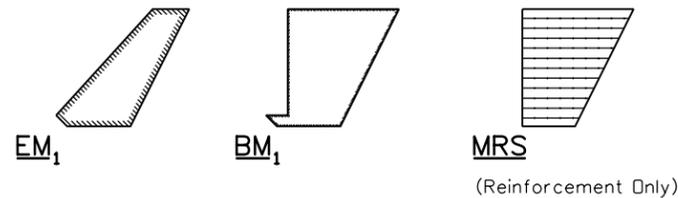


θ = Average Angle of Existing Ground Line
Note: Widening width may vary

SECTION VIEW



CONDITION: $H \geq 1.5 + 3 \tan(\theta)$
 $EM_1 = [0.7(DH)^2 - 0.5(DH-H)^2/\tan\theta + 3.375 + 4.5\tan\theta] / 27$
 $BM_1 = [3.375 + (RL)(DH)] / 27$
 $MRS = [(DH)(RL)] / 27$
 $PLG = [0.95 DH]$
 $H = 1.5 + 3\tan(\theta)$

Example:
 Inputs - DH=16'; Average RL=0.7DH=11.2'; $\theta=45^\circ$
 Outputs - H=4.5'; $EM_1=4.2$ (CY/Ft.); $BM_1=6.76$ (CY/Ft.); MRS=6.64 (CY/Ft.); PLG=15.2 (ft./ft.)

NOTES:

1. Template with minimum 1'-6" toe cover is based on wall at its layout line, and may be used for taking sections perpendicular to roadway center line with offsets.
2. Quantity of structure excavation (EM_1) may be calculated either by formulae with average H and θ at wall layout line or by actual area from graphic model.
3. Earth removal, outside the boundaries as defined shall be managed under roadway quantities and paid as unclassified excavation.
4. Micropile A-Frame is an option only for anchoring bridge rail and meeting slope stability with F.S. ≥ 1.3 .
5. Existing slope and widening width may be varied depending upon site geometry

| Revision Dates (Preliminary Stage Only) | |
|---|--|
| 09-16 | |

| Design | | Detail | | Quantities | |
|---------|------|---------|------|------------|------|
| INITIAL | DATE | INITIAL | DATE | INITIAL | DATE |
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|---|------------------------|-----------|--------|--|---|---|-------------------|------------------|---------------------------|
| Print Date: 9/6/2016 | Sheet Revisions | | | <p>Colorado Department of Transportation 4201 East Arkansas Avenue Room 107 Denver, CO 80222 Phone: 303-757-9309 FAX: 303-757-9197</p> | As Constructed No Revisions: Revised: Void: | Pay Items For Truncated Base With or Without A-Frame MSE Wall With 1/2:1 Rock Excavation | | Project No./Code | |
| File Name: Sheet_LB-504-Q5.dgn | Date: | Comments: | Init.: | | | | | Project Number | |
| Horiz. Scale: 1:4 Vert. Scale: As Noted | | | | | | Code | | | |
| Staff Bridge Branch-Unit OXXX Unit Leader Initials | | | | | | Sheet Number | | | |
| | | | | Staff Bridge Branch | Initials | Sheet Subset: Wall | Structure Numbers | Wall-X-XX-XX | Subset Sheets: WXX of XXX |