

FACTOR OF SAFETY SUMMARY

PHASE II FILL SEQUENCE

Shane R. Fischer, P.E.
Florida License Number: 58026

(Signature)

(Date)

(Attachment 3 - rec'd 7/21/05)

FIVE

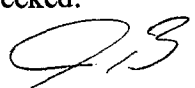
SCS ENGINEERS

Sheet

1

of

1

Client: Citrus County	Project: Phase II Fill Sequence	Job No. 09199056.13	
Subject: Slope Stability Factor Of Safety Summary Results Phase II Fill Sequence		By: SRF	Date: 7/20/2005
		Checked: 	Date: 7/20/05
	CIRCULAR MODE FACTOR SAFETY (FS)	BLOCK MODE FACTOR SAFETY (FS)	
No Equipment	1.9	2.0	
CAT 836G Compactor	1.9	2.0	

PHASE II FILL SEQUENCE					
NORTH SIDE SECTION - SLOPE STABILITY LINE SEGMENT COORDINATES					
LINE	X	Y	X	Y	SOIL
SEGMENT	DESIGNATION				
1TOP	132.0	264.0	152.0	264.0	7
2TOP	152.0	264.0	200.0	248.0	7
3TOP	200.0	248.0	235.0	248.0	7
4TOP	235.0	248.0	282.0	263.7	7
5TOP	282.0	263.7	282.6	263.9	6
6TOP	282.6	263.9	283.3	264.1	5
7TOP	283.3	264.1	286.0	265.0	4
8TOP	286.0	265.0	391.0	300.0	1
9TOP	391.0	300.0	411.0	300.0	1
10TOP	411.0	300.0	531.0	340.0	1
11TOP	531.0	340.0	551.0	340.0	1
12TOP	551.0	340.0	671.0	380.0	1
13TOP	671.0	380.0	691.0	380.0	1
14TOP	691.0	380.0	751.0	400.0	1
15TOP	751.0	400.0	821.0	397.2	1
16	288.5	263.7	391.3	298.0	2
17	391.3	298.0	411.3	298.0	2
18	411.3	298.0	531.3	338.0	2
19	531.3	338.0	551.3	338.0	2
20	551.3	338.0	671.3	378.0	2
21	671.3	378.0	691.3	378.0	2
22	691.3	378.0	751.3	398.0	2
23	751.3	398.0	821.0	395.2	2
24	286.0	265.0	288.5	263.7	4
25	289.2	263.4	391.4	297.5	3
26	391.4	297.5	411.4	297.5	3
27	411.4	297.5	531.4	337.5	3
28	531.4	337.5	551.4	337.5	3
29	551.4	337.5	671.4	377.5	3
30	671.4	377.5	691.4	377.5	3
31	691.4	377.5	751.4	397.5	3
32	751.4	397.5	821.0	394.7	3
33	288.5	263.7	289.2	263.4	4
34	289.2	263.4	330.0	243.0	4
35	330.0	243.0	821.0	243.0	4
36	283.3	264.1	329.5	241.0	5
37	329.5	241.0	821.0	241.0	5
38	282.6	263.9	329.4	240.5	6
39	329.4	240.5	821.0	240.5	6
40	282.0	263.7	329.3	240.0	7
41	329.3	240.0	821.0	240.0	7

PHASE II FILL SEQUENCE					
NORTH SIDE SECTION - SLOPE STABILITY BLOCK COORDINATES					
BLOCK	X-LEFT	Y-RIGHT	X-LEFT	Y-RIGHT	HEIGHT
NUMBER					(FT)
1	284.2	263.7	328.6	241.4	0.25
2	330.5	241.0	331.5	241.0	0.25
3	332.5	241.0	778.0	241.0	0.25

SOIL DESIGNATIONS

FINAL COVER LAYER	1
INITIAL COVER LAYER	2
WASTE	3
PROTECTIVE SOIL LAYER	4
GEOSYNTHETIC LAYER	5
SUB-BASE	6
SURFICIAL SAND	7

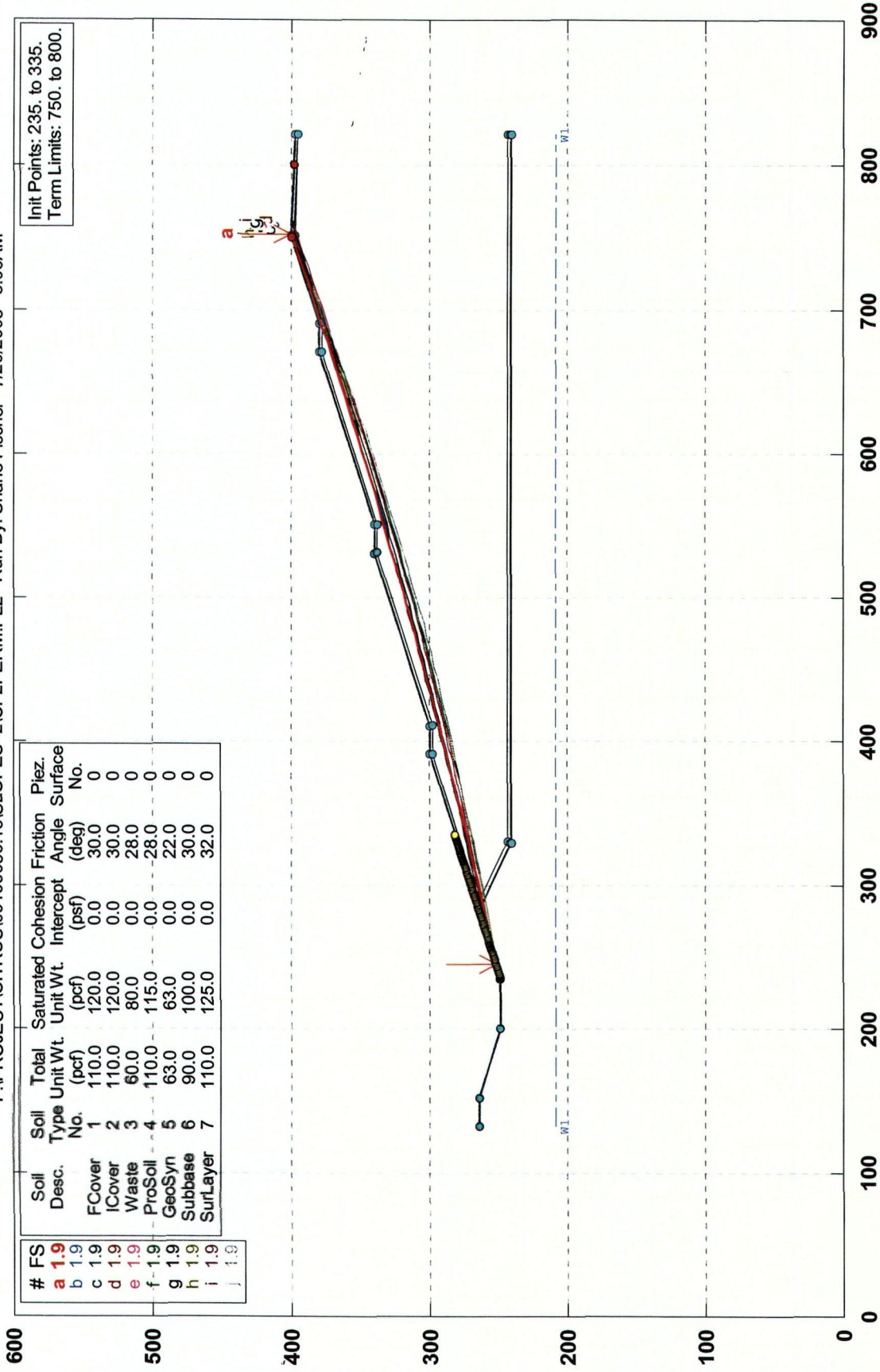
WATER TABLE

EL 8.5 FT NGVD

**CIRCULAR SLOPE STABILITY ANALYSES
NORTH SIDE SECTION
WITHOUT EQUIPMENT LOAD**

Central Landfill - Citrus Co. North Side Phase II Fill Sequence

F:\PROJECT\CITRUS\09199056.13\SLOPES~2\CP2PERM.PL2 Run By: Shane Fischer 7/20/2005 8:06AM



#	FS	Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion (psf)	Friction Angle (deg)	Piez. Surface No.
a	1.9	FCover	1	110.0	120.0	0.0	30.0	0
b	1.9	ICover	2	110.0	120.0	0.0	30.0	0
c	1.9	Waste	3	60.0	80.0	0.0	28.0	0
d	1.9	ProSol	4	110.0	115.0	0.0	28.0	0
e	1.9	GeoSyn	5	63.0	63.0	0.0	22.0	0
f	1.9	Subbase	6	90.0	100.0	0.0	30.0	0
g	1.9	SurLayer	7	110.0	125.0	0.0	32.0	0

Init Points: 235. to 335.
Term Limits: 750. to 800.

STABL6H FSmin=1.9
Safety Factors Are Calculated By The Modified Bishop Method

** STABL6H **
by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer's Method of Slices

Run Date: 7/20/2005
Time of Run: 8:06AM
Run By: Shane Fischer
Input Data Filename: F:cp2perm.
Output Filename: F:cp2perm.OUT
Plotted Output Filename: F:cp2perm.PLT

PROBLEM DESCRIPTION **CENTRAL LANDFILL - CITRUS CO.**
 NORTH SIDE PHASE II FILL SEQUENCE
 WITHOUT EQUIPMENT LOAD

BOUNDARY COORDINATES
15 Top Boundaries
41 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	132.00	264.00	152.00	264.00	7
2	152.00	264.00	200.00	248.00	7
3	200.00	248.00	235.00	248.00	7
4	235.00	248.00	282.00	263.70	7
5	282.00	263.70	282.60	263.90	6
6	282.60	263.90	283.30	264.10	5
7	283.30	264.10	286.00	265.00	4
8	286.00	265.00	391.00	300.00	1
9	391.00	300.00	411.00	300.00	1
10	411.00	300.00	531.00	340.00	1
11	531.00	340.00	551.00	340.00	1
12	551.00	340.00	671.00	380.00	1
13	671.00	380.00	691.00	380.00	1
14	691.00	380.00	751.00	400.00	1
15	751.00	400.00	821.00	397.20	1
16	288.50	263.70	391.30	298.00	2
17	391.30	298.00	411.30	298.00	2
18	411.30	298.00	531.30	338.00	2
19	531.30	338.00	551.30	338.00	2
20	551.30	338.00	671.30	378.00	2
21	671.30	378.00	691.30	378.00	2
22	691.30	378.00	751.30	398.00	2
23	751.30	398.00	821.00	395.20	2
24	286.00	265.00	288.50	263.70	4
25	289.20	263.40	391.40	297.50	3
26	391.40	297.50	411.40	297.50	3
27	411.40	297.50	531.40	337.50	3
28	531.40	337.50	551.40	337.50	3
29	551.40	337.50	671.40	377.50	3
30	671.40	377.50	691.40	377.50	3
31	691.40	377.50	751.40	397.50	3
32	751.40	397.50	821.00	394.70	3

33	288.50	263.70	289.20	263.40	4
34	289.20	263.40	330.00	243.00	4
35	330.00	243.00	821.00	243.00	4
36	283.30	264.10	329.50	241.00	5
37	329.50	241.00	821.00	241.00	5
38	282.60	263.90	329.40	240.50	6
39	329.40	240.50	821.00	240.50	6
40	282.00	263.70	329.30	240.00	7
41	329.30	240.00	821.00	240.00	7

ISOTROPIC SOIL PARAMETERS

7 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	110.0	120.0	.0	30.0	.00	.0	0
2	110.0	120.0	.0	30.0	.00	.0	0
3	60.0	80.0	.0	28.0	.00	.0	0
4	110.0	115.0	.0	28.0	.00	.0	0
5	63.0	63.0	.0	22.0	.00	.0	0
6	90.0	100.0	.0	30.0	.00	.0	0
7	110.0	125.0	.0	32.0	.00	.0	0

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	132.00	208.50
2	821.00	208.50

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (lb/sqft)	Deflection (deg)
1	750.00	760.50	2152.7	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

SURCHARGE BOUNDARY LOAD DATA HAS BEEN SUPPRESSED

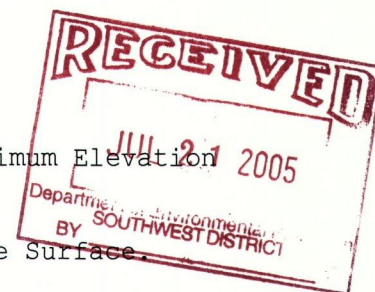
A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

5000 Trial Surfaces Have Been Generated.

50 Surfaces Initiate From Each Of 100 Points Equally Spaced Along The Ground Surface Between X = 235.00 ft.
and X = 335.00 ft.

Each Surface Terminates Between X = 750.00 ft.
and X = 800.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is $Y = .00$ ft.



10.00 ft. Line Segments Define Each Trial Failure Surface.

The Following Is The Most Critical Of The Trial Failure Surfaces Examined.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 54 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	245.10	251.37
2	254.85	253.62
3	264.59	255.89
4	274.32	258.18
5	284.05	260.49
6	293.77	262.82
7	303.49	265.18
8	313.20	267.56
9	322.91	269.96
10	332.61	272.38
11	342.31	274.82
12	352.00	277.28
13	361.69	279.77
14	371.37	282.28
15	381.04	284.81
16	390.71	287.36
17	400.38	289.93
18	410.03	292.53
19	419.69	295.15
20	429.33	297.79
21	438.97	300.45
22	448.60	303.13
23	458.23	305.83
24	467.85	308.56
25	477.47	311.30
26	487.08	314.07
27	496.68	316.86
28	506.28	319.67
29	515.87	322.51
30	525.45	325.36
31	535.03	328.24
32	544.60	331.14
33	554.16	334.06
34	563.72	337.00
35	573.27	339.96
36	582.82	342.94
37	592.35	345.95
38	601.89	348.98
39	611.41	352.02
40	620.93	355.09
41	630.44	358.18
42	639.94	361.30
43	649.44	364.43

44	658.93	367.59
45	668.41	370.76
46	677.88	373.96
47	687.35	377.18
48	696.81	380.42
49	706.26	383.68
50	715.71	386.96
51	725.15	390.27
52	734.58	393.59
53	744.00	396.94
54	752.40	399.94

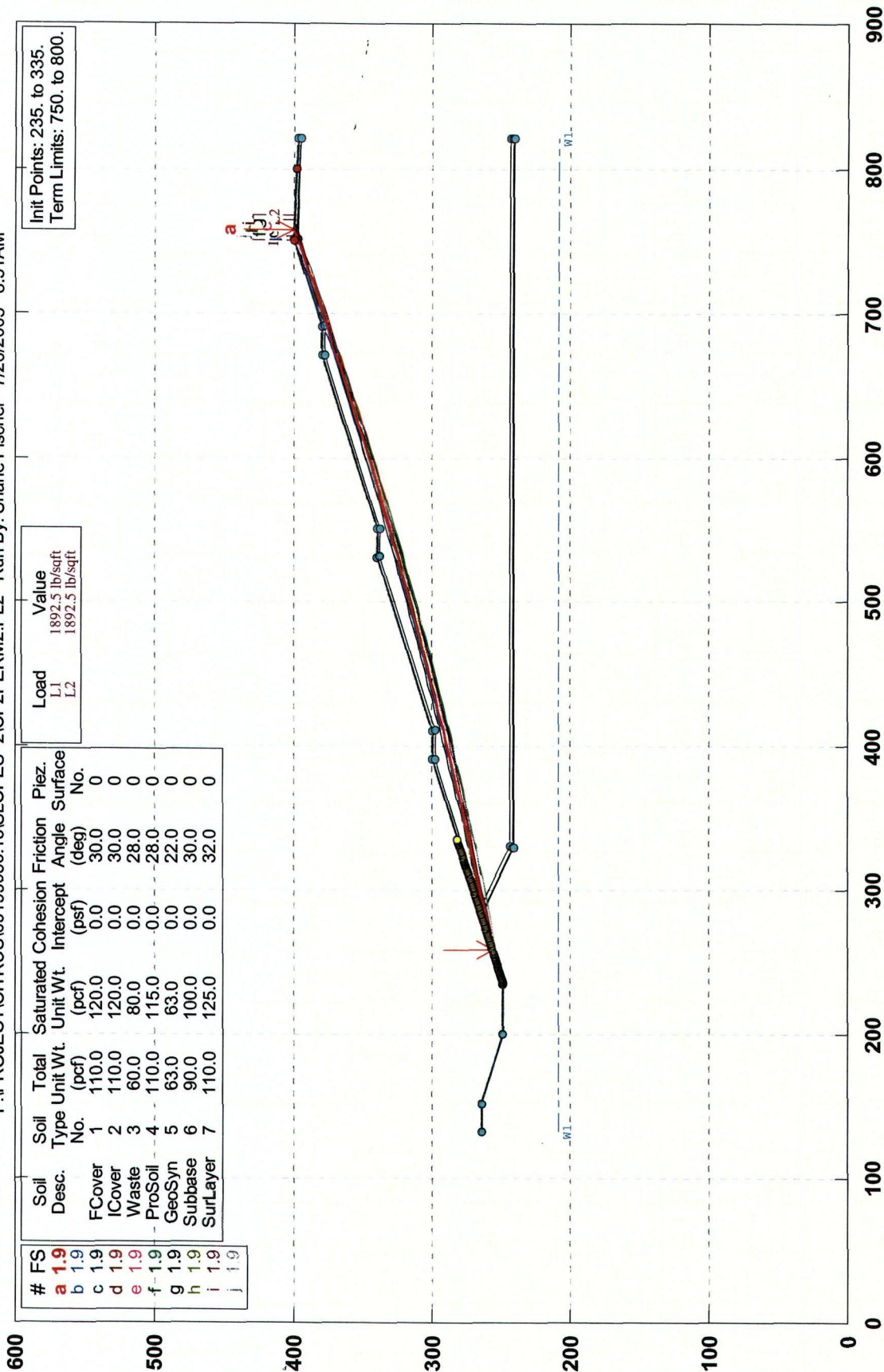
Circle Center At $X = -748.6$; $Y = 4584.7$ and Radius, 4445.8

FACTOR OF SAFETY = 1.9 (WITHOUT EQUIPMENT LOAD)

**CIRCULAR SLOPE STABILITY ANALYSES
NORTH SIDE SECTION
WITH EQUIPMENT LOAD
(CAT 836G COMPACTOR)**

Central Landfill - Citrus Co. North Side Phase II Fill Sequence

F:\PROJECT\CITRUS\09199056.13\SLOPES~2\CP2PERM2.PL2 Run By: Shane Fischer 7/20/2005 8:51AM



STABL6H FSmin=1.9
 Safety Factors Are Calculated By The Modified Bishop Method

SCS ENGINEERS

** STABL6H **
by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer's Method of Slices

Run Date: 7/20/2005
Time of Run: 8:51AM
Run By: Shane Fischer
Input Data Filename: F:CP2PERM2.
Output Filename: F:CP2PERM2.OUT
Plotted Output Filename: F:CP2PERM2.PLT

PROBLEM DESCRIPTION **CENTRAL LANDFILL - CITRUS CO.**
NORTH SIDE PHASE II FILL SEQUENCE
WITH EQUIPMENT LOAD (CAT 836G COMPACTOR)

BOUNDARY COORDINATES
15 Top Boundaries
41 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	132.00	264.00	152.00	264.00	7
2	152.00	264.00	200.00	248.00	7
3	200.00	248.00	235.00	248.00	7
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5	282.00	263.70	282.60	263.90	6
6	282.60	263.90	283.30	264.10	5
7	283.30	264.10	286.00	265.00	4
8	286.00	265.00	391.00	300.00	1
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7 Type(s) of Soil

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1	110.0	120.0	.0	30.0	.00	.0	0
2	110.0	120.0	.0	30.0	.00	.0	0
3	60.0	80.0	.0	28.0	.00	.0	0
4	110.0	115.0	.0	28.0	.00	.0	0
5	63.0	63.0	.0	22.0	.00	.0	0
6	90.0	100.0	.0	30.0	.00	.0	0
7	110.0	125.0	.0	32.0	.00	.0	0

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	132.00	208.50
2	821.00	208.50

BOUNDARY LOAD(S)

2 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (lb/sqft)	Deflection (deg)
1	750.00	753.40	1892.5	.0
2	764.08	767.48	1892.5	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

5000 Trial Surfaces Have Been Generated.

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10.00 ft. Line Segments Define Each Trial Failure Surface.

The Following Is The Most Critical Of The Trial Failure Surfaces Examined.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 53 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	258.23	255.76
2	268.01	257.87
3	277.78	260.01
4	287.54	262.17
5	297.30	264.36
6	307.05	266.58
7	316.79	268.82
8	326.53	271.09
9	336.27	273.38
10	345.99	275.70
11	355.71	278.05
12	365.43	280.42
13	375.14	282.82
14	384.84	285.24
15	394.53	287.69
16	404.22	290.17
17	413.90	292.67
18	423.58	295.20
19	433.25	297.75
20	442.91	300.33
21	452.56	302.94
22	462.21	305.57
23	471.85	308.23
24	481.49	310.91
25	491.11	313.62
26	500.73	316.36
27	510.34	319.12
28	519.95	321.90
29	529.54	324.72
30	539.13	327.55
31	548.71	330.42
32	558.29	333.31
33	567.85	336.22
34	577.41	339.16
35	586.96	342.13
36	596.50	345.12
37	606.03	348.14
38	615.56	351.18
39	625.08	354.25
40	634.59	357.34
41	644.09	360.46
42	653.58	363.61
43	663.06	366.78

44	672.54	369.97
45	682.01	373.19
46	691.47	376.44
47	700.92	379.71
48	710.36	383.01
49	719.79	386.33
50	729.21	389.68
51	738.63	393.05
52	748.03	396.45
53	757.10	399.76

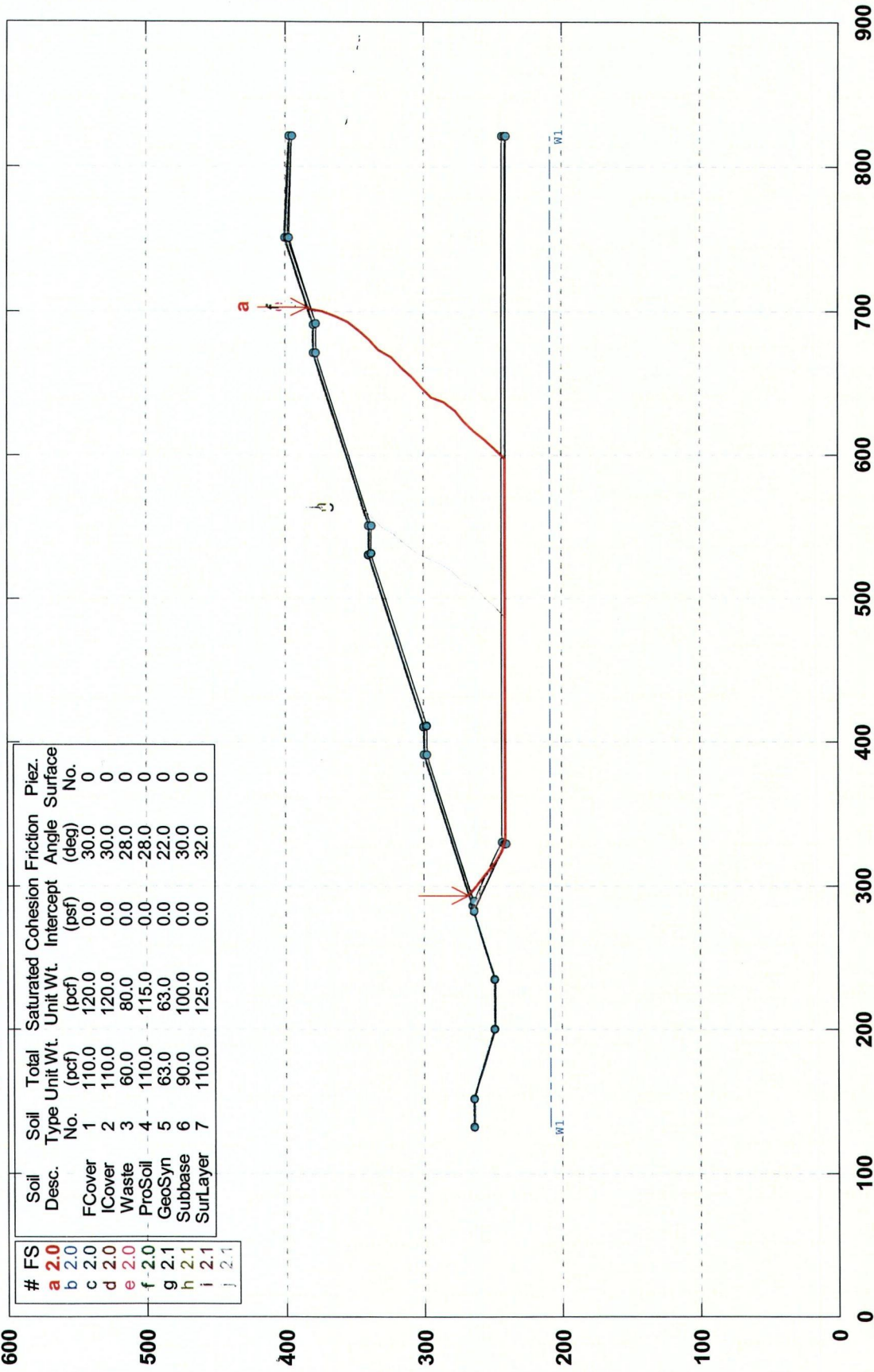
Circle Center At $X = -524.2$; $Y = 3902.2$ and Radius, 3729.4

FACTOR OF SAFETY = 1.9 WITH EQUIPMENT LOAD (CAT 836G COMPACTOR)

**BLOCK SLOPE STABILITY ANALYSES
NORTH SIDE SECTION
WITHOUT EQUIPMENT LOAD**

Central Landfill - Citrus Co. North Side Phase II Fill Sequence

F:\PROJECT\CITRUS\09199056.13\SLOPES~2\BP2PERM.PL2 Run By: Shane Fischer 7/20/2005 9:11AM



STABL6H FSmin=2.0
Safety Factors Are Calculated By The Modified Janbu Method

** STABL6H **
by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer's Method of Slices

Run Date: 7/20/2005
Time of Run: 9:11AM
Run By: Shane Fischer
Input Data Filename: F:bp2perm.
Output Filename: F:bp2perm.OUT
Plotted Output Filename: F:bp2perm.PLT

PROBLEM DESCRIPTION **CENTRAL LANDFILL - CITRUS CO.**
 NORTH SIDE PHASE II FILL SEQUENCE
 WITHOUT EQUIPMENT LOAD

BOUNDARY COORDINATES
15 Top Boundaries
41 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
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6	282.60	263.90	283.30	264.10	5
7	283.30	264.10	286.00	265.00	4
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9	391.00	300.00	411.00	300.00	1
10	411.00	300.00	531.00	340.00	1
11	531.00	340.00	551.00	340.00	1
12	551.00	340.00	671.00	380.00	1
13	671.00	380.00	691.00	380.00	1
14	691.00	380.00	751.00	400.00	1
15	751.00	400.00	821.00	397.20	1
16	288.50	263.70	391.30	298.00	2
17	391.30	298.00	411.30	298.00	2
18	411.30	298.00	531.30	338.00	2
19	531.30	338.00	551.30	338.00	2
20	551.30	338.00	671.30	378.00	2
21	671.30	378.00	691.30	378.00	2
22	691.30	378.00	751.30	398.00	2
23	751.30	398.00	821.00	395.20	2
24	286.00	265.00	288.50	263.70	4
25	289.20	263.40	391.40	297.50	3
26	391.40	297.50	411.40	297.50	3
27	411.40	297.50	531.40	337.50	3
28	531.40	337.50	551.40	337.50	3
29	551.40	337.50	671.40	377.50	3
30	671.40	377.50	691.40	377.50	3
31	691.40	377.50	751.40	397.50	3
32	751.40	397.50	821.00	394.70	3

33	288.50	263.70	289.20	263.40	4
34	289.20	263.40	330.00	243.00	4
35	330.00	243.00	821.00	243.00	4
36	283.30	264.10	329.50	241.00	5
37	329.50	241.00	821.00	241.00	5
38	282.60	263.90	329.40	240.50	6
39	329.40	240.50	821.00	240.50	6
40	282.00	263.70	329.30	240.00	7
41	329.30	240.00	821.00	240.00	7

ISOTROPIC SOIL PARAMETERS

7 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	110.0	120.0	.0	30.0	.00	.0	0
2	110.0	120.0	.0	30.0	.00	.0	0
3	60.0	80.0	.0	28.0	.00	.0	0
4	110.0	115.0	.0	28.0	.00	.0	0
5	63.0	63.0	.0	22.0	.00	.0	0
6	90.0	100.0	.0	30.0	.00	.0	0
7	110.0	125.0	.0	32.0	.00	.0	0

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	132.00	208.50
2	821.00	208.50

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (lb/sqft)	Deflection (deg)
1	750.00	760.50	2152.7	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

SURCHARGE BOUNDARY LOAD DATA HAS BEEN SUPPRESSED

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

3 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 10.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	284.20	263.70	328.60	241.40	.25
2	330.50	241.00	331.50	241.00	.25
3	332.50	241.00	725.00	241.00	.25

The Following Is The Most Critical Of The Trial Failure Surfaces Examined.

* * Safety Factors Are Calculated By The Modified Janbu Method * *

Failure Surface Specified By 26 Coordinate Points

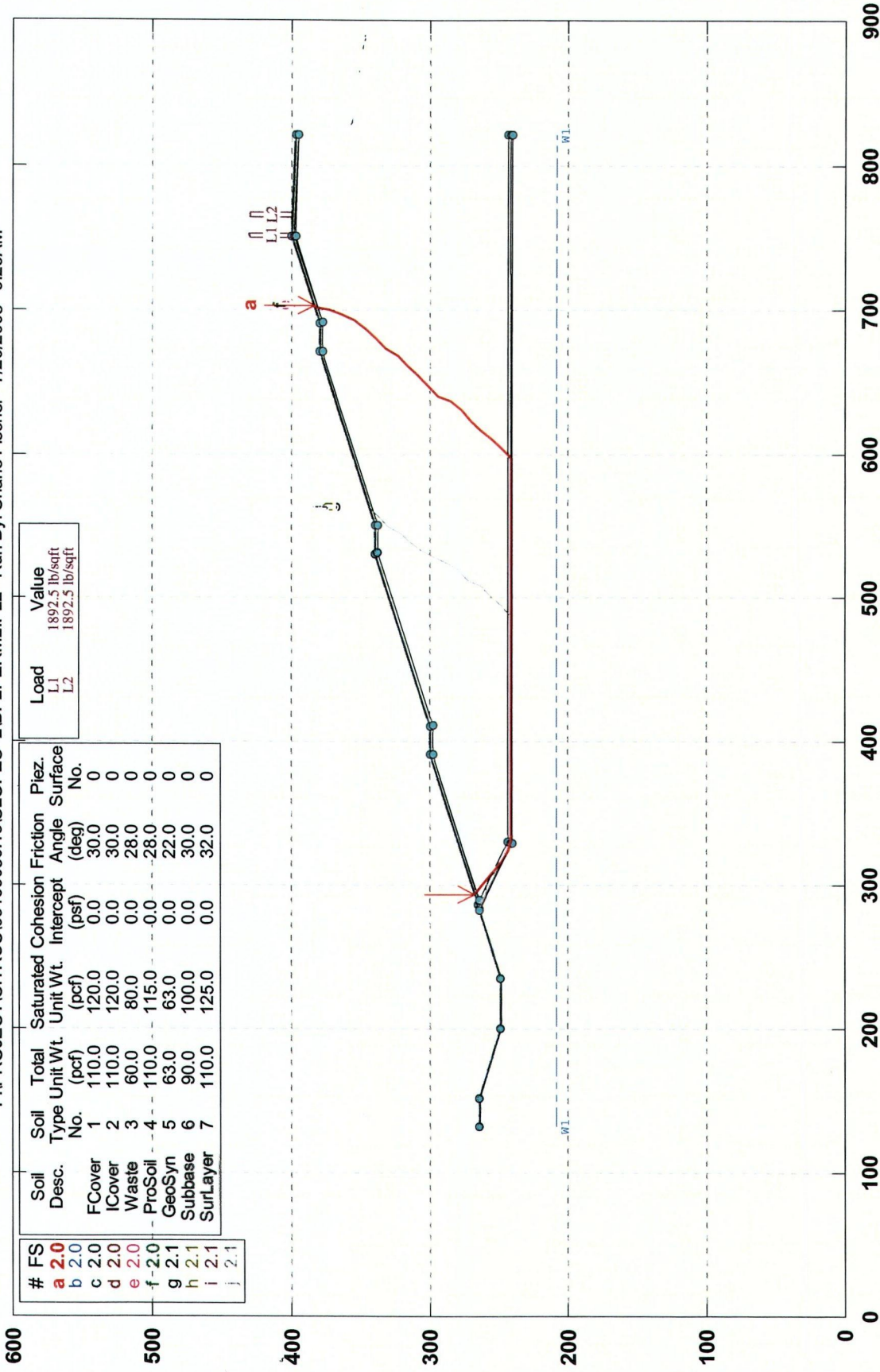
Point No.	X-Surf (ft)	Y-Surf (ft)
1	293.91	267.64
2	300.78	261.81
3	308.16	255.06
4	315.68	248.47
5	324.40	243.58
6	331.27	241.00
7	597.05	240.91
8	604.08	248.02
9	610.56	255.63
10	616.91	263.36
11	623.90	270.52
12	630.97	277.59
13	637.39	285.25
14	640.64	294.71
15	647.23	302.22
16	654.26	309.34
17	661.29	316.45
18	668.09	323.78
19	673.22	332.37
20	680.23	339.50
21	686.73	347.10
22	692.47	355.29
23	696.44	364.46
24	699.40	374.02
25	702.38	383.56
26	702.68	383.89

FACTOR OF SAFETY = 2.0 (WITHOUT EQUIPMENT LOAD)

**BLOCK SLOPE STABILITY ANALYSES
NORTH SIDE SECTION
WITH EQUIPMENT LOAD
(CAT 836G COMPACTOR)**

Central Landfill - Citrus Co. North Side Phase II Fill Sequence

F:\PROJECT\CITRUS\09199056.13\SLOPES~2\BP2PERM2.PL2 Run By: Shane Fischer 7/20/2005 9:29AM



STABL6H FSmin=2.0
Safety Factors Are Calculated By The Modified Janbu Method

** STABL6H **
by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer's Method of Slices

Run Date: 7/20/2005
Time of Run: 9:29AM
Run By: Shane Fischer
Input Data Filename: F:BP2PERM2.
Output Filename: F:BP2PERM2.OUT
Plotted Output Filename: F:BP2PERM2.PLT

PROBLEM DESCRIPTION **CENTRAL LANDFILL - CITRUS CO.**
NORTH SIDE PHASE II FILL SEQUENCE
WITH EQUIPMENT LOAD (CAT 836G COMPACTOR)

BOUNDARY COORDINATES
15 Top Boundaries
41 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	132.00	264.00	152.00	264.00	7
2	152.00	264.00	200.00	248.00	7
3	200.00	248.00	235.00	248.00	7
4	235.00	248.00	282.00	263.70	7
5	282.00	263.70	282.60	263.90	6
6	282.60	263.90	283.30	264.10	5
7	283.30	264.10	286.00	265.00	4
8	286.00	265.00	391.00	300.00	1
9	391.00	300.00	411.00	300.00	1
10	411.00	300.00	531.00	340.00	1
11	531.00	340.00	551.00	340.00	1
12	551.00	340.00	671.00	380.00	1
13	671.00	380.00	691.00	380.00	1
14	691.00	380.00	751.00	400.00	1
15	751.00	400.00	821.00	397.20	1
16	288.50	263.70	391.30	298.00	2
17	391.30	298.00	411.30	298.00	2
18	411.30	298.00	531.30	338.00	2
19	531.30	338.00	551.30	338.00	2
20	551.30	338.00	671.30	378.00	2
21	671.30	378.00	691.30	378.00	2
22	691.30	378.00	751.30	398.00	2
23	751.30	398.00	821.00	395.20	2
24	286.00	265.00	288.50	263.70	4
25	289.20	263.40	391.40	297.50	3
26	391.40	297.50	411.40	297.50	3
27	411.40	297.50	531.40	337.50	3
28	531.40	337.50	551.40	337.50	3
29	551.40	337.50	671.40	377.50	3
30	671.40	377.50	691.40	377.50	3
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37	329.50	241.00	821.00	241.00	5
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7 Type(s) of Soil

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3	60.0	80.0	.0	28.0	.00	.0	0
4	110.0	115.0	.0	28.0	.00	.0	0
5	63.0	63.0	.0	22.0	.00	.0	0
6	90.0	100.0	.0	30.0	.00	.0	0
7	110.0	125.0	.0	32.0	.00	.0	0

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	132.00	208.50
2	821.00	208.50

BOUNDARY LOAD(S)

2 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (lb/sqft)	Deflection (deg)
1	750.00	753.40	1892.5	.0
2	764.08	767.48	1892.5	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

3 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 10.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	284.20	263.70	328.60	241.40	.25
2	330.50	241.00	331.50	241.00	.25
3	332.50	241.00	725.00	241.00	.25

The Following Is The Most Critical Of The Trial Failure Surfaces Examined.

* * Safety Factors Are Calculated By The Modified Janbu Method * *

Failure Surface Specified By 26 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	293.91	267.64
2	300.78	261.81
3	308.16	255.06
4	315.68	248.47
5	324.40	243.58
6	331.27	241.00
7	597.05	240.91
8	604.08	248.02
9	610.56	255.63
10	616.91	263.36
11	623.90	270.52
12	630.97	277.59
13	637.39	285.25
14	640.64	294.71
15	647.23	302.22
16	654.26	309.34
17	661.29	316.45
18	668.09	323.78
19	673.22	332.37
20	680.23	339.50
21	686.73	347.10
22	692.47	355.29
23	696.44	364.46
24	699.40	374.02
25	702.38	383.56
26	702.68	383.89

FACTOR OF SAFETY = 2.0 WITH EQUIPMENT LOAD (CAT 836G COMPACTOR)

EQUIPMENT LOADING

CAT 836G COMPACTOR

SCS ENGINEERS

SHEET 1 OF 3

CLIENT	Citrus County	PROJECT	Phase IA Fill Sequence Height Increase	JOB NUMBER	09199056.13
SUBJECT	Equipment Loading	BY	SRF	DATE	7/18/05
		CHECKED	[Signature]	DATE	7/20/05

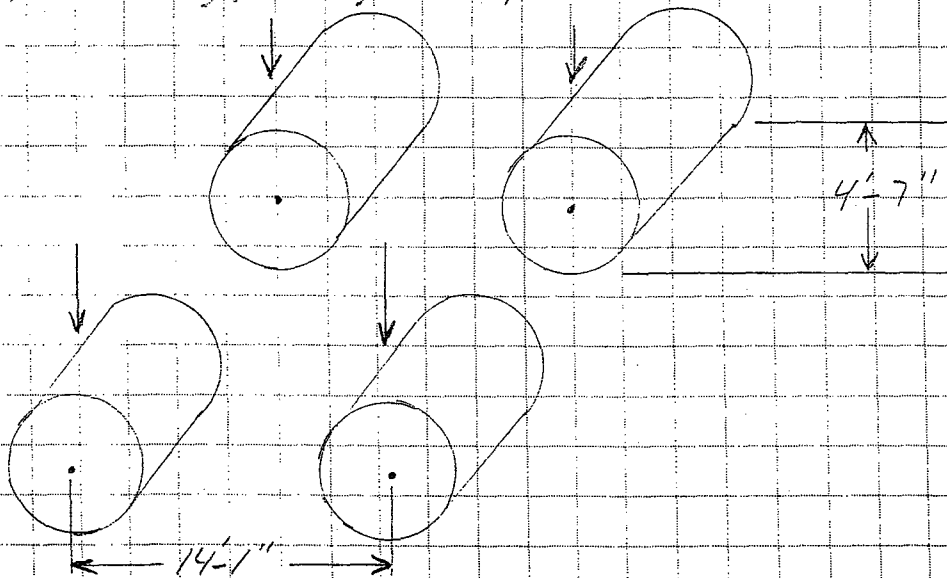
Equipment 8366

Operating Weight = 113,348 lbs

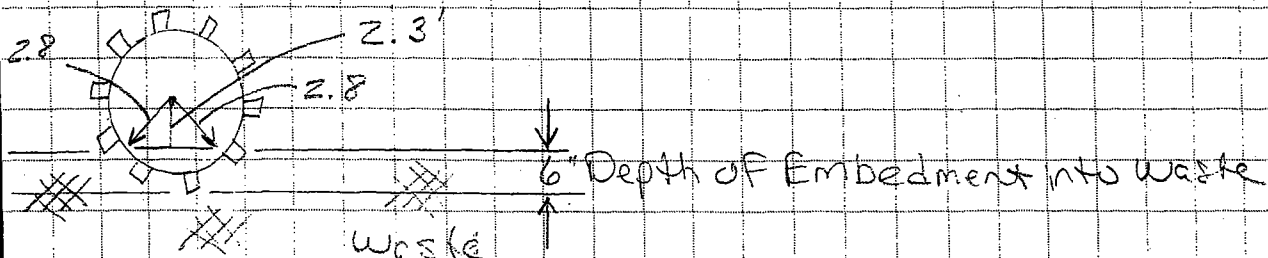
Weight Distribution = 52% Rear
48% Front

$$(113,348 \text{ lbs}) (0.52) = 58,940.96 \text{ lbs Rear}$$

$$(113,348 \text{ lbs}) (0.48) = 54,407.04 \text{ lbs Front}$$



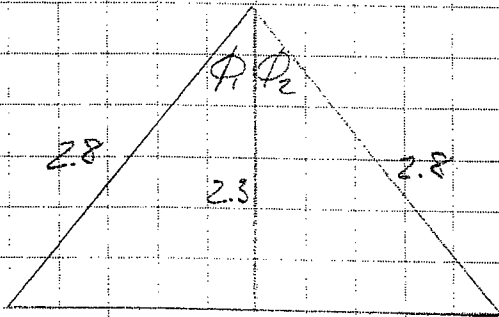
Wheel Contact



SCS ENGINEERS

SHEET 2 OF 3

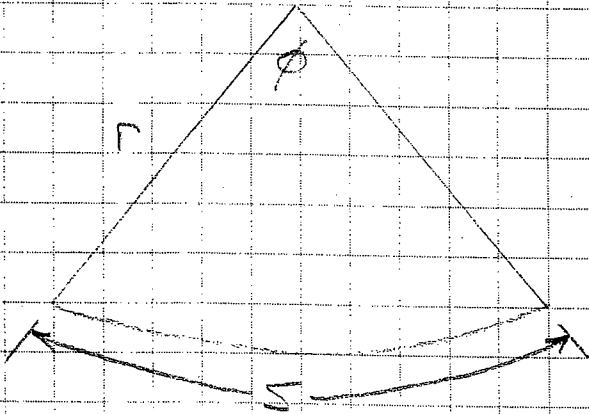
CLIENT <u>Stros County</u>	PROJECT <u>Phase IA Fill Sequence Height Increase</u>	JOB NUMBER <u>09199056.13</u>
SUBJECT <u>Equipment Loading</u>	BY <u>SRF</u>	DATE <u>7/18/05</u>
	CHECKED <u>JR</u>	DATE <u>7/20/05</u>



$$\cos \phi_1 = \frac{2.3}{2.8}$$

$$\phi_1 = \phi_2 = 34.77^\circ$$

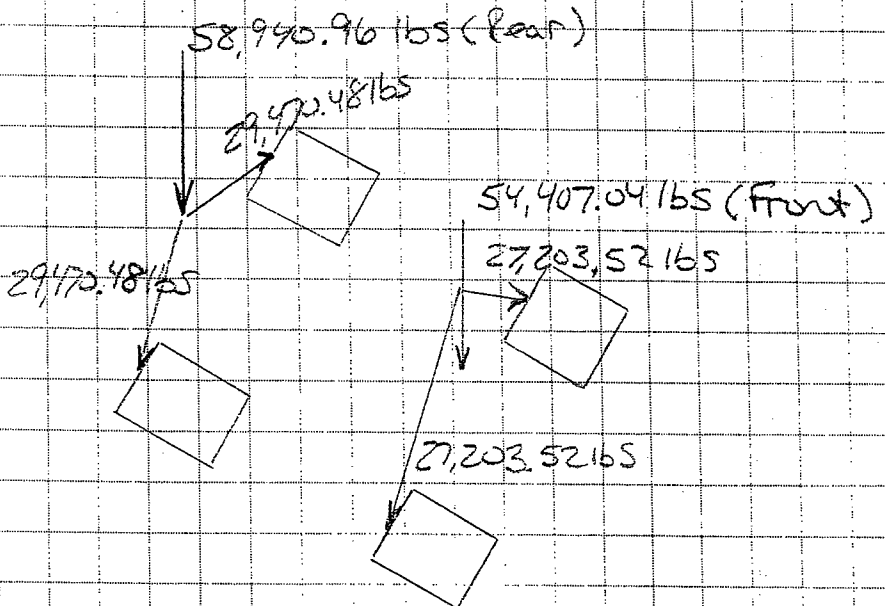
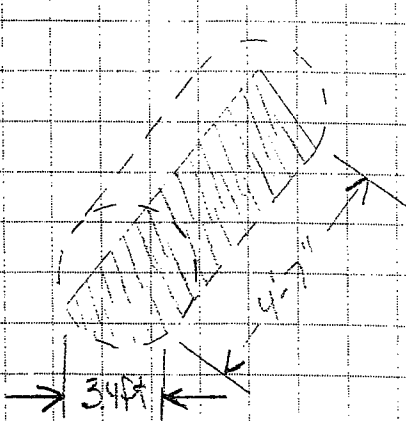
$$\phi_1 + \phi_2 = 34.77^\circ + 34.77^\circ = 69.54^\circ$$



$$\phi = \frac{S}{R}$$

$$S = 69.54 \left(\frac{2\pi}{360} \right) 2.8 = 340.4$$

S = Perimeter length of wheel in contact with surface



SCS ENGINEERS

SHEET 3 OF 3

CLIENT <i>Citrus County</i>	PROJECT <i>Phase IA Fill Sequence Height Increase</i>	JOB NUMBER <i>09199056.13</i>
SUBJECT <i>Equipment Loading</i>	BY <i>SLF</i>	DATE <i>7/18/05</i>
	CHECKED <i>JB</i>	DATE <i>7/20/05</i>

$$W_{\text{Rear}} = \frac{29,470.48 \text{ lbs}}{(3.4 \text{ ft})(4.58 \text{ ft})} = \frac{1,892.53 \text{ lbs}}{\text{ft}^2}$$

$$W_{\text{Front}} = \frac{27,203.52 \text{ lbs}}{(3.4 \text{ ft})(4.58 \text{ ft})} = \frac{1,746.95 \text{ lbs}}{\text{ft}^2}$$

Specifications
• Rimpull

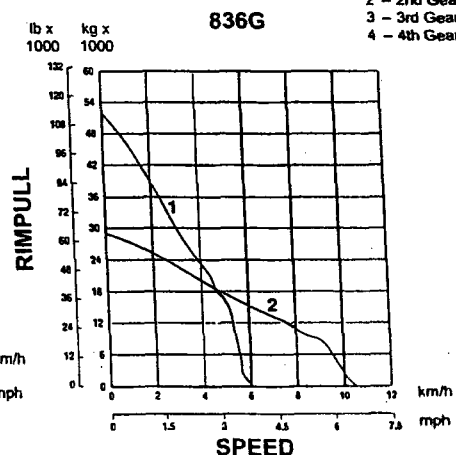
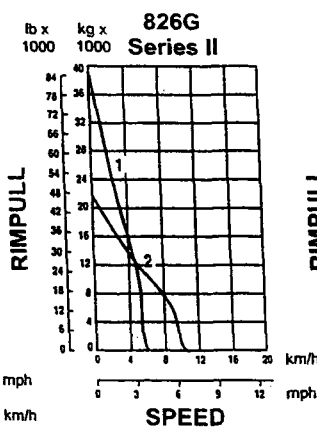
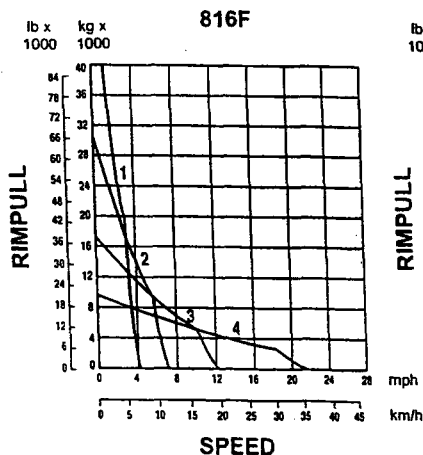
Waste Handling
Landfill Compactors



MODEL	816F		826G Series II		836G	
Flywheel Power	164 kW	220 hp	253 kW	340 hp	358 kW	480 hp
Operating Weight*	23 946 kg	52,793 lb	36 967 kg	81,498 lb	53 682 kg	113,348 lb
Engine Model	3176 DITA		3406E DITA		3456 DITA	
Rated Engine RPM	2100		2000		1900	
No. Cylinders	6		6		6	
Displacement	10.3 L	628 in ³	16.4 L	893 in ³	15.8 L	966 in ³
Speeds:						
Forward	2		2		2	
Reverse	2		2		2	
Turning Radius with Straight Blade						
Inside Blade Corner	3.5 m	11'6"	3.2 m	10'6"	4.3 m	14'11"
Outside Blade Corner	6.7 m	21'9"	7.3 m	23'9"	9.0 m	29'6"
Fuel Tank Refill Capacity	464 L	122.6 U.S. gal	640 L	169.1 U.S. gal	795 L	210 U.S. gal
WHEELS:	PLUS TIP		PLUS TIP		PLUS TIP	
Each Drum Width	1.02 m	3'4"	1.2 m	3'11"	1.4 m	4'7"
Diameters, over Tips	1.7 m	5'10"	1.9 m	6'6"	2.0 m	6'9"
Drum only	1.3 m	4'3"	1.53 m	5'0"	1.62 m	5'8"
Tips per Wheel	20		25		35	
Tip Height	158 mm	6.5"	158 mm	6.5"	158 mm	6.5"
Chopper Blades per Wheel	20		24		28	
Blade Height	152 mm	6"	158 mm	6"	158 mm	6"
Width of Two Pass Coverage	4.5 m	14'9"	4.78 m	15'8"	5.67 m	18'7"
GENERAL DIMENSIONS:						
Height (Overall)	3.8 m	12'8"	4.2 m	13'7"	4.5 m	14'9"
Height (Top of Cab)	3.4 m	11'3"	3.8 m	12'8"	4.1 m	13'5"
Wheel Base	3.35 m	11'0"	3.7 m	12'2"	4.55 m	14'11"
Overall Length with Dozer	7.85 m	25'7"	8.27 m	27'2"	10.18 m	33'5"
Width over Drums	3.33 m	10'11"	3.8 m	12'8"	4.18 m	14'1"
Ground Clearance	456 mm	1'5"	489 mm	1'6"	697 mm	2'3"
LANDFILL BULLDOZER:						
Width	3.65 m	12'0"	4.5 m	14'9"	5.19 m	17'0"
Height**	1.91 m	6'3"	1.91 m	6'3"	2.22 m	7'3"

*Operating Weight includes coolant, bulldozer, hydraulics, ROPS cab, full fuel tank, and 82 kg (180 lb) operator.
**Height (stripped top) — without ROPS cab, exhaust, seat back or other easily removed encumbrances.

KEY
1 — 1st Gear
2 — 2nd Gear
3 — 3rd Gear
4 — 4th Gear



DRAWINGS

**LARGE NUMBER
OF MAPS
SCANNED
SEPARATELY**