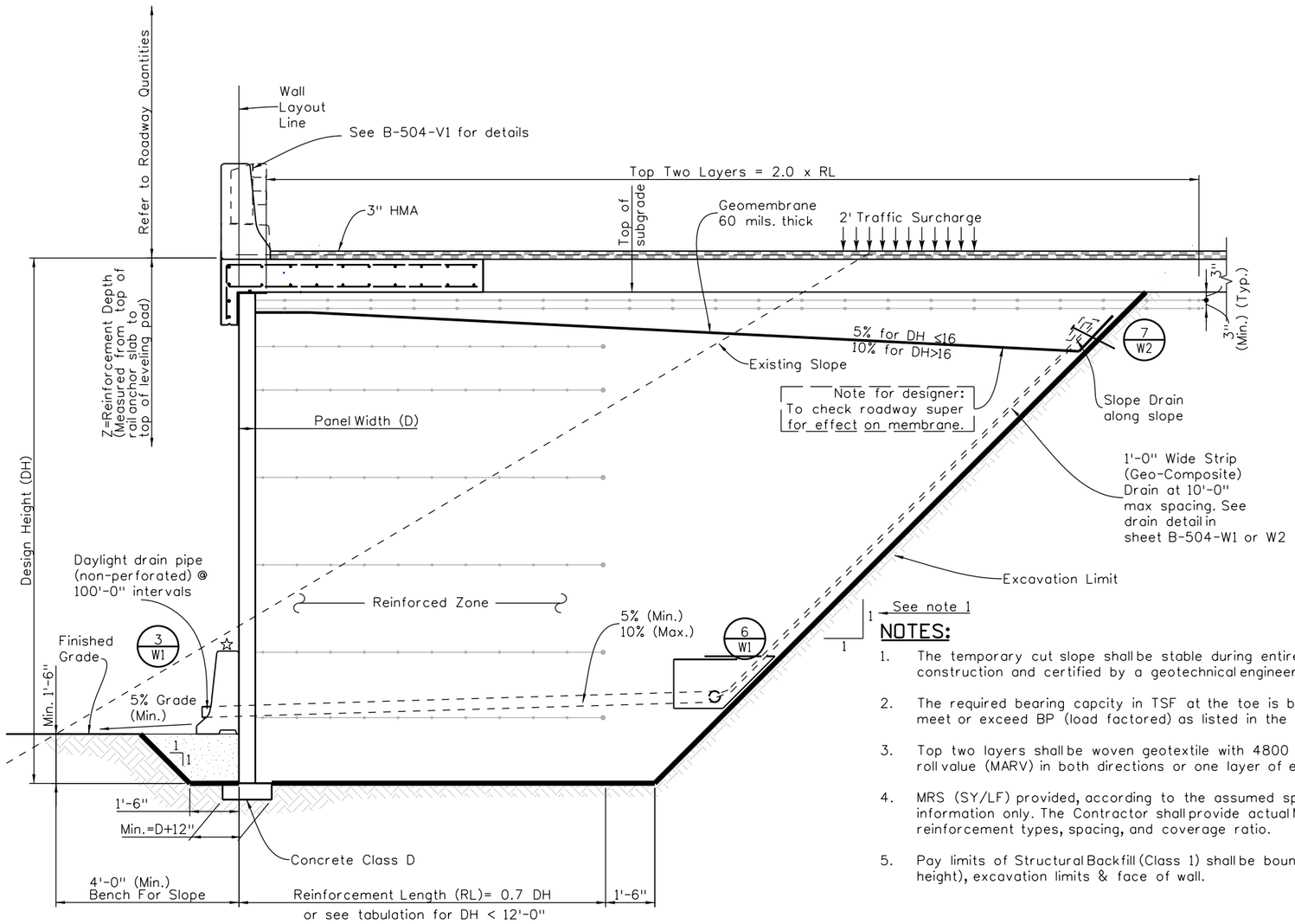
# B-504-D1

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




☆ Barrier only required when located next to traffic

## SECTION VIEW

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

| | DH (FT) | RL** (FT) | MRS (CY/LF) | MRS (SY/LF) | BM1 (CY/LF) | PLG (Ft/LF) | BP (TSF) |
|---|---|---|---|---|---|---|---|
| | 2.000 | 6.000 | 0.444 | 2.667 | 0.755 | 9.500 | 0.448 |
| | 2.667 | 6.000 | 0.593 | 3.333 | 0.997 | 10.167 | 0.513 |
| | 3.333 | 6.000 | 0.741 | 3.333 | 1.257 | 10.833 | 0.583 |
| | 4.000 | 6.000 | 0.889 | 4.000 | 1.532 | 11.500 | 0.657 |
| | 4.667 | 6.000 | 1.037 | 4.000 | 1.825 | 12.167 | 0.737 |
| | 5.333 | 6.000 | 1.185 | 4.000 | 2.133 | 12.833 | 0.824 |
| | 6.000 | 6.000 | 1.333 | 4.000 | 2.458 | 13.500 | 0.920 |
| | 6.667 | 7.000 | 1.728 | 5.444 | 3.047 | 15.167 | 0.966 |
| | 7.333 | 7.000 | 1.901 | 5.444 | 3.430 | 15.833 | 1.063 |
| | 8.000 | 8.000 | 2.370 | 6.222 | 4.125 | 17.500 | 1.108 |
| | 8.667 | 8.000 | 2.568 | 6.222 | 4.565 | 18.167 | 1.206 |
| | 9.333 | 8.000 | 2.765 | 7.111 | 5.022 | 18.833 | 1.312 |
| | 10.000 | 8.000 | 2.963 | 7.111 | 5.495 | 19.500 | 1.427 |
| | 10.667 | 8.000 | 3.160 | 7.111 | 5.985 | 20.167 | 1.554 |
| | 11.333 | 8.000 | 3.358 | 7.111 | 6.491 | 20.833 | 1.693 |
| | 12.000 | 8.400 | 3.733 | 8.400 | 7.192 | 21.900 | 1.775 |
| | 12.667 | 8.867 | 4.160 | 8.867 | 7.960 | 23.033 | 1.846 |
| | 13.333 | 9.333 | 4.609 | 9.333 | 8.767 | 24.167 | 1.917 |
| | 14.000 | 9.800 | 5.081 | 10.889 | 9.614 | 25.300 | 1.988 |
| | 14.667 | 10.267 | 5.577 | 11.407 | 10.500 | 26.433 | 2.059 |
| | 15.333 | 10.733 | 6.095 | 11.926 | 11.426 | 27.567 | 2.130 |
| *** | 16.000 | 11.200 | 6.637 | 13.689 | 12.392 | 28.700 | 2.202 |
| | 16.667 | 11.667 | 7.202 | 14.259 | 13.397 | 29.833 | 2.273 |
| | 17.333 | 12.133 | 7.789 | 14.830 | 14.441 | 30.967 | 2.344 |
| | 18.000 | 12.600 | 8.400 | 16.800 | 15.525 | 32.100 | 2.415 |
| | 18.667 | 13.067 | 9.034 | 17.422 | 16.648 | 33.233 | 2.487 |
| | 19.333 | 13.533 | 9.691 | 18.044 | 17.811 | 34.367 | 2.558 |
| | 20.000 | 14.000 | 10.370 | 20.222 | 19.014 | 35.500 | 2.629 |
| | 20.667 | 14.467 | 11.073 | 20.896 | 20.256 | 36.633 | 2.700 |
| | 21.333 | 14.933 | 11.799 | 21.570 | 21.537 | 37.767 | 2.772 |
| | 22.000 | 15.400 | 12.548 | 23.956 | 22.858 | 38.900 | 2.843 |
| | 22.667 | 15.867 | 13.320 | 24.681 | 24.219 | 40.033 | 2.914 |
| | 23.333 | 16.333 | 14.115 | 25.407 | 25.619 | 41.167 | 2.986 |
| | 24.000 | 16.800 | 14.933 | 28.000 | 27.058 | 42.300 | 3.057 |
| | 24.667 | 17.267 | 15.774 | 28.778 | 28.537 | 43.433 | 3.129 |
| | 25.333 | 17.733 | 16.639 | 29.556 | 30.056 | 44.567 | 3.200 |
| | 26.000 | 18.200 | 17.526 | 32.356 | 31.614 | 45.700 | 3.271 |
| | 26.667 | 18.667 | 18.436 | 33.185 | 33.211 | 46.833 | 3.343 |
| | 27.333 | 19.133 | 19.370 | 34.015 | 34.848 | 47.967 | 3.414 |
| | 28.000 | 19.600 | 20.326 | 37.022 | 36.525 | 49.100 | 3.486 |
| | 28.667 | 20.067 | 21.305 | 37.904 | 38.241 | 50.233 | 3.557 |
| | 29.333 | 20.533 | 22.308 | 41.067 | 39.997 | 51.367 | 3.628 |
| | 30.000 | 21.000 | 23.333 | 42.000 | 41.792 | 52.500 | 3.700 |
| | 30.667 | 21.467 | 24.382 | 45.319 | 43.626 | 53.633 | 3.771 |
| | 31.333 | 21.933 | 25.453 | 46.304 | 45.500 | 54.767 | 3.843 |
| | 32.000 | 22.400 | 26.548 | 49.778 | 47.414 | 55.900 | 3.914 |
| | 32.667 | 22.867 | 27.666 | 50.815 | 49.367 | 57.033 | 3.986 |
| | 33.333 | 23.333 | 28.807 | 54.444 | 51.360 | 58.167 | 4.057 |
| | 34.000 | 23.800 | 29.970 | 55.533 | 53.392 | 59.300 | 4.128 |
| | 34.667 | 24.267 | 31.157 | 59.319 | 55.463 | 60.433 | 4.200 |
| | 35.333 | 24.733 | 32.367 | 60.459 | 57.574 | 61.567 | 4.271 |
| | 36.000 | 25.200 | 33.600 | 64.400 | 59.725 | 62.700 | 4.343 |
| | 36.667 | 25.667 | 34.856 | 68.444 | 61.915 | 63.833 | 4.414 |
| | 37.333 | 26.133 | 36.135 | 72.593 | 64.145 | 64.967 | 4.486 |
| | 38.000 | 26.600 | 37.437 | 76.844 | 66.414 | 66.100 | 4.557 |
| | 38.667 | 27.067 | 38.762 | 81.200 | 68.723 | 67.233 | 4.629 |
| | 39.333 | 27.533 | 40.110 | 85.659 | 71.071 | 68.367 | 4.700 |
| | 40.000 | 28.000 | 41.481 | 90.222 | 73.458 | 69.500 | 4.772 |

## 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 capcity in TSF at the toe is based on 0.7 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. Pay limits of Structural Backfill (Class 1) shall be bound by top of DH (design height), excavation limits & face of wall.

** RL for top two geotextile layers = 2 x RL

*** For example spacing on B-504-H2: DH=16' requires 13.689 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

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

nguyenh 9:17:53 AM C:\Users\nguyenh\Desktop\Worksheet dgn and PDF\Sheet_B-504-D1.dgn

| | | | |
|---|---|---|---|
| Print Date: 9/6/2016 | Sheet Revisions | | |
| File Name: Sheet_B-504-D1.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
No Revisions:
Revised:
Void:

RAIL ANCHOR SLAB WITH PANEL FACING MSE WALL
1:1 SOIL EXCAVATION OR FILL

| | | | |
|---|---|---|---|
| Designer: | XXXXXXX | Structure Numbers | Wall-X-XX-XX |
| Detailer: | XXXXXXX | | Wall-X-XX-XX |
| Sheet Subset: | Wall | Subset Sheets: | WXX of XXX |

Project No./Code
Project Number
Code
Sheet Number