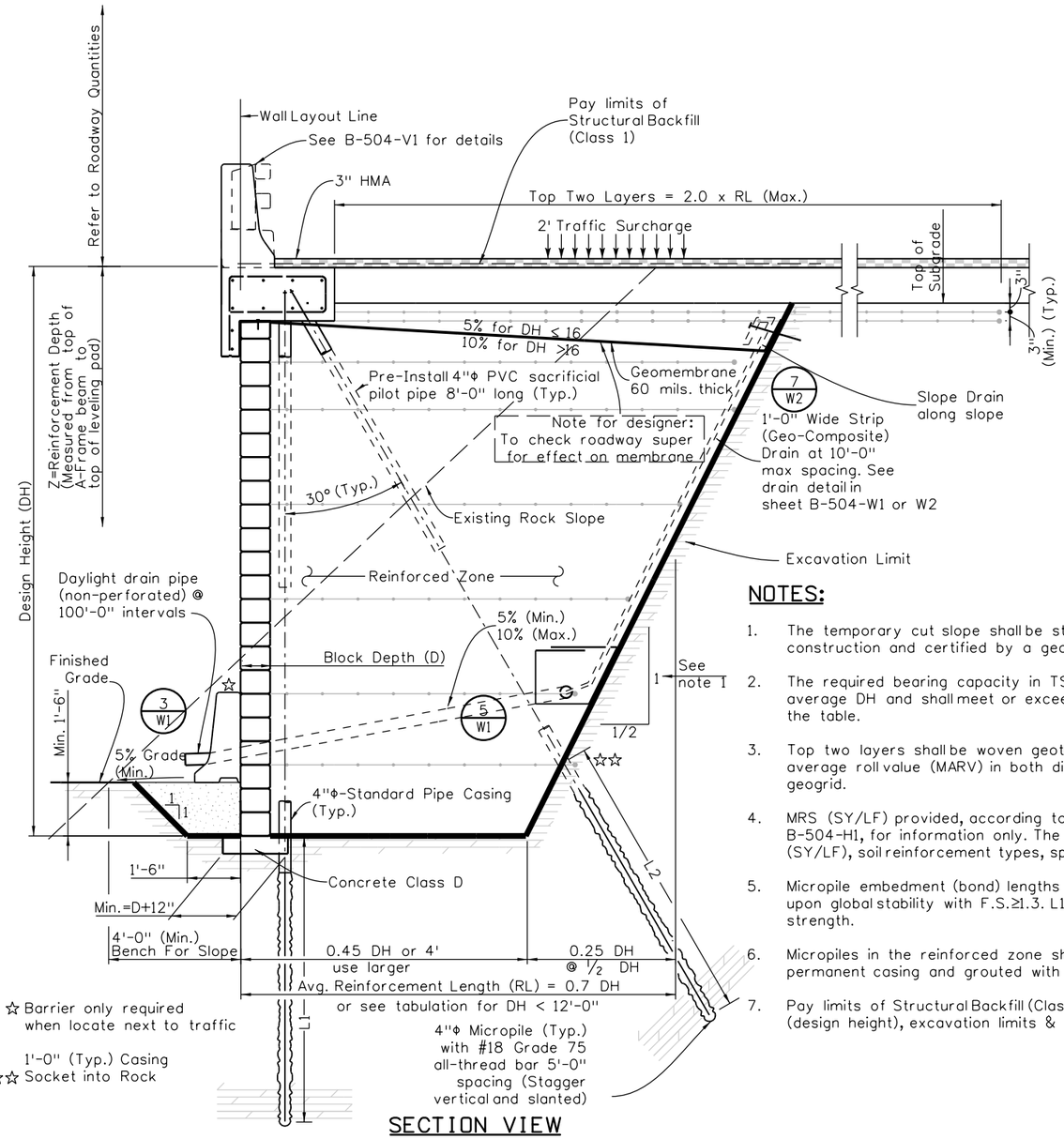
B-504-A5

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



SECTION VIEW

Note for the Designer:
Check slope stability during excavation shown on Geotech recommendation.

NOTES:

1. The temporary cut slope shall be stable during entire period of wall construction and certified by a geotechnical engineer.
2. The required bearing capacity in TSF at the toe is based on 0.70 average DH and shall meet or exceed BP (load factored) as listed in the table.
3. 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.
4. 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.
5. 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.
6. Micropiles in the reinforced zone shall be cased with 8-STD. pipe permanent casing and grouted with 6 ksi (Min.) sand/cement grout.
7. Pay limits of Structural Backfill (Class 1) shall be bound by top of DH (design height), excavation limits & face of wall.

DH (FT)	RL**(FT) (Min.)	RL**(FT) (Avg.)	RL**(FT) (Max.)	MRS (CY/LF)	MRS (SY/LF)	BM1 (CY/LF)	PLG (Ft/LF)	BP (TSF)
2.000	4.000	4.500	5.000	0.333	2.222	0.458	5.00	0.515
2.667	4.000	4.667	5.333	0.461	2.889	0.586	5.33	0.621
3.333	4.000	4.833	5.667	0.597	3.056	0.722	5.67	0.741
4.000	4.000	5.000	6.000	0.741	3.778	0.866	6.00	0.879
4.667	4.000	5.167	6.333	0.893	3.963	1.018	6.33	1.037
5.333	4.000	5.333	6.667	1.053	4.148	1.178	6.67	1.221
6.000	4.000	5.500	7.000	1.222	4.333	1.347	7.00	1.434
6.667	4.000	5.667	7.333	1.399	5.148	1.524	7.33	1.684
7.333	4.000	5.833	7.667	1.584	5.352	1.709	7.67	1.980
8.000	4.000	6.000	8.000	1.778	5.556	1.903	8.00	2.333
8.667	4.000	6.167	8.333	1.979	5.759	2.104	8.33	2.761
9.333	4.200	6.533	8.867	2.258	6.844	2.383	8.87	3.007
10.000	4.500	7.000	9.500	2.593	7.333	2.718	9.50	3.133
10.667	4.800	7.467	10.133	2.950	7.822	3.075	10.13	3.258
11.333	5.100	7.933	10.767	3.330	8.311	3.455	10.77	3.385
12.000	5.400	8.400	11.400	3.733	9.733	3.858	11.40	3.511
12.667	5.700	8.867	12.033	4.160	10.274	4.285	12.03	3.639
13.333	6.000	9.333	12.667	4.609	10.815	4.734	12.67	3.766
14.000	6.300	9.800	13.300	5.081	12.444	5.206	13.30	3.894
14.667	6.600	10.267	13.933	5.577	13.037	5.702	13.93	4.022
15.333	6.900	10.733	14.567	6.095	13.630	6.220	14.57	4.151
16.000 ***	7.200	11.200	15.200	6.637	15.467	6.762	15.20	4.279
16.667	7.500	11.667	15.833	7.202	16.111	7.327	15.83	4.408
17.333	7.800	12.133	16.467	7.789	16.756	7.914	16.47	4.537
18.000	8.100	12.600	17.100	8.400	18.800	8.525	17.10	4.666
18.667	8.400	13.067	17.733	9.034	19.496	9.159	17.73	4.795
19.333	8.700	13.533	18.367	9.691	20.193	9.816	18.37	4.925
20.000	9.000	14.000	19.000	10.370	22.444	10.495	19.00	5.054
20.667	9.300	14.467	19.633	11.073	23.193	11.198	19.63	5.184
21.333	9.600	14.933	20.267	11.799	23.941	11.924	20.27	5.313
22.000	9.900	15.400	20.900	12.548	26.400	12.673	20.90	5.443
22.667	10.200	15.867	21.533	13.320	27.200	13.445	21.53	5.573
23.333	10.500	16.333	22.167	14.115	28.000	14.240	22.17	5.703
24.000	10.800	16.800	22.800	14.933	30.667	15.058	22.80	5.833
24.667	11.100	17.267	23.433	15.774	31.519	15.899	23.43	5.963
25.333	11.400	17.733	24.067	16.639	32.370	16.764	24.07	6.093
26.000	11.700	18.200	24.700	17.526	35.244	17.651	24.70	6.223
26.667	12.000	18.667	25.333	18.436	36.148	18.561	25.33	6.353
27.333	12.300	19.133	25.967	19.370	37.052	19.495	25.97	6.483
28.000	12.600	19.600	26.600	20.326	40.133	20.451	26.60	6.614
28.667	12.900	20.067	27.233	21.305	41.089	21.430	27.23	6.744
29.333	13.200	20.533	27.867	22.308	44.326	22.433	27.87	6.874
30.000	13.500	21.000	28.500	23.333	45.333	23.458	28.50	7.005
30.667	13.800	21.467	29.133	24.382	48.726	24.507	29.13	7.135
31.333	14.100	21.933	29.767	25.453	49.785	25.578	29.77	7.265
32.000	14.400	22.400	30.400	26.548	53.333	26.673	30.40	7.396
32.667	14.700	22.867	31.033	27.666	54.444	27.791	31.03	7.526
33.333	15.000	23.333	31.667	28.807	58.148	28.932	31.67	7.657
34.000	15.300	23.800	32.300	29.970	59.311	30.095	32.30	7.787
34.667	15.600	24.267	32.933	31.157	63.170	31.282	32.93	7.918
35.333	15.900	24.733	33.567	32.367	64.385	32.492	33.57	8.048
36.000	16.200	25.200	34.200	33.600	68.400	33.725	34.20	8.179
36.667	16.500	25.667	34.833	34.856	72.519	34.981	34.83	8.310
37.333	16.800	26.133	35.467	36.135	76.741	36.260	35.47	8.440
38.000	17.100	26.600	36.100	37.437	81.067	37.562	36.10	8.571
38.667	17.400	27.067	36.733	38.762	85.496	38.887	36.73	8.701
39.333	17.700	27.533	37.367	40.110	90.030	40.235	37.37	8.832
40.000	18.000	28.000	38.000	41.481	94.667	41.606	38.00	8.963

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

*** For example spacing on B-504-H1: DH=16' requires 15.467 SY/LF reinforcement corresponding to 6.637 CY/LF volume of MRS with Class 1 backfill paid separately

Revision Dates (Preliminary Stage Only): 09-16

Design	INITIAL	DATE	Detail	INITIAL	DATE	Quantities	INITIAL	DATE
Designed By			Detailed By			Quantities By		
Checked By			Checked By			Checked By		

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Print Date: 9/6/2016	Sheet Revisions		
File Name: Sheet_B-504-A5.dgn	Date:	Comments	Init.
Horiz. Scale: 1:4 Vert. Scale: As Noted			
Staff Bridge Branch-Unit OXXX Unit Leader Initials			

Colorado Department of Transportation
4201 East Arkansas Avenue
Room 107
Denver, CO 80222
Phone: 303-757-9309 FAX: 303-757-9197
Staff Bridge Branch Initials

As Constructed	RAIL ANCHOR SLAB WITH BLOCK FACING MRS WALL WITH 1/2:1 ROCK EXCAVATION			Project No./Code
No Revisions:	Designer: XXXXXXX	Structure Numbers	Wall-X-XX-XX	Project Number
Revised:	Detailer: XXXXXXX		Wall-X-XX-XX	Code
Void:	Sheet Subset: Wall	Subset Sheets: WXX of XXX		Sheet Number