

west virginia department of environmental protection

EARL RAY TOMBLIN, GOVERNOR

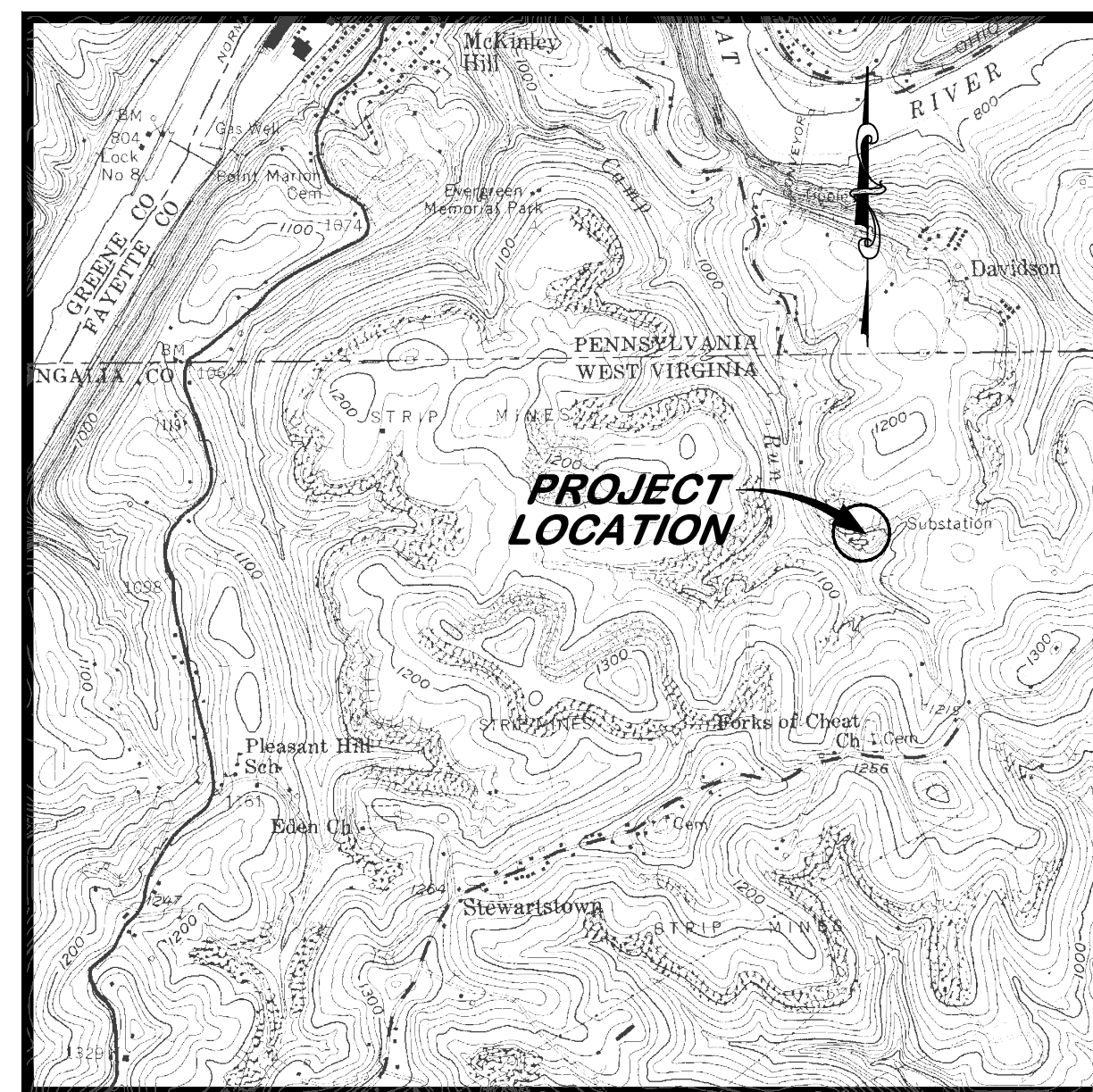
RANDY C. HUFFMAN, CABINET SECRETARY

OFFICE OF ABANDONED MINE LANDS AND RECLAMATION

DAVIDSON HIGHWALL DRAINAGE

NEAR MORGANTOWN
MONONGALIA COUNTY, WEST VIRGINIA

VICINITY MAP



USGS 7.5' QUAD (MORGANTOWN NORTH)

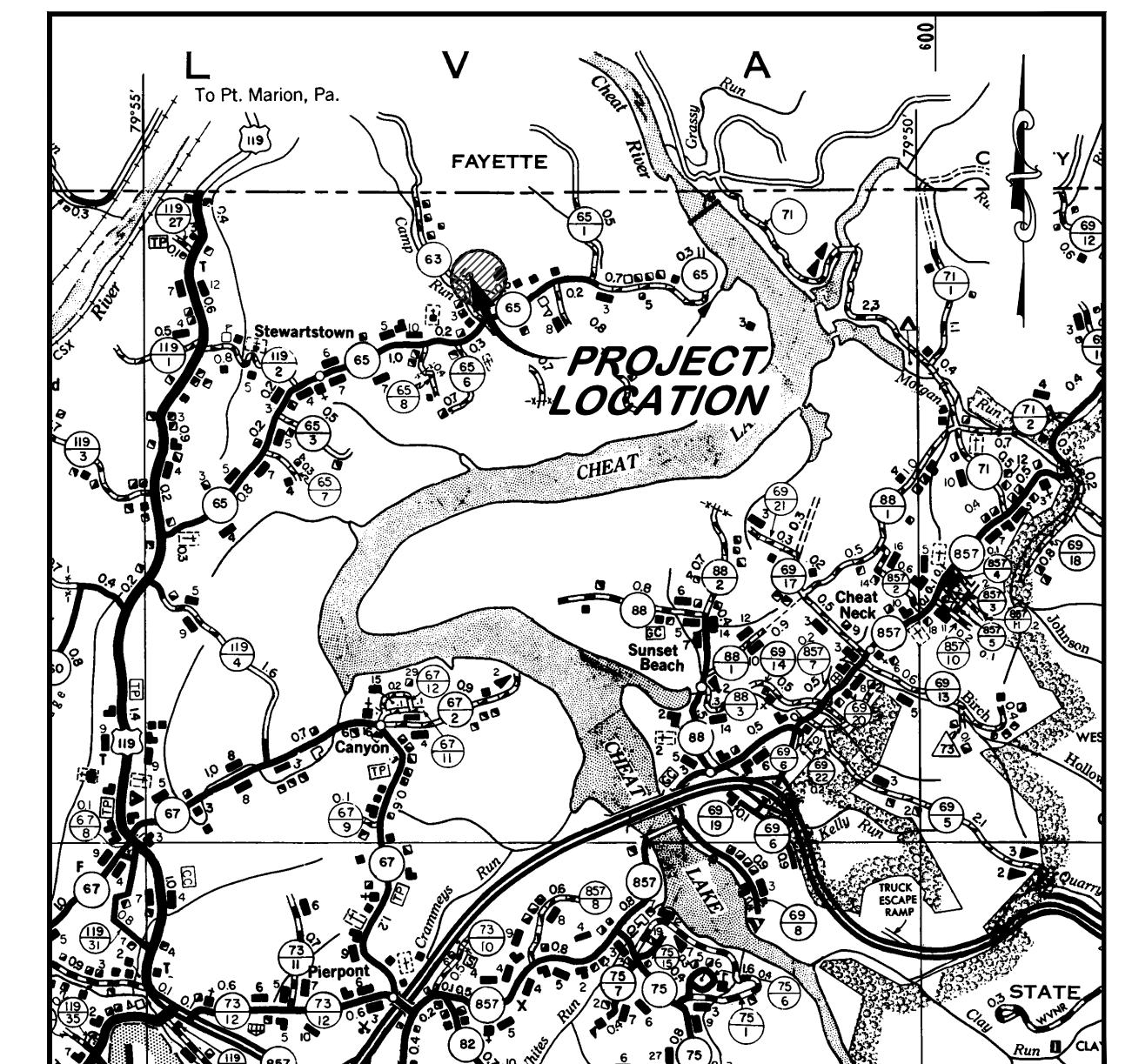
INDEX TO SHEETS

SHEET NO.	DESCRIPTION
2	EXISTING CONDITIONS AND TAX MAP OVERLAY
3	RECLAMATION AND SEDIMENT CONTROL PLAN
4	UNDERDRAIN CROSS SECTIONS, PROFILE AND TYPICAL DETAILS
5	SEDIMENT CONTROL DETAILS

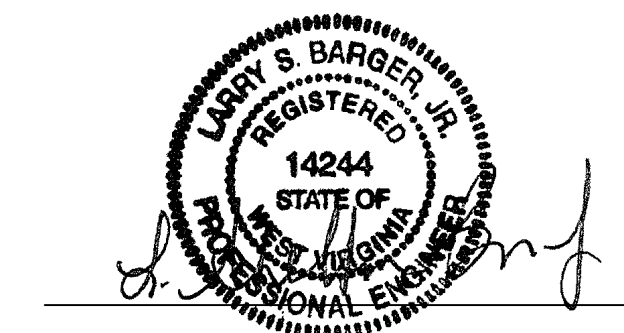
BID SCHEDULE

ITEM NO.	DESCRIPTION	QUANTITY
1.0	MOBILIZATION AND DEMOBILIZATION (LIMITED TO 10% OF TOTAL BID)	LS
2.0	CONSTRUCTION LAYOUT (LIMITED TO 5% OF TOTAL BID)	LS
3.0	QUALITY CONTROL (LIMITED TO 3% OF TOTAL BID)	LS
4.0	SITE PREPARATION (LIMITED TO 10% OF TOTAL BID)	LS
5.1	SILT FENCE SEDIMENT CONTROL	400 LF
5.2	12" STRAW WATTLES EROSION CONTROL	265 LF
5.3	STONE CONSTRUCTION ENTRANCE (70 LF x 12" WIDTH)	25 TONS
6.0	REVEGETATION	LS
7.1	TYPE "A" MANHOLE	2 EA.
7.2	12" PVC SDR-35 PVC CONVEYANCE PIPE	90 LF
7.3	BORE AND JACKED 18" GRADE B, 1" THICK STEEL CASING	30 LF
8.0	UNCLASSIFIED EXCAVATION	LS
11.1	3' X 4' UNDERDRAIN (12" PVC SDR-35)	245 LF
11.2	SODA ASH BRIQUETTES (50 LB. BAG)	5 EA.

LOCATION MAP



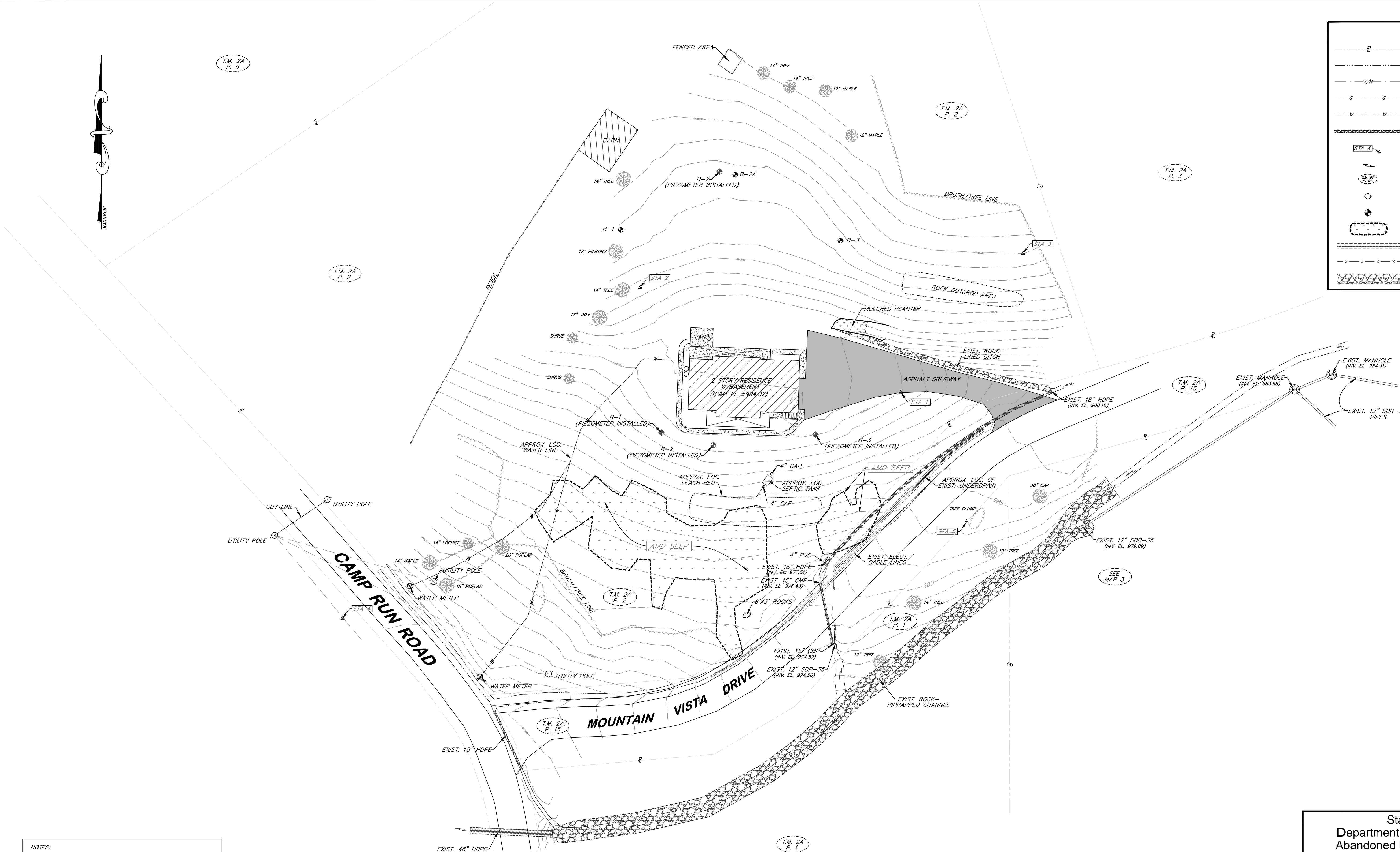
COUNTY HIGHWAY MAP, 1" = 1 MI.



DATE

LEGEND

- APPROX. PROPERTY LINE
- EXIST. DRAIN OR WATER COURSE
- EXISTING OVERHEAD UTILITY LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING CULVERT OR PIPE
- EXISTING SURVEY CONTROL
- DIRECTION OF FLOW
- TAX MAP AND PARCEL NO.
- EXISTING UTILITY OR LIGHT POLE
- BORE OR AUGER HOLE
- EXIST. AMD SEEP AREA
- EXISTING UNDERDRAIN
- EXISTING FENCE LINE
- EXISTING RIPRAPPED CHANNEL



- NOTES:**
- 1.) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL PERMIT REQUIREMENTS.
 - 2.) CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND VERIFICATION OF ANY AND ALL UTILITIES LOCATED WITHIN THE CONSTRUCTION LIMITS.
 - 3.) ALL AREAS AFFECTED BY ACCESS AND/OR CONSTRUCTION SHALL BE REGRADED, SEEDED AND MULCHED UPON COMPLETION OF PROJECT.
 - 4.) ANY PROPERTY CORNERS (i.e. IRON RODS, REBARS, CONC. MONUMENTS AND SIGNS) DISTURBED SHALL BE RE-ESTABLISHED AND RESET UPON COMPLETION OF PROJECT.

SURVEY CONTROL

NO.	NORTHING	EASTING	ELEV.	DESC.
STA 1	10000.0000	10000.0000	1000.00	NAIL/RIBBON
STA 2	100671.757	9833.7459	1009.09	NAIL/RIBBON
STA 3	10088.9271	10078.2085	1020.05	NAIL/RIBBON
STA 4	9855.9709	9643.6690	959.21	NAIL/RIBBON
STA 4	9917.4477	10042.1255	984.76	NAIL/RIBBON

(HORIZONTAL AND VERTICAL SURVEY DATUM IS BASED ON AN ASSUMED GRID SYSTEM)

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**DAVIDSON HIGHWALL
DRAINAGE**

**EXISTING CONDITIONS AND
TAX MAP OVERLAY**

DRAWN BY: DWH	SCALE: 1" = 20'
APPROVED BY: SB	SHEET NO. 2
DATE: 12/2/2013	OF 5

LEGEND	
	APPROX. PROPERTY LINE
	EXIST. DRAIN OR WATER COURSE
	EXISTING OVERHEAD UTILITY LINE
	EXISTING GAS LINE
	EXISTING WATER LINE
	EXISTING CULVERT OR PIPE
	EXISTING SURVEY CONTROL
	DIRECTION OF FLOW
	TAX MAP AND PARCEL NO.
	EXISTING UTILITY OR LIGHT POLE
	BORE OR AUGER HOLE
	EXIST. AND SEEP AREA
	EXISTING UNDERDRAIN
	EXISTING FENCE LINE
	EXISTING RIPRAPPED CHANNEL
	PROPOSED TYPE "A" MANHOLE
	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED 3'W X 4' UNDERDRAIN
	SILT FENCE SEDIMENT CONTROL
	STRAW WATTLE EROSION CONTROL



- NOTES:
- 1.) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL PERMIT REQUIREMENTS.
 - 2.) CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND VERIFICATION OF ANY AND ALL UTILITIES LOCATED WITHIN THE CONSTRUCTION LIMITS.
 - 3.) ALL AREAS AFFECTED BY ACCESS AND/OR CONSTRUCTION SHALL BE REGRADED, SEEDED AND MULCHED UPON COMPLETION OF PROJECT.
 - 4.) ANY PROPERTY CORNERS (i.e. IRON RODS, REBARS, CONC. MONUMENTS AND SIGNS) DISTURBED SHALL BE RE-ESTABLISHED AND RESET UPON COMPLETION OF PROJECT.
 - 5.) POTENTIAL OFF-SITE WASTE AREAS FOR THE DISPOSAL OF EXCAVATED MATERIAL HAVE BEEN DETERMINED. SEE SPECIFICATIONS FOR LOCATION AND REQUIREMENTS.

SURVEY CONTROL				
NO.	NORTHING	EASTING	ELEV.	DESC.
STA 1	10000.0000	10000.0000	1000.00	NAIL/RIBBON
STA 2	100671.757	9833.7459	1009.09	NAIL/RIBBON
STA 3	10088.9271	10078.2085	1020.05	NAIL/RIBBON
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(HORIZONTAL AND VERTICAL SURVEY DATUM IS BASED ON AN ASSUMED GRID SYSTEM)

State of West Virginia
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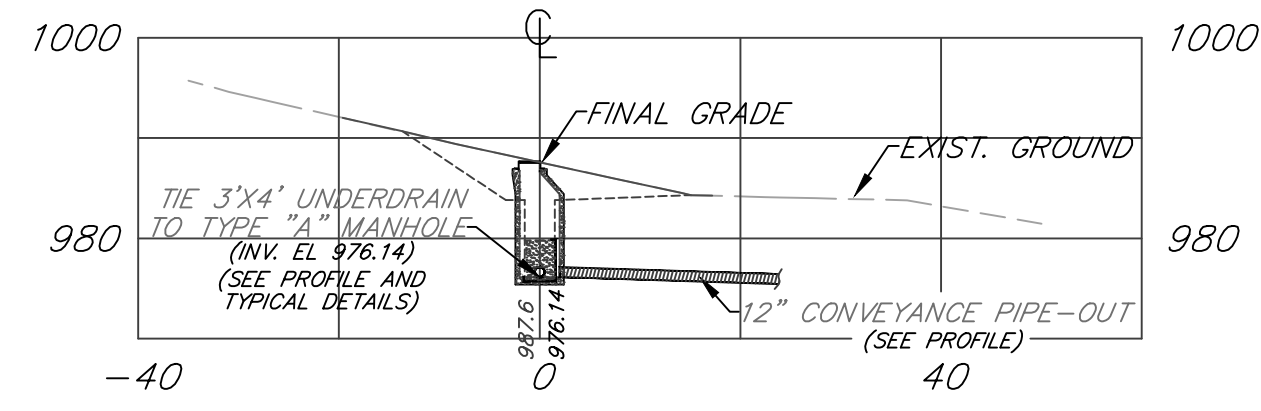
**DAVIDSON HIGHWALL
DRAINAGE**

**RECLAMATION AND SEDIMENT
CONTROL PLAN**

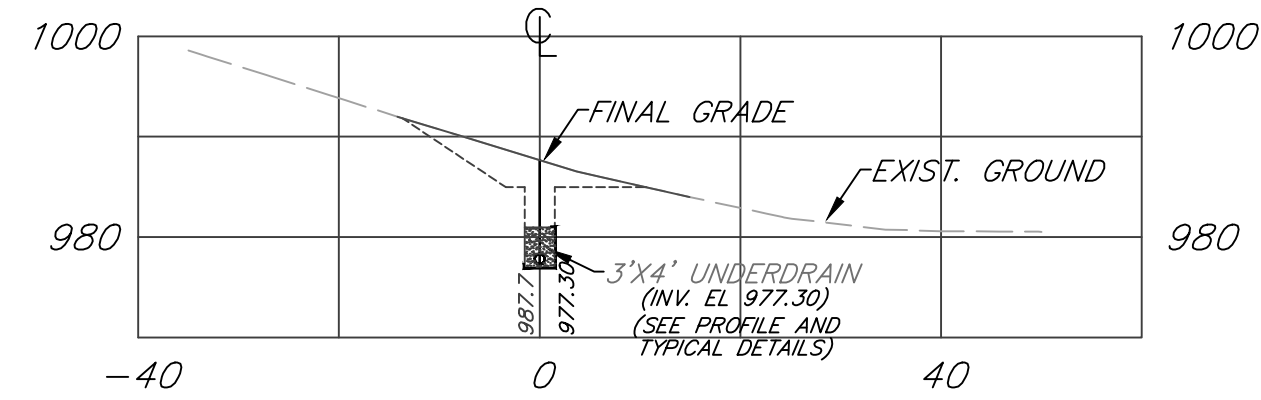
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APPROVED BY: SB
DATE: 12/2/2013

SCALE: 1" = 30'
SHEET NO. **3**
OF 5

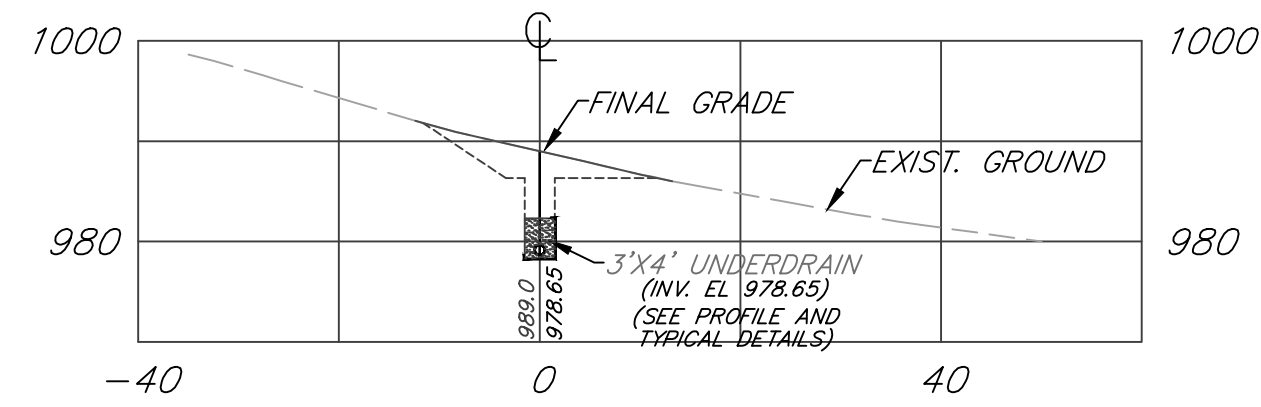
2+44.80



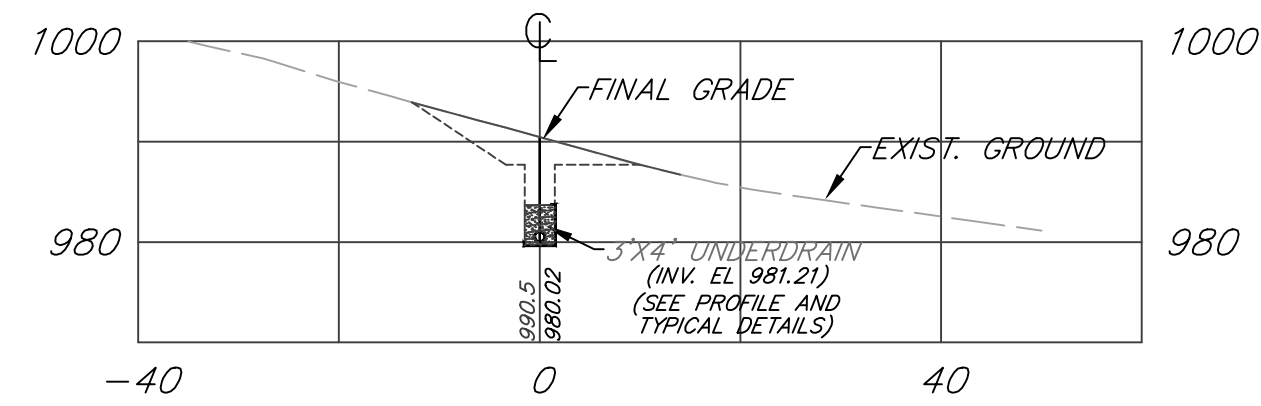
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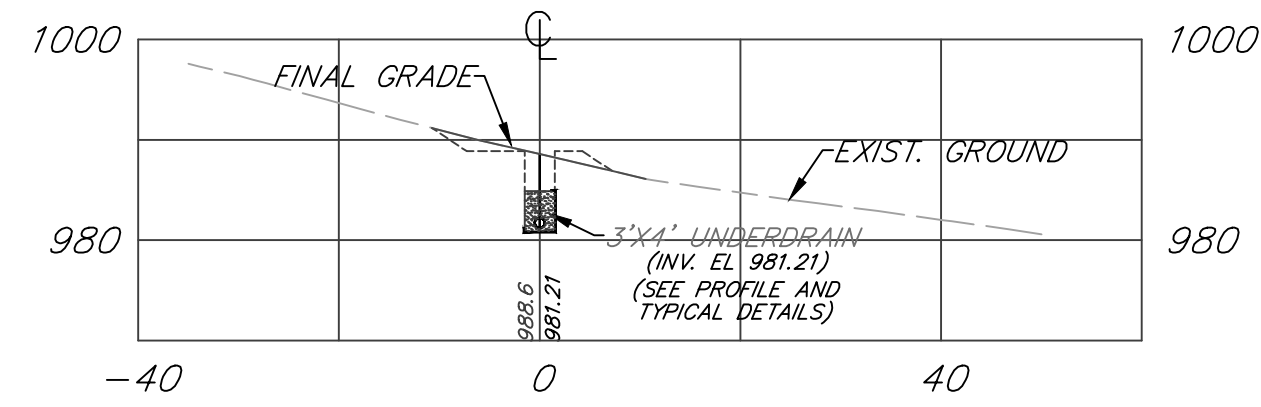
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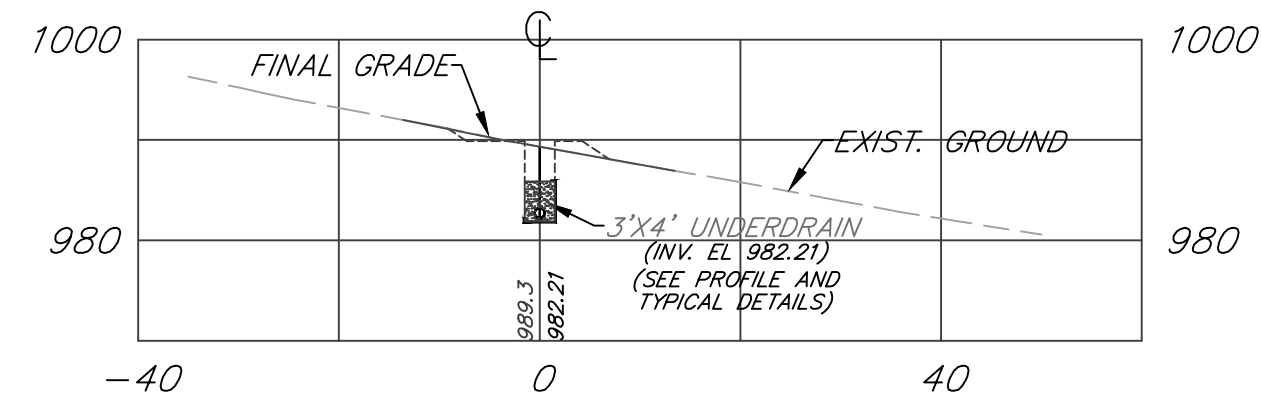
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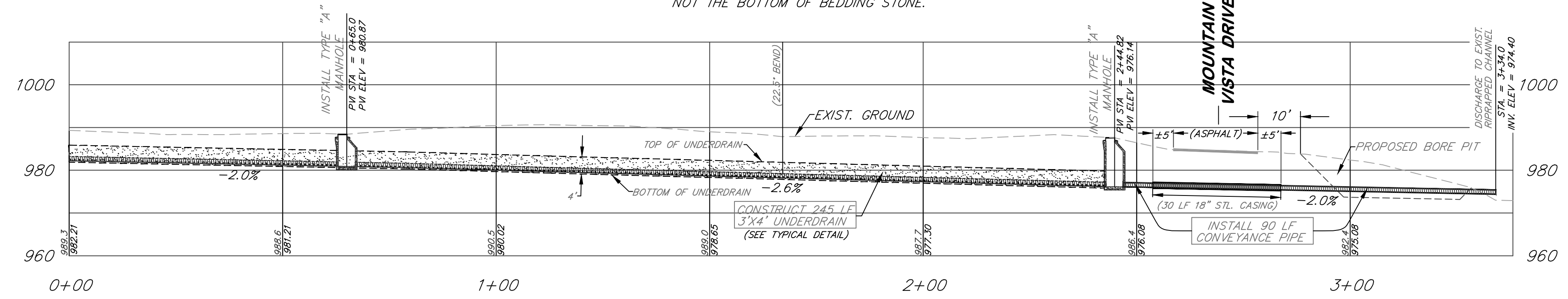


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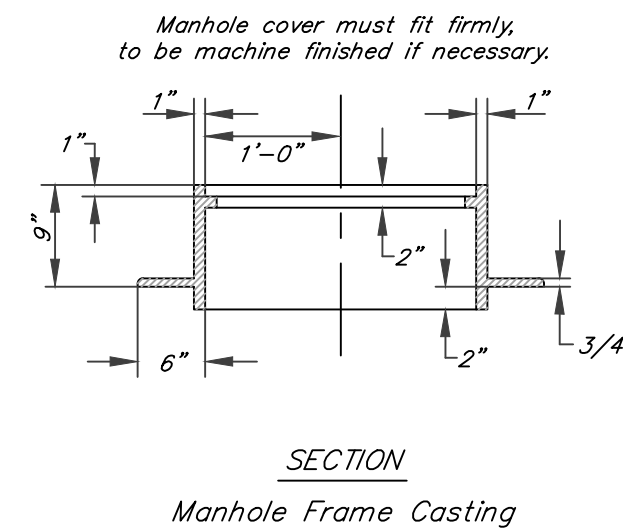
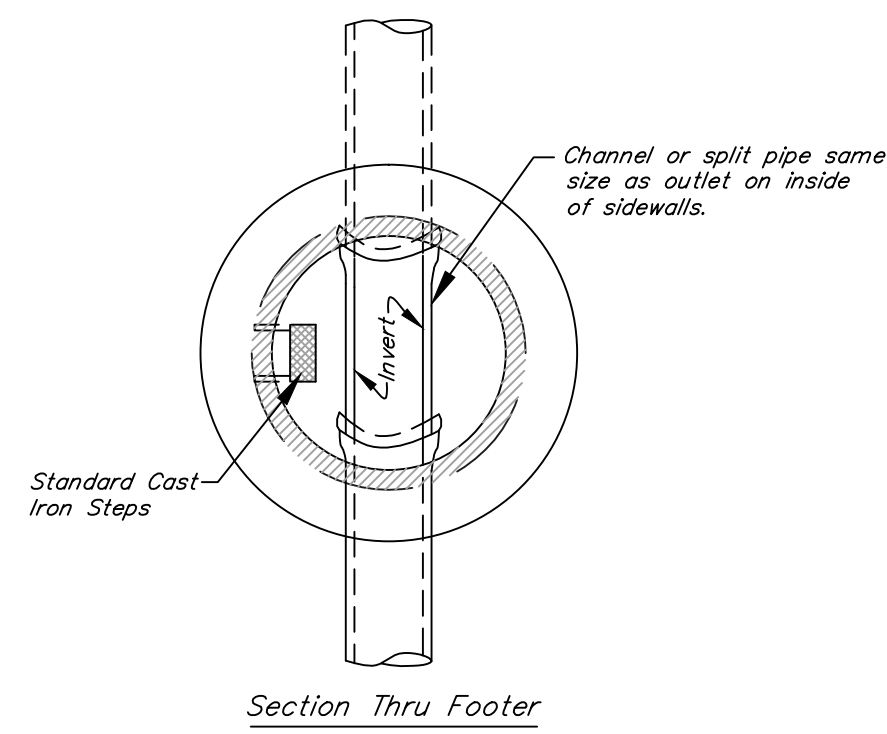
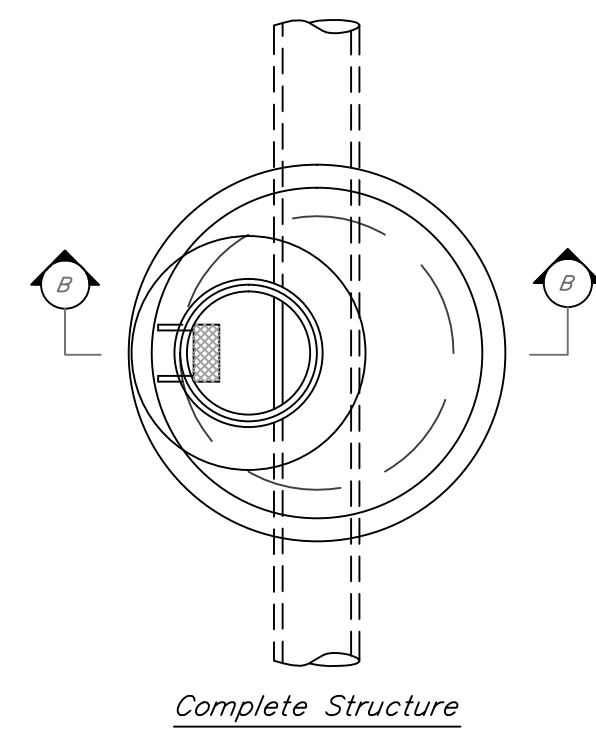


UNDERDRAIN CROSS SECTIONS
(SCALE: 1" = 20')

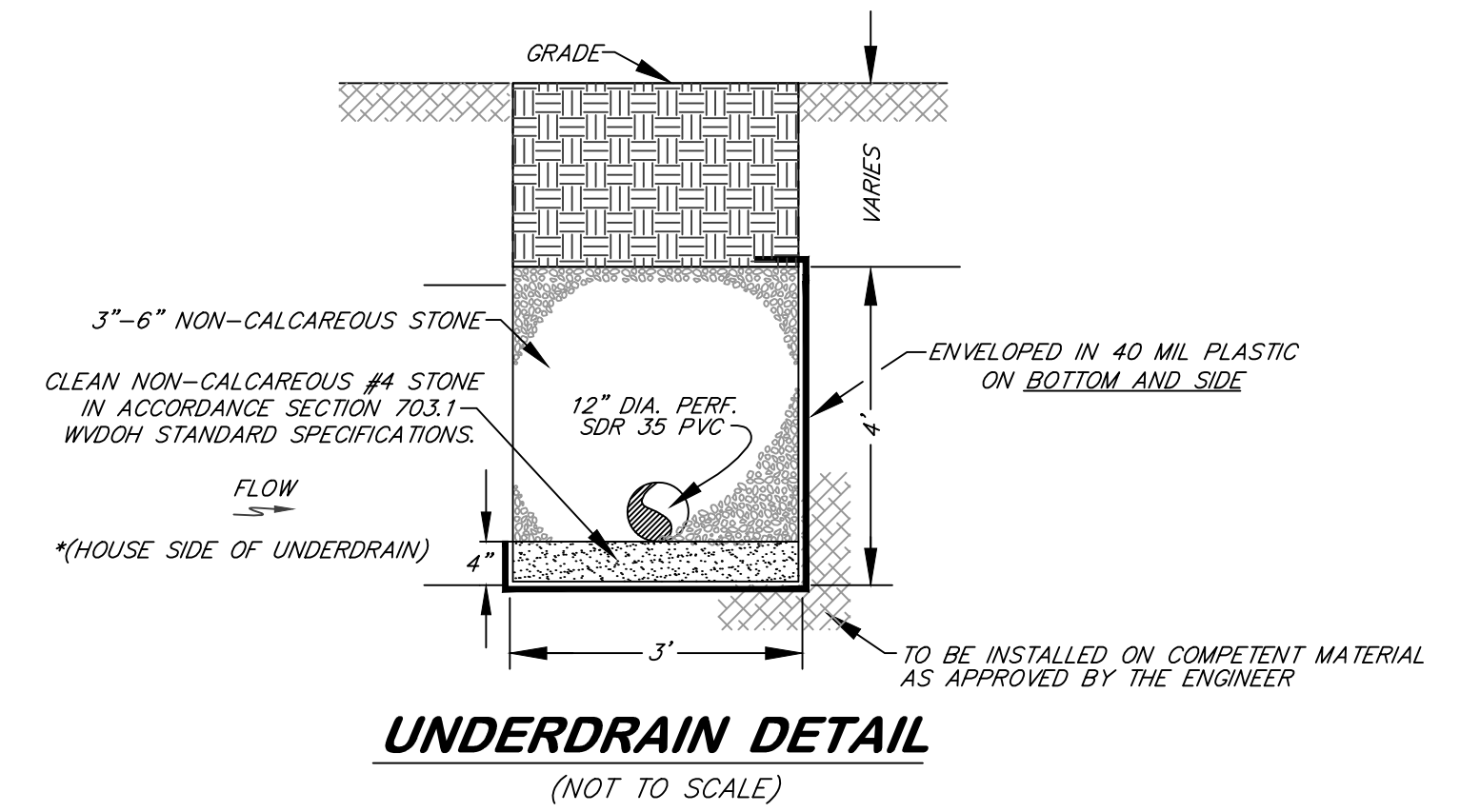
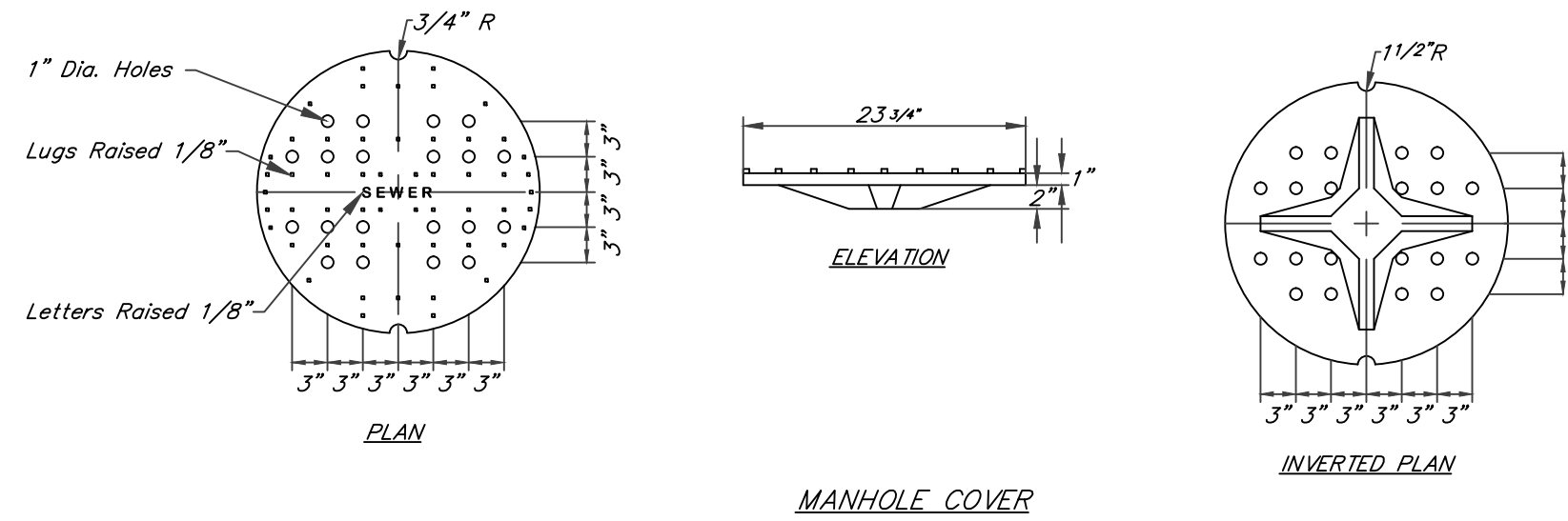
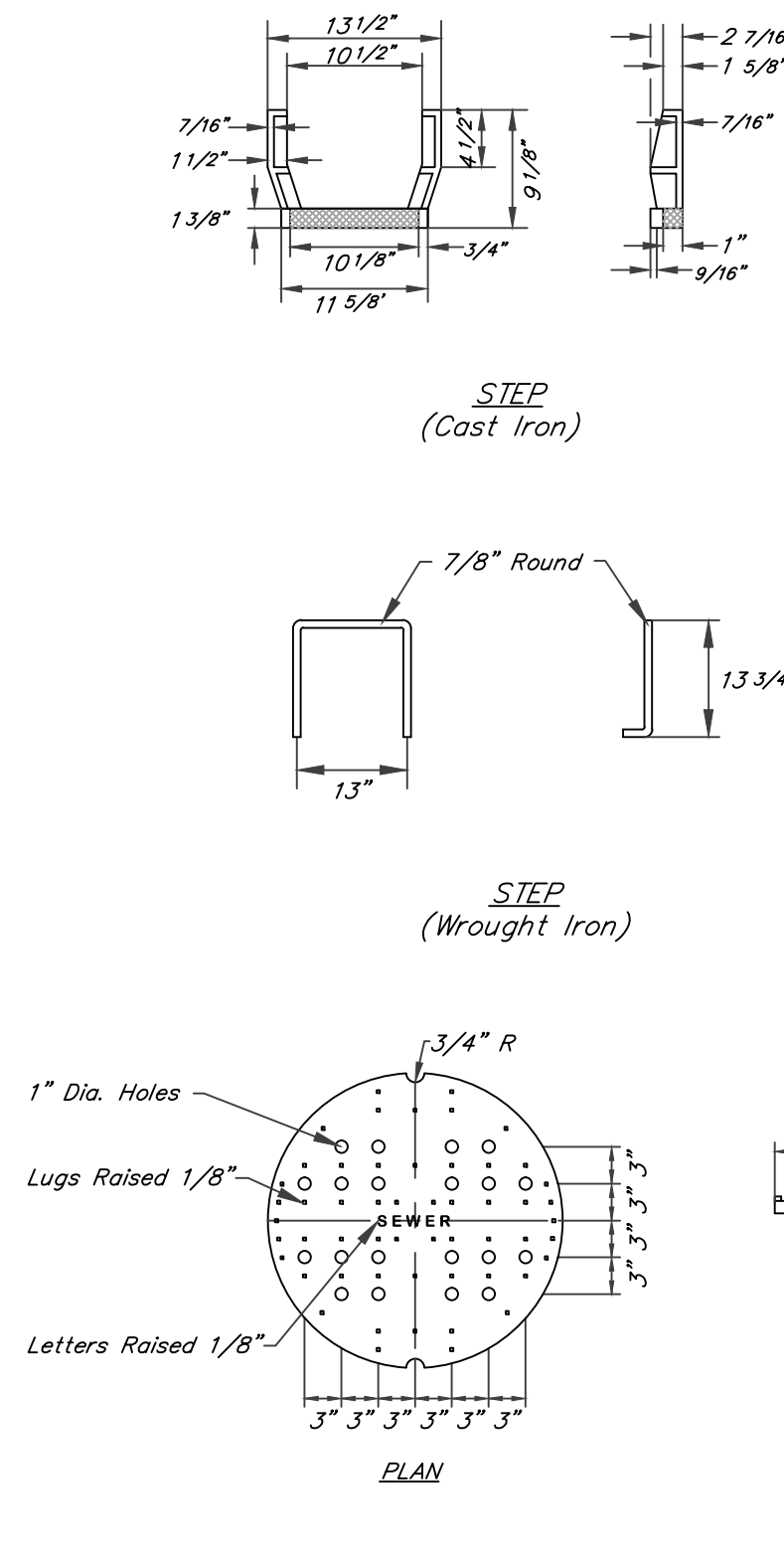
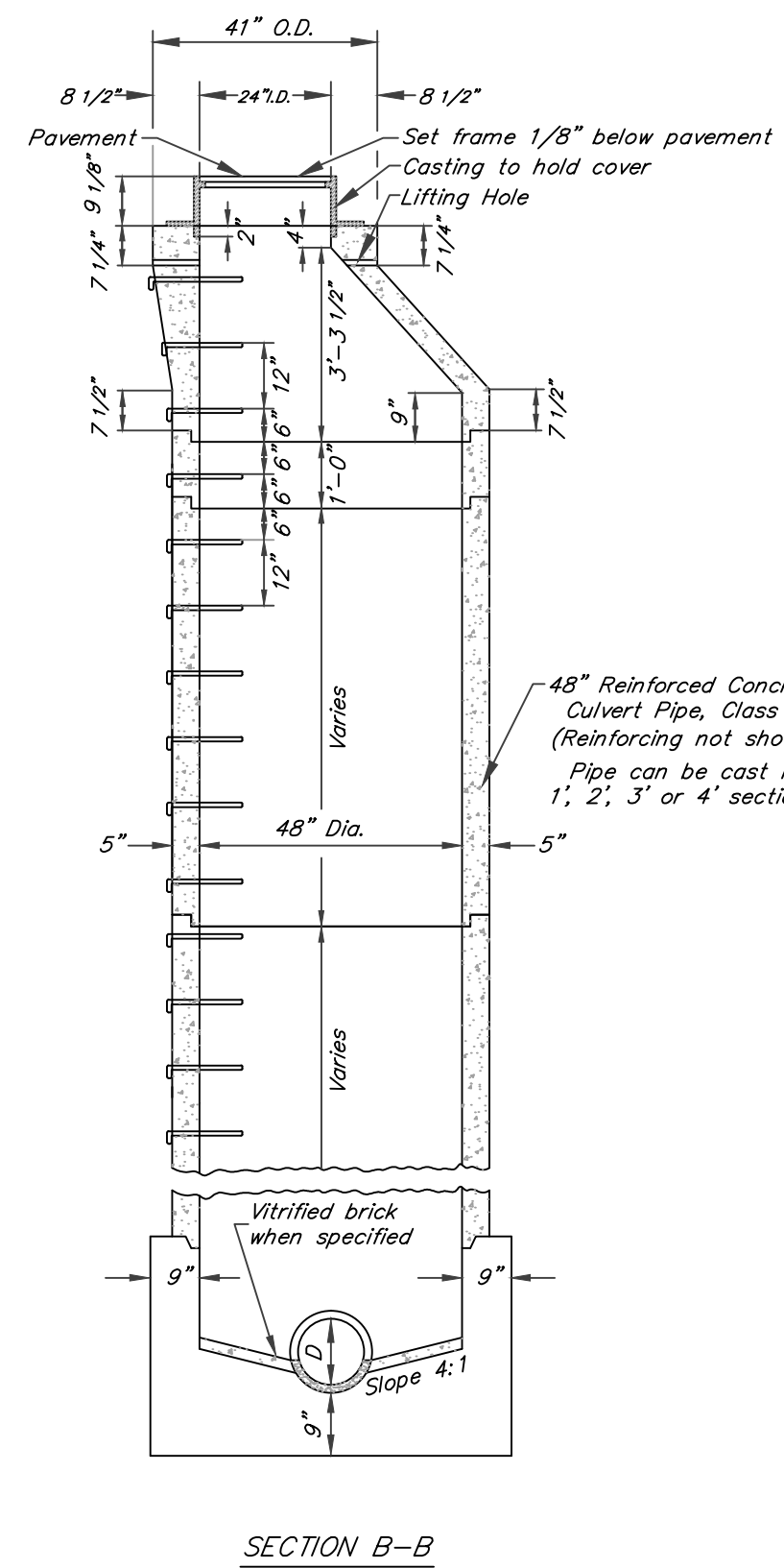
NOTE: ALL INVERTS SHOWN IN REGARD TO UNDERDRAIN CONSTRUCTION, REFER TO THE UNDERDRAIN PIPE INVERT AND NOT THE BOTTOM OF BEDDING STONE.



UNDERDRAIN PROFILE
(SCALE: 1" = 20')



NOTES
All concrete pipe to be used as sidewall for the manhole shall meet the requirements for Class III pipe of Subsection 714.2 of the Standard Specifications. Concrete pipe sections may be used in any combination to produce a manhole of desired depth, except the tapered top section shall be retained as shown.
The tapered top sections shall be manufactured and meet the same requirements as the concrete pipe.
Lifting hole in the tapered top section and the circumferential notches in the manhole cover are for handling purposes only.
Drawing shows pipe entering and leaving manhole in a straight line. However, the pipes may enter or leave at any angle or place as called for or shown on the plans.
The footer up to the joint shown shall be Class B concrete.
Castings are to be of the design shown and are to be of Gray-Iron meeting the requirements of Subsection 709.10 of the Standard Specifications.
Steps may be either the Cast Iron Step or the Wrought Iron Step as shown and shall conform to the requirements of Subsections 709.10 and 709.11, respectively, of the Standard Specifications.
The precast sections of pipe shall be set in joint mortar.
The forming of the seat in the footing may be by the use of a section of the precast pipe or by means of a jig.
Pipe at elevations of than shown may be joined to the manhole by cutting a hole the size of the connecting pipe in the manhole, inserting the pipe the thickness of the manhole shell and closing all openings around the connecting pipe with joint mortar.
Either this manhole or the cast in place manhole on Standard M.S. 3-A may be furnished when Type A manhole is called for in the contract.
Minimum height of bench wall above flow line of pipe is 25% of the diameter of the pipes.
The bearing area of the frame and cover shall be so fitted and finished as to provide a firm and even seat for the entire cover in the frame.
No projections shall exist on bearing areas of wither casting, and the cover shall seat in its frame without rocking.



STANDARD DETAIL
TYPE "A" MANHOLE
(PRECAST)
(NOT TO SCALE)

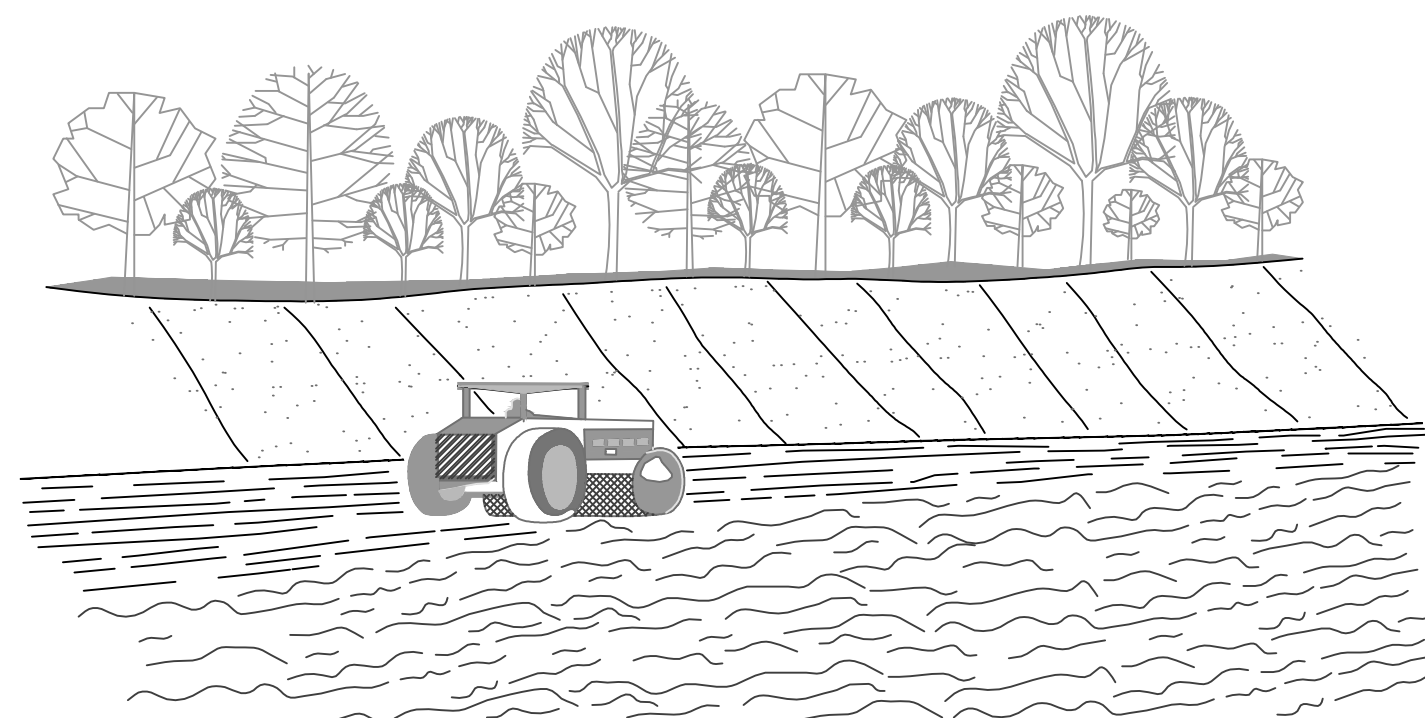
State of West Virginia
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**DAVIDSON HIGHWALL
DRAINAGE**

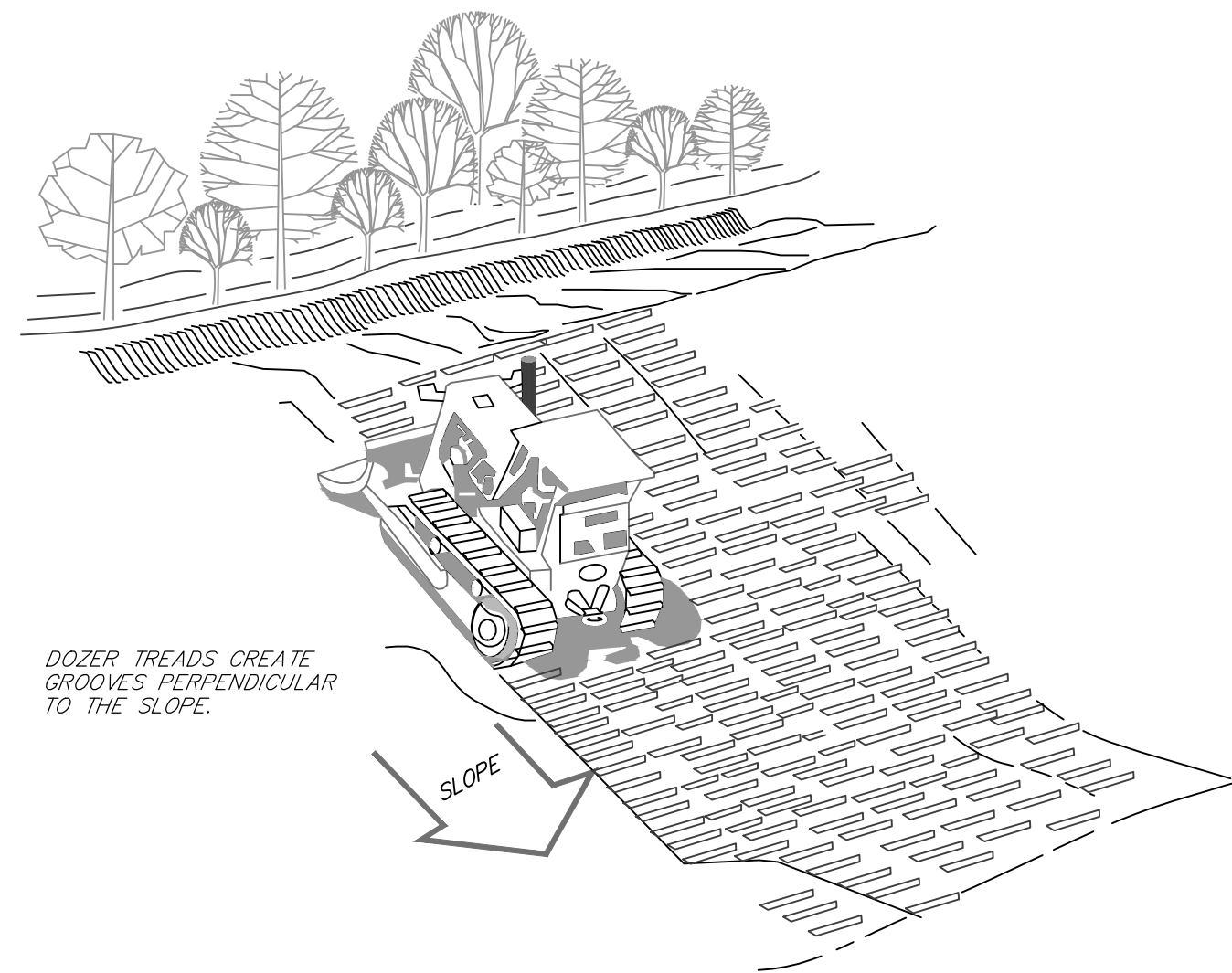
**UNDERDRAIN CROSS SECTIONS,
PROFILE,
AND TYPICAL DETAILS**

DRAWN BY: DWH
APPROVED BY: SB
DATE: 12/2/2013

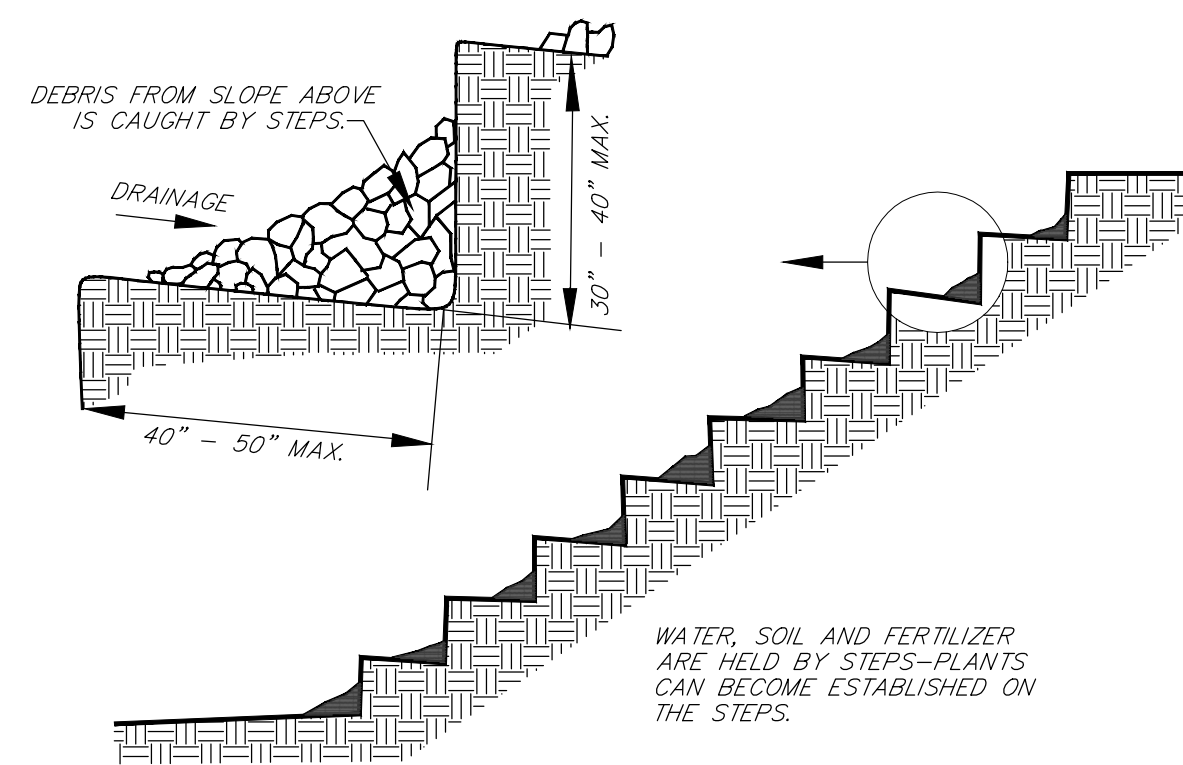
SCALE: AS SHOWN
SHEET NO. **4**
OF 5



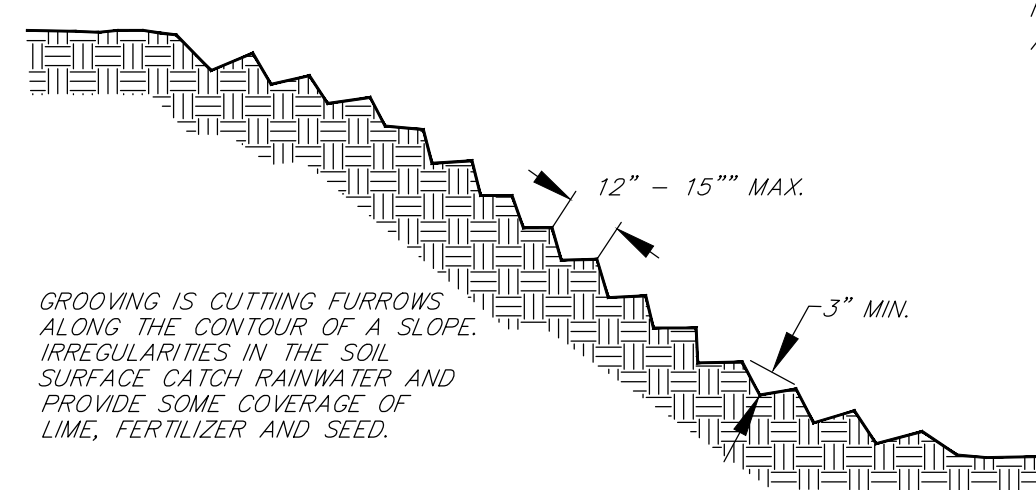
FILL SLOPE TREATMENT



TRACKING

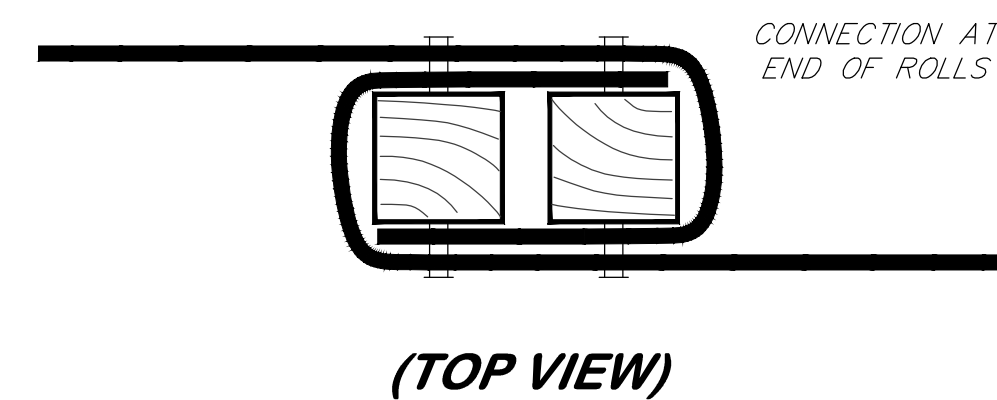
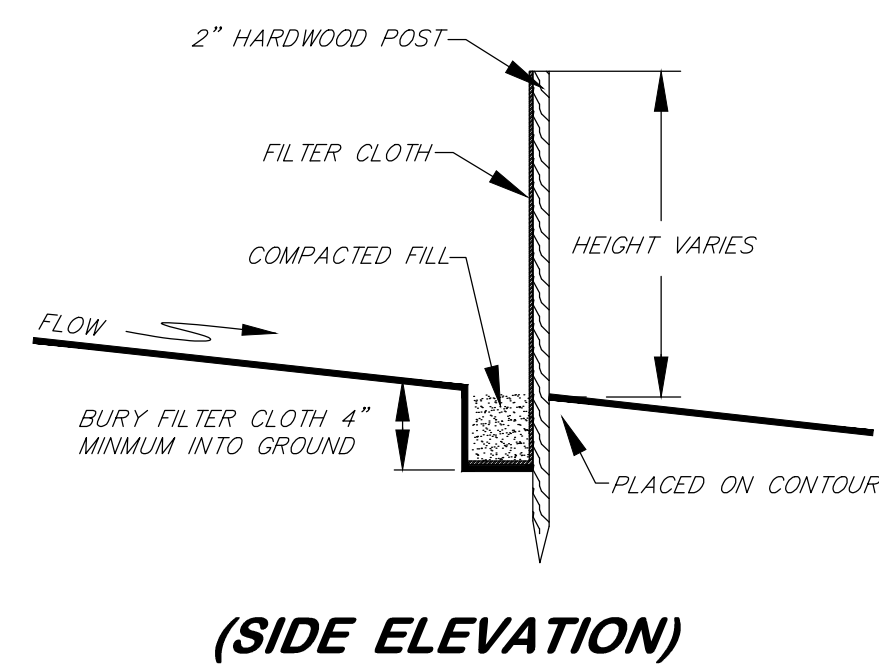
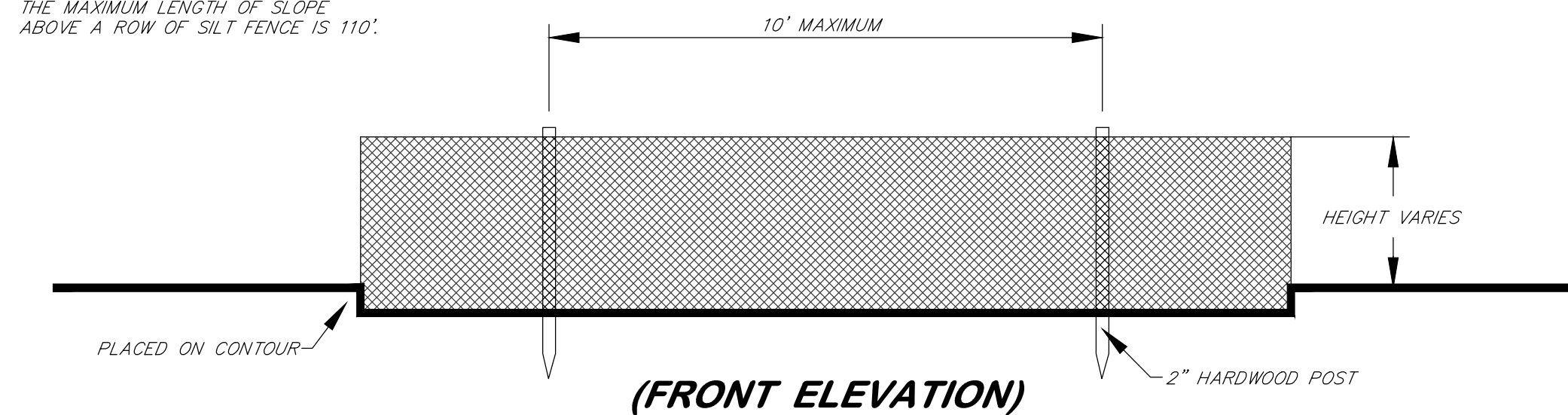


STAIR STEPPING CUT SLOPES

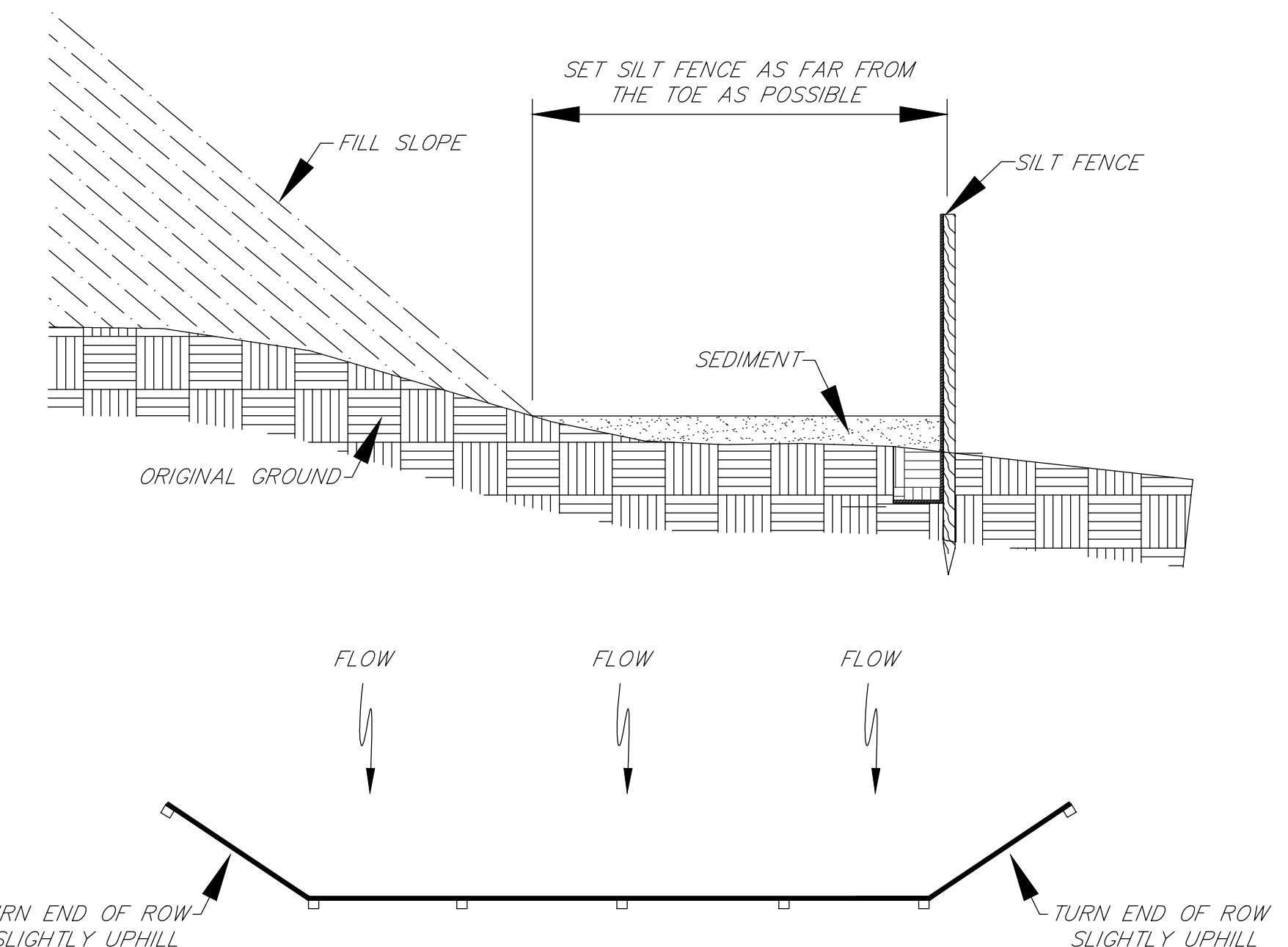


GROOVING SLOPES

NOTE: THE MAXIMUM LENGTH OF SLOPE ABOVE A ROW OF SILT FENCE IS 110'.

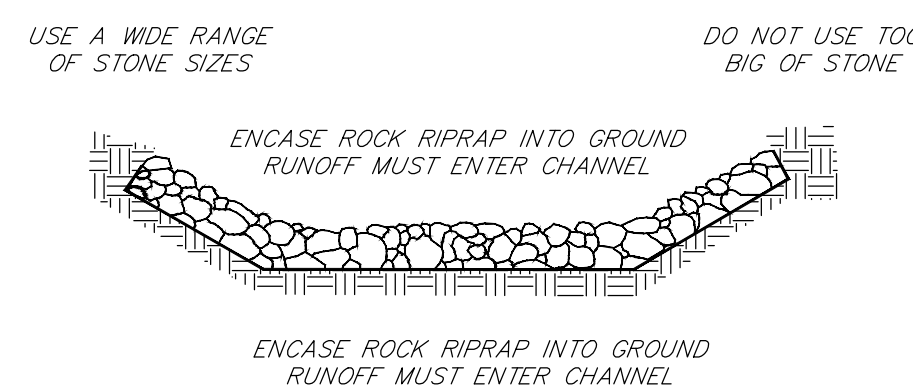


SILT FENCE
(FIG. 3.27.2)

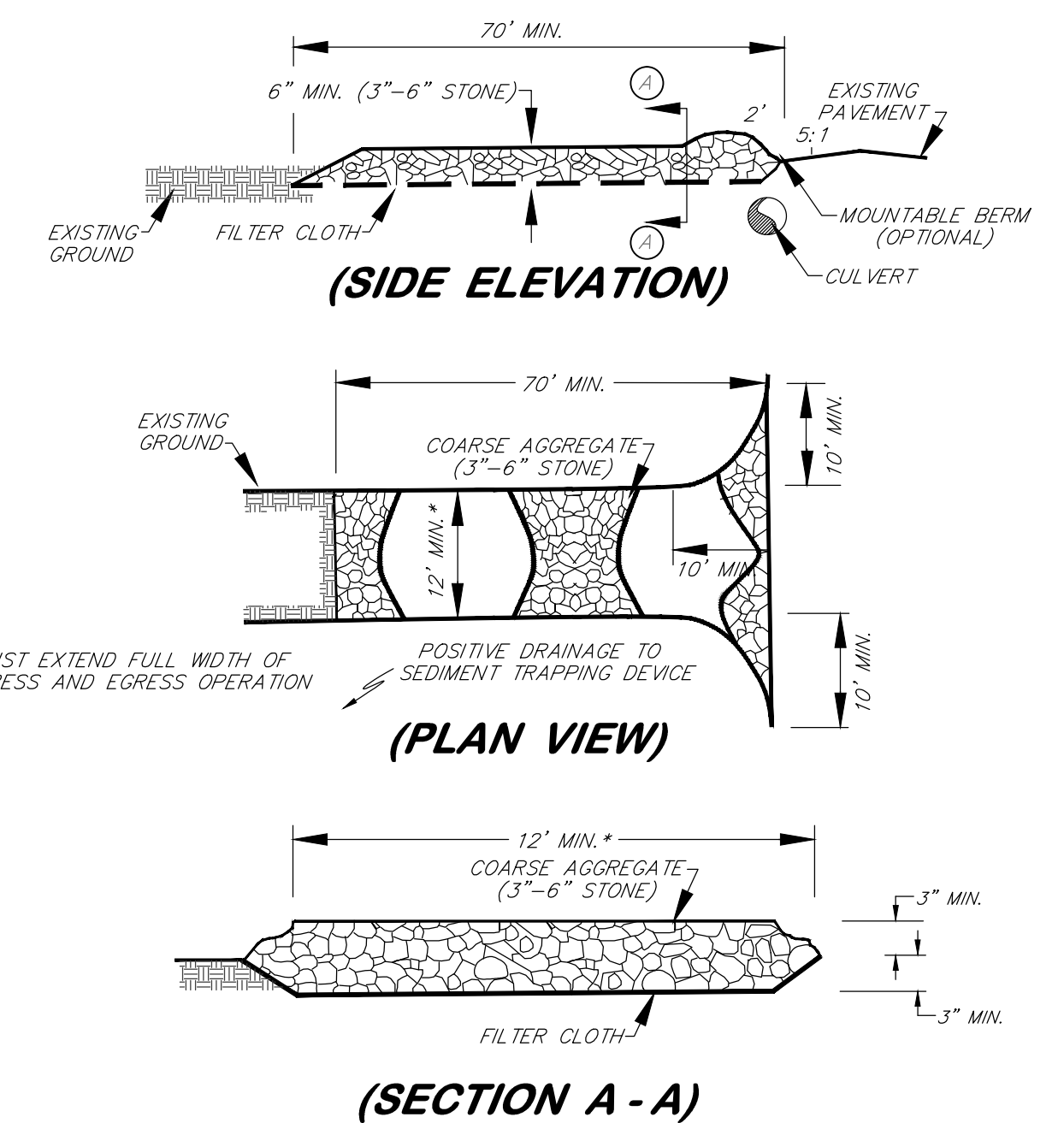
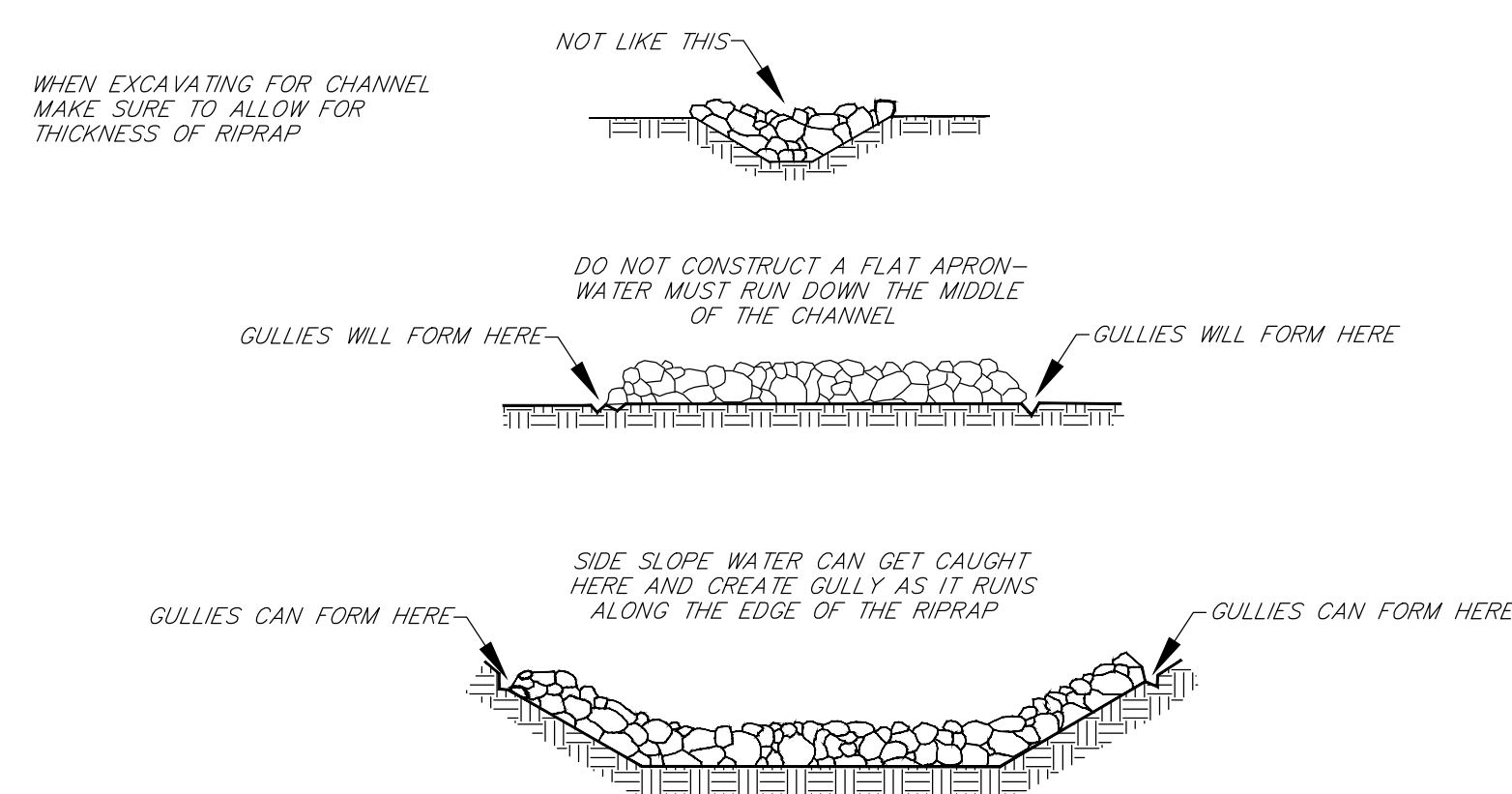


PLACEMENT OF SILT FENCE
(FIG. 3.27.1)

RIPRAP DIVERSION
(FIG. 3.15.3)

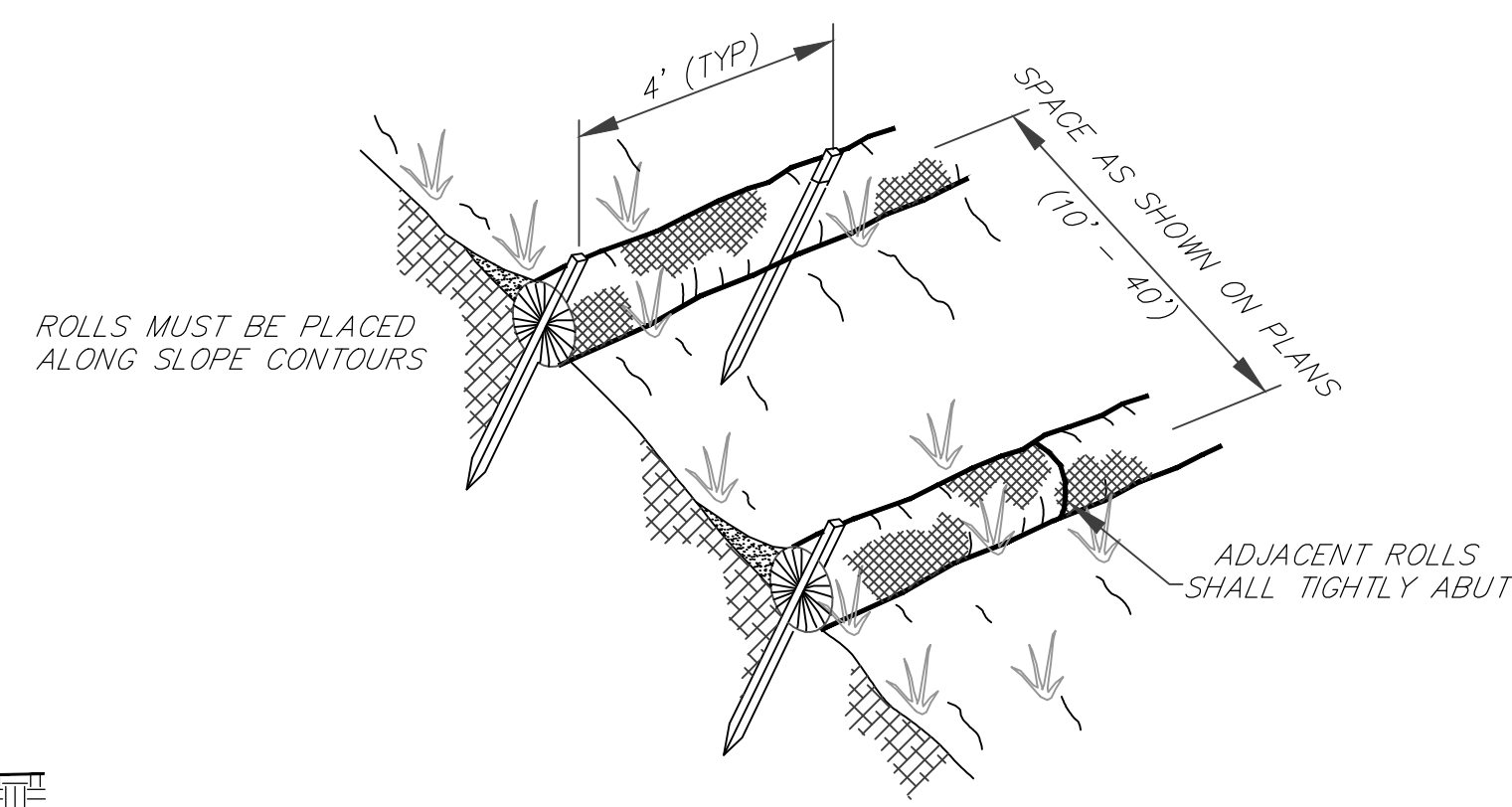


COMMON PROBLEMS

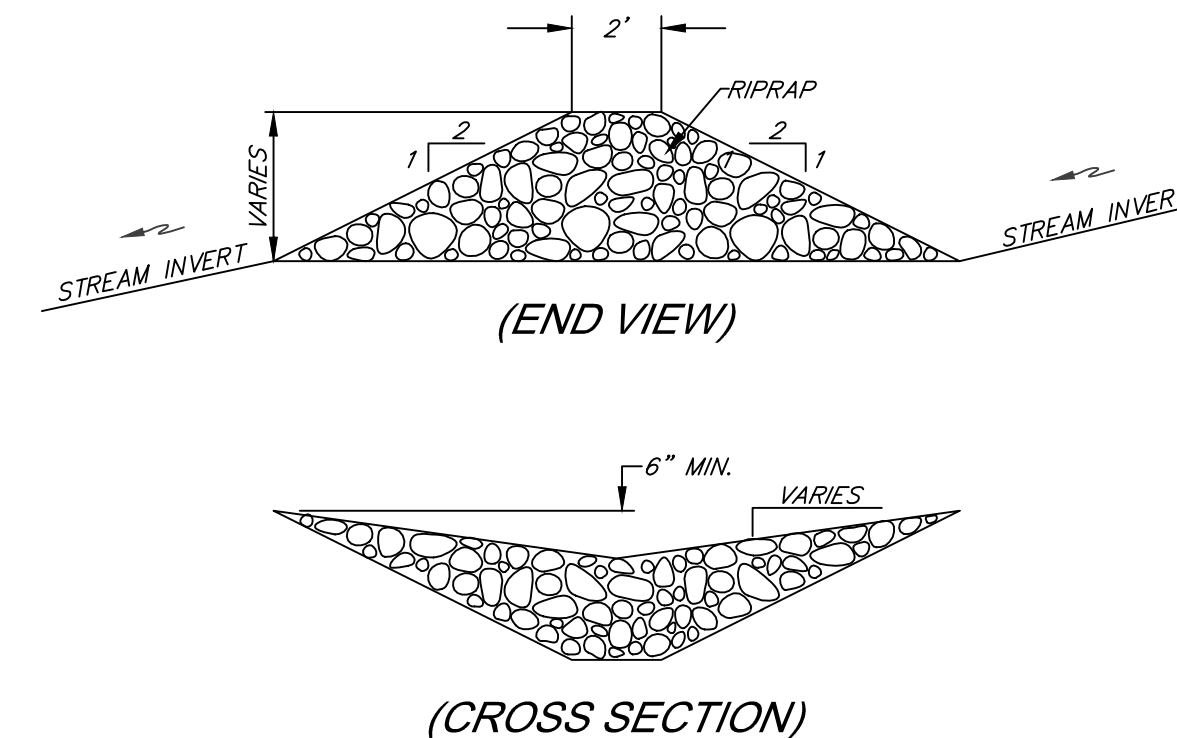
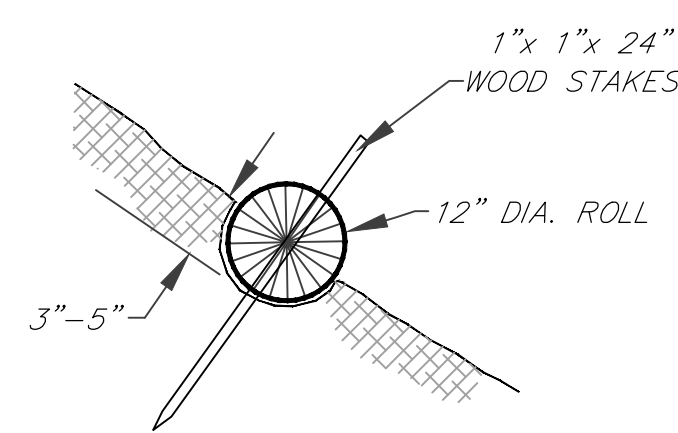


STONE CONSTRUCTION ENTRANCE
(FIG. 3.02.1)

NOTE: STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOURS. RUNOFF MUST NOT BE ALLOWED TO FLOW UNDER OR AROUND THE ROLLS.



12" WATTLE EROSION CONTROL



IN-STREAM ROCK CHECK DAM

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

DAVIDSON HIGHWALL DRAINAGE

SEDIMENT CONTROL TYPICAL DETAILS

DRAWN BY: DWH
APPROVED BY: SB
DATE: 12/2/2013

SCALE: 1" = 20'
SHEET NO. 5
OF 5