FIRM:YOUR FIRM JOB NO. SHEET NO: 1
MADE BY:YOU DATE:12-10-2010 CHECKED BY: DATE:
TITLE:Example TRIALWEG Output

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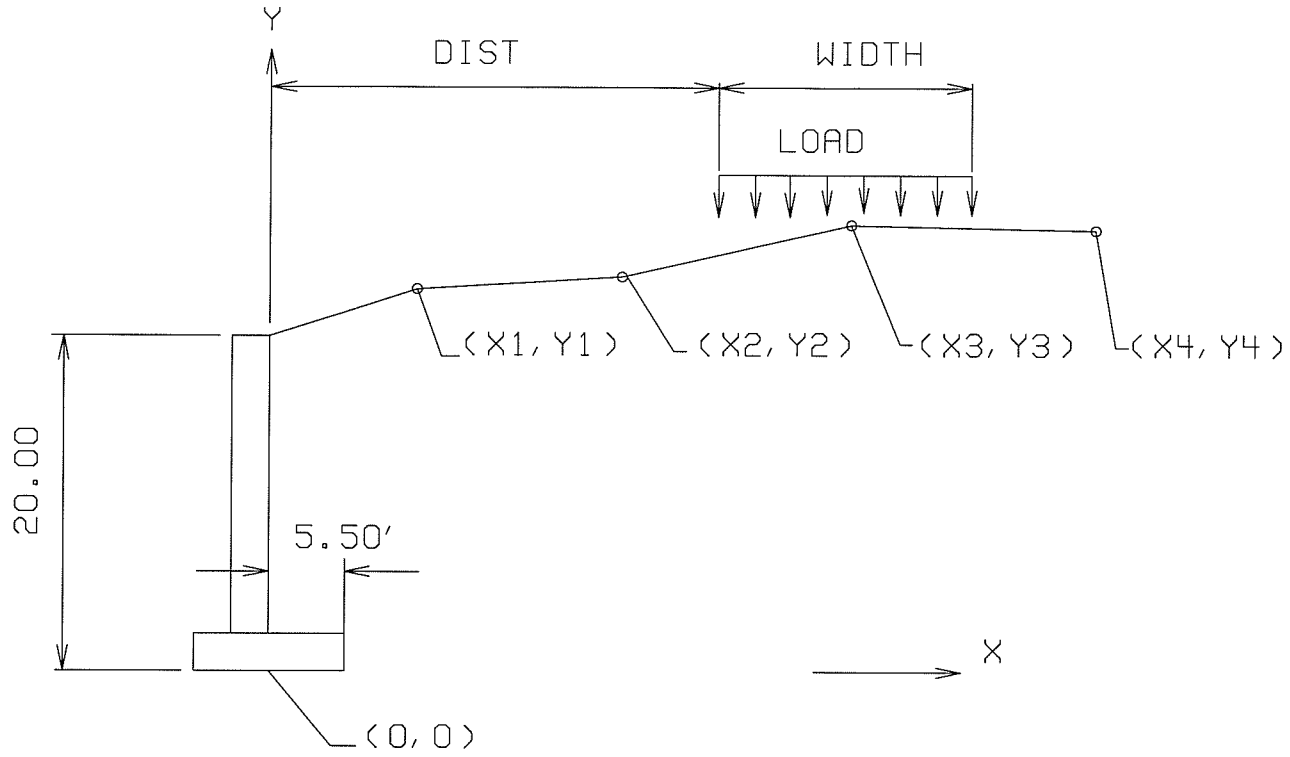
TRIAL WEDGE METHOD:



SURFACE GEOMETRY:

Point No.	X (ft)	Y (ft)
1	6.000	20.000
2	10.000	23.000
3	30.000	23.000

DESIGN DATA:

Permanent or temporary condition: Permanent
Coloumb Analysis. Friction angle against surface, δ = 20.000 degrees

Backfill properties:
Unit Weight = .120 kcf
Drained Internal Angle of Friction, φ =30.000 degrees
Long term cohesion, c = .200 ksf

Load. No.	Distance (ft)	Width (ft)	Load
1	10.00		8.000 k (concentrated)
2	16.00		8.000 k (concentrated)

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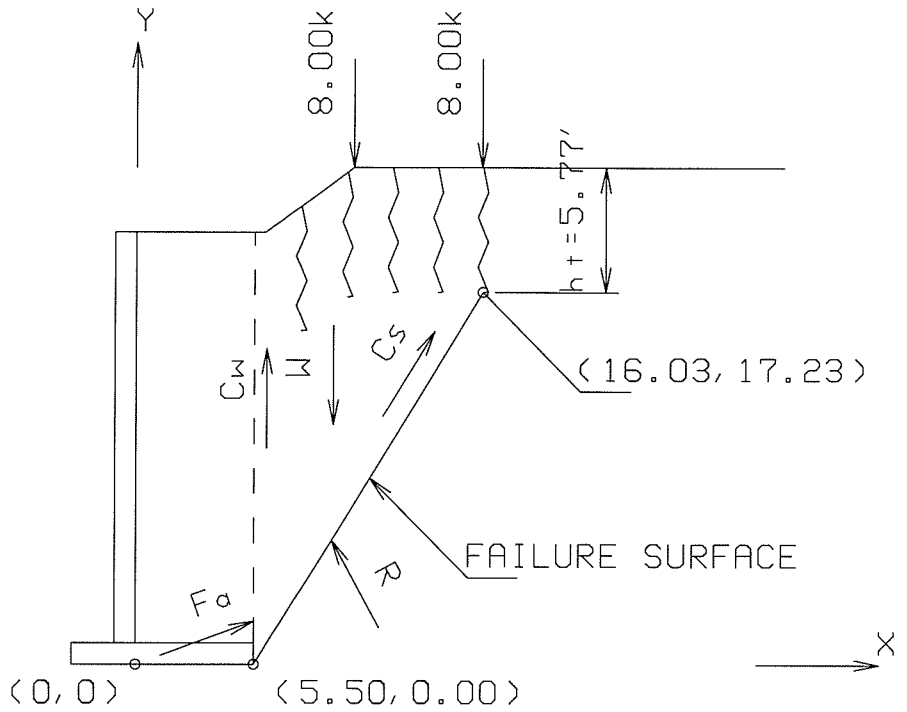
TRIAL WEDGE METHOD:



SOLUTION BASED ON 100 TRIAL WEDGE ITERATIONS:

Total Active Force, Fa = 7.55 k/ft
Horiz. Component, FaH = 7.10 k/ft acting at Y= 1.99 ft from bot
Vert. Component, FaV = 2.58 k/ft

DETAILED CALCULATION:

Depth of tension crack,

$h_t = 2*c/(\gamma *(K_a)^{.5}) = 2* .200/(.120 * (.333)^{.5}) = 5.774$ ft

Cohesion along pressure face:
Length = 14.226 ft
C_w = 14.226 ft * .200 ksf = 2.845 k/ft
Cohesion along failure surface:
Length = 20.193 ft
C_s = 20.193 ft * .200 ksf = 4.039 k/ft

Weight of failure wedge behind pressure face,
W = 17.78 k/ft

Surcharge force on top of wedge,
$W_{surcharge}$ = 8.00 k/ft

Direction of R: Angle = 90 + ρ - φ = 118.55 degrees
Direction of Fa: Angle = 90 - α + δ = 20.00 degrees

FIRM:YOUR FIRM JOB NO. SHEET NO: 3
MADE BY:YOU DATE:12-10-2010 CHECKED BY: DATE:
TITLE:Example TRIALWEG Output

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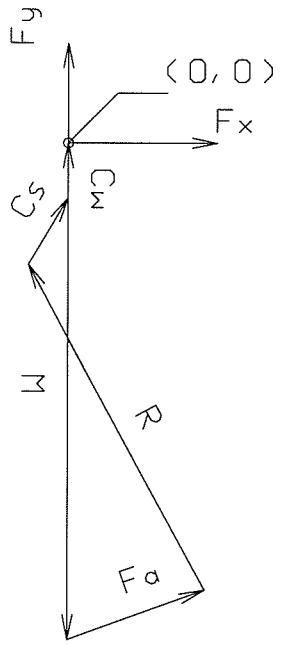
TRIAL WEDGE METHOD:

DETAIL OF FORCE VECTORS:



Vector	Force (k)	From Point F_{X1}	From Point F_{Y1}	To Point F_{X2}	To Point F_{Y2}
Cw	2.845	0.000	-2.845	0.000	0.000
Cs	4.039	-2.096	-6.297	0.000	-2.845
W+Sur.	25.780	0.000	0.000	0.000	-25.780
Fa	7.555	0.000	-25.780	7.099	-23.196
R	19.238	7.099	-23.196	-2.096	-6.297

PRESSURE DISTRIBUTION:

Y (ft)	Total Pressure (ksf)	Horiz. Component acting to left (ksf)	Vert. Component acting down (ksf)
20.00	0.000	0.000	0.000
18.00	0.000	0.000	0.000
16.00	0.000	0.000	0.000
14.00	2.846	2.674	.973
12.00	2.760	2.594	.944
10.00	2.957	2.778	1.011
8.00	2.930	2.753	1.002
6.00	3.001	2.820	1.026
4.00	3.071	2.886	1.051
2.00	3.143	2.953	1.075
0.00	55.679	52.321	19.043