

**B-504-D3**

(This sheet must be accompanied with B-504-H1)

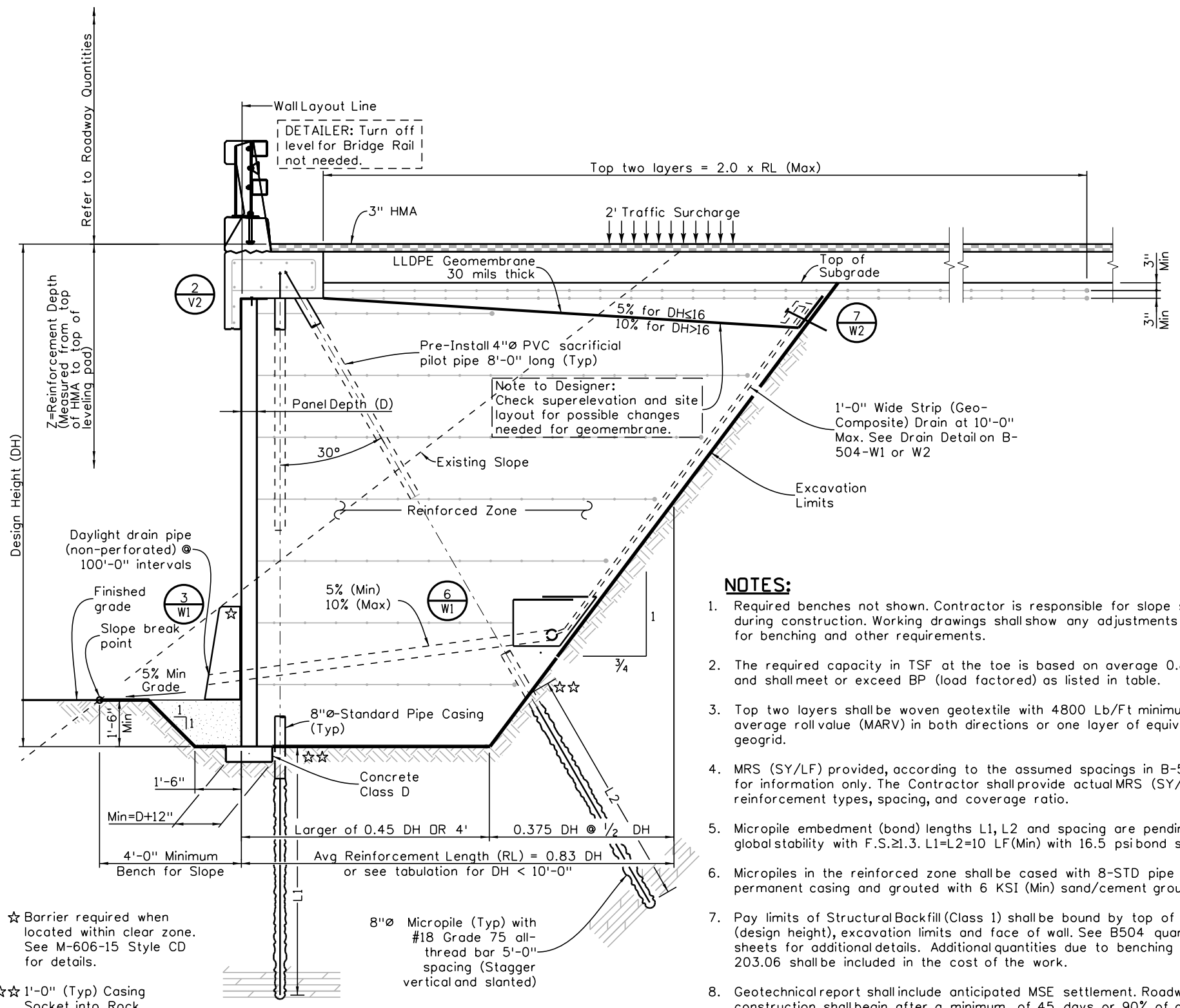
DH (Ft)	RL**(Ft)			MRS (CY/LF)	MRS (SY/LF)	BM1 (CY/LF)	PLG (Ft/LF)	BP (TSF)
	(Min)	(Avg)	(Max)					
2.000	4.000	4.750	5.500	0.352	2.444	0.477	5.50	0.543
2.667	4.000	5.000	6.000	0.494	3.222	0.619	6.00	0.662
3.333	4.000	5.250	6.500	0.648	3.472	0.773	6.50	0.798
4.000	4.000	5.500	7.000	0.815	4.333	0.940	7.00	0.953
4.667	4.000	5.750	7.500	0.994	4.611	1.119	7.50	1.130
5.333	4.000	6.000	8.000	1.185	4.889	1.310	8.00	1.333
6.000	4.000	6.250	8.500	1.389	5.167	1.514	8.50	1.565
6.667	4.000	6.500	9.000	1.605	5.667	1.730	9.00	1.831
7.333	4.000	6.750	9.500	1.833	6.472	1.958	9.50	2.138
8.000	4.000	7.000	10.000	2.074	6.778	2.199	10.00	2.492
8.667	4.000	7.250	10.500	2.327	7.083	2.452	10.50	2.904
9.333	4.200	7.700	11.200	2.662	8.400	2.787	11.20	3.149
10.000	4.500	8.250	12.000	3.056	9.000	3.181	12.00	3.289
10.667	4.800	8.800	12.800	3.477	9.600	3.602	12.80	3.429
11.333	5.100	9.350	13.600	3.925	10.200	4.050	13.60	3.570
12.000	5.400	9.900	14.400	4.400	11.900	4.525	14.40	3.711
12.667	5.700	10.450	15.200	4.902	12.561	5.027	15.20	3.852
13.333	6.000	11.000	16.000	5.432	13.222	5.557	16.00	3.993
14.000	6.300	11.550	16.800	5.989	15.167	6.114	16.80	4.135
14.667	6.600	12.100	17.600	6.573	15.889	6.698	17.60	4.277
15.333	6.900	12.650	18.400	7.184	16.611	7.309	18.40	4.419
16.000	7.200	13.200	19.200	7.822	18.800	7.947	19.20	4.561
16.667	7.500	13.750	20.000	8.488	19.583	8.613	20.00	4.703
17.333	7.800	14.300	20.800	9.180	20.367	9.305	20.80	4.845
18.000	8.100	14.850	21.600	9.900	22.800	10.025	21.60	4.987
18.667	8.400	15.400	22.400	10.647	23.644	10.772	22.40	5.130
19.333	8.700	15.950	23.200	11.421	24.489	11.546	23.20	5.272
20.000	9.000	16.500	24.000	12.222	27.167	12.347	24.00	5.415
20.667	9.300	17.050	24.800	13.051	28.072	13.176	24.80	5.558
21.333	9.600	17.600	25.600	13.906	28.978	14.031	25.60	5.700
22.000	9.900	18.150	26.400	14.789	31.900	14.914	26.40	5.843
22.667	10.200	18.700	27.200	15.699	32.867	15.824	27.20	5.986
23.333	10.500	19.250	28.000	16.636	33.833	16.761	28.00	6.129
24.000	10.800	19.800	28.800	17.600	33.000	17.725	28.80	6.272
24.667	11.100	20.350	29.600	18.591	38.028	18.716	29.60	6.415
25.333	11.400	20.900	30.400	19.610	39.056	19.735	30.40	6.558
26.000	11.700	21.450	31.200	20.656	42.467	20.781	31.20	6.701
26.667	12.000	22.000	32.000	21.728	43.556	21.853	32.00	6.844
27.333	12.300	22.550	32.800	22.828	44.644	22.953	32.80	6.987
28.000	12.600	23.100	33.600	23.956	48.300	24.081	33.60	7.130
28.667	12.900	23.650	34.400	25.110	49.450	25.235	34.40	7.273
29.333	13.200	24.200	35.200	26.291	53.289	26.416	35.20	7.416
30.000	13.500	24.750	36.000	27.500	54.500	27.625	36.00	7.559
30.667	13.800	25.300	36.800	28.736	58.522	28.861	36.80	7.702
31.333	14.100	25.850	37.600	29.999	59.794	30.124	37.60	7.846
32.000	14.400	26.400	38.400	31.289	64.000	31.414	38.40	7.989
32.667	14.700	26.950	39.200	32.606	65.333	32.731	39.20	8.132
33.333	15.000	27.500	40.000	33.951	69.722	34.076	40.00	8.275
34.000	15.300	28.050	40.800	35.322	71.117	35.447	40.80	8.419
34.667	15.600	28.600	41.600	36.721	75.689	36.846	41.60	8.562
35.333	15.900	29.150	42.400	38.147	77.144	38.272	42.40	8.705
36.000	16.200	29.700	43.200	39.600	81.900	39.725	43.20	8.848
36.667	16.500	30.250	44.000	41.080	86.778	41.205	44.00	8.992
37.333	16.800	30.800	44.800	42.588	91.778	42.713	44.80	9.135
38.000	17.100	31.350	45.600	44.122	96.900	44.247	45.60	9.278
38.667	17.400	31.900	46.400	45.684	102.144	45.809	46.40	9.422
39.333	17.700	32.450	47.200	47.273	107.511	47.398	47.20	9.565
40.000	18.000	33.000	48.000	48.889	113.000	49.014	48.00	9.709

\*\* RL for top two geotextile layers = 2 x RL (Max)

\*\*\* For example spacing on B-504-H2: DH=16' requires 18.8 SY/LF woven geotextile corresponding to 7.822 CY/LF volume of MRS with Class 1 backfill paid separately

Revision	Date
09-16	10-24

INITIALS	DESIGN	DATE	DETAIL	QUANTITY	DATE
By					
Checked By					



- NOTES:**
- Required benches not shown. Contractor is responsible for slope stability during construction. Working drawings shall show any adjustments needed for benching and other requirements.
  - The required capacity in TSF at the toe is based on average 0.83 DH and shall meet or exceed BP (load factored) as listed in table.
  - Top two layers shall be woven geotextile with 4800 Lb/Ft minimum average roll value (MARV) in both directions or one layer of equivalent geogrid.
  - MRS (SY/LF) provided, according to the assumed spacings in B-504-H1, for information only. The Contractor shall provide actual MRS (SY/LF), soil reinforcement types, spacing, and coverage ratio.
  - Micropile embedment (bond) lengths L1, L2 and spacing are pending upon global stability with F.S. ≥ 1.3. L1=L2=10 LF (Min) with 16.5 psi bond strength.
  - Micropiles in the reinforced zone shall be cased with 8-STD pipe permanent casing and grouted with 6 KSI (Min) sand/cement grout.
  - Pay limits of Structural Backfill (Class 1) shall be bound by top of DH (design height), excavation limits and face of wall. See B504 quantity sheets for additional details. Additional quantities due to benching per 203.06 shall be included in the cost of the work.
  - Geotechnical report shall include anticipated MSE settlement. Roadway construction shall begin after a minimum of 45 days or 90% of anticipated settlement to avoid cracking due to differential settlement.

**SECTION VIEW**

All seals for this set of drawings are applied to the cover page(s)	Print Date: \$DATE\$	Sheet Revisions		Colorado Department of Transportation		As Constructed		MICROPILE A-FRAME WITH PANEL FACING MSE WALL		Project No./Code	
	File Name: Sheet_B-504-D3.dgn	Date:	Comments	Init.	2829 West Howard Place, 3rd Floor Denver, CO 80204 Phone: 303-512-4079 FAX: 303-757-9197	No Revisions:		3/4:1 SOIL EXCAVATION		Sheet Number	
	Horiz. Scale: Vert. Scale: As Noted					Revised:	Designer: XXXXXXXX	Structure Numbers: XXXXXXXXXXXXX			
Unit Information	Unit Leader Initials				Staff Bridge Branch	Void:	Detailer: XXXXXXXX	Subset Sheets: WXX of XXX			

\$PLOT\_INFO\$