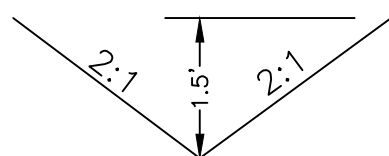


J:\2023\2403065\GAD - BRAMMER LN MASS GRADING\GAD - BRAMMER LN MASS GRADING.dwg PLOTTED: 11/30/2023 3:56:43 PM

### CONVEYANCE CHANNEL CROSS SECTIONS

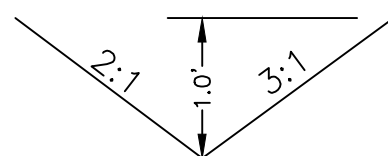
N.T.S.

D=1  
DRAINAGE AREA=1.31 AC.



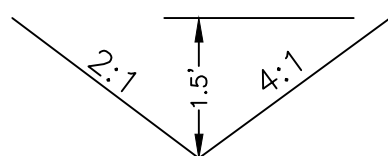
MIN. CONSTRUCTED DEPTH = 1.5 FT  
LINING=EC-2 (TREATMENT 1)  
 $Q_2$  = 2.90 cfs  
 $V_2$  = 3.11 fps  
 $Q_{10}$  = 3.87 cfs  
 $D_{10}$  = 0.76 ft

D=2  
DRAINAGE AREA=0.56 AC.



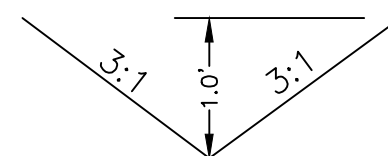
MIN. CONSTRUCTED DEPTH = 1.0 FT  
LINING=EC-2 (TREATMENT 1)  
 $Q_2$  = 0.69 cfs  
 $V_2$  = 3.45 fps  
 $Q_{10}$  = 0.92 cfs  
 $D_{10}$  = 0.32 ft

D=3  
DRAINAGE AREA=0.09 AC.



MIN. CONSTRUCTED DEPTH = 1.5 FT  
LINING=EC-2 (TREATMENT 1)  
 $Q_2$  = 0.33 cfs  
 $V_2$  = 3.30 fps  
 $Q_{10}$  = 0.44 cfs  
 $D_{10}$  = 0.20 ft

D=4  
DRAINAGE AREA=6.18 AC.



MIN. CONSTRUCTED DEPTH = 1.0 FT  
LINING=EC-2 (TREATMENT 1)  
 $Q_2$  = 1.34\* cfs  
 $V_2$  = 2.54\* fps  
 $Q_{10}$  = 4.35\* cfs  
 $D_{10}$  = 0.65 ft

\*NOTE:

THE FLOW RATES FOR CONVEYANCE CHANNEL SECTION D-4 HAVE BEEN TAKEN FROM HYDROCAD CALCULATIONS AT POD #1.

### STRUCTURE SCHEDULE

- 32.39 LF OF 18" C-361 CLASS III RCP @ 1.39% W/ VDOT EW-1 ENDWALL  
INV. UPPER=2160.45 INV. LOWER=2160.00
- 48" DIA. RISER STRUCTURE  
OUTLET CONTROL FLOW STRUCTURE  
SEE DETAIL SHEET C3  
TOP=2164.00  
18" INV. OUT=2160.45
- 41.43 LF OF 15" HDPE @ 1.00%  
INV. UPPER=2166.69 INV. LOWER=2166.28



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Christiansburg, VA 24073  
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GAD - BRAMMER LN MASS GRADING PLAN

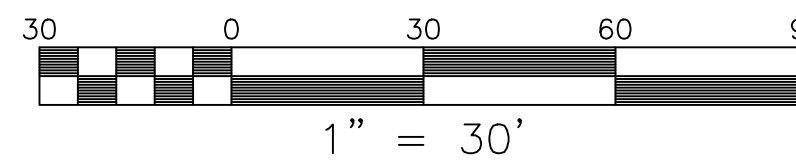
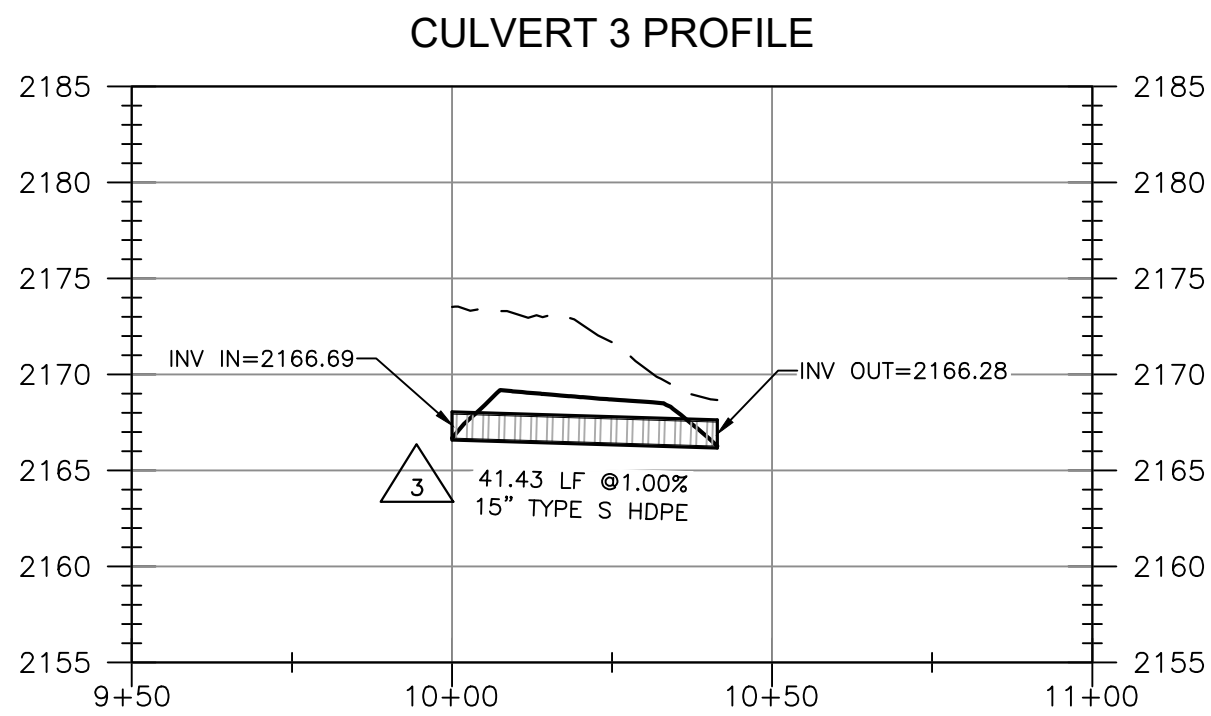
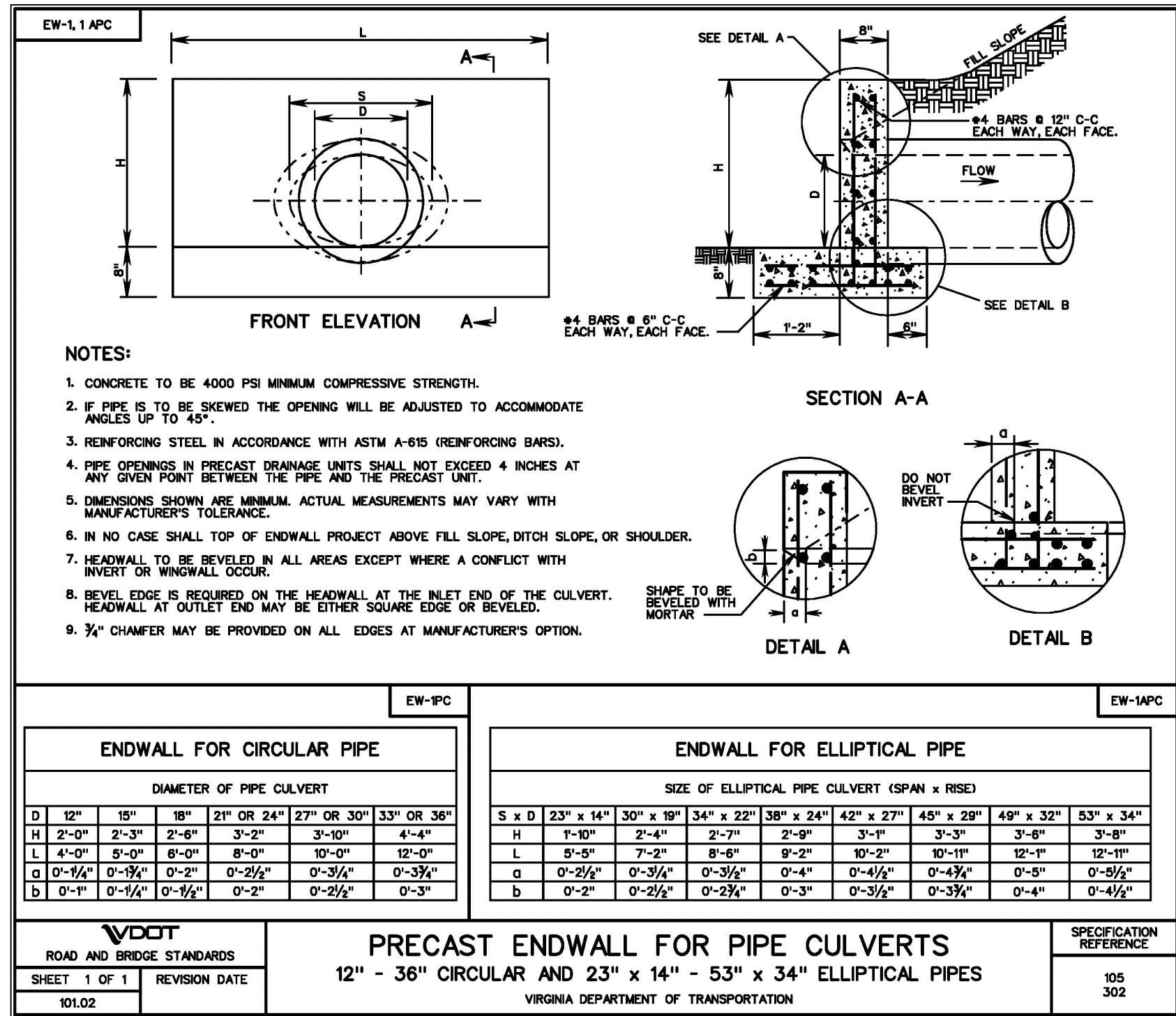
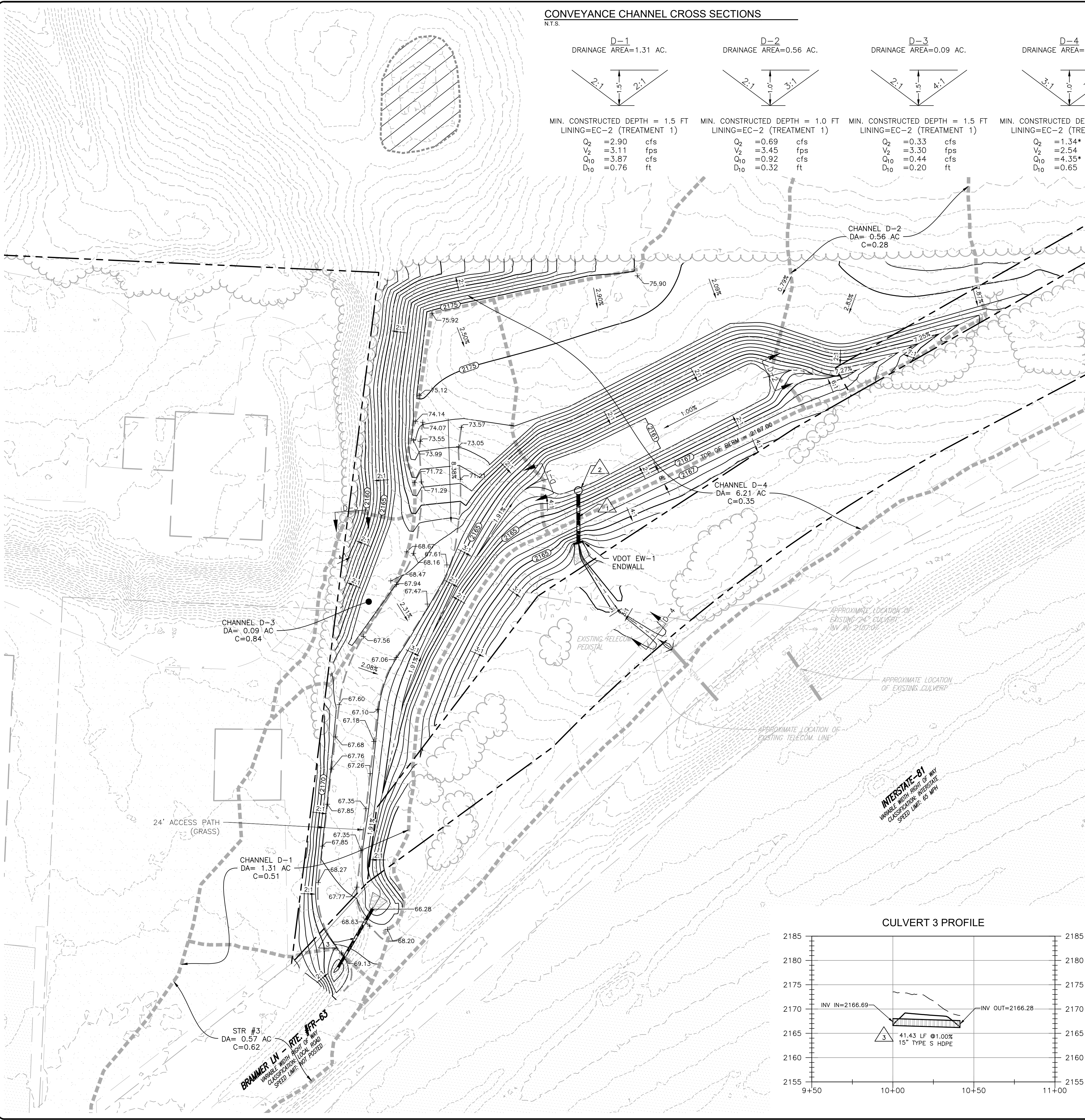
GRADING PLAN & STRUCTURE SCHEDULE

SHAVESVILLE MAGISTERIAL DISTRICT  
260 BRAMMER LN, CHRISTIANSBURG, VIRGINIA

DRAWN BY: WRS  
DESIGNED BY: WRS  
CHECKED BY: JRT  
DATE: 07/28/2023  
SCALE: AS NOTED  
REVISIONS:  
11/15/2023  
11/30/2023

PROJECT NO. 2403065.00

C4



APPROVED: Engineering Date  
APPROVED: Planning Date