ohio
(513) 720-9900

BENCHMARK

O.D.O.T VRS Network NAVD88-
Sanitary Manhole 17.0 Feet North of
the North Terminus of Mikehill Drive
Elevation= 571.04

JOB LOG	
DATE	COMMENT
6-25-21	Submitted to Butler County Planning & SWRW
7-27-21	Resubmitted to BCWS
8-9-21	Resubmitted to BCEO

APPROVED
Eric Pottenger, 8/19/2021, 10:02:44 AM

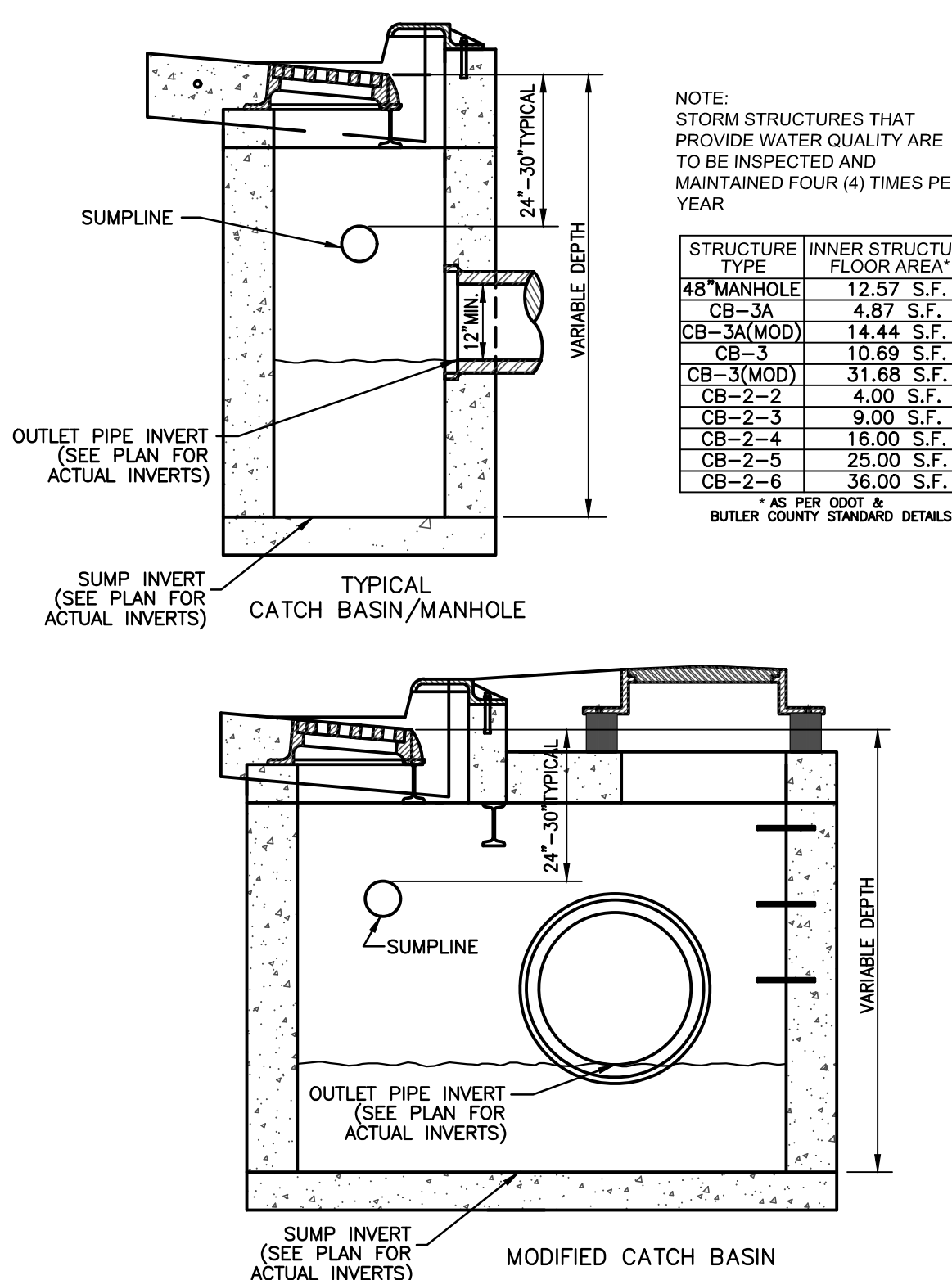
SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

C-1	
Std.MH-1A	
Std.HW-D	HW1.1 (O.D.O.T.)
CB-3	
CB-3(Mod.)	
CB-3A	
CB-3A(Mod.)	CB-2-4(O.D.O.T.)
CB-2-3(O.D.O.T.)	CB-2-3(O.D.O.T.)
Std.R-1	

CONSTRUCTION APPROVAL

Butler Co. Water & Sewer Dept.	Date
Butler Co. Engineer's Office	
Southwest Regional Water District	
Butler Co. Zoning & Drainage	

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



STORM WATER QUALITY STRUCTURE DETAILS
(Not to Scale)

GENERAL NOTES

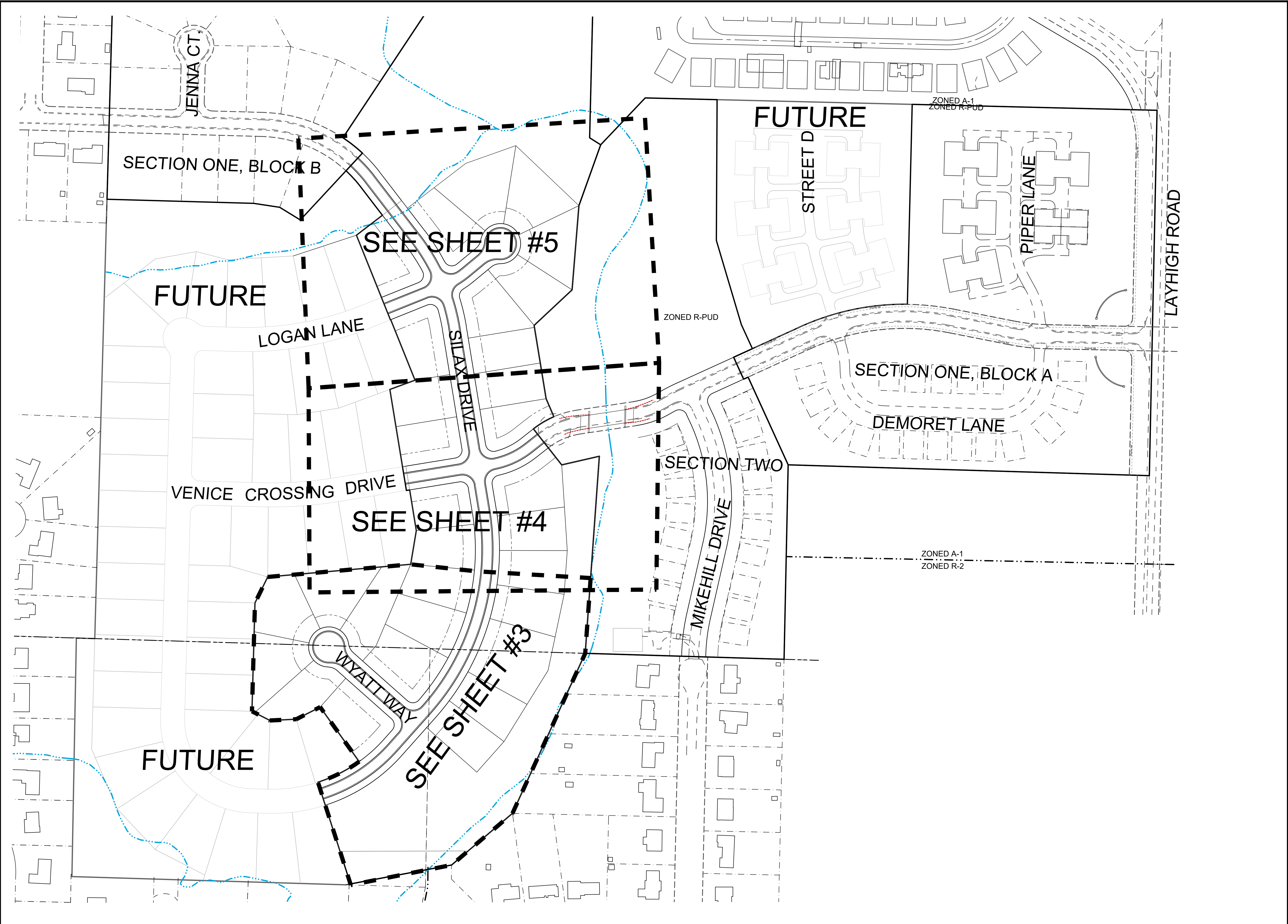
- Item numbers refer to the 2010 Ohio Department of Transportation construction and material specifications, and all construction work shall be done according to said specifications of Butler County requirements and standards for subdivisions. When in conflict, the County requirements shall prevail.
- 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 15' 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 403), 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 appearances.
- Sump line conduits are to be SDR 35, Arcco 2000.
- WATER MAIN**
A. Water main materials, valves, fire hydrants, fittings and appurtenances and installation to be as per Southwest Regional Water District specifications. Ductile iron water main shall be Pressure Class 350 as per AWWA C-151 with 8-mil polyethylene encasement as per AWWA C-105. PVC water main shall be DR14 as per AWWA C-900. All fittings shall be mechanical joint ductile iron with 8-mil polyethylene encasement as per AWWA C-105.
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. Service risers to be installed per Typical Section. Meter Facilities to be installed by Southwest Regional Water District.
- 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 encased or constructed of materials that are equivalent to water main standards of construction for a minimum distance of 10 feet on each side of the water main.
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 or 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 would 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 on file in the office of the Butler County Department Water and Sewer Department.
- Butler County Water and Sewer Department and Southwest Regional Water District 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.
- STORM SEWER**
A. Storm sewer pipe shall meet the requirements as follows:
1. PVC pipe as per ODOT Supplemental Specification 707.42 for all diameters.
2. HDPE pipe as per ODOT Supplemental Specification 707.33.
3. Corrugated steel spiral rib pipe as per ODOT Supplemental 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, Duracrete or equal).
5. Bituminous coated corrugated steel pipe as per ODOT Specification 707.05 or 707.07.
Installation shall meet Butler County Specifications. All joints shall be soil seal joints unless specifically noted on the plans.
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 for 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.
- Private driveways, parking lots and other paved areas, earthen berms or structures should not be constructed over private water or sewer service lines within the public road right of way or within the easement areas for the public utilities. Should this occur, the property owner shall be held responsible for the protection and repair and for providing access to any curb stops, meter pits, manholes, clean-outs, etc. installed in conjunction with these private service lines and for any damage or restoration of the paved surfaces or structures that may result from the future operation, maintenance, repair or replacement of said service lines and appurtenances.
- Any detention basin on site should be constructed prior to the clearing of topsoil and grading of the site. All trees and vegetation shall be removed from all proposed detention basins regardless of maintenance responsibility.
- SEDIMENTATION CONTROL**
The project has been designed to control erosion and prevent damage to other property. All stripping, earthwork, and regrading shall be performed to minimize erosion. Natural vegetation shall be retained wherever possible. The proposed plan will allow almost all eroded material to be retained on site.
All areas disturbed by the construction of the roadways, ditches and sediment basins shall be seeded and strowed 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 and Southwest Regional Water District will not be responsible for any pavement or storm sewer repairs resulting from water main and sanitary sewer repairs. Butler County and Southwest Regional Water District 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 and Southwest Regional Water District, 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. For Patio Home lots, the drainage easement will be provided between the lots in the open space.
- 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 and Southwest Regional Water District inspection and extension fees in unit price bid.
- Existing Zoning: R-PUD
- Total Acreage: 26.475 Acres

VENICE CROSSING SECTION THREE
ROSS TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 28 & 33, TOWN 3, RANGE 2

bayer becker
www.bayerbecker.com
6900 Tiersville Road, Suite A
Mason, OH 45040 - 513.339.6600

Drawing: 13M074-003 CD
Drawn by: TAC
Checked by: XXX
Issue Date: 6-24-21
Sheet: 1/13

Plot time: Aug 09, 2021 - 4:27pm
 Drawing name: J:\2013\13M074-003\CD\DWG\13M074-003 CD.dwg - Layout Tab: 20V



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Item	Revision Description	Date	Drawn	Chk
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VENICE CROSSING SECTION THREE
 ROSS TOWNSHIP, BUTLER COUNTY, OHIO
 SECTION 28 & 33, TOWN 3, RANGE 2

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

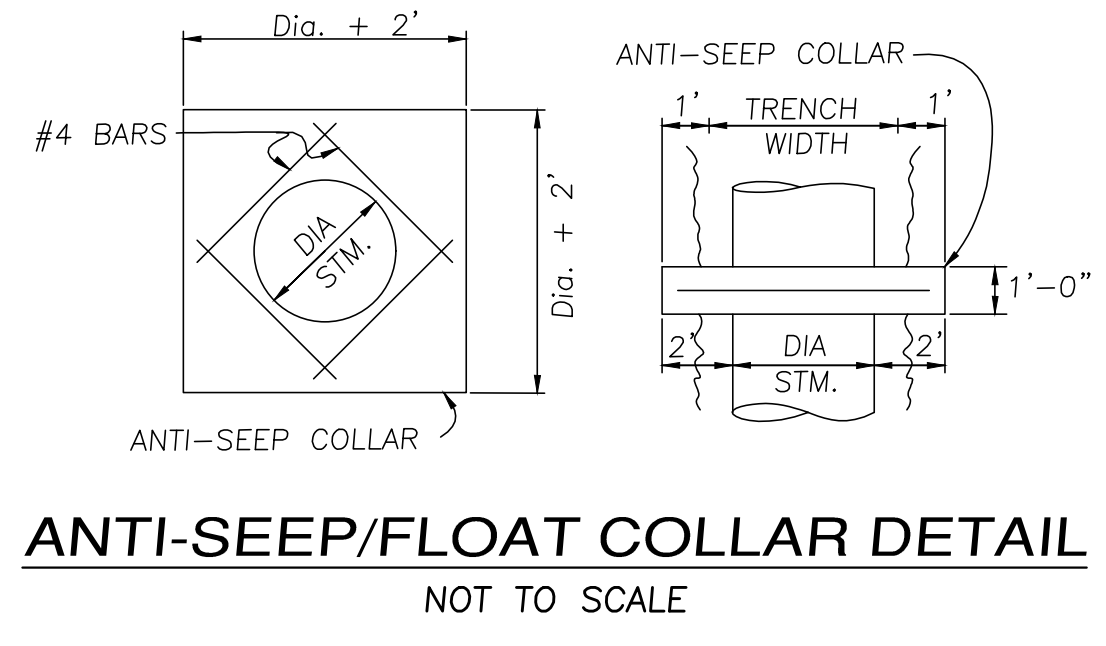
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 Drawn by: TAC
 Checked by: xxx
 Issue Date: 6-24-21

Sheet: **2/13**

OVERALL PLAN

- NOTES:
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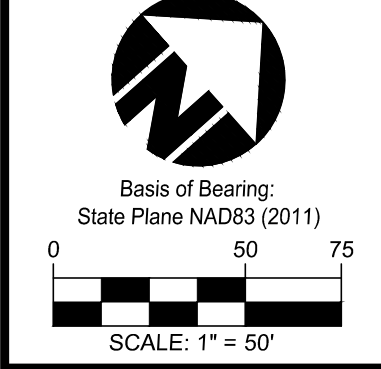
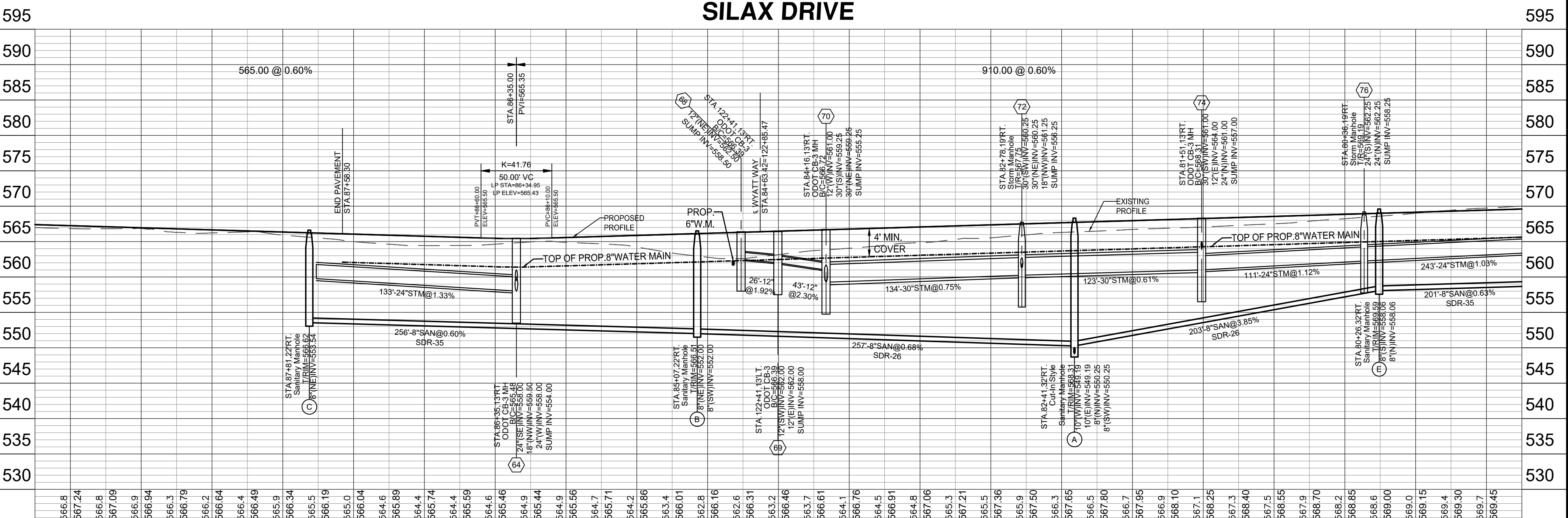
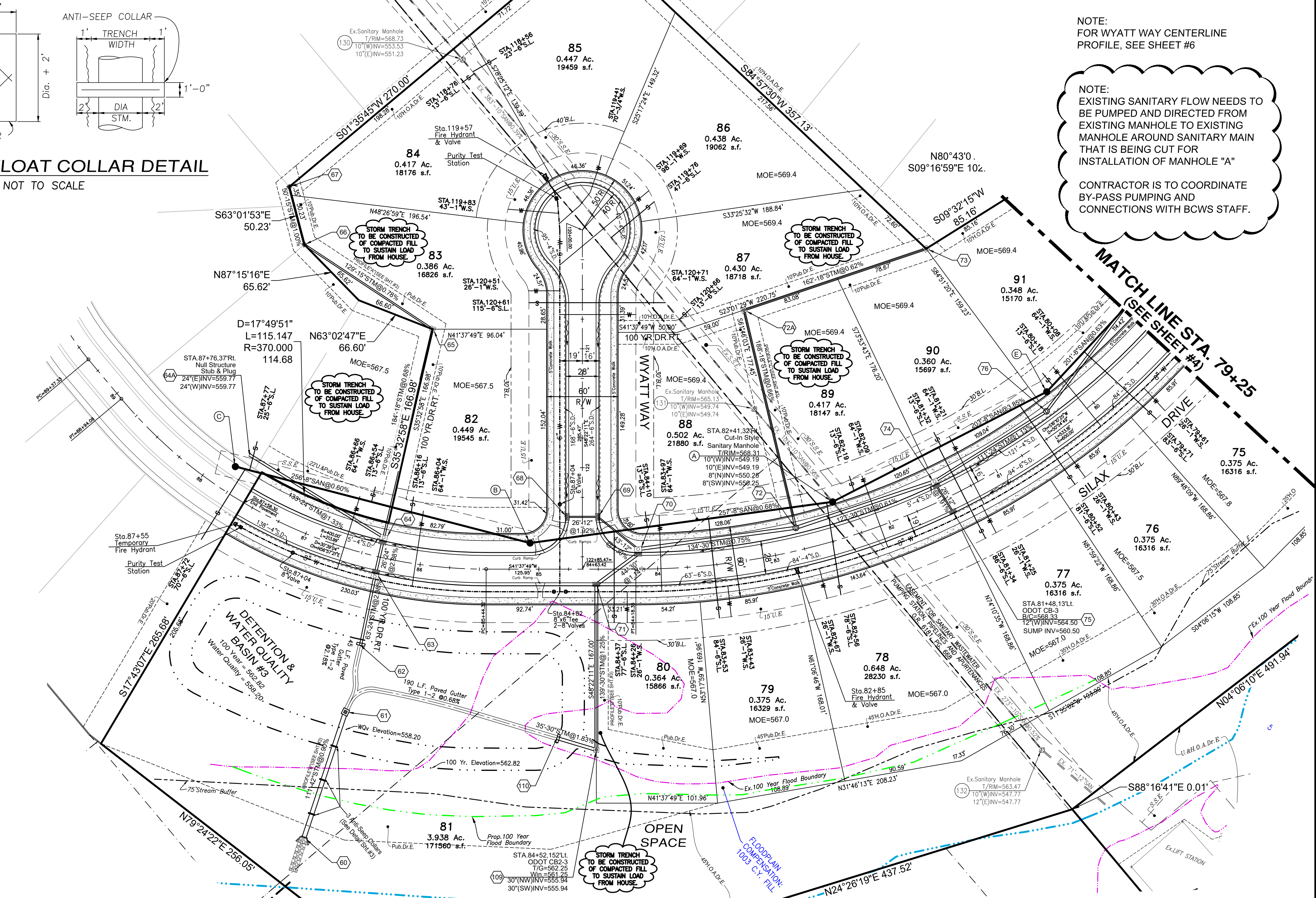
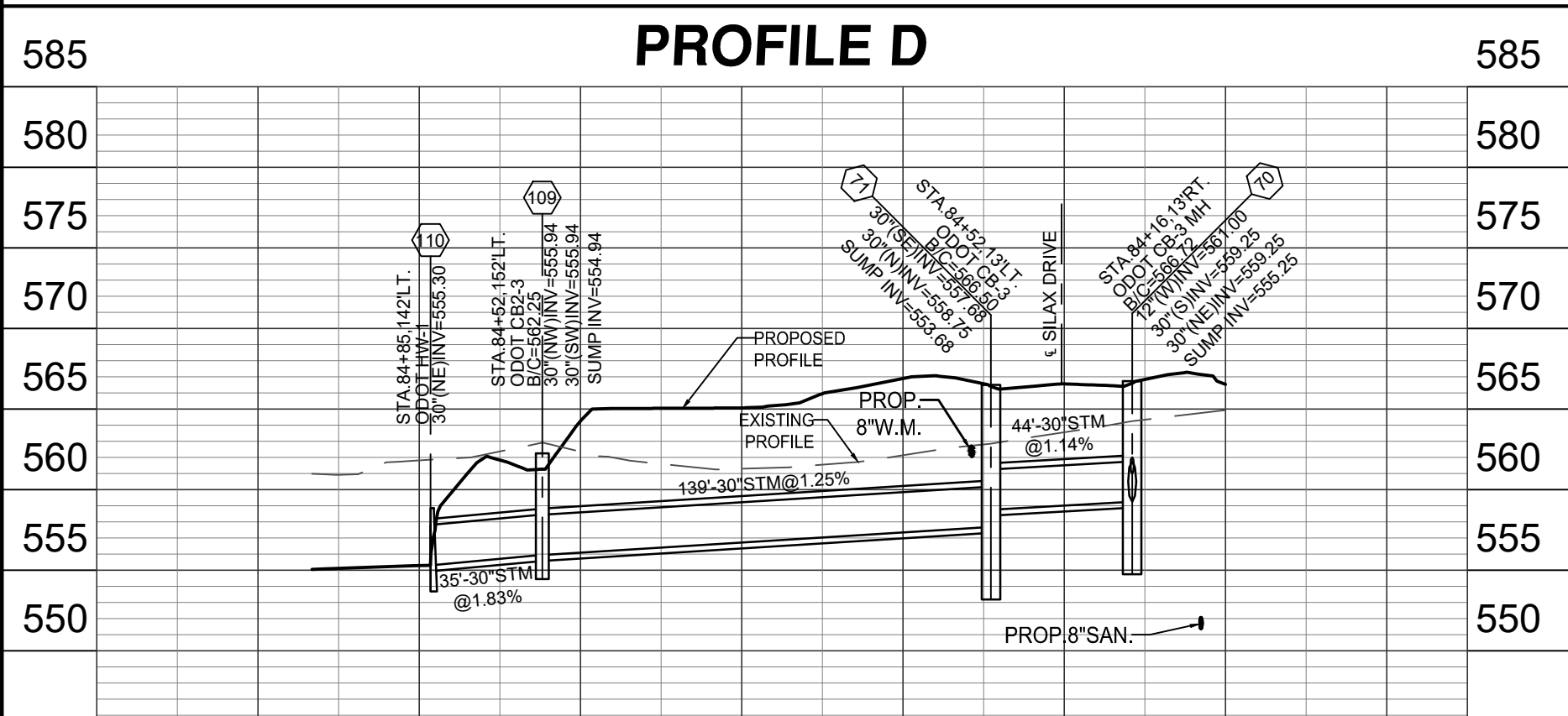
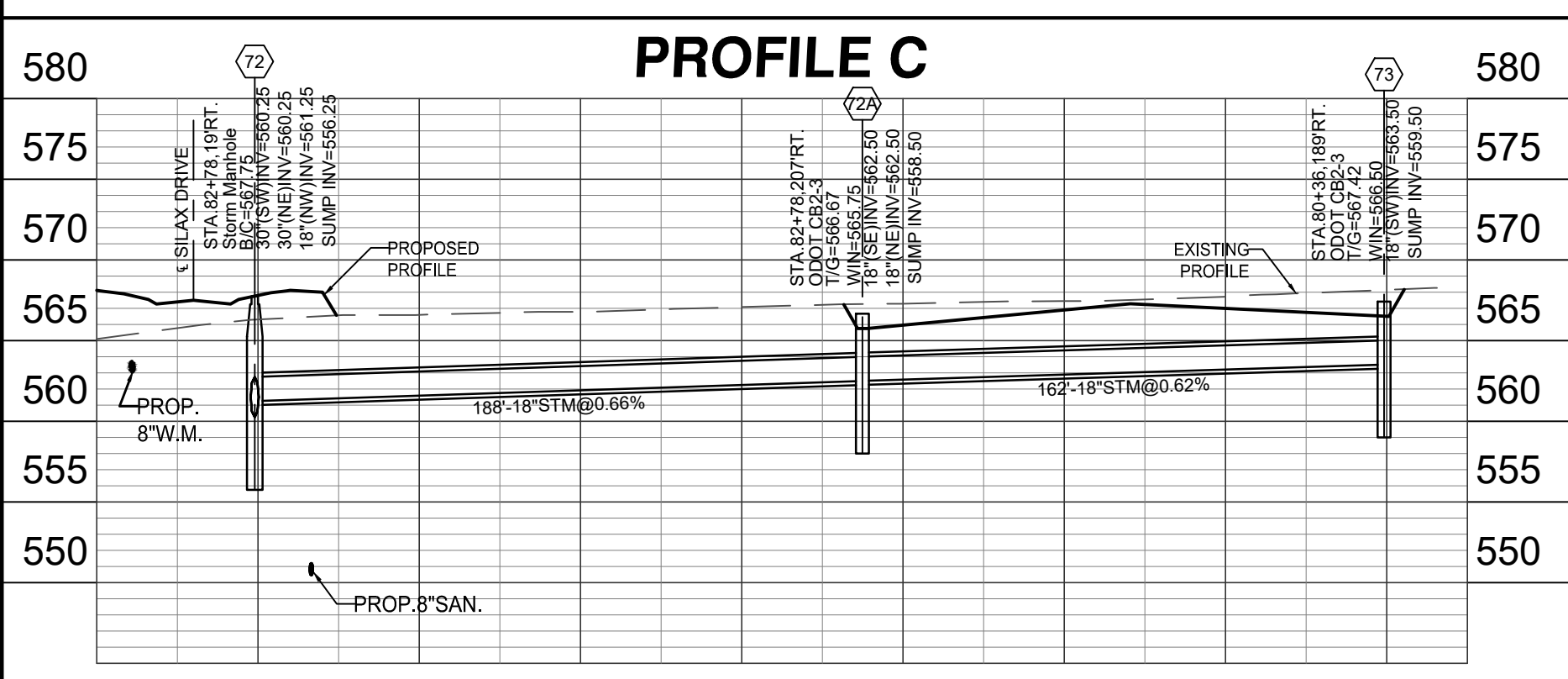
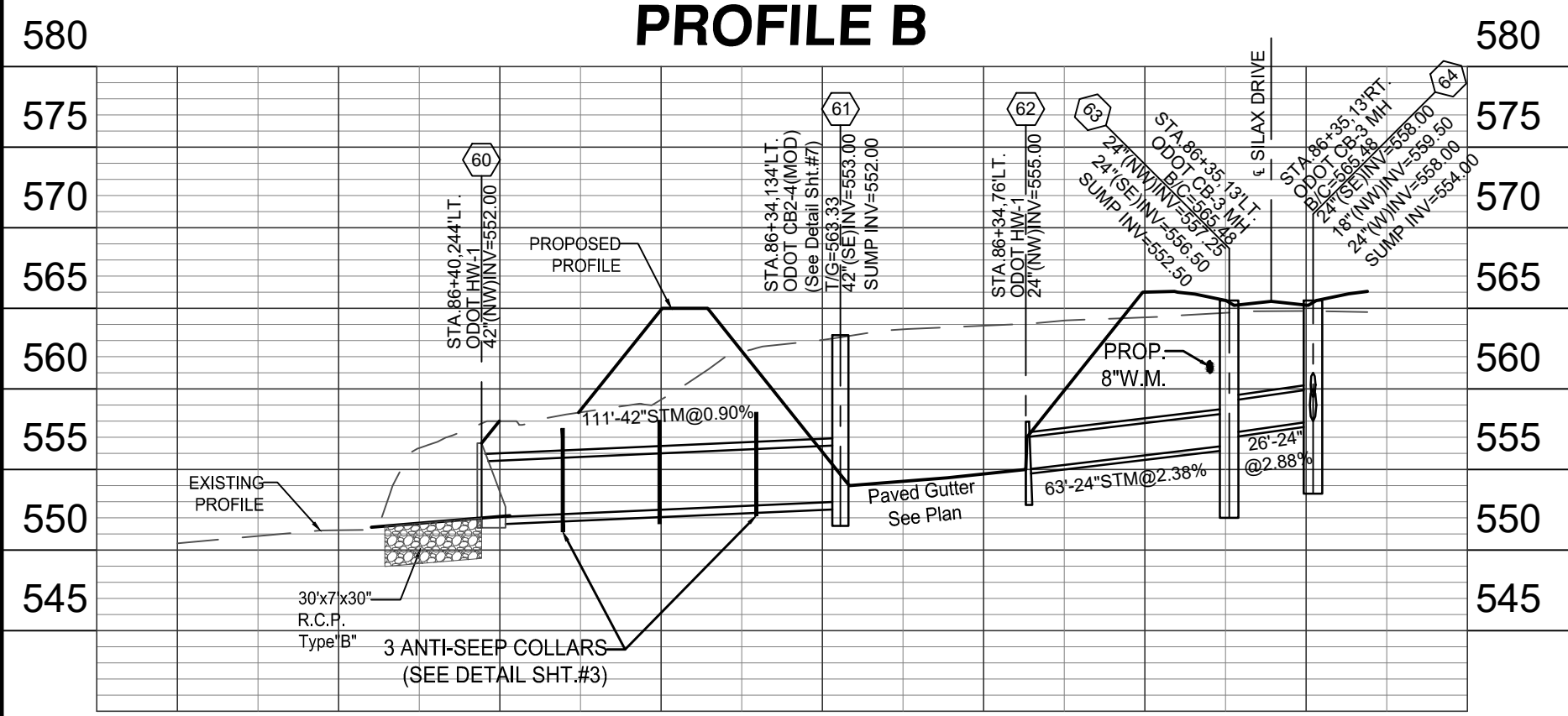
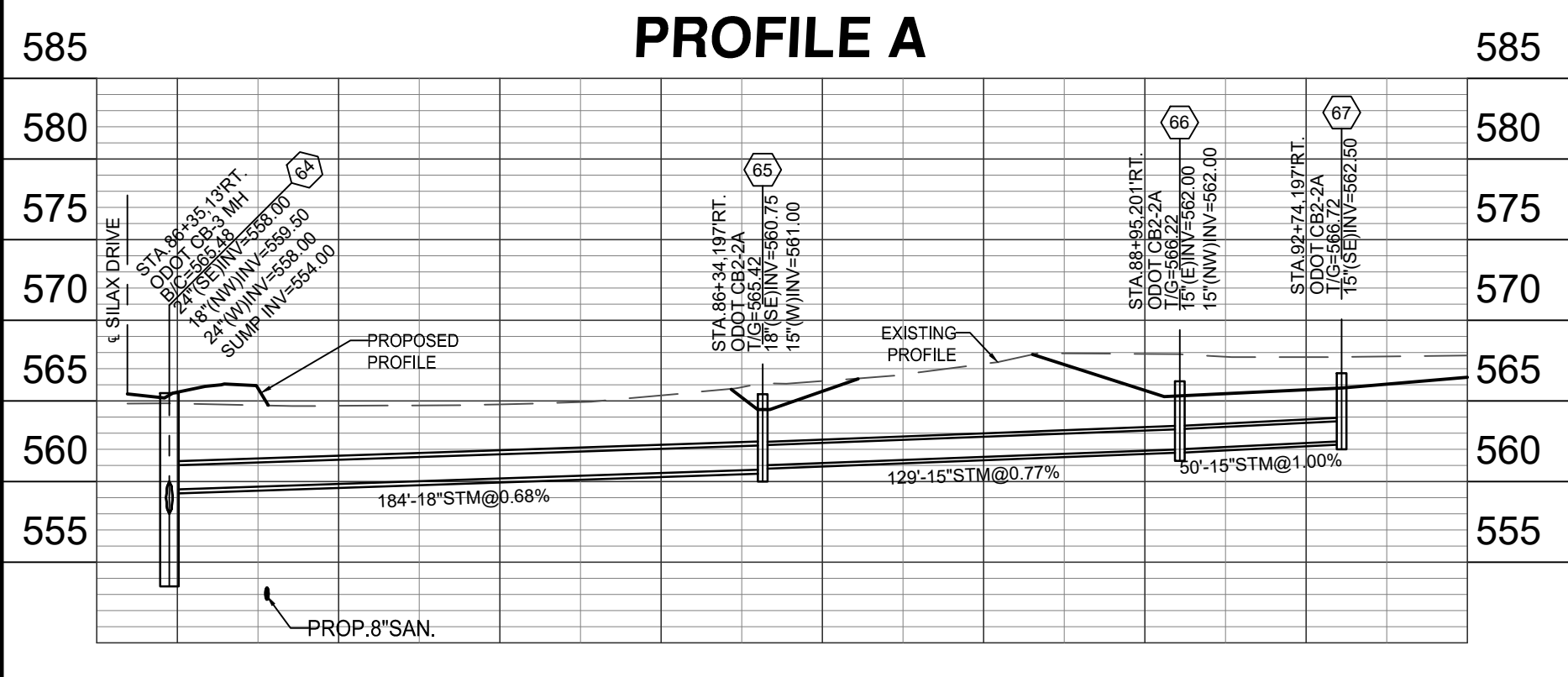
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NOTE:
FOR WYATT WAY CENTERLINE PROFILE, SEE SHEET #6

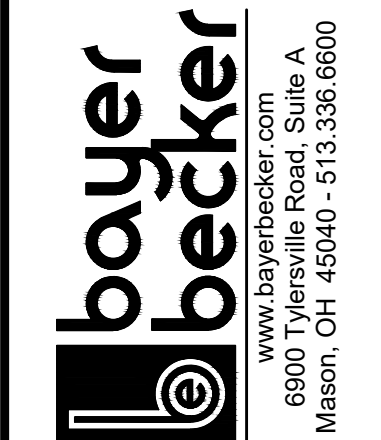
NOTE:
EXISTING SANITARY FLOW NEEDS TO BE PUMPED AND DIRECTED FROM EXISTING MANHOLE TO EXISTING MAINHOLE AROUND SANITARY MAIN THAT IS BEING CUT FOR INSTALLATION OF MANHOLE "A"

CONTRACTOR IS TO COORDINATE BY-PASS PUMPING AND CONNECTIONS WITH BCWS STAFF.



Date	Drawn	Chk.	Revision Description
7-27-21	TAC		1. Revised as per BCWS
8-9-21	JAB		2. Revised as per BCCE
			3.
			4.
			5.
			6.
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VENICE CROSSING SECTION THREE
ROSS TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 28 & 33, TOWN 3, RANGE 2

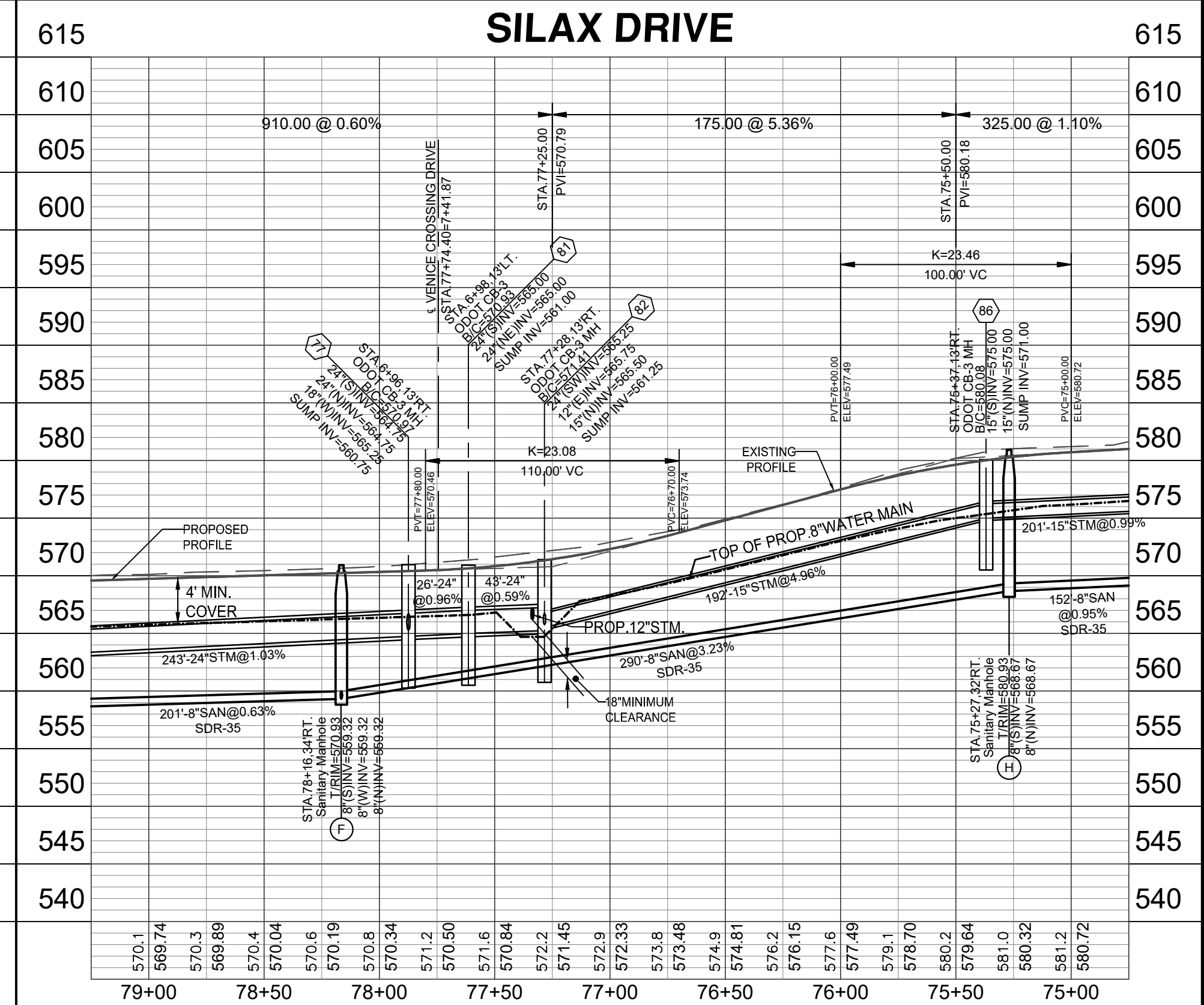
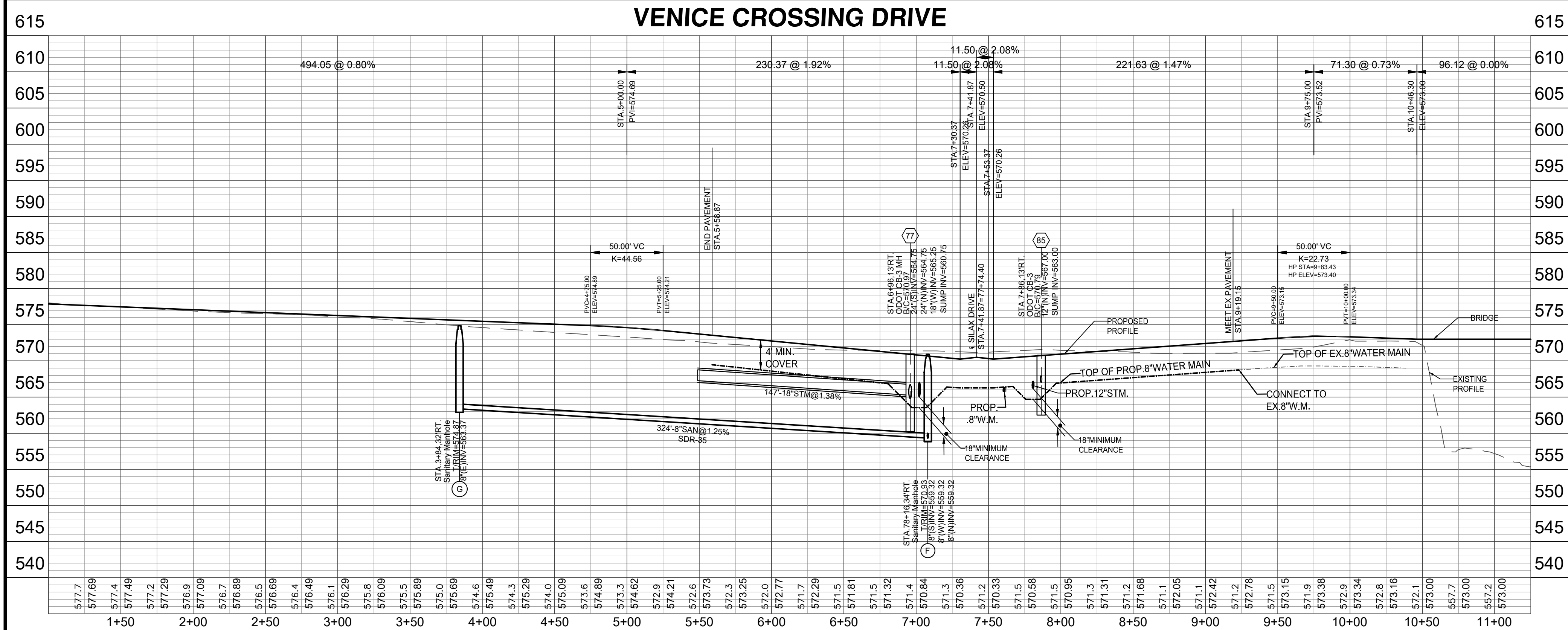
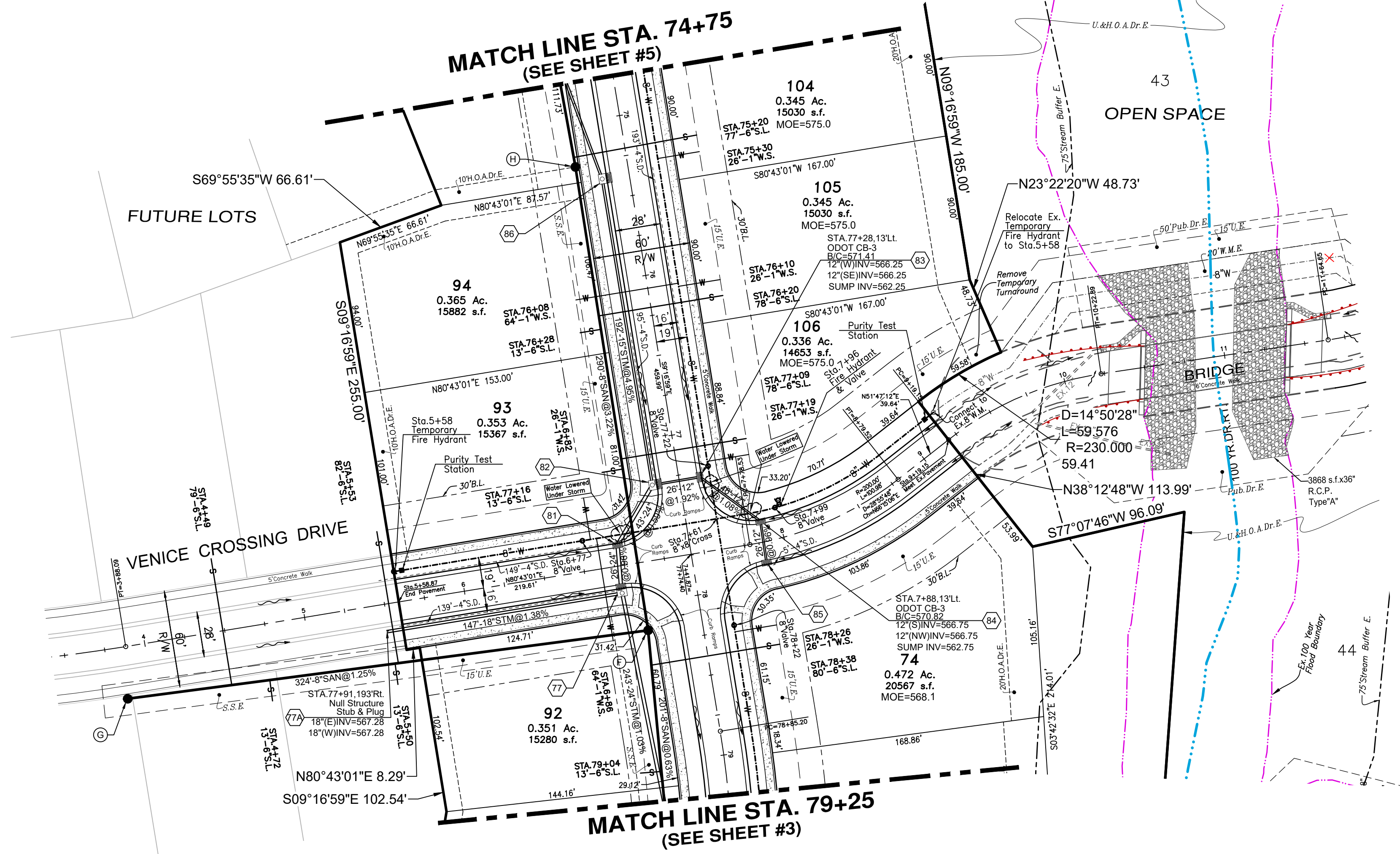


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Drawn by: TAC
Checked by: XXX
Issue Date: 6-24-21

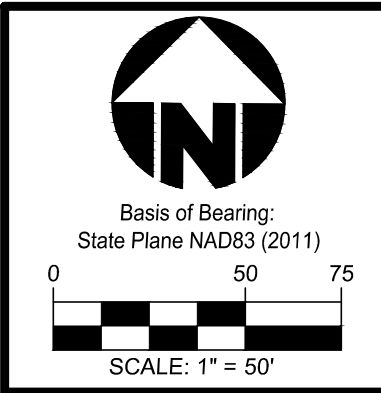
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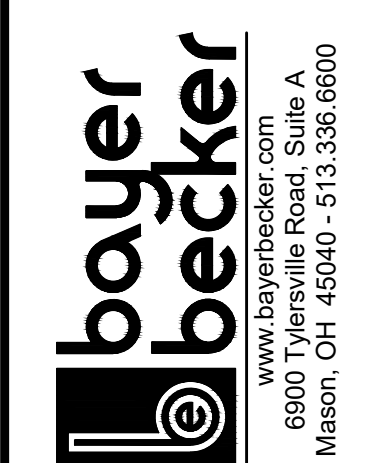


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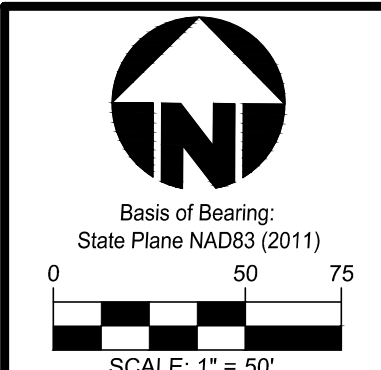
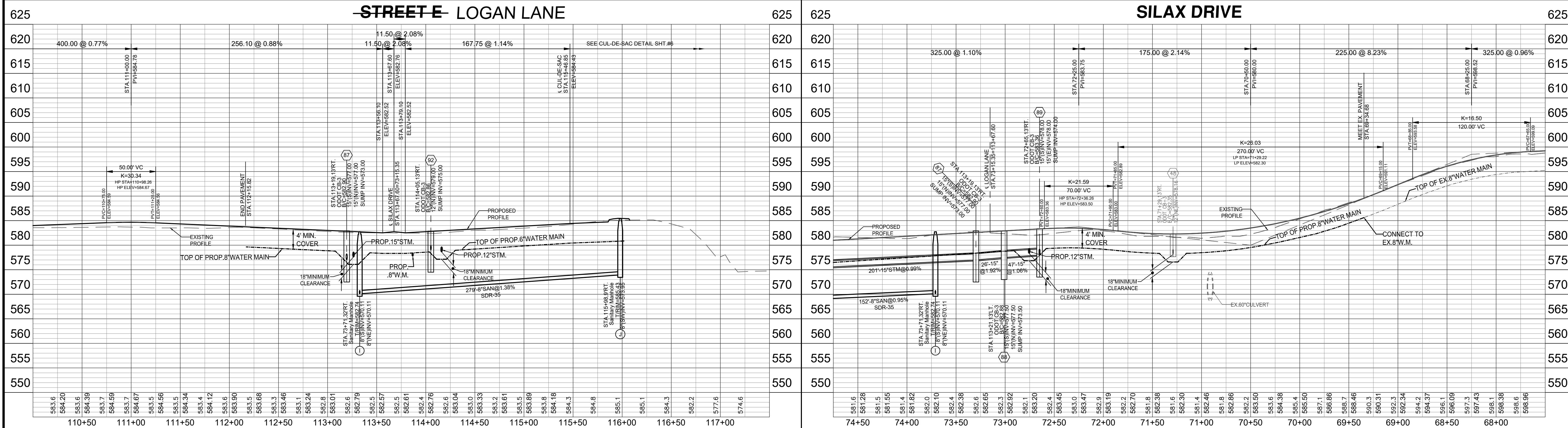
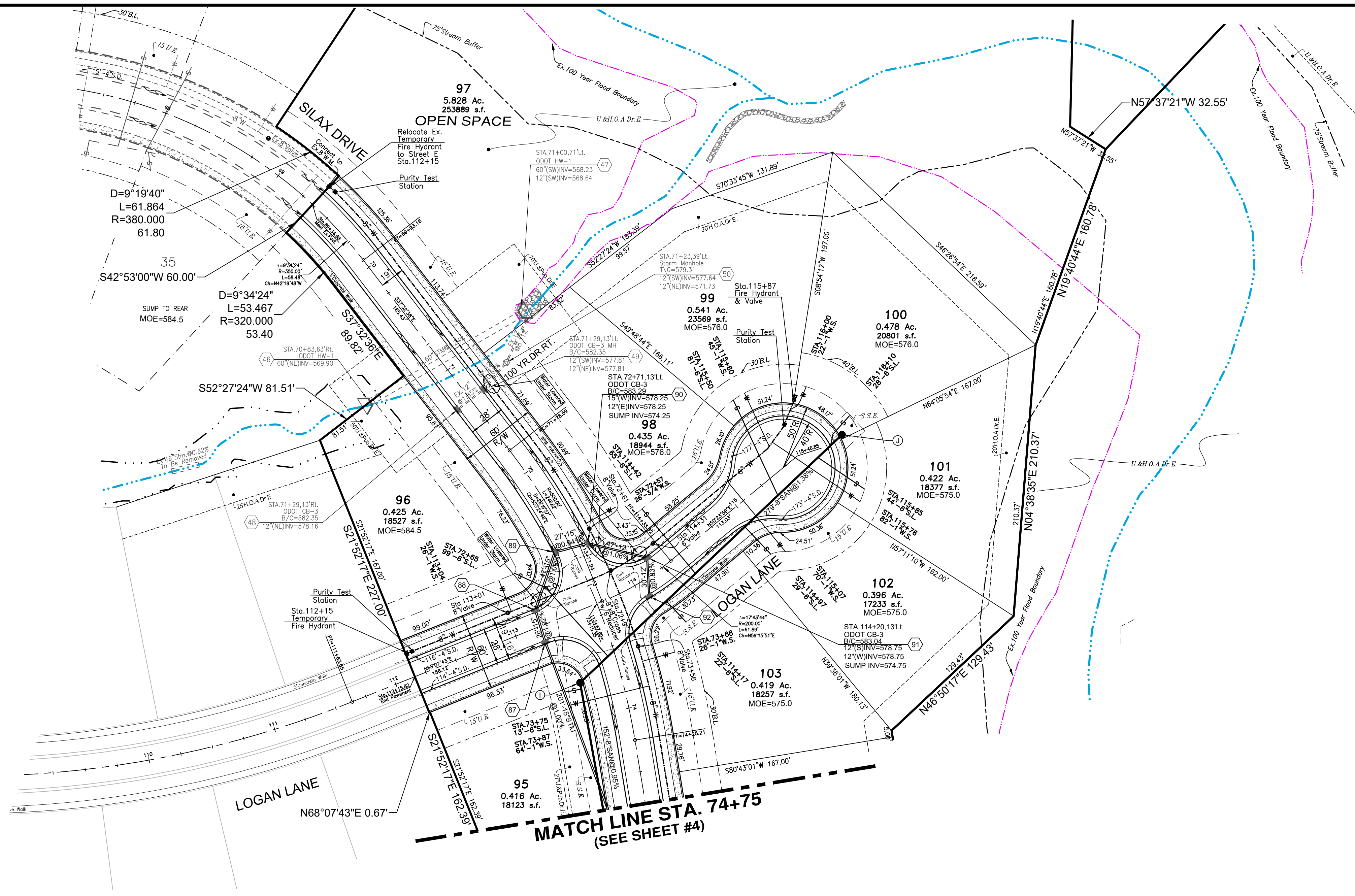
VENICE CROSSING SECTION THREE
ROSS TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 28 & 33, TOWN 3, RANGE 2



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Issue Date: 6-24-21

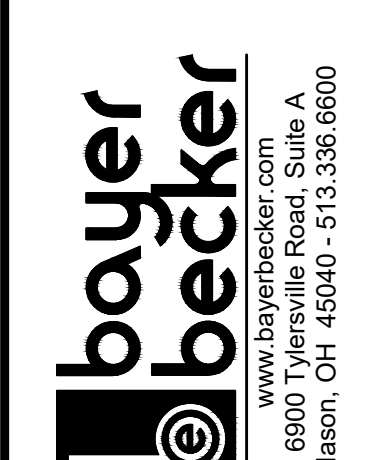
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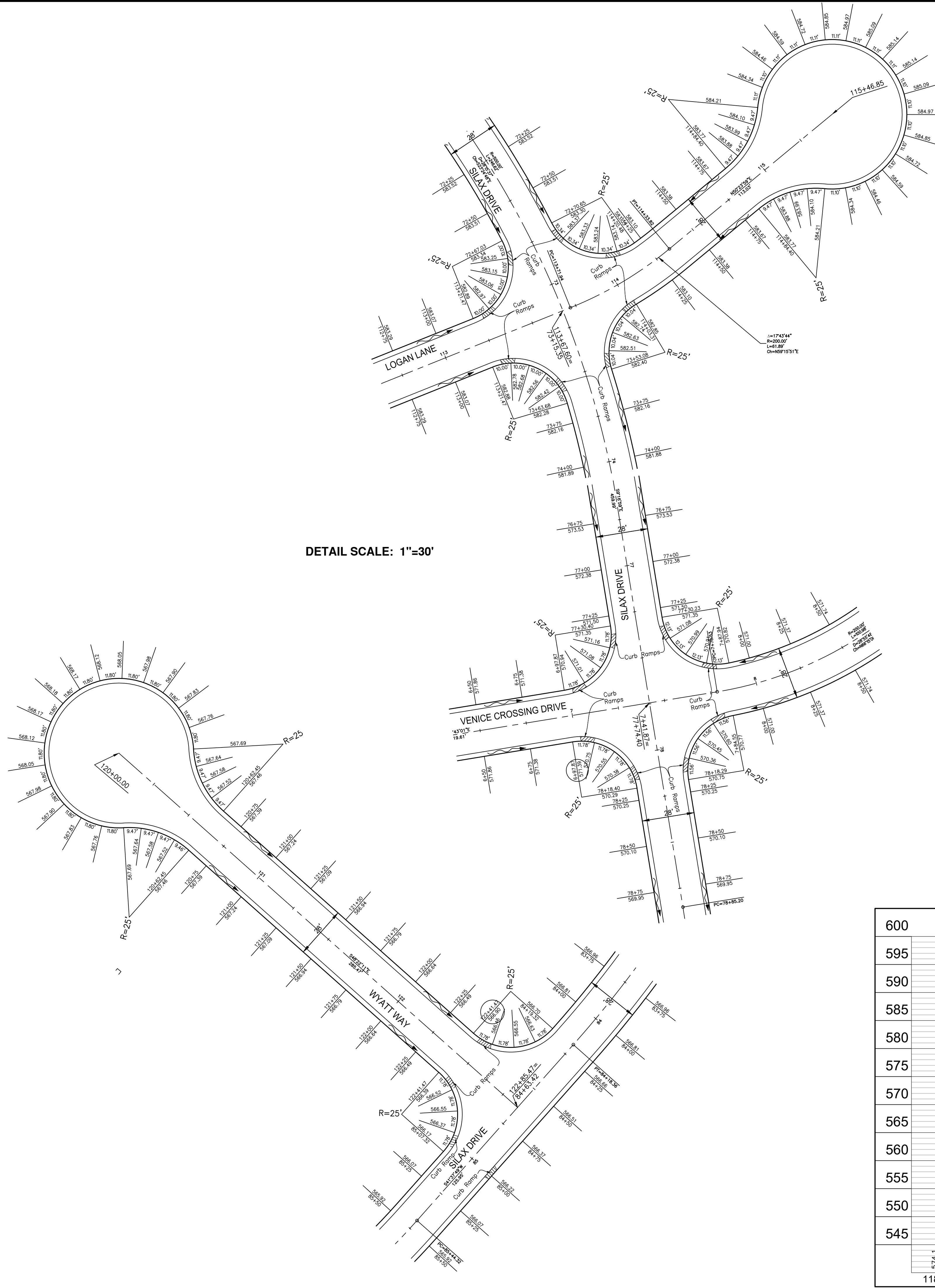
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1	Revised as per BCEE	8-9-21	JAB	
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VENICE CROSSING SECTION THREE
ROSS TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 28 & 33, TOWN 3, RANGE 2

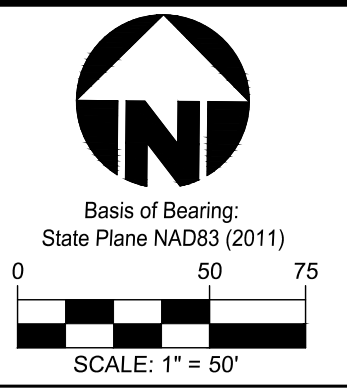
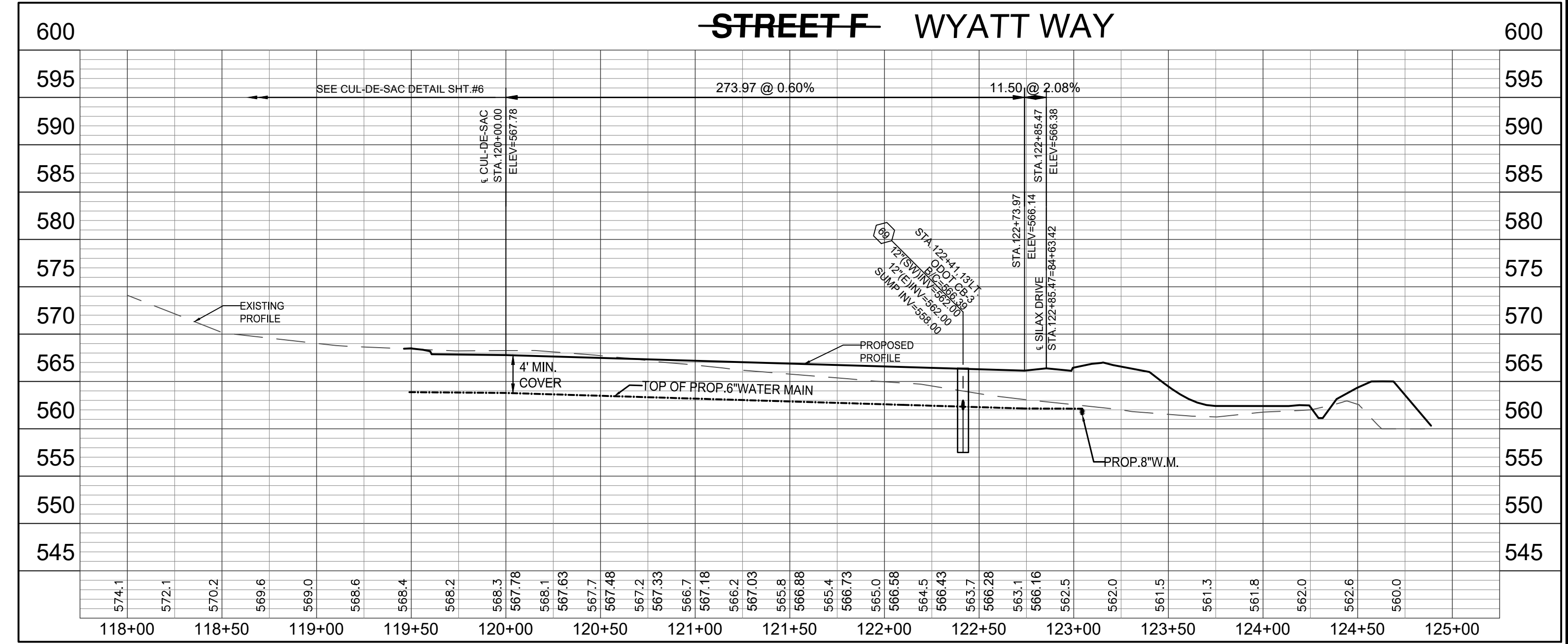


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Drawn by: TAC
Checked by: XXX
Issue Date: 6-24-21

Plot time: Aug 09, 2021 - 7:44pm
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DETAIL SCALE: 1"=30'



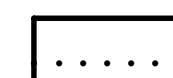
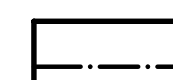
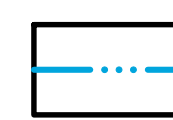
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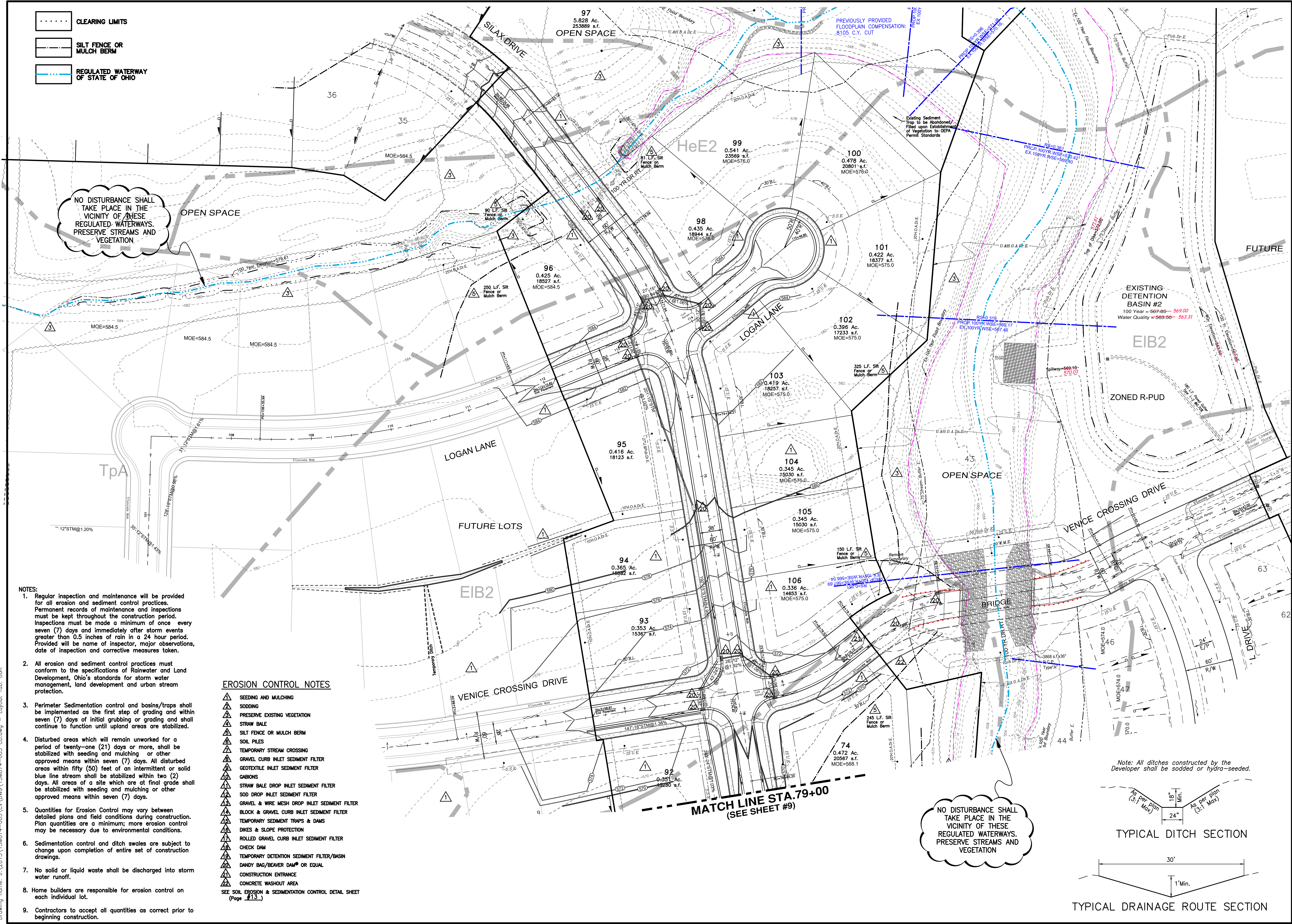
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**VENICE CROSSING
SECTION THREE**
 ROSS TOWNSHIP, BUTLER COUNTY, OHIO
 SECTION 28 & 33, TOWN 3, RANGE 2
 PROFILES & INTERSECTION DETAILS



Drawing:	13M074-003 CD
Drawn by:	ETH
Checked by:	XXX
Issue Date:	6-24-21

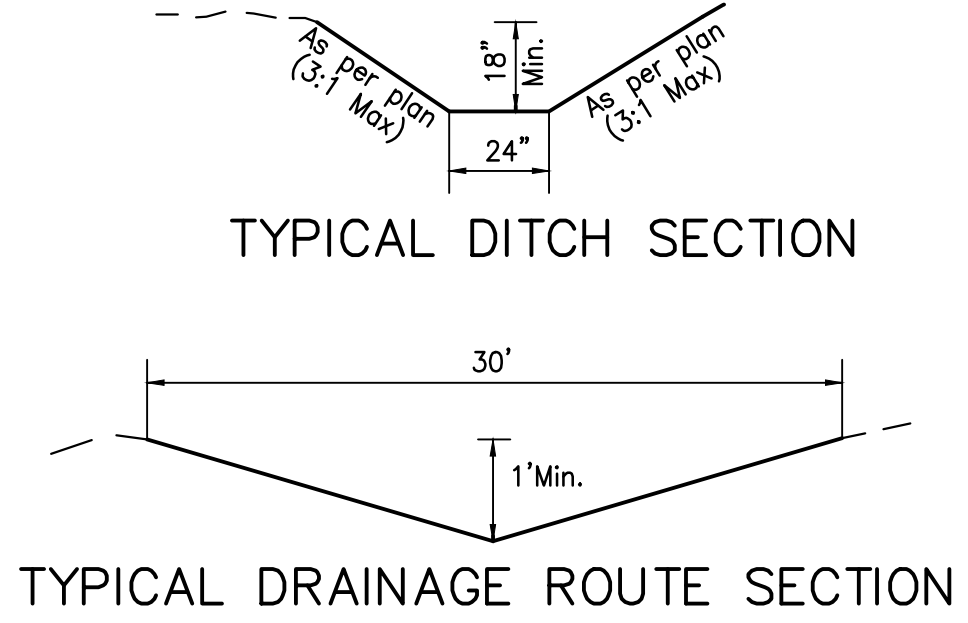
 CLEARING LIMITS
 SILT FENCE OR MULCH BERM
 REGULATED WATERWAY OF STATE OF OHIO

















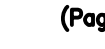



NO DISTURBANCE SHALL TAKE PLACE IN THE VICINITY OF THESE REGULATED WATERWAYS. PRESERVE STREAMS AND VEGETATION

NO DISTURBANCE SHALL TAKE PLACE IN THE VICINITY OF THESE REGULATED WATERWAYS. PRESERVE STREAMS AND VEGETATION

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

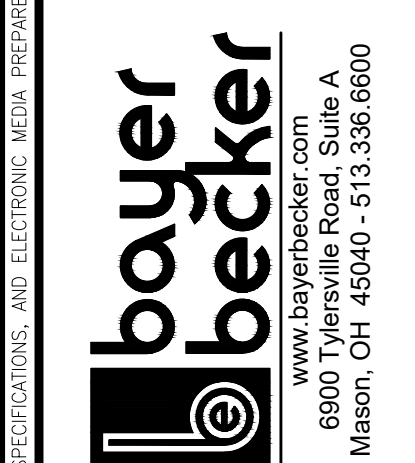


- NOTES:**
- Regular inspection and maintenance will be provided for all erosion and sediment control practices. Permanent records of maintenance and inspections must be kept throughout the construction period. Inspections must be made a minimum of once every seven (7) days and immediately after storm 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 twenty-one (21) 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.
 - Contractors to accept all quantities as correct prior to beginning construction.

- 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
 -  DIMES & 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 113)

Item	Revision Description	Date	Drawn	Chk.
1	Revised as per BCEO	8-9-21	JAB	
2				
3				
4				
5				
6				
7				
8				
9				

VENICE CROSSING SECTION THREE
 ROSS TOWNSHIP, BUTLER COUNTY, OHIO
 SECTION 28 & 33, TOWN 3, RANGE 2
 GRADING PLAN



Drawing:	13M074-003 CD
Drawn by:	TAC
Checked by:	EMR
Issue Date:	6-24-21

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.
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- Home builders are responsible for erosion control on each individual lot.
- Contractors to accept all quantities as correct prior to beginning construction.

PROJECT DATA

Total Site Area	26.48 Ac.
Sediment Basin Calculations:	
Drainage Area	34.50 Ac.
Disturbed Tributary Area	32.85 Ac.
Required Sediment Storage	0.75 Ac./Ft.
Required Dewatering Storage	1.43 Ac./Ft.
Water Quality Volume Required	0.94 Ac./Ft.
Pre-Developed Runoff Coefficient	0.32
Post-Developed Runoff Coefficient	0.50
Estimated Proposed Impervious Area	12.08 Ac. (45.6%)
Immediate Receiving Waters	Dry Run Creek
Subsequent Receiving Waters	Great Miami River

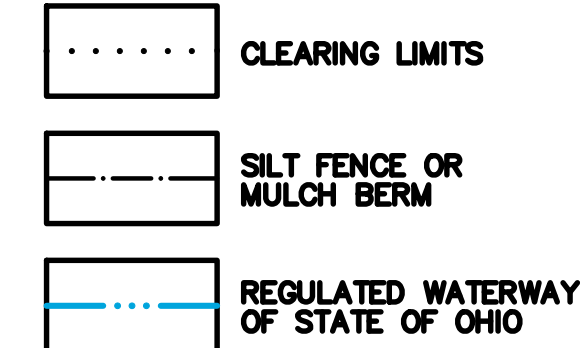
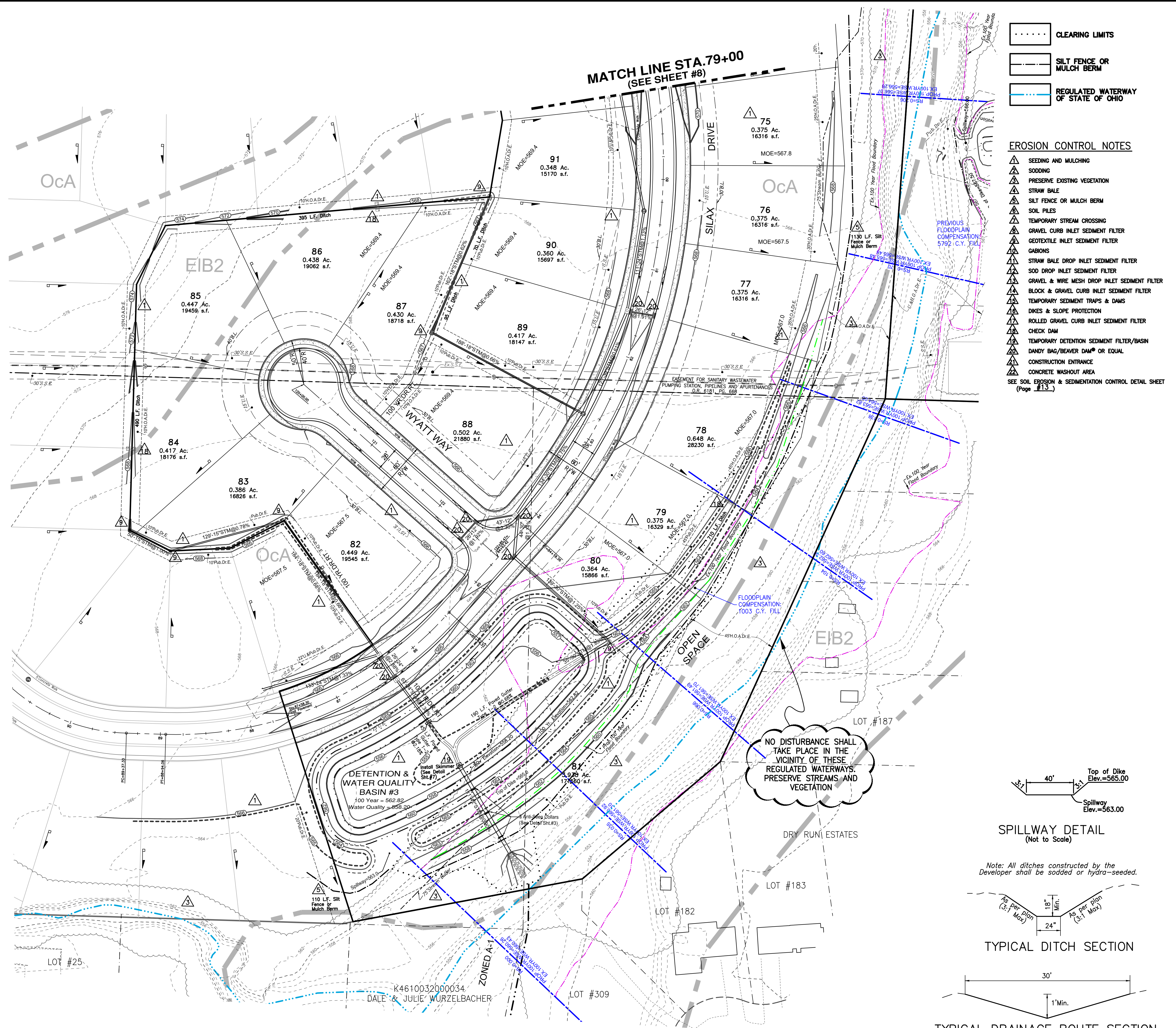
SOIL TYPES

Symbol	Name	Type
EIB2	Eldean loam 2 to 6 percent slopes, moderately eroded	B
Gn	Genesee loam	B
HsH2	Hennepin-Miamian silt loams 18 to 25 percent slopes, moderately eroded	B
OcA	Ockley silt loam 0 to 2 percent slopes	B
RvB2	Russell-Miamian silt loams, 2 to 6 percent slopes, moderately eroded	B
TpA	Tippecanoe silt loam 0 to 2 percent slopes	B
UnB	Uniontown silt loam 2 to 6 percent slopes	B

NOTE:
The Temporary Sediment Basins are to be cleaned out in accordance with the Rainwater and Land Development Manual and Butler County standards.

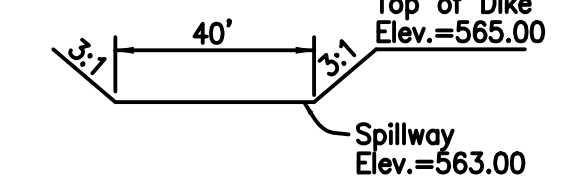
GRADING NOTES

- LOCATION OF EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL OBTAIN A COPY OF THE COMPLETE GEOTECHNICAL REPORT PRIOR TO BIDDING THE PROJECT.
- CONTRACTORS SHALL SET UP AN ONSITE PRE-CONSTRUCTION MEETING WITH THE BUTLER COUNTY STORM WATER DISTRICT/BCO DEVELOPER, PROJECT GEOTECHNICAL ENGINEER, EARTHWORK CONTRACTOR, AND SITE CIVIL ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL ASSUME THE TOP 8" OF EXISTING GROUND IS TOPSOIL. TOPSOIL REMOVED TO DEPTHS GREATER THAN 8" SHALL BE DONE ONLY AFTER CONSULTATION WITH THE PROJECT GEOTECHNICAL ENGINEER AND APPROVAL OF THE DEVELOPER.
- ALL EARTHWORK AND CONSTRUCTION ACTIVITY SHALL BE PERFORMED PER THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS DESCRIBED IN THE GEOTECHNICAL EXPLORATION REPORT AND ALL ADDENDUMS.
- CONTRACTOR SHALL VERIFY ALL EARTHWORK QUANTITIES PRIOR TO AWARD OF CONTRACT. PAY QUANTITIES ARE FINAL EXCEPT FOR DOCUMENTED UNDERCUT APPROVED BY DEVELOPER PRIOR TO COMPLETION OF THE EXTRA WORK. UPON REQUEST, CONTRACTORS MAY HAVE ACCESS TO THE SITE TO FIELD CHECK TOPOGRAPHY.
- THE AREAS LABELED DENSE VEGETATION ARE WHERE THE EXISTING GROUND WAS OBSURED FROM VIEW BY EXISTING VEGETATION. THE EXISTING CONTOURS SHOWN IN THIS AREA MAY VARY.

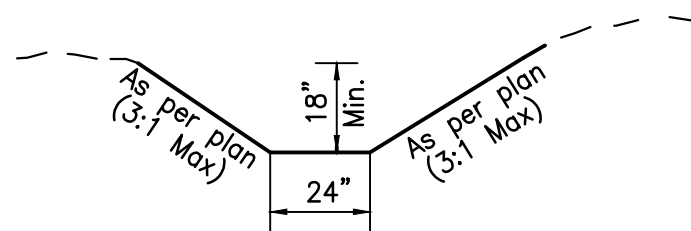


EROSION CONTROL NOTES

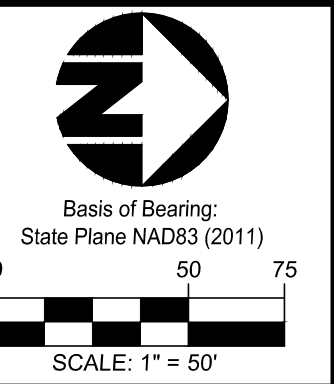
- ▲ SEEDING AND MULCHING
 - ▲ SODDING
 - ▲ PRESERVE EXISTING VEGETATION
 - ▲ STRAW BALE
 - ▲ SILT FENCE OR MULCH BERM
 - ▲ SOIL PILES
 - ▲ TEMPORARY STREAM CROSSING
 - ▲ GRAVEL CURB INLET SEDIMENT FILTER
 - ▲ GEOTEXTILE INLET SEDIMENT FILTER
 - ▲ GABIONS
 - ▲ STRAW BALE DROP INLET SEDIMENT FILTER
 - ▲ 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
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 - ▲ CONSTRUCTION ENTRANCE
 - ▲ CONCRETE WASHOUT AREA
- SEE SOIL EROSION & SEDIMENTATION CONTROL DETAIL SHEET (Page #13)



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



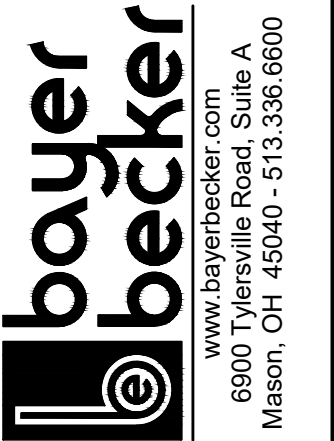
TYPICAL DRAINAGE ROUTE SECTION



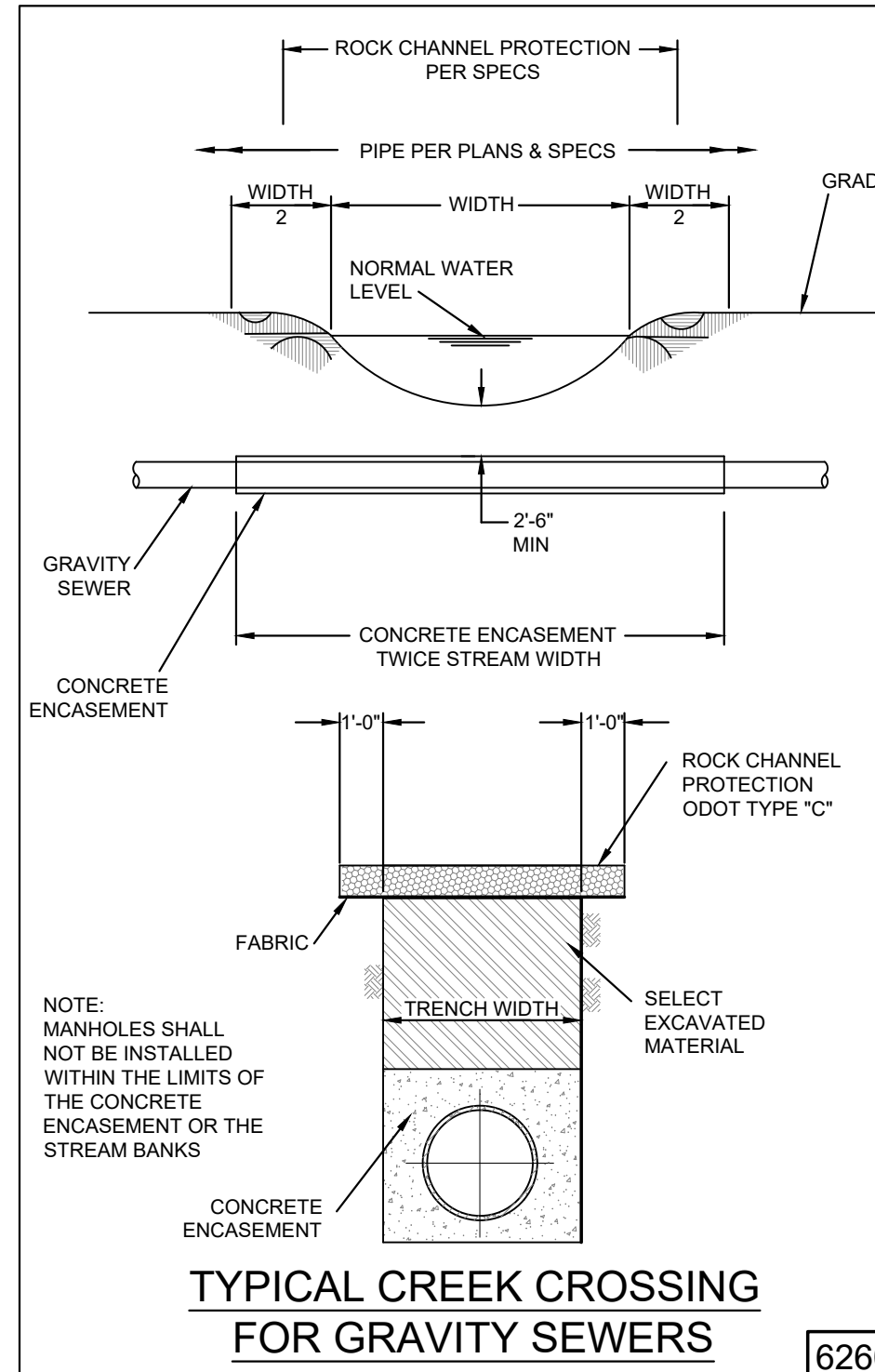
Date	Drawn	Chk.
8-9-21	JAB	

Item	Revision Description
1	Revised as per BCEO
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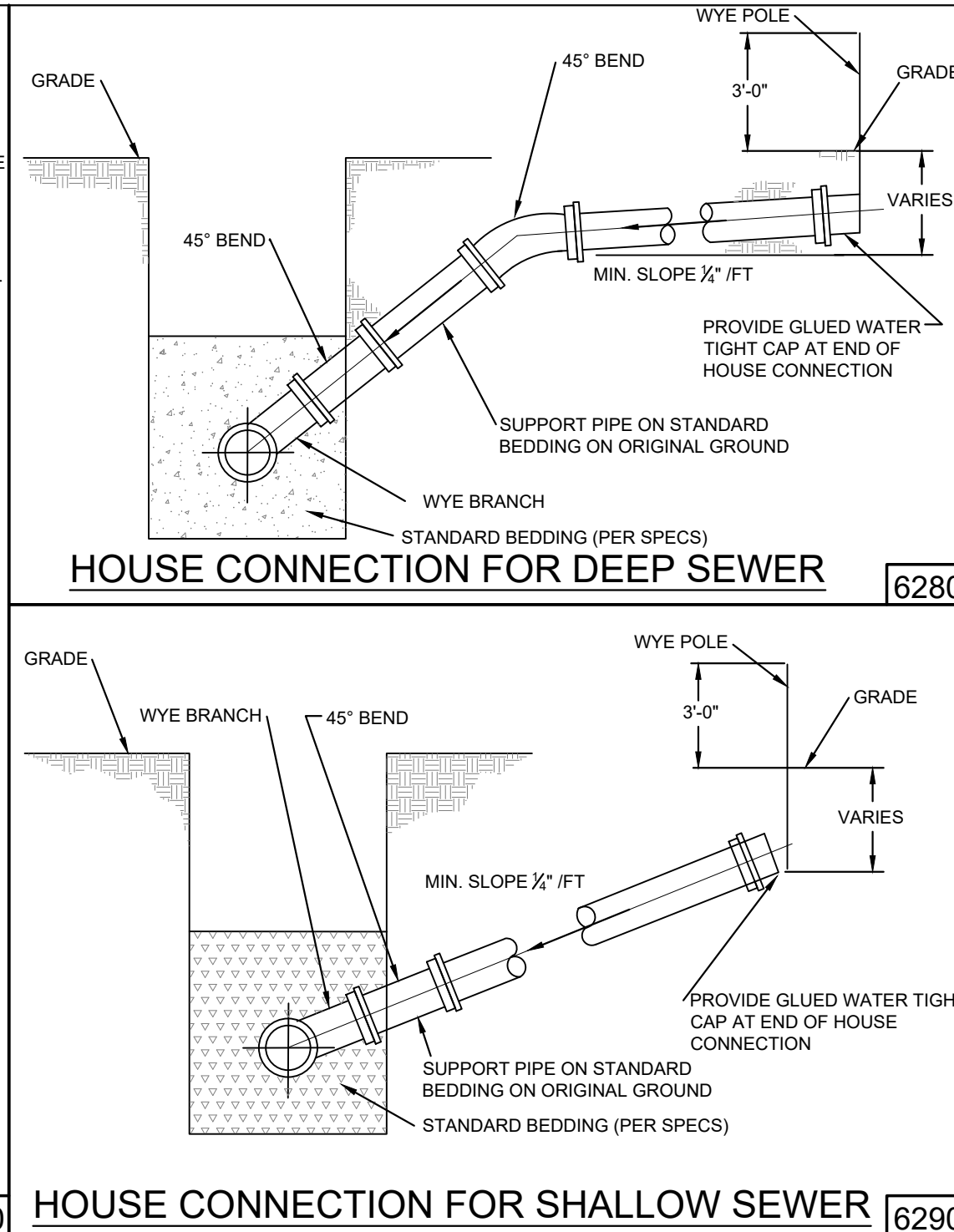
VENICE CROSSING SECTION THREE
ROSS TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 28 & 33, TOWN 3, RANGE 2



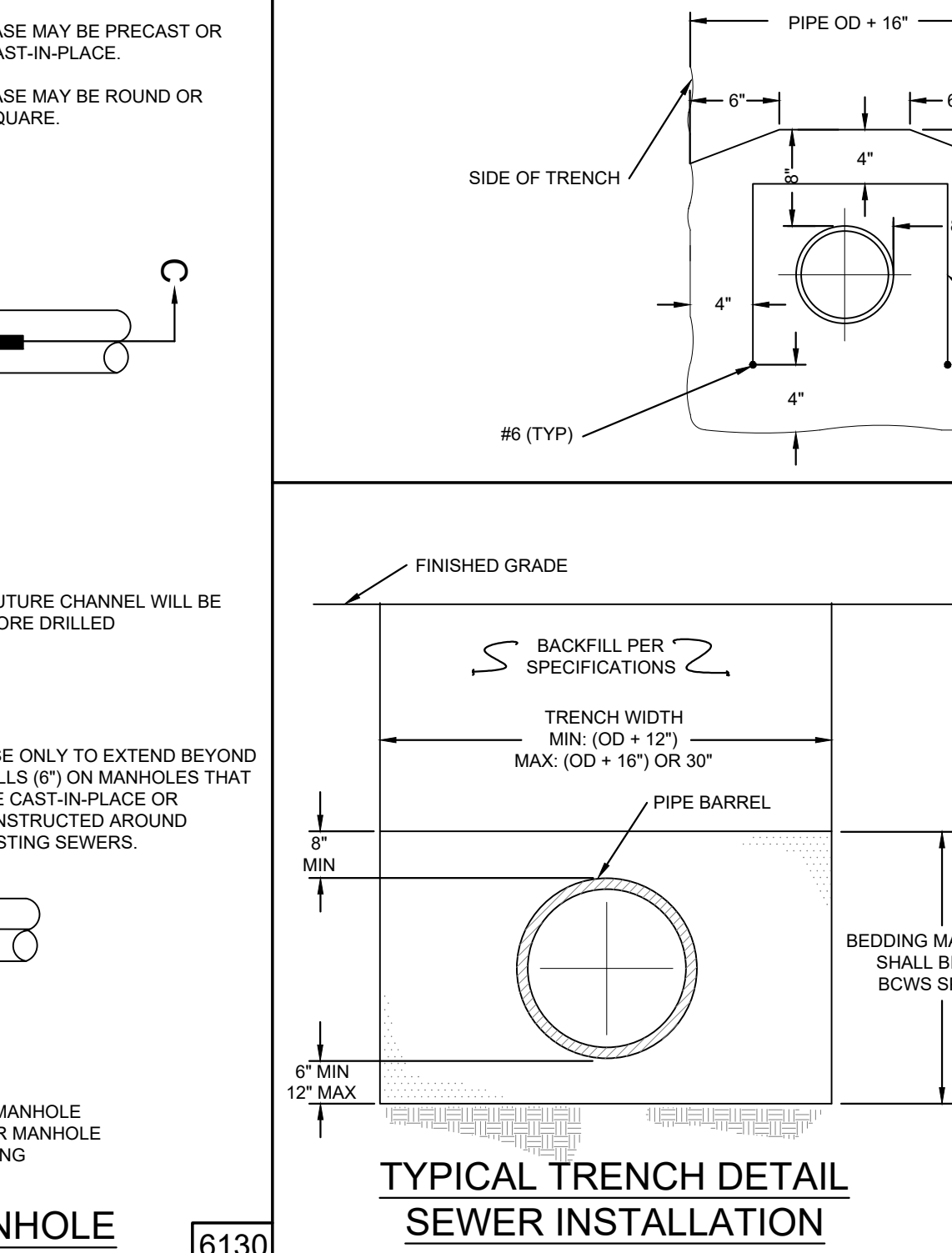
Drawing:	13M074-003 CD
Drawn by:	TAC
Checked by:	EMR
Issue Date:	6-24-21
Sheet:	



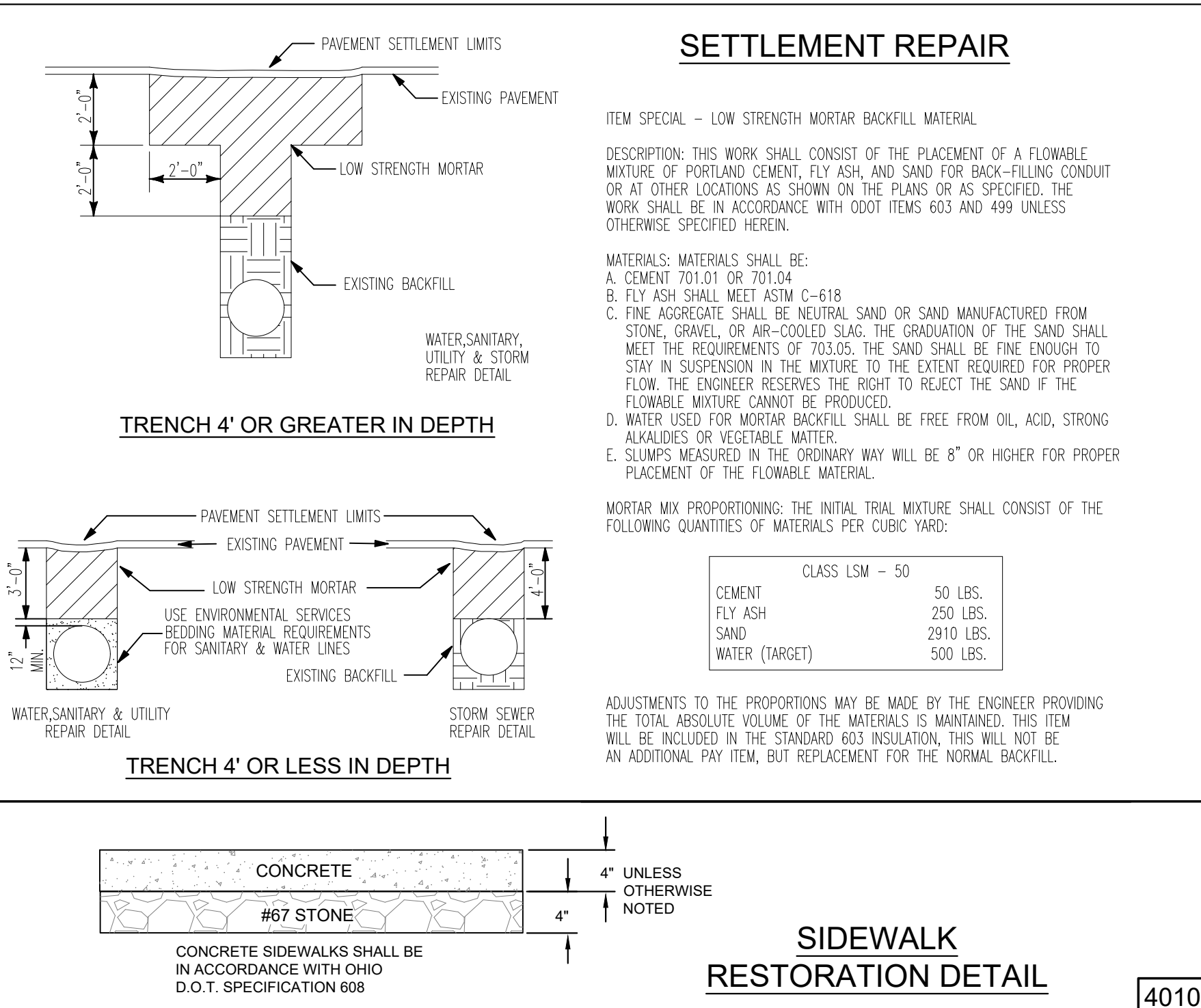
TYPICAL CREEK CROSSING FOR GRAVITY SEWERS [6260]



HOUSE CONNECTION FOR DEEP SEWER [6280]



HOUSE CONNECTION FOR SHALLOW SEWER [6290]



SETTLEMENT REPAIR

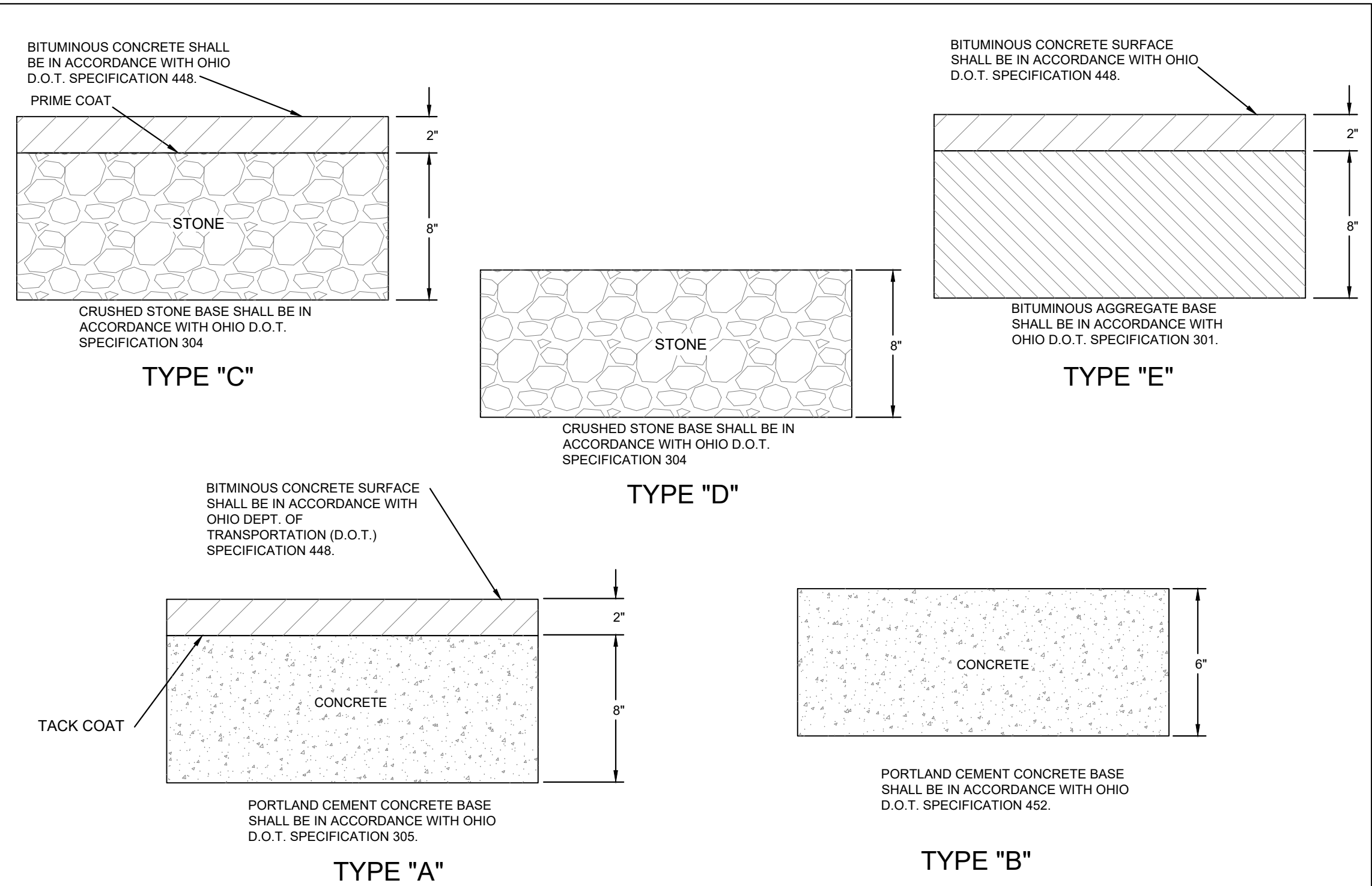
ITEM SPECIAL - LOW STRENGTH MORTAR BACKFILL MATERIAL
 DESCRIPTION: THIS WORK SHALL CONSIST OF THE PLACEMENT OF A FLOWABLE MIXTURE OF PORTLAND CEMENT, FLY ASH, AND SAND FOR BACK-FILLING CONDUIT OR AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS SPECIFIED. THE WORK SHALL BE IN ACCORDANCE WITH ODOT ITEMS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

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

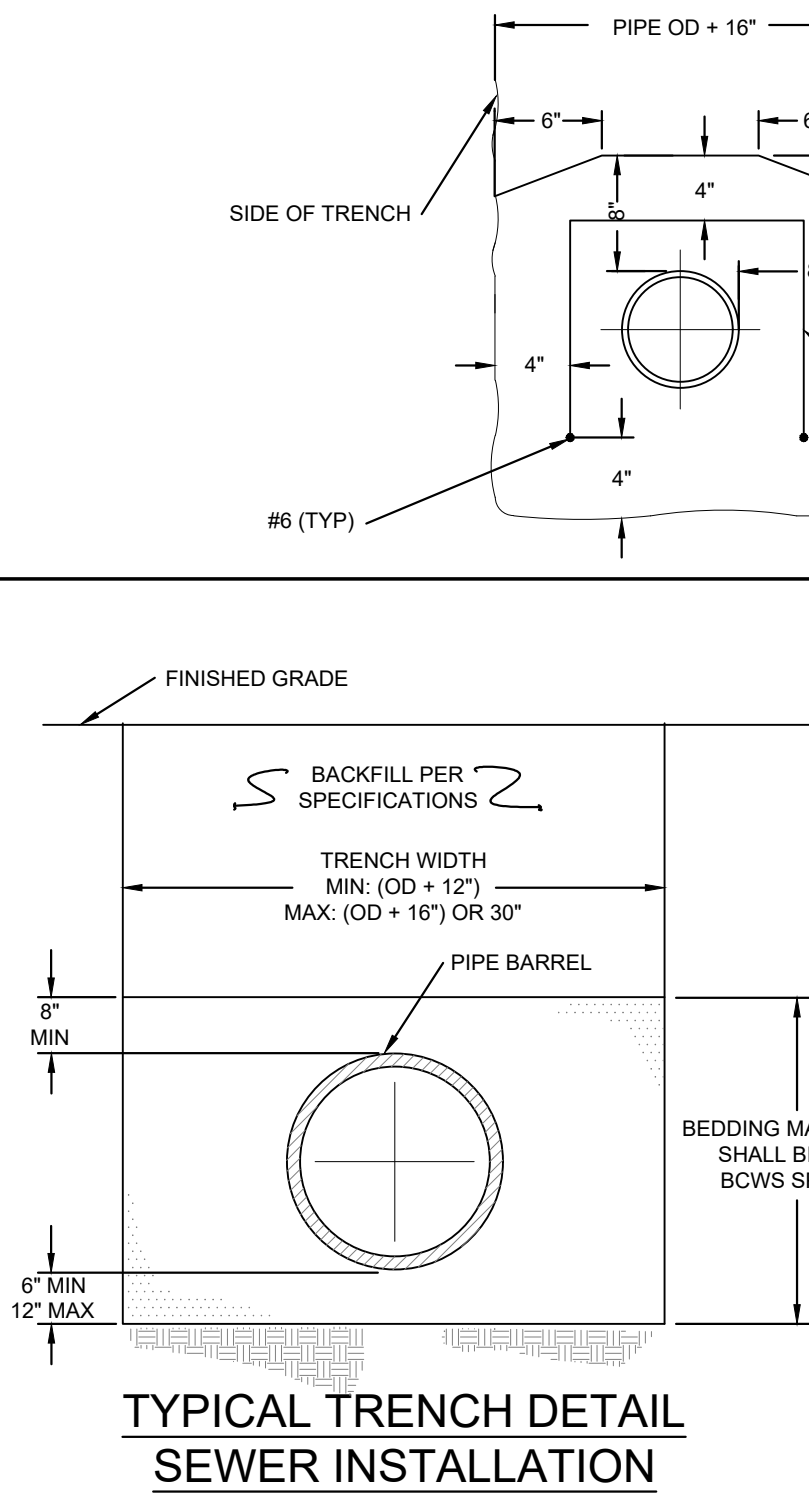
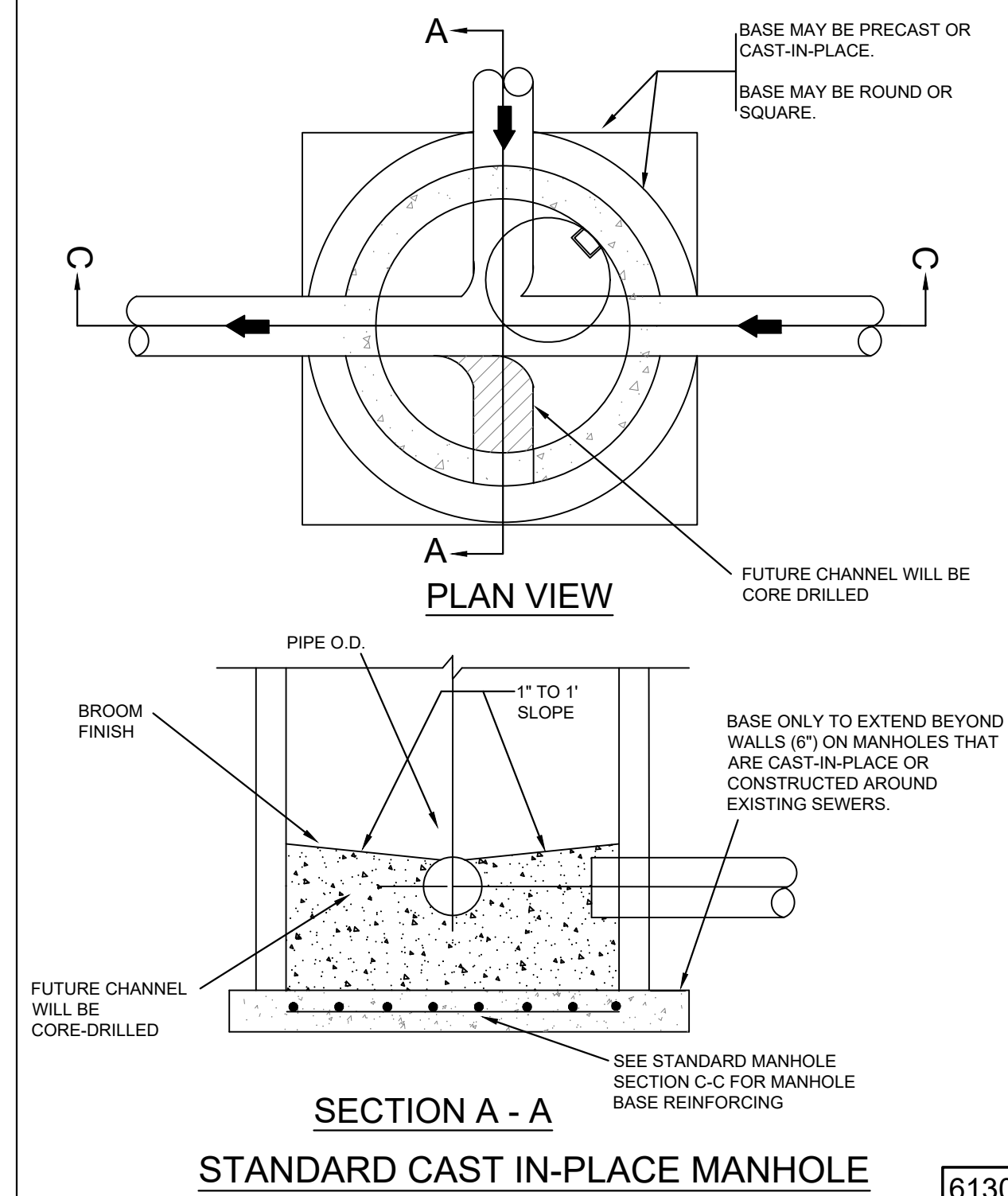
CEMENT	CLASS LSM - 50
FLY ASH	50 LBS.
SAND	250 LBS.
WATER (TARGET)	2910 LBS.
	500 LBS.

 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.

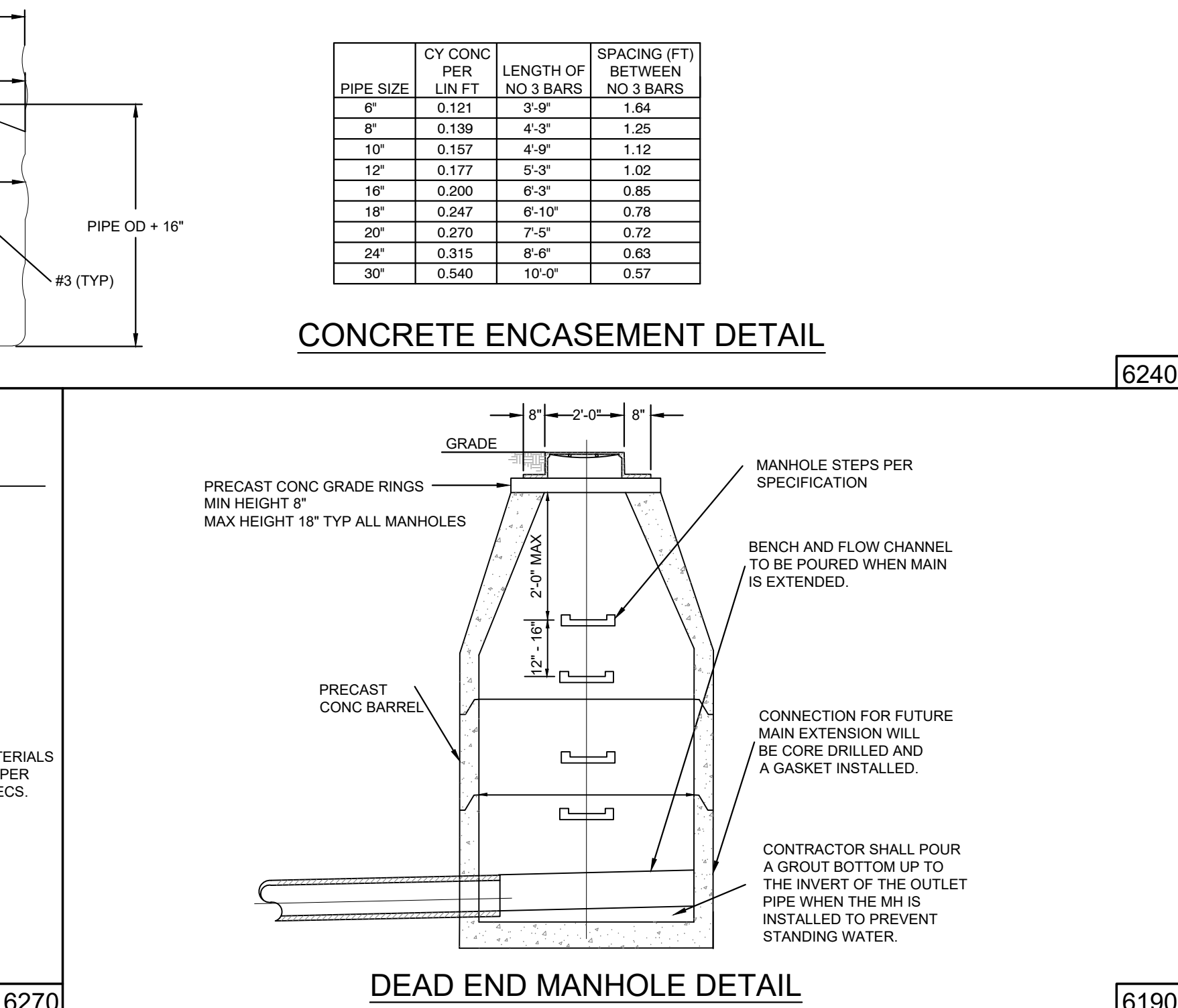
SIDEWALK RESTORATION DETAIL [4010]



PAVEMENT REPLACEMENT DETAILS [4120]



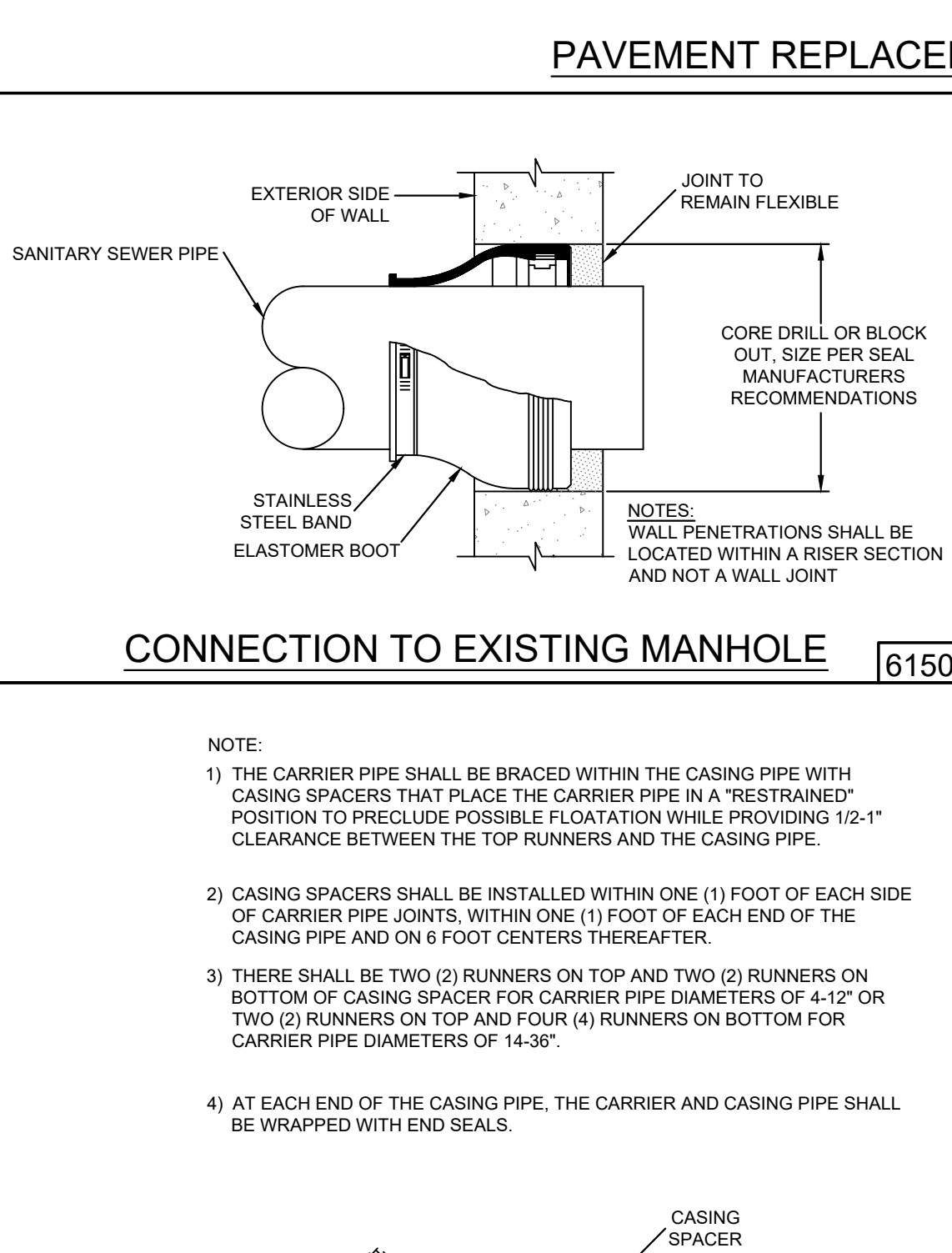
TYPICAL TRENCH DETAIL SEWER INSTALLATION [6270]



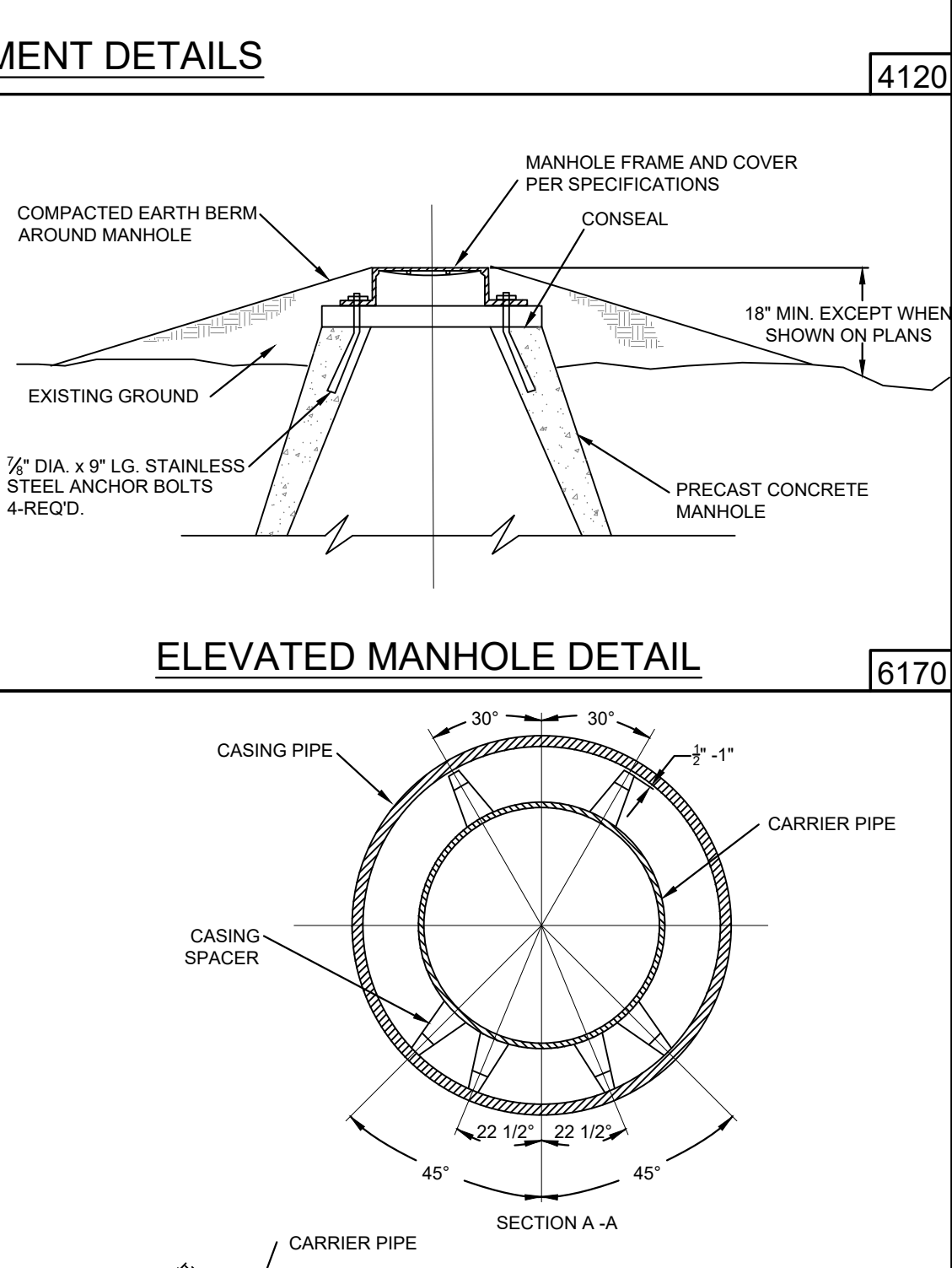
CONCRETE ENCASEMENT DETAIL [6240]

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"	0.159	4'-3"	1.26
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

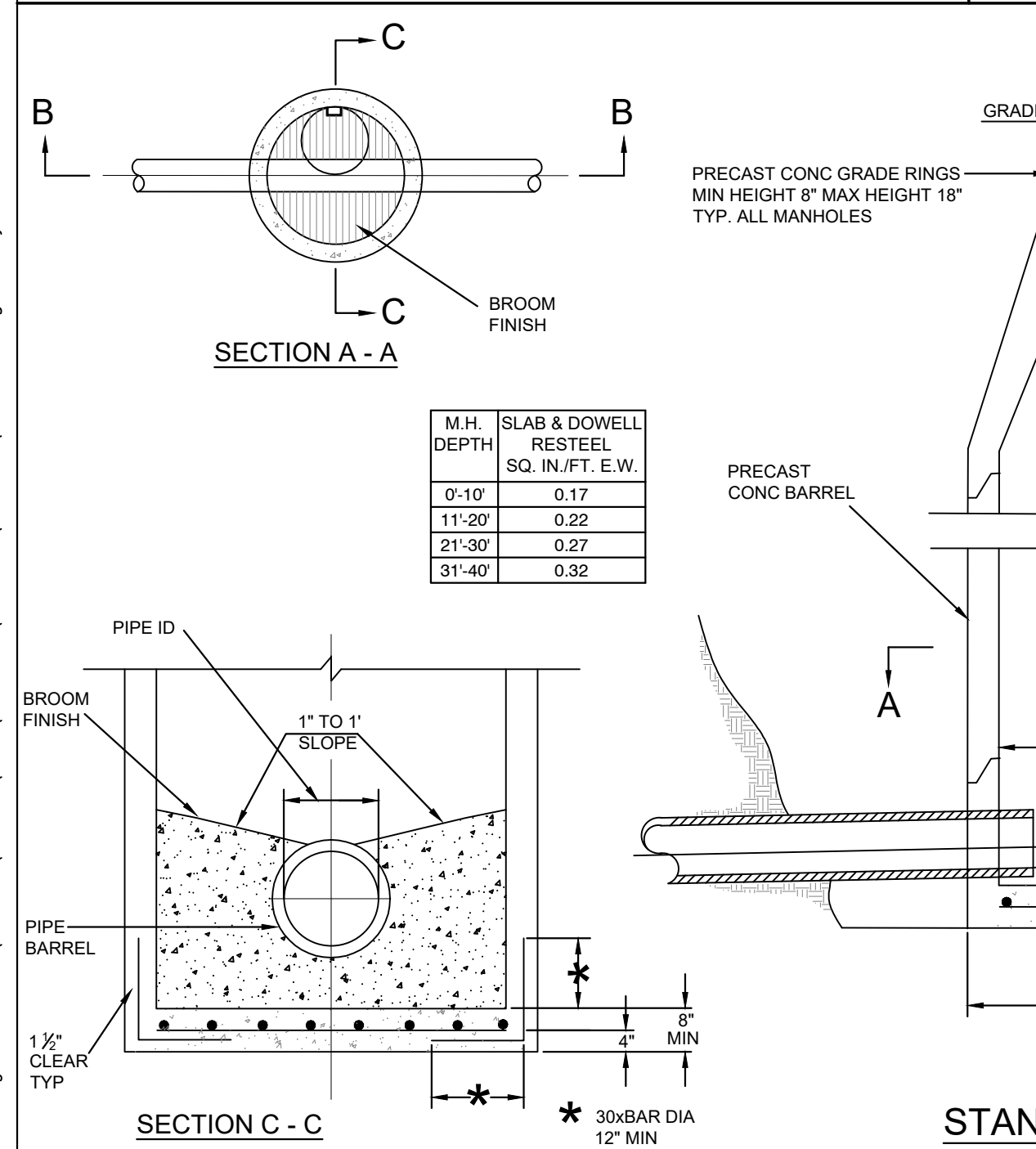
DEAD END MANHOLE DETAIL [6190]



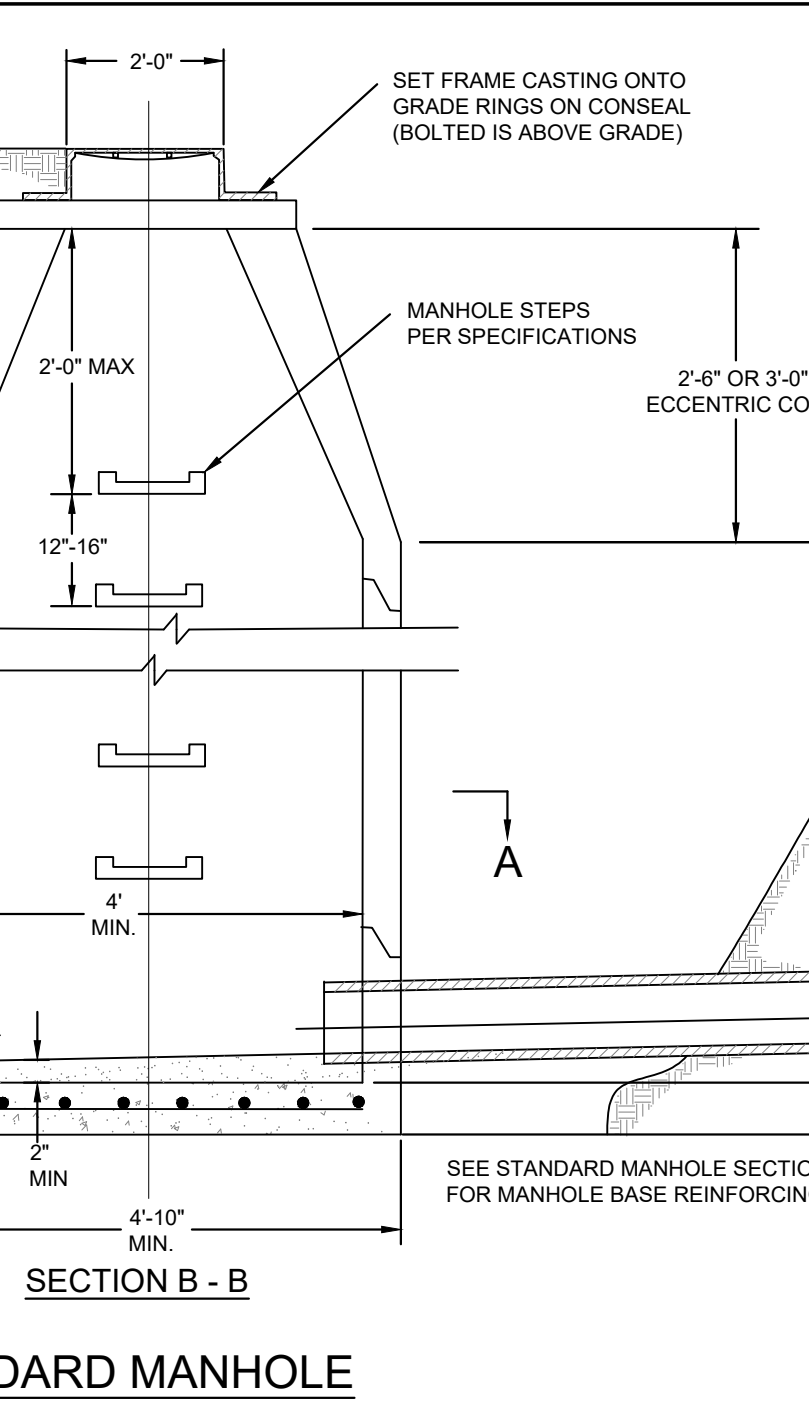
CONNECTION TO EXISTING MANHOLE [6150]



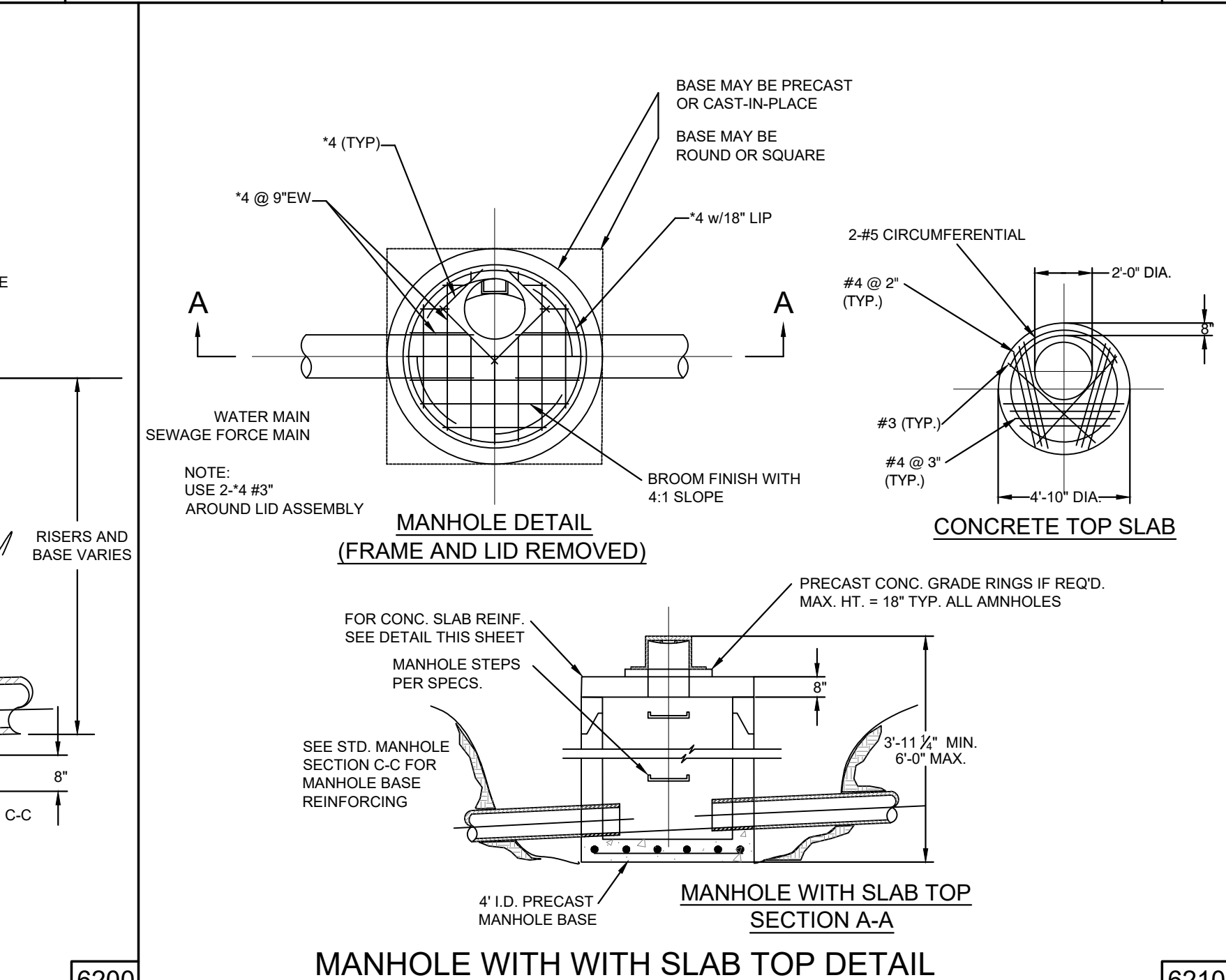
ELEVATED MANHOLE DETAIL [6170]



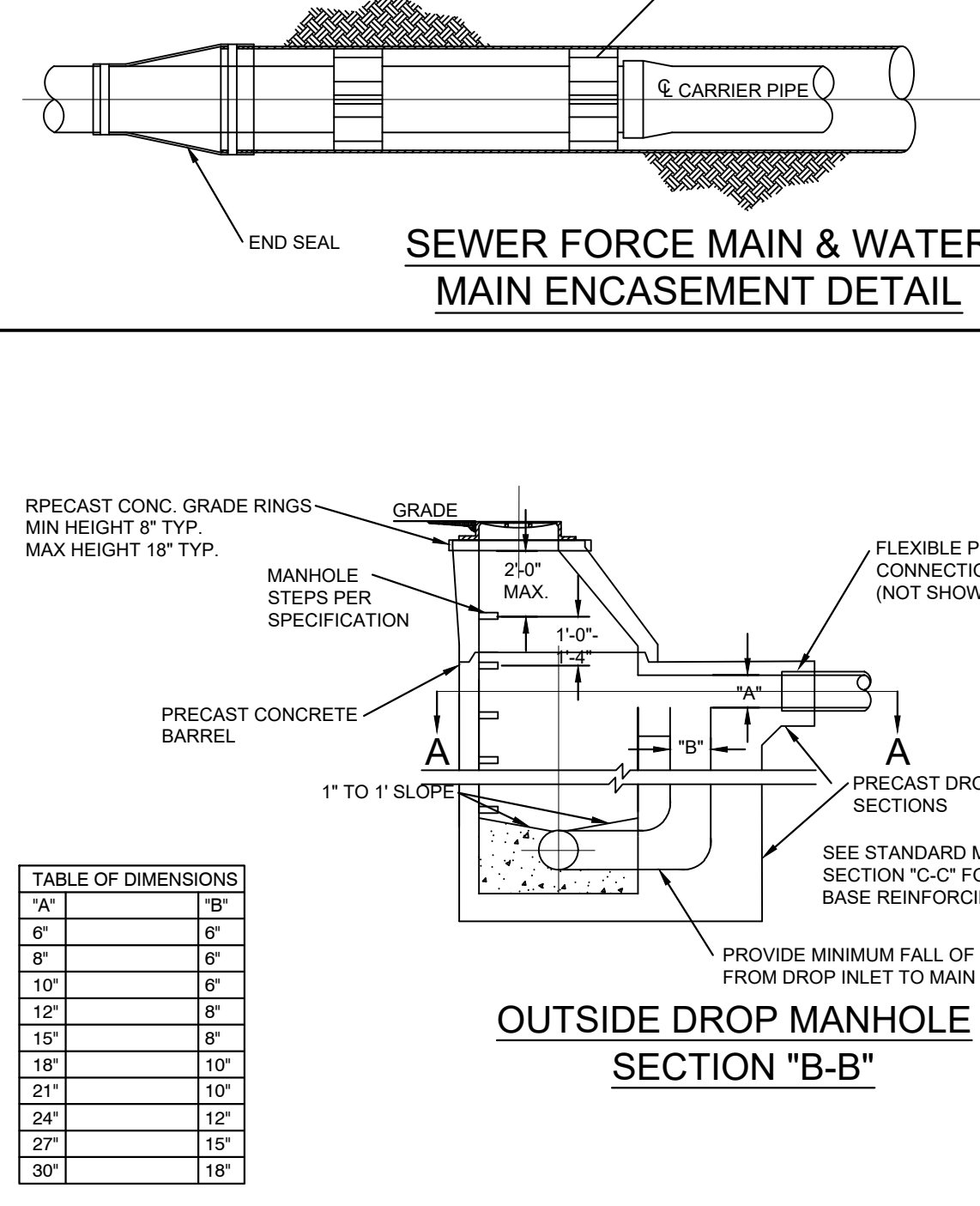
STANDARD MANHOLE [6200]



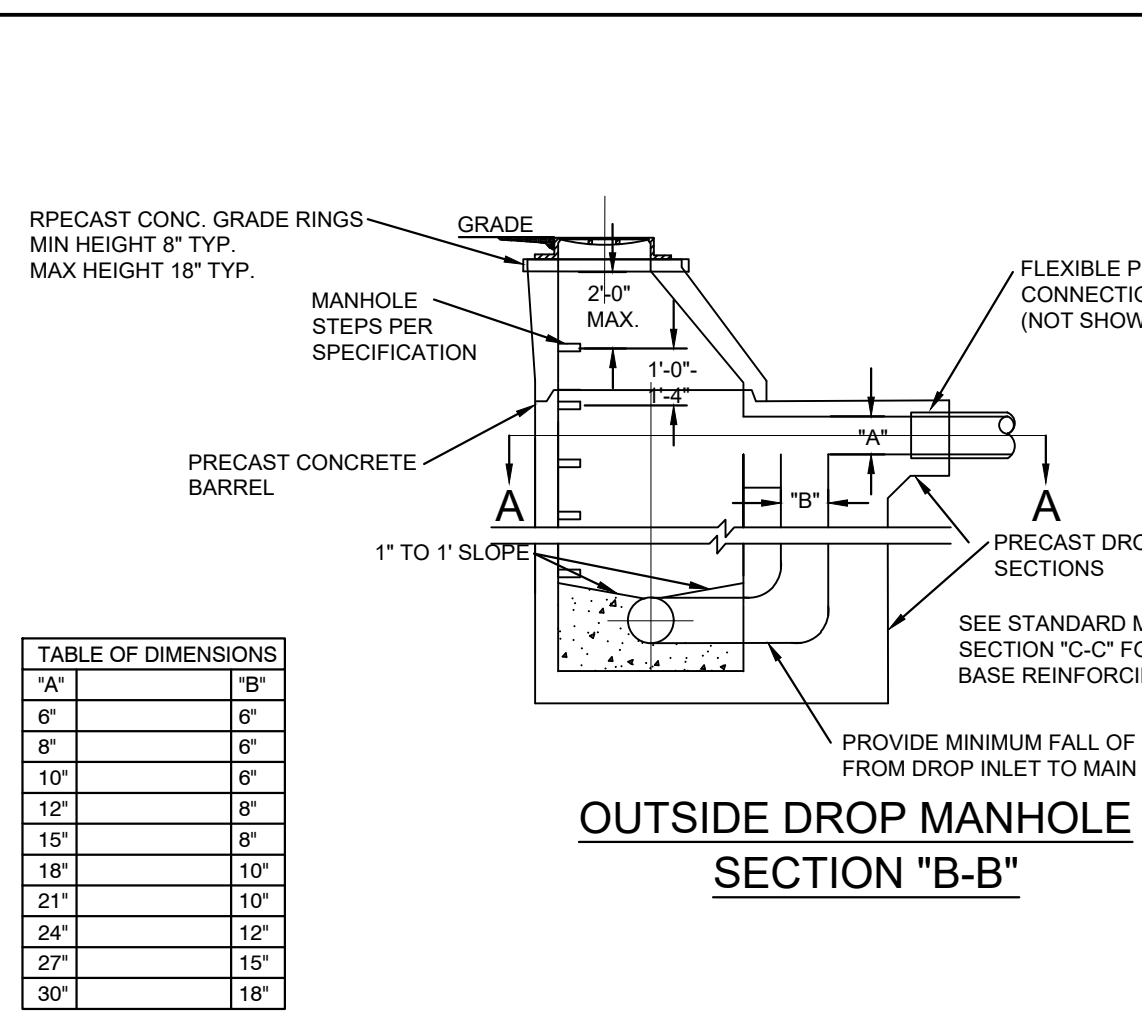
MANHOLE WITH WITH SLAB TOP DETAIL [6210]



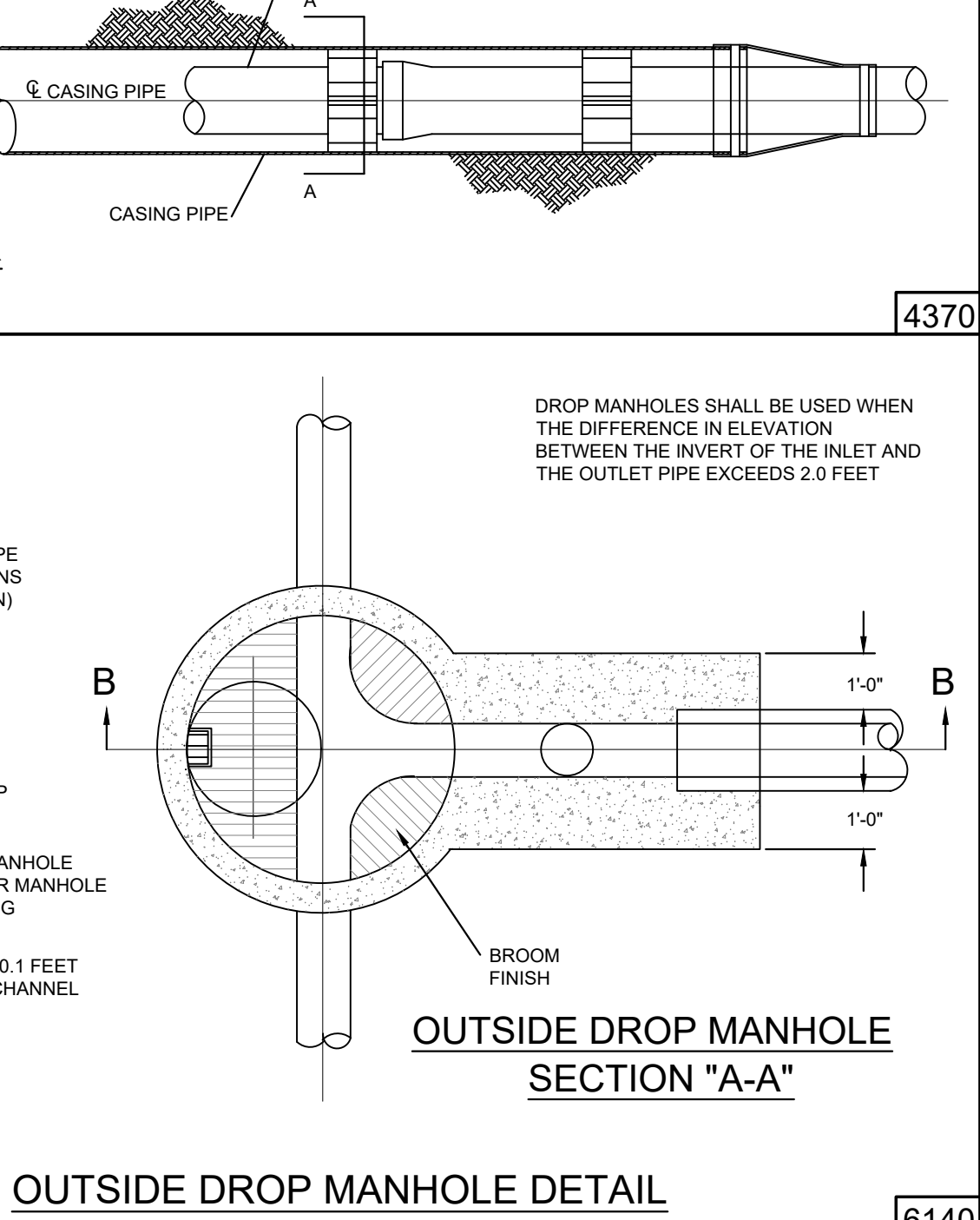
MANHOLE WITH WITH SLAB TOP DETAIL [6210]



SEWER FORCE MAIN & WATER MAIN ENCASEMENT DETAIL [4370]



OUTSIDE DROP MANHOLE SECTION 'B-B' [6140]



OUTSIDE DROP MANHOLE DETAIL [6140]

Plot time: Jun 24, 2021 - 5:30pm
 Drawing name: K:\OLD-K\Mason\BUTLER\BC SAN.dwg - Layout: Tab: SAN

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Revision Description
 Date
 Item

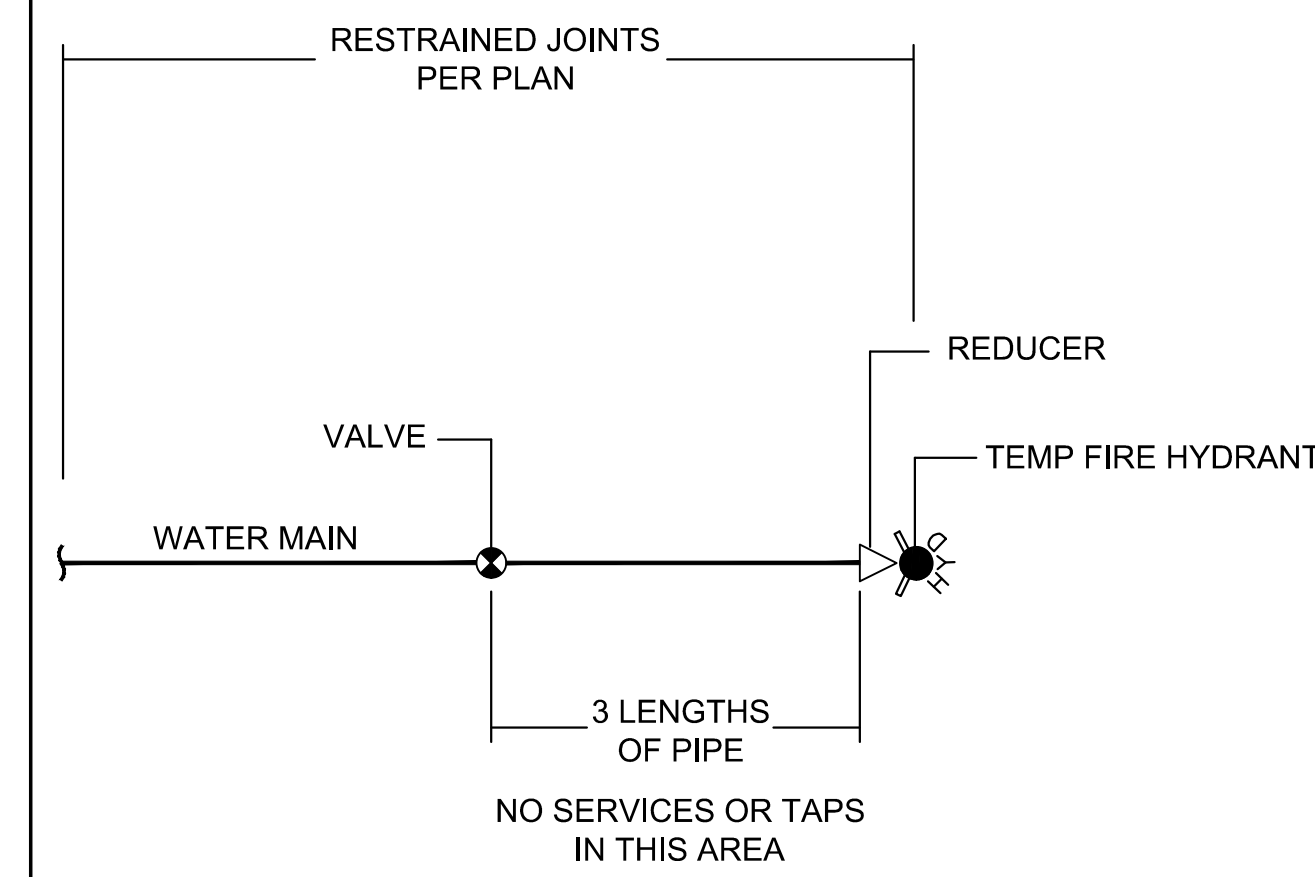
www.bayerbecker.com
 6000 Yonerville Road Suite A
 Mason, Ohio 45040 - 513.336.6000

Butler County, Ohio
 Miscellaneous & Sanitary Details

Drawing: BC SAN
 Drawn by:
 Checked by:
 Issue Date: 12-28-17
 Sheet:

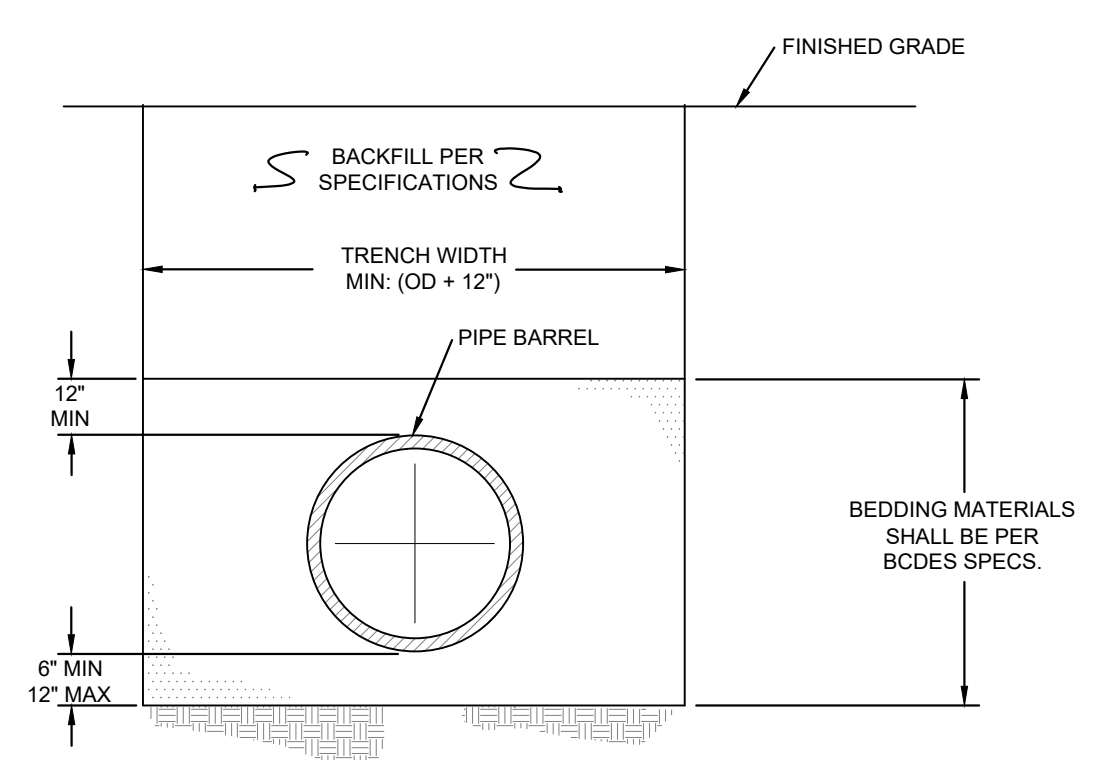
10/13

Plot time: Jun 24, 2021 - 5:31pm
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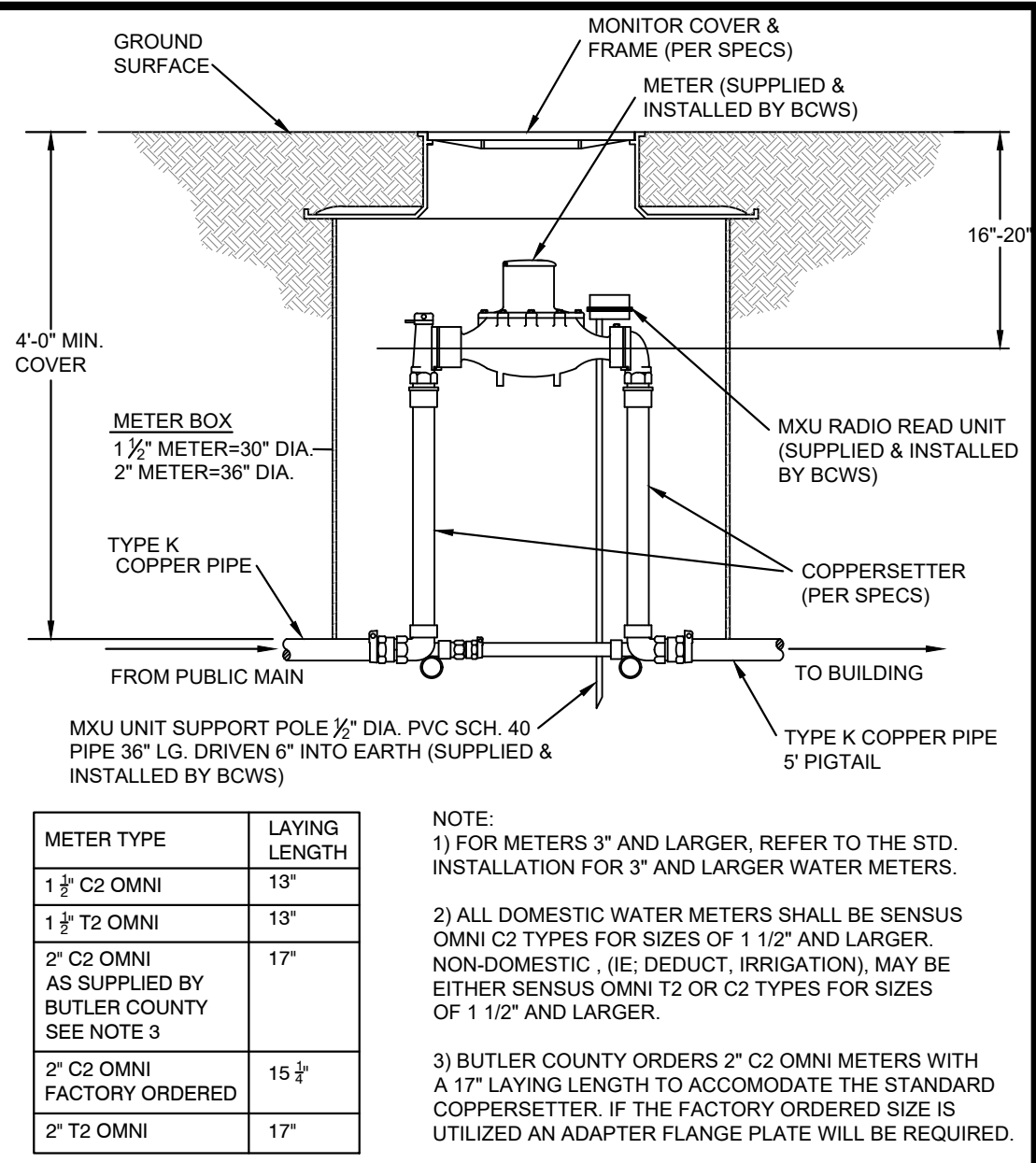
DEAD END DETAIL WITH TEMPORARY FIRE HYDRANT

5140



TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION

5280

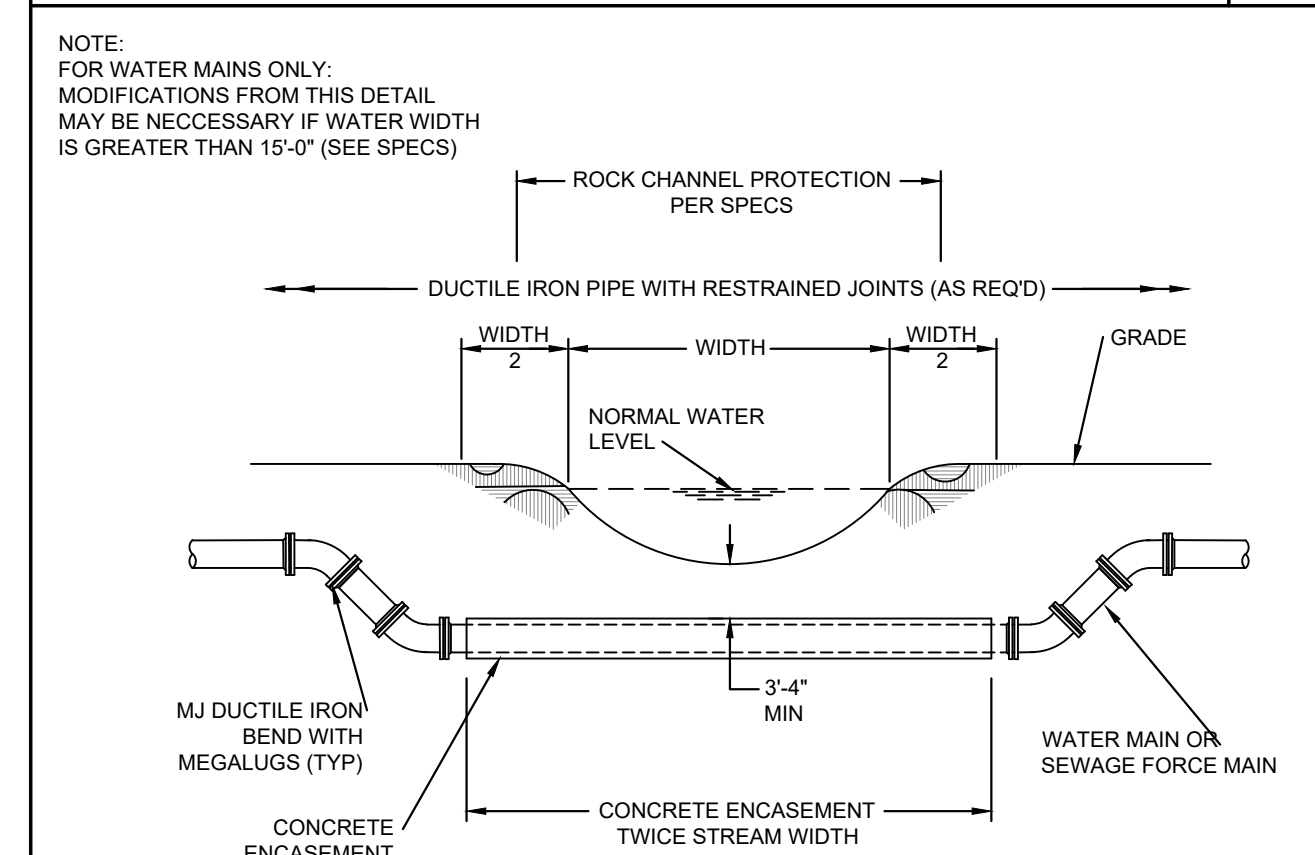


METER TYPE	LAYING LENGTH
1 1/2" C2 OMNI	13"
1 1/2" T2 OMNI	13"
2" C2 OMNI AS SUPPLIED BY BUTLER COUNTY SEE NOTE 3	17"
2" C2 OMNI FACTORY ORDERED	15 1/2"
2" T2 OMNI	17"

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. 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.

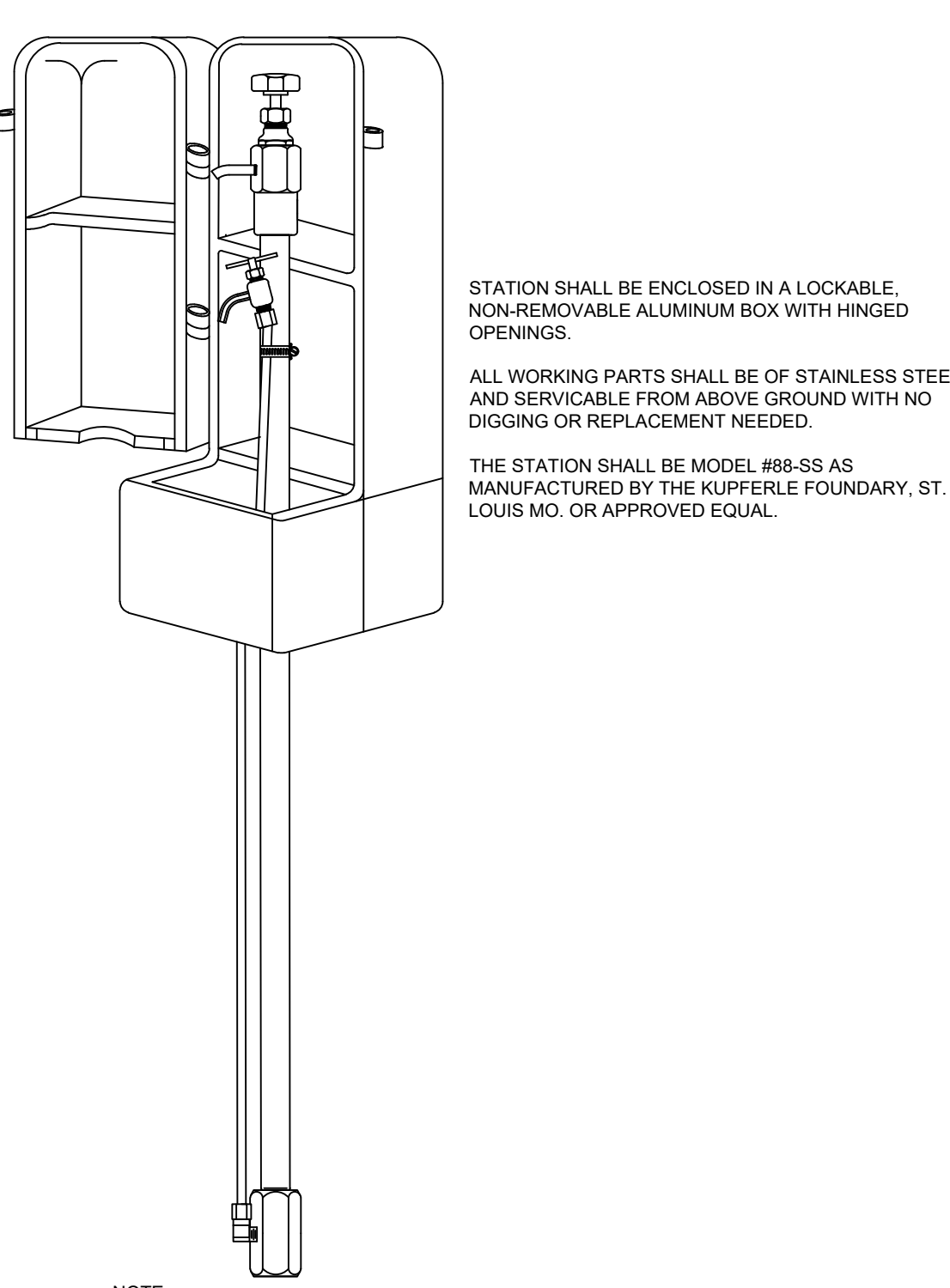
STANDARD INSTALLATION FOR 1-1/2" & 2" WATER METER SETTINGS

5170



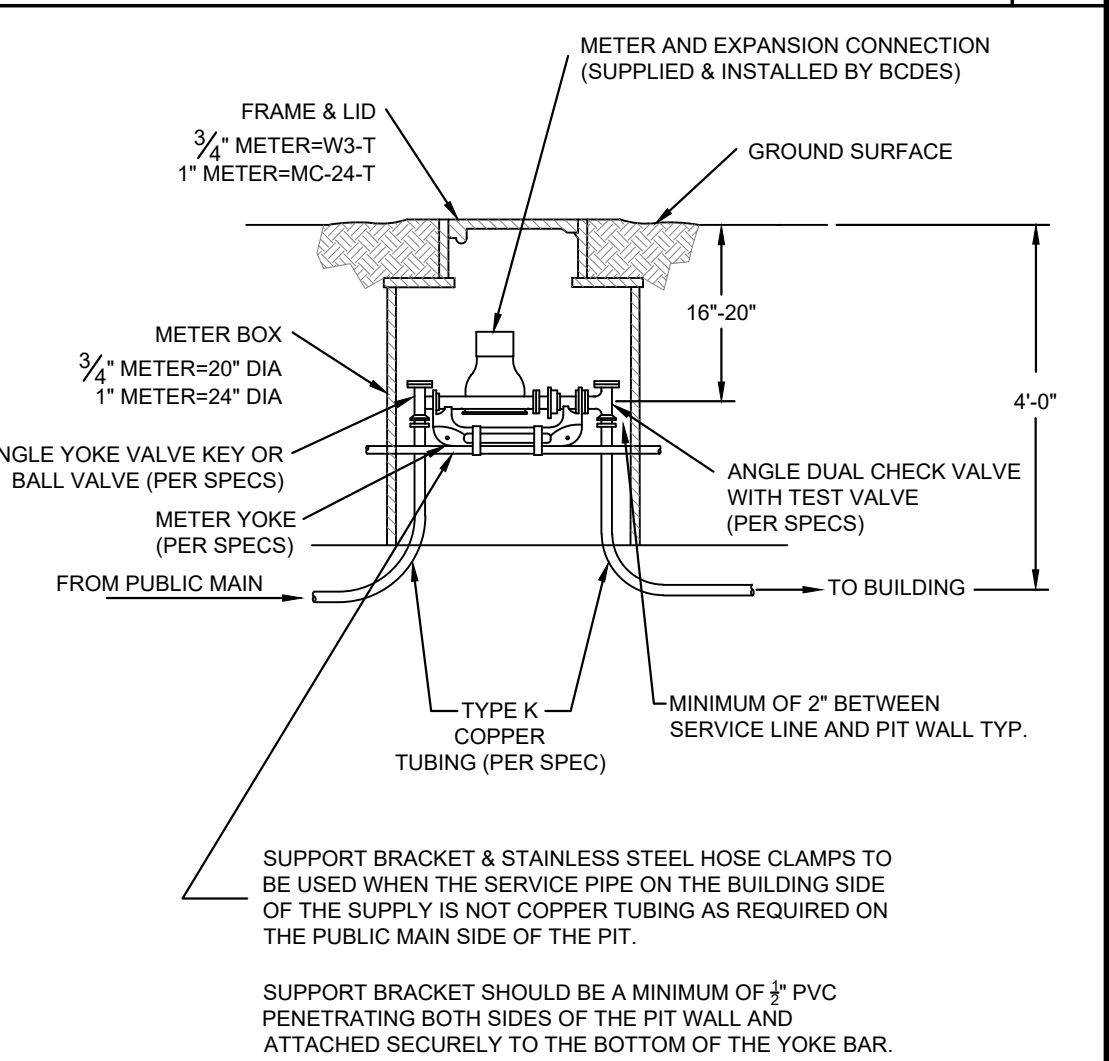
TYPICAL CREEK CROSSING & TRENCH DETAIL FOR WATER & SEWER FORCE MAINS

5150



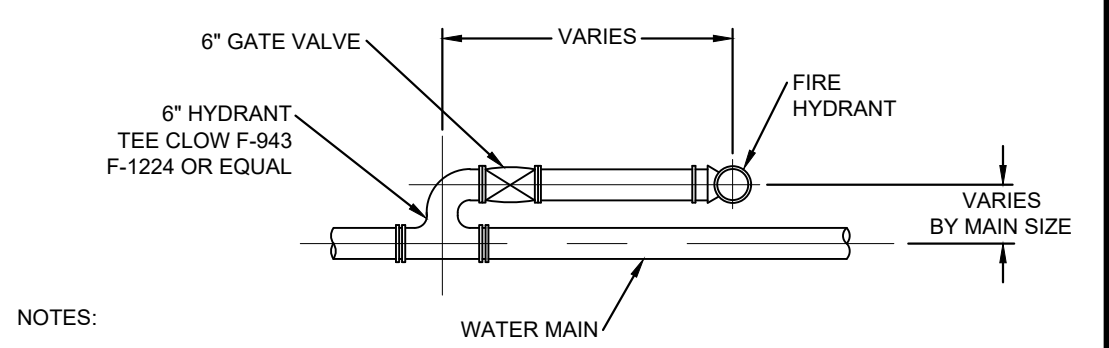
PERMANENT LAB SAMPLING STATION

5270



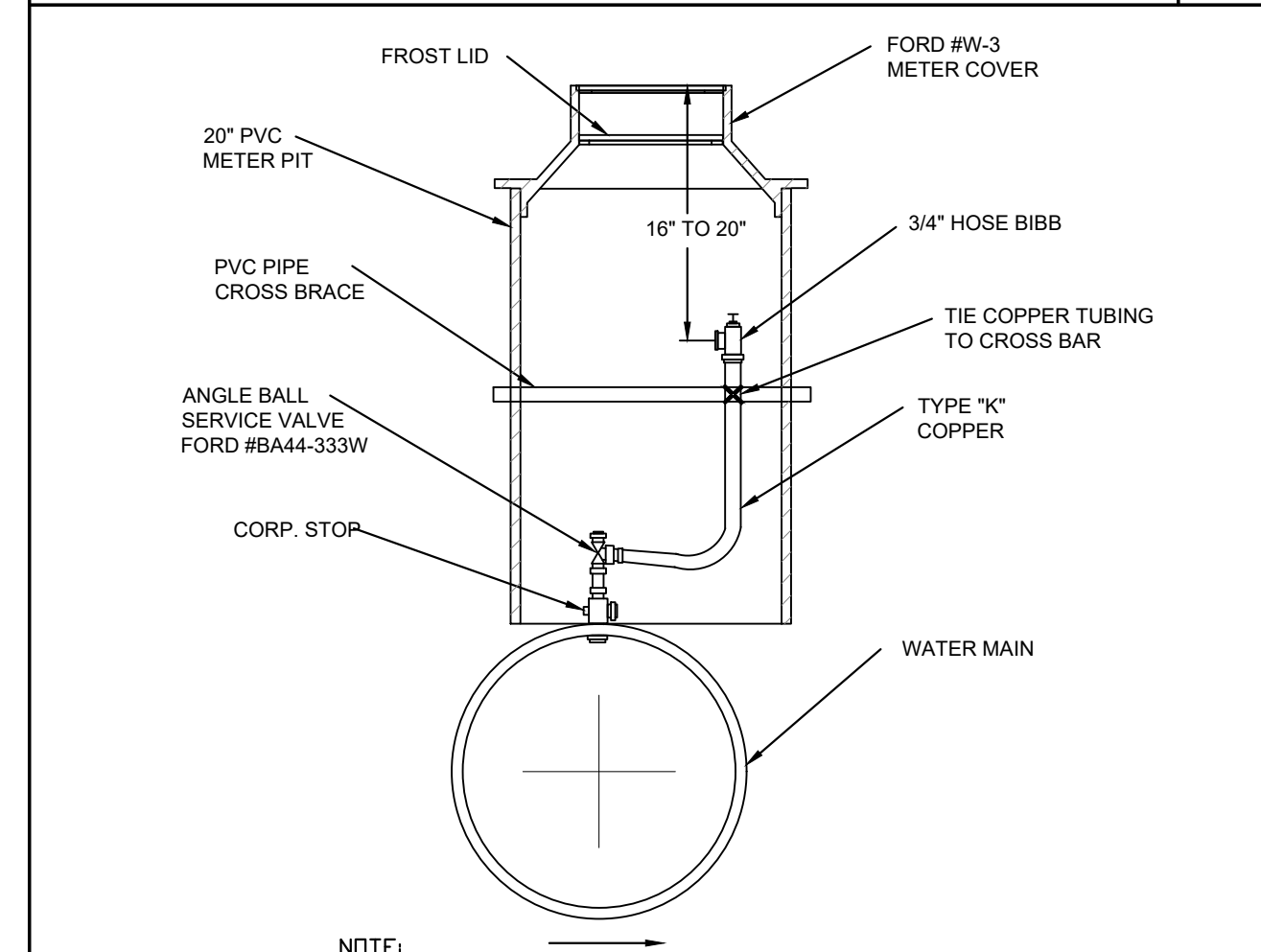
STANDARD INSTALLATION FOR 3/4" AND 1" WATER METER SETTINGS

5150



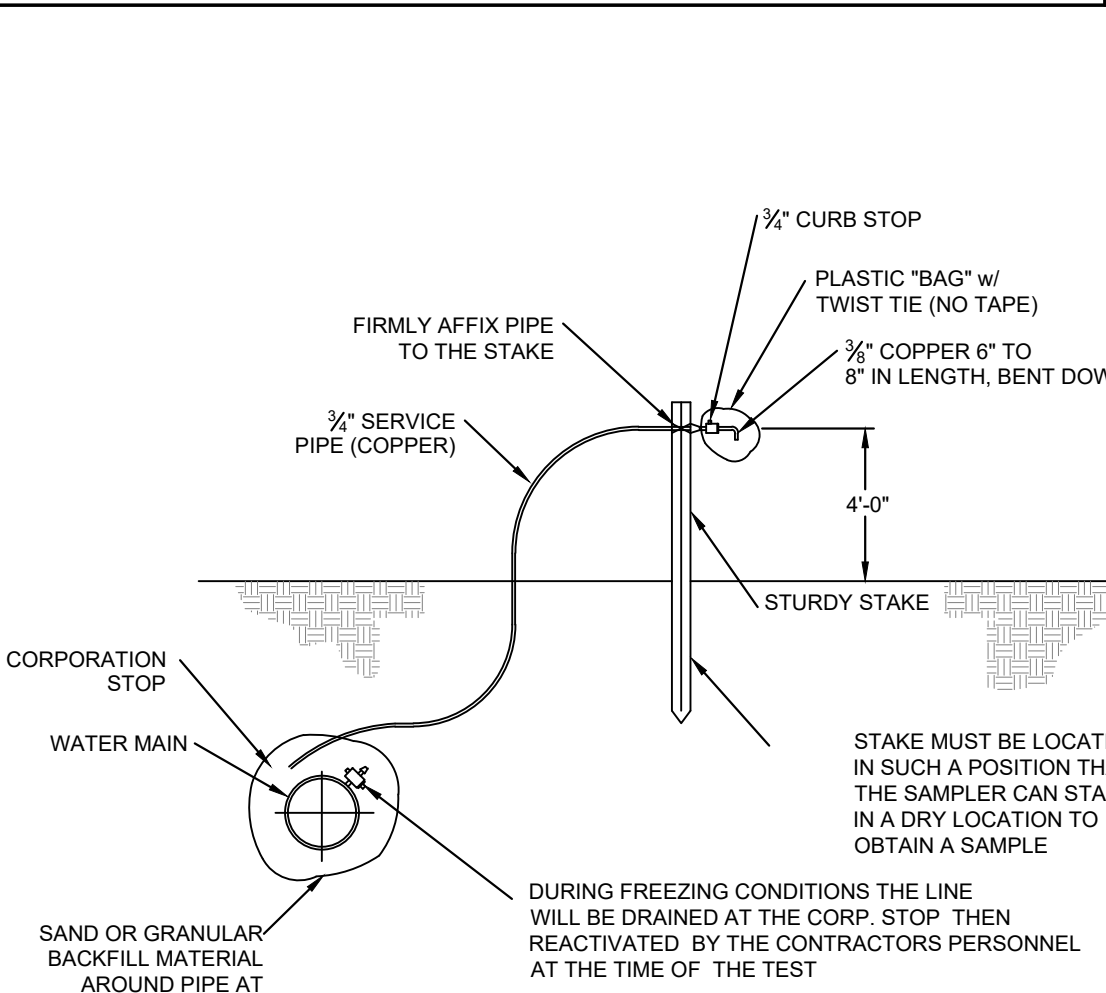
SETTING FOR HYDRANT ADJACENT TO MAIN

5120



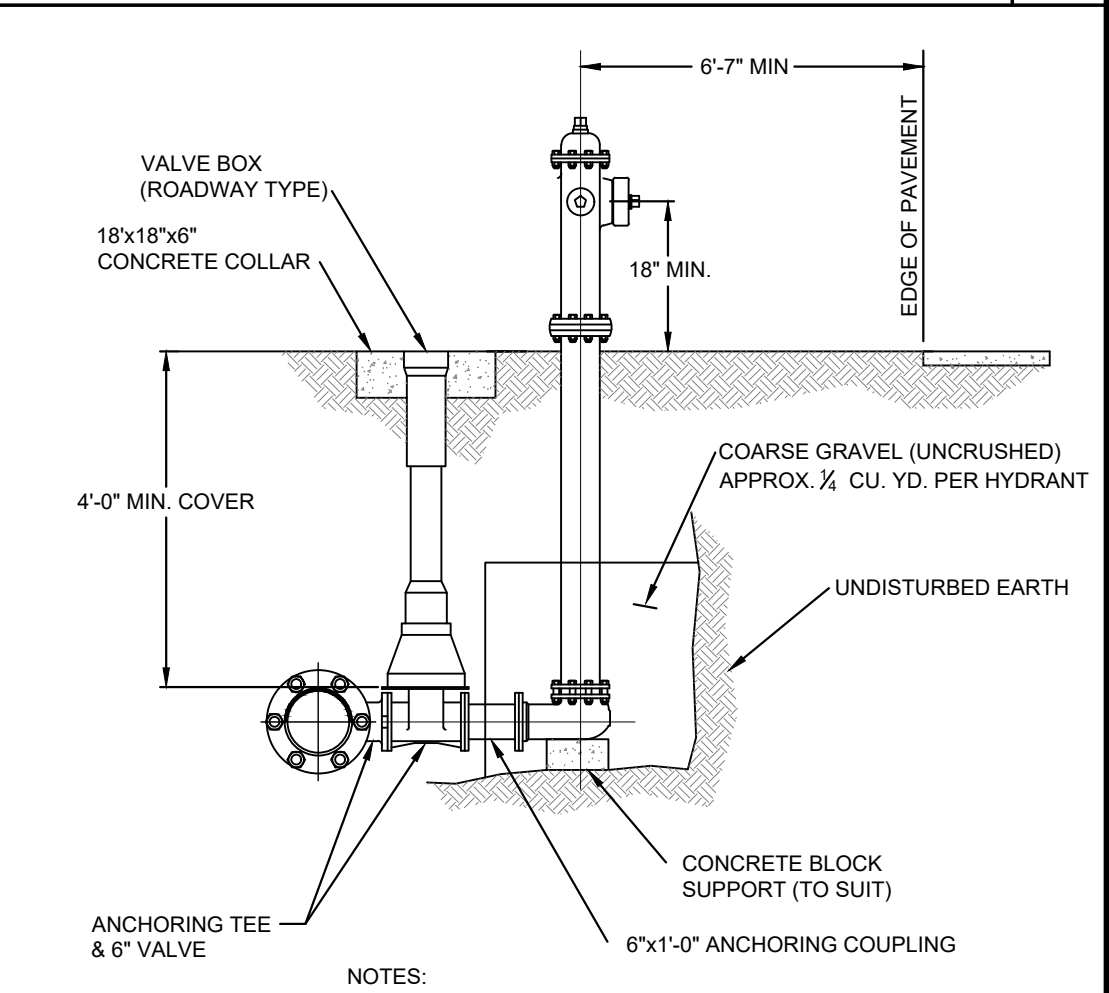
AIR RELEASE VALVE DETAIL

5290



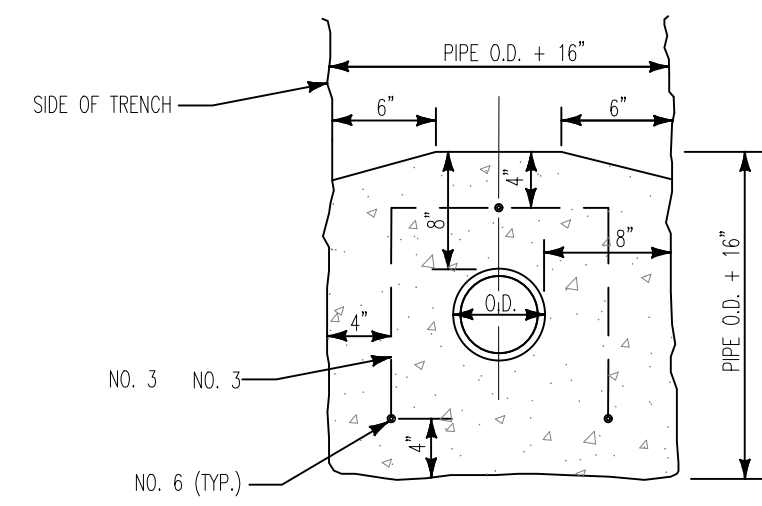
TEMPORARY PURITY TEST STATION

5260

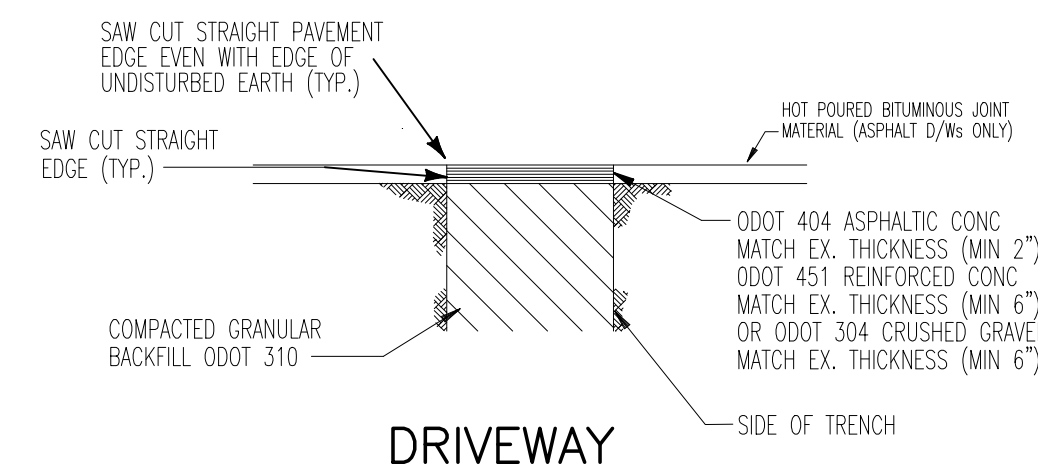


TYPICAL FIRE HYDRANT INSTALLATION

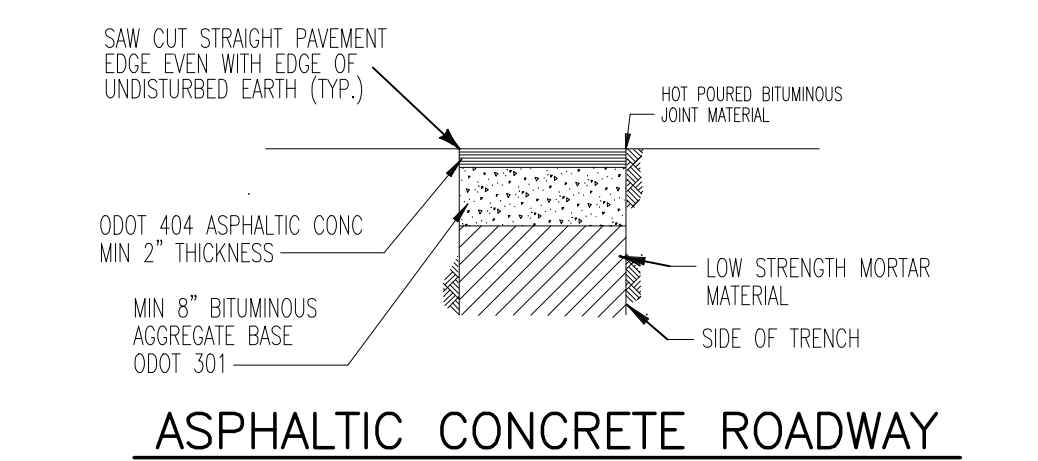
5110



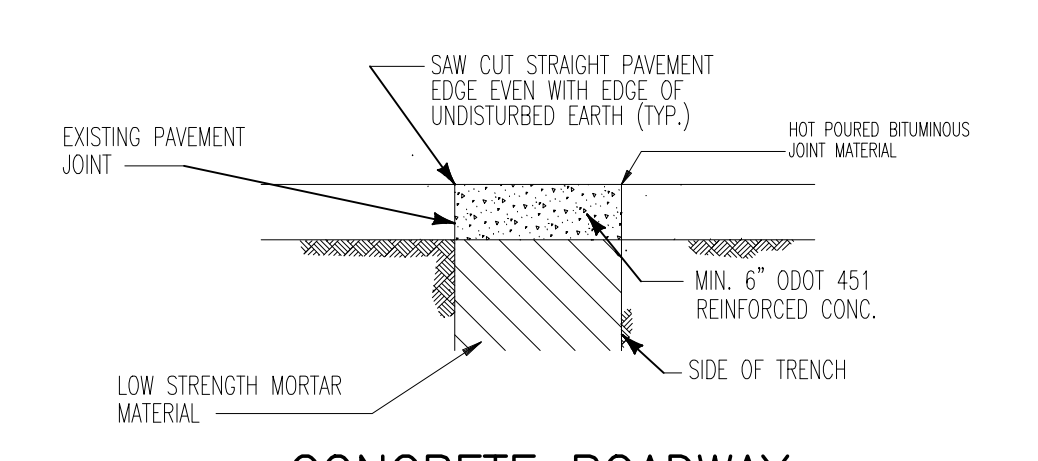
CONCRETE ENCASUREMENT



DRIVEWAY



ASPHALTIC CONCRETE ROADWAY



CONCRETE ROADWAY

PAVEMENT REPLACEMENT DETAILS

PIPE SIZE	C.Y. CONC. PER LIN. FT.	LENGTH OF NO. 3 BARS BETWEEN NO. 3 BARS	SPACING (FT)
6"	0.121	3'-8"	1.64
8"	0.139	4'-3"	1.25
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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 45040-3133, 513.336.6600

Drawing: BC WAT
 Drawn by: _____
 Checked by: _____
 Issue Date: 2019
 Sheet: 11/13

STANDARD 2-2A CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-10

CATCH BASIN CB 2-2A CB 2-2B

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 2-2B CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-10

CATCH BASIN CB 2-2A CB 2-2B

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 3 CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-6

CATCH BASIN NO. 3

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 3A CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-9

CATCH BASIN NO. 3A

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 3A MODIFIED CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-9

CATCH BASIN NO. 3A-MOD.

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 3B CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-9

CATCH BASIN NO. 3B

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 3B MODIFIED CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-9

CATCH BASIN NO. 3B-MOD.

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 4 CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-7

CATCH BASIN NO. 4

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

STANDARD NO. 4A CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-9

CATCH BASIN NO. 4A

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

NOTES

CONSTRUCTION: No. 1 manhole is for 30\"/>

DESIGN: The design shown is for brick construction with every sixth course a structural course. The 6\"/>

bottom may be precast and cast in place concrete. The bottom channel section shall be built with concrete and lined with spot pipe or brick except channel sections may be formed in the concrete.

PRECAST: Precast concrete blocks or cast in place concrete reinforced with No. 4 bars on 12\"/>

horizontal, may be used with a wall thickness of 6\"/>

or greater. Precast manholes shall be used on MH-1 or MH-5 may be used in lieu of the design shown herein unless otherwise required by the plans.

FRAME AND COVERS: shall be of heavy design (475 lbs. min. total weight) when the manhole is placed within the limits of the pavement or shoulder, otherwise the light design shall be required. Each cover shall seat in its frame without rocking and shall be marked on the frame cover and cover. The frame shall be set in a full bed of concrete and shall be set in a full bed of concrete to conform to the finished pavement or shoulder surface. The manhole shall meet Item 604 requirements and designed accordingly. The same steel supports as shown hereon shall be provided.

STEPS: shall conform to the material requirements of specification 604. All steps shall have a depressed tread or a 1/2\"/>

minimum clear height of the end. Steps installed in front concrete shall be extended to a minimum depth of 2\"/>

into the concrete. All steps installed in masonry shall be extended to a minimum depth of 2\"/>

into the masonry. All steps shall be set in a full bed of concrete. The maximum depth of a step shall be 1 1/2\"/>

in diameter. Steps may be used in precast manholes. The manhole shall be set in a full bed of concrete. The manhole shall be set in a full bed of concrete. The manhole shall be set in a full bed of concrete.

PIPE: shall conform to the material requirements of specification 604. All pipes shall have a depressed tread or a 1/2\"/>

minimum clear height of the end. Pipes installed in front concrete shall be extended to a minimum depth of 2\"/>

into the concrete. All pipes installed in masonry shall be extended to a minimum depth of 2\"/>

into the masonry. All pipes shall be set in a full bed of concrete. The maximum depth of a pipe shall be 1 1/2\"/>

in diameter. Pipes may be used in precast manholes. The manhole shall be set in a full bed of concrete. The manhole shall be set in a full bed of concrete.

WIND ANGLE: shall conform to the material requirements of specification 604. All pipes shall have a depressed tread or a 1/2\"/>

minimum clear height of the end. Pipes installed in front concrete shall be extended to a minimum depth of 2\"/>

into the concrete. All pipes installed in masonry shall be extended to a minimum depth of 2\"/>

into the masonry. All pipes shall be set in a full bed of concrete. The maximum depth of a pipe shall be 1 1/2\"/>

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into the masonry. All pipes shall be set in a full bed of concrete. The maximum depth of a pipe shall be 1 1/2\"/>

in diameter. Pipes may be used in precast manholes. The manhole shall be set in a full bed of concrete. The manhole shall be set in a full bed of concrete.

PIPE DIA. OR SHAPE EQUIV. DIA.	DIMENSIONS							CLASS CONC.	REIN. STEEL C. Y.	LBS.
	C	E	F	L	W	T	X			
12"	1'-9"	2'-6"	2'-3"	3'-6"	4'-0"	4'-9"	2"	15/2"	0.58	7
15"	2'-0"	2'-9"	2'-9"	3'-6"	4'-0"	4'-9"	2 1/4"	15/2"	0.75	8
18"	2'-3"	3'-0"	3'-6"	4'-6"	5'-3"	2 1/2"	15"	0.93	0.89	8
21"	2'-6"	3'-3"	3'-6"	4'-6"	5'-6"	2 3/4"	14"	1.14	1.14	9
24"	2'-9"	3'-6"	4'-6"	5'-6"	6'-6"	3"	16"	1.35	1.35	9
27"	3'-0"	3'-9"	4'-6"	5'-6"	6'-6"	3 1/2"	17"	1.57	1.57	10

STANDARD NO. 5 CATCH BASIN

NOTES

GRATING AND FRAME: Shall meet the requirements of 604. The design shall be symmetrical to the center and equidistant as shown in the plan view.

CONCRETE: Cast in place for a thickness of 4\"/>

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 roadway or ditch floor lines, returning to normal 10 feet each side of the basin.

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

SIDE 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 PIPE SIZE IS 21\"/>

MAXIMUM DEPTH IS 4 FEET.

STEPS: Steps are to be installed in storm structures over 4\"/>

4\"/>

IN DEPTH AND SHALL MEET THE REQUIREMENTS OF DRAWING M-1.

REVISIONS DATE C-13A

CATCH BASIN NO. 5

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

BUTLER COUNTY ENGINEERS OFFICE AND OPERATIONS FACILITY 180 FARMERS AVENUE - HAMILTON, OH 45030

GENERAL NOTES
EROSION AND SEDIMENT CONTROLS

Vegetative Practices
Such practices may include: temporary seeding, permanent seeding, mulching, matted, sod stabilization, vegetative buffer strips, planting 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 restabilized.

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

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

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

Maintenance
All temporary and permanent control practices shall be maintained and repaired as needed to assure continued performance of their intended function.

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

2. The following methods may be used for "Dormant Seeding":
From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20 and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.

From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and 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.

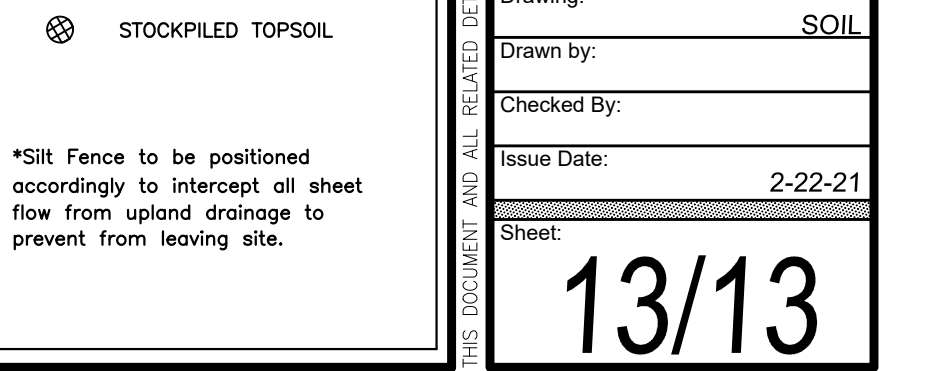
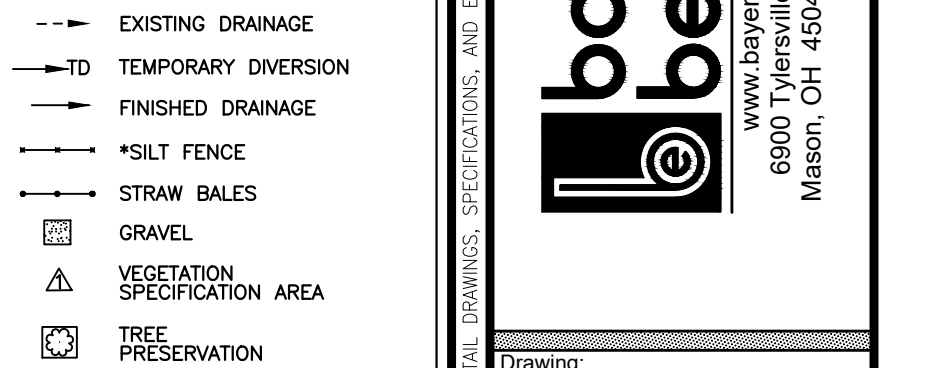
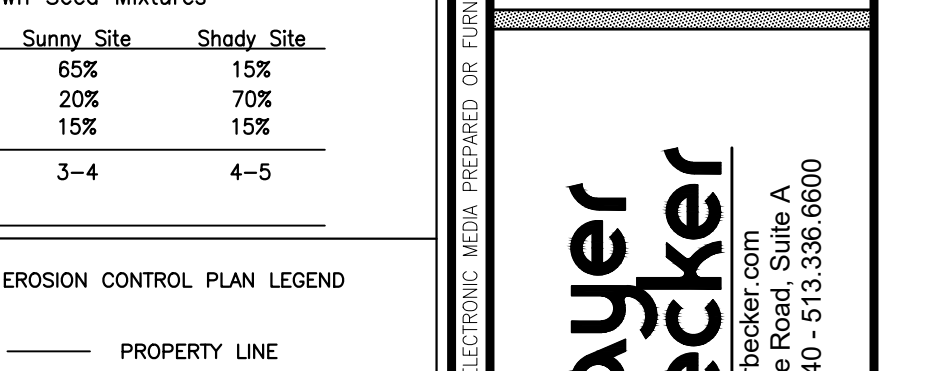
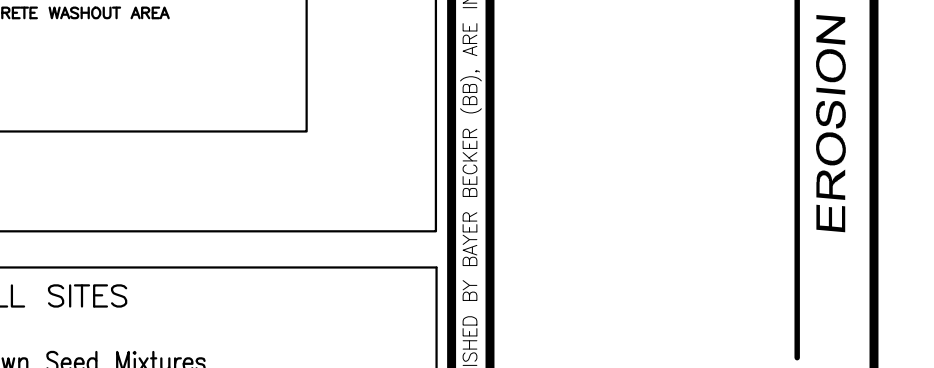
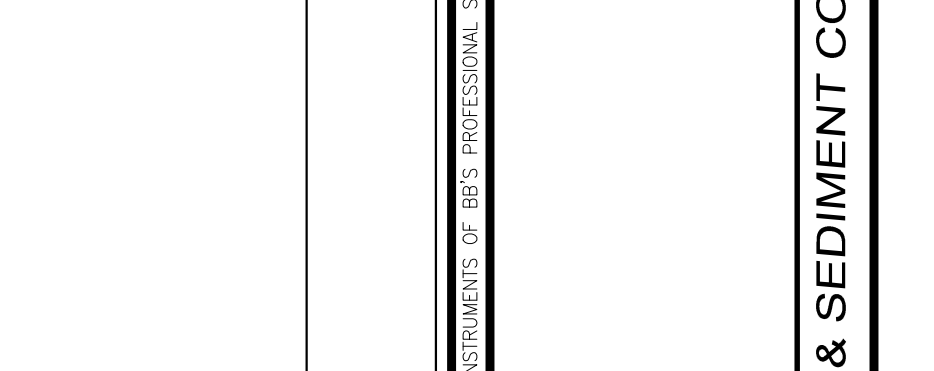
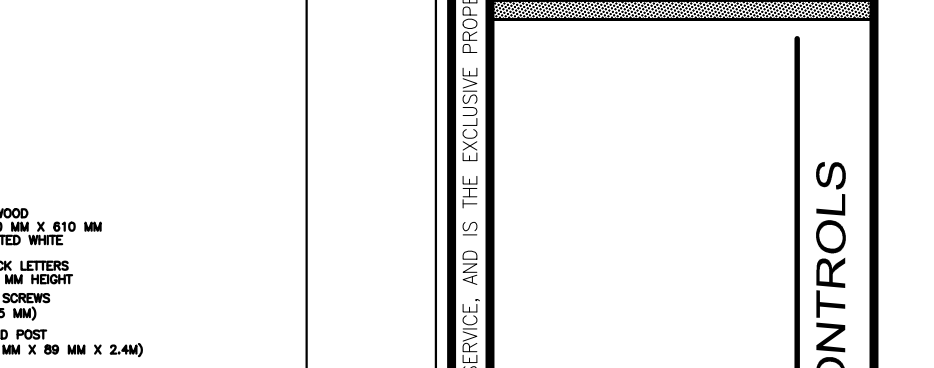
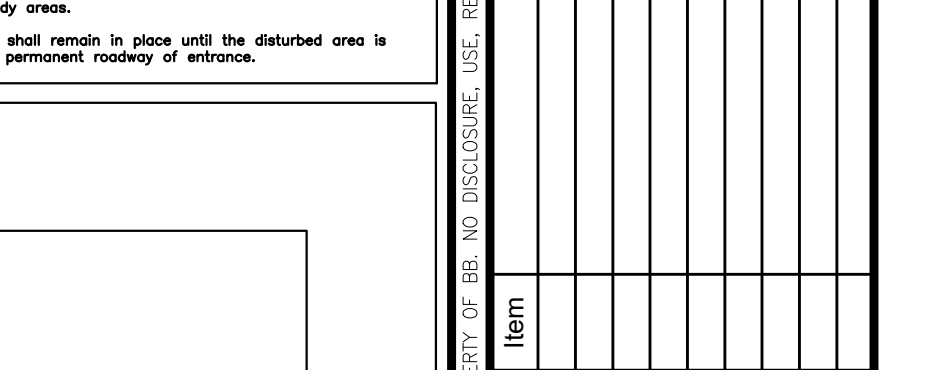
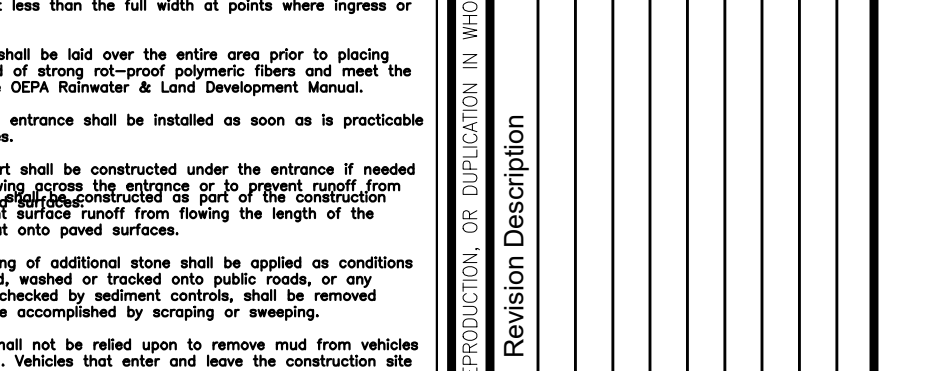
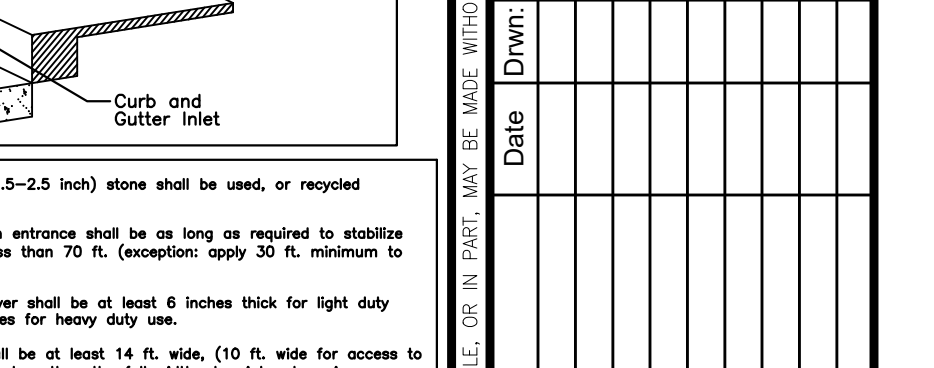
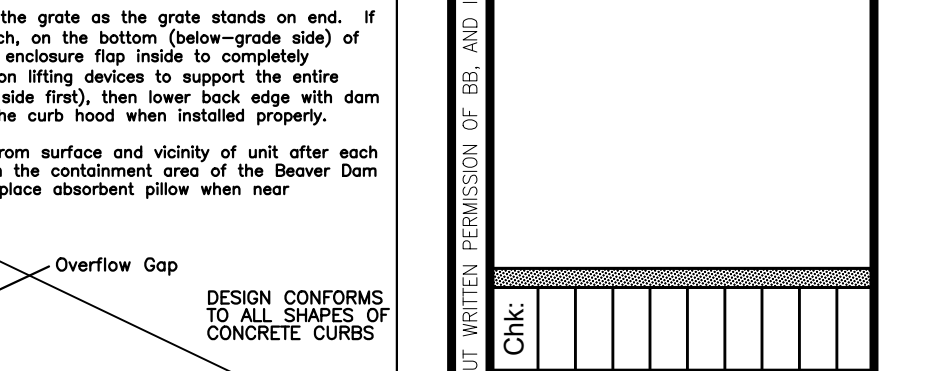
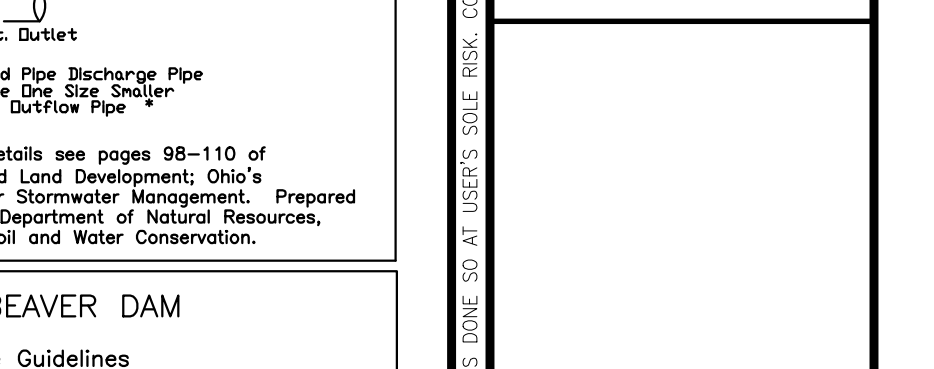
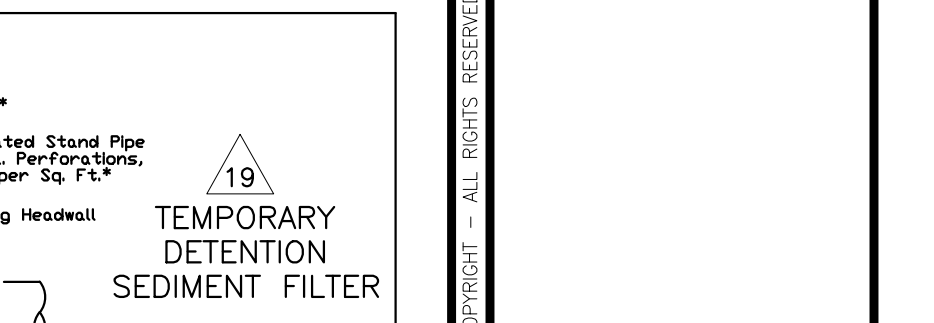
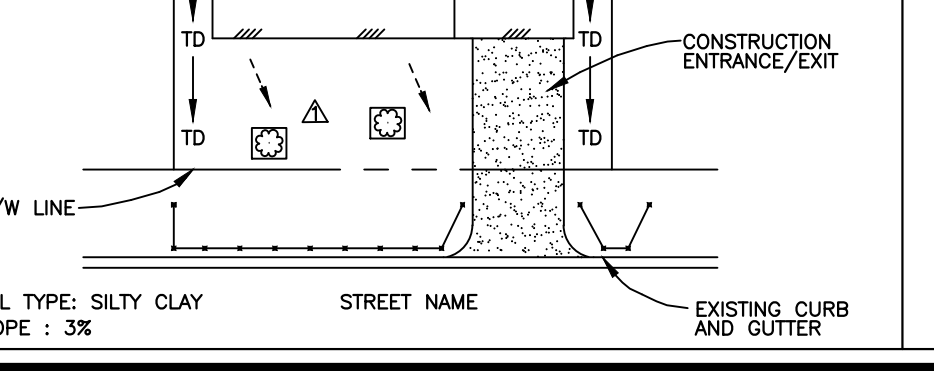
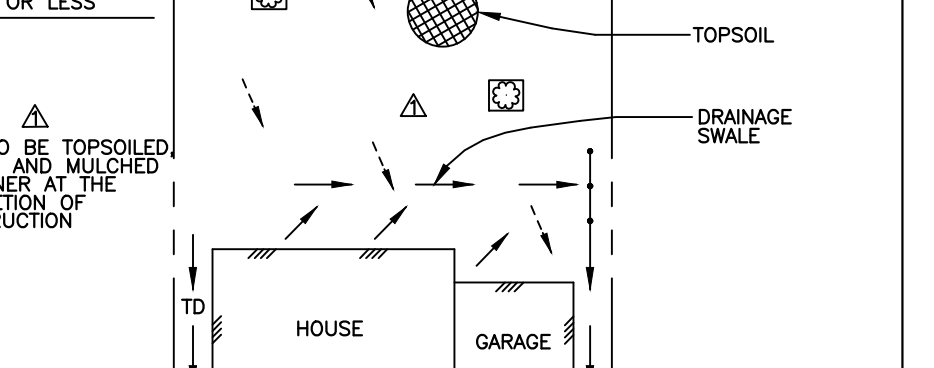
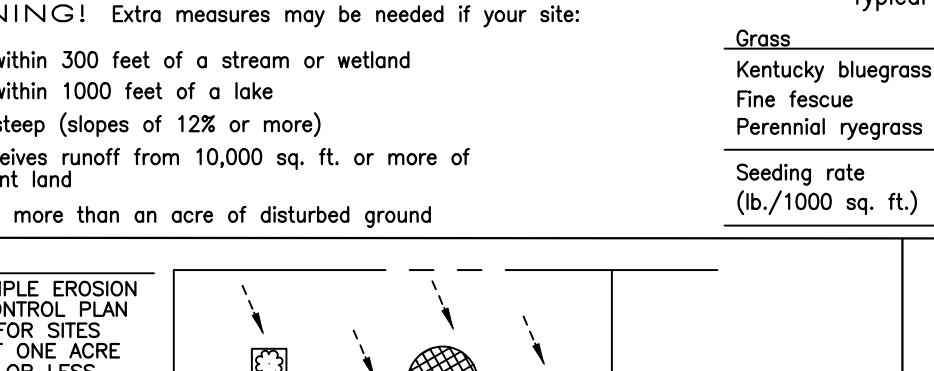
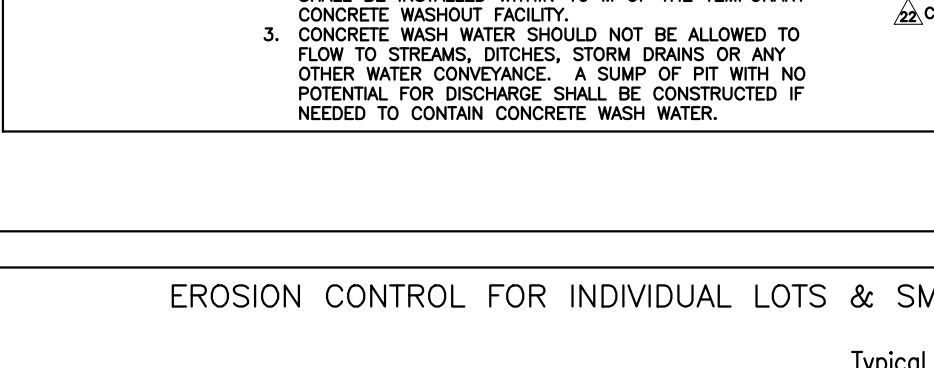
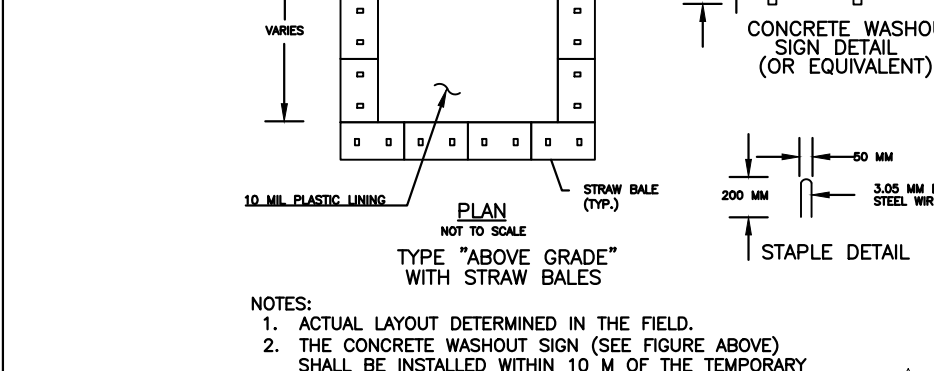
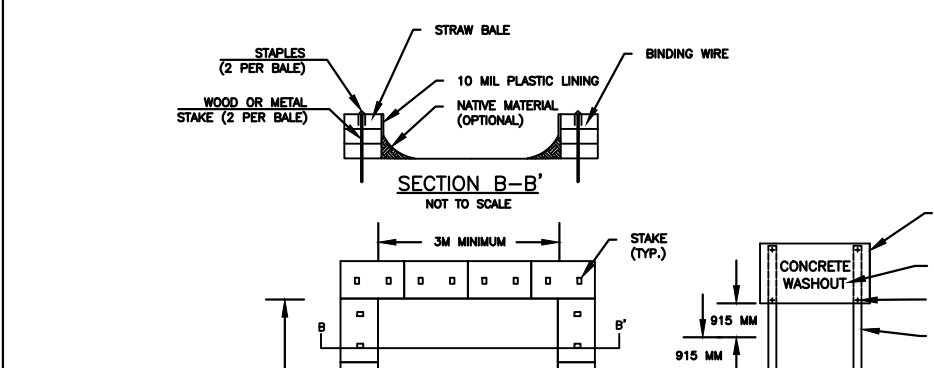
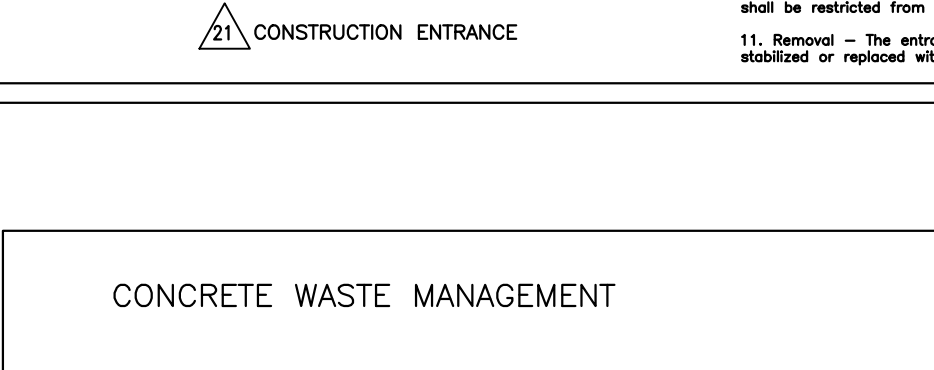
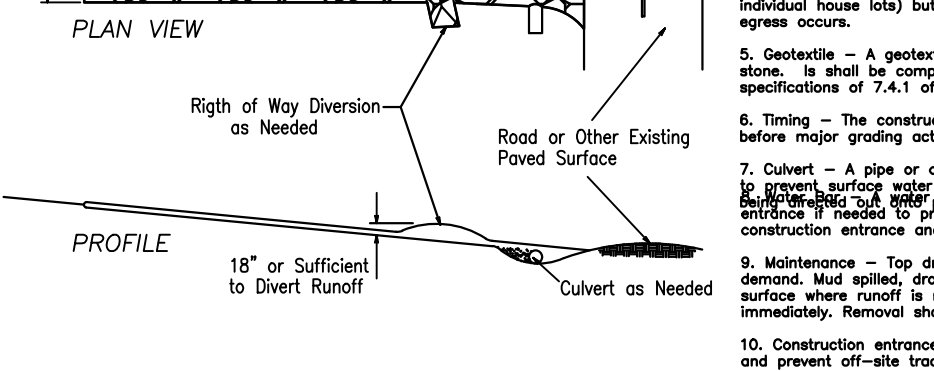
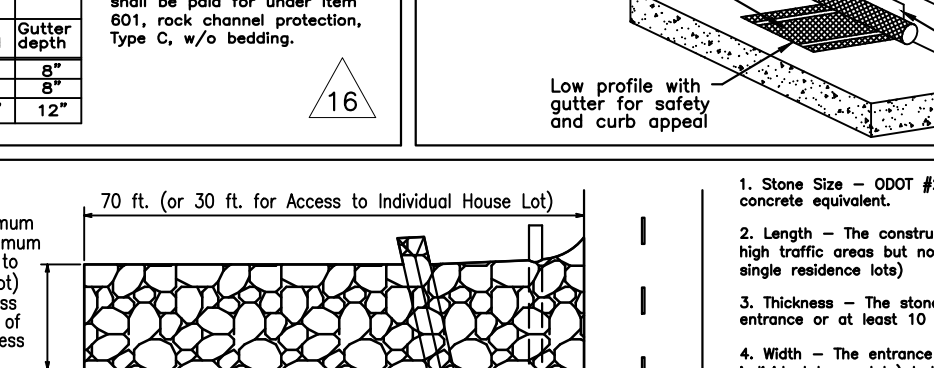
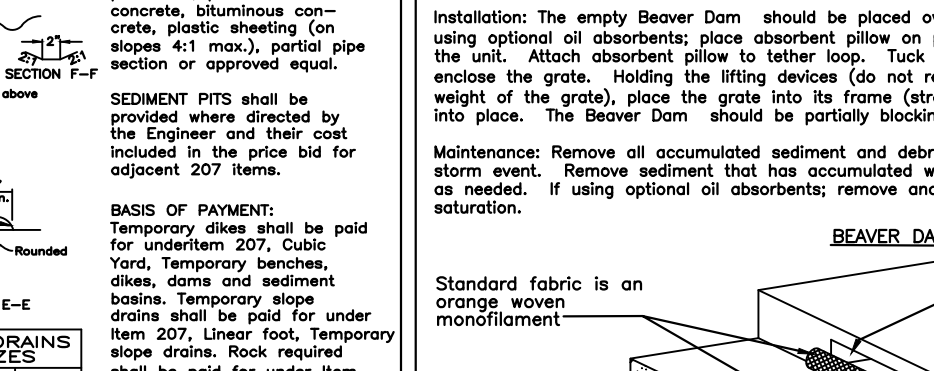
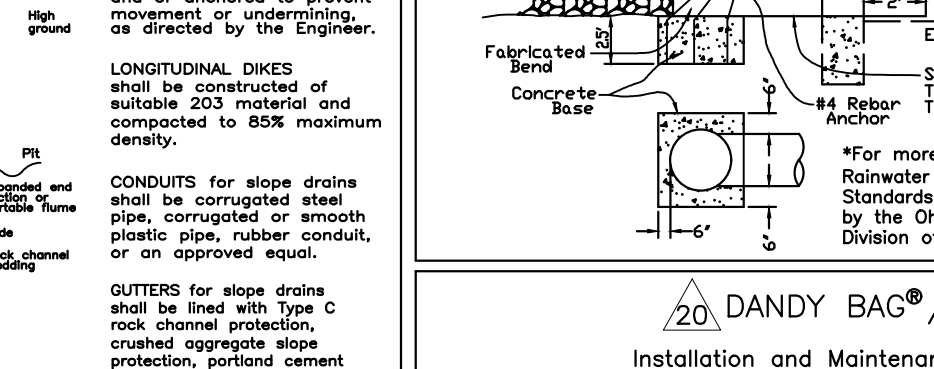
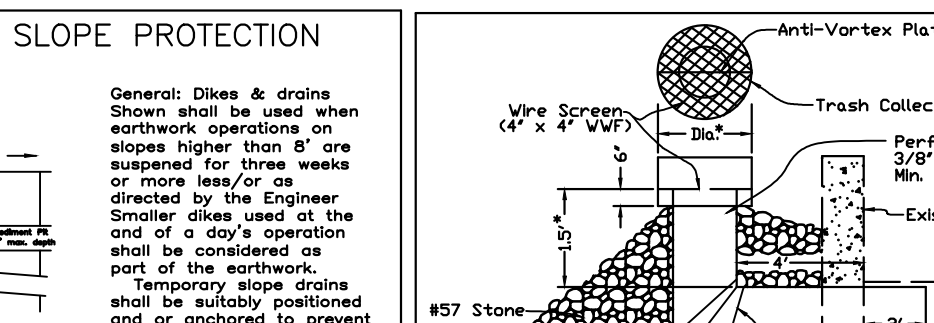
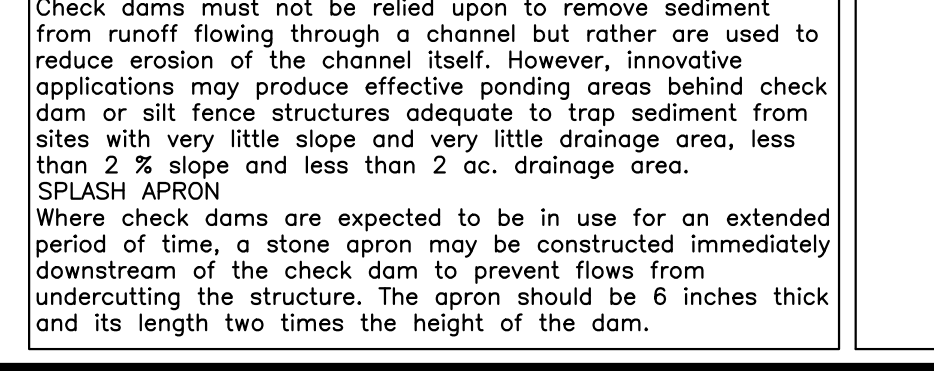
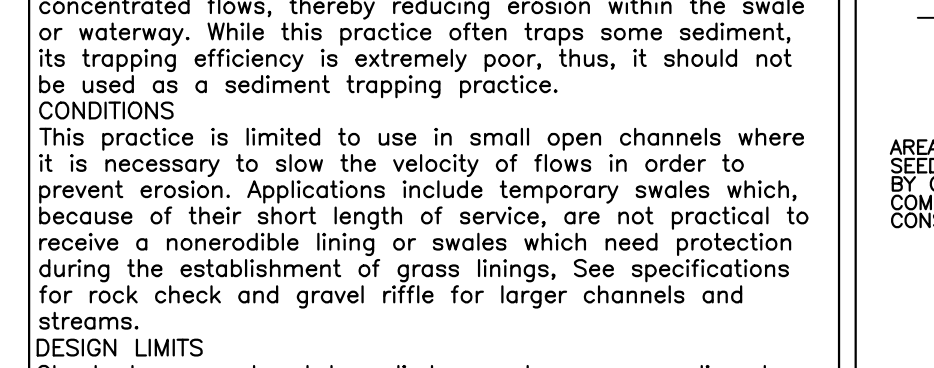
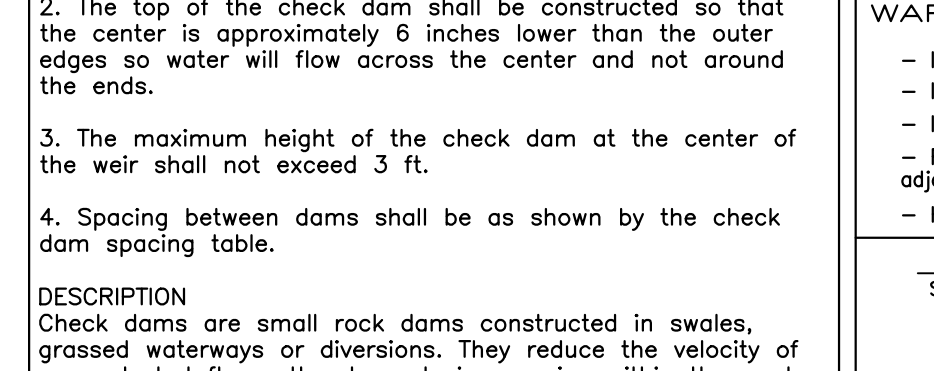
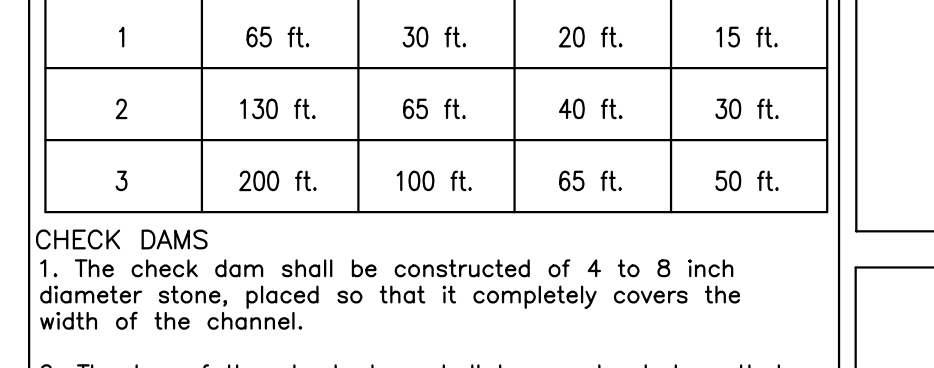
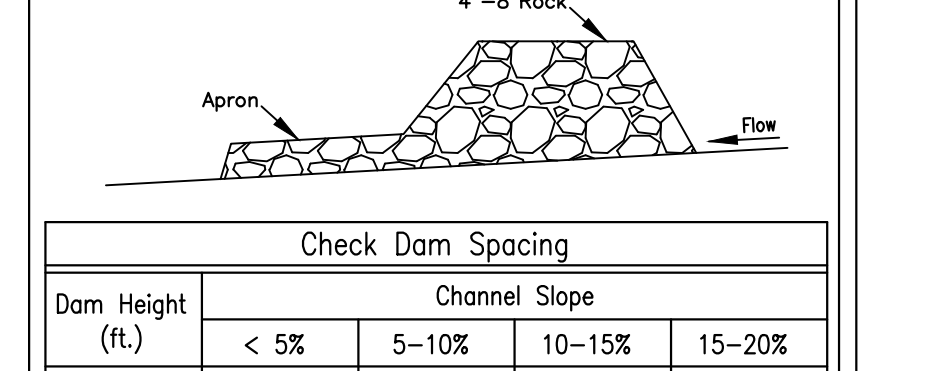
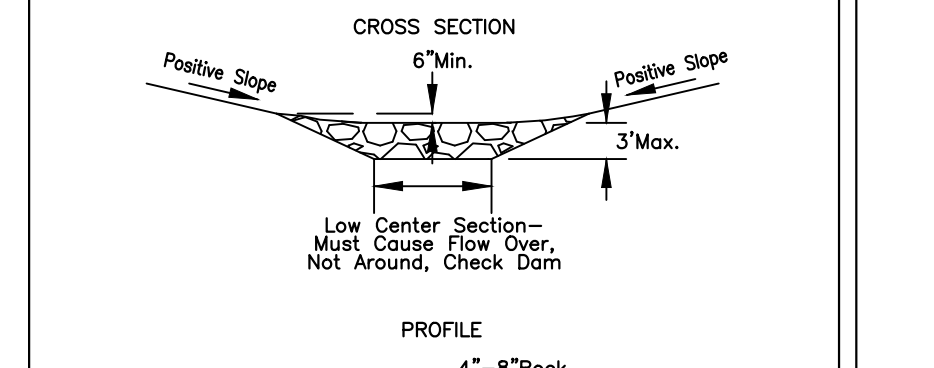
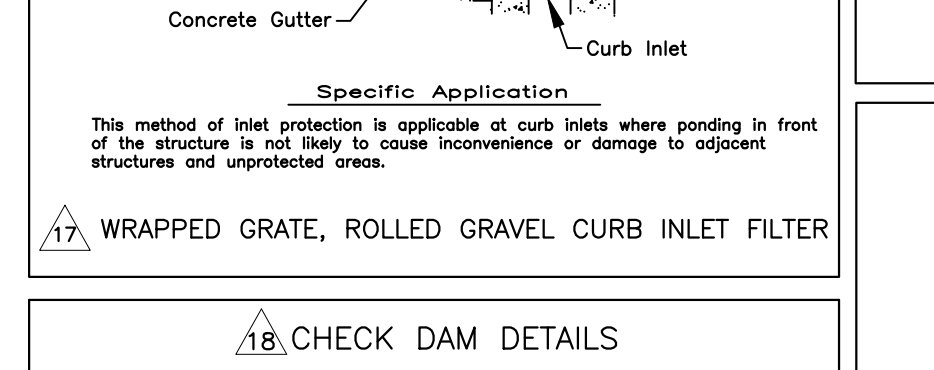
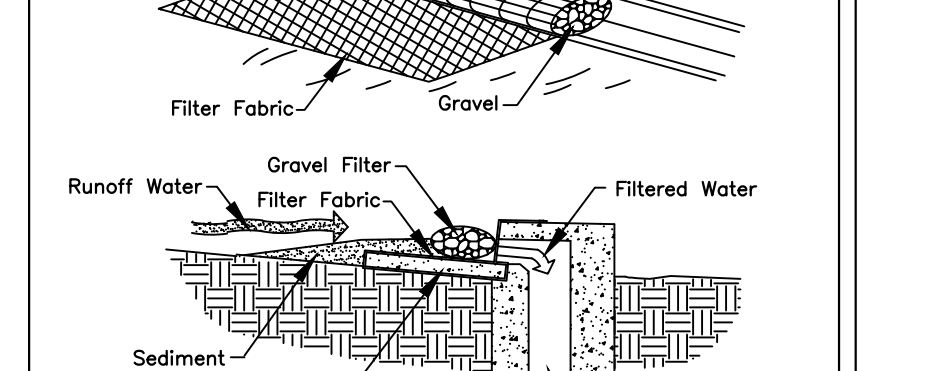
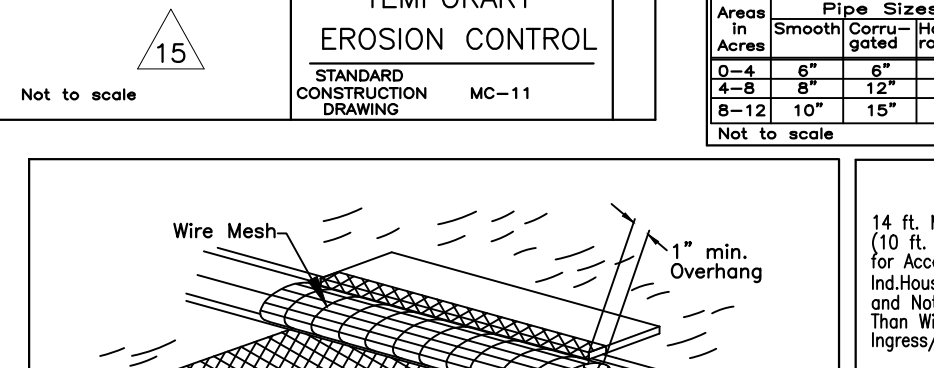
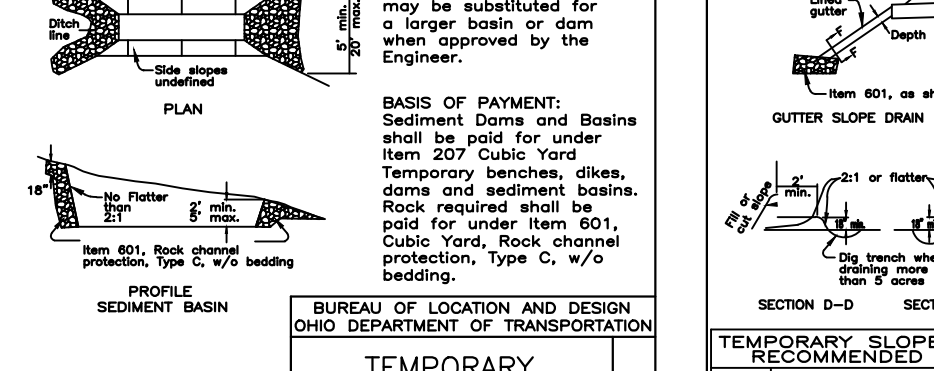
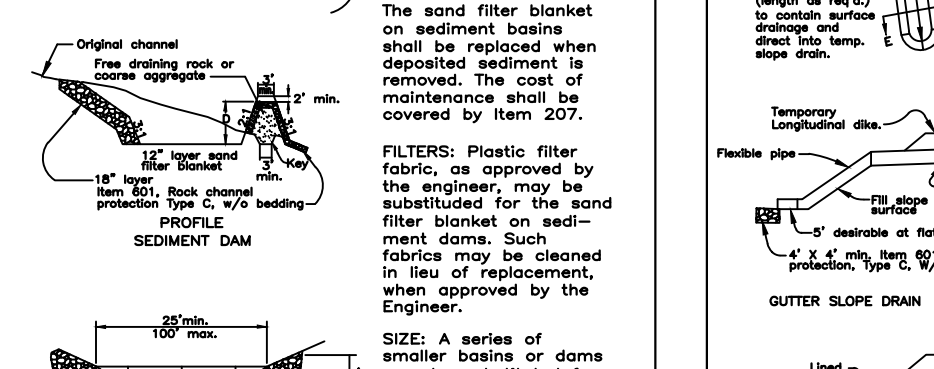
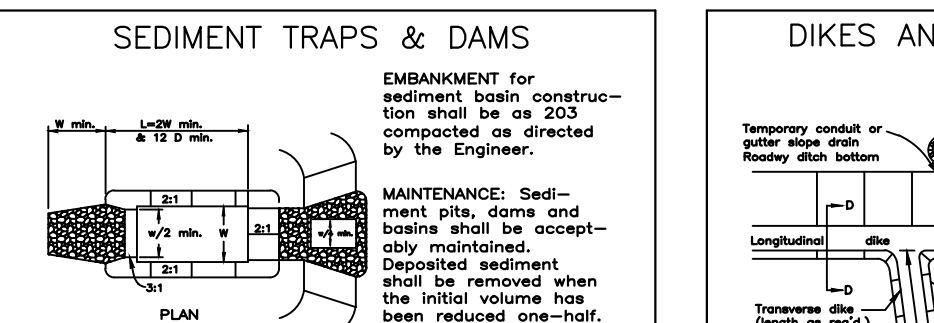
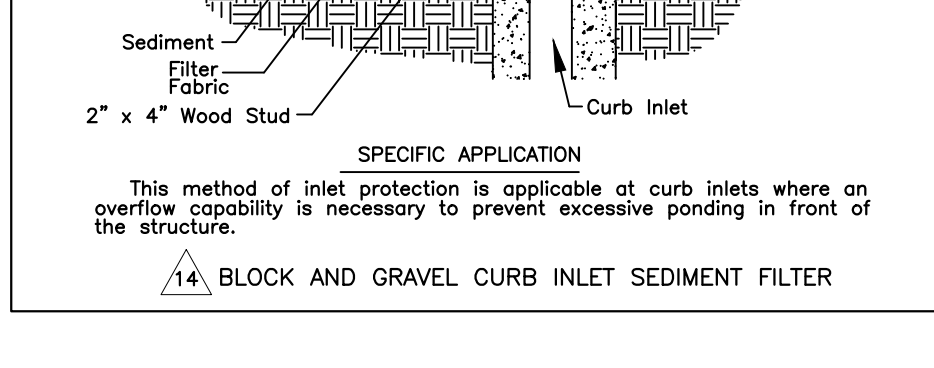
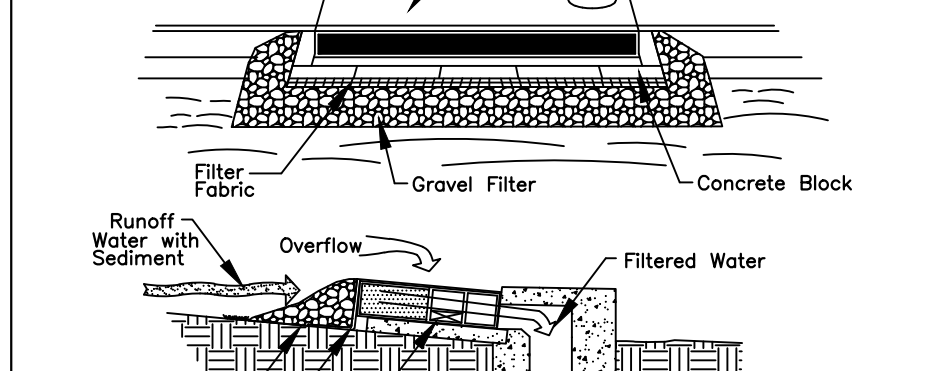
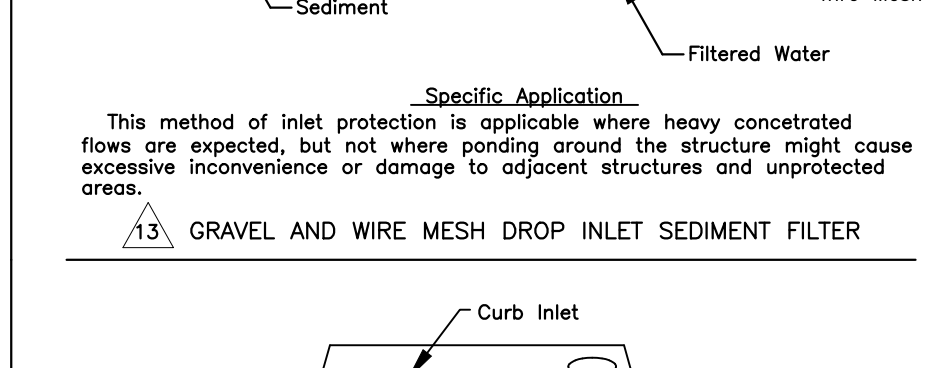
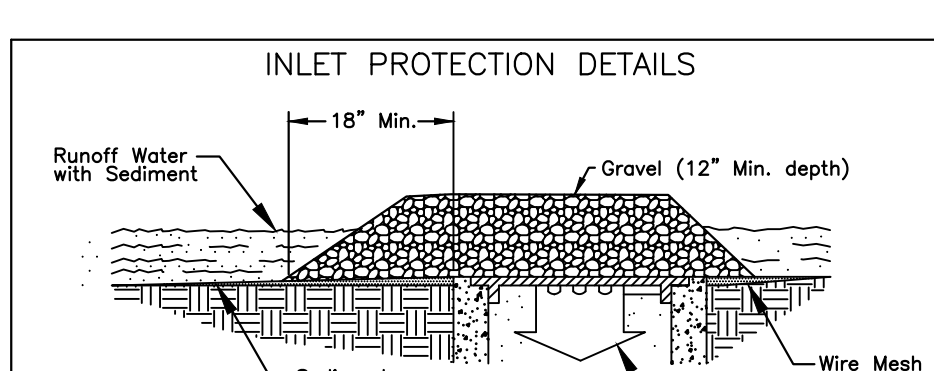
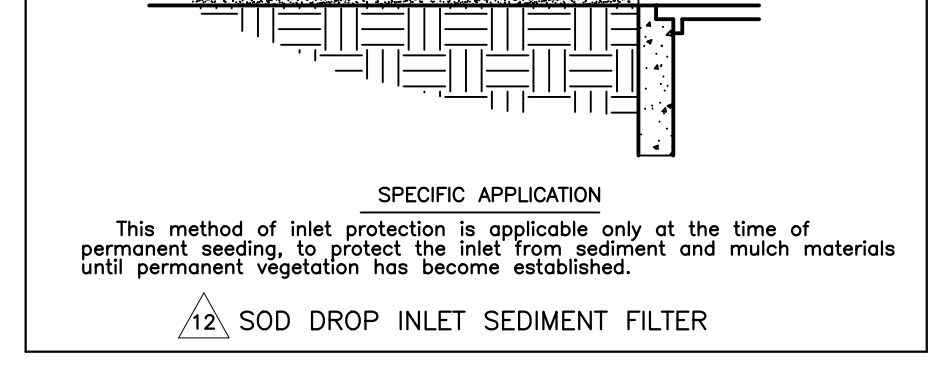
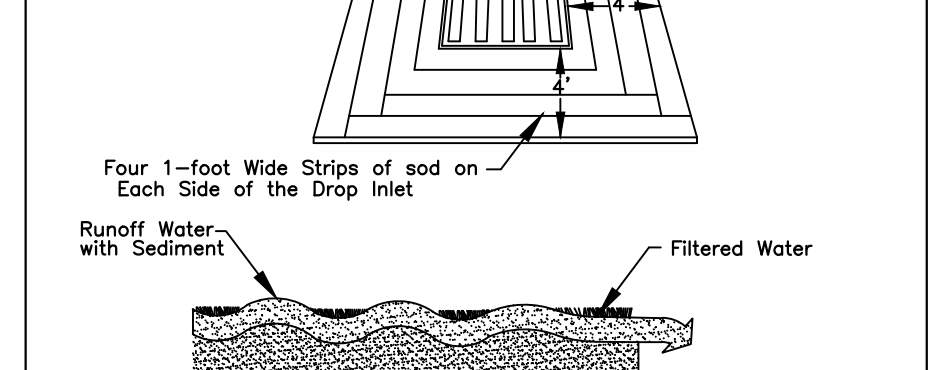
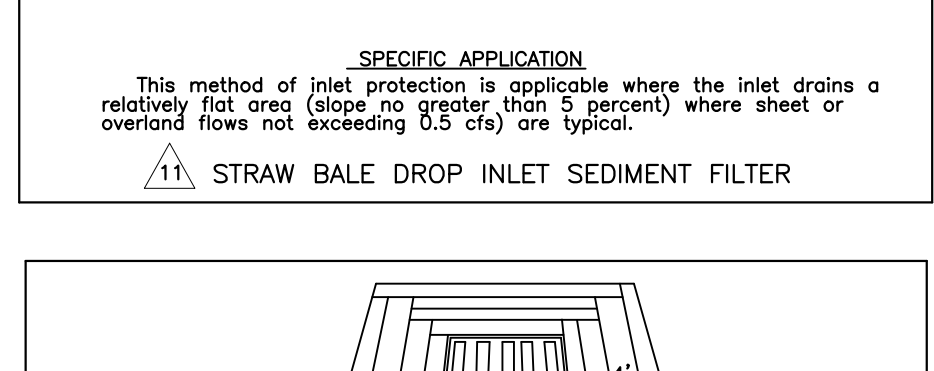
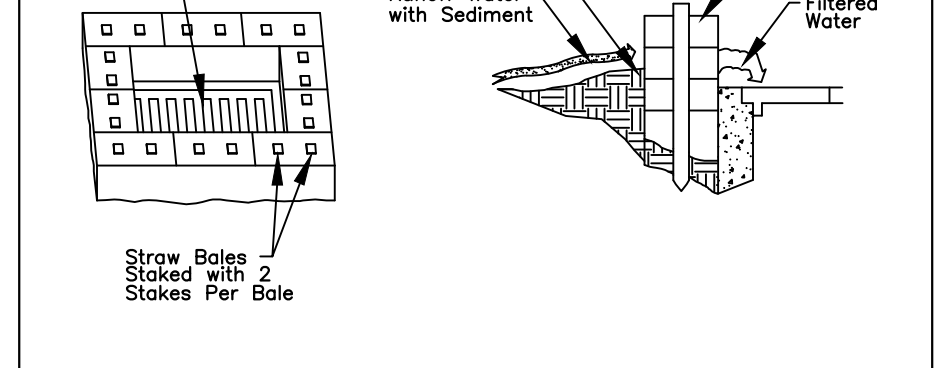
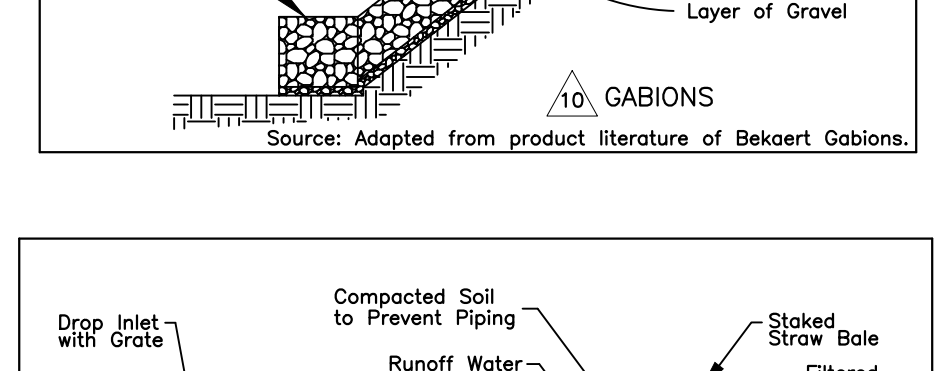
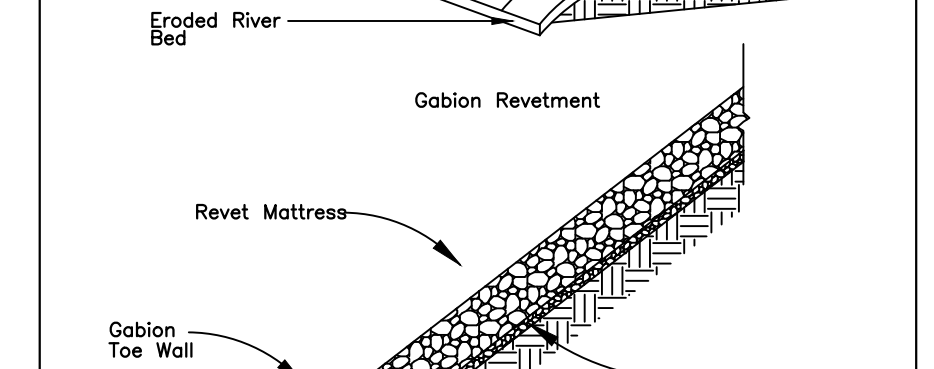
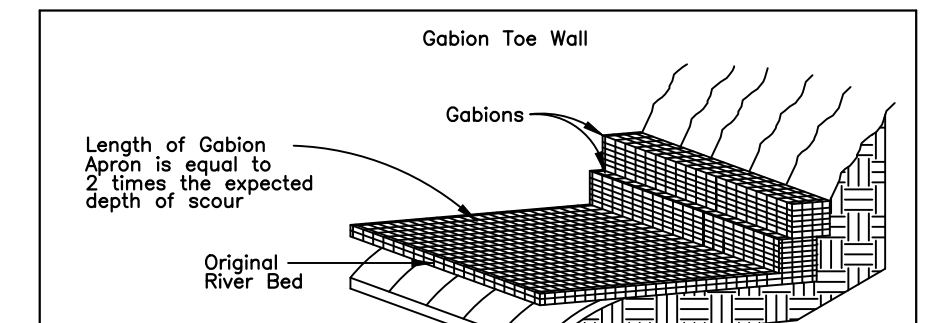
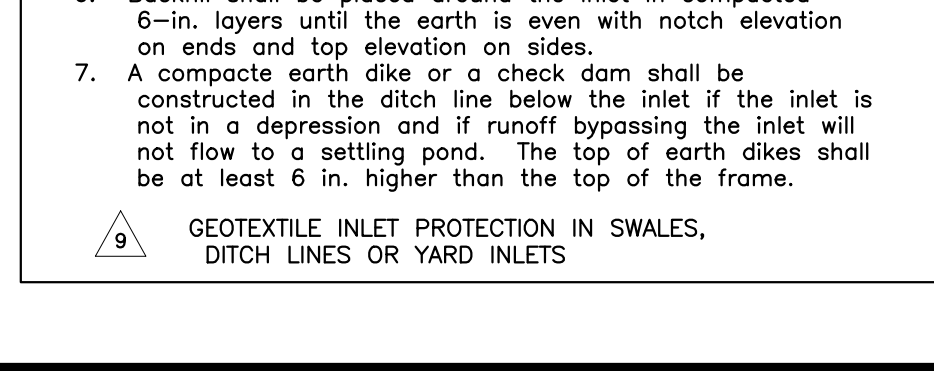
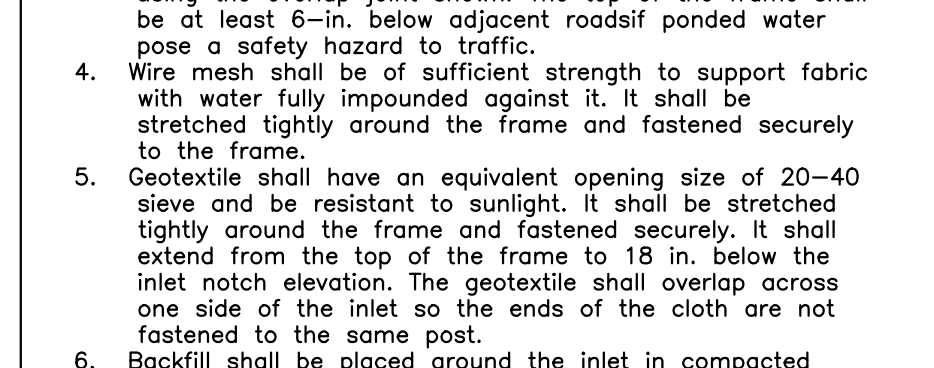
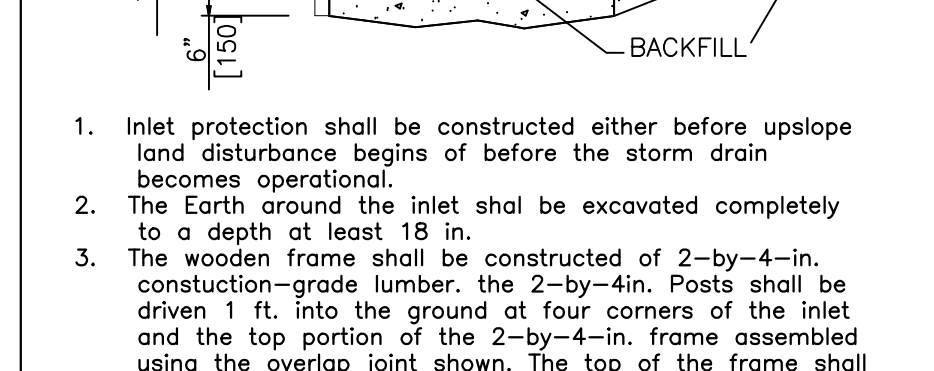
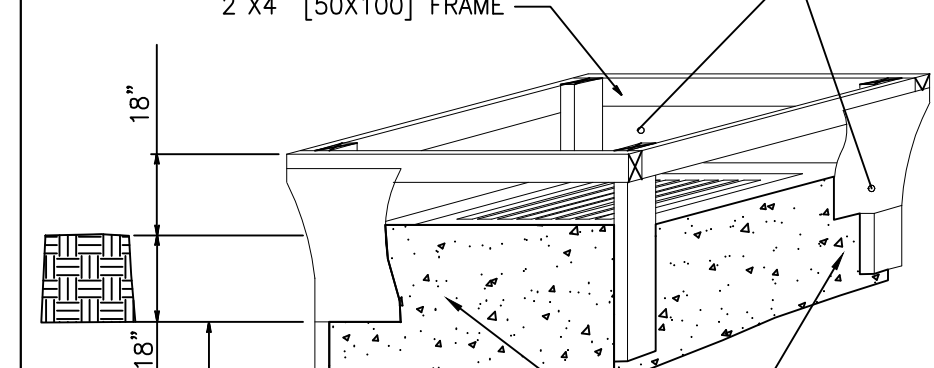
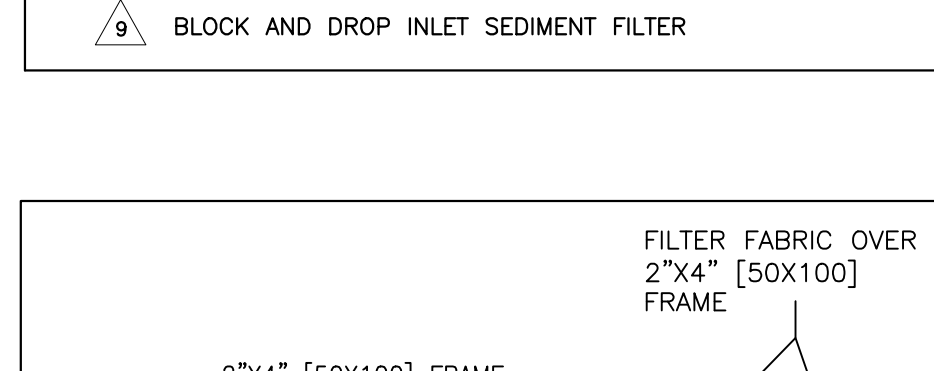
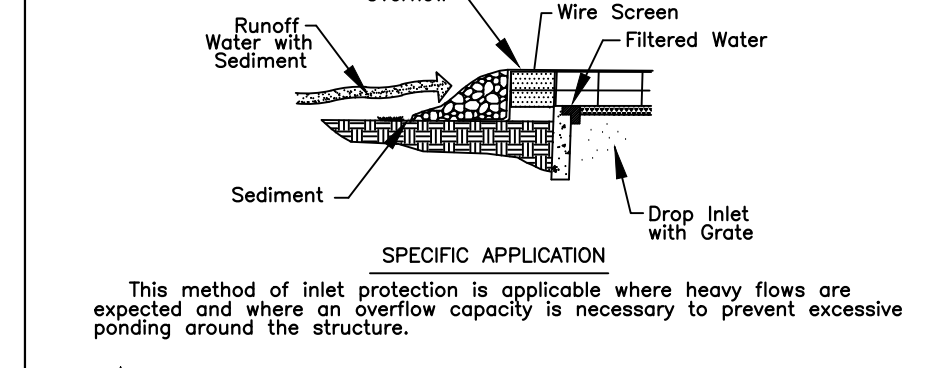
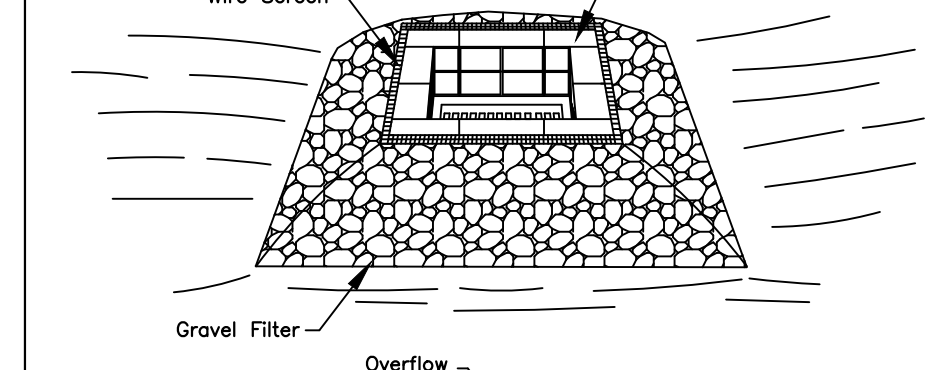
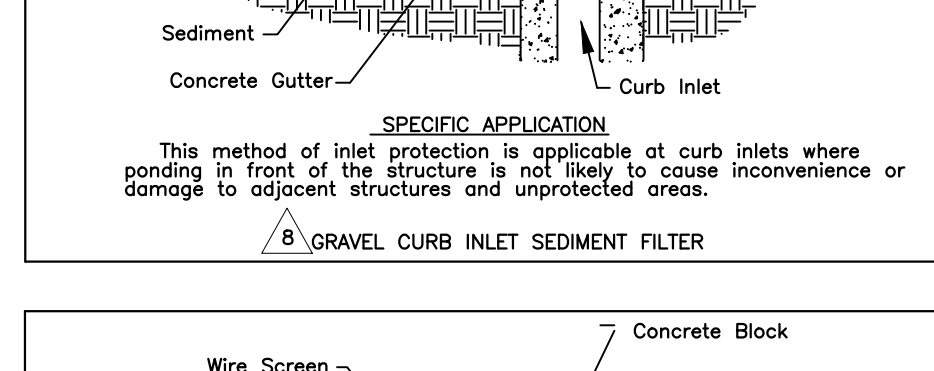
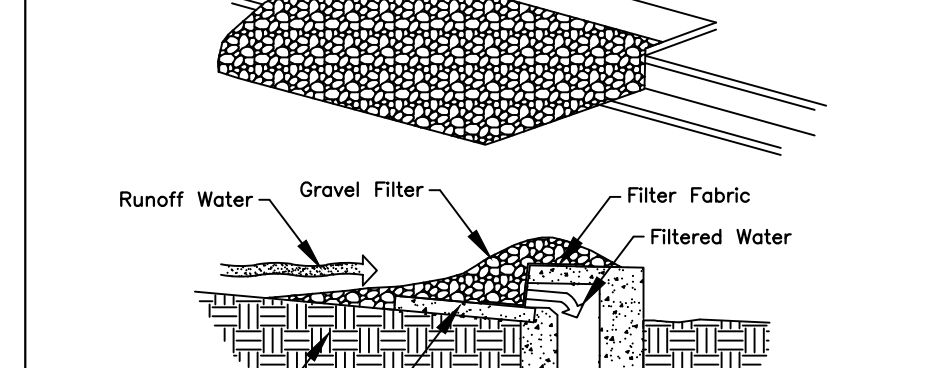
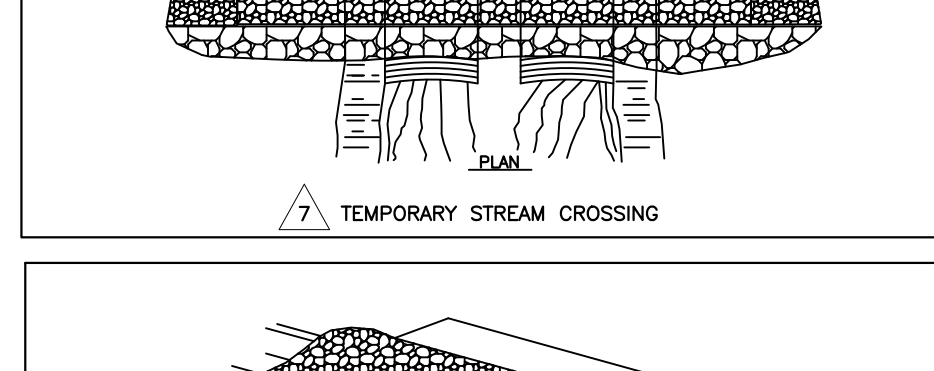
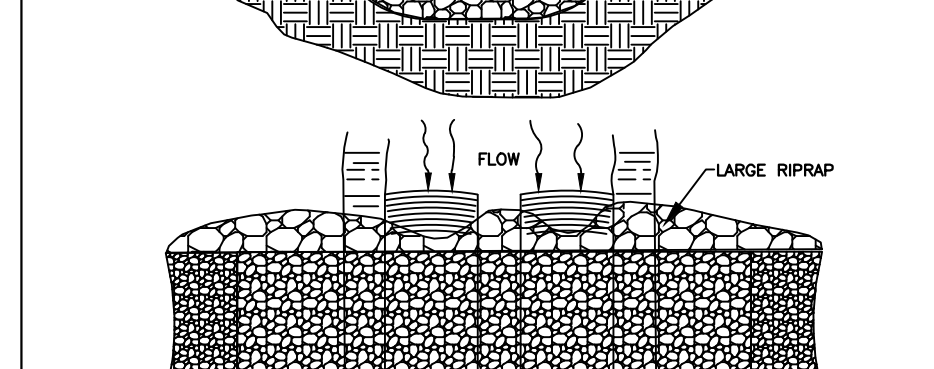
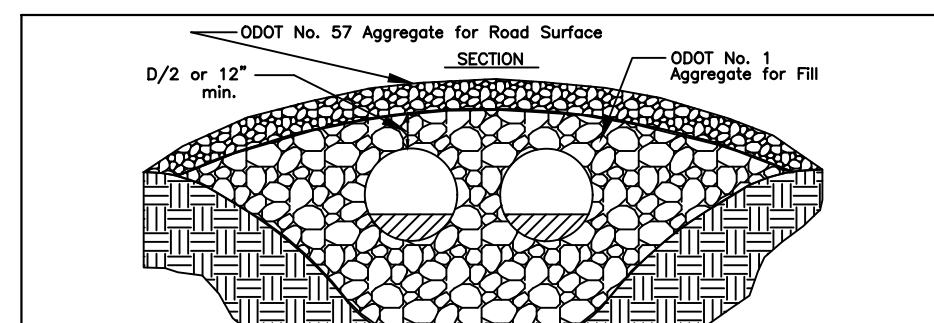
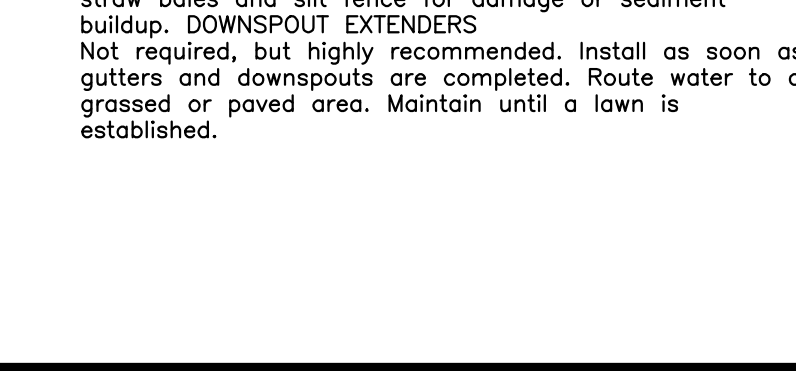
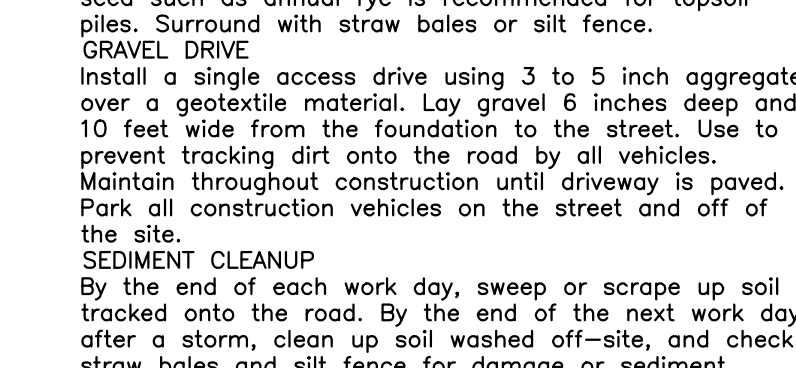
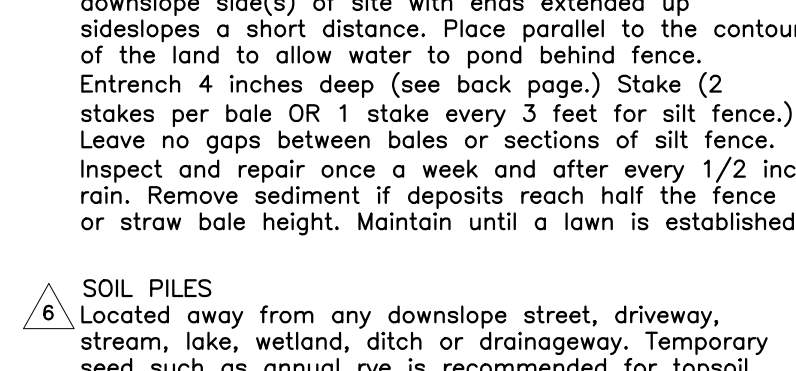
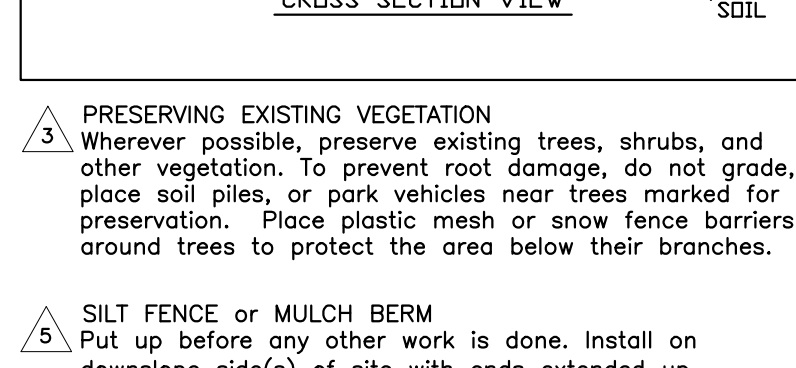
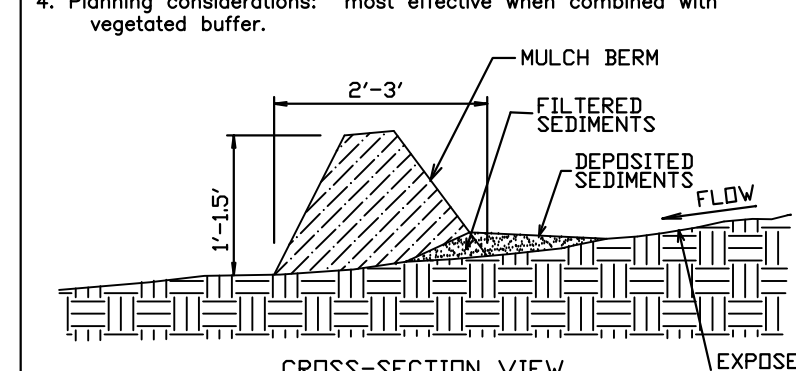
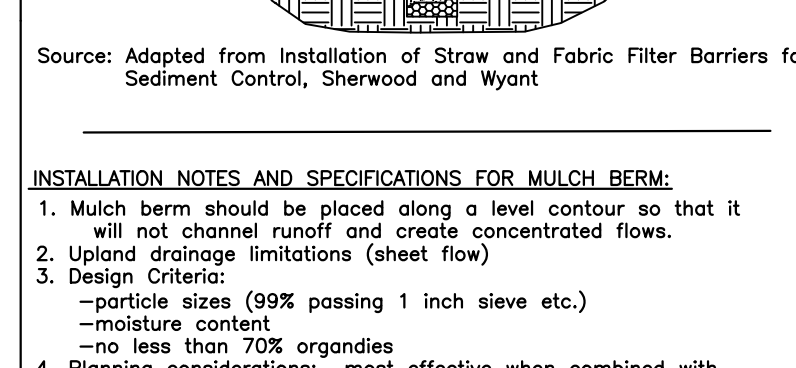
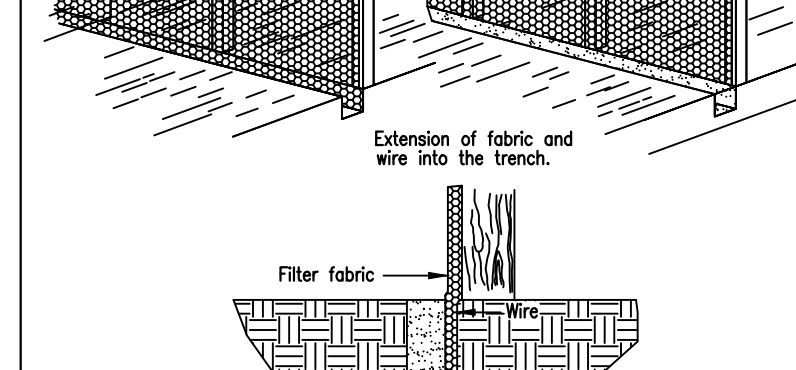
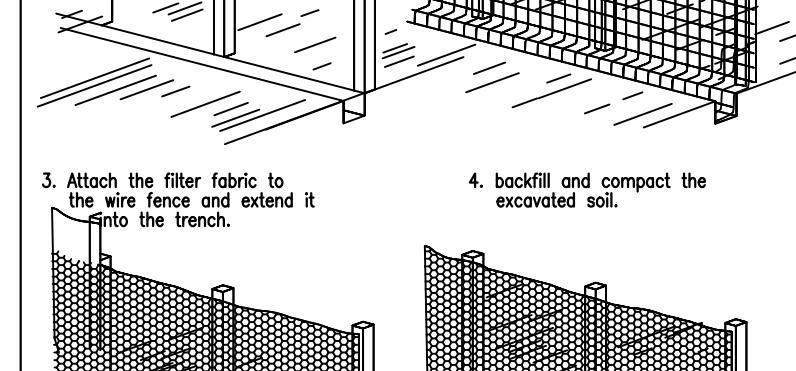
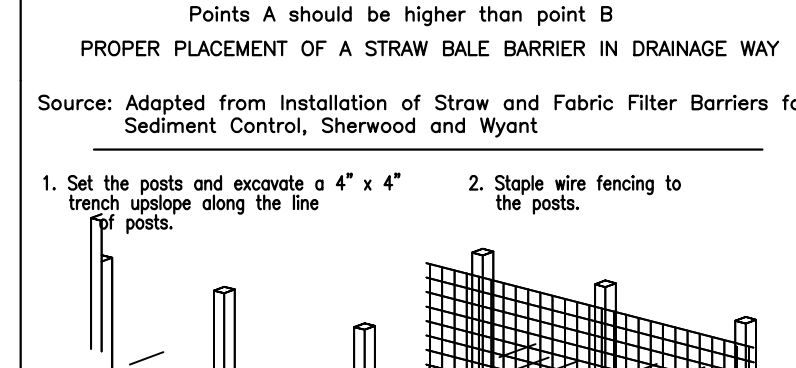
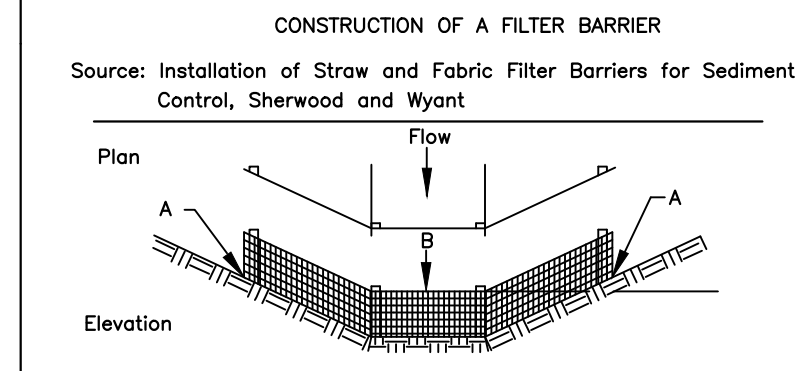
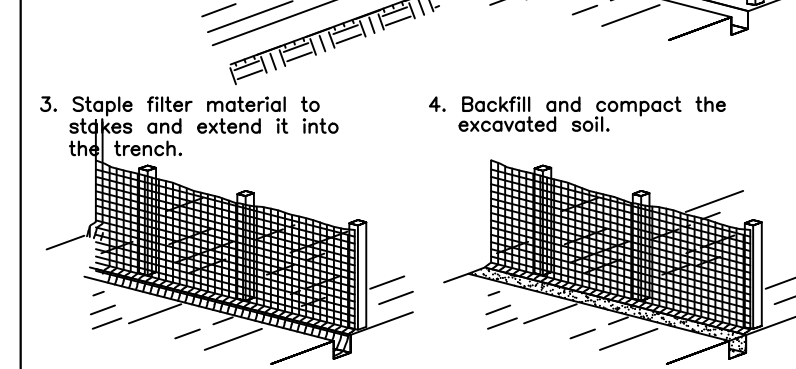
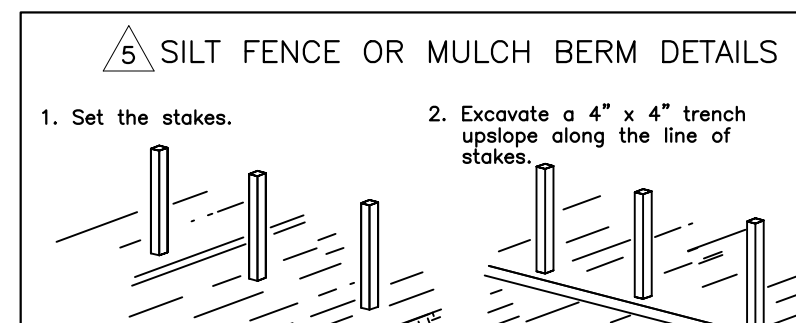
Where feasible, except when a cultipacker type seeder is used, the seedbed should be formed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

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.

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).
3. Design Criteria:
- particle sizes (99% passing 1 inch sieve etc.)
- moisture content
- no less than 70% organics
4. Planning considerations: most effective when combined with vegetated buffer.



Plot time: Jun 24, 2021 - 5:33pm
 Drawing name: K:\OLD-K\Mason\VF\FBLOCKS\DETAILS\SOLLEROS\SOLL.DWG - Layout Tab: Layout1
 Date: _____
 Drawn by: _____
 Checked by: _____
 Issue Date: 2-22-21
 Sheet: 13/13
 Revision Description: _____
 Item: _____
 SOIL
 Drawing: _____
 Checked By: _____
 Issue Date: 2-22-21
 Sheet: 13/13
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