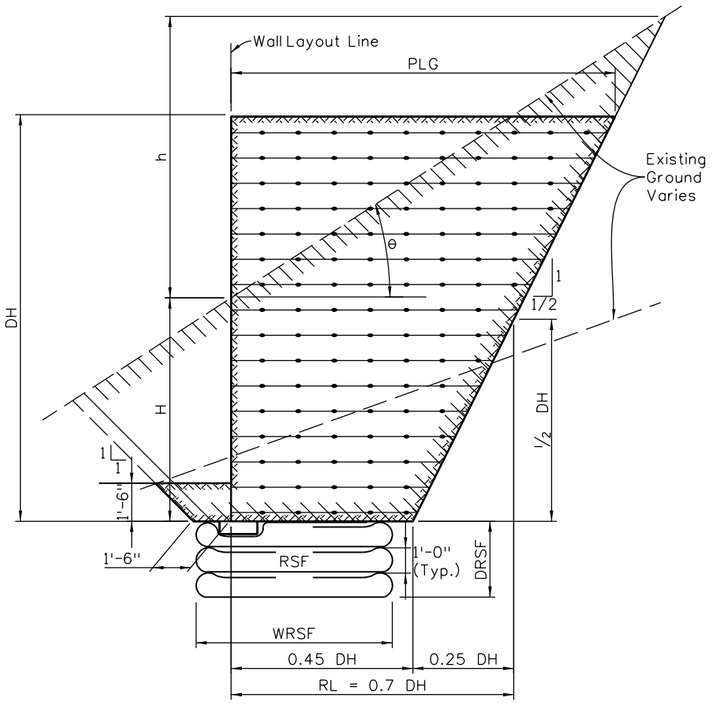
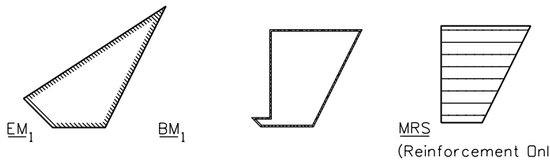


NOTES:

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. Use of reinforced soil foundation (RFS) is an option for bridging over weak foundation material.
5. The width (WRSF) and depth (DRSF) shall be addressed in both the project plans and geotechnical report.
6. Given end of wall to end of wall stations, with wall segment lengths defined, a spreadsheet may be required for summing up wall related calculations.

θ = Average Angle of Existing Ground Line



CONDITION: $H \geq 1.5 + 3\tan(\theta)$

$EM_1 = [\ (H + h/2)(0.45DH + 0.5(H + h)) - 0.25(H + h)^2 + (H/2 + 1.5)(H) - 0.5(H + 1.5)^2(\frac{\tan\theta}{1+\tan\theta})\ ]\ /\ 27$

$BM_1 = [\ 3.375 + (RL)(DH)\ ]\ /\ 27$

$MRS = [\ (DH)(RL)\ ]\ /\ 27$

$PLG = [\ 0.95\ DH\ ]$

$h = (0.45DH + 0.5H)(\frac{\tan(\theta)}{1 - 0.5\tan\theta})$

$RSF = [(WRSF)(DRSF)]\ /\ 27$

Example:
Inputs - DH=16'; Ave. RL=0.7DH=11.2'; H=8'; θ=30°
Outputs - h=9.09'; EM_1=5.63 (c.y./ft.); BM_1=6.8 (c.y./ft.); MRS=6.6 (c.y./ft.); PLG=15.2 (ft./ft.)

Revision Dates	(Preliminary Stage Only)
09-16	

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

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Print Date: 9/6/2016			
File Name: Sheet_B-504-Q3.dgn			
Horiz. Scale: As Noted	Vert. Scale: As Noted		
Staff Bridge Branch - Unit 022X	XXX		

Sheet Revisions		
Date:	Comments	Init.

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Staff Bridge Branch

Initials

As Constructed
No Revisions:
Revised:
Void:

Pay Items For Truncated Base MSE Wall With 1/2:1 Rock Excavation

Designer:	XXXX	Structure Numbers	X-XX-XX
Detailer:	XXXX		X-XX-XX
Sheet Subset:	XXXXXXX	Subset Sheets: XXX of XXX	

Project No./Code
Project Number
Code
Sheet Number