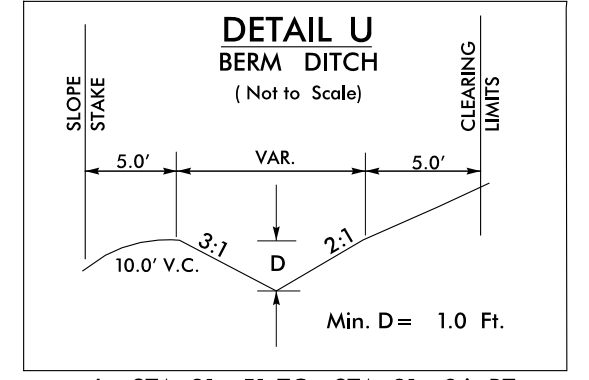
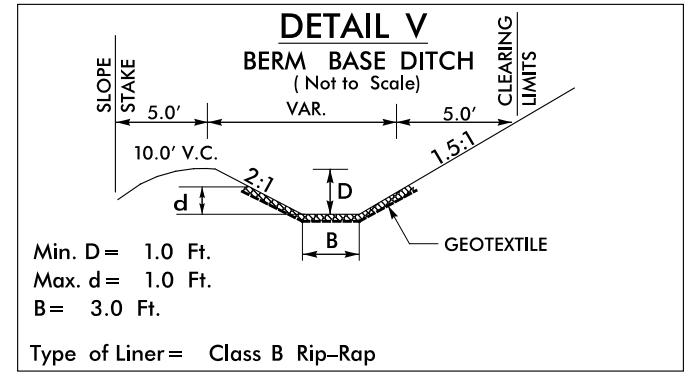


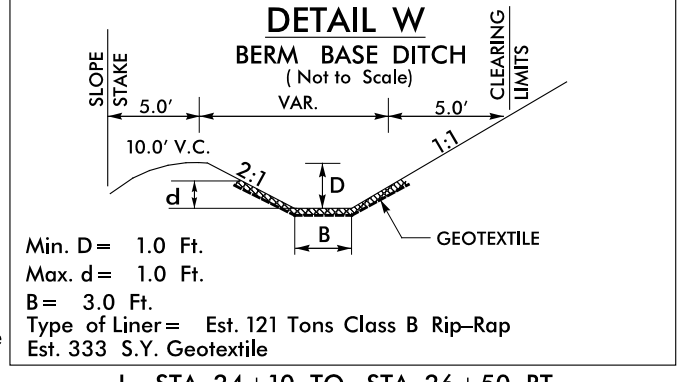
# DRAINAGE DETAILS



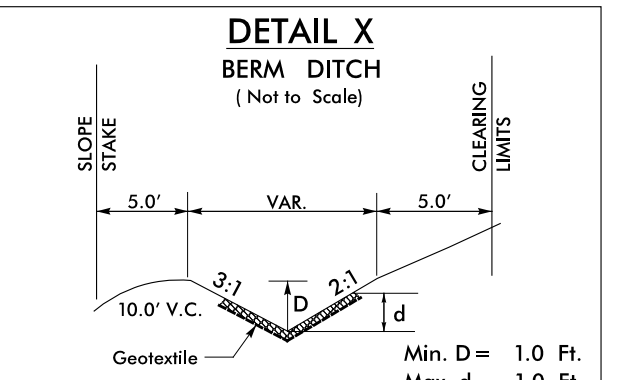
Min. D = 1.0 Ft.  
-L- STA. 31+51 TO STA. 31+96 RT  
-L- STA. 37+26 TO STA. 37+67 RT



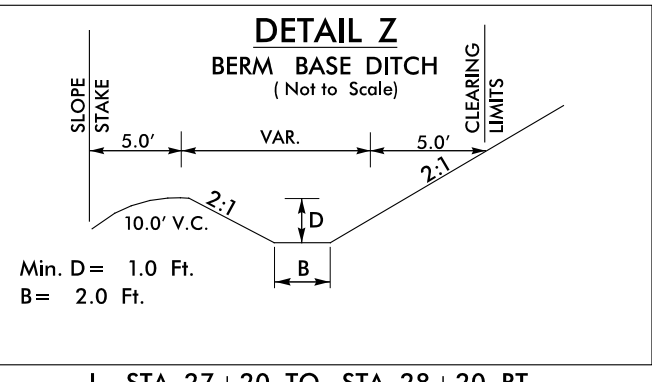
Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
Type of Liner = Class B Rip-Rap  
-L- STA. 21+95 TO STA. 23+78 RT  
Est. 58 Tons Class B Rip-Rap, Est. 161 S.Y. Geotextile  
-L- STA. 32+00 TO STA. 33+98 RT  
Est. 92 Tons Class B Rip-Rap, Est. 256 S.Y. Geotextile  
-L- STA. 54+51 TO STA. 58+97 RT  
Est. 208 Tons Class B Rip-Rap, Est. 576 S.Y. Geotextile  
-L- STA. 141+48 TO STA. 142+49 RT  
Est. 38 Tons Class B Rip-Rap, Est. 105 S.Y. Geotextile



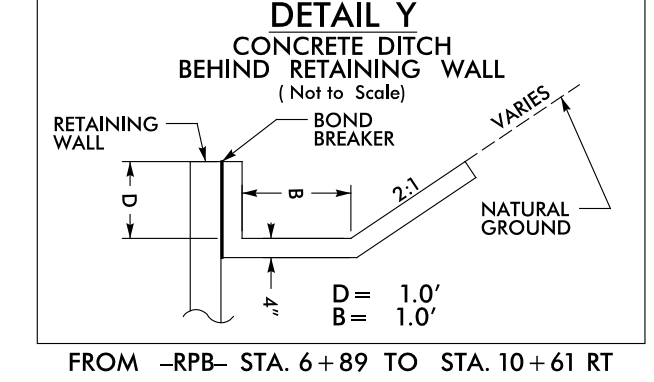
Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
Type of Liner = Est. 121 Tons Class B Rip-Rap  
Est. 333 S.Y. Geotextile  
-L- STA. 24+10 TO STA. 26+50 RT



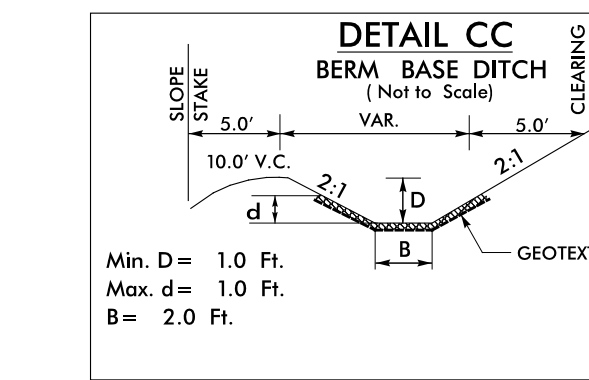
Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 2.0 Ft.  
Type of Liner = Est. 124 Tons Class B Rip-Rap  
Est. 372 S.Y. Geotextile  
-L- STA. 84+97 TO STA. 87+85 RT



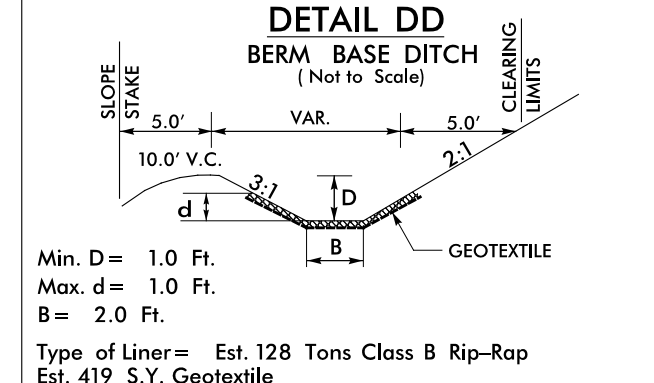
Min. D = 1.0 Ft.  
B = 2.0 Ft.  
-L- STA. 27+20 TO STA. 28+20 RT  
-L- STA. 37+73 TO STA. 42+95 RT  
-L- STA. 54+04 TO STA. 54+48 RT  
-L- STA. 71+61 TO STA. 71+98 RT  
-L- STA. 129+72 TO STA. 130+17 RT  
-L- STA. 132+98 TO STA. 133+50 RT  
-L- STA. 137+97 TO STA. 138+88 RT



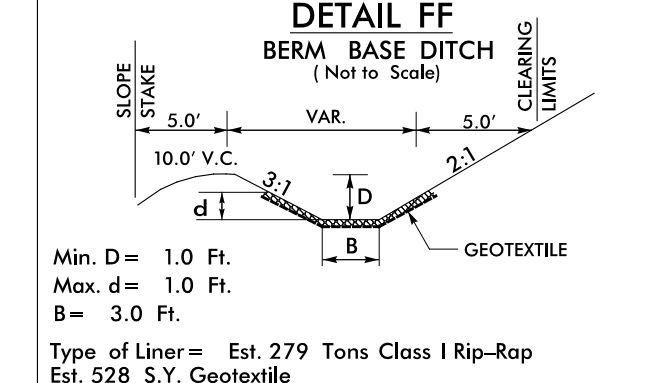
D = 1.0'  
B = 1.0'  
FROM -RPB- STA. 6+89 TO STA. 10+61 RT



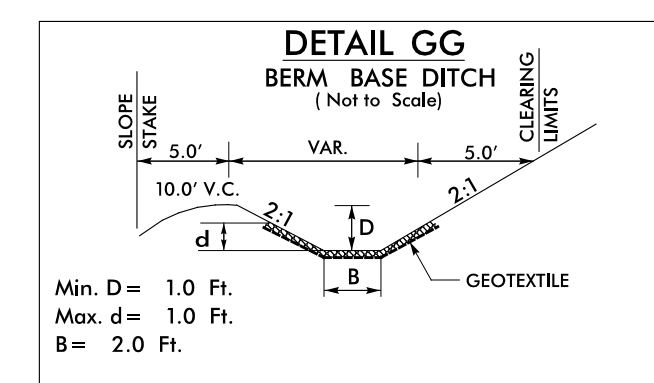
Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 2.0 Ft.  
-L- STA. 59+02 TO STA. 60+67 RT  
Est. 74 Tons Class B Rip-Rap, Est. 209 S.Y. Geotextile  
-Y2- STA. 10+20 TO 12+50 RT  
Type of Liner = Est. 49 Tons Class B Rip-Rap, Est. 137 S.Y. Geotextile  
-L- STA. 71+98 TO STA. 72+50 RT  
Type of Liner = Est. 31 Tons Class B Rip-Rap, Est. 89 S.Y. Geotextile  
-L- STA. 103+51 TO STA. 105+89 RT  
Type of Liner = Est. 108 Tons Class B Rip-Rap, Est. 307 S.Y. Geotextile  
-L- STA. 108+23 TO STA. 113+33 RT  
Type of Liner = Est. 89 Tons Class B Rip-Rap, Est. 251 S.Y. Geotextile  
-L- STA. 130+17 TO STA. 132+98 RT  
Type of Liner = Est. 147 Tons Class B Rip-Rap, Est. 418 S.Y. Geotextile  
-L- STA. 133+50 TO STA. 136+28 RT  
Type of Liner = Est. 113 Tons Class B Rip-Rap, Est. 319 S.Y. Geotextile  
-L- STA. 138+93 TO STA. 141+48 RT  
Type of Liner = Est. 132 Tons Class B Rip-Rap, Est. 373 S.Y. Geotextile  
-L- STA. 142+51 TO STA. 145+00 RT  
Type of Liner = Est. 140 Tons Class B Rip-Rap, Est. 397 S.Y. Geotextile  
-Y4- STA. 11+00 TO STA. 13+50 LT  
Type of Liner = Est. 80 Tons Class B Rip-Rap, Est. 226 S.Y. Geotextile



Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 2.0 Ft.  
Type of Liner = Est. 128 Tons Class B Rip-Rap  
Est. 419 S.Y. Geotextile  
-L- STA. 28+44 TO STA. 31+31 RT

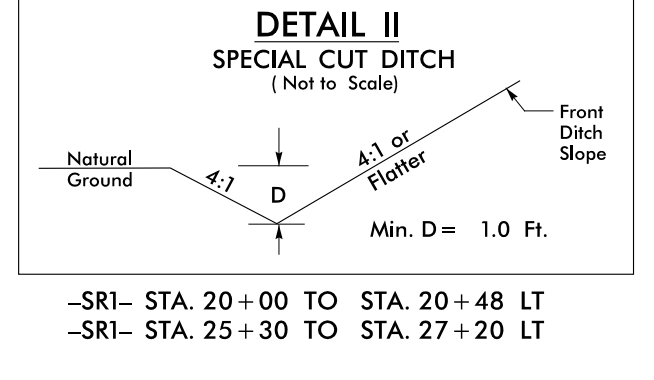


Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
Type of Liner = Est. 279 Tons Class I Rip-Rap  
Est. 528 S.Y. Geotextile  
-L- STA. 72+50 TO STA. 75+17 RT

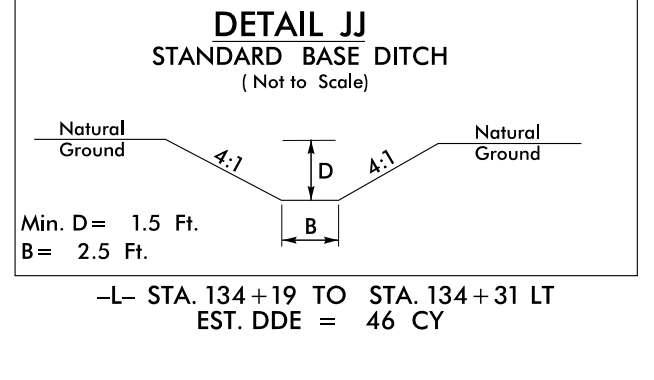


Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 2.0 Ft.  
-L- STA. 145+02 TO STA. 148+81 RT  
Type of Liner = Est. 315 Tons Class I Rip-Rap, Est. 607 S.Y. Geotextile  
-L- STA. 151+08 TO STA. 153+73 RT  
Type of Liner = Est. 233 Tons Class I Rip-Rap, Est. 449 S.Y. Geotextile

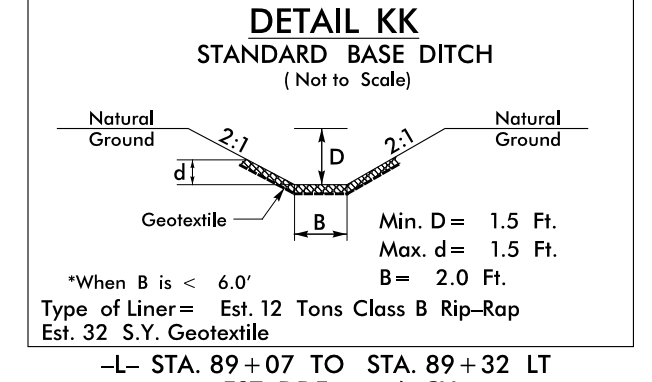
Type of Liner = Est. 31 Tons Class B Rip-Rap, Est. 89 S.Y. Geotextile  
-L- STA. 103+51 TO STA. 105+89 RT  
Type of Liner = Est. 108 Tons Class B Rip-Rap, Est. 307 S.Y. Geotextile  
-L- STA. 108+23 TO STA. 113+33 RT  
Type of Liner = Est. 89 Tons Class B Rip-Rap, Est. 251 S.Y. Geotextile  
-L- STA. 130+17 TO STA. 132+98 RT  
Type of Liner = Est. 147 Tons Class B Rip-Rap, Est. 418 S.Y. Geotextile  
-L- STA. 133+50 TO STA. 136+28 RT  
Type of Liner = Est. 113 Tons Class B Rip-Rap, Est. 319 S.Y. Geotextile  
-L- STA. 138+93 TO STA. 141+48 RT  
Type of Liner = Est. 132 Tons Class B Rip-Rap, Est. 373 S.Y. Geotextile  
-L- STA. 142+51 TO STA. 145+00 RT  
Type of Liner = Est. 140 Tons Class B Rip-Rap, Est. 397 S.Y. Geotextile  
-Y4- STA. 11+00 TO STA. 13+50 LT  
Type of Liner = Est. 80 Tons Class B Rip-Rap, Est. 226 S.Y. Geotextile



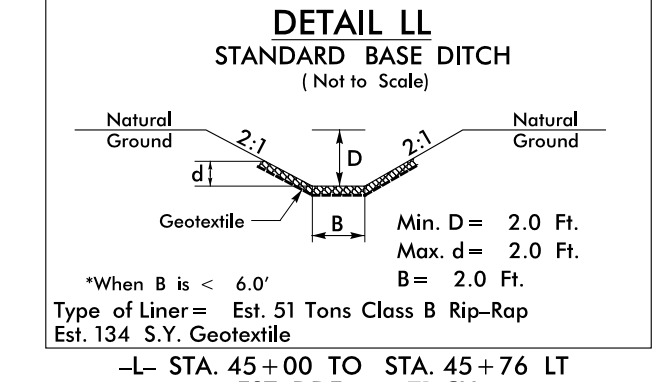
Min. D = 1.0 Ft.  
-SR1- STA. 20+00 TO STA. 20+48 LT  
-SR1- STA. 25+30 TO STA. 27+20 LT



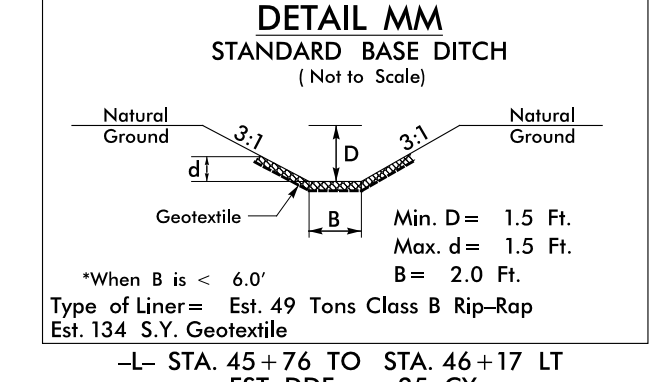
Min. D = 1.5 Ft.  
B = 2.5 Ft.  
-L- STA. 134+19 TO STA. 134+31 LT  
EST. DDE = 46 CY



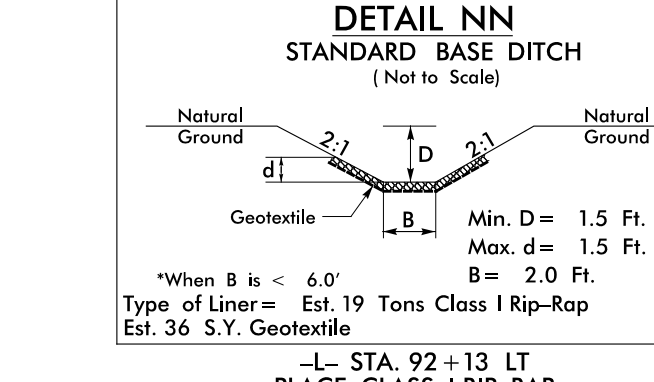
Min. D = 1.5 Ft.  
Max. d = 1.5 Ft.  
B = 2.0 Ft.  
Type of Liner = Est. 12 Tons Class B Rip-Rap  
Est. 32 S.Y. Geotextile  
-L- STA. 89+07 TO STA. 89+32 LT  
EST. DDE = 6 CY



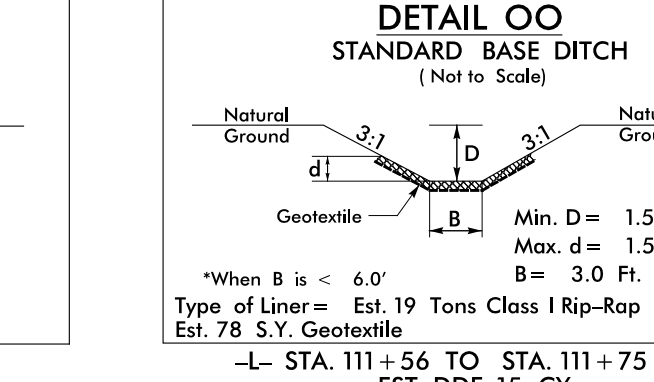
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 2.0 Ft.  
Type of Liner = Est. 51 Tons Class B Rip-Rap  
Est. 134 S.Y. Geotextile  
-L- STA. 45+00 TO STA. 45+76 LT  
EST. DDE = 71 CY



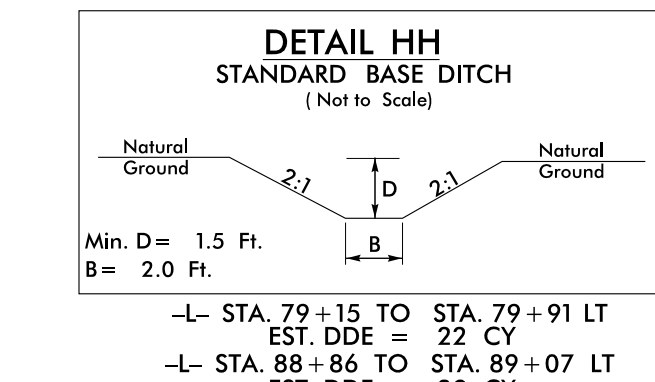
Min. D = 1.5 Ft.  
Max. d = 1.5 Ft.  
B = 2.0 Ft.  
Type of Liner = Est. 49 Tons Class B Rip-Rap  
Est. 134 S.Y. Geotextile  
-L- STA. 45+76 TO STA. 46+17 LT  
EST. DDE = 25 CY



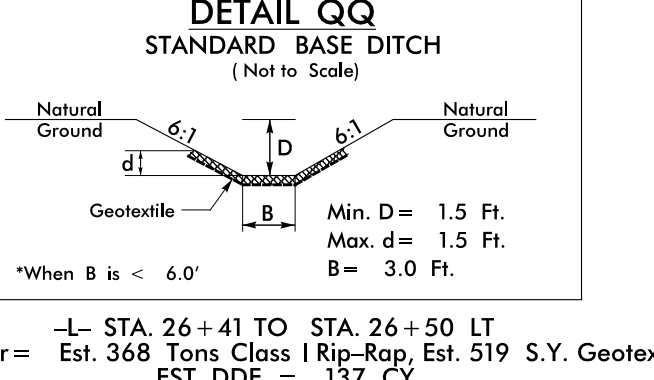
Min. D = 1.5 Ft.  
Max. d = 1.5 Ft.  
B = 2.0 Ft.  
Type of Liner = Est. 19 Tons Class I Rip-Rap  
Est. 36 S.Y. Geotextile  
-L- STA. 92+13 LT  
PLACE CLASS I RIP RAP  
IN LAST 20' OF DITCH  
EST. DDE = 6 CY



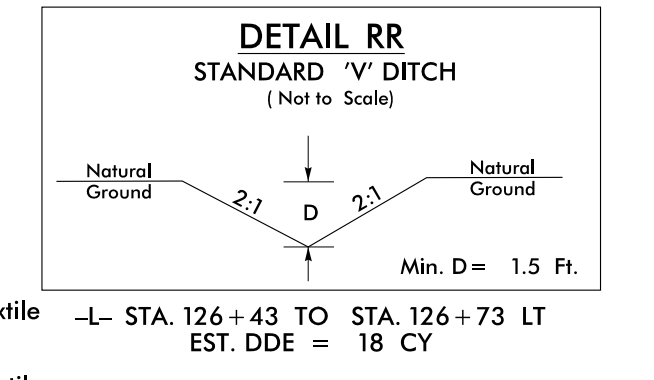
Min. D = 1.5 Ft.  
Max. d = 1.5 Ft.  
B = 3.0 Ft.  
Type of Liner = Est. 19 Tons Class I Rip-Rap  
Est. 78 S.Y. Geotextile  
-L- STA. 111+56 TO STA. 111+75 LT  
EST. DDE 15 CY



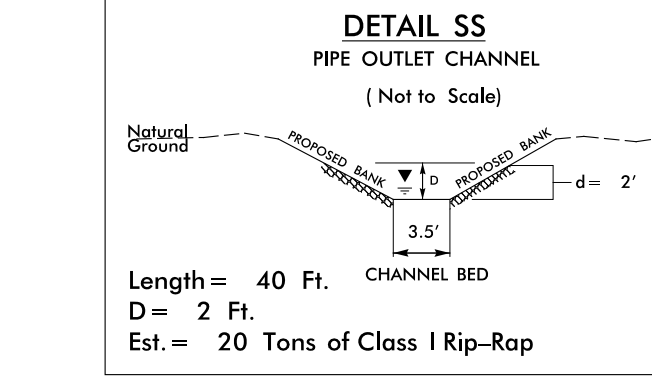
Min. D = 1.5 Ft.  
B = 2.0 Ft.  
-L- STA. 79+15 TO STA. 79+91 LT  
EST. DDE = 22 CY  
-L- STA. 88+86 TO STA. 89+07 LT  
EST. DDE = 29 CY  
-L- STA. 92+13 TO STA. 92+17 LT  
EST. DDE = 44 CY



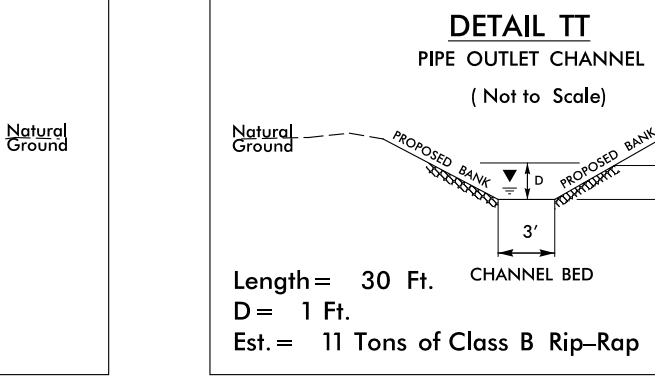
Min. D = 1.5 Ft.  
Max. d = 1.5 Ft.  
B = 3.0 Ft.  
Type of Liner = Est. 368 Tons Class I Rip-Rap, Est. 519 S.Y. Geotextile  
EST. DDE = 137 CY  
Type of Liner = Est. 454 Tons Class I Rip-Rap, Est. 640 S.Y. Geotextile  
EST. DDE = 176 CY



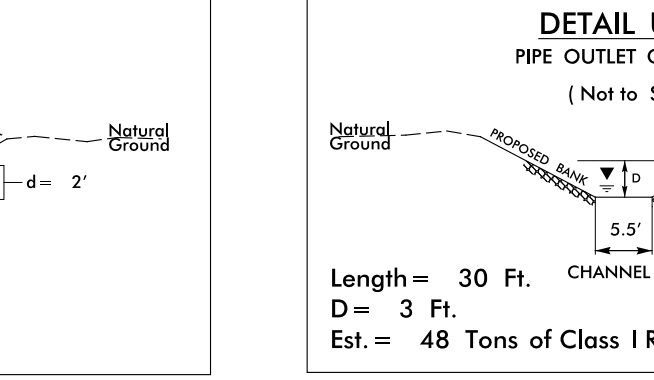
Min. D = 1.5 Ft.  
-L- STA. 126+43 TO STA. 126+73 LT  
EST. DDE = 18 CY



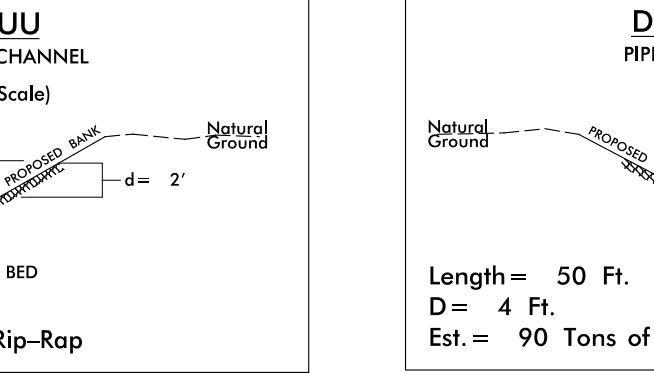
Length = 40 Ft.  
CHANNEL BED  
D = 2 Ft.  
Est. = 20 Tons of Class I Rip-Rap  
-L- STA. 75+70 LT  
EST. DDE = 14 CY



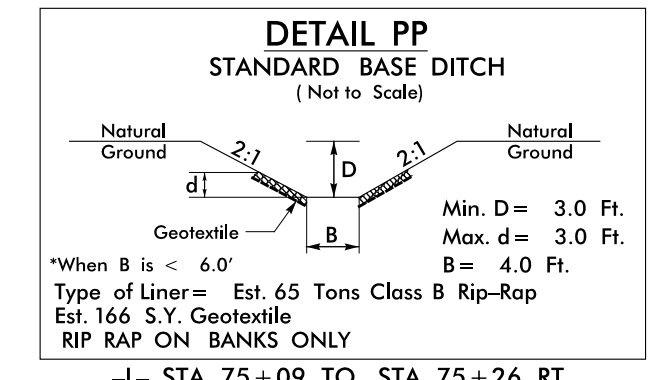
Length = 30 Ft.  
CHANNEL BED  
D = 1 Ft.  
Est. = 11 Tons of Class B Rip-Rap  
-L- STA. 15+20 LT EST. DDE = 10 CY  
-L- STA. 89+18 LT EST. DDE = 10 CY  
-L- STA. 115+50 LT EST. DDE = 10 CY  
-L- STA. 129+45 LT EST. DDE = 10 CY



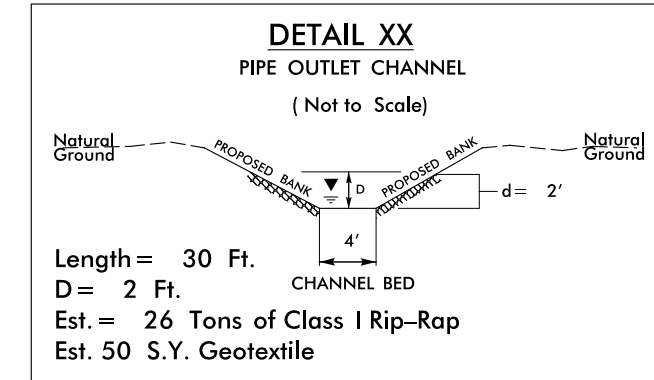
Length = 30 Ft.  
CHANNEL BED  
D = 3 Ft.  
Est. = 48 Tons of Class I Rip-Rap  
-L- STA. 52+02 LT EST. DDE = 17 CY  
-L- STA. 107+00 LT EST. DDE = 17 CY



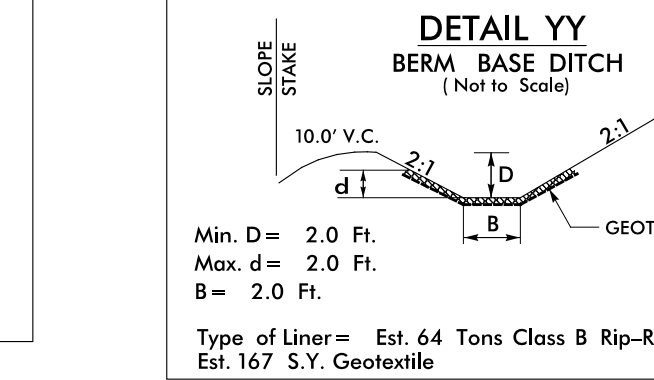
Length = 50 Ft.  
CHANNEL BED  
D = 4 Ft.  
Est. = 90 Tons of Class I Rip-Rap  
-L- STA. 99+61 RT EST. DDE = 39 CY  
-L- STA. 99+76 LT EST. DDE = 39 CY



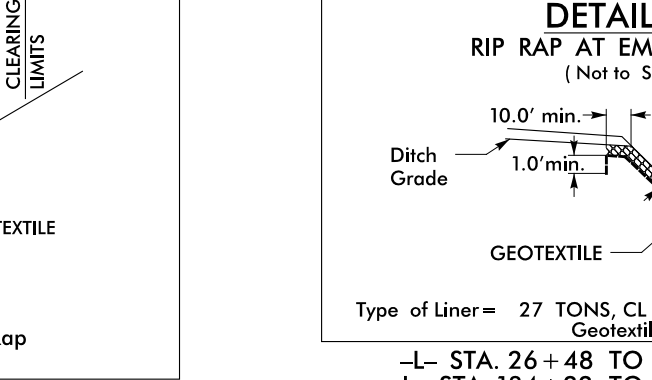
Min. D = 3.0 Ft.  
Max. d = 3.0 Ft.  
B = 4.0 Ft.  
Type of Liner = Est. 65 Tons Class B Rip-Rap  
Est. 166 S.Y. Geotextile  
RIP RAP ON BANKS ONLY  
-L- STA. 75+09 TO STA. 75+26 RT  
EST. DDE = 86 CY



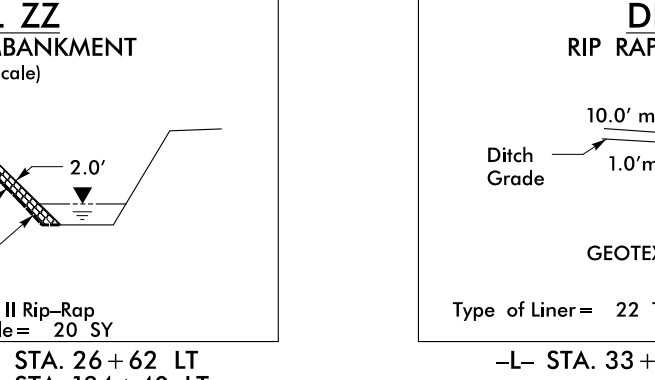
Length = 30 Ft.  
CHANNEL BED  
D = 2 Ft.  
Est. = 50 Tons of Class I Rip-Rap  
Est. 50 S.Y. Geotextile  
-L- STA. 79+85 LT



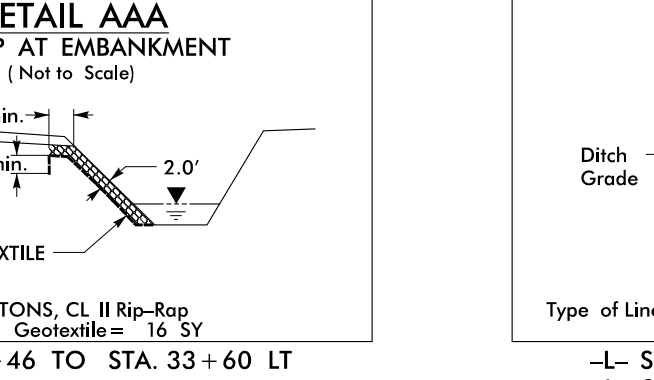
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 2.0 Ft.  
Type of Liner = Est. 64 Tons Class B Rip-Rap  
Est. 167 S.Y. Geotextile  
-Y7- STA. 11+02 TO STA. 12+49 RT



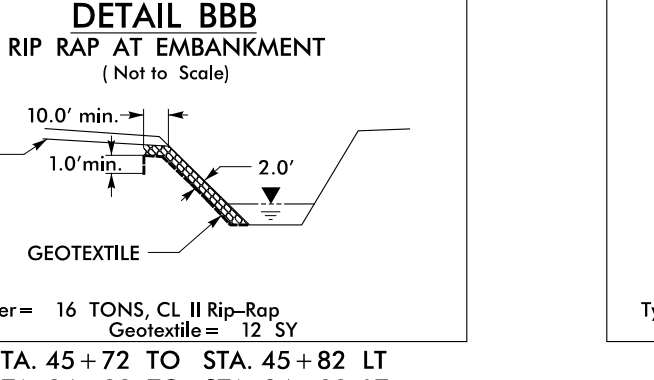
Type of Liner = 27 TONS, CL II Rip-Rap  
Geotextile = 20 SY  
-L- STA. 26+48 TO STA. 26+62 LT  
-L- STA. 134+22 TO STA. 134+40 LT



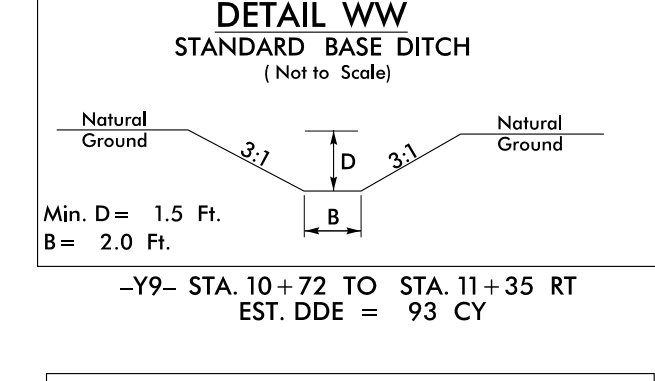
Type of Liner = 22 TONS, CL II Rip-Rap  
Geotextile = 16 SY  
-L- STA. 33+46 TO STA. 33+60 LT



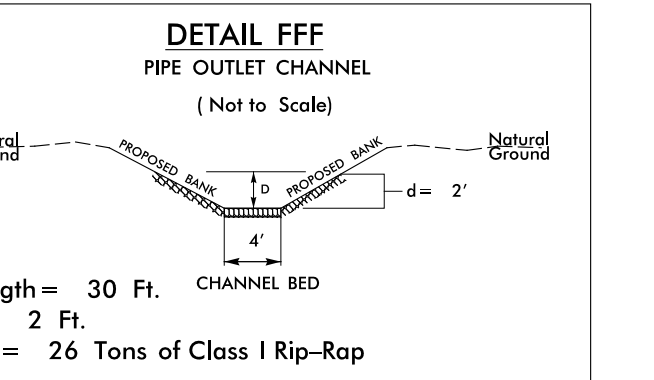
Type of Liner = 16 TONS, CL II Rip-Rap  
Geotextile = 12 SY  
-L- STA. 45+72 TO STA. 45+82 LT  
-L- STA. 84+80 TO STA. 84+90 LT  
-L- STA. 89+31 TO STA. 89+37 LT  
-L- STA. 92+05 TO STA. 92+08 LT



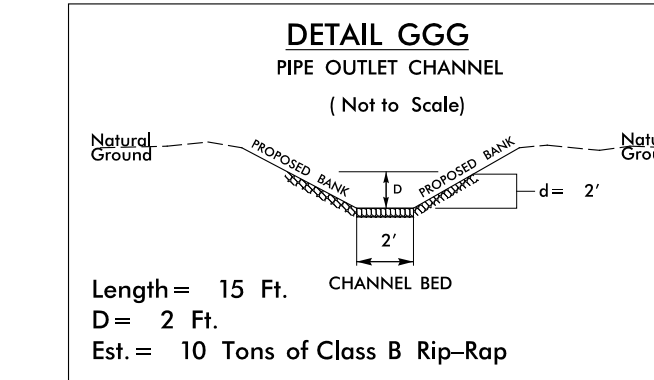
Type of Liner = 10 TONS, CL I Rip-Rap  
Geotextile = 10 SY  
-L- STA. 13+33 TO STA. 13+53 LT



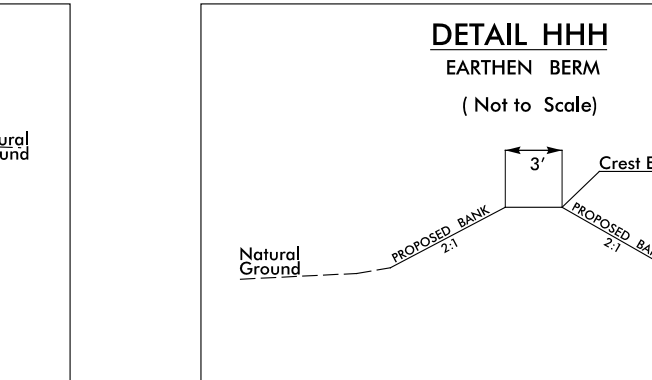
Min. D = 1.5 Ft.  
B = 2.0 Ft.  
-Y9- STA. 10+72 TO STA. 11+35 RT  
EST. DDE = 93 CY



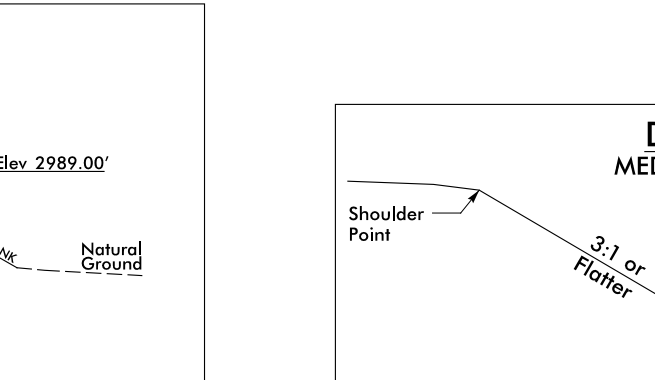
Length = 30 Ft.  
CHANNEL BED  
D = 2 Ft.  
Est. = 26 Tons of Class I Rip-Rap  
-L- STA. 120+75 LT  
EST. DDE = 38 CY



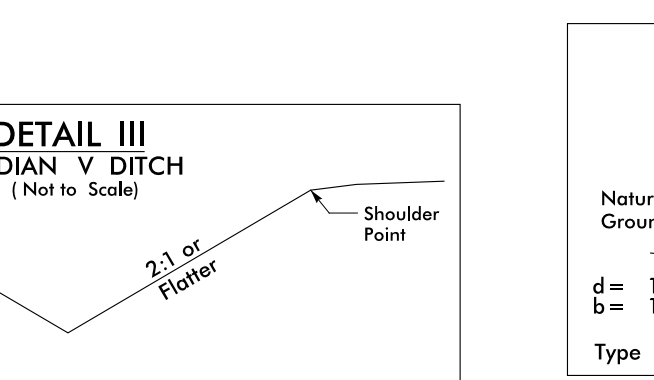
Length = 15 Ft.  
CHANNEL BED  
D = 2 Ft.  
Est. = 10 Tons of Class B Rip-Rap  
-L- STA. 124+07 LT  
EST. DDE = 5 CY



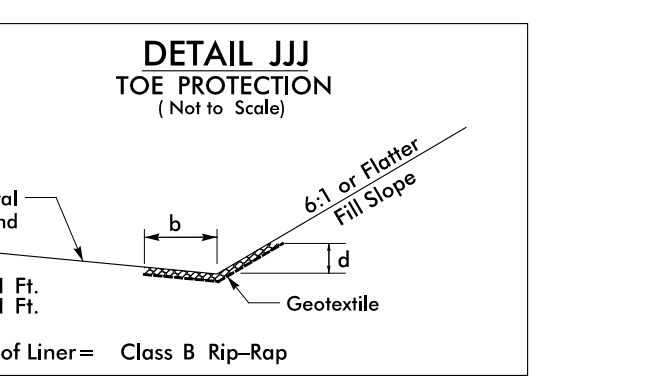
-RPC- STA. 8+25 TO 8+70 RT



-L- STA. 17+00 TO STA. 20+50 RT  
-RPA- STA. 10+75 TO STA. 14+88 RT



Type of Liner = Class B Rip-Rap  
FROM -Y1- STA. 51+11 TO STA. 53+53 (LT)



Type of Liner = Class B Rip-Rap  
FROM -LPC- STA. 11+16 TO STA. 12+80 (RT)  
FROM -LPC- STA. 12+86 TO STA. 13+46 (RT)

FILED \$ DATE \$

**RS&H**  
IMPROVING YOUR WORLD  
Consulting Engineers  
RS&H Architects-Engineers-Planners, Inc.  
1520 South Boulevard, Suite 200  
Charlotte, NC 28203  
Phone: 704-752-0610  
NC License No. F-0493 www.rsandh.com

**V&M**  
Vaughan & Melton  
Seal 036188  
8/10/2015

Boone, NC 800-355-9333  
Tel-O-Haus, TN 423-141-9400  
Knoxville, TN 865-546-5800  
Spartanburg, SC 864-574-4775  
Charleston, SC 843-974-5600  
Millsboro, DE 302-353-2796  
Asheville, NC 828-253-2796  
Raleigh, NC 919-971-9405  
Charlotte, NC 704-351-0488  
Annapolis, MD 410-248-6600  
Arlington, VA 703-627-3509  
Copyright © 2006 Vaughan & Melton, Inc. All Rights Reserved