GEOTECHNICAL INVESTIGATION
NEW MEXICO FOREST HIGHWAY 12
NEW MEXICO STATE HIGHWAY 126
CUBA-LACUEVA, NEW MEXICO
PROJECT NO. 35321 REV. 2
VOL. 3 OF 3

KLEINFELDER
An employee owned company

July 19, 2005

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VOL. 3 OF 3

Prepared for:
Federal Highway Administration
Central Federal Lands Highway Division

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Appendix H

APPENDIX H
DRIVEN and GRLWEAP Output

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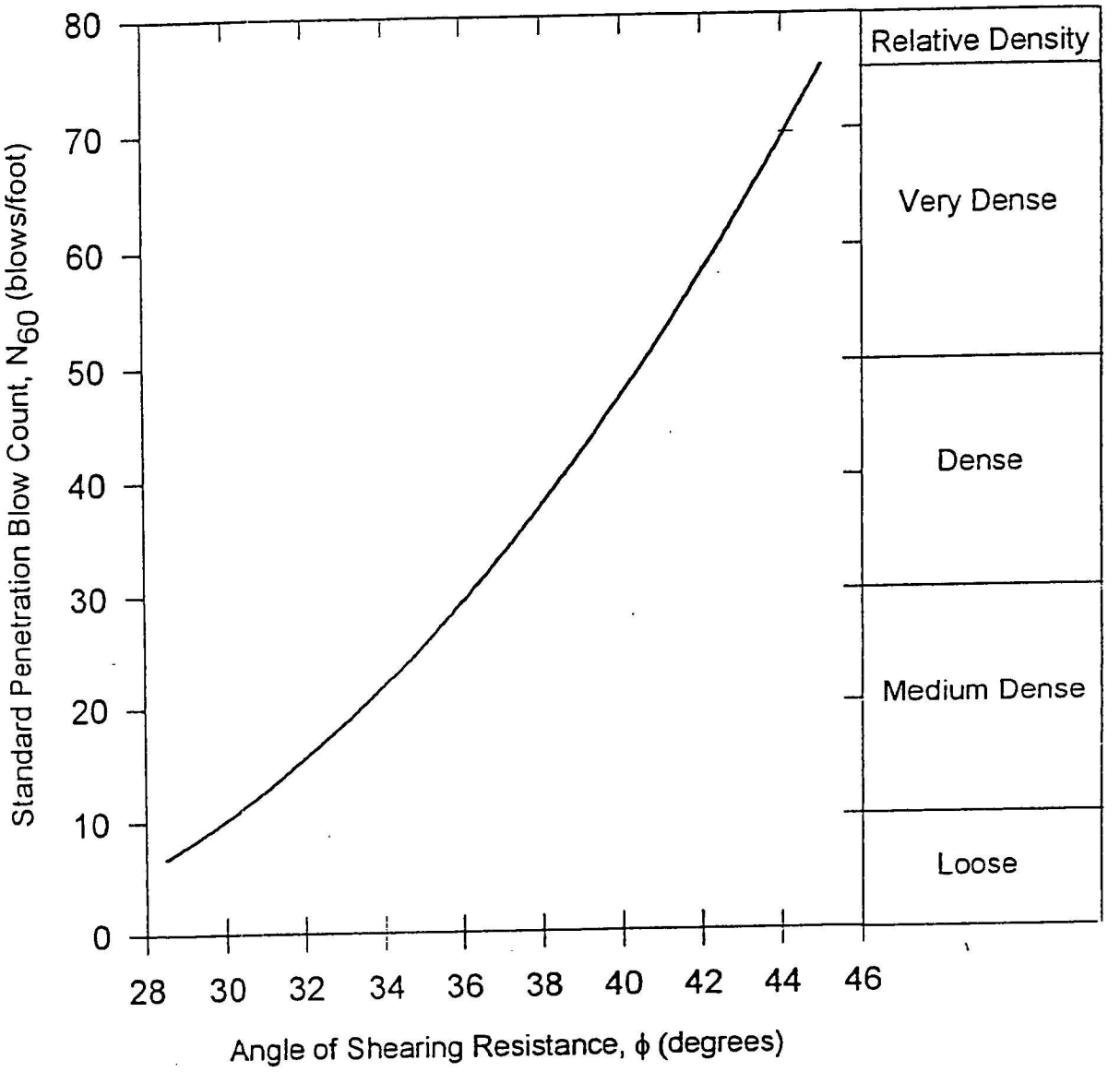

Figure 35. Estimation of the angle of shearing resistance of granular soils from standard penetration test results (Originally from Peck et al., 1974, modified by Carter and Bentley, 1991).

H-2

Stratum A

	ϕ for SPT-10	ϕ for SPT 11	ϕ for SPT-12	ϕ for SPT-14	ϕ for SPT 16
	25	26	25.5	25	25.5
		28.5	27.8	29.25	29.25
		25	25.5	27.8	29.5
		28.5	27.25	28.5	32.75
		25.5	26.5	27.8	27.8
			27.25	31.8	28.5
				27.8	29.25
				31.8	31.8
N	1	5	6	8	8
x	25.0	26.7	26.6	28.7	29.3
σ		1.7	1.0	2.3	2.3
COV		0.06	0.04	0.08	0.08
λ_R	1.00	1.00	1.00	1.00	1.00

	Resistance Factors, ϕ				
β_T	SPT-10	SPT-11	SPT-12	SPT-14	SPT-16
3.5		0.83	0.89	0.79	0.79
3.0		0.85	0.91	0.81	0.82
2.5		0.87	0.92	0.84	0.85
2.0		0.90	0.94	0.87	0.87

Stratum B

	ϕ for SPT-10	ϕ for SPT-11	ϕ for SPT-12	ϕ for SPT-14	ϕ for SPT-16
	30.75	35.4	27.25	37.25	36
	32.5	33.5	34.25	40	31.8
	32.7		32.5	37	34
	35.25		29.8		29.8
	34.25		36		
N	5	2	5	3	4
$\bar{x}$	33.1	34.5	32.0	38.1	32.9
σ	1.7	1.3	3.5	1.7	2.7
COV	0.05	0.04	0.11	0.04	0.08
λ_R	1.00	1.00	1.00	1.00	1.00

	Resistance Factors, ϕ				
β_T	SPT-10	SPT-11	SPT-12	SPT-14	SPT-16
3.5	0.85	0.89	0.72	0.88	0.78
3.0	0.87	0.90	0.75	0.89	0.81
2.5	0.89	0.92	0.79	0.91	0.84
2.0	0.91	0.93	0.83	0.93	0.87

Stratum D

	ϕ for SPT-10	ϕ for SPT-11	ϕ for SPT-12	ϕ for SPT 14	ϕ for SPT 16
			40	31.75	29.8
			40	38	29.25
N	0	0	2	2	2
x			40.0	34.9	29.5
σ			0.0	4.4	0.4
COV			0.00	0.13	0.01
λ_R	1.00	1.00	1.00	1.00	1.00

	Resistance Factors, ϕ				
β_T	SPT-10	SPT-11	SPT-12	SPT-14	SPT-16
3.5			1.00	0.68	0.96
3.0			1.00	0.72	0.97
2.5			1.00	0.76	0.97
2.0			1.00	0.80	0.98

Stratum E

	ϕ for CPTU-10	ϕ for CPTU-11	ϕ for CPTU-12	ϕ for CPTU-14	ϕ for CPTU-16
	40	40	40	40	35.4
	40	40	40		40
	40		40		
			40		
			40		
N	3	2	5	1	2
x	40.0	40.0	40.0	40.0	37.7
σ	0.0	0.0	0.0		3.3
COV	0.00	0.00	0.00		0.09
λ_R	1.00	1.00	1.00	1.00	1.00

	Resistance Factors, ϕ				
β_T	SPT-10	SPT-11	SPT-12	SPT-14	SPT-16
3.5	1.00	1.00	1.00		0.77
3.0	1.00	1.00	1.00		0.80
2.5	1.00	1.00	1.00		0.83
2.0	1.00	1.00	1.00		0.86

Stratum A

	ϕ for CPTU-10	ϕ for CPTU-11	ϕ for CPTU-12	ϕ for CPTU-13	ϕ for CPTU-14	ϕ for CPTU-15	ϕ for CPTU-16
	42.7	35.1	40.7	39.3	34.2	40.4	34.1
	40.5	31.7	35.7	37.4	30.9	38.9	36.4
	34.4	32.4	30.1	34.6	26.6	35.9	33.9
	32.6	34.2	33.5	32.1	25.8	35.5	32.0
	39.0	32.8	34.8	28.2	24.5	36.1	31.4
		33.5	31.9	30.1	28.2	35.6	26.9
		33.1	31.9	32.5	31.5	34.5	27.4
		35.4	32.4	36.0	32.1	33.8	29.1
		32.2	31.8	36.9	31.5	34.5	28.6
		31.7	34.3	39.0	30.2	31.6	29.2
		33.6	29.0	40.6	27.7	28.9	27.4
		32.1	27.0	39.9	24.8	31.3	23.5
		28.0	27.1	40.4	25.1	33.5	24.0
		23.1	30.2	41.1	23.8	34.2	30.3
		27.5	34.3	40.3	28.4	33.6	34.4
		39.3	31.4	40.1	28.0	30.5	37.2
		40.5	34.2	39.5	32.4	29.3	39.1
		38.8	34.4	40.4	38.8	32.1	40.4
		42.3	35.1	41.5	39.7	32.6	40.7
		41.5	37.5	41.3	39.1	33.9	40.1
		38.9	37.0	40.8	37.2	34.1	39.8
		35.8	35.4	40.6	36.6	34.5	39.2
		33.6	34.0	40.7	37.8	33.2	39.5
		33.5	33.5	40.9	38.2	35.4	38.9
		34.4	36.1	42.5	38.9	36.3	39.3
		34.1	37.4	42.0	39.3	39.7	40.7
		34.5	37.7	40.7	39.9	43.4	41.6
		35.3	39.7	37.4	38.2	44.5	42.2
		36.2	40.3	35.2	37.8	42.5	42.2
		36.6	39.7	32.4	38.4	41.7	42.2
		36.2	40.1	35.8	37.8	41.0	42.0
		35.5	39.4	36.5	37.8	39.4	41.6
		33.4	39.5	37.0	38.0	39.2	41.6
		30.9	38.5	35.3	36.6	39.7	41.3
		30.3	37.8	35.4	34.3	40.1	40.9
		29.1	38.5	36.2	33.1	39.6	40.9
		25.8	38.5	33.4	32.1	39.6	40.4
		29.2	36.1	31.3	33.0	41.1	39.6
		30.3	35.1	35.1	33.2	39.2	40.0
		36.7	34.7	34.9	31.6	38.8	40.4
		37.4	32.5	34.6	29.3	39.0	40.9
		32.4	32.7	31.6	33.6	39.2	40.0
		30.7	34.2	33.1	33.7	39.3	38.9
		30.0	35.4	34.3	33.3	39.8	38.7
		31.9	34.6	34.9	30.8	39.8	38.0
		39.5	34.6	33.5	29.4	40.0	38.6

		40.5	35.1	33.4	29.5	41.0	38.4
		40.0	35.5	31.9	30.9	41.5	39.2
		35.4	34.4	31.2	31.6	41.2	40.6
		30.4	31.0	33.0	29.3	41.5	41.3
		31.8	30.5	33.3	27.8	40.9	42.4
		31.6	31.7	33.7	28.0	39.8	40.8
		31.9	32.7	34.9	28.2	39.4	40.6
		30.8	33.8	33.8	26.6	39.1	40.4
		32.5	33.6	34.3	28.4	38.6	40.1
		31.0	33.0	34.9	33.0	39.5	41.3
		30.5	31.9	35.2	33.1	40.3	41.3
		37.0	32.4	34.9	34.1	40.2	40.3
		41.2	32.7	34.8	34.6	39.2	39.3
		37.2	30.7	36.7	34.5	39.7	39.0
		30.0	30.3	37.3	31.1	39.4	37.8
		38.4	31.0	36.9	30.2	39.1	36.2
		42.6	29.8	38.3	29.9	38.4	34.8
		41.0	30.6	40.0	33.8	37.8	35.9
		40.5	32.0	39.8	32.7	38.3	36.6
		39.1	30.3	38.2	32.0	39.6	36.6
		39.1	29.2	39.3	32.5	40.1	37.5
		41.0	31.6	39.9	29.7	39.4	38.2
			33.1	40.3	28.2	38.0	38.7
			34.3	38.3	28.9	37.6	37.9
			33.8	32.9	27.8	39.1	37.4
			34.1	33.9	22.9	38.6	37.7
			34.2	37.9	29.3	38.1	38.7
			31.9	39.0	32.4	38.4	38.7
			31.1	38.1	35.2	37.8	39.1
			30.5	38.2	36.8	37.6	39.4
			29.7	40.8	38.4	37.6	39.8
			31.7	42.0	39.3	38.3	40.0
			34.2	42.6	36.4	37.3	40.7
			35.3	42.5	34.4	38.1	39.9
			35.2	41.1	33.5	36.3	38.9
			33.4	40.8	31.9	33.3	39.0
			32.0	40.0	33.8	32.5	39.4
			31.2	40.8	38.0	31.9	38.5
			33.3	40.1	41.3	33.2	37.8
			36.6	37.9	40.1	32.2	37.0
				35.8	40.7	31.2	37.5
				32.6	39.1	31.8	38.3
				31.1	34.8	37.3	38.7
				27.4	30.9	37.0	38.5
				28.5	27.6	34.8	38.5
				30.9	31.5	32.2	39.2
				31.9	32.4	33.8	39.4
					29.6	33.4	39.7
					32.2	32.2	38.0
					34.0	33.5	34.9
					34.3	30.9	35.6

					33.6	33.4	35.7
					32.5	34.0	34.8
					33.3	34.9	32.8
					32.6	34.9	33.4
					32.5	35.5	30.7
					34.0	34.4	31.2
					38.5	34.4	31.7
					40.9	35.5	29.2
					40.4	36.0	30.7
					40.5	37.2	32.2
					39.0	39.2	33.0
							36.8
							37.4
							36.2
							38.6
							40.8
							41.8
							40.8
N	17	68	86	93	108	108	115
x	37.8	34.5	33.8	36.7	33.1	36.9	37.4
σ	4.2	4.3	3.0	3.7	4.4	3.4	4.1
COV	0.11	0.12	0.09	0.10	0.13	0.09	0.11
λ_R	1.00	1.00	1.00	1.00	1.00	1.00	1.00

	Resistance Factors, ϕ						
β_T	CPTU-10	CPTU-11	CPTU-12	CPTU-13	CPTU-14	CPTU-15	CPTU-16
3.5	0.71	0.69	0.76	0.73	0.67	0.76	0.71
3.0	0.75	0.72	0.79	0.77	0.71	0.79	0.75
2.5	0.79	0.76	0.82	0.80	0.75	0.82	0.79
2.0	0.82	0.81	0.86	0.84	0.79	0.85	0.83

Stratum B

	ϕ for CPTU-10	ϕ for CPTU-11	ϕ for CPTU-12	ϕ for CPTU-13	ϕ for CPTU-14	ϕ for CPTU-15	ϕ for CPTU-16
	40.9	43.7	37.7	29.9	40.2	41.6	40.4
	41.1	39.1	39.1	28.3	39.0	42.9	42.7
	41.3	33.8	41.6	32.1	38.2	43.3	41.4
	40.5	31.8	41.4	37.1	39.9	42.2	39.6
	44.6	32.1	40.5	40.9	40.1	41.6	40.0
	42.5	32.9	40.7	40.5	38.9	41.6	44.0
	41.1	39.9	39.8	40.8	38.7	42.2	
	42.8	37.2	37.0	40.4	40.4	41.8	
	43.7	35.5	37.6	38.7		40.4	
	44.6	37.0	40.2	35.5			
	44.5	36.0	42.5	31.9			
	45.6	39.5	41.9	32.2			
	46.4	38.7	40.9	37.5			
	45.6	35.4	39.5	40.7			
	46.1	39.8	38.7	40.8			
	45.9		38.1	40.3			
	46.1		36.2	40.3			
	44.4		35.8	39.9			
	39.6		36.3	39.2			
	36.5		38.2	37.0			
	36.0		40.0	34.2			
	36.0		39.1	32.4			
	40.1		41.4	31.7			
	39.9		40.9	27.7			
	40.2		39.0	38.3			
	42.3		41.7	40.8			
	42.5		42.6	41.2			
	42.5		41.5	41.3			
	43.5		40.5	40.9			
	42.1		39.9	40.2			
	43.7		40.9	38.6			
	44.4		40.9	36.9			
	42.9		41.4	32.8			
	42.2		41.4	27.4			
			38.9	27.0			
			37.0				
			37.2				
			37.0				
			36.8				
			35.8				
			36.1				
			35.9				
			34.6				
			34.7				
			34.7				
			33.8				

			32.8				
			33.7				
			35.2				
			40.7				
N	21	15	50	35	8	9	6
x	42.0	36.8	38.6	36.4	39.4	41.9	41.3
σ	3.2	3.3	2.6	4.7	0.8	0.8	1.7
COV	0.08	0.09	0.07	0.13	0.02	0.02	0.04
λ_R	1.00	1.00	1.00	1.00	1.00	1.00	1.00

	Resistance Factors, ϕ						
β_T	CPTU-10	CPTU-11	CPTU-12	CPTU-13	CPTU-14	CPTU-15	CPTU-16
3.5	0.80	0.76	0.81	0.68	0.94	0.94	0.88
3.0	0.82	0.79	0.84	0.71	0.95	0.95	0.90
2.5	0.85	0.82	0.86	0.76	0.96	0.96	0.91
2.0	0.88	0.85	0.89	0.80	0.96	0.97	0.93

Stratum D

	ϕ for CPTU-10	ϕ for CPTU-11	ϕ for CPTU-12	ϕ for CPTU-13	ϕ for CPTU-14	ϕ for CPTU-15	ϕ for CPTU-16
				31.1			
				33.3			
				38.6			
				40.1			
N	0	0	0	4	0	0	0
x				35.8			
σ				4.3			
COV				0.12			
λ_R				1.00			

	Resistance Factors, ϕ						
β_T	CPTU-10	CPTU-11	CPTU-12	CPTU-13	CPTU-14	CPTU-15	CPTU-16
3.5				0.69			
3.0				0.73			
2.5				0.77			
2.0				0.81			

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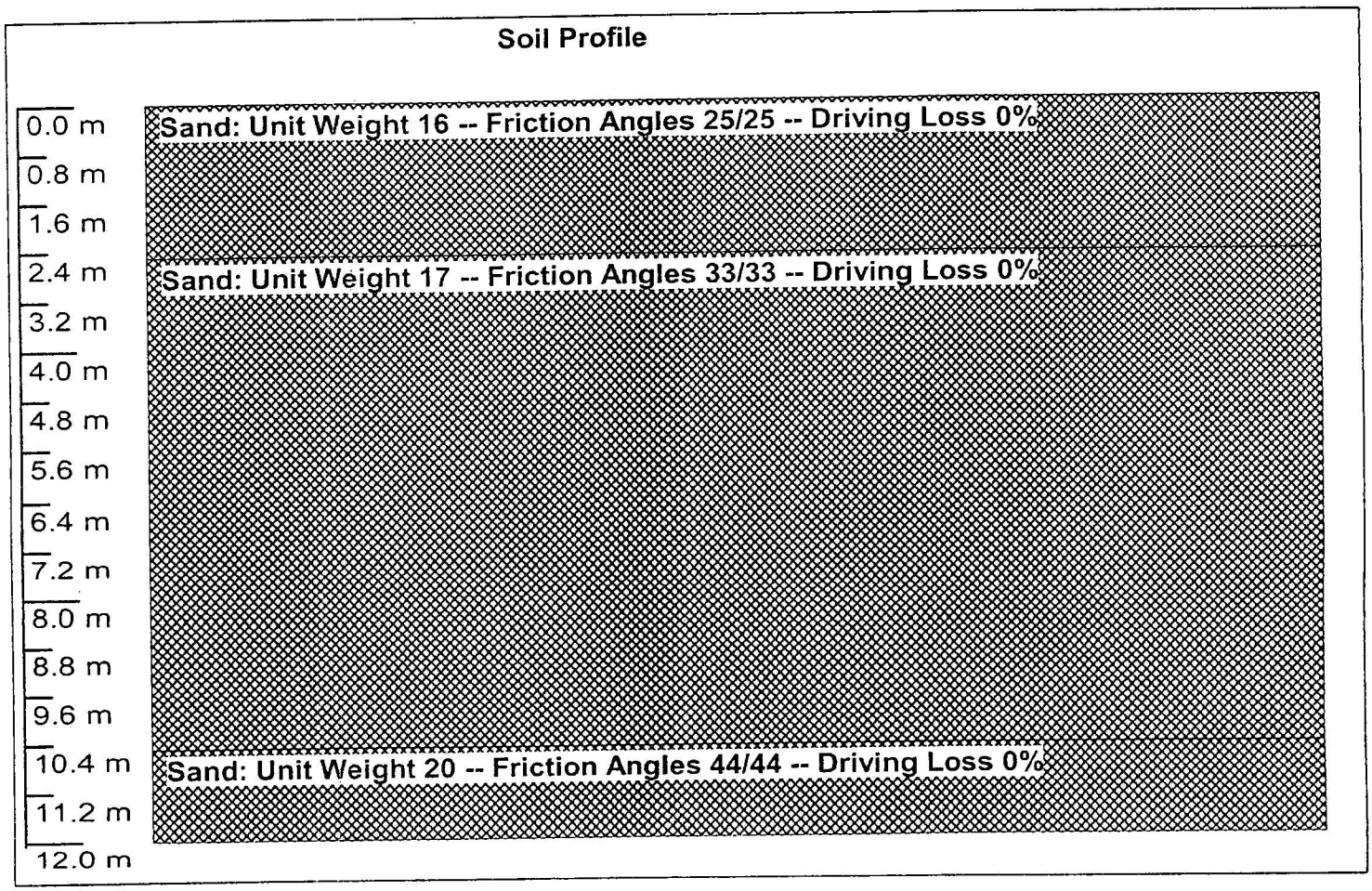

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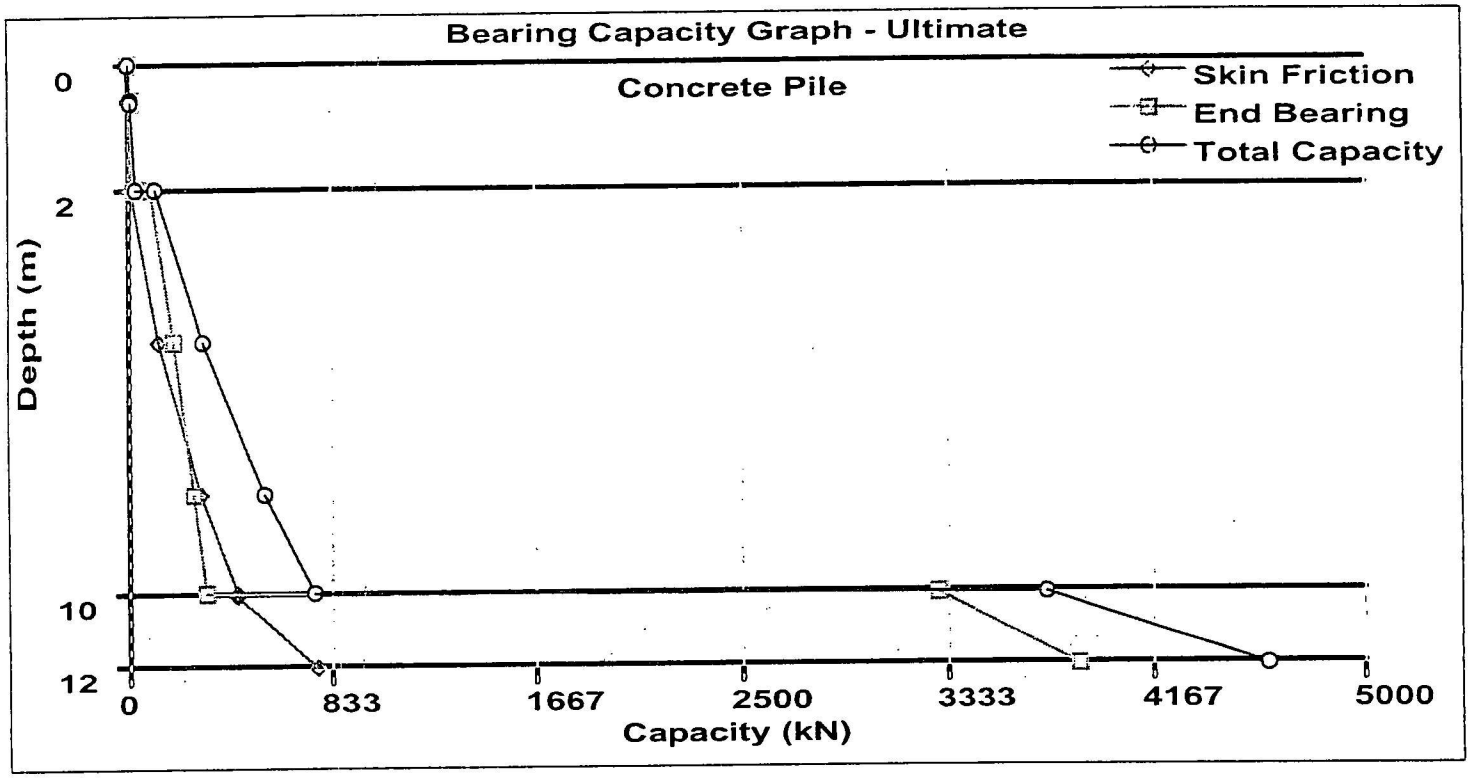

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SAB1_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	2.50 m	0.00%	16.49 kN/m^3	25.0/25.0	Nordlund
2	Cohesionless	8.00 m	0.00%	17.27 kN/m^3	33.1/33.1	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	21.04	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	21.04	N/A	1.94 kN
0.76 m	Cohesionless	12.40 kPa	21.04	N/A	2.04 kN
2.49 m	Cohesionless	18.19 kPa	21.04	N/A	15.55 kN
2.51 m	Cohesionless	24.11 kPa	27.86	N/A	15.89 kN
5.51 m	Cohesionless	35.31 kPa	27.86	N/A	121.09 kN
8.51 m	Cohesionless	46.52 kPa	27.86	N/A	292.97 kN
10.49 m	Cohesionless	53.91 kPa	27.86	N/A	442.93 kN
10.51 m	Cohesionless	83.87 kPa	37.04	N/A	445.78 kN
11.99 m	Cohesionless	91.14 kPa	37.04	N/A	769.24 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	15.00	80.64 kN	0.15 kN
0.74 m	Cohesionless	12.20 kPa	15.00	80.64 kN	10.88 kN
0.76 m	Cohesionless	12.43 kPa	15.00	80.64 kN	11.09 kN
2.49 m	Cohesionless	24.01 kPa	15.00	80.64 kN	21.40 kN
2.51 m	Cohesionless	24.15 kPa	48.04	314.82 kN	94.95 kN
5.51 m	Cohesionless	46.55 kPa	48.04	314.82 kN	183.05 kN
8.51 m	Cohesionless	68.96 kPa	48.04	314.82 kN	266.75 kN
10.49 m	Cohesionless	83.75 kPa	48.04	314.82 kN	314.82 kN
10.51 m	Cohesionless	83.92 kPa	391.00	4465.59 kN	3286.01 kN
11.99 m	Cohesionless	98.47 kPa	391.00	4465.59 kN	3855.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.15 kN	0.15 kN
0.74 m	1.94 kN	10.88 kN	12.81 kN
0.76 m	2.04 kN	11.09 kN	13.13 kN
2.49 m	15.55 kN	21.40 kN	36.95 kN
2.51 m	15.89 kN	94.95 kN	110.84 kN
5.51 m	121.09 kN	183.05 kN	304.14 kN
8.51 m	292.97 kN	266.75 kN	559.72 kN
10.49 m	442.93 kN	314.82 kN	757.75 kN
10.51 m	445.78 kN	3286.01 kN	3731.78 kN
11.99 m	769.24 kN	3855.59 kN	4624.83 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	21.04	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	21.04	N/A	1.94 kN
0.76 m	Cohesionless	12.40 kPa	21.04	N/A	2.04 kN
2.49 m	Cohesionless	18.19 kPa	21.04	N/A	15.55 kN
2.51 m	Cohesionless	24.11 kPa	27.86	N/A	15.89 kN
5.51 m	Cohesionless	35.31 kPa	27.86	N/A	121.09 kN
8.51 m	Cohesionless	46.52 kPa	27.86	N/A	292.97 kN
10.49 m	Cohesionless	53.91 kPa	27.86	N/A	442.93 kN
10.51 m	Cohesionless	83.87 kPa	37.04	N/A	445.78 kN
11.99 m	Cohesionless	91.14 kPa	37.04	N/A	769.24 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	15.00	80.64 kN	0.15 kN
0.74 m	Cohesionless	12.20 kPa	15.00	80.64 kN	10.88 kN
0.76 m	Cohesionless	12.43 kPa	15.00	80.64 kN	11.09 kN
2.49 m	Cohesionless	24.01 kPa	15.00	80.64 kN	21.40 kN
2.51 m	Cohesionless	24.15 kPa	48.04	314.82 kN	94.95 kN
5.51 m	Cohesionless	46.55 kPa	48.04	314.82 kN	183.05 kN
8.51 m	Cohesionless	68.96 kPa	48.04	314.82 kN	266.75 kN
10.49 m	Cohesionless	83.75 kPa	48.04	314.82 kN	314.82 kN
10.51 m	Cohesionless	83.92 kPa	391.00	4465.59 kN	3286.01 kN
11.99 m	Cohesionless	98.47 kPa	391.00	4465.59 kN	3855.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.15 kN	0.15 kN
0.74 m	1.94 kN	10.88 kN	12.81 kN
0.76 m	2.04 kN	11.09 kN	13.13 kN
2.49 m	15.55 kN	21.40 kN	36.95 kN
2.51 m	15.89 kN	94.95 kN	110.84 kN
5.51 m	121.09 kN	183.05 kN	304.14 kN
8.51 m	292.97 kN	266.75 kN	559.72 kN
10.49 m	442.93 kN	314.82 kN	757.75 kN
10.51 m	445.78 kN	3286.01 kN	3731.78 kN
11.99 m	769.24 kN	3855.59 kN	4624.83 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	21.04	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	21.04	N/A	1.94 kN
0.76 m	Cohesionless	12.40 kPa	21.04	N/A	2.04 kN
2.49 m	Cohesionless	18.19 kPa	21.04	N/A	15.55 kN
2.51 m	Cohesionless	24.11 kPa	27.86	N/A	15.89 kN
5.51 m	Cohesionless	35.31 kPa	27.86	N/A	121.09 kN
8.51 m	Cohesionless	46.52 kPa	27.86	N/A	292.97 kN
10.49 m	Cohesionless	53.91 kPa	27.86	N/A	442.93 kN
10.51 m	Cohesionless	83.87 kPa	37.04	N/A	445.78 kN
11.99 m	Cohesionless	91.14 kPa	37.04	N/A	769.24 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	15.00	80.64 kN	0.15 kN
0.74 m	Cohesionless	12.20 kPa	15.00	80.64 kN	10.88 kN
0.76 m	Cohesionless	12.43 kPa	15.00	80.64 kN	11.09 kN
2.49 m	Cohesionless	24.01 kPa	15.00	80.64 kN	21.40 kN
2.51 m	Cohesionless	24.15 kPa	48.04	314.82 kN	94.95 kN
5.51 m	Cohesionless	46.55 kPa	48.04	314.82 kN	183.05 kN
8.51 m	Cohesionless	68.96 kPa	48.04	314.82 kN	266.75 kN
10.49 m	Cohesionless	83.75 kPa	48.04	314.82 kN	314.82 kN
10.51 m	Cohesionless	83.92 kPa	391.00	4465.59 kN	3286.01 kN
11.99 m	Cohesionless	98.47 kPa	391.00	4465.59 kN	3855.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.15 kN	0.15 kN
0.74 m	1.94 kN	10.88 kN	12.81 kN
0.76 m	2.04 kN	11.09 kN	13.13 kN
2.49 m	15.55 kN	21.40 kN	36.95 kN
2.51 m	15.89 kN	94.95 kN	110.84 kN
5.51 m	121.09 kN	183.05 kN	304.14 kN
8.51 m	292.97 kN	266.75 kN	559.72 kN
10.49 m	442.93 kN	314.82 kN	757.75 kN
10.51 m	445.78 kN	3286.01 kN	3731.78 kN
11.99 m	769.24 kN	3855.59 kN	4624.83 kN

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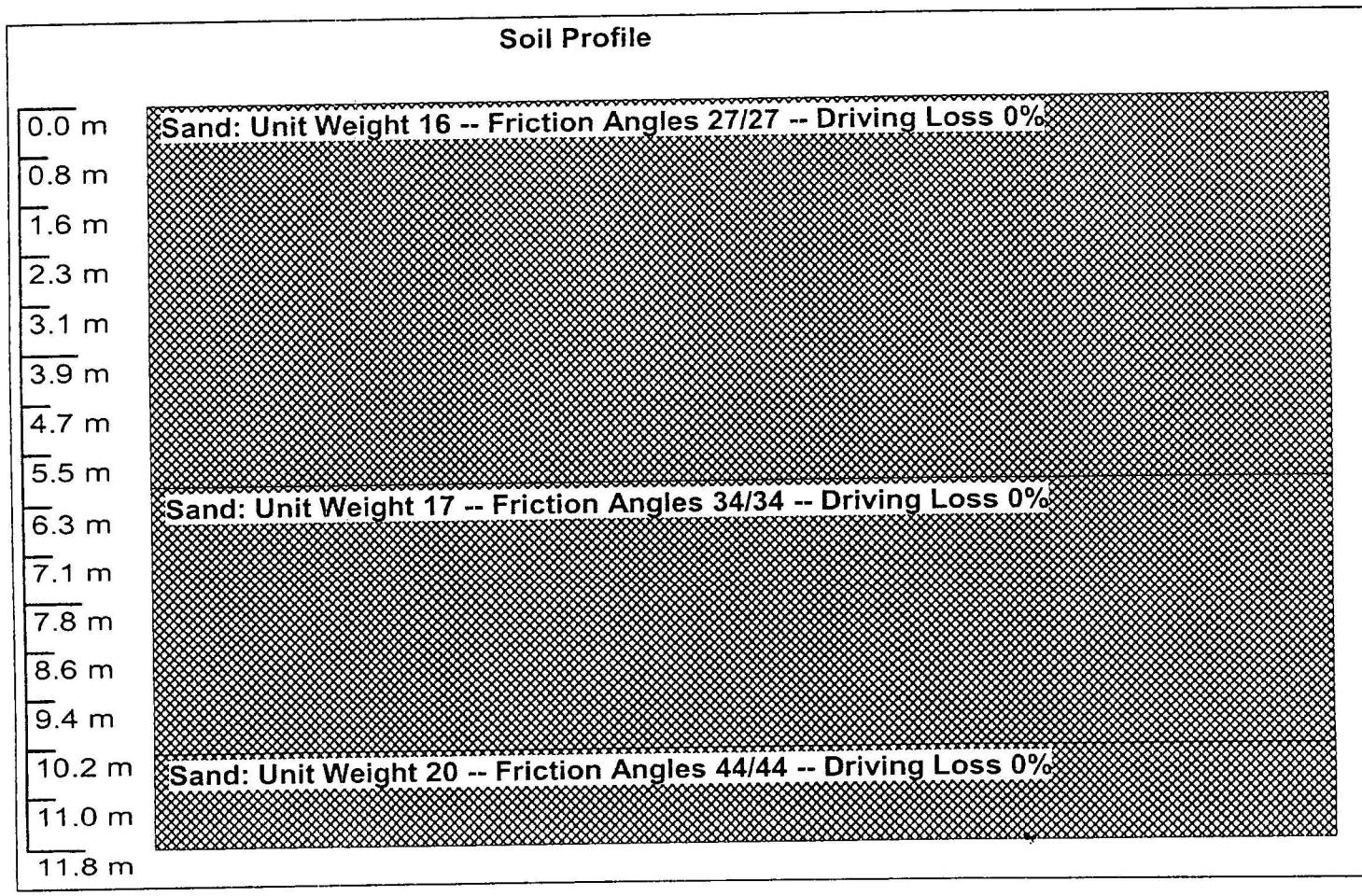

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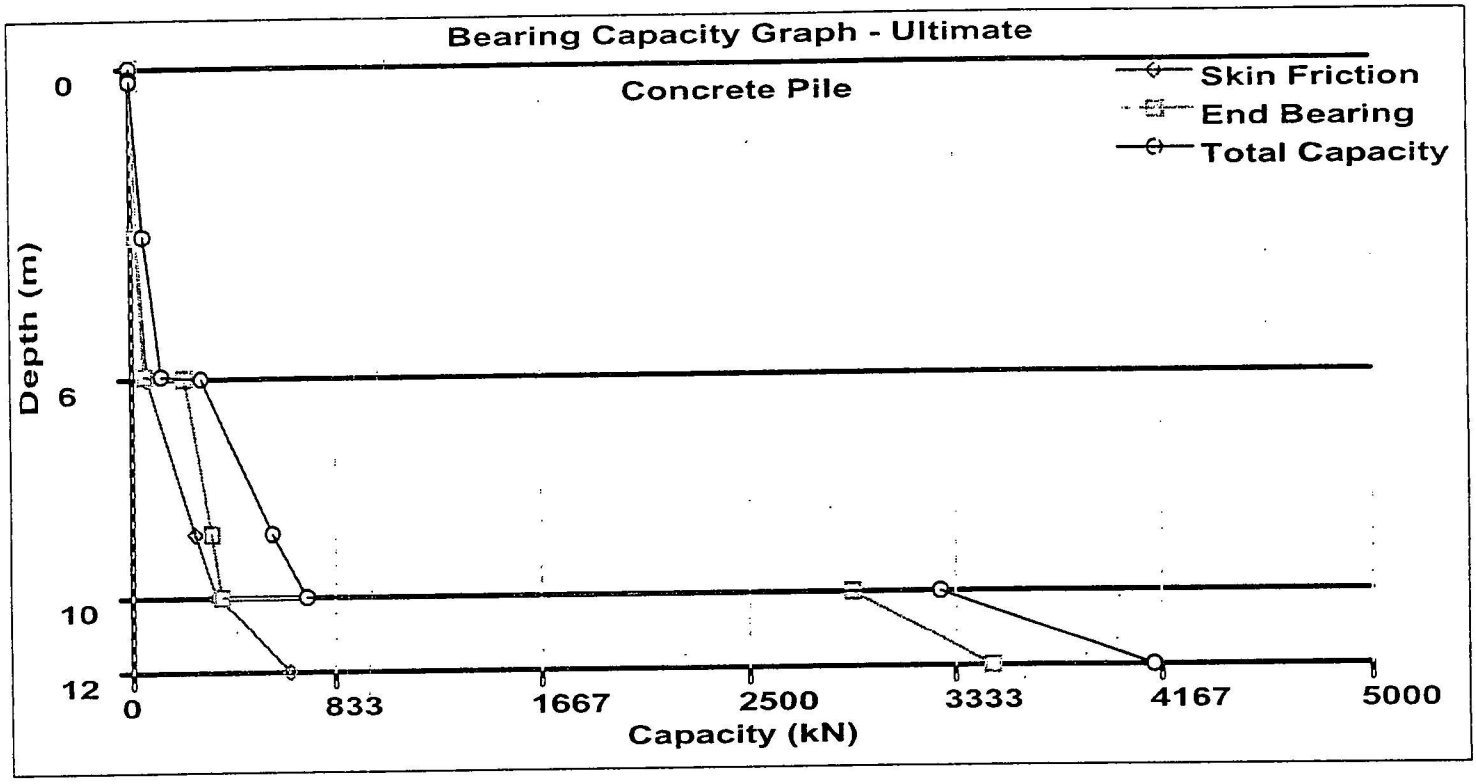

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP1_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.25 m
	- Driving/Restrike	0.25 m
	- Ultimate:	0.25 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	6.00 m	0.00%	16.49 kN/m^3	26.7/26.7	Nordlund
2	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	34.5/34.5	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	22.48	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	22.48	N/A	0.24 kN
0.26 m	Cohesionless	4.16 kPa	22.48	N/A	0.28 kN
3.26 m	Cohesionless	14.19 kPa	22.48	N/A	22.07 kN
5.99 m	Cohesionless	23.32 kPa	22.48	N/A	68.59 kN
6.01 m	Cohesionless	42.62 kPa	29.04	N/A	69.29 kN
9.01 m	Cohesionless	53.82 kPa	29.04	N/A	253.49 kN
10.24 m	Cohesionless	58.41 kPa	29.04	N/A	351.16 kN
10.26 m	Cohesionless	74.37 kPa	37.04	N/A	353.78 kN
11.74 m	Cohesionless	81.65 kPa	37.04	N/A	643.56 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	19.08	80.64 kN	0.20 kN
0.24 m	Cohesionless	3.96 kPa	19.08	80.64 kN	4.84 kN
0.26 m	Cohesionless	4.19 kPa	19.08	80.64 kN	5.13 kN
3.26 m	Cohesionless	24.26 kPa	19.08	80.64 kN	29.69 kN
5.99 m	Cohesionless	42.51 kPa	19.08	80.64 kN	52.04 kN
6.01 m	Cohesionless	42.66 kPa	59.80	548.27 kN	216.56 kN
9.01 m	Cohesionless	65.06 kPa	59.80	548.27 kN	326.52 kN
10.24 m	Cohesionless	74.25 kPa	59.80	548.27 kN	369.83 kN
10.26 m	Cohesionless	74.42 kPa	391.00	4465.59 kN	2914.08 kN
11.74 m	Cohesionless	88.97 kPa	391.00	4465.59 kN	3483.67 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.20 kN	0.20 kN
0.24 m	0.24 kN	4.84 kN	5.09 kN
0.26 m	0.28 kN	5.13 kN	5.41 kN
3.26 m	22.07 kN	29.69 kN	51.76 kN
5.99 m	68.59 kN	52.04 kN	120.63 kN
6.01 m	69.29 kN	216.56 kN	285.85 kN
9.01 m	253.49 kN	326.52 kN	580.01 kN
10.24 m	351.16 kN	369.83 kN	720.98 kN
10.26 m	353.78 kN	2914.08 kN	3267.87 kN
11.74 m	643.56 kN	3483.67 kN	4127.23 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	22.48	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	22.48	N/A	0.24 kN
0.26 m	Cohesionless	4.16 kPa	22.48	N/A	0.28 kN
3.26 m	Cohesionless	14.19 kPa	22.48	N/A	22.07 kN
5.99 m	Cohesionless	23.32 kPa	22.48	N/A	68.59 kN
6.01 m	Cohesionless	42.62 kPa	29.04	N/A	69.29 kN
9.01 m	Cohesionless	53.82 kPa	29.04	N/A	253.49 kN
10.24 m	Cohesionless	58.41 kPa	29.04	N/A	351.16 kN
10.26 m	Cohesionless	74.37 kPa	37.04	N/A	353.78 kN
11.74 m	Cohesionless	81.65 kPa	37.04	N/A	643.56 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	19.08	80.64 kN	0.20 kN
0.24 m	Cohesionless	3.96 kPa	19.08	80.64 kN	4.84 kN
0.26 m	Cohesionless	4.19 kPa	19.08	80.64 kN	5.13 kN
3.26 m	Cohesionless	24.26 kPa	19.08	80.64 kN	29.69 kN
5.99 m	Cohesionless	42.51 kPa	19.08	80.64 kN	52.04 kN
6.01 m	Cohesionless	42.66 kPa	59.80	548.27 kN	216.56 kN
9.01 m	Cohesionless	65.06 kPa	59.80	548.27 kN	326.52 kN
10.24 m	Cohesionless	74.25 kPa	59.80	548.27 kN	369.83 kN
10.26 m	Cohesionless	74.42 kPa	391.00	4465.59 kN	2914.08 kN
11.74 m	Cohesionless	88.97 kPa	391.00	4465.59 kN	3483.67 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.20 kN	0.20 kN
0.24 m	0.24 kN	4.84 kN	5.09 kN
0.26 m	0.28 kN	5.13 kN	5.41 kN
3.26 m	22.07 kN	29.69 kN	51.76 kN
5.99 m	68.59 kN	52.04 kN	120.63 kN
6.01 m	69.29 kN	216.56 kN	285.85 kN
9.01 m	253.49 kN	326.52 kN	580.01 kN
10.24 m	351.16 kN	369.83 kN	720.98 kN
10.26 m	353.78 kN	2914.08 kN	3267.87 kN
11.74 m	643.56 kN	3483.67 kN	4127.23 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	22.48	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	22.48	N/A	0.24 kN
0.26 m	Cohesionless	4.16 kPa	22.48	N/A	0.28 kN
3.26 m	Cohesionless	14.19 kPa	22.48	N/A	22.07 kN
5.99 m	Cohesionless	23.32 kPa	22.48	N/A	68.59 kN
6.01 m	Cohesionless	42.62 kPa	29.04	N/A	69.29 kN
9.01 m	Cohesionless	53.82 kPa	29.04	N/A	253.49 kN
10.24 m	Cohesionless	58.41 kPa	29.04	N/A	351.16 kN
10.26 m	Cohesionless	74.37 kPa	37.04	N/A	353.78 kN
11.74 m	Cohesionless	81.65 kPa	37.04	N/A	643.56 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	19.08	80.64 kN	0.20 kN
0.24 m	Cohesionless	3.96 kPa	19.08	80.64 kN	4.84 kN
0.26 m	Cohesionless	4.19 kPa	19.08	80.64 kN	5.13 kN
3.26 m	Cohesionless	24.26 kPa	19.08	80.64 kN	29.69 kN
5.99 m	Cohesionless	42.51 kPa	19.08	80.64 kN	52.04 kN
6.01 m	Cohesionless	42.66 kPa	59.80	548.27 kN	216.56 kN
9.01 m	Cohesionless	65.06 kPa	59.80	548.27 kN	326.52 kN
10.24 m	Cohesionless	74.25 kPa	59.80	548.27 kN	369.83 kN
10.26 m	Cohesionless	74.42 kPa	391.00	4465.59 kN	2914.08 kN
11.74 m	Cohesionless	88.97 kPa	391.00	4465.59 kN	3483.67 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.20 kN	0.20 kN
0.24 m	0.24 kN	4.84 kN	5.09 kN
0.26 m	0.28 kN	5.13 kN	5.41 kN
3.26 m	22.07 kN	29.69 kN	51.76 kN
5.99 m	68.59 kN	52.04 kN	120.63 kN
6.01 m	69.29 kN	216.56 kN	285.85 kN
9.01 m	253.49 kN	326.52 kN	580.01 kN
10.24 m	351.16 kN	369.83 kN	720.98 kN
10.26 m	353.78 kN	2914.08 kN	3267.87 kN
11.74 m	643.56 kN	3483.67 kN	4127.23 kN

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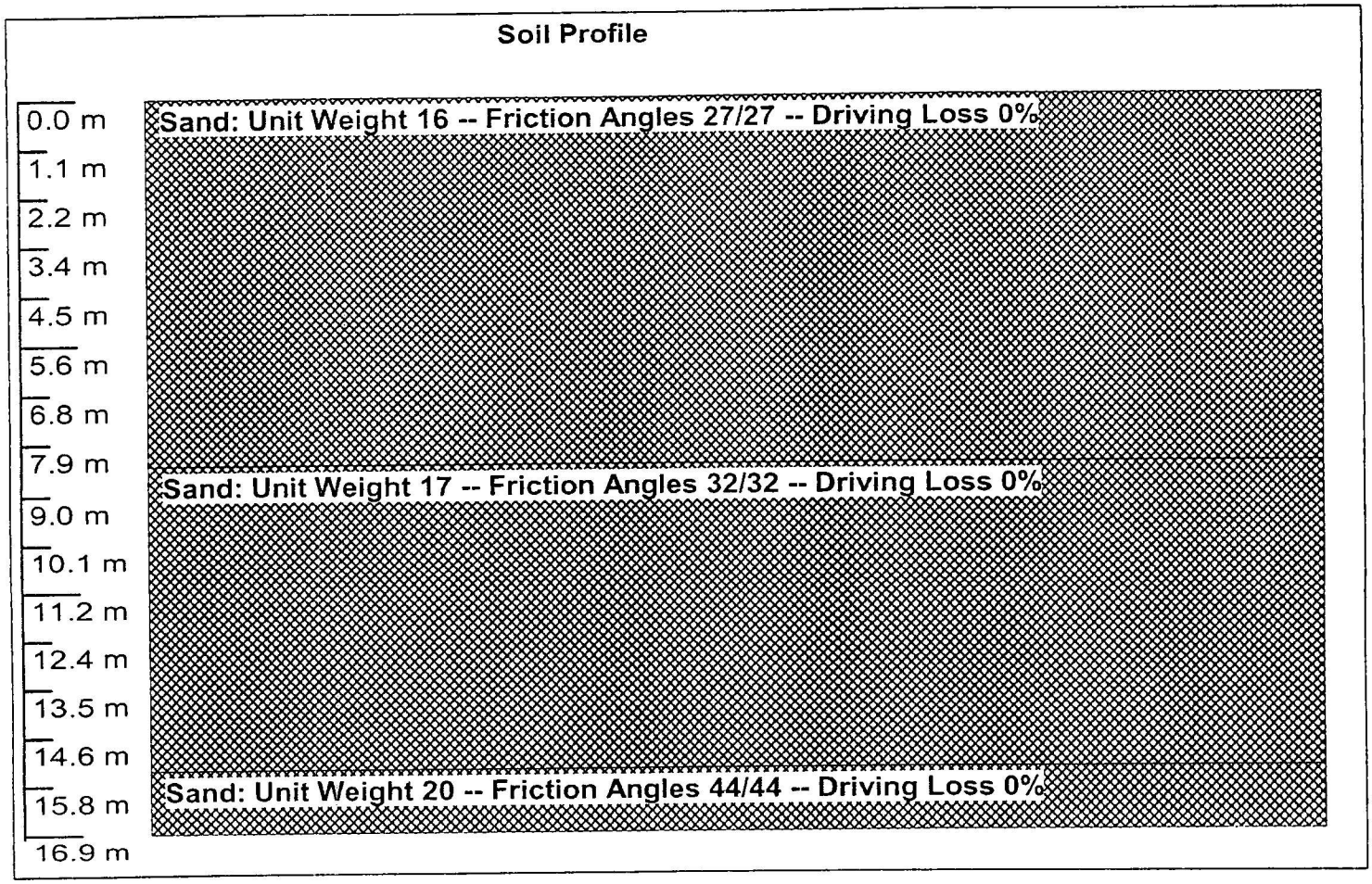

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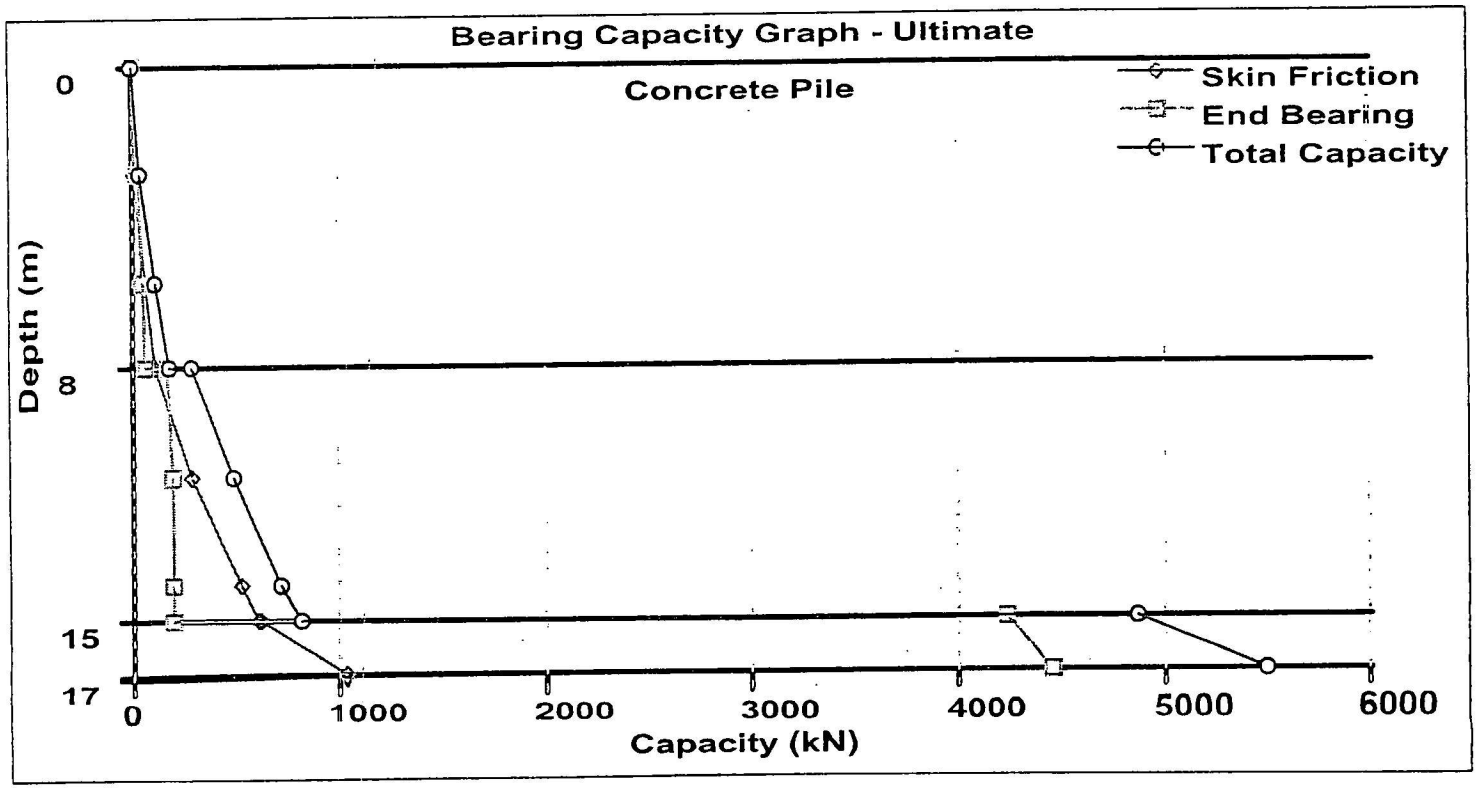

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP2_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	-0.50 m
	- Driving/Restrike	-0.50 m
	- Ultimate:	-0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	8.38 m	0.00%	16.49 kN/m^3	26.6/26.6	Nordlund
2	Cohesionless	7.00 m	0.00%	17.27 kN/m^3	32.0/32.0	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	22.39	N/A	-0.02 kN
3.01 m	Cohesionless	5.17 kPa	22.39	N/A	7.86 kN
6.01 m	Cohesionless	15.20 kPa	22.39	N/A	46.17 kN
8.36 m	Cohesionless	23.07 kPa	22.39	N/A	97.56 kN
8.39 m	Cohesionless	51.15 kPa	26.94	N/A	98.27 kN
11.39 m	Cohesionless	62.36 kPa	26.94	N/A	263.03 kN
14.39 m	Cohesionless	73.56 kPa	26.94	N/A	486.96 kN
15.36 m	Cohesionless	77.22 kPa	26.94	N/A	572.93 kN
15.39 m	Cohesionless	103.44 kPa	37.04	N/A	576.32 kN
16.86 m	Cohesionless	110.72 kPa	37.04	N/A	969.21 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	18.84	80.64 kN	-5.82 kN
3.01 m	Cohesionless	15.23 kPa	18.84	80.64 kN	18.33 kN
6.01 m	Cohesionless	35.30 kPa	18.84	80.64 kN	42.48 kN
8.36 m	Cohesionless	51.05 kPa	18.84	80.64 kN	58.40 kN
8.39 m	Cohesionless	51.19 kPa	40.40	199.79 kN	160.07 kN
11.39 m	Cohesionless	73.60 kPa	40.40	199.79 kN	199.79 kN
14.39 m	Cohesionless	96.00 kPa	40.40	199.79 kN	199.79 kN
15.36 m	Cohesionless	103.32 kPa	40.40	199.79 kN	199.79 kN
15.39 m	Cohesionless	103.49 kPa	391.00	4465.59 kN	4052.44 kN
16.86 m	Cohesionless	118.04 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.02 kN	-5.82 kN	-5.84 kN
3.01 m	7.86 kN	18.33 kN	26.19 kN
6.01 m	46.17 kN	42.48 kN	88.65 kN
8.36 m	97.56 kN	58.40 kN	155.96 kN
8.39 m	98.27 kN	160.07 kN	258.34 kN
11.39 m	263.03 kN	199.79 kN	462.82 kN
14.39 m	486.96 kN	199.79 kN	686.75 kN
15.36 m	572.93 kN	199.79 kN	772.72 kN
15.39 m	576.32 kN	4052.44 kN	4628.76 kN
16.86 m	969.21 kN	4465.59 kN	5434.81 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	22.39	N/A	-0.02 kN
3.01 m	Cohesionless	5.17 kPa	22.39	N/A	7.86 kN
6.01 m	Cohesionless	15.20 kPa	22.39	N/A	46.17 kN
8.36 m	Cohesionless	23.07 kPa	22.39	N/A	97.56 kN
8.39 m	Cohesionless	51.15 kPa	26.94	N/A	98.27 kN
11.39 m	Cohesionless	62.36 kPa	26.94	N/A	263.03 kN
14.39 m	Cohesionless	73.56 kPa	26.94	N/A	486.96 kN
15.36 m	Cohesionless	77.22 kPa	26.94	N/A	572.93 kN
15.39 m	Cohesionless	103.44 kPa	37.04	N/A	576.32 kN
16.86 m	Cohesionless	110.72 kPa	37.04	N/A	969.21 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	18.84	80.64 kN	-5.82 kN
3.01 m	Cohesionless	15.23 kPa	18.84	80.64 kN	18.33 kN
6.01 m	Cohesionless	35.30 kPa	18.84	80.64 kN	42.48 kN
8.36 m	Cohesionless	51.05 kPa	18.84	80.64 kN	58.40 kN
8.39 m	Cohesionless	51.19 kPa	40.40	199.79 kN	160.07 kN
11.39 m	Cohesionless	73.60 kPa	40.40	199.79 kN	199.79 kN
14.39 m	Cohesionless	96.00 kPa	40.40	199.79 kN	199.79 kN
15.36 m	Cohesionless	103.32 kPa	40.40	199.79 kN	199.79 kN
15.39 m	Cohesionless	103.49 kPa	391.00	4465.59 kN	4052.44 kN
16.86 m	Cohesionless	118.04 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.02 kN	-5.82 kN	-5.84 kN
3.01 m	7.86 kN	18.33 kN	26.19 kN
6.01 m	46.17 kN	42.48 kN	88.65 kN
8.36 m	97.56 kN	58.40 kN	155.96 kN
8.39 m	98.27 kN	160.07 kN	258.34 kN
11.39 m	263.03 kN	199.79 kN	462.82 kN
14.39 m	486.96 kN	199.79 kN	686.75 kN
15.36 m	572.93 kN	199.79 kN	772.72 kN
15.39 m	576.32 kN	4052.44 kN	4628.76 kN
16.86 m	969.21 kN	4465.59 kN	5434.81 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	22.39	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	22.39	N/A	15.31 kN
6.01 m	Cohesionless	20.10 kPa	22.39	N/A	61.06 kN
8.36 m	Cohesionless	27.97 kPa	22.39	N/A	118.28 kN
8.39 m	Cohesionless	56.05 kPa	26.94	N/A	119.06 kN
11.39 m	Cohesionless	67.26 kPa	26.94	N/A	296.76 kN
14.39 m	Cohesionless	78.46 kPa	26.94	N/A	533.63 kN
15.36 m	Cohesionless	82.12 kPa	26.94	N/A	623.83 kN
15.39 m	Cohesionless	108.34 kPa	37.04	N/A	627.38 kN
16.86 m	Cohesionless	115.62 kPa	37.04	N/A	1037.66 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	18.84	80.64 kN	0.08 kN
3.01 m	Cohesionless	20.13 kPa	18.84	80.64 kN	24.23 kN
6.01 m	Cohesionless	40.20 kPa	18.84	80.64 kN	48.38 kN
8.36 m	Cohesionless	55.95 kPa	18.84	80.64 kN	64.01 kN
8.39 m	Cohesionless	56.09 kPa	40.40	199.79 kN	175.40 kN
11.39 m	Cohesionless	78.50 kPa	40.40	199.79 kN	199.79 kN
14.39 m	Cohesionless	100.90 kPa	40.40	199.79 kN	199.79 kN
15.36 m	Cohesionless	108.22 kPa	40.40	199.79 kN	199.79 kN
15.39 m	Cohesionless	108.39 kPa	391.00	4465.59 kN	4244.35 kN
16.86 m	Cohesionless	122.94 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.08 kN	0.08 kN
3.01 m	15.31 kN	24.23 kN	39.54 kN
6.01 m	61.06 kN	48.38 kN	109.43 kN
8.36 m	118.28 kN	64.01 kN	182.29 kN
8.39 m	119.06 kN	175.40 kN	294.45 kN
11.39 m	296.76 kN	199.79 kN	496.55 kN
14.39 m	533.63 kN	199.79 kN	733.42 kN
15.36 m	623.83 kN	199.79 kN	823.62 kN
15.39 m	627.38 kN	4244.35 kN	4871.74 kN
16.86 m	1037.66 kN	4465.59 kN	5503.25 kN

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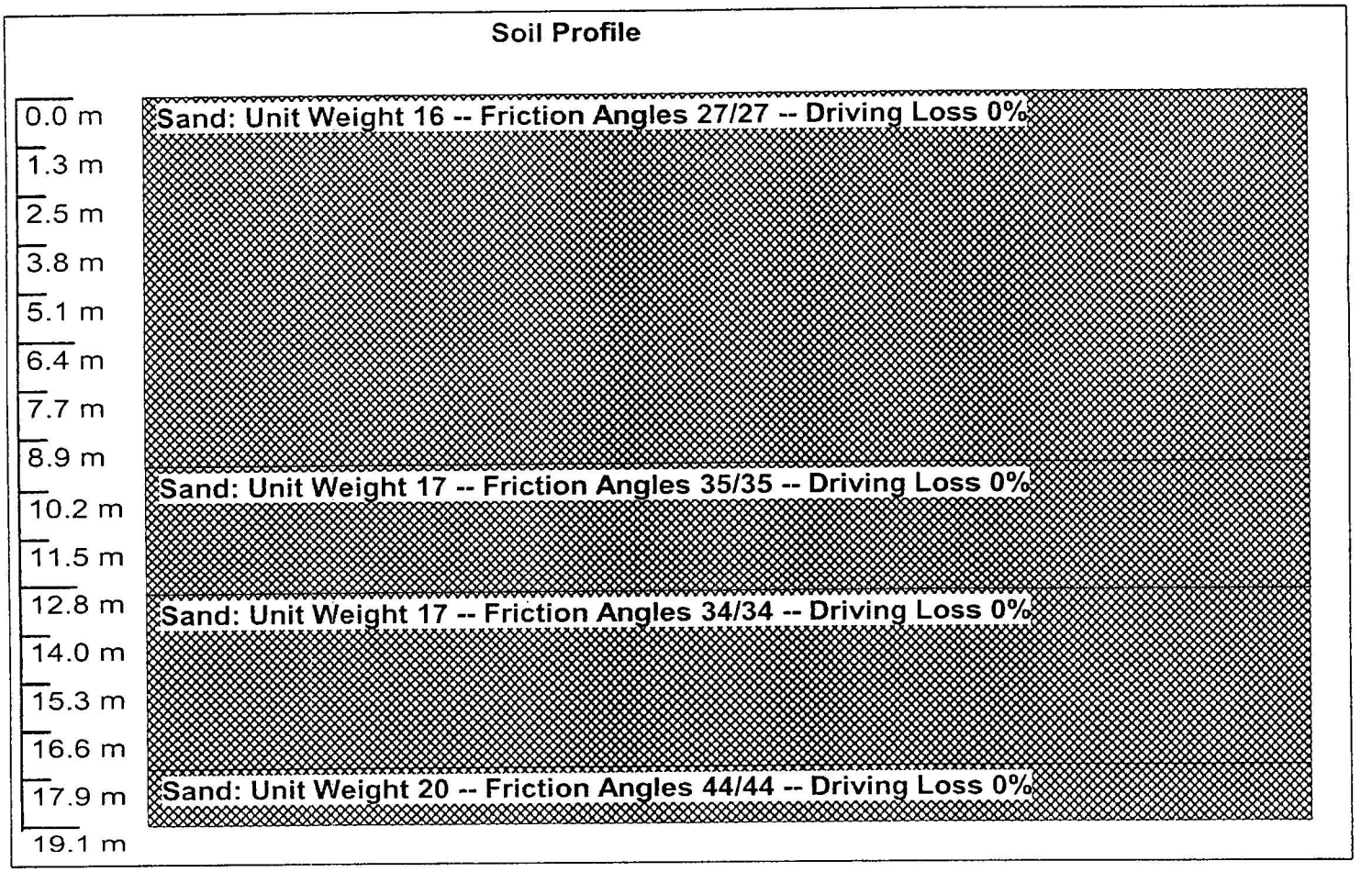

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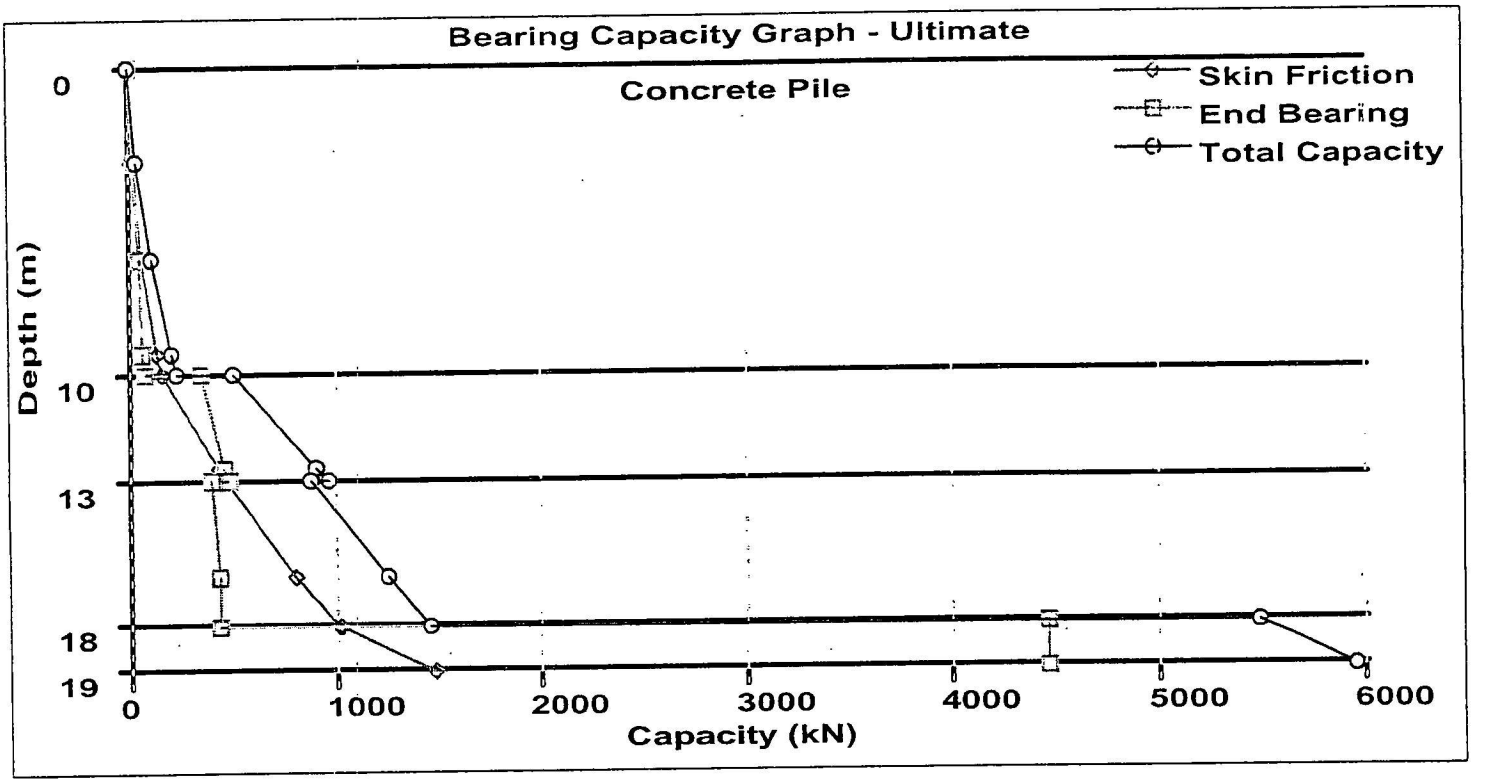

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP3_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.00 m
	- Driving/Restrike	0.00 m
	- Ultimate:	0.00 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	9.62 m	0.00%	16.49 kN/m^3	27.0/27.0	Nordlund
2	Cohesionless	3.38 m	0.00%	17.27 kN/m^3	35.0/35.0	Nordlund
3	Cohesionless	4.62 m	0.00%	17.27 kN/m^3	34.0/34.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	22.73	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	22.73	N/A	15.93 kN
6.01 m	Cohesionless	20.10 kPa	22.73	N/A	63.50 kN
9.01 m	Cohesionless	30.13 kPa	22.73	N/A	142.72 kN
9.61 m	Cohesionless	32.15 kPa	22.73	N/A	162.53 kN
9.64 m	Cohesionless	64.41 kPa	29.46	N/A	163.64 kN
12.64 m	Cohesionless	75.62 kPa	29.46	N/A	434.72 kN
12.99 m	Cohesionless	76.94 kPa	29.46	N/A	472.11 kN
13.01 m	Cohesionless	89.62 kPa	28.62	N/A	474.15 kN
16.01 m	Cohesionless	100.82 kPa	28.62	N/A	802.87 kN
17.61 m	Cohesionless	106.82 kPa	28.62	N/A	1008.72 kN
17.64 m	Cohesionless	124.17 kPa	37.04	N/A	1013.04 kN
19.11 m	Cohesionless	131.45 kPa	37.04	N/A	1479.47 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	19.80	80.64 kN	0.09 kN
3.01 m	Cohesionless	20.13 kPa	19.80	80.64 kN	25.91 kN
6.01 m	Cohesionless	40.20 kPa	19.80	80.64 kN	51.73 kN
9.01 m	Cohesionless	60.26 kPa	19.80	80.64 kN	72.06 kN
9.61 m	Cohesionless	64.31 kPa	19.80	80.64 kN	75.03 kN
9.64 m	Cohesionless	64.45 kPa	64.00	651.43 kN	350.97 kN
12.64 m	Cohesionless	86.86 kPa	64.00	651.43 kN	468.35 kN
12.99 m	Cohesionless	89.51 kPa	64.00	651.43 kN	482.16 kN
13.01 m	Cohesionless	89.66 kPa	55.60	445.11 kN	401.28 kN
16.01 m	Cohesionless	112.06 kPa	55.60	445.11 kN	445.11 kN
17.61 m	Cohesionless	124.05 kPa	55.60	445.11 kN	445.11 kN
17.64 m	Cohesionless	124.22 kPa	391.00	4465.59 kN	4465.59 kN
19.11 m	Cohesionless	138.77 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.09 kN	0.09 kN
3.01 m	15.93 kN	25.91 kN	41.84 kN
6.01 m	63.50 kN	51.73 kN	115.23 kN
9.01 m	142.72 kN	72.06 kN	214.78 kN
9.61 m	162.53 kN	75.03 kN	237.56 kN
9.64 m	163.64 kN	350.97 kN	514.61 kN
12.64 m	434.72 kN	468.35 kN	903.06 kN
12.99 m	472.11 kN	482.16 kN	954.27 kN
13.01 m	474.15 kN	401.28 kN	875.43 kN
16.01 m	802.87 kN	445.11 kN	1247.98 kN
17.61 m	1008.72 kN	445.11 kN	1453.83 kN
17.64 m	1013.04 kN	4465.59 kN	5478.64 kN
19.11 m	1479.47 kN	4465.59 kN	5945.06 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	22.73	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	22.73	N/A	15.93 kN
6.01 m	Cohesionless	20.10 kPa	22.73	N/A	63.50 kN
9.01 m	Cohesionless	30.13 kPa	22.73	N/A	142.72 kN
9.61 m	Cohesionless	32.15 kPa	22.73	N/A	162.53 kN
9.64 m	Cohesionless	64.41 kPa	29.46	N/A	163.64 kN
12.64 m	Cohesionless	75.62 kPa	29.46	N/A	434.72 kN
12.99 m	Cohesionless	76.94 kPa	29.46	N/A	472.11 kN
13.01 m	Cohesionless	89.62 kPa	28.62	N/A	474.15 kN
16.01 m	Cohesionless	100.82 kPa	28.62	N/A	802.87 kN
17.61 m	Cohesionless	106.82 kPa	28.62	N/A	1008.72 kN
17.64 m	Cohesionless	124.17 kPa	37.04	N/A	1013.04 kN
19.11 m	Cohesionless	131.45 kPa	37.04	N/A	1479.47 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	19.80	80.64 kN	0.09 kN
3.01 m	Cohesionless	20.13 kPa	19.80	80.64 kN	25.91 kN
6.01 m	Cohesionless	40.20 kPa	19.80	80.64 kN	51.73 kN
9.01 m	Cohesionless	60.26 kPa	19.80	80.64 kN	72.06 kN
9.61 m	Cohesionless	64.31 kPa	19.80	80.64 kN	75.03 kN
9.64 m	Cohesionless	64.45 kPa	64.00	651.43 kN	350.97 kN
12.64 m	Cohesionless	86.86 kPa	64.00	651.43 kN	468.35 kN
12.99 m	Cohesionless	89.51 kPa	64.00	651.43 kN	482.16 kN
13.01 m	Cohesionless	89.66 kPa	55.60	445.11 kN	401.28 kN
16.01 m	Cohesionless	112.06 kPa	55.60	445.11 kN	445.11 kN
17.61 m	Cohesionless	124.05 kPa	55.60	445.11 kN	445.11 kN
17.64 m	Cohesionless	124.22 kPa	391.00	4465.59 kN	4465.59 kN
19.11 m	Cohesionless	138.77 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.09 kN	0.09 kN
3.01 m	15.93 kN	25.91 kN	41.84 kN
6.01 m	63.50 kN	51.73 kN	115.23 kN
9.01 m	142.72 kN	72.06 kN	214.78 kN
9.61 m	162.53 kN	75.03 kN	237.56 kN
9.64 m	163.64 kN	350.97 kN	514.61 kN
12.64 m	434.72 kN	468.35 kN	903.06 kN
12.99 m	472.11 kN	482.16 kN	954.27 kN
13.01 m	474.15 kN	401.28 kN	875.43 kN
16.01 m	802.87 kN	445.11 kN	1247.98 kN
17.61 m	1008.72 kN	445.11 kN	1453.83 kN
17.64 m	1013.04 kN	4465.59 kN	5478.64 kN
19.11 m	1479.47 kN	4465.59 kN	5945.06 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	22.73	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	22.73	N/A	15.93 kN
6.01 m	Cohesionless	20.10 kPa	22.73	N/A	63.50 kN
9.01 m	Cohesionless	30.13 kPa	22.73	N/A	142.72 kN
9.61 m	Cohesionless	32.15 kPa	22.73	N/A	162.53 kN
9.64 m	Cohesionless	64.41 kPa	29.46	N/A	163.64 kN
12.64 m	Cohesionless	75.62 kPa	29.46	N/A	434.72 kN
12.99 m	Cohesionless	76.94 kPa	29.46	N/A	472.11 kN
13.01 m	Cohesionless	89.62 kPa	28.62	N/A	474.15 kN
16.01 m	Cohesionless	100.82 kPa	28.62	N/A	802.87 kN
17.61 m	Cohesionless	106.82 kPa	28.62	N/A	1008.72 kN
17.64 m	Cohesionless	124.17 kPa	37.04	N/A	1013.04 kN
19.11 m	Cohesionless	131.45 kPa	37.04	N/A	1479.47 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	19.80	80.64 kN	0.09 kN
3.01 m	Cohesionless	20.13 kPa	19.80	80.64 kN	25.91 kN
6.01 m	Cohesionless	40.20 kPa	19.80	80.64 kN	51.73 kN
9.01 m	Cohesionless	60.26 kPa	19.80	80.64 kN	72.06 kN
9.61 m	Cohesionless	64.31 kPa	19.80	80.64 kN	75.03 kN
9.64 m	Cohesionless	64.45 kPa	64.00	651.43 kN	350.97 kN
12.64 m	Cohesionless	86.86 kPa	64.00	651.43 kN	468.35 kN
12.99 m	Cohesionless	89.51 kPa	64.00	651.43 kN	482.16 kN
13.01 m	Cohesionless	89.66 kPa	55.60	445.11 kN	401.28 kN
16.01 m	Cohesionless	112.06 kPa	55.60	445.11 kN	445.11 kN
17.61 m	Cohesionless	124.05 kPa	55.60	445.11 kN	445.11 kN
17.64 m	Cohesionless	124.22 kPa	391.00	4465.59 kN	4465.59 kN
19.11 m	Cohesionless	138.77 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.09 kN	0.09 kN
3.01 m	15.93 kN	25.91 kN	41.84 kN
6.01 m	63.50 kN	51.73 kN	115.23 kN
9.01 m	142.72 kN	72.06 kN	214.78 kN
9.61 m	162.53 kN	75.03 kN	237.56 kN
9.64 m	163.64 kN	350.97 kN	514.61 kN
12.64 m	434.72 kN	468.35 kN	903.06 kN
12.99 m	472.11 kN	482.16 kN	954.27 kN
13.01 m	474.15 kN	401.28 kN	875.43 kN
16.01 m	802.87 kN	445.11 kN	1247.98 kN
17.61 m	1008.72 kN	445.11 kN	1453.83 kN
17.64 m	1013.04 kN	4465.59 kN	5478.64 kN
19.11 m	1479.47 kN	4465.59 kN	5945.06 kN

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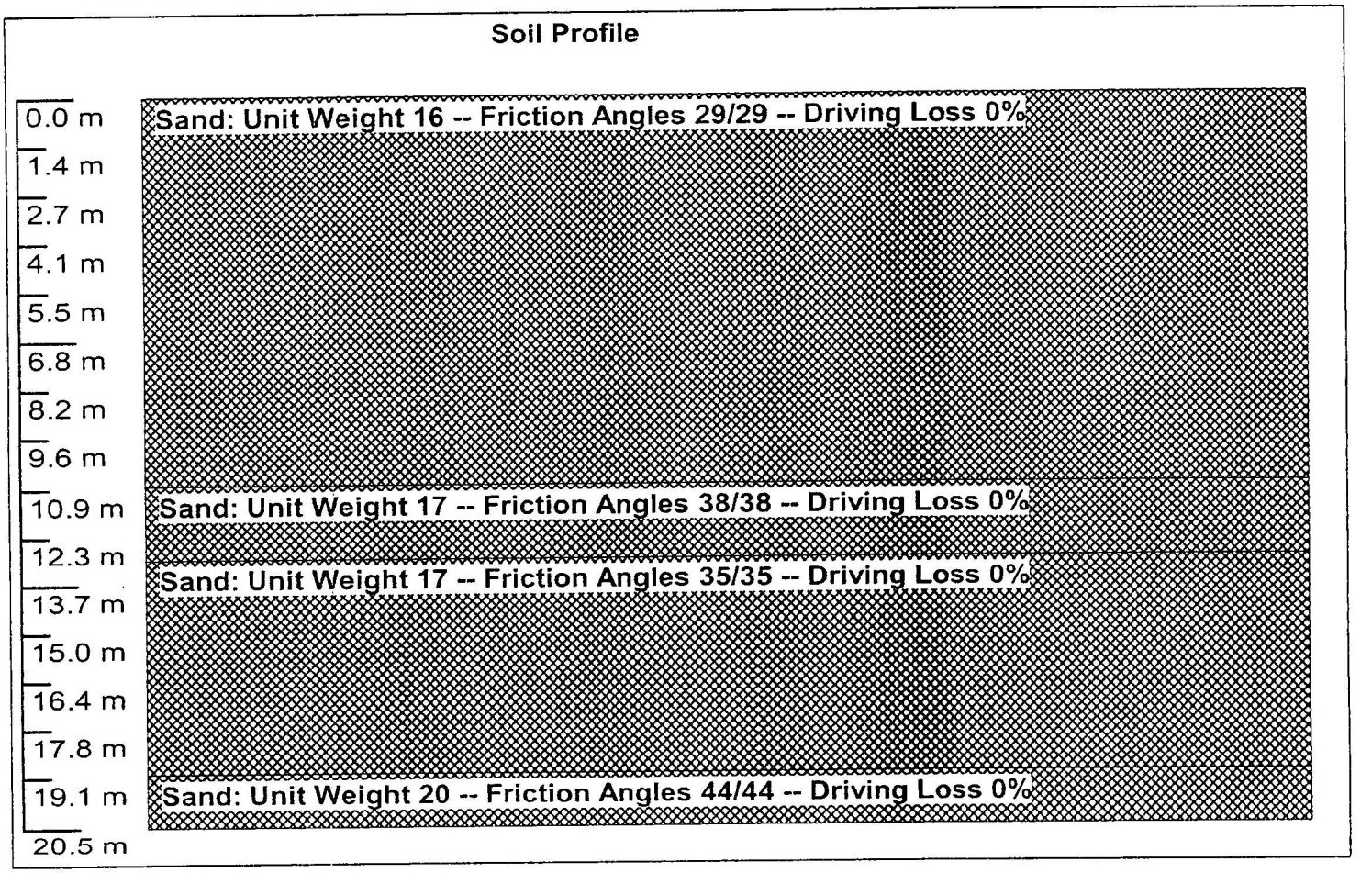

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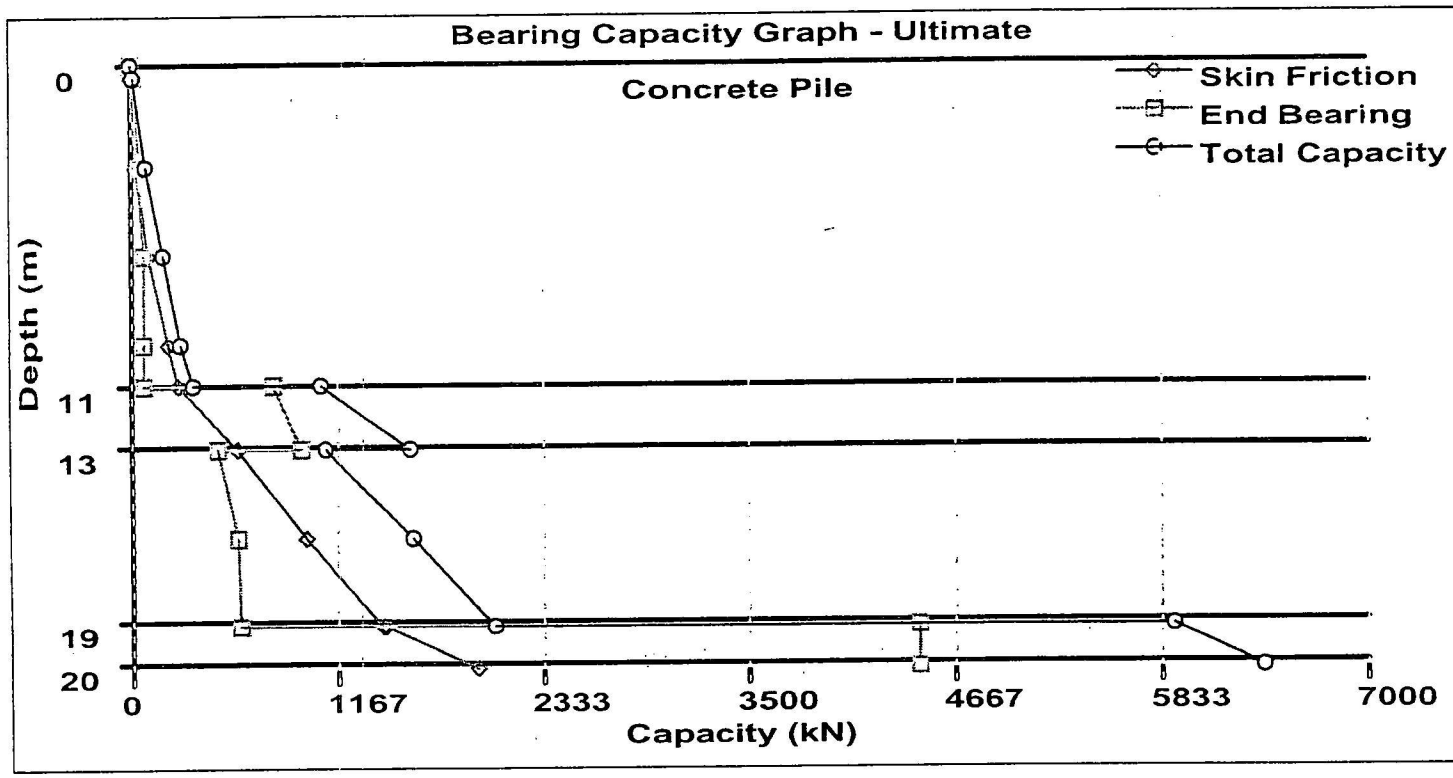

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP4_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.88 m	0.00%	16.49 kN/m^3	28.7/28.7	Nordlund
2	Cohesionless	2.12 m	0.00%	17.27 kN/m^3	38.1/38.1	Nordlund
3	Cohesionless	6.00 m	0.00%	17.27 kN/m^3	34.9/34.9	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.16	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	24.16	N/A	1.22 kN
0.51 m	Cohesionless	8.28 kPa	24.16	N/A	1.32 kN
3.51 m	Cohesionless	18.31 kPa	24.16	N/A	35.19 kN
6.51 m	Cohesionless	28.34 kPa	24.16	N/A	106.11 kN
9.51 m	Cohesionless	38.38 kPa	24.16	N/A	214.08 kN
10.86 m	Cohesionless	42.91 kPa	24.16	N/A	274.99 kN
10.89 m	Cohesionless	77.68 kPa	32.07	N/A	276.90 kN
12.99 m	Cohesionless	85.54 kPa	32.07	N/A	610.36 kN
13.01 m	Cohesionless	93.55 kPa	29.38	N/A	613.20 kN
16.01 m	Cohesionless	104.75 kPa	29.38	N/A	985.22 kN
18.99 m	Cohesionless	115.88 kPa	29.38	N/A	1433.51 kN
19.01 m	Cohesionless	138.37 kPa	37.04	N/A	1438.46 kN
20.49 m	Cohesionless	145.64 kPa	37.04	N/A	1955.23 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	25.32	80.64 kN	0.29 kN
0.49 m	Cohesionless	8.08 kPa	25.32	80.64 kN	14.26 kN
0.51 m	Cohesionless	8.31 kPa	25.32	80.64 kN	14.67 kN
3.51 m	Cohesionless	28.38 kPa	25.32	80.64 kN	50.10 kN
6.51 m	Cohesionless	48.44 kPa	25.32	80.64 kN	80.64 kN
9.51 m	Cohesionless	68.51 kPa	25.32	80.64 kN	80.64 kN
10.86 m	Cohesionless	77.57 kPa	25.32	80.64 kN	80.64 kN
10.89 m	Cohesionless	77.71 kPa	112.88	1666.85 kN	802.41 kN
12.99 m	Cohesionless	93.43 kPa	112.88	1666.85 kN	964.73 kN
13.01 m	Cohesionless	93.58 kPa	63.16	630.80 kN	495.30 kN
16.01 m	Cohesionless	115.99 kPa	63.16	630.80 kN	608.34 kN
18.99 m	Cohesionless	138.25 kPa	63.16	630.80 kN	630.80 kN
19.01 m	Cohesionless	138.42 kPa	391.00	4465.59 kN	4465.59 kN
20.49 m	Cohesionless	152.96 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.29 kN	0.29 kN
0.49 m	1.22 kN	14.26 kN	15.48 kN
0.51 m	1.32 kN	14.67 kN	15.99 kN
3.51 m	35.19 kN	50.10 kN	85.29 kN
6.51 m	106.11 kN	80.64 kN	186.75 kN
9.51 m	214.08 kN	80.64 kN	294.72 kN
10.86 m	274.99 kN	80.64 kN	355.63 kN
10.89 m	276.90 kN	802.41 kN	1079.31 kN
12.99 m	610.36 kN	964.73 kN	1575.09 kN
13.01 m	613.20 kN	495.30 kN	1108.50 kN
16.01 m	985.22 kN	608.34 kN	1593.56 kN
18.99 m	1433.51 kN	630.80 kN	2064.31 kN
19.01 m	1438.46 kN	4465.59 kN	5904.05 kN
20.49 m	1955.23 kN	4465.59 kN	6420.83 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.16	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	24.16	N/A	1.22 kN
0.51 m	Cohesionless	8.28 kPa	24.16	N/A	1.32 kN
3.51 m	Cohesionless	18.31 kPa	24.16	N/A	35.19 kN
6.51 m	Cohesionless	28.34 kPa	24.16	N/A	106.11 kN
9.51 m	Cohesionless	38.38 kPa	24.16	N/A	214.08 kN
10.86 m	Cohesionless	42.91 kPa	24.16	N/A	274.99 kN
10.89 m	Cohesionless	77.68 kPa	32.07	N/A	276.90 kN
12.99 m	Cohesionless	85.54 kPa	32.07	N/A	610.36 kN
13.01 m	Cohesionless	93.55 kPa	29.38	N/A	613.20 kN
16.01 m	Cohesionless	104.75 kPa	29.38	N/A	985.22 kN
18.99 m	Cohesionless	115.88 kPa	29.38	N/A	1433.51 kN
19.01 m	Cohesionless	138.37 kPa	37.04	N/A	1438.46 kN
20.49 m	Cohesionless	145.64 kPa	37.04	N/A	1955.23 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	25.32	80.64 kN	0.29 kN
0.49 m	Cohesionless	8.08 kPa	25.32	80.64 kN	14.26 kN
0.51 m	Cohesionless	8.31 kPa	25.32	80.64 kN	14.67 kN
3.51 m	Cohesionless	28.38 kPa	25.32	80.64 kN	50.10 kN
6.51 m	Cohesionless	48.44 kPa	25.32	80.64 kN	80.64 kN
9.51 m	Cohesionless	68.51 kPa	25.32	80.64 kN	80.64 kN
10.86 m	Cohesionless	77.57 kPa	25.32	80.64 kN	80.64 kN
10.89 m	Cohesionless	77.71 kPa	112.88	1666.85 kN	802.41 kN
12.99 m	Cohesionless	93.43 kPa	112.88	1666.85 kN	964.73 kN
13.01 m	Cohesionless	93.58 kPa	63.16	630.80 kN	495.30 kN
16.01 m	Cohesionless	115.99 kPa	63.16	630.80 kN	608.34 kN
18.99 m	Cohesionless	138.25 kPa	63.16	630.80 kN	630.80 kN
19.01 m	Cohesionless	138.42 kPa	391.00	4465.59 kN	4465.59 kN
20.49 m	Cohesionless	152.96 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.29 kN	0.29 kN
0.49 m	1.22 kN	14.26 kN	15.48 kN
0.51 m	1.32 kN	14.67 kN	15.99 kN
3.51 m	35.19 kN	50.10 kN	85.29 kN
6.51 m	106.11 kN	80.64 kN	186.75 kN
9.51 m	214.08 kN	80.64 kN	294.72 kN
10.86 m	274.99 kN	80.64 kN	355.63 kN
10.89 m	276.90 kN	802.41 kN	1079.31 kN
12.99 m	610.36 kN	964.73 kN	1575.09 kN
13.01 m	613.20 kN	495.30 kN	1108.50 kN
16.01 m	985.22 kN	608.34 kN	1593.56 kN
18.99 m	1433.51 kN	630.80 kN	2064.31 kN
19.01 m	1438.46 kN	4465.59 kN	5904.05 kN
20.49 m	1955.23 kN	4465.59 kN	6420.83 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.16	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	24.16	N/A	1.22 kN
0.51 m	Cohesionless	8.28 kPa	24.16	N/A	1.32 kN
3.51 m	Cohesionless	18.31 kPa	24.16	N/A	35.19 kN
6.51 m	Cohesionless	28.34 kPa	24.16	N/A	106.11 kN
9.51 m	Cohesionless	38.38 kPa	24.16	N/A	214.08 kN
10.86 m	Cohesionless	42.91 kPa	24.16	N/A	274.99 kN
10.89 m	Cohesionless	77.68 kPa	32.07	N/A	276.90 kN
12.99 m	Cohesionless	85.54 kPa	32.07	N/A	610.36 kN
13.01 m	Cohesionless	93.55 kPa	29.38	N/A	613.20 kN
16.01 m	Cohesionless	104.75 kPa	29.38	N/A	985.22 kN
18.99 m	Cohesionless	115.88 kPa	29.38	N/A	1433.51 kN
19.01 m	Cohesionless	138.37 kPa	37.04	N/A	1438.46 kN
20.49 m	Cohesionless	145.64 kPa	37.04	N/A	1955.23 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	25.32	80.64 kN	0.29 kN
0.49 m	Cohesionless	8.08 kPa	25.32	80.64 kN	14.26 kN
0.51 m	Cohesionless	8.31 kPa	25.32	80.64 kN	14.67 kN
3.51 m	Cohesionless	28.38 kPa	25.32	80.64 kN	50.10 kN
6.51 m	Cohesionless	48.44 kPa	25.32	80.64 kN	80.64 kN
9.51 m	Cohesionless	68.51 kPa	25.32	80.64 kN	80.64 kN
10.86 m	Cohesionless	77.57 kPa	25.32	80.64 kN	80.64 kN
10.89 m	Cohesionless	77.71 kPa	112.88	1666.85 kN	802.41 kN
12.99 m	Cohesionless	93.43 kPa	112.88	1666.85 kN	964.73 kN
13.01 m	Cohesionless	93.58 kPa	63.16	630.80 kN	495.30 kN
16.01 m	Cohesionless	115.99 kPa	63.16	630.80 kN	608.34 kN
18.99 m	Cohesionless	138.25 kPa	63.16	630.80 kN	630.80 kN
19.01 m	Cohesionless	138.42 kPa	391.00	4465.59 kN	4465.59 kN
20.49 m	Cohesionless	152.96 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.29 kN	0.29 kN
0.49 m	1.22 kN	14.26 kN	15.48 kN
0.51 m	1.32 kN	14.67 kN	15.99 kN
3.51 m	35.19 kN	50.10 kN	85.29 kN
6.51 m	106.11 kN	80.64 kN	186.75 kN
9.51 m	214.08 kN	80.64 kN	294.72 kN
10.86 m	274.99 kN	80.64 kN	355.63 kN
10.89 m	276.90 kN	802.41 kN	1079.31 kN
12.99 m	610.36 kN	964.73 kN	1575.09 kN
13.01 m	613.20 kN	495.30 kN	1108.50 kN
16.01 m	985.22 kN	608.34 kN	1593.56 kN
18.99 m	1433.51 kN	630.80 kN	2064.31 kN
19.01 m	1438.46 kN	4465.59 kN	5904.05 kN
20.49 m	1955.23 kN	4465.59 kN	6420.83 kN

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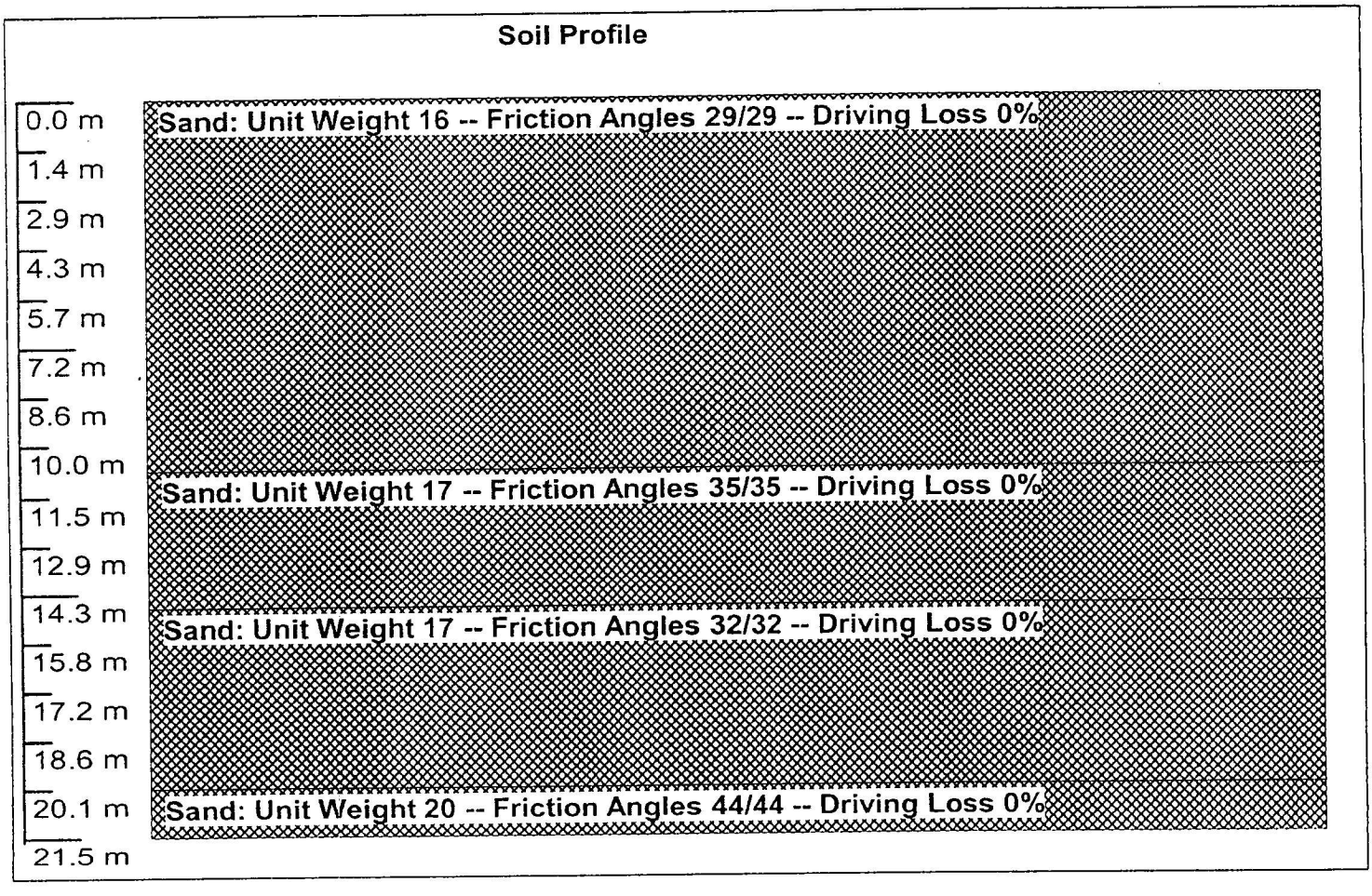

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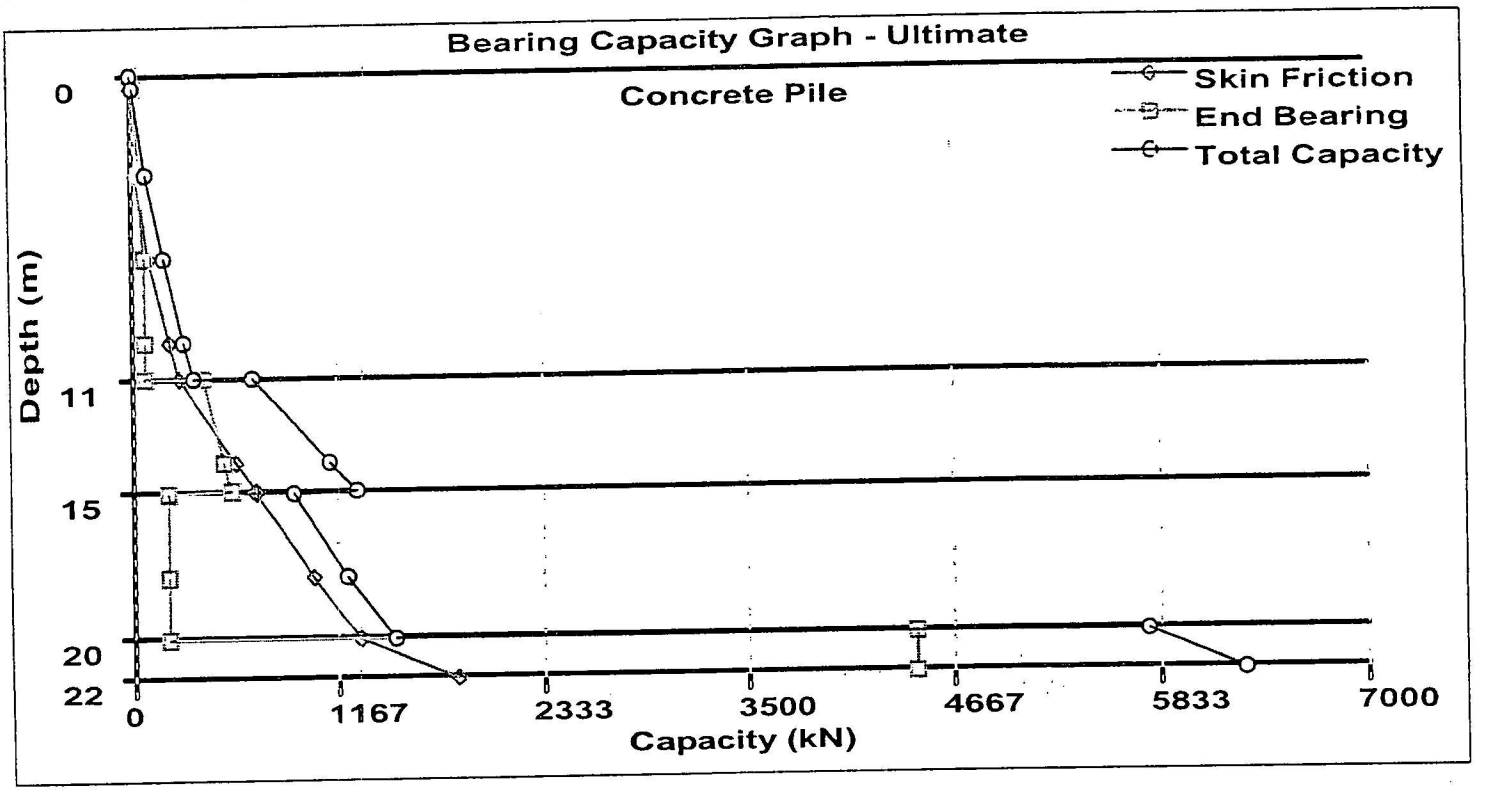

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP5_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.75 m	0.00%	16.49 kN/m^3	29.0/29.0	Nordlund
2	Cohesionless	4.00 m	0.00%	17.27 kN/m^3	35.0/35.0	Nordlund
3	Cohesionless	5.25 m	0.00%	17.27 kN/m^3	32.0/32.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.41	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	24.41	N/A	1.25 kN
0.51 m	Cohesionless	8.28 kPa	24.41	N/A	1.35 kN
3.51 m	Cohesionless	18.31 kPa	24.41	N/A	36.13 kN
6.51 m	Cohesionless	28.34 kPa	24.41	N/A	108.94 kN
9.51 m	Cohesionless	38.38 kPa	24.41	N/A	219.79 kN
10.74 m	Cohesionless	42.49 kPa	24.41	N/A	276.23 kN
10.76 m	Cohesionless	76.84 kPa	29.46	N/A	277.64 kN
13.76 m	Cohesionless	88.04 kPa	29.46	N/A	593.23 kN
14.74 m	Cohesionless	91.70 kPa	29.46	N/A	713.72 kN
14.76 m	Cohesionless	106.71 kPa	26.94	N/A	715.94 kN
17.76 m	Cohesionless	117.92 kPa	26.94	N/A	1027.42 kN
19.99 m	Cohesionless	126.24 kPa	26.94	N/A	1297.30 kN
20.01 m	Cohesionless	145.94 kPa	37.04	N/A	1302.08 kN
21.49 m	Cohesionless	153.21 kPa	37.04	N/A	1845.69 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	26.40	80.64 kN	0.31 kN
0.49 m	Cohesionless	8.08 kPa	26.40	80.64 kN	15.05 kN
0.51 m	Cohesionless	8.31 kPa	26.40	80.64 kN	15.48 kN
3.51 m	Cohesionless	28.38 kPa	26.40	80.64 kN	52.86 kN
6.51 m	Cohesionless	48.44 kPa	26.40	80.64 kN	80.64 kN
9.51 m	Cohesionless	68.51 kPa	26.40	80.64 kN	80.64 kN
10.74 m	Cohesionless	76.74 kPa	26.40	80.64 kN	80.64 kN
10.76 m	Cohesionless	76.88 kPa	64.00	651.43 kN	416.72 kN
13.76 m	Cohesionless	99.28 kPa	64.00	651.43 kN	533.65 kN
14.74 m	Cohesionless	106.60 kPa	64.00	651.43 kN	571.41 kN
14.76 m	Cohesionless	106.75 kPa	40.40	199.79 kN	199.79 kN
17.76 m	Cohesionless	129.16 kPa	40.40	199.79 kN	199.79 kN
19.99 m	Cohesionless	145.81 kPa	40.40	199.79 kN	199.79 kN
20.01 m	Cohesionless	145.98 kPa	391.00	4465.59 kN	4465.59 kN
21.49 m	Cohesionless	160.53 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.31 kN	0.31 kN
0.49 m	1.25 kN	15.05 kN	16.30 kN
0.51 m	1.35 kN	15.48 kN	16.84 kN
3.51 m	36.13 kN	52.86 kN	88.99 kN
6.51 m	108.94 kN	80.64 kN	189.58 kN
9.51 m	219.79 kN	80.64 kN	300.43 kN
10.74 m	276.23 kN	80.64 kN	356.88 kN
10.76 m	277.64 kN	416.72 kN	694.36 kN
13.76 m	593.23 kN	533.65 kN	1126.88 kN
14.74 m	713.72 kN	571.41 kN	1285.13 kN
14.76 m	715.94 kN	199.79 kN	915.72 kN
17.76 m	1027.42 kN	199.79 kN	1227.21 kN
19.99 m	1297.30 kN	199.79 kN	1497.09 kN
20.01 m	1302.08 kN	4465.59 kN	5767.67 kN
21.49 m	1845.69 kN	4465.59 kN	6311.29 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.41	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	24.41	N/A	1.25 kN
0.51 m	Cohesionless	8.28 kPa	24.41	N/A	1.35 kN
3.51 m	Cohesionless	18.31 kPa	24.41	N/A	36.13 kN
6.51 m	Cohesionless	28.34 kPa	24.41	N/A	108.94 kN
9.51 m	Cohesionless	38.38 kPa	24.41	N/A	219.79 kN
10.74 m	Cohesionless	42.49 kPa	24.41	N/A	276.23 kN
10.76 m	Cohesionless	76.84 kPa	29.46	N/A	277.64 kN
13.76 m	Cohesionless	88.04 kPa	29.46	N/A	593.23 kN
14.74 m	Cohesionless	91.70 kPa	29.46	N/A	713.72 kN
14.76 m	Cohesionless	106.71 kPa	26.94	N/A	715.94 kN
17.76 m	Cohesionless	117.92 kPa	26.94	N/A	1027.42 kN
19.99 m	Cohesionless	126.24 kPa	26.94	N/A	1297.30 kN
20.01 m	Cohesionless	145.94 kPa	37.04	N/A	1302.08 kN
21.49 m	Cohesionless	153.21 kPa	37.04	N/A	1845.69 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	26.40	80.64 kN	0.31 kN
0.49 m	Cohesionless	8.08 kPa	26.40	80.64 kN	15.05 kN
0.51 m	Cohesionless	8.31 kPa	26.40	80.64 kN	15.48 kN
3.51 m	Cohesionless	28.38 kPa	26.40	80.64 kN	52.86 kN
6.51 m	Cohesionless	48.44 kPa	26.40	80.64 kN	80.64 kN
9.51 m	Cohesionless	68.51 kPa	26.40	80.64 kN	80.64 kN
10.74 m	Cohesionless	76.74 kPa	26.40	80.64 kN	80.64 kN
10.76 m	Cohesionless	76.88 kPa	64.00	651.43 kN	416.72 kN
13.76 m	Cohesionless	99.28 kPa	64.00	651.43 kN	533.65 kN
14.74 m	Cohesionless	106.60 kPa	64.00	651.43 kN	571.41 kN
14.76 m	Cohesionless	106.75 kPa	40.40	199.79 kN	199.79 kN
17.76 m	Cohesionless	129.16 kPa	40.40	199.79 kN	199.79 kN
19.99 m	Cohesionless	145.81 kPa	40.40	199.79 kN	199.79 kN
20.01 m	Cohesionless	145.98 kPa	391.00	4465.59 kN	4465.59 kN
21.49 m	Cohesionless	160.53 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.31 kN	0.31 kN
0.49 m	1.25 kN	15.05 kN	16.30 kN
0.51 m	1.35 kN	15.48 kN	16.84 kN
3.51 m	36.13 kN	52.86 kN	88.99 kN
6.51 m	108.94 kN	80.64 kN	189.58 kN
9.51 m	219.79 kN	80.64 kN	300.43 kN
10.74 m	276.23 kN	80.64 kN	356.88 kN
10.76 m	277.64 kN	416.72 kN	694.36 kN
13.76 m	593.23 kN	533.65 kN	1126.88 kN
14.74 m	713.72 kN	571.41 kN	1285.13 kN
14.76 m	715.94 kN	199.79 kN	915.72 kN
17.76 m	1027.42 kN	199.79 kN	1227.21 kN
19.99 m	1297.30 kN	199.79 kN	1497.09 kN
20.01 m	1302.08 kN	4465.59 kN	5767.67 kN
21.49 m	1845.69 kN	4465.59 kN	6311.29 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.41	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	24.41	N/A	1.25 kN
0.51 m	Cohesionless	8.28 kPa	24.41	N/A	1.35 kN
3.51 m	Cohesionless	18.31 kPa	24.41	N/A	36.13 kN
6.51 m	Cohesionless	28.34 kPa	24.41	N/A	108.94 kN
9.51 m	Cohesionless	38.38 kPa	24.41	N/A	219.79 kN
10.74 m	Cohesionless	42.49 kPa	24.41	N/A	276.23 kN
10.76 m	Cohesionless	76.84 kPa	29.46	N/A	277.64 kN
13.76 m	Cohesionless	88.04 kPa	29.46	N/A	593.23 kN
14.74 m	Cohesionless	91.70 kPa	29.46	N/A	713.72 kN
14.76 m	Cohesionless	106.71 kPa	26.94	N/A	715.94 kN
17.76 m	Cohesionless	117.92 kPa	26.94	N/A	1027.42 kN
19.99 m	Cohesionless	126.24 kPa	26.94	N/A	1297.30 kN
20.01 m	Cohesionless	145.94 kPa	37.04	N/A	1302.08 kN
21.49 m	Cohesionless	153.21 kPa	37.04	N/A	1845.69 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	26.40	80.64 kN	0.31 kN
0.49 m	Cohesionless	8.08 kPa	26.40	80.64 kN	15.05 kN
0.51 m	Cohesionless	8.31 kPa	26.40	80.64 kN	15.48 kN
3.51 m	Cohesionless	28.38 kPa	26.40	80.64 kN	52.86 kN
6.51 m	Cohesionless	48.44 kPa	26.40	80.64 kN	80.64 kN
9.51 m	Cohesionless	68.51 kPa	26.40	80.64 kN	80.64 kN
10.74 m	Cohesionless	76.74 kPa	26.40	80.64 kN	80.64 kN
10.76 m	Cohesionless	76.88 kPa	64.00	651.43 kN	416.72 kN
13.76 m	Cohesionless	99.28 kPa	64.00	651.43 kN	533.65 kN
14.74 m	Cohesionless	106.60 kPa	64.00	651.43 kN	571.41 kN
14.76 m	Cohesionless	106.75 kPa	40.40	199.79 kN	199.79 kN
17.76 m	Cohesionless	129.16 kPa	40.40	199.79 kN	199.79 kN
19.99 m	Cohesionless	145.81 kPa	40.40	199.79 kN	199.79 kN
20.01 m	Cohesionless	145.98 kPa	391.00	4465.59 kN	4465.59 kN
21.49 m	Cohesionless	160.53 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.31 kN	0.31 kN
0.49 m	1.25 kN	15.05 kN	16.30 kN
0.51 m	1.35 kN	15.48 kN	16.84 kN
3.51 m	36.13 kN	52.86 kN	88.99 kN
6.51 m	108.94 kN	80.64 kN	189.58 kN
9.51 m	219.79 kN	80.64 kN	300.43 kN
10.74 m	276.23 kN	80.64 kN	356.88 kN
10.76 m	277.64 kN	416.72 kN	694.36 kN
13.76 m	593.23 kN	533.65 kN	1126.88 kN
14.74 m	713.72 kN	571.41 kN	1285.13 kN
14.76 m	715.94 kN	199.79 kN	915.72 kN
17.76 m	1027.42 kN	199.79 kN	1227.21 kN
19.99 m	1297.30 kN	199.79 kN	1497.09 kN
20.01 m	1302.08 kN	4465.59 kN	5767.67 kN
21.49 m	1845.69 kN	4465.59 kN	6311.29 kN

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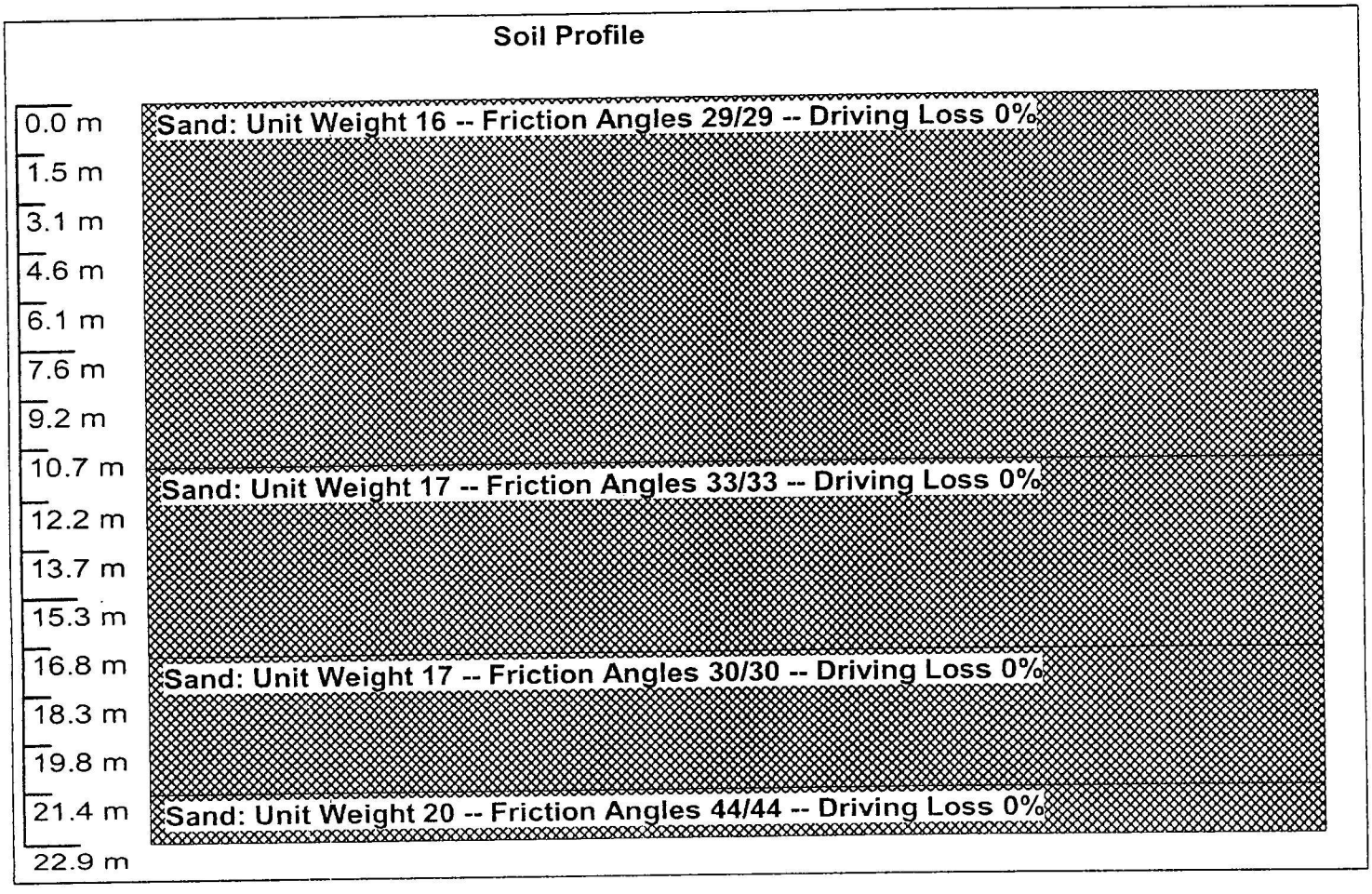

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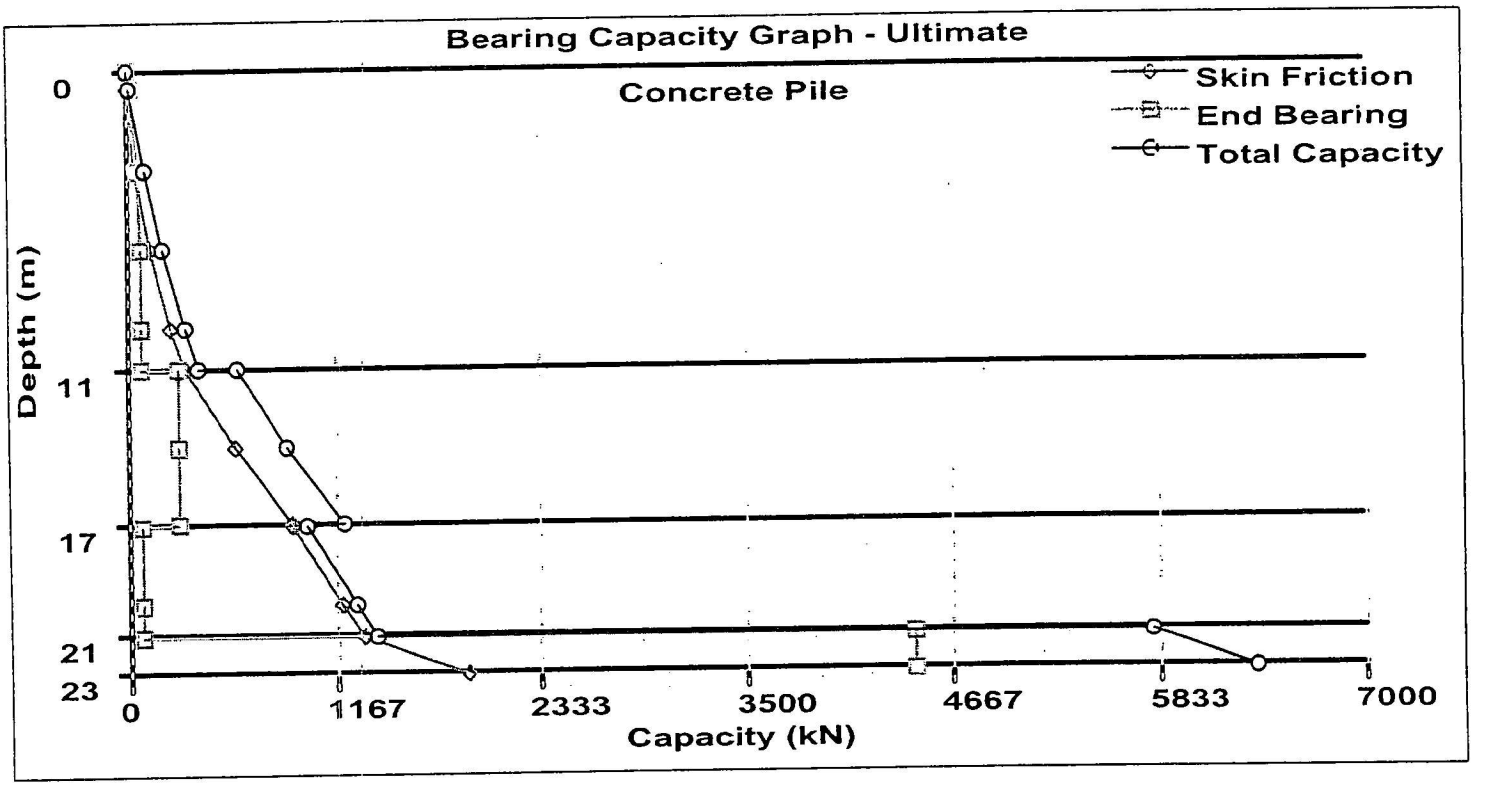

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SAB2_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	11.25 m	0.00%	16.49 kN/m^3	29.3/29.3	Nordlund
2	Cohesionless	5.90 m	0.00%	17.27 kN/m^3	32.9/32.9	Nordlund
3	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	29.5/29.5	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.66	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	24.66	N/A	2.93 kN
0.76 m	Cohesionless	12.40 kPa	24.66	N/A	3.09 kN
3.76 m	Cohesionless	22.43 kPa	24.66	N/A	46.80 kN
6.76 m	Cohesionless	32.47 kPa	24.66	N/A	129.54 kN
9.76 m	Cohesionless	42.50 kPa	24.66	N/A	251.33 kN
11.24 m	Cohesionless	47.45 kPa	24.66	N/A	325.79 kN
11.26 m	Cohesionless	82.63 kPa	27.69	N/A	327.12 kN
14.26 m	Cohesionless	93.84 kPa	27.69	N/A	600.68 kN
17.14 m	Cohesionless	104.59 kPa	27.69	N/A	924.72 kN
17.16 m	Cohesionless	126.70 kPa	24.83	N/A	926.79 kN
20.16 m	Cohesionless	137.90 kPa	24.83	N/A	1199.76 kN
21.39 m	Cohesionless	142.49 kPa	24.83	N/A	1324.50 kN
21.41 m	Cohesionless	158.45 kPa	37.04	N/A	1329.34 kN
22.89 m	Cohesionless	165.73 kPa	37.04	N/A	1917.35 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	27.48	80.64 kN	0.32 kN
0.74 m	Cohesionless	12.20 kPa	27.48	80.64 kN	23.94 kN
0.76 m	Cohesionless	12.43 kPa	27.48	80.64 kN	24.40 kN
3.76 m	Cohesionless	32.50 kPa	27.48	80.64 kN	63.76 kN
6.76 m	Cohesionless	52.57 kPa	27.48	80.64 kN	80.64 kN
9.76 m	Cohesionless	72.63 kPa	27.48	80.64 kN	80.64 kN
11.24 m	Cohesionless	82.53 kPa	27.48	80.64 kN	80.64 kN
11.26 m	Cohesionless	82.67 kPa	46.36	290.60 kN	290.60 kN
14.26 m	Cohesionless	105.08 kPa	46.36	290.60 kN	290.60 kN
17.14 m	Cohesionless	126.59 kPa	46.36	290.60 kN	290.60 kN
17.16 m	Cohesionless	126.74 kPa	28.20	80.64 kN	80.64 kN
20.16 m	Cohesionless	149.14 kPa	28.20	80.64 kN	80.64 kN
21.39 m	Cohesionless	158.33 kPa	28.20	80.64 kN	80.64 kN
21.41 m	Cohesionless	158.50 kPa	391.00	4465.59 kN	4465.59 kN
22.89 m	Cohesionless	173.05 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.32 kN	0.32 kN
0.74 m	2.93 kN	23.94 kN	26.87 kN
0.76 m	3.09 kN	24.40 kN	27.48 kN
3.76 m	46.80 kN	63.76 kN	110.56 kN
6.76 m	129.54 kN	80.64 kN	210.19 kN
9.76 m	251.33 kN	80.64 kN	331.97 kN
11.24 m	325.79 kN	80.64 kN	406.43 kN
11.26 m	327.12 kN	290.60 kN	617.73 kN
14.26 m	600.68 kN	290.60 kN	891.28 kN
17.14 m	924.72 kN	290.60 kN	1215.32 kN
17.16 m	926.79 kN	80.64 kN	1007.43 kN
20.16 m	1199.76 kN	80.64 kN	1280.41 kN
21.39 m	1324.50 kN	80.64 kN	1405.14 kN
21.41 m	1329.34 kN	4465.59 kN	5794.94 kN
22.89 m	1917.35 kN	4465.59 kN	6382.94 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.66	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	24.66	N/A	2.93 kN
0.76 m	Cohesionless	12.40 kPa	24.66	N/A	3.09 kN
3.76 m	Cohesionless	22.43 kPa	24.66	N/A	46.80 kN
6.76 m	Cohesionless	32.47 kPa	24.66	N/A	129.54 kN
9.76 m	Cohesionless	42.50 kPa	24.66	N/A	251.33 kN
11.24 m	Cohesionless	47.45 kPa	24.66	N/A	325.79 kN
11.26 m	Cohesionless	82.63 kPa	27.69	N/A	327.12 kN
14.26 m	Cohesionless	93.84 kPa	27.69	N/A	600.68 kN
17.14 m	Cohesionless	104.59 kPa	27.69	N/A	924.72 kN
17.16 m	Cohesionless	126.70 kPa	24.83	N/A	926.79 kN
20.16 m	Cohesionless	137.90 kPa	24.83	N/A	1199.76 kN
21.39 m	Cohesionless	142.49 kPa	24.83	N/A	1324.50 kN
21.41 m	Cohesionless	158.45 kPa	37.04	N/A	1329.34 kN
22.89 m	Cohesionless	165.73 kPa	37.04	N/A	1917.35 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	27.48	80.64 kN	0.32 kN
0.74 m	Cohesionless	12.20 kPa	27.48	80.64 kN	23.94 kN
0.76 m	Cohesionless	12.43 kPa	27.48	80.64 kN	24.40 kN
3.76 m	Cohesionless	32.50 kPa	27.48	80.64 kN	63.76 kN
6.76 m	Cohesionless	52.57 kPa	27.48	80.64 kN	80.64 kN
9.76 m	Cohesionless	72.63 kPa	27.48	80.64 kN	80.64 kN
11.24 m	Cohesionless	82.53 kPa	27.48	80.64 kN	80.64 kN
11.26 m	Cohesionless	82.67 kPa	46.36	290.60 kN	290.60 kN
14.26 m	Cohesionless	105.08 kPa	46.36	290.60 kN	290.60 kN
17.14 m	Cohesionless	126.59 kPa	46.36	290.60 kN	290.60 kN
17.16 m	Cohesionless	126.74 kPa	28.20	80.64 kN	80.64 kN
20.16 m	Cohesionless	149.14 kPa	28.20	80.64 kN	80.64 kN
21.39 m	Cohesionless	158.33 kPa	28.20	80.64 kN	80.64 kN
21.41 m	Cohesionless	158.50 kPa	391.00	4465.59 kN	4465.59 kN
22.89 m	Cohesionless	173.05 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.32 kN	0.32 kN
0.74 m	2.93 kN	23.94 kN	26.87 kN
0.76 m	3.09 kN	24.40 kN	27.48 kN
3.76 m	46.80 kN	63.76 kN	110.56 kN
6.76 m	129.54 kN	80.64 kN	210.19 kN
9.76 m	251.33 kN	80.64 kN	331.97 kN
11.24 m	325.79 kN	80.64 kN	406.43 kN
11.26 m	327.12 kN	290.60 kN	617.73 kN
14.26 m	600.68 kN	290.60 kN	891.28 kN
17.14 m	924.72 kN	290.60 kN	1215.32 kN
17.16 m	926.79 kN	80.64 kN	1007.43 kN
20.16 m	1199.76 kN	80.64 kN	1280.41 kN
21.39 m	1324.50 kN	80.64 kN	1405.14 kN
21.41 m	1329.34 kN	4465.59 kN	5794.94 kN
22.89 m	1917.35 kN	4465.59 kN	6382.94 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	24.66	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	24.66	N/A	2.93 kN
0.76 m	Cohesionless	12.40 kPa	24.66	N/A	3.09 kN
3.76 m	Cohesionless	22.43 kPa	24.66	N/A	46.80 kN
6.76 m	Cohesionless	32.47 kPa	24.66	N/A	129.54 kN
9.76 m	Cohesionless	42.50 kPa	24.66	N/A	251.33 kN
11.24 m	Cohesionless	47.45 kPa	24.66	N/A	325.79 kN
11.26 m	Cohesionless	82.63 kPa	27.69	N/A	327.12 kN
14.26 m	Cohesionless	93.84 kPa	27.69	N/A	600.68 kN
17.14 m	Cohesionless	104.59 kPa	27.69	N/A	924.72 kN
17.16 m	Cohesionless	126.70 kPa	24.83	N/A	926.79 kN
20.16 m	Cohesionless	137.90 kPa	24.83	N/A	1199.76 kN
21.39 m	Cohesionless	142.49 kPa	24.83	N/A	1324.50 kN
21.41 m	Cohesionless	158.45 kPa	37.04	N/A	1329.34 kN
22.89 m	Cohesionless	165.73 kPa	37.04	N/A	1917.35 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	27.48	80.64 kN	0.32 kN
0.74 m	Cohesionless	12.20 kPa	27.48	80.64 kN	23.94 kN
0.76 m	Cohesionless	12.43 kPa	27.48	80.64 kN	24.40 kN
3.76 m	Cohesionless	32.50 kPa	27.48	80.64 kN	63.76 kN
6.76 m	Cohesionless	52.57 kPa	27.48	80.64 kN	80.64 kN
9.76 m	Cohesionless	72.63 kPa	27.48	80.64 kN	80.64 kN
11.24 m	Cohesionless	82.53 kPa	27.48	80.64 kN	80.64 kN
11.26 m	Cohesionless	82.67 kPa	46.36	290.60 kN	290.60 kN
14.26 m	Cohesionless	105.08 kPa	46.36	290.60 kN	290.60 kN
17.14 m	Cohesionless	126.59 kPa	46.36	290.60 kN	290.60 kN
17.16 m	Cohesionless	126.74 kPa	28.20	80.64 kN	80.64 kN
20.16 m	Cohesionless	149.14 kPa	28.20	80.64 kN	80.64 kN
21.39 m	Cohesionless	158.33 kPa	28.20	80.64 kN	80.64 kN
21.41 m	Cohesionless	158.50 kPa	391.00	4465.59 kN	4465.59 kN
22.89 m	Cohesionless	173.05 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.32 kN	0.32 kN
0.74 m	2.93 kN	23.94 kN	26.87 kN
0.76 m	3.09 kN	24.40 kN	27.48 kN
3.76 m	46.80 kN	63.76 kN	110.56 kN
6.76 m	129.54 kN	80.64 kN	210.19 kN
9.76 m	251.33 kN	80.64 kN	331.97 kN
11.24 m	325.79 kN	80.64 kN	406.43 kN
11.26 m	327.12 kN	290.60 kN	617.73 kN
14.26 m	600.68 kN	290.60 kN	891.28 kN
17.14 m	924.72 kN	290.60 kN	1215.32 kN
17.16 m	926.79 kN	80.64 kN	1007.43 kN
20.16 m	1199.76 kN	80.64 kN	1280.41 kN
21.39 m	1324.50 kN	80.64 kN	1405.14 kN
21.41 m	1329.34 kN	4465.59 kN	5794.94 kN
22.89 m	1917.35 kN	4465.59 kN	6382.94 kN

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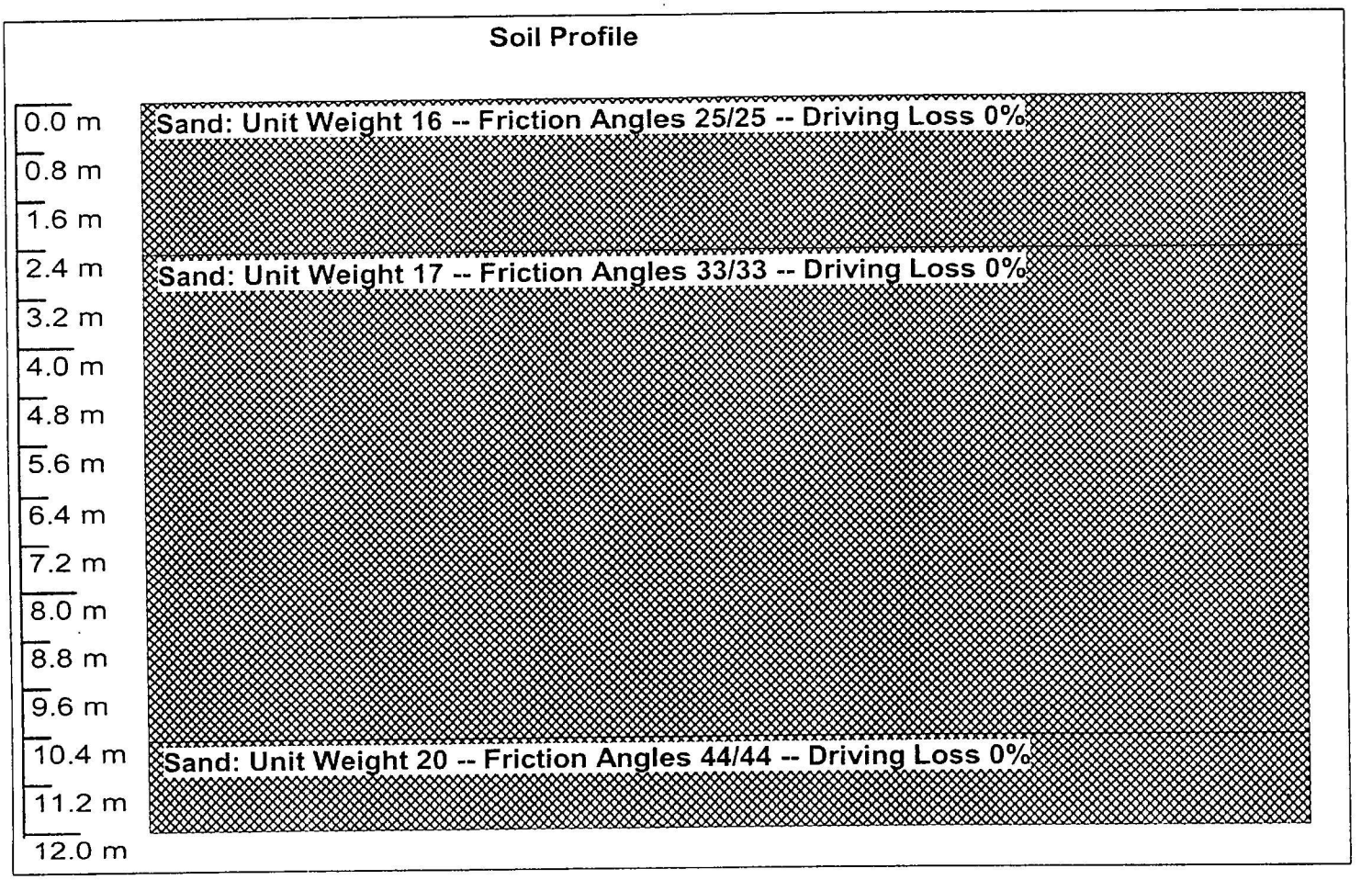

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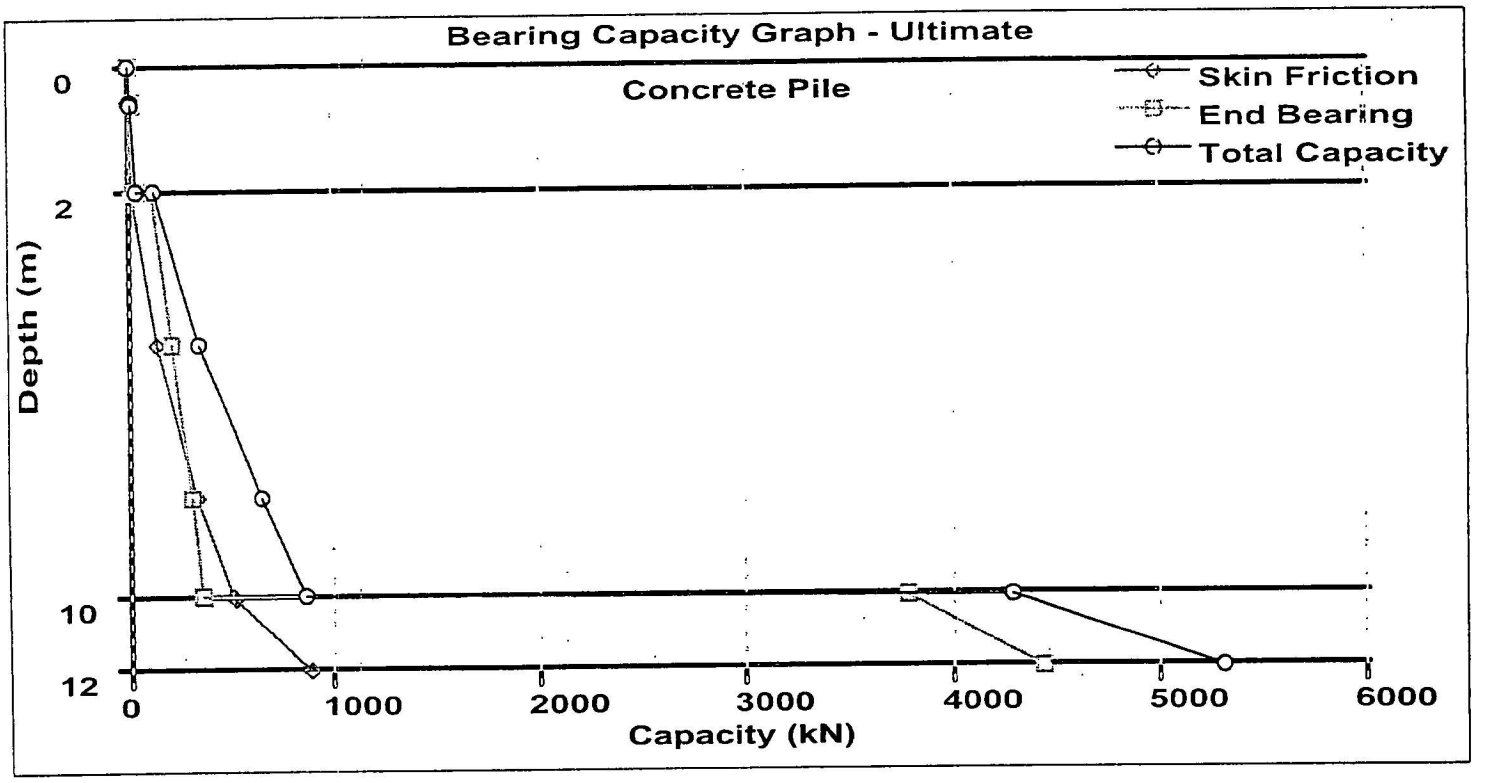

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SAB1_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	2.50 m	0.00%	16.49 kN/m^3	25.0/25.0	Nordlund
2	Cohesionless	8.00 m	0.00%	17.27 kN/m^3	33.1/33.1	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	21.80	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	21.80	N/A	2.18 kN
0.76 m	Cohesionless	12.40 kPa	21.80	N/A	2.30 kN
2.49 m	Cohesionless	18.19 kPa	21.80	N/A	17.53 kN
2.51 m	Cohesionless	24.11 kPa	28.87	N/A	17.92 kN
5.51 m	Cohesionless	35.31 kPa	28.87	N/A	137.94 kN
8.51 m	Cohesionless	46.52 kPa	28.87	N/A	334.02 kN
10.49 m	Cohesionless	53.91 kPa	28.87	N/A	505.11 kN
10.51 m	Cohesionless	83.87 kPa	38.37	N/A	508.39 kN
11.99 m	Cohesionless	91.14 kPa	38.37	N/A	883.78 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	15.00	92.57 kN	0.17 kN
0.74 m	Cohesionless	12.20 kPa	15.00	92.57 kN	12.49 kN
0.76 m	Cohesionless	12.43 kPa	15.00	92.57 kN	12.73 kN
2.49 m	Cohesionless	24.01 kPa	15.00	92.57 kN	24.57 kN
2.51 m	Cohesionless	24.15 kPa	48.04	361.40 kN	109.00 kN
5.51 m	Cohesionless	46.55 kPa	48.04	361.40 kN	210.14 kN
8.51 m	Cohesionless	68.96 kPa	48.04	361.40 kN	308.27 kN
10.49 m	Cohesionless	83.75 kPa	48.04	361.40 kN	361.40 kN
10.51 m	Cohesionless	83.92 kPa	391.00	5126.32 kN	3772.20 kN
11.99 m	Cohesionless	98.47 kPa	391.00	5126.32 kN	4426.06 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.17 kN	0.17 kN
0.74 m	2.18 kN	12.49 kN	14.67 kN
0.76 m	2.30 kN	12.73 kN	15.03 kN
2.49 m	17.53 kN	24.57 kN	42.10 kN
2.51 m	17.92 kN	109.00 kN	126.92 kN
5.51 m	137.94 kN	210.14 kN	348.08 kN
8.51 m	334.02 kN	308.27 kN	642.29 kN
10.49 m	505.11 kN	361.40 kN	866.51 kN
10.51 m	508.39 kN	3772.20 kN	4280.59 kN
11.99 m	883.78 kN	4426.06 kN	5309.85 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	21.80	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	21.80	N/A	2.18 kN
0.76 m	Cohesionless	12.40 kPa	21.80	N/A	2.30 kN
2.49 m	Cohesionless	18.19 kPa	21.80	N/A	17.53 kN
2.51 m	Cohesionless	24.11 kPa	28.87	N/A	17.92 kN
5.51 m	Cohesionless	35.31 kPa	28.87	N/A	137.94 kN
8.51 m	Cohesionless	46.52 kPa	28.87	N/A	334.02 kN
10.49 m	Cohesionless	53.91 kPa	28.87	N/A	505.11 kN
10.51 m	Cohesionless	83.87 kPa	38.37	N/A	508.39 kN
11.99 m	Cohesionless	91.14 kPa	38.37	N/A	883.78 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	15.00	92.57 kN	0.17 kN
0.74 m	Cohesionless	12.20 kPa	15.00	92.57 kN	12.49 kN
0.76 m	Cohesionless	12.43 kPa	15.00	92.57 kN	12.73 kN
2.49 m	Cohesionless	24.01 kPa	15.00	92.57 kN	24.57 kN
2.51 m	Cohesionless	24.15 kPa	48.04	361.40 kN	109.00 kN
5.51 m	Cohesionless	46.55 kPa	48.04	361.40 kN	210.14 kN
8.51 m	Cohesionless	68.96 kPa	48.04	361.40 kN	308.27 kN
10.49 m	Cohesionless	83.75 kPa	48.04	361.40 kN	361.40 kN
10.51 m	Cohesionless	83.92 kPa	391.00	5126.32 kN	3772.20 kN
11.99 m	Cohesionless	98.47 kPa	391.00	5126.32 kN	4426.06 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.17 kN	0.17 kN
0.74 m	2.18 kN	12.49 kN	14.67 kN
0.76 m	2.30 kN	12.73 kN	15.03 kN
2.49 m	17.53 kN	24.57 kN	42.10 kN
2.51 m	17.92 kN	109.00 kN	126.92 kN
5.51 m	137.94 kN	210.14 kN	348.08 kN
8.51 m	334.02 kN	308.27 kN	642.29 kN
10.49 m	505.11 kN	361.40 kN	866.51 kN
10.51 m	508.39 kN	3772.20 kN	4280.59 kN
11.99 m	883.78 kN	4426.06 kN	5309.85 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	21.80	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	21.80	N/A	2.18 kN
0.76 m	Cohesionless	12.40 kPa	21.80	N/A	2.30 kN
2.49 m	Cohesionless	18.19 kPa	21.80	N/A	17.53 kN
2.51 m	Cohesionless	24.11 kPa	28.87	N/A	17.92 kN
5.51 m	Cohesionless	35.31 kPa	28.87	N/A	137.94 kN
8.51 m	Cohesionless	46.52 kPa	28.87	N/A	334.02 kN
10.49 m	Cohesionless	53.91 kPa	28.87	N/A	505.11 kN
10.51 m	Cohesionless	83.87 kPa	38.37	N/A	508.39 kN
11.99 m	Cohesionless	91.14 kPa	38.37	N/A	883.78 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	15.00	92.57 kN	0.17 kN
0.74 m	Cohesionless	12.20 kPa	15.00	92.57 kN	12.49 kN
0.76 m	Cohesionless	12.43 kPa	15.00	92.57 kN	12.73 kN
2.49 m	Cohesionless	24.01 kPa	15.00	92.57 kN	24.57 kN
2.51 m	Cohesionless	24.15 kPa	48.04	361.40 kN	109.00 kN
5.51 m	Cohesionless	46.55 kPa	48.04	361.40 kN	210.14 kN
8.51 m	Cohesionless	68.96 kPa	48.04	361.40 kN	308.27 kN
10.49 m	Cohesionless	83.75 kPa	48.04	361.40 kN	361.40 kN
10.51 m	Cohesionless	83.92 kPa	391.00	5126.32 kN	3772.20 kN
11.99 m	Cohesionless	98.47 kPa	391.00	5126.32 kN	4426.06 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.17 kN	0.17 kN
0.74 m	2.18 kN	12.49 kN	14.67 kN
0.76 m	2.30 kN	12.73 kN	15.03 kN
2.49 m	17.53 kN	24.57 kN	42.10 kN
2.51 m	17.92 kN	109.00 kN	126.92 kN
5.51 m	137.94 kN	210.14 kN	348.08 kN
8.51 m	334.02 kN	308.27 kN	642.29 kN
10.49 m	505.11 kN	361.40 kN	866.51 kN
10.51 m	508.39 kN	3772.20 kN	4280.59 kN
11.99 m	883.78 kN	4426.06 kN	5309.85 kN

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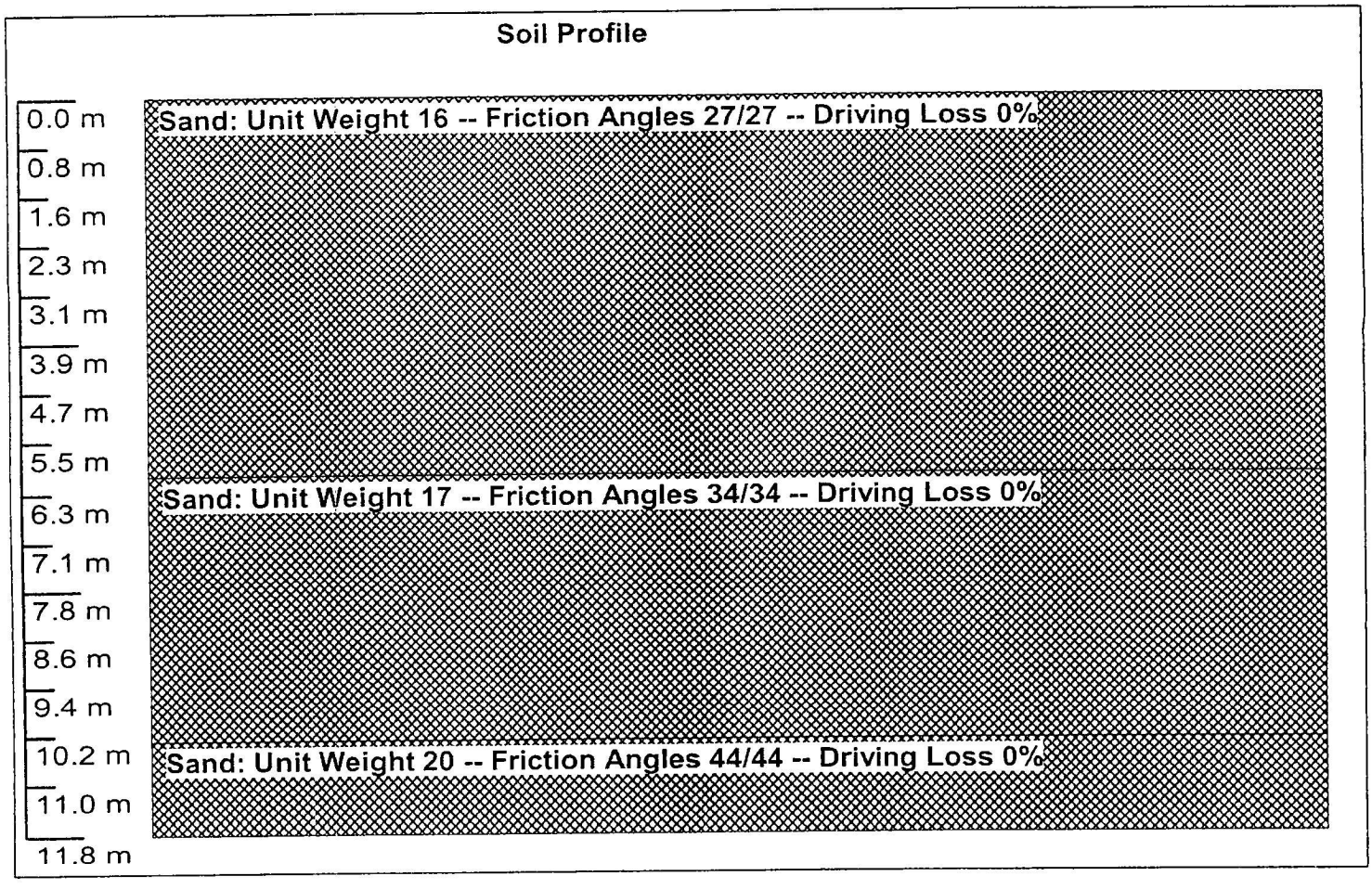

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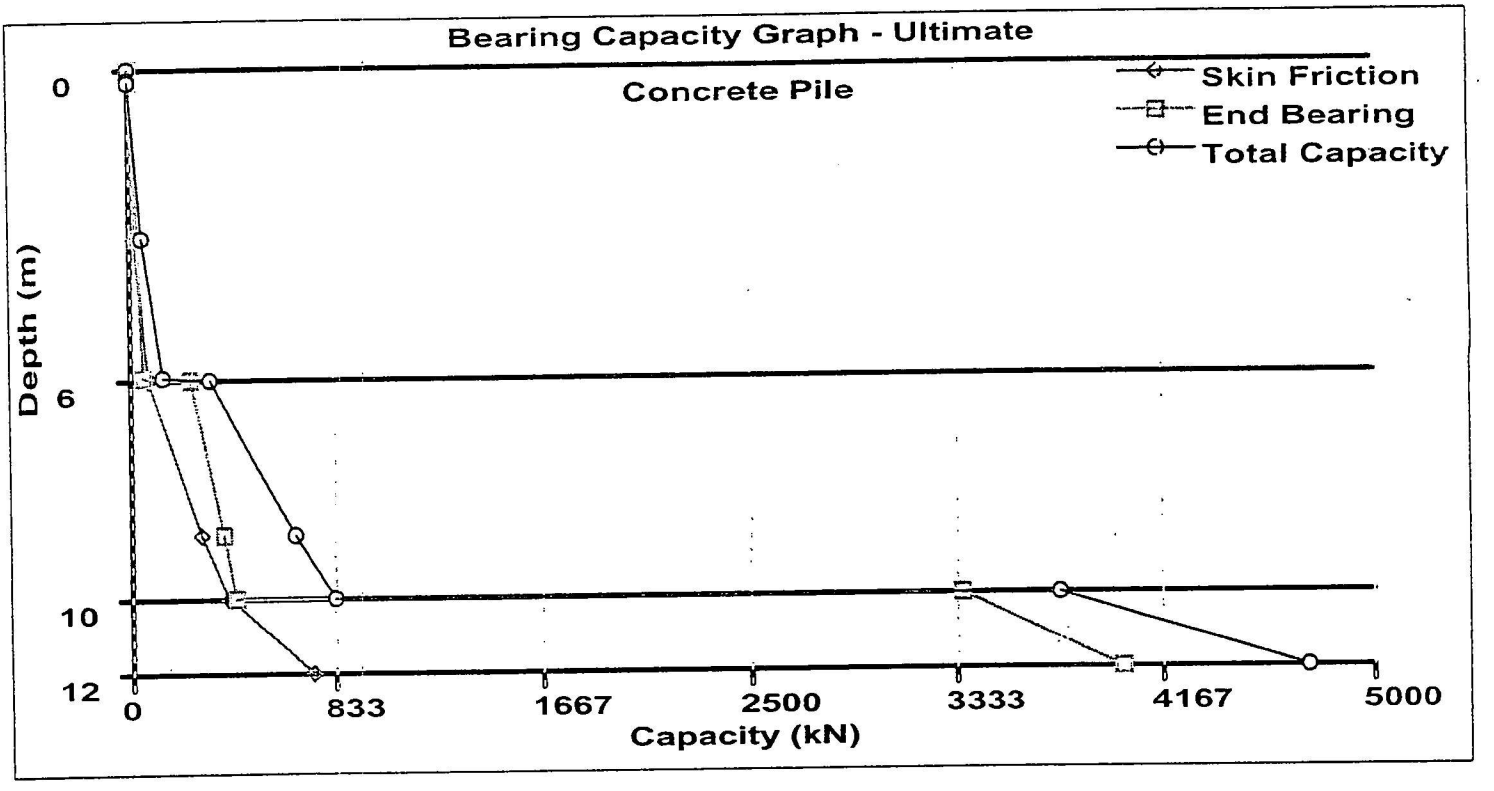

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP1_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.25 m
	- Driving/Restrike	0.25 m
	- Ultimate:	0.25 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	6.00 m	0.00%	16.49 kN/m^3	26.7/26.7	Nordlund
2	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	34.5/34.5	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	23.29	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	23.29	N/A	0.27 kN
0.26 m	Cohesionless	4.16 kPa	23.29	N/A	0.32 kN
3.26 m	Cohesionless	14.19 kPa	23.29	N/A	24.95 kN
5.99 m	Cohesionless	23.32 kPa	23.29	N/A	77.56 kN
6.01 m	Cohesionless	42.62 kPa	30.09	N/A	78.36 kN
9.01 m	Cohesionless	53.82 kPa	30.09	N/A	288.90 kN
10.24 m	Cohesionless	58.41 kPa	30.09	N/A	400.53 kN
10.26 m	Cohesionless	74.37 kPa	38.37	N/A	403.57 kN
11.74 m	Cohesionless	81.65 kPa	38.37	N/A	739.86 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	19.08	92.57 kN	0.23 kN
0.24 m	Cohesionless	3.96 kPa	19.08	92.57 kN	5.56 kN
0.26 m	Cohesionless	4.19 kPa	19.08	92.57 kN	5.89 kN
3.26 m	Cohesionless	24.26 kPa	19.08	92.57 kN	34.08 kN
5.99 m	Cohesionless	42.51 kPa	19.08	92.57 kN	59.74 kN
6.01 m	Cohesionless	42.66 kPa	59.80	629.39 kN	248.60 kN
9.01 m	Cohesionless	65.06 kPa	59.80	629.39 kN	376.21 kN
10.24 m	Cohesionless	74.25 kPa	59.80	629.39 kN	426.33 kN
10.26 m	Cohesionless	74.42 kPa	391.00	5126.32 kN	3345.25 kN
11.74 m	Cohesionless	88.97 kPa	391.00	5126.32 kN	3999.11 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.23 kN	0.23 kN
0.24 m	0.27 kN	5.56 kN	5.84 kN
0.26 m	0.32 kN	5.89 kN	6.21 kN
3.26 m	24.95 kN	34.08 kN	59.04 kN
5.99 m	77.56 kN	59.74 kN	137.30 kN
6.01 m	78.36 kN	248.60 kN	326.96 kN
9.01 m	288.90 kN	376.21 kN	665.10 kN
10.24 m	400.53 kN	426.33 kN	826.86 kN
10.26 m	403.57 kN	3345.25 kN	3748.82 kN
11.74 m	739.86 kN	3999.11 kN	4738.97 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	23.29	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	23.29	N/A	0.27 kN
0.26 m	Cohesionless	4.16 kPa	23.29	N/A	0.32 kN
3.26 m	Cohesionless	14.19 kPa	23.29	N/A	24.95 kN
5.99 m	Cohesionless	23.32 kPa	23.29	N/A	77.56 kN
6.01 m	Cohesionless	42.62 kPa	30.09	N/A	78.36 kN
9.01 m	Cohesionless	53.82 kPa	30.09	N/A	288.90 kN
10.24 m	Cohesionless	58.41 kPa	30.09	N/A	400.53 kN
10.26 m	Cohesionless	74.37 kPa	38.37	N/A	403.57 kN
11.74 m	Cohesionless	81.65 kPa	38.37	N/A	739.86 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	19.08	92.57 kN	0.23 kN
0.24 m	Cohesionless	3.96 kPa	19.08	92.57 kN	5.56 kN
0.26 m	Cohesionless	4.19 kPa	19.08	92.57 kN	5.89 kN
3.26 m	Cohesionless	24.26 kPa	19.08	92.57 kN	34.08 kN
5.99 m	Cohesionless	42.51 kPa	19.08	92.57 kN	59.74 kN
6.01 m	Cohesionless	42.66 kPa	59.80	629.39 kN	248.60 kN
9.01 m	Cohesionless	65.06 kPa	59.80	629.39 kN	376.21 kN
10.24 m	Cohesionless	74.25 kPa	59.80	629.39 kN	426.33 kN
10.26 m	Cohesionless	74.42 kPa	391.00	5126.32 kN	3345.25 kN
11.74 m	Cohesionless	88.97 kPa	391.00	5126.32 kN	3999.11 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.23 kN	0.23 kN
0.24 m	0.27 kN	5.56 kN	5.84 kN
0.26 m	0.32 kN	5.89 kN	6.21 kN
3.26 m	24.95 kN	34.08 kN	59.04 kN
5.99 m	77.56 kN	59.74 kN	137.30 kN
6.01 m	78.36 kN	248.60 kN	326.96 kN
9.01 m	288.90 kN	376.21 kN	665.10 kN
10.24 m	400.53 kN	426.33 kN	826.86 kN
10.26 m	403.57 kN	3345.25 kN	3748.82 kN
11.74 m	739.86 kN	3999.11 kN	4738.97 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	23.29	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	23.29	N/A	0.27 kN
0.26 m	Cohesionless	4.16 kPa	23.29	N/A	0.32 kN
3.26 m	Cohesionless	14.19 kPa	23.29	N/A	24.95 kN
5.99 m	Cohesionless	23.32 kPa	23.29	N/A	77.56 kN
6.01 m	Cohesionless	42.62 kPa	30.09	N/A	78.36 kN
9.01 m	Cohesionless	53.82 kPa	30.09	N/A	288.90 kN
10.24 m	Cohesionless	58.41 kPa	30.09	N/A	400.53 kN
10.26 m	Cohesionless	74.37 kPa	38.37	N/A	403.57 kN
11.74 m	Cohesionless	81.65 kPa	38.37	N/A	739.86 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	19.08	92.57 kN	0.23 kN
0.24 m	Cohesionless	3.96 kPa	19.08	92.57 kN	5.56 kN
0.26 m	Cohesionless	4.19 kPa	19.08	92.57 kN	5.89 kN
3.26 m	Cohesionless	24.26 kPa	19.08	92.57 kN	34.08 kN
5.99 m	Cohesionless	42.51 kPa	19.08	92.57 kN	59.74 kN
6.01 m	Cohesionless	42.66 kPa	59.80	629.39 kN	248.60 kN
9.01 m	Cohesionless	65.06 kPa	59.80	629.39 kN	376.21 kN
10.24 m	Cohesionless	74.25 kPa	59.80	629.39 kN	426.33 kN
10.26 m	Cohesionless	74.42 kPa	391.00	5126.32 kN	3345.25 kN
11.74 m	Cohesionless	88.97 kPa	391.00	5126.32 kN	3999.11 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.23 kN	0.23 kN
0.24 m	0.27 kN	5.56 kN	5.84 kN
0.26 m	0.32 kN	5.89 kN	6.21 kN
3.26 m	24.95 kN	34.08 kN	59.04 kN
5.99 m	77.56 kN	59.74 kN	137.30 kN
6.01 m	78.36 kN	248.60 kN	326.96 kN
9.01 m	288.90 kN	376.21 kN	665.10 kN
10.24 m	400.53 kN	426.33 kN	826.86 kN
10.26 m	403.57 kN	3345.25 kN	3748.82 kN
11.74 m	739.86 kN	3999.11 kN	4738.97 kN

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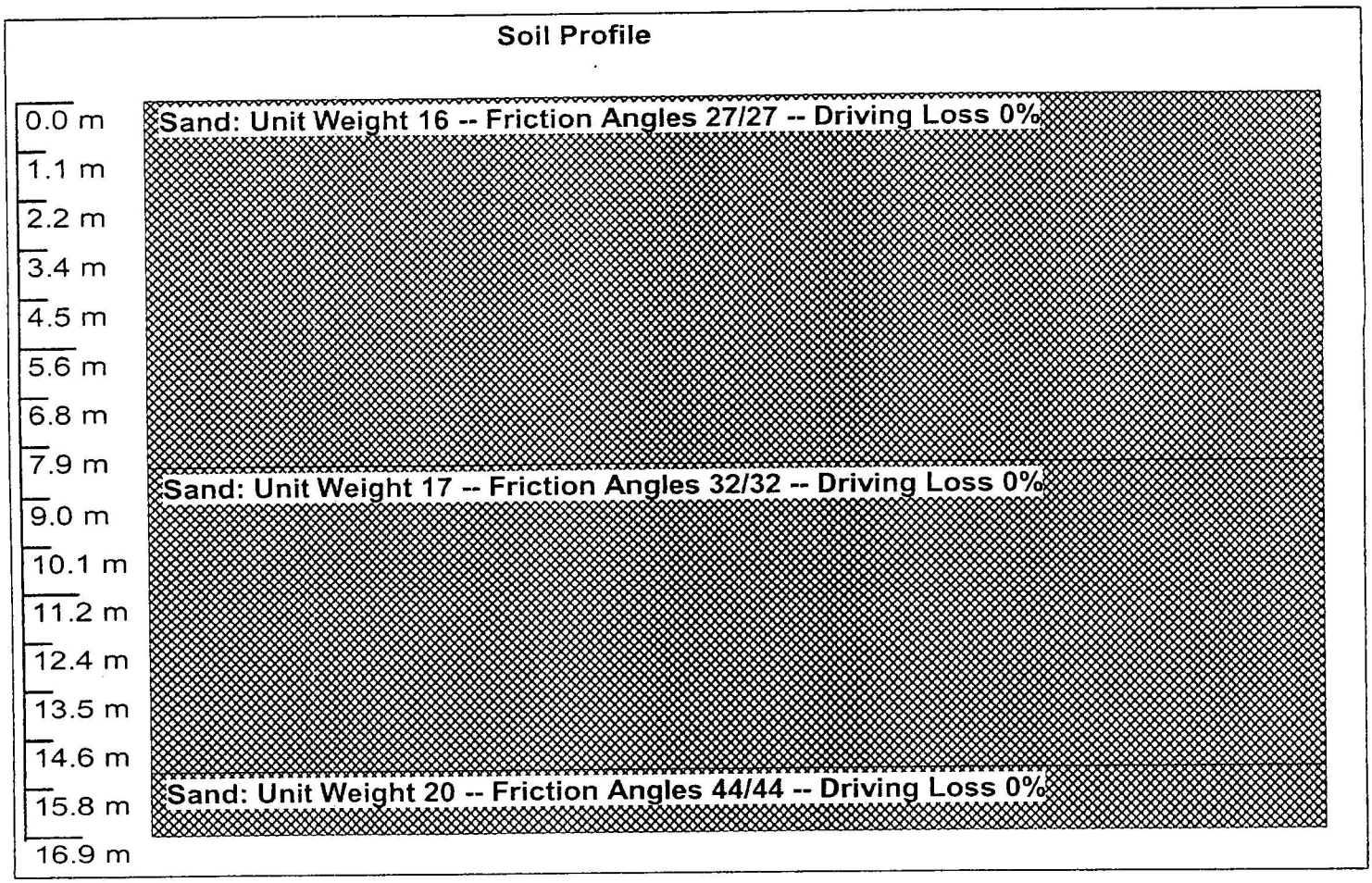

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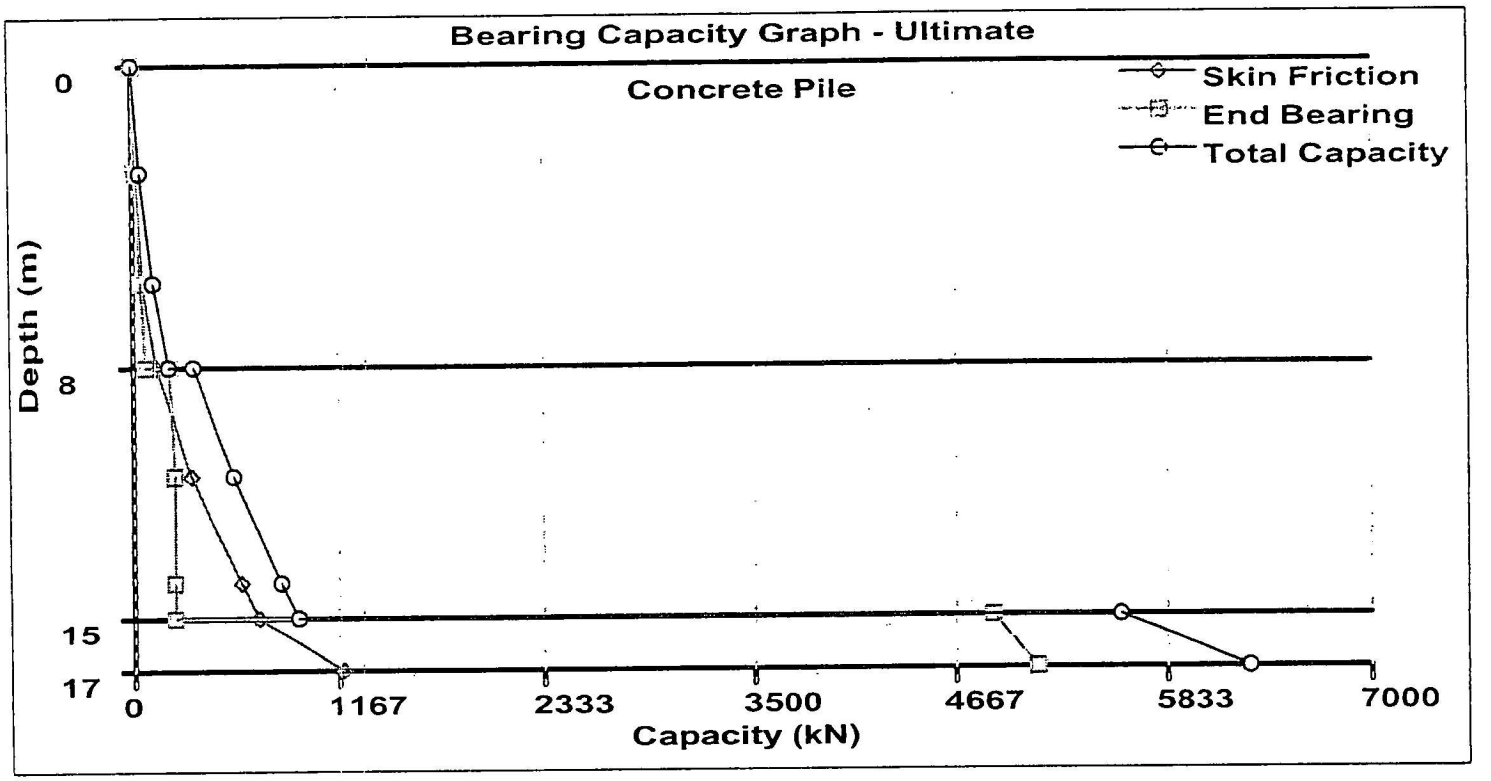

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP2_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	-0.50 m
	- Driving/Restrike	-0.50 m
	- Ultimate:	-0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	8.38 m	0.00%	16.49 kN/m^3	26.6/26.6	Nordlund
2	Cohesionless	7.00 m	0.00%	17.27 kN/m^3	32.0/32.0	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	23.20	N/A	-0.03 kN
3.01 m	Cohesionless	5.17 kPa	23.20	N/A	8.88 kN
6.01 m	Cohesionless	15.20 kPa	23.20	N/A	52.20 kN
8.36 m	Cohesionless	23.07 kPa	23.20	N/A	110.30 kN
8.39 m	Cohesionless	51.15 kPa	27.91	N/A	111.10 kN
11.39 m	Cohesionless	62.36 kPa	27.91	N/A	298.76 kN
14.39 m	Cohesionless	73.56 kPa	27.91	N/A	553.80 kN
15.36 m	Cohesionless	77.22 kPa	27.91	N/A	651.72 kN
15.39 m	Cohesionless	103.44 kPa	38.37	N/A	655.63 kN
16.86 m	Cohesionless	110.72 kPa	38.37	N/A	1111.60 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	18.84	92.57 kN	-6.68 kN
3.01 m	Cohesionless	15.23 kPa	18.84	92.57 kN	21.04 kN
6.01 m	Cohesionless	35.30 kPa	18.84	92.57 kN	48.77 kN
8.36 m	Cohesionless	51.05 kPa	18.84	92.57 kN	68.60 kN
8.39 m	Cohesionless	51.19 kPa	40.40	229.35 kN	185.53 kN
11.39 m	Cohesionless	73.60 kPa	40.40	229.35 kN	229.35 kN
14.39 m	Cohesionless	96.00 kPa	40.40	229.35 kN	229.35 kN
15.36 m	Cohesionless	103.32 kPa	40.40	229.35 kN	229.35 kN
15.39 m	Cohesionless	103.49 kPa	391.00	5126.32 kN	4652.04 kN
16.86 m	Cohesionless	118.04 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.03 kN	-6.68 kN	-6.71 kN
3.01 m	8.88 kN	21.04 kN	29.93 kN
6.01 m	52.20 kN	48.77 kN	100.96 kN
8.36 m	110.30 kN	68.60 kN	178.89 kN
8.39 m	111.10 kN	185.53 kN	296.64 kN
11.39 m	298.76 kN	229.35 kN	528.11 kN
14.39 m	553.80 kN	229.35 kN	783.15 kN
15.36 m	651.72 kN	229.35 kN	881.07 kN
15.39 m	655.63 kN	4652.04 kN	5307.67 kN
16.86 m	1111.60 kN	5126.32 kN	6237.92 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	23.20	N/A	-0.03 kN
3.01 m	Cohesionless	5.17 kPa	23.20	N/A	8.88 kN
6.01 m	Cohesionless	15.20 kPa	23.20	N/A	52.20 kN
8.36 m	Cohesionless	23.07 kPa	23.20	N/A	110.30 kN
8.39 m	Cohesionless	51.15 kPa	27.91	N/A	111.10 kN
11.39 m	Cohesionless	62.36 kPa	27.91	N/A	298.76 kN
14.39 m	Cohesionless	73.56 kPa	27.91	N/A	553.80 kN
15.36 m	Cohesionless	77.22 kPa	27.91	N/A	651.72 kN
15.39 m	Cohesionless	103.44 kPa	38.37	N/A	655.63 kN
16.86 m	Cohesionless	110.72 kPa	38.37	N/A	1111.60 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	18.84	92.57 kN	-6.68 kN
3.01 m	Cohesionless	15.23 kPa	18.84	92.57 kN	21.04 kN
6.01 m	Cohesionless	35.30 kPa	18.84	92.57 kN	48.77 kN
8.36 m	Cohesionless	51.05 kPa	18.84	92.57 kN	68.60 kN
8.39 m	Cohesionless	51.19 kPa	40.40	229.35 kN	185.53 kN
11.39 m	Cohesionless	73.60 kPa	40.40	229.35 kN	229.35 kN
14.39 m	Cohesionless	96.00 kPa	40.40	229.35 kN	229.35 kN
15.36 m	Cohesionless	103.32 kPa	40.40	229.35 kN	229.35 kN
15.39 m	Cohesionless	103.49 kPa	391.00	5126.32 kN	4652.04 kN
16.86 m	Cohesionless	118.04 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.03 kN	-6.68 kN	-6.71 kN
3.01 m	8.88 kN	21.04 kN	29.93 kN
6.01 m	52.20 kN	48.77 kN	100.96 kN
8.36 m	110.30 kN	68.60 kN	178.89 kN
8.39 m	111.10 kN	185.53 kN	296.64 kN
11.39 m	298.76 kN	229.35 kN	528.11 kN
14.39 m	553.80 kN	229.35 kN	783.15 kN
15.36 m	651.72 kN	229.35 kN	881.07 kN
15.39 m	655.63 kN	4652.04 kN	5307.67 kN
16.86 m	1111.60 kN	5126.32 kN	6237.92 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	23.20	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	23.20	N/A	17.32 kN
6.01 m	Cohesionless	20.10 kPa	23.20	N/A	69.03 kN
8.36 m	Cohesionless	27.97 kPa	23.20	N/A	133.73 kN
8.39 m	Cohesionless	56.05 kPa	27.91	N/A	134.61 kN
11.39 m	Cohesionless	67.26 kPa	27.91	N/A	337.01 kN
14.39 m	Cohesionless	78.46 kPa	27.91	N/A	606.79 kN
15.36 m	Cohesionless	82.12 kPa	27.91	N/A	709.52 kN
15.39 m	Cohesionless	108.34 kPa	38.37	N/A	713.62 kN
16.86 m	Cohesionless	115.62 kPa	38.37	N/A	1189.76 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	18.84	92.57 kN	0.09 kN
3.01 m	Cohesionless	20.13 kPa	18.84	92.57 kN	27.81 kN
6.01 m	Cohesionless	40.20 kPa	18.84	92.57 kN	55.54 kN
8.36 m	Cohesionless	55.95 kPa	18.84	92.57 kN	75.18 kN
8.39 m	Cohesionless	56.09 kPa	40.40	229.35 kN	203.30 kN
11.39 m	Cohesionless	78.50 kPa	40.40	229.35 kN	229.35 kN
14.39 m	Cohesionless	100.90 kPa	40.40	229.35 kN	229.35 kN
15.36 m	Cohesionless	108.22 kPa	40.40	229.35 kN	229.35 kN
15.39 m	Cohesionless	108.39 kPa	391.00	5126.32 kN	4872.35 kN
16.86 m	Cohesionless	122.94 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.09 kN	0.09 kN
3.01 m	17.32 kN	27.81 kN	45.13 kN
6.01 m	69.03 kN	55.54 kN	124.57 kN
8.36 m	133.73 kN	75.18 kN	208.91 kN
8.39 m	134.61 kN	203.30 kN	337.91 kN
11.39 m	337.01 kN	229.35 kN	566.36 kN
14.39 m	606.79 kN	229.35 kN	836.14 kN
15.36 m	709.52 kN	229.35 kN	938.87 kN
15.39 m	713.62 kN	4872.35 kN	5585.97 kN
16.86 m	1189.76 kN	5126.32 kN	6316.08 kN

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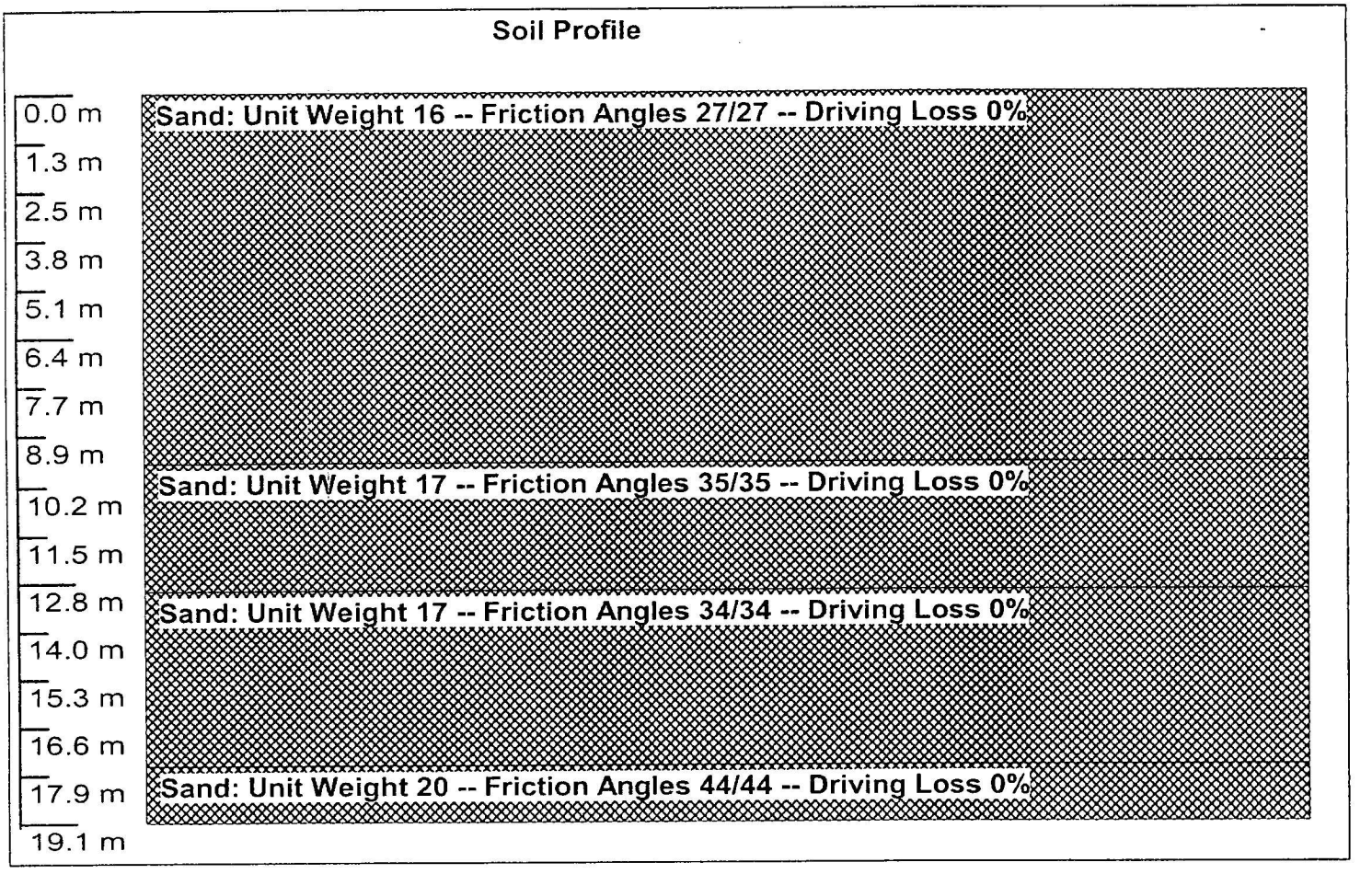

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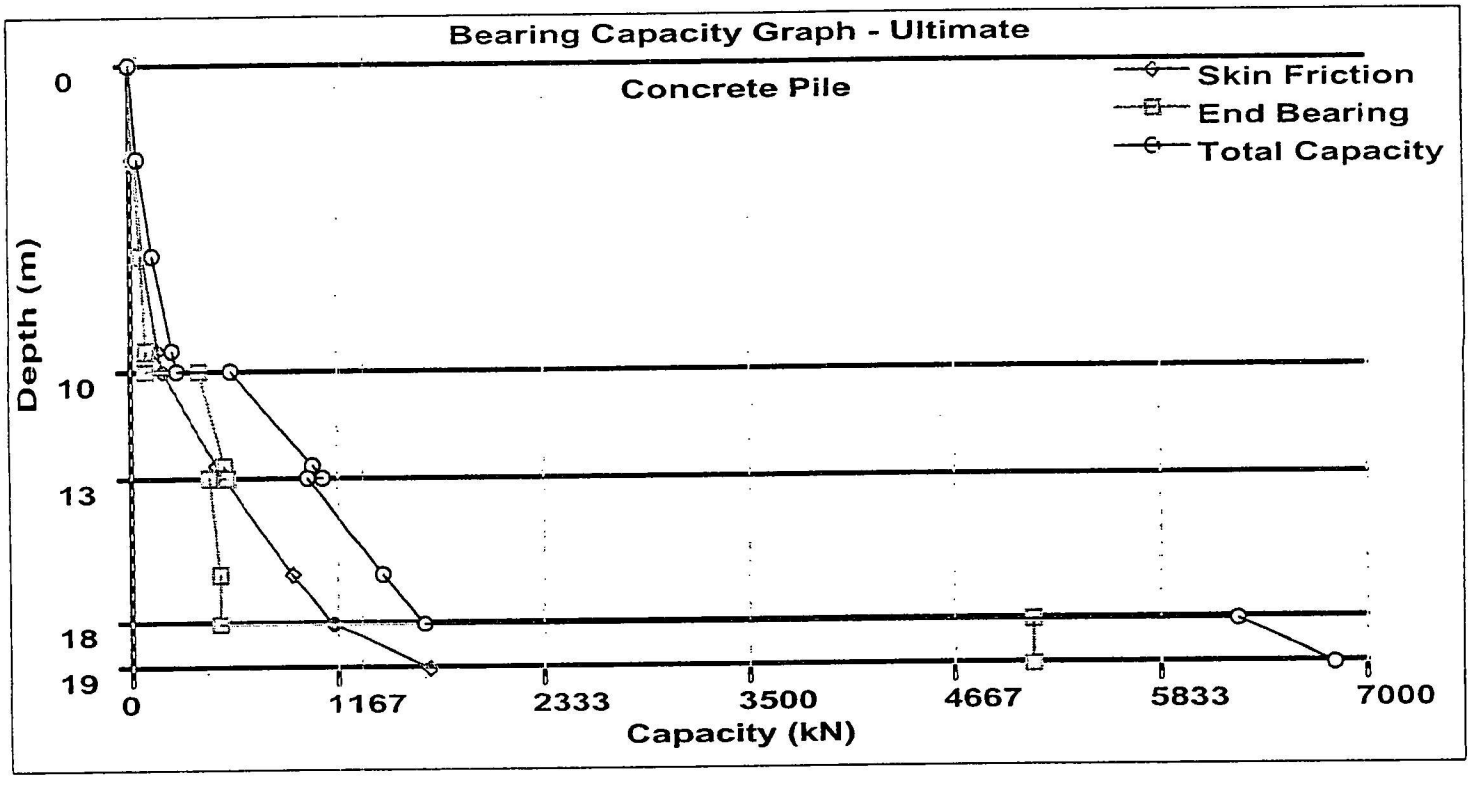

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP3_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.00 m
	- Driving/Restrike	0.00 m
	- Ultimate:	0.00 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	9.62 m	0.00%	16.49 kN/m^3	27.0/27.0	Nordlund
2	Cohesionless	3.38 m	0.00%	17.27 kN/m^3	35.0/35.0	Nordlund
3	Cohesionless	4.62 m	0.00%	17.27 kN/m^3	34.0/34.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	23.55	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	23.55	N/A	18.02 kN
6.01 m	Cohesionless	20.10 kPa	23.55	N/A	71.83 kN
9.01 m	Cohesionless	30.13 kPa	23.55	N/A	161.45 kN
9.61 m	Cohesionless	32.15 kPa	23.55	N/A	183.86 kN
9.64 m	Cohesionless	64.41 kPa	30.52	N/A	185.12 kN
12.64 m	Cohesionless	75.62 kPa	30.52	N/A	495.16 kN
12.99 m	Cohesionless	76.94 kPa	30.52	N/A	537.92 kN
13.01 m	Cohesionless	89.62 kPa	29.65	N/A	540.26 kN
16.01 m	Cohesionless	100.82 kPa	29.65	N/A	915.74 kN
17.61 m	Cohesionless	106.82 kPa	29.65	N/A	1150.87 kN
17.64 m	Cohesionless	124.17 kPa	38.37	N/A	1155.87 kN
19.11 m	Cohesionless	131.45 kPa	38.37	N/A	1697.17 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	19.80	92.57 kN	0.10 kN
3.01 m	Cohesionless	20.13 kPa	19.80	92.57 kN	29.74 kN
6.01 m	Cohesionless	40.20 kPa	19.80	92.57 kN	59.38 kN
9.01 m	Cohesionless	60.26 kPa	19.80	92.57 kN	84.72 kN
9.61 m	Cohesionless	64.31 kPa	19.80	92.57 kN	88.40 kN
9.64 m	Cohesionless	64.45 kPa	64.00	747.82 kN	403.98 kN
12.64 m	Cohesionless	86.86 kPa	64.00	747.82 kN	538.92 kN
12.99 m	Cohesionless	89.51 kPa	64.00	747.82 kN	554.85 kN
13.01 m	Cohesionless	89.66 kPa	55.60	510.96 kN	462.63 kN
16.01 m	Cohesionless	112.06 kPa	55.60	510.96 kN	510.96 kN
17.61 m	Cohesionless	124.05 kPa	55.60	510.96 kN	510.96 kN
17.64 m	Cohesionless	124.22 kPa	391.00	5126.32 kN	5126.32 kN
19.11 m	Cohesionless	138.77 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.10 kN	0.10 kN
3.01 m	18.02 kN	29.74 kN	47.76 kN
6.01 m	71.83 kN	59.38 kN	131.22 kN
9.01 m	161.45 kN	84.72 kN	246.16 kN
9.61 m	183.86 kN	88.40 kN	272.26 kN
9.64 m	185.12 kN	403.98 kN	589.10 kN
12.64 m	495.16 kN	538.92 kN	1034.07 kN
12.99 m	537.92 kN	554.85 kN	1092.77 kN
13.01 m	540.26 kN	462.63 kN	1002.89 kN
16.01 m	915.74 kN	510.96 kN	1426.70 kN
17.61 m	1150.87 kN	510.96 kN	1661.84 kN
17.64 m	1155.87 kN	5126.32 kN	6282.19 kN
19.11 m	1697.17 kN	5126.32 kN	6823.49 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	23.55	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	23.55	N/A	18.02 kN
6.01 m	Cohesionless	20.10 kPa	23.55	N/A	71.83 kN
9.01 m	Cohesionless	30.13 kPa	23.55	N/A	161.45 kN
9.61 m	Cohesionless	32.15 kPa	23.55	N/A	183.86 kN
9.64 m	Cohesionless	64.41 kPa	30.52	N/A	185.12 kN
12.64 m	Cohesionless	75.62 kPa	30.52	N/A	495.16 kN
12.99 m	Cohesionless	76.94 kPa	30.52	N/A	537.92 kN
13.01 m	Cohesionless	89.62 kPa	29.65	N/A	540.26 kN
16.01 m	Cohesionless	100.82 kPa	29.65	N/A	915.74 kN
17.61 m	Cohesionless	106.82 kPa	29.65	N/A	1150.87 kN
17.64 m	Cohesionless	124.17 kPa	38.37	N/A	1155.87 kN
19.11 m	Cohesionless	131.45 kPa	38.37	N/A	1697.17 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	19.80	92.57 kN	0.10 kN
3.01 m	Cohesionless	20.13 kPa	19.80	92.57 kN	29.74 kN
6.01 m	Cohesionless	40.20 kPa	19.80	92.57 kN	59.38 kN
9.01 m	Cohesionless	60.26 kPa	19.80	92.57 kN	84.72 kN
9.61 m	Cohesionless	64.31 kPa	19.80	92.57 kN	88.40 kN
9.64 m	Cohesionless	64.45 kPa	64.00	747.82 kN	403.98 kN
12.64 m	Cohesionless	86.86 kPa	64.00	747.82 kN	538.92 kN
12.99 m	Cohesionless	89.51 kPa	64.00	747.82 kN	554.85 kN
13.01 m	Cohesionless	89.66 kPa	55.60	510.96 kN	462.63 kN
16.01 m	Cohesionless	112.06 kPa	55.60	510.96 kN	510.96 kN
17.61 m	Cohesionless	124.05 kPa	55.60	510.96 kN	510.96 kN
17.64 m	Cohesionless	124.22 kPa	391.00	5126.32 kN	5126.32 kN
19.11 m	Cohesionless	138.77 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.10 kN	0.10 kN
3.01 m	18.02 kN	29.74 kN	47.76 kN
6.01 m	71.83 kN	59.38 kN	131.22 kN
9.01 m	161.45 kN	84.72 kN	246.16 kN
9.61 m	183.86 kN	88.40 kN	272.26 kN
9.64 m	185.12 kN	403.98 kN	589.10 kN
12.64 m	495.16 kN	538.92 kN	1034.07 kN
12.99 m	537.92 kN	554.85 kN	1092.77 kN
13.01 m	540.26 kN	462.63 kN	1002.89 kN
16.01 m	915.74 kN	510.96 kN	1426.70 kN
17.61 m	1150.87 kN	510.96 kN	1661.84 kN
17.64 m	1155.87 kN	5126.32 kN	6282.19 kN
19.11 m	1697.17 kN	5126.32 kN	6823.49 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	23.55	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	23.55	N/A	18.02 kN
6.01 m	Cohesionless	20.10 kPa	23.55	N/A	71.83 kN
9.01 m	Cohesionless	30.13 kPa	23.55	N/A	161.45 kN
9.61 m	Cohesionless	32.15 kPa	23.55	N/A	183.86 kN
9.64 m	Cohesionless	64.41 kPa	30.52	N/A	185.12 kN
12.64 m	Cohesionless	75.62 kPa	30.52	N/A	495.16 kN
12.99 m	Cohesionless	76.94 kPa	30.52	N/A	537.92 kN
13.01 m	Cohesionless	89.62 kPa	29.65	N/A	540.26 kN
16.01 m	Cohesionless	100.82 kPa	29.65	N/A	915.74 kN
17.61 m	Cohesionless	106.82 kPa	29.65	N/A	1150.87 kN
17.64 m	Cohesionless	124.17 kPa	38.37	N/A	1155.87 kN
19.11 m	Cohesionless	131.45 kPa	38.37	N/A	1697.17 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	19.80	92.57 kN	0.10 kN
3.01 m	Cohesionless	20.13 kPa	19.80	92.57 kN	29.74 kN
6.01 m	Cohesionless	40.20 kPa	19.80	92.57 kN	59.38 kN
9.01 m	Cohesionless	60.26 kPa	19.80	92.57 kN	84.72 kN
9.61 m	Cohesionless	64.31 kPa	19.80	92.57 kN	88.40 kN
9.64 m	Cohesionless	64.45 kPa	64.00	747.82 kN	403.98 kN
12.64 m	Cohesionless	86.86 kPa	64.00	747.82 kN	538.92 kN
12.99 m	Cohesionless	89.51 kPa	64.00	747.82 kN	554.85 kN
13.01 m	Cohesionless	89.66 kPa	55.60	510.96 kN	462.63 kN
16.01 m	Cohesionless	112.06 kPa	55.60	510.96 kN	510.96 kN
17.61 m	Cohesionless	124.05 kPa	55.60	510.96 kN	510.96 kN
17.64 m	Cohesionless	124.22 kPa	391.00	5126.32 kN	5126.32 kN
19.11 m	Cohesionless	138.77 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.10 kN	0.10 kN
3.01 m	18.02 kN	29.74 kN	47.76 kN
6.01 m	71.83 kN	59.38 kN	131.22 kN
9.01 m	161.45 kN	84.72 kN	246.16 kN
9.61 m	183.86 kN	88.40 kN	272.26 kN
9.64 m	185.12 kN	403.98 kN	589.10 kN
12.64 m	495.16 kN	538.92 kN	1034.07 kN
12.99 m	537.92 kN	554.85 kN	1092.77 kN
13.01 m	540.26 kN	462.63 kN	1002.89 kN
16.01 m	915.74 kN	510.96 kN	1426.70 kN
17.61 m	1150.87 kN	510.96 kN	1661.84 kN
17.64 m	1155.87 kN	5126.32 kN	6282.19 kN
19.11 m	1697.17 kN	5126.32 kN	6823.49 kN

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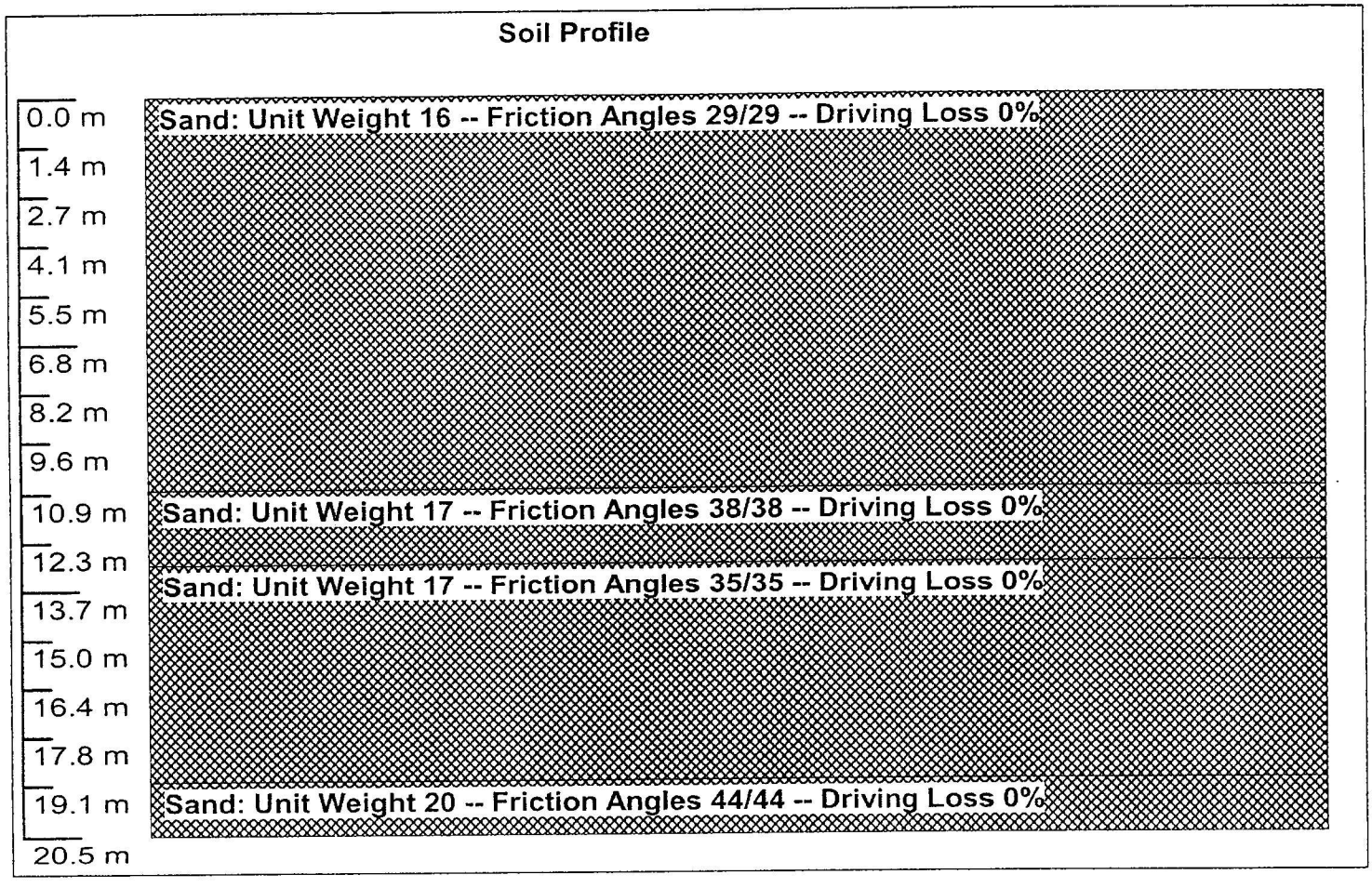

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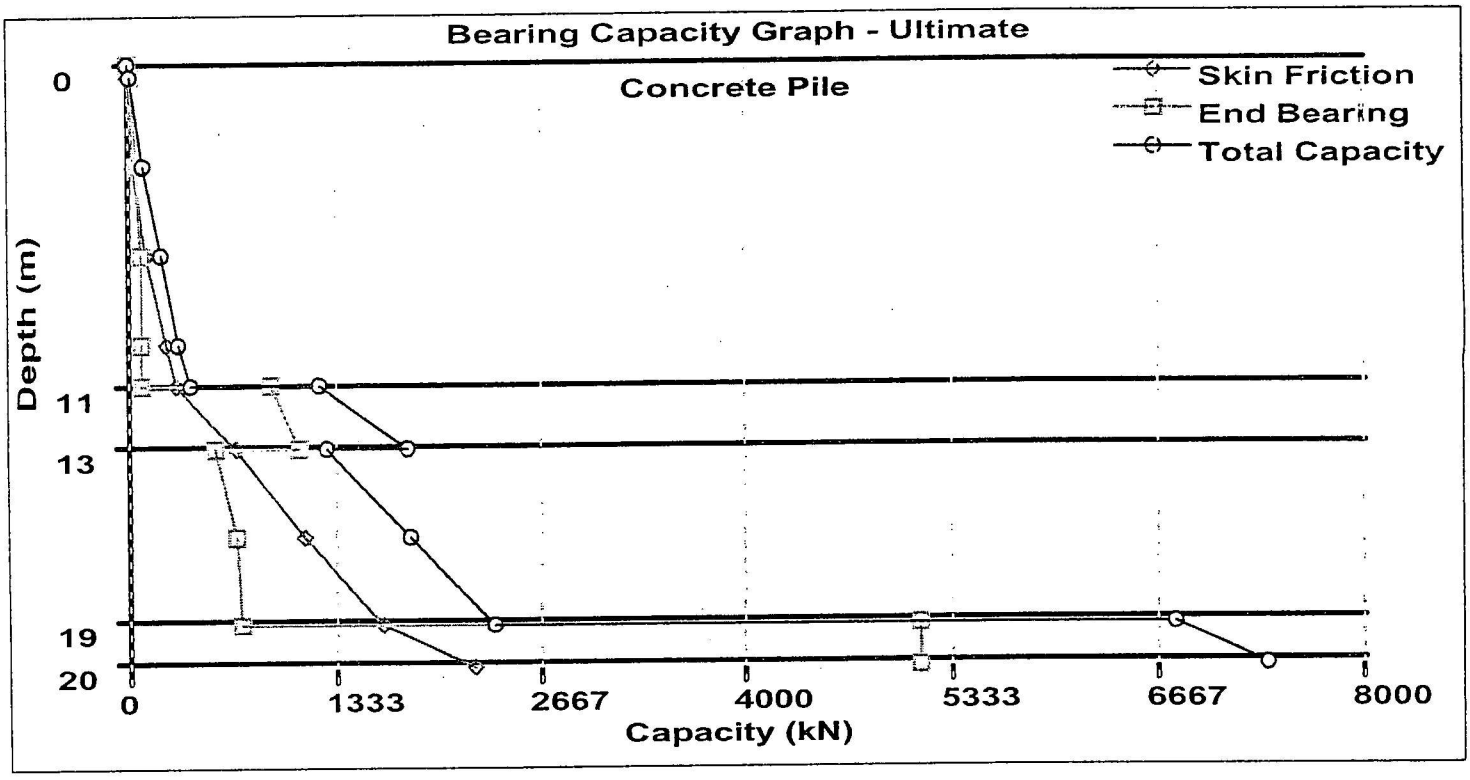

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP4_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.88 m	0.00%	16.49 kN/m^3	28.7/28.7	Nordlund
2	Cohesionless	2.12 m	0.00%	17.27 kN/m^3	38.1/38.1	Nordlund
3	Cohesionless	6.00 m	0.00%	17.27 kN/m^3	34.9/34.9	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.03	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	25.03	N/A	1.38 kN
0.51 m	Cohesionless	8.28 kPa	25.03	N/A	1.50 kN
3.51 m	Cohesionless	18.31 kPa	25.03	N/A	39.88 kN
6.51 m	Cohesionless	28.34 kPa	25.03	N/A	120.26 kN
9.51 m	Cohesionless	38.38 kPa	25.03	N/A	242.63 kN
10.86 m	Cohesionless	42.91 kPa	25.03	N/A	311.67 kN
10.89 m	Cohesionless	77.68 kPa	33.23	N/A	313.86 kN
12.99 m	Cohesionless	85.54 kPa	33.23	N/A	697.42 kN
13.01 m	Cohesionless	93.55 kPa	30.44	N/A	700.67 kN
16.01 m	Cohesionless	104.75 kPa	30.44	N/A	1126.11 kN
18.99 m	Cohesionless	115.88 kPa	30.44	N/A	1638.77 kN
19.01 m	Cohesionless	138.37 kPa	38.37	N/A	1644.49 kN
20.49 m	Cohesionless	145.64 kPa	38.37	N/A	2244.23 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	25.32	92.57 kN	0.33 kN
0.49 m	Cohesionless	8.08 kPa	25.32	92.57 kN	16.38 kN
0.51 m	Cohesionless	8.31 kPa	25.32	92.57 kN	16.85 kN
3.51 m	Cohesionless	28.38 kPa	25.32	92.57 kN	57.51 kN
6.51 m	Cohesionless	48.44 kPa	25.32	92.57 kN	92.57 kN
9.51 m	Cohesionless	68.51 kPa	25.32	92.57 kN	92.57 kN
10.86 m	Cohesionless	77.57 kPa	25.32	92.57 kN	92.57 kN
10.89 m	Cohesionless	77.71 kPa	112.88	1913.47 kN	921.13 kN
12.99 m	Cohesionless	93.43 kPa	112.88	1913.47 kN	1107.47 kN
13.01 m	Cohesionless	93.58 kPa	63.16	724.13 kN	570.08 kN
16.01 m	Cohesionless	115.99 kPa	63.16	724.13 kN	700.60 kN
18.99 m	Cohesionless	138.25 kPa	63.16	724.13 kN	724.13 kN
19.01 m	Cohesionless	138.42 kPa	391.00	5126.32 kN	5126.32 kN
20.49 m	Cohesionless	152.96 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.33 kN	0.33 kN
0.49 m	1.38 kN	16.38 kN	17.76 kN
0.51 m	1.50 kN	16.85 kN	18.34 kN
3.51 m	39.88 kN	57.51 kN	97.39 kN
6.51 m	120.26 kN	92.57 kN	212.84 kN
9.51 m	242.63 kN	92.57 kN	335.21 kN
10.86 m	311.67 kN	92.57 kN	404.24 kN
10.89 m	313.86 kN	921.13 kN	1234.99 kN
12.99 m	697.42 kN	1107.47 kN	1804.89 kN
13.01 m	700.67 kN	570.08 kN	1270.75 kN
16.01 m	1126.11 kN	700.60 kN	1826.71 kN
18.99 m	1638.77 kN	724.13 kN	2362.91 kN
19.01 m	1644.49 kN	5126.32 kN	6770.81 kN
20.49 m	2244.23 kN	5126.32 kN	7370.55 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.03	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	25.03	N/A	1.38 kN
0.51 m	Cohesionless	8.28 kPa	25.03	N/A	1.50 kN
3.51 m	Cohesionless	18.31 kPa	25.03	N/A	39.88 kN
6.51 m	Cohesionless	28.34 kPa	25.03	N/A	120.26 kN
9.51 m	Cohesionless	38.38 kPa	25.03	N/A	242.63 kN
10.86 m	Cohesionless	42.91 kPa	25.03	N/A	311.67 kN
10.89 m	Cohesionless	77.68 kPa	33.23	N/A	313.86 kN
12.99 m	Cohesionless	85.54 kPa	33.23	N/A	697.42 kN
13.01 m	Cohesionless	93.55 kPa	30.44	N/A	700.67 kN
16.01 m	Cohesionless	104.75 kPa	30.44	N/A	1126.11 kN
18.99 m	Cohesionless	115.88 kPa	30.44	N/A	1638.77 kN
19.01 m	Cohesionless	138.37 kPa	38.37	N/A	1644.49 kN
20.49 m	Cohesionless	145.64 kPa	38.37	N/A	2244.23 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	25.32	92.57 kN	0.33 kN
0.49 m	Cohesionless	8.08 kPa	25.32	92.57 kN	16.38 kN
0.51 m	Cohesionless	8.31 kPa	25.32	92.57 kN	16.85 kN
3.51 m	Cohesionless	28.38 kPa	25.32	92.57 kN	57.51 kN
6.51 m	Cohesionless	48.44 kPa	25.32	92.57 kN	92.57 kN
9.51 m	Cohesionless	68.51 kPa	25.32	92.57 kN	92.57 kN
10.86 m	Cohesionless	77.57 kPa	25.32	92.57 kN	92.57 kN
10.89 m	Cohesionless	77.71 kPa	112.88	1913.47 kN	921.13 kN
12.99 m	Cohesionless	93.43 kPa	112.88	1913.47 kN	1107.47 kN
13.01 m	Cohesionless	93.58 kPa	63.16	724.13 kN	570.08 kN
16.01 m	Cohesionless	115.99 kPa	63.16	724.13 kN	700.60 kN
18.99 m	Cohesionless	138.25 kPa	63.16	724.13 kN	724.13 kN
19.01 m	Cohesionless	138.42 kPa	391.00	5126.32 kN	5126.32 kN
20.49 m	Cohesionless	152.96 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.33 kN	0.33 kN
0.49 m	1.38 kN	16.38 kN	17.76 kN
0.51 m	1.50 kN	16.85 kN	18.34 kN
3.51 m	39.88 kN	57.51 kN	97.39 kN
6.51 m	120.26 kN	92.57 kN	212.84 kN
9.51 m	242.63 kN	92.57 kN	335.21 kN
10.86 m	311.67 kN	92.57 kN	404.24 kN
10.89 m	313.86 kN	921.13 kN	1234.99 kN
12.99 m	697.42 kN	1107.47 kN	1804.89 kN
13.01 m	700.67 kN	570.08 kN	1270.75 kN
16.01 m	1126.11 kN	700.60 kN	1826.71 kN
18.99 m	1638.77 kN	724.13 kN	2362.91 kN
19.01 m	1644.49 kN	5126.32 kN	6770.81 kN
20.49 m	2244.23 kN	5126.32 kN	7370.55 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.03	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	25.03	N/A	1.38 kN
0.51 m	Cohesionless	8.28 kPa	25.03	N/A	1.50 kN
3.51 m	Cohesionless	18.31 kPa	25.03	N/A	39.88 kN
6.51 m	Cohesionless	28.34 kPa	25.03	N/A	120.26 kN
9.51 m	Cohesionless	38.38 kPa	25.03	N/A	242.63 kN
10.86 m	Cohesionless	42.91 kPa	25.03	N/A	311.67 kN
10.89 m	Cohesionless	77.68 kPa	33.23	N/A	313.86 kN
12.99 m	Cohesionless	85.54 kPa	33.23	N/A	697.42 kN
13.01 m	Cohesionless	93.55 kPa	30.44	N/A	700.67 kN
16.01 m	Cohesionless	104.75 kPa	30.44	N/A	1126.11 kN
18.99 m	Cohesionless	115.88 kPa	30.44	N/A	1638.77 kN
19.01 m	Cohesionless	138.37 kPa	38.37	N/A	1644.49 kN
20.49 m	Cohesionless	145.64 kPa	38.37	N/A	2244.23 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	25.32	92.57 kN	0.33 kN
0.49 m	Cohesionless	8.08 kPa	25.32	92.57 kN	16.38 kN
0.51 m	Cohesionless	8.31 kPa	25.32	92.57 kN	16.85 kN
3.51 m	Cohesionless	28.38 kPa	25.32	92.57 kN	57.51 kN
6.51 m	Cohesionless	48.44 kPa	25.32	92.57 kN	92.57 kN
9.51 m	Cohesionless	68.51 kPa	25.32	92.57 kN	92.57 kN
10.86 m	Cohesionless	77.57 kPa	25.32	92.57 kN	92.57 kN
10.89 m	Cohesionless	77.71 kPa	112.88	1913.47 kN	921.13 kN
12.99 m	Cohesionless	93.43 kPa	112.88	1913.47 kN	1107.47 kN
13.01 m	Cohesionless	93.58 kPa	63.16	724.13 kN	570.08 kN
16.01 m	Cohesionless	115.99 kPa	63.16	724.13 kN	700.60 kN
18.99 m	Cohesionless	138.25 kPa	63.16	724.13 kN	724.13 kN
19.01 m	Cohesionless	138.42 kPa	391.00	5126.32 kN	5126.32 kN
20.49 m	Cohesionless	152.96 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.33 kN	0.33 kN
0.49 m	1.38 kN	16.38 kN	17.76 kN
0.51 m	1.50 kN	16.85 kN	18.34 kN
3.51 m	39.88 kN	57.51 kN	97.39 kN
6.51 m	120.26 kN	92.57 kN	212.84 kN
9.51 m	242.63 kN	92.57 kN	335.21 kN
10.86 m	311.67 kN	92.57 kN	404.24 kN
10.89 m	313.86 kN	921.13 kN	1234.99 kN
12.99 m	697.42 kN	1107.47 kN	1804.89 kN
13.01 m	700.67 kN	570.08 kN	1270.75 kN
16.01 m	1126.11 kN	700.60 kN	1826.71 kN
18.99 m	1638.77 kN	724.13 kN	2362.91 kN
19.01 m	1644.49 kN	5126.32 kN	6770.81 kN
20.49 m	2244.23 kN	5126.32 kN	7370.55 kN

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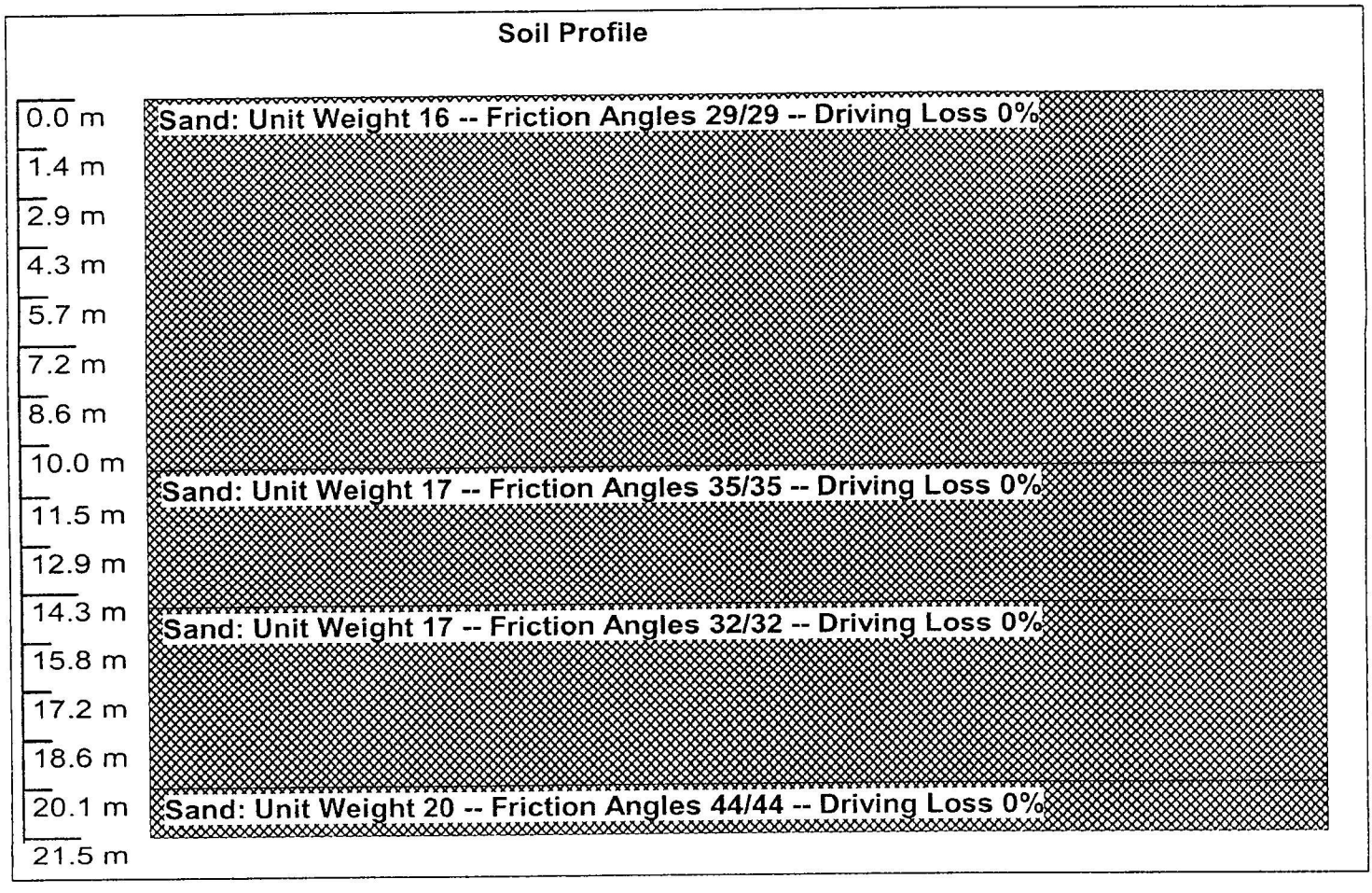

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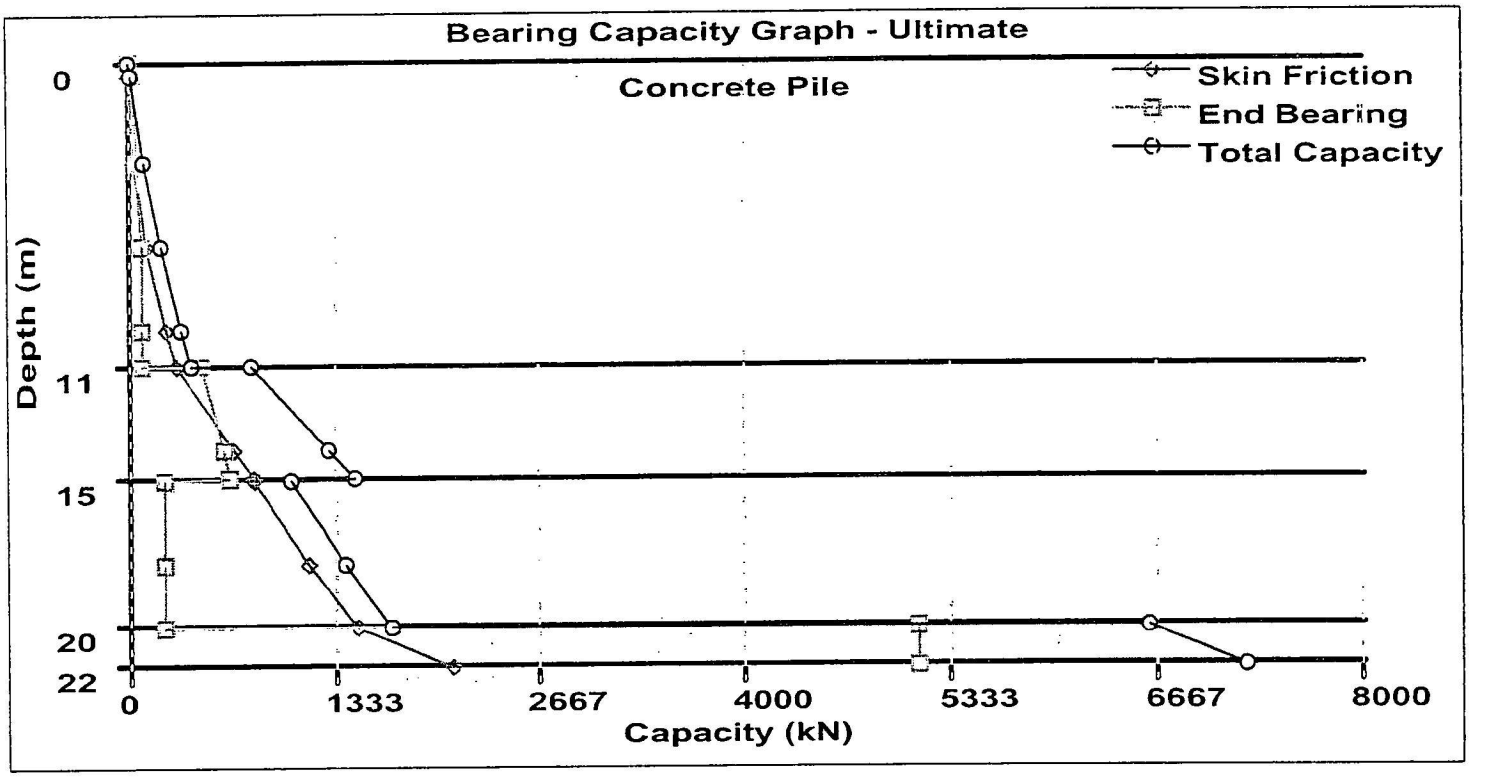

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SP5_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.75 m	0.00%	16.49 kN/m^3	29.0/29.0	Nordlund
2	Cohesionless	4.00 m	0.00%	17.27 kN/m^3	35.0/35.0	Nordlund
3	Cohesionless	5.25 m	0.00%	17.27 kN/m^3	32.0/32.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.29	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	25.29	N/A	1.42 kN
0.51 m	Cohesionless	8.28 kPa	25.29	N/A	1.54 kN
3.51 m	Cohesionless	18.31 kPa	25.29	N/A	40.96 kN
6.51 m	Cohesionless	28.34 kPa	25.29	N/A	123.51 kN
9.51 m	Cohesionless	38.38 kPa	25.29	N/A	249.19 kN
10.74 m	Cohesionless	42.49 kPa	25.29	N/A	313.18 kN
10.76 m	Cohesionless	76.84 kPa	30.52	N/A	314.78 kN
13.76 m	Cohesionless	88.04 kPa	30.52	N/A	675.74 kN
14.74 m	Cohesionless	91.70 kPa	30.52	N/A	813.55 kN
14.76 m	Cohesionless	106.71 kPa	27.91	N/A	816.07 kN
17.76 m	Cohesionless	117.92 kPa	27.91	N/A	1170.84 kN
19.99 m	Cohesionless	126.24 kPa	27.91	N/A	1478.21 kN
20.01 m	Cohesionless	145.94 kPa	38.37	N/A	1483.73 kN
21.49 m	Cohesionless	153.21 kPa	38.37	N/A	2114.61 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	26.40	92.57 kN	0.35 kN
0.49 m	Cohesionless	8.08 kPa	26.40	92.57 kN	17.28 kN
0.51 m	Cohesionless	8.31 kPa	26.40	92.57 kN	17.77 kN
3.51 m	Cohesionless	28.38 kPa	26.40	92.57 kN	60.68 kN
6.51 m	Cohesionless	48.44 kPa	26.40	92.57 kN	92.57 kN
9.51 m	Cohesionless	68.51 kPa	26.40	92.57 kN	92.57 kN
10.74 m	Cohesionless	76.74 kPa	26.40	92.57 kN	92.57 kN
10.76 m	Cohesionless	76.88 kPa	64.00	747.82 kN	479.76 kN
13.76 m	Cohesionless	99.28 kPa	64.00	747.82 kN	614.20 kN
14.74 m	Cohesionless	106.60 kPa	64.00	747.82 kN	657.78 kN
14.76 m	Cohesionless	106.75 kPa	40.40	229.35 kN	229.35 kN
17.76 m	Cohesionless	129.16 kPa	40.40	229.35 kN	229.35 kN
19.99 m	Cohesionless	145.81 kPa	40.40	229.35 kN	229.35 kN
20.01 m	Cohesionless	145.98 kPa	391.00	5126.32 kN	5126.32 kN
21.49 m	Cohesionless	160.53 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.35 kN	0.35 kN
0.49 m	1.42 kN	17.28 kN	18.70 kN
0.51 m	1.54 kN	17.77 kN	19.31 kN
3.51 m	40.96 kN	60.68 kN	101.64 kN
6.51 m	123.51 kN	92.57 kN	216.09 kN
9.51 m	249.19 kN	92.57 kN	341.76 kN
10.74 m	313.18 kN	92.57 kN	405.75 kN
10.76 m	314.78 kN	479.76 kN	794.53 kN
13.76 m	675.74 kN	614.20 kN	1289.93 kN
14.74 m	813.55 kN	657.78 kN	1471.32 kN
14.76 m	816.07 kN	229.35 kN	1045.42 kN
17.76 m	1170.84 kN	229.35 kN	1400.19 kN
19.99 m	1478.21 kN	229.35 kN	1707.56 kN
20.01 m	1483.73 kN	5126.32 kN	6610.05 kN
21.49 m	2114.61 kN	5126.32 kN	7240.93 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.29	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	25.29	N/A	1.42 kN
0.51 m	Cohesionless	8.28 kPa	25.29	N/A	1.54 kN
3.51 m	Cohesionless	18.31 kPa	25.29	N/A	40.96 kN
6.51 m	Cohesionless	28.34 kPa	25.29	N/A	123.51 kN
9.51 m	Cohesionless	38.38 kPa	25.29	N/A	249.19 kN
10.74 m	Cohesionless	42.49 kPa	25.29	N/A	313.18 kN
10.76 m	Cohesionless	76.84 kPa	30.52	N/A	314.78 kN
13.76 m	Cohesionless	88.04 kPa	30.52	N/A	675.74 kN
14.74 m	Cohesionless	91.70 kPa	30.52	N/A	813.55 kN
14.76 m	Cohesionless	106.71 kPa	27.91	N/A	816.07 kN
17.76 m	Cohesionless	117.92 kPa	27.91	N/A	1170.84 kN
19.99 m	Cohesionless	126.24 kPa	27.91	N/A	1478.21 kN
20.01 m	Cohesionless	145.94 kPa	38.37	N/A	1483.73 kN
21.49 m	Cohesionless	153.21 kPa	38.37	N/A	2114.61 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	26.40	92.57 kN	0.35 kN
0.49 m	Cohesionless	8.08 kPa	26.40	92.57 kN	17.28 kN
0.51 m	Cohesionless	8.31 kPa	26.40	92.57 kN	17.77 kN
3.51 m	Cohesionless	28.38 kPa	26.40	92.57 kN	60.68 kN
6.51 m	Cohesionless	48.44 kPa	26.40	92.57 kN	92.57 kN
9.51 m	Cohesionless	68.51 kPa	26.40	92.57 kN	92.57 kN
10.74 m	Cohesionless	76.74 kPa	26.40	92.57 kN	92.57 kN
10.76 m	Cohesionless	76.88 kPa	64.00	747.82 kN	479.76 kN
13.76 m	Cohesionless	99.28 kPa	64.00	747.82 kN	614.20 kN
14.74 m	Cohesionless	106.60 kPa	64.00	747.82 kN	657.78 kN
14.76 m	Cohesionless	106.75 kPa	40.40	229.35 kN	229.35 kN
17.76 m	Cohesionless	129.16 kPa	40.40	229.35 kN	229.35 kN
19.99 m	Cohesionless	145.81 kPa	40.40	229.35 kN	229.35 kN
20.01 m	Cohesionless	145.98 kPa	391.00	5126.32 kN	5126.32 kN
21.49 m	Cohesionless	160.53 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.35 kN	0.35 kN
0.49 m	1.42 kN	17.28 kN	18.70 kN
0.51 m	1.54 kN	17.77 kN	19.31 kN
3.51 m	40.96 kN	60.68 kN	101.64 kN
6.51 m	123.51 kN	92.57 kN	216.09 kN
9.51 m	249.19 kN	92.57 kN	341.76 kN
10.74 m	313.18 kN	92.57 kN	405.75 kN
10.76 m	314.78 kN	479.76 kN	794.53 kN
13.76 m	675.74 kN	614.20 kN	1289.93 kN
14.74 m	813.55 kN	657.78 kN	1471.32 kN
14.76 m	816.07 kN	229.35 kN	1045.42 kN
17.76 m	1170.84 kN	229.35 kN	1400.19 kN
19.99 m	1478.21 kN	229.35 kN	1707.56 kN
20.01 m	1483.73 kN	5126.32 kN	6610.05 kN
21.49 m	2114.61 kN	5126.32 kN	7240.93 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.29	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	25.29	N/A	1.42 kN
0.51 m	Cohesionless	8.28 kPa	25.29	N/A	1.54 kN
3.51 m	Cohesionless	18.31 kPa	25.29	N/A	40.96 kN
6.51 m	Cohesionless	28.34 kPa	25.29	N/A	123.51 kN
9.51 m	Cohesionless	38.38 kPa	25.29	N/A	249.19 kN
10.74 m	Cohesionless	42.49 kPa	25.29	N/A	313.18 kN
10.76 m	Cohesionless	76.84 kPa	30.52	N/A	314.78 kN
13.76 m	Cohesionless	88.04 kPa	30.52	N/A	675.74 kN
14.74 m	Cohesionless	91.70 kPa	30.52	N/A	813.55 kN
14.76 m	Cohesionless	106.71 kPa	27.91	N/A	816.07 kN
17.76 m	Cohesionless	117.92 kPa	27.91	N/A	1170.84 kN
19.99 m	Cohesionless	126.24 kPa	27.91	N/A	1478.21 kN
20.01 m	Cohesionless	145.94 kPa	38.37	N/A	1483.73 kN
21.49 m	Cohesionless	153.21 kPa	38.37	N/A	2114.61 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	26.40	92.57 kN	0.35 kN
0.49 m	Cohesionless	8.08 kPa	26.40	92.57 kN	17.28 kN
0.51 m	Cohesionless	8.31 kPa	26.40	92.57 kN	17.77 kN
3.51 m	Cohesionless	28.38 kPa	26.40	92.57 kN	60.68 kN
6.51 m	Cohesionless	48.44 kPa	26.40	92.57 kN	92.57 kN
9.51 m	Cohesionless	68.51 kPa	26.40	92.57 kN	92.57 kN
10.74 m	Cohesionless	76.74 kPa	26.40	92.57 kN	92.57 kN
10.76 m	Cohesionless	76.88 kPa	64.00	747.82 kN	479.76 kN
13.76 m	Cohesionless	99.28 kPa	64.00	747.82 kN	614.20 kN
14.74 m	Cohesionless	106.60 kPa	64.00	747.82 kN	657.78 kN
14.76 m	Cohesionless	106.75 kPa	40.40	229.35 kN	229.35 kN
17.76 m	Cohesionless	129.16 kPa	40.40	229.35 kN	229.35 kN
19.99 m	Cohesionless	145.81 kPa	40.40	229.35 kN	229.35 kN
20.01 m	Cohesionless	145.98 kPa	391.00	5126.32 kN	5126.32 kN
21.49 m	Cohesionless	160.53 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.35 kN	0.35 kN
0.49 m	1.42 kN	17.28 kN	18.70 kN
0.51 m	1.54 kN	17.77 kN	19.31 kN
3.51 m	40.96 kN	60.68 kN	101.64 kN
6.51 m	123.51 kN	92.57 kN	216.09 kN
9.51 m	249.19 kN	92.57 kN	341.76 kN
10.74 m	313.18 kN	92.57 kN	405.75 kN
10.76 m	314.78 kN	479.76 kN	794.53 kN
13.76 m	675.74 kN	614.20 kN	1289.93 kN
14.74 m	813.55 kN	657.78 kN	1471.32 kN
14.76 m	816.07 kN	229.35 kN	1045.42 kN
17.76 m	1170.84 kN	229.35 kN	1400.19 kN
19.99 m	1478.21 kN	229.35 kN	1707.56 kN
20.01 m	1483.73 kN	5126.32 kN	6610.05 kN
21.49 m	2114.61 kN	5126.32 kN	7240.93 kN

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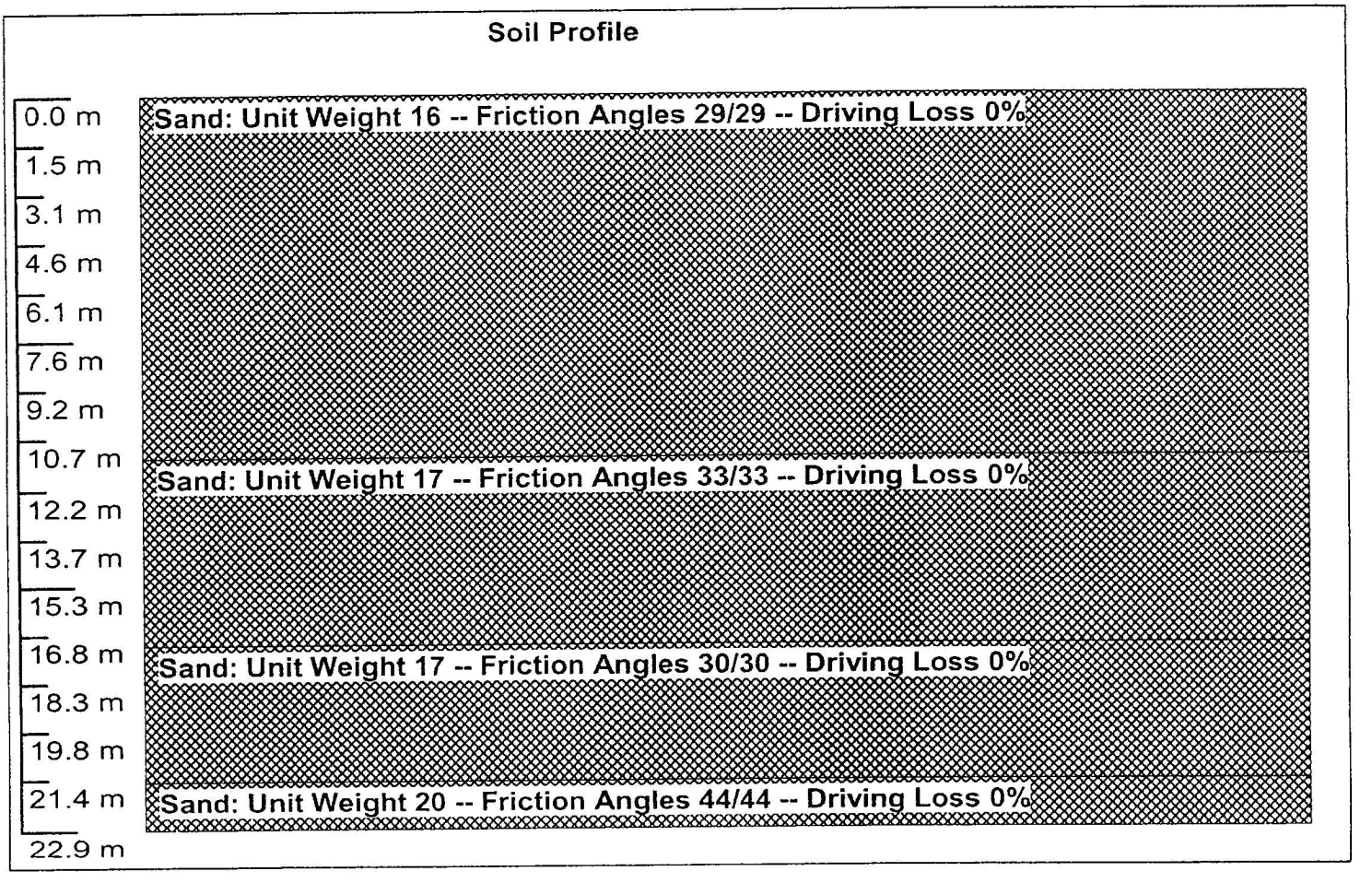

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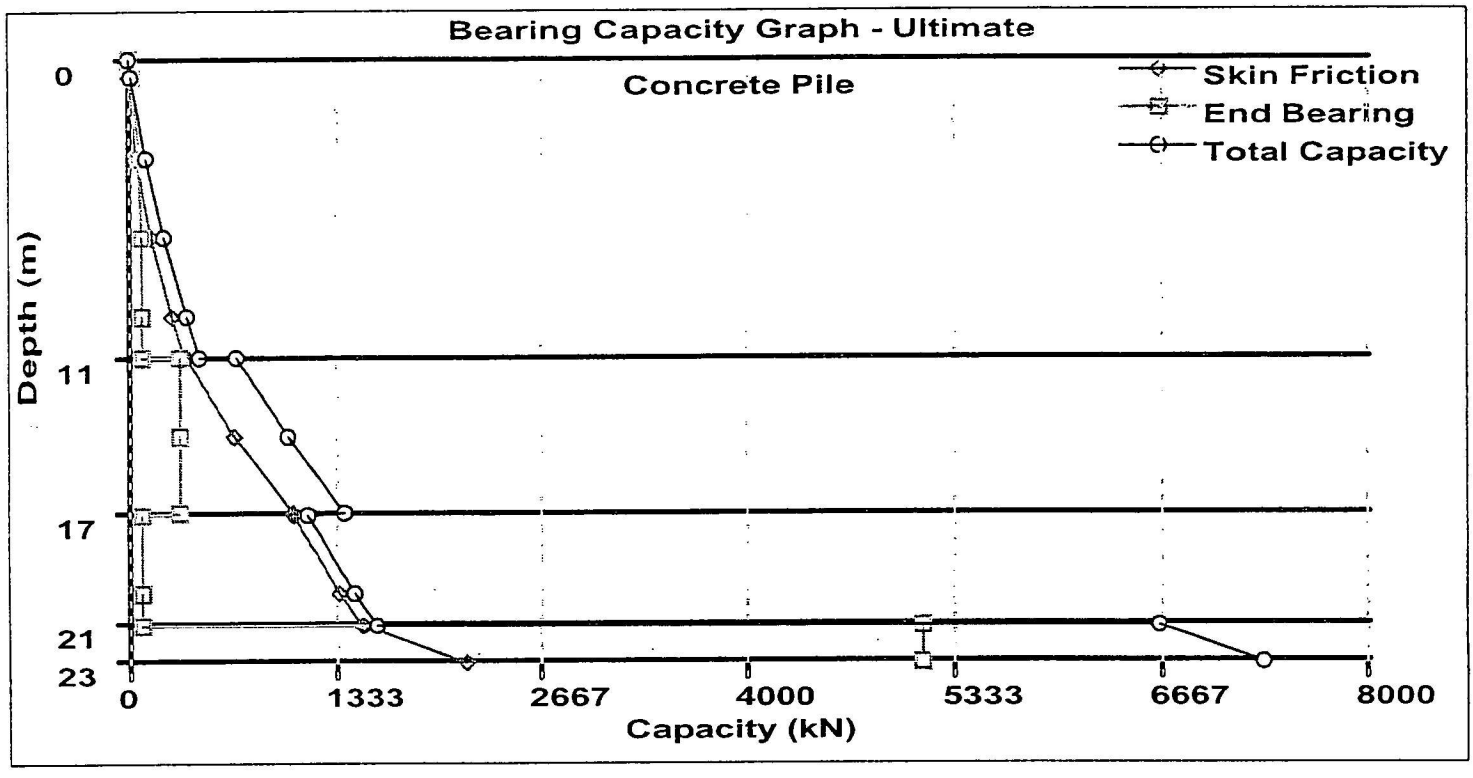

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\SAB2_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	11.25 m	0.00%	16.49 kN/m^3	29.3/29.3	Nordlund
2	Cohesionless	5.90 m	0.00%	17.27 kN/m^3	32.9/32.9	Nordlund
3	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	29.5/29.5	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.55	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	25.55	N/A	3.32 kN
0.76 m	Cohesionless	12.40 kPa	25.55	N/A	3.50 kN
3.76 m	Cohesionless	22.43 kPa	25.55	N/A	53.07 kN
6.76 m	Cohesionless	32.47 kPa	25.55	N/A	146.91 kN
9.76 m	Cohesionless	42.50 kPa	25.55	N/A	285.03 kN
11.24 m	Cohesionless	47.45 kPa	25.55	N/A	369.47 kN
11.26 m	Cohesionless	82.63 kPa	28.69	N/A	370.99 kN
14.26 m	Cohesionless	93.84 kPa	28.69	N/A	682.99 kN
17.14 m	Cohesionless	104.59 kPa	28.69	N/A	1052.56 kN
17.16 m	Cohesionless	126.70 kPa	25.73	N/A	1054.91 kN
20.16 m	Cohesionless	137.90 kPa	25.73	N/A	1364.55 kN
21.39 m	Cohesionless	142.49 kPa	25.73	N/A	1506.04 kN
21.41 m	Cohesionless	158.45 kPa	38.37	N/A	1511.63 kN
22.89 m	Cohesionless	165.73 kPa	38.37	N/A	2194.04 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	27.48	92.57 kN	0.37 kN
0.74 m	Cohesionless	12.20 kPa	27.48	92.57 kN	27.48 kN
0.76 m	Cohesionless	12.43 kPa	27.48	92.57 kN	28.00 kN
3.76 m	Cohesionless	32.50 kPa	27.48	92.57 kN	73.19 kN
6.76 m	Cohesionless	52.57 kPa	27.48	92.57 kN	92.57 kN
9.76 m	Cohesionless	72.63 kPa	27.48	92.57 kN	92.57 kN
11.24 m	Cohesionless	82.53 kPa	27.48	92.57 kN	92.57 kN
11.26 m	Cohesionless	82.67 kPa	46.36	333.60 kN	333.60 kN
14.26 m	Cohesionless	105.08 kPa	46.36	333.60 kN	333.60 kN
17.14 m	Cohesionless	126.59 kPa	46.36	333.60 kN	333.60 kN
17.16 m	Cohesionless	126.74 kPa	28.20	92.57 kN	92.57 kN
20.16 m	Cohesionless	149.14 kPa	28.20	92.57 kN	92.57 kN
21.39 m	Cohesionless	158.33 kPa	28.20	92.57 kN	92.57 kN
21.41 m	Cohesionless	158.50 kPa	391.00	5126.32 kN	5126.32 kN
22.89 m	Cohesionless	173.05 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.37 kN	0.37 kN
0.74 m	3.32 kN	27.48 kN	30.80 kN
0.76 m	3.50 kN	28.00 kN	31.51 kN
3.76 m	53.07 kN	73.19 kN	126.27 kN
6.76 m	146.91 kN	92.57 kN	239.49 kN
9.76 m	285.03 kN	92.57 kN	377.60 kN
11.24 m	369.47 kN	92.57 kN	462.04 kN
11.26 m	370.99 kN	333.60 kN	704.59 kN
14.26 m	682.99 kN	333.60 kN	1016.59 kN
17.14 m	1052.56 kN	333.60 kN	1386.16 kN
17.16 m	1054.91 kN	92.57 kN	1147.48 kN
20.16 m	1364.55 kN	92.57 kN	1457.12 kN
21.39 m	1506.04 kN	92.57 kN	1598.61 kN
21.41 m	1511.63 kN	5126.32 kN	6637.95 kN
22.89 m	2194.04 kN	5126.32 kN	7320.36 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.55	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	25.55	N/A	3.32 kN
0.76 m	Cohesionless	12.40 kPa	25.55	N/A	3.50 kN
3.76 m	Cohesionless	22.43 kPa	25.55	N/A	53.07 kN
6.76 m	Cohesionless	32.47 kPa	25.55	N/A	146.91 kN
9.76 m	Cohesionless	42.50 kPa	25.55	N/A	285.03 kN
11.24 m	Cohesionless	47.45 kPa	25.55	N/A	369.47 kN
11.26 m	Cohesionless	82.63 kPa	28.69	N/A	370.99 kN
14.26 m	Cohesionless	93.84 kPa	28.69	N/A	682.99 kN
17.14 m	Cohesionless	104.59 kPa	28.69	N/A	1052.56 kN
17.16 m	Cohesionless	126.70 kPa	25.73	N/A	1054.91 kN
20.16 m	Cohesionless	137.90 kPa	25.73	N/A	1364.55 kN
21.39 m	Cohesionless	142.49 kPa	25.73	N/A	1506.04 kN
21.41 m	Cohesionless	158.45 kPa	38.37	N/A	1511.63 kN
22.89 m	Cohesionless	165.73 kPa	38.37	N/A	2194.04 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	27.48	92.57 kN	0.37 kN
0.74 m	Cohesionless	12.20 kPa	27.48	92.57 kN	27.48 kN
0.76 m	Cohesionless	12.43 kPa	27.48	92.57 kN	28.00 kN
3.76 m	Cohesionless	32.50 kPa	27.48	92.57 kN	73.19 kN
6.76 m	Cohesionless	52.57 kPa	27.48	92.57 kN	92.57 kN
9.76 m	Cohesionless	72.63 kPa	27.48	92.57 kN	92.57 kN
11.24 m	Cohesionless	82.53 kPa	27.48	92.57 kN	92.57 kN
11.26 m	Cohesionless	82.67 kPa	46.36	333.60 kN	333.60 kN
14.26 m	Cohesionless	105.08 kPa	46.36	333.60 kN	333.60 kN
17.14 m	Cohesionless	126.59 kPa	46.36	333.60 kN	333.60 kN
17.16 m	Cohesionless	126.74 kPa	28.20	92.57 kN	92.57 kN
20.16 m	Cohesionless	149.14 kPa	28.20	92.57 kN	92.57 kN
21.39 m	Cohesionless	158.33 kPa	28.20	92.57 kN	92.57 kN
21.41 m	Cohesionless	158.50 kPa	391.00	5126.32 kN	5126.32 kN
22.89 m	Cohesionless	173.05 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.37 kN	0.37 kN
0.74 m	3.32 kN	27.48 kN	30.80 kN
0.76 m	3.50 kN	28.00 kN	31.51 kN
3.76 m	53.07 kN	73.19 kN	126.27 kN
6.76 m	146.91 kN	92.57 kN	239.49 kN
9.76 m	285.03 kN	92.57 kN	377.60 kN
11.24 m	369.47 kN	92.57 kN	462.04 kN
11.26 m	370.99 kN	333.60 kN	704.59 kN
14.26 m	682.99 kN	333.60 kN	1016.59 kN
17.14 m	1052.56 kN	333.60 kN	1386.16 kN
17.16 m	1054.91 kN	92.57 kN	1147.48 kN
20.16 m	1364.55 kN	92.57 kN	1457.12 kN
21.39 m	1506.04 kN	92.57 kN	1598.61 kN
21.41 m	1511.63 kN	5126.32 kN	6637.95 kN
22.89 m	2194.04 kN	5126.32 kN	7320.36 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	25.55	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	25.55	N/A	3.32 kN
0.76 m	Cohesionless	12.40 kPa	25.55	N/A	3.50 kN
3.76 m	Cohesionless	22.43 kPa	25.55	N/A	53.07 kN
6.76 m	Cohesionless	32.47 kPa	25.55	N/A	146.91 kN
9.76 m	Cohesionless	42.50 kPa	25.55	N/A	285.03 kN
11.24 m	Cohesionless	47.45 kPa	25.55	N/A	369.47 kN
11.26 m	Cohesionless	82.63 kPa	28.69	N/A	370.99 kN
14.26 m	Cohesionless	93.84 kPa	28.69	N/A	682.99 kN
17.14 m	Cohesionless	104.59 kPa	28.69	N/A	1052.56 kN
17.16 m	Cohesionless	126.70 kPa	25.73	N/A	1054.91 kN
20.16 m	Cohesionless	137.90 kPa	25.73	N/A	1364.55 kN
21.39 m	Cohesionless	142.49 kPa	25.73	N/A	1506.04 kN
21.41 m	Cohesionless	158.45 kPa	38.37	N/A	1511.63 kN
22.89 m	Cohesionless	165.73 kPa	38.37	N/A	2194.04 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	27.48	92.57 kN	0.37 kN
0.74 m	Cohesionless	12.20 kPa	27.48	92.57 kN	27.48 kN
0.76 m	Cohesionless	12.43 kPa	27.48	92.57 kN	28.00 kN
3.76 m	Cohesionless	32.50 kPa	27.48	92.57 kN	73.19 kN
6.76 m	Cohesionless	52.57 kPa	27.48	92.57 kN	92.57 kN
9.76 m	Cohesionless	72.63 kPa	27.48	92.57 kN	92.57 kN
11.24 m	Cohesionless	82.53 kPa	27.48	92.57 kN	92.57 kN
11.26 m	Cohesionless	82.67 kPa	46.36	333.60 kN	333.60 kN
14.26 m	Cohesionless	105.08 kPa	46.36	333.60 kN	333.60 kN
17.14 m	Cohesionless	126.59 kPa	46.36	333.60 kN	333.60 kN
17.16 m	Cohesionless	126.74 kPa	28.20	92.57 kN	92.57 kN
20.16 m	Cohesionless	149.14 kPa	28.20	92.57 kN	92.57 kN
21.39 m	Cohesionless	158.33 kPa	28.20	92.57 kN	92.57 kN
21.41 m	Cohesionless	158.50 kPa	391.00	5126.32 kN	5126.32 kN
22.89 m	Cohesionless	173.05 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.37 kN	0.37 kN
0.74 m	3.32 kN	27.48 kN	30.80 kN
0.76 m	3.50 kN	28.00 kN	31.51 kN
3.76 m	53.07 kN	73.19 kN	126.27 kN
6.76 m	146.91 kN	92.57 kN	239.49 kN
9.76 m	285.03 kN	92.57 kN	377.60 kN
11.24 m	369.47 kN	92.57 kN	462.04 kN
11.26 m	370.99 kN	333.60 kN	704.59 kN
14.26 m	682.99 kN	333.60 kN	1016.59 kN
17.14 m	1052.56 kN	333.60 kN	1386.16 kN
17.16 m	1054.91 kN	92.57 kN	1147.48 kN
20.16 m	1364.55 kN	92.57 kN	1457.12 kN
21.39 m	1506.04 kN	92.57 kN	1598.61 kN
21.41 m	1511.63 kN	5126.32 kN	6637.95 kN
22.89 m	2194.04 kN	5126.32 kN	7320.36 kN

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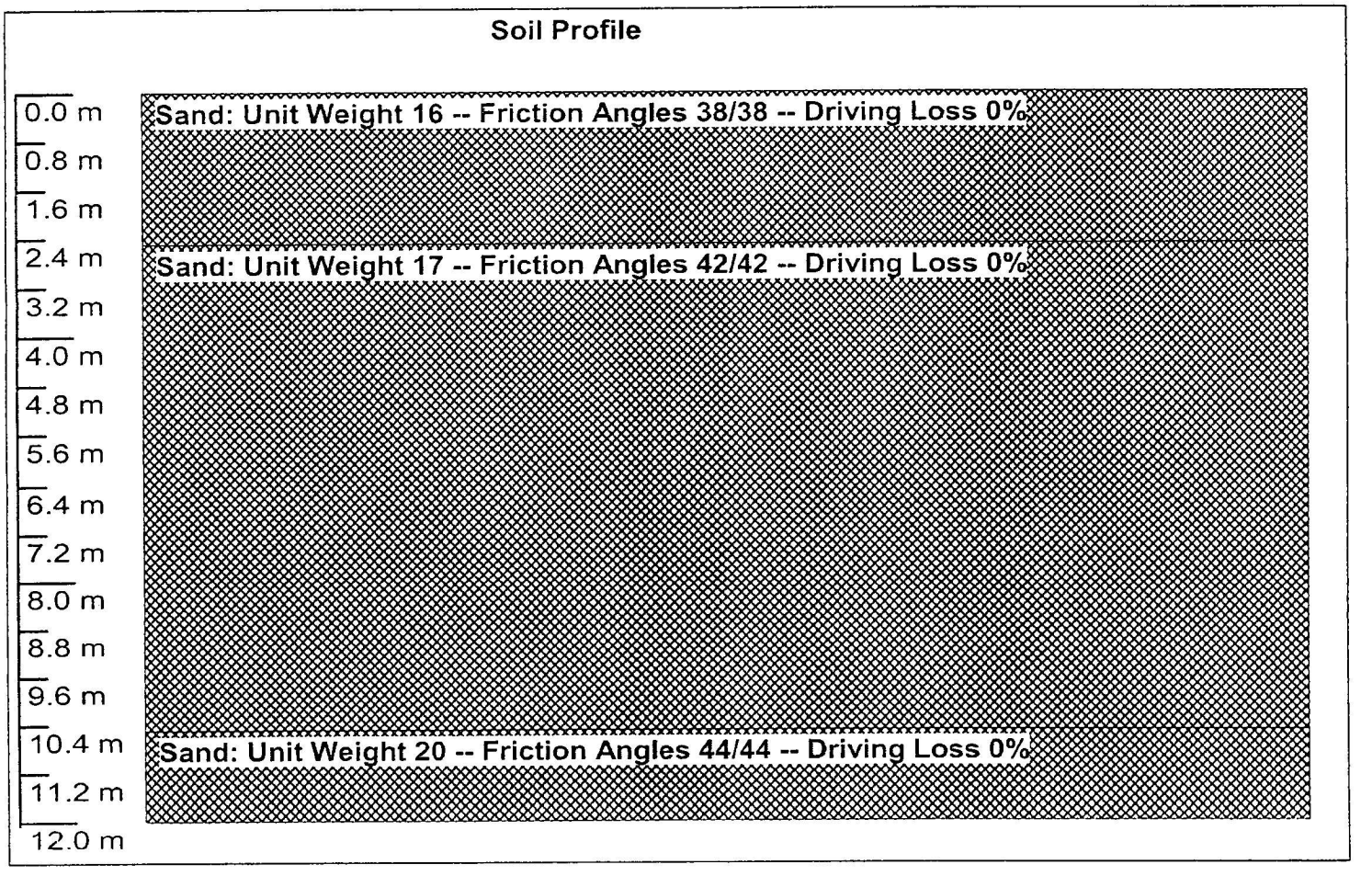

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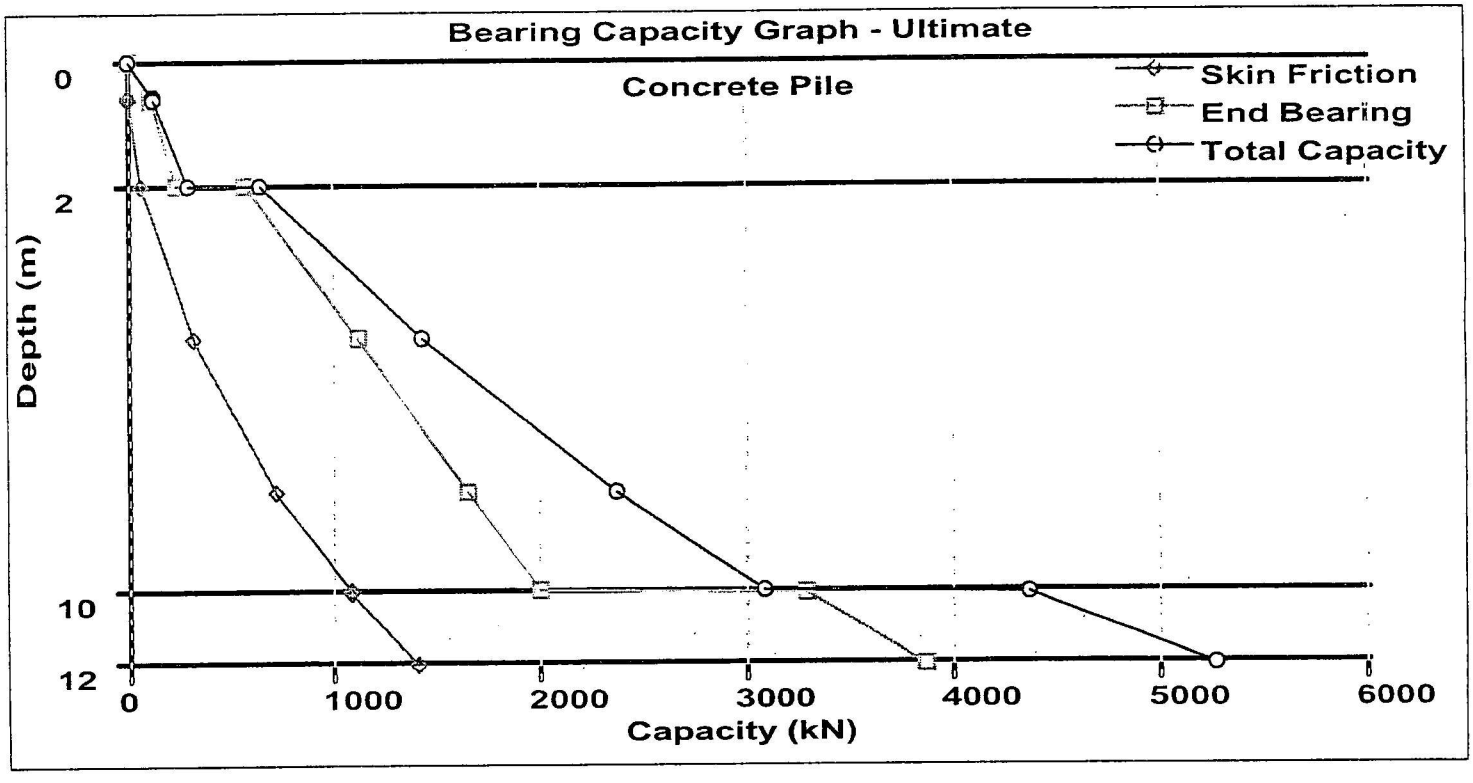

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CAB1_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	2.50 m	0.00%	16.49 kN/m^3	37.8/37.8	Nordlund
2	Cohesionless	8.00 m	0.00%	17.27 kN/m^3	42.0/42.0	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.82	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	31.82	N/A	8.06 kN
0.76 m	Cohesionless	12.40 kPa	31.82	N/A	8.50 kN
2.49 m	Cohesionless	18.19 kPa	31.82	N/A	64.77 kN
2.51 m	Cohesionless	24.11 kPa	35.35	N/A	65.77 kN
5.51 m	Cohesionless	35.31 kPa	35.35	N/A	314.31 kN
8.51 m	Cohesionless	46.52 kPa	35.35	N/A	720.39 kN
10.49 m	Cohesionless	53.91 kPa	35.35	N/A	1074.70 kN
10.51 m	Cohesionless	83.87 kPa	37.04	N/A	1078.67 kN
11.99 m	Cohesionless	91.14 kPa	37.04	N/A	1402.13 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	105.44	1544.79 kN	1.58 kN
0.74 m	Cohesionless	12.20 kPa	105.44	1544.79 kN	117.01 kN
0.76 m	Cohesionless	12.43 kPa	105.44	1544.79 kN	119.23 kN
2.49 m	Cohesionless	24.01 kPa	105.44	1544.79 kN	230.19 kN
2.51 m	Cohesionless	24.15 kPa	244.00	3587.49 kN	576.64 kN
5.51 m	Cohesionless	46.55 kPa	244.00	3587.49 kN	1111.69 kN
8.51 m	Cohesionless	68.96 kPa	244.00	3587.49 kN	1646.74 kN
10.49 m	Cohesionless	83.75 kPa	244.00	3587.49 kN	1999.87 kN
10.51 m	Cohesionless	83.92 kPa	391.00	4465.59 kN	3286.01 kN
11.99 m	Cohesionless	98.47 kPa	391.00	4465.59 kN	3855.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.58 kN	1.58 kN
0.74 m	8.06 kN	117.01 kN	125.07 kN
0.76 m	8.50 kN	119.23 kN	127.74 kN
2.49 m	64.77 kN	230.19 kN	294.96 kN
2.51 m	65.77 kN	576.64 kN	642.41 kN
5.51 m	314.31 kN	1111.69 kN	1426.00 kN
8.51 m	720.39 kN	1646.74 kN	2367.13 kN
10.49 m	1074.70 kN	1999.87 kN	3074.56 kN
10.51 m	1078.67 kN	3286.01 kN	4364.68 kN
11.99 m	1402.13 kN	3855.59 kN	5257.73 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.82	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	31.82	N/A	8.06 kN
0.76 m	Cohesionless	12.40 kPa	31.82	N/A	8.50 kN
2.49 m	Cohesionless	18.19 kPa	31.82	N/A	64.77 kN
2.51 m	Cohesionless	24.11 kPa	35.35	N/A	65.77 kN
5.51 m	Cohesionless	35.31 kPa	35.35	N/A	314.31 kN
8.51 m	Cohesionless	46.52 kPa	35.35	N/A	720.39 kN
10.49 m	Cohesionless	53.91 kPa	35.35	N/A	1074.70 kN
10.51 m	Cohesionless	83.87 kPa	37.04	N/A	1078.67 kN
11.99 m	Cohesionless	91.14 kPa	37.04	N/A	1402.13 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	105.44	1544.79 kN	1.58 kN
0.74 m	Cohesionless	12.20 kPa	105.44	1544.79 kN	117.01 kN
0.76 m	Cohesionless	12.43 kPa	105.44	1544.79 kN	119.23 kN
2.49 m	Cohesionless	24.01 kPa	105.44	1544.79 kN	230.19 kN
2.51 m	Cohesionless	24.15 kPa	244.00	3587.49 kN	576.64 kN
5.51 m	Cohesionless	46.55 kPa	244.00	3587.49 kN	1111.69 kN
8.51 m	Cohesionless	68.96 kPa	244.00	3587.49 kN	1646.74 kN
10.49 m	Cohesionless	83.75 kPa	244.00	3587.49 kN	1999.87 kN
10.51 m	Cohesionless	83.92 kPa	391.00	4465.59 kN	3286.01 kN
11.99 m	Cohesionless	98.47 kPa	391.00	4465.59 kN	3855.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.58 kN	1.58 kN
0.74 m	8.06 kN	117.01 kN	125.07 kN
0.76 m	8.50 kN	119.23 kN	127.74 kN
2.49 m	64.77 kN	230.19 kN	294.96 kN
2.51 m	65.77 kN	576.64 kN	642.41 kN
5.51 m	314.31 kN	1111.69 kN	1426.00 kN
8.51 m	720.39 kN	1646.74 kN	2367.13 kN
10.49 m	1074.70 kN	1999.87 kN	3074.56 kN
10.51 m	1078.67 kN	3286.01 kN	4364.68 kN
11.99 m	1402.13 kN	3855.59 kN	5257.73 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.82	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	31.82	N/A	8.06 kN
0.76 m	Cohesionless	12.40 kPa	31.82	N/A	8.50 kN
2.49 m	Cohesionless	18.19 kPa	31.82	N/A	64.77 kN
2.51 m	Cohesionless	24.11 kPa	35.35	N/A	65.77 kN
5.51 m	Cohesionless	35.31 kPa	35.35	N/A	314.31 kN
8.51 m	Cohesionless	46.52 kPa	35.35	N/A	720.39 kN
10.49 m	Cohesionless	53.91 kPa	35.35	N/A	1074.70 kN
10.51 m	Cohesionless	83.87 kPa	37.04	N/A	1078.67 kN
11.99 m	Cohesionless	91.14 kPa	37.04	N/A	1402.13 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	105.44	1544.79 kN	1.58 kN
0.74 m	Cohesionless	12.20 kPa	105.44	1544.79 kN	117.01 kN
0.76 m	Cohesionless	12.43 kPa	105.44	1544.79 kN	119.23 kN
2.49 m	Cohesionless	24.01 kPa	105.44	1544.79 kN	230.19 kN
2.51 m	Cohesionless	24.15 kPa	244.00	3587.49 kN	576.64 kN
5.51 m	Cohesionless	46.55 kPa	244.00	3587.49 kN	1111.69 kN
8.51 m	Cohesionless	68.96 kPa	244.00	3587.49 kN	1646.74 kN
10.49 m	Cohesionless	83.75 kPa	244.00	3587.49 kN	1999.87 kN
10.51 m	Cohesionless	83.92 kPa	391.00	4465.59 kN	3286.01 kN
11.99 m	Cohesionless	98.47 kPa	391.00	4465.59 kN	3855.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.58 kN	1.58 kN
0.74 m	8.06 kN	117.01 kN	125.07 kN
0.76 m	8.50 kN	119.23 kN	127.74 kN
2.49 m	64.77 kN	230.19 kN	294.96 kN
2.51 m	65.77 kN	576.64 kN	642.41 kN
5.51 m	314.31 kN	1111.69 kN	1426.00 kN
8.51 m	720.39 kN	1646.74 kN	2367.13 kN
10.49 m	1074.70 kN	1999.87 kN	3074.56 kN
10.51 m	1078.67 kN	3286.01 kN	4364.68 kN
11.99 m	1402.13 kN	3855.59 kN	5257.73 kN

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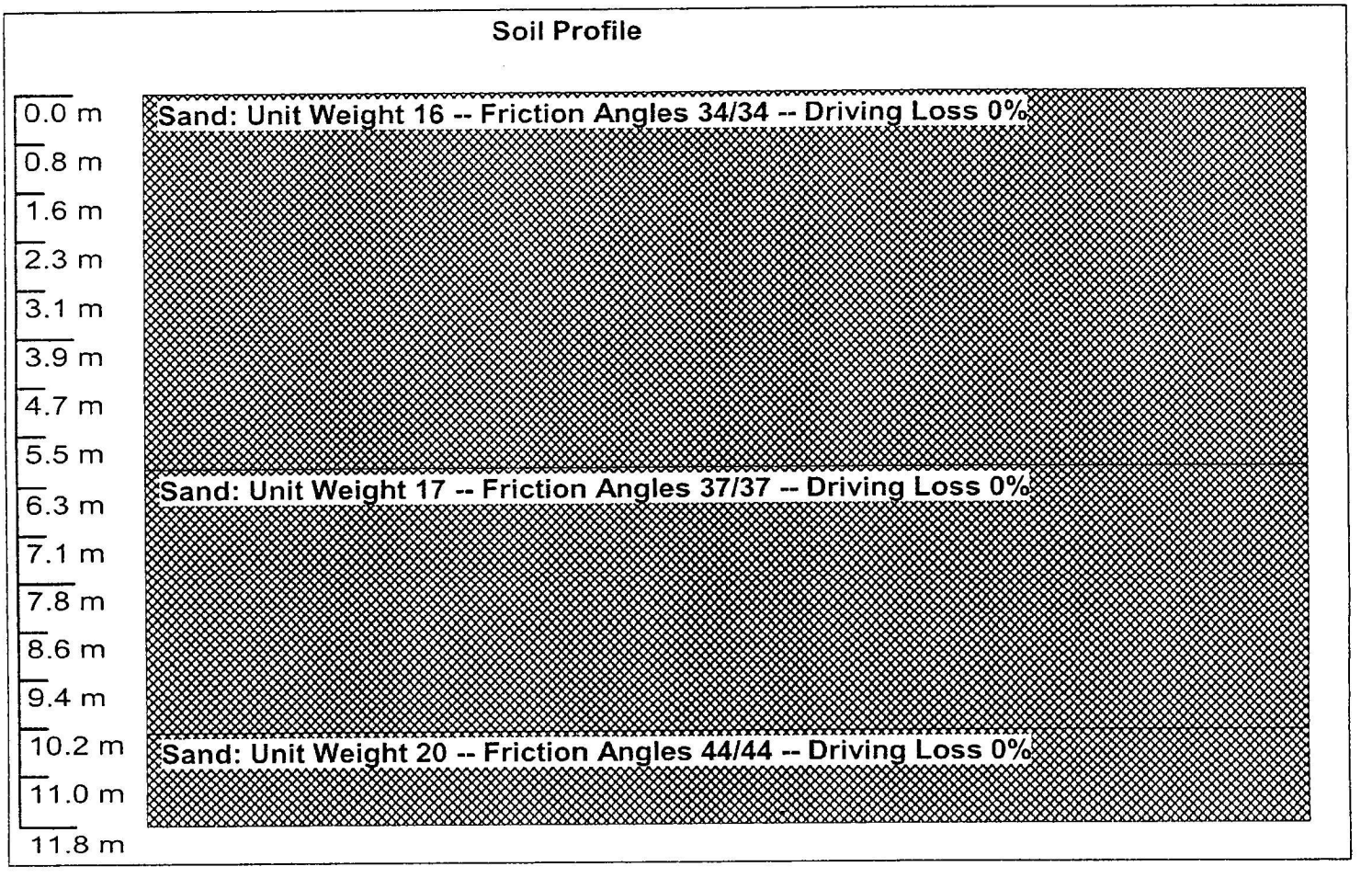

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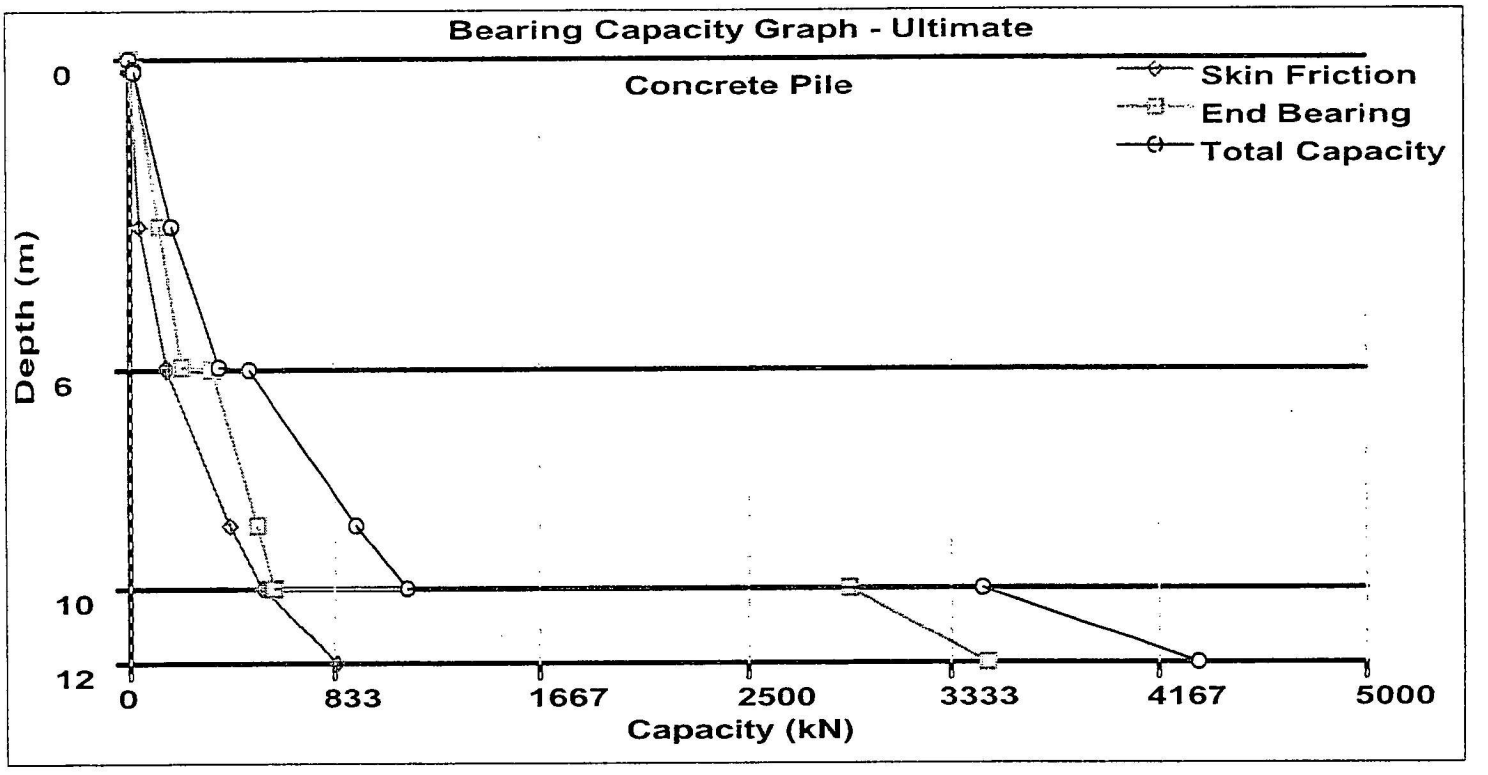

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP1_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.25 m
	- Driving/Restrike	0.25 m
	- Ultimate:	0.25 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	6.00 m	0.00%	16.49 kN/m^3	34.5/34.5	Nordlund
2	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	36.8/36.8	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	29.04	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	29.04	N/A	0.54 kN
0.26 m	Cohesionless	4.16 kPa	29.04	N/A	0.63 kN
3.26 m	Cohesionless	14.19 kPa	29.04	N/A	49.27 kN
5.99 m	Cohesionless	23.32 kPa	29.04	N/A	153.17 kN
6.01 m	Cohesionless	42.62 kPa	30.98	N/A	154.33 kN
9.01 m	Cohesionless	53.82 kPa	30.98	N/A	407.69 kN
10.24 m	Cohesionless	58.41 kPa	30.98	N/A	542.04 kN
10.26 m	Cohesionless	74.37 kPa	37.04	N/A	544.99 kN
11.74 m	Cohesionless	81.65 kPa	37.04	N/A	834.76 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	59.80	548.27 kN	0.84 kN
0.24 m	Cohesionless	3.96 kPa	59.80	548.27 kN	20.09 kN
0.26 m	Cohesionless	4.19 kPa	59.80	548.27 kN	21.27 kN
3.26 m	Cohesionless	24.26 kPa	59.80	548.27 kN	123.14 kN
5.99 m	Cohesionless	42.51 kPa	59.80	548.27 kN	215.84 kN
6.01 m	Cohesionless	42.66 kPa	88.48	1177.28 kN	336.21 kN
9.01 m	Cohesionless	65.06 kPa	88.48	1177.28 kN	512.81 kN
10.24 m	Cohesionless	74.25 kPa	88.48	1177.28 kN	585.21 kN
10.26 m	Cohesionless	74.42 kPa	391.00	4465.59 kN	2914.08 kN
11.74 m	Cohesionless	88.97 kPa	391.00	4465.59 kN	3483.67 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.84 kN	0.84 kN
0.24 m	0.54 kN	20.09 kN	20.63 kN
0.26 m	0.63 kN	21.27 kN	21.90 kN
3.26 m	49.27 kN	123.14 kN	172.41 kN
5.99 m	153.17 kN	215.84 kN	369.01 kN
6.01 m	154.33 kN	336.21 kN	490.54 kN
9.01 m	407.69 kN	512.81 kN	920.50 kN
10.24 m	542.04 kN	585.21 kN	1127.26 kN
10.26 m	544.99 kN	2914.08 kN	3459.07 kN
11.74 m	834.76 kN	3483.67 kN	4318.43 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	29.04	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	29.04	N/A	0.54 kN
0.26 m	Cohesionless	4.16 kPa	29.04	N/A	0.63 kN
3.26 m	Cohesionless	14.19 kPa	29.04	N/A	49.27 kN
5.99 m	Cohesionless	23.32 kPa	29.04	N/A	153.17 kN
6.01 m	Cohesionless	42.62 kPa	30.98	N/A	154.33 kN
9.01 m	Cohesionless	53.82 kPa	30.98	N/A	407.69 kN
10.24 m	Cohesionless	58.41 kPa	30.98	N/A	542.04 kN
10.26 m	Cohesionless	74.37 kPa	37.04	N/A	544.99 kN
11.74 m	Cohesionless	81.65 kPa	37.04	N/A	834.76 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	59.80	548.27 kN	0.84 kN
0.24 m	Cohesionless	3.96 kPa	59.80	548.27 kN	20.09 kN
0.26 m	Cohesionless	4.19 kPa	59.80	548.27 kN	21.27 kN
3.26 m	Cohesionless	24.26 kPa	59.80	548.27 kN	123.14 kN
5.99 m	Cohesionless	42.51 kPa	59.80	548.27 kN	215.84 kN
6.01 m	Cohesionless	42.66 kPa	88.48	1177.28 kN	336.21 kN
9.01 m	Cohesionless	65.06 kPa	88.48	1177.28 kN	512.81 kN
10.24 m	Cohesionless	74.25 kPa	88.48	1177.28 kN	585.21 kN
10.26 m	Cohesionless	74.42 kPa	391.00	4465.59 kN	2914.08 kN
11.74 m	Cohesionless	88.97 kPa	391.00	4465.59 kN	3483.67 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.84 kN	0.84 kN
0.24 m	0.54 kN	20.09 kN	20.63 kN
0.26 m	0.63 kN	21.27 kN	21.90 kN
3.26 m	49.27 kN	123.14 kN	172.41 kN
5.99 m	153.17 kN	215.84 kN	369.01 kN
6.01 m	154.33 kN	336.21 kN	490.54 kN
9.01 m	407.69 kN	512.81 kN	920.50 kN
10.24 m	542.04 kN	585.21 kN	1127.26 kN
10.26 m	544.99 kN	2914.08 kN	3459.07 kN
11.74 m	834.76 kN	3483.67 kN	4318.43 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	29.04	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	29.04	N/A	0.54 kN
0.26 m	Cohesionless	4.16 kPa	29.04	N/A	0.63 kN
3.26 m	Cohesionless	14.19 kPa	29.04	N/A	49.27 kN
5.99 m	Cohesionless	23.32 kPa	29.04	N/A	153.17 kN
6.01 m	Cohesionless	42.62 kPa	30.98	N/A	154.33 kN
9.01 m	Cohesionless	53.82 kPa	30.98	N/A	407.69 kN
10.24 m	Cohesionless	58.41 kPa	30.98	N/A	542.04 kN
10.26 m	Cohesionless	74.37 kPa	37.04	N/A	544.99 kN
11.74 m	Cohesionless	81.65 kPa	37.04	N/A	834.76 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	59.80	548.27 kN	0.84 kN
0.24 m	Cohesionless	3.96 kPa	59.80	548.27 kN	20.09 kN
0.26 m	Cohesionless	4.19 kPa	59.80	548.27 kN	21.27 kN
3.26 m	Cohesionless	24.26 kPa	59.80	548.27 kN	123.14 kN
5.99 m	Cohesionless	42.51 kPa	59.80	548.27 kN	215.84 kN
6.01 m	Cohesionless	42.66 kPa	88.48	1177.28 kN	336.21 kN
9.01 m	Cohesionless	65.06 kPa	88.48	1177.28 kN	512.81 kN
10.24 m	Cohesionless	74.25 kPa	88.48	1177.28 kN	585.21 kN
10.26 m	Cohesionless	74.42 kPa	391.00	4465.59 kN	2914.08 kN
11.74 m	Cohesionless	88.97 kPa	391.00	4465.59 kN	3483.67 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.84 kN	0.84 kN
0.24 m	0.54 kN	20.09 kN	20.63 kN
0.26 m	0.63 kN	21.27 kN	21.90 kN
3.26 m	49.27 kN	123.14 kN	172.41 kN
5.99 m	153.17 kN	215.84 kN	369.01 kN
6.01 m	154.33 kN	336.21 kN	490.54 kN
9.01 m	407.69 kN	512.81 kN	920.50 kN
10.24 m	542.04 kN	585.21 kN	1127.26 kN
10.26 m	544.99 kN	2914.08 kN	3459.07 kN
11.74 m	834.76 kN	3483.67 kN	4318.43 kN

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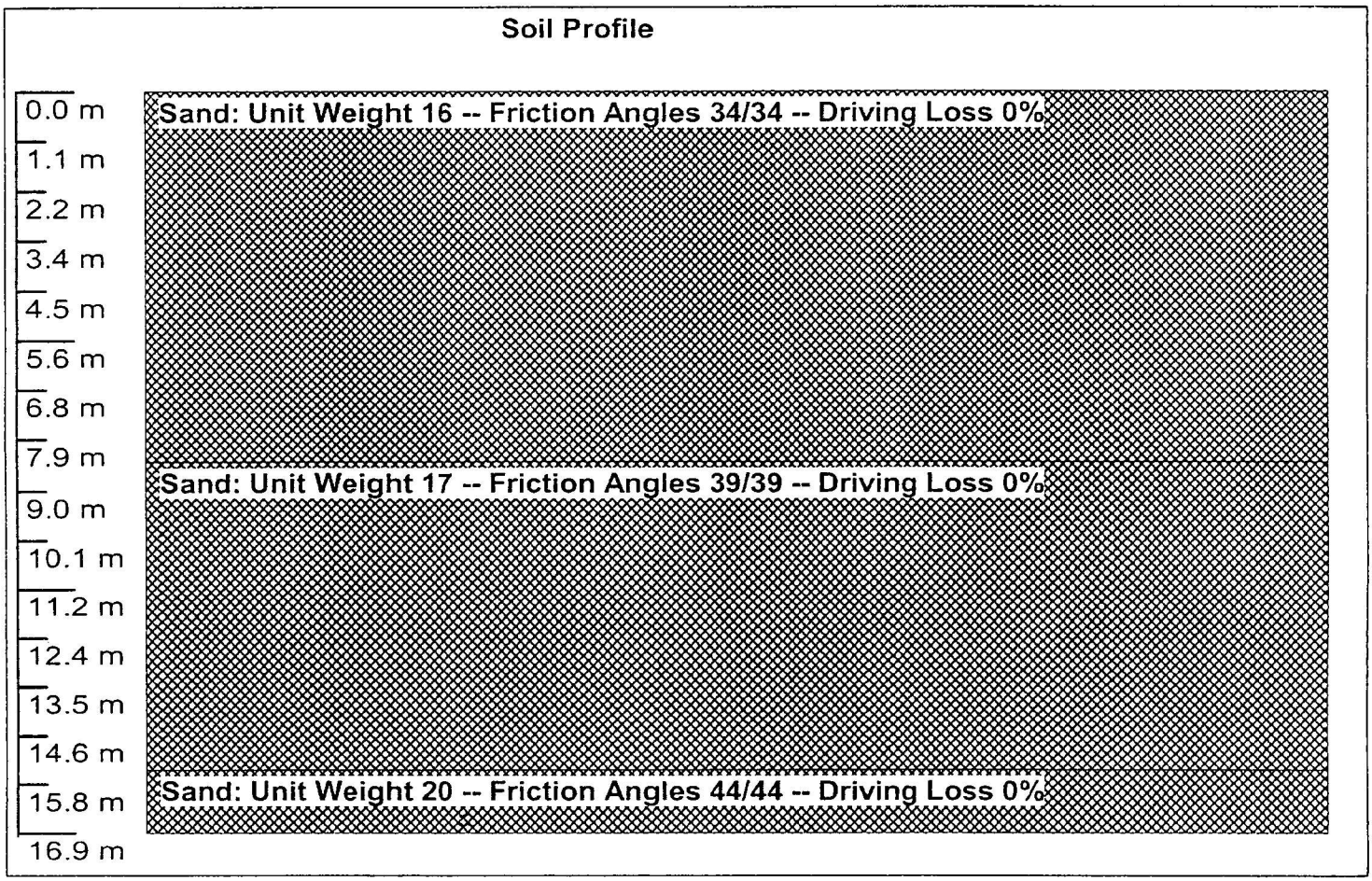

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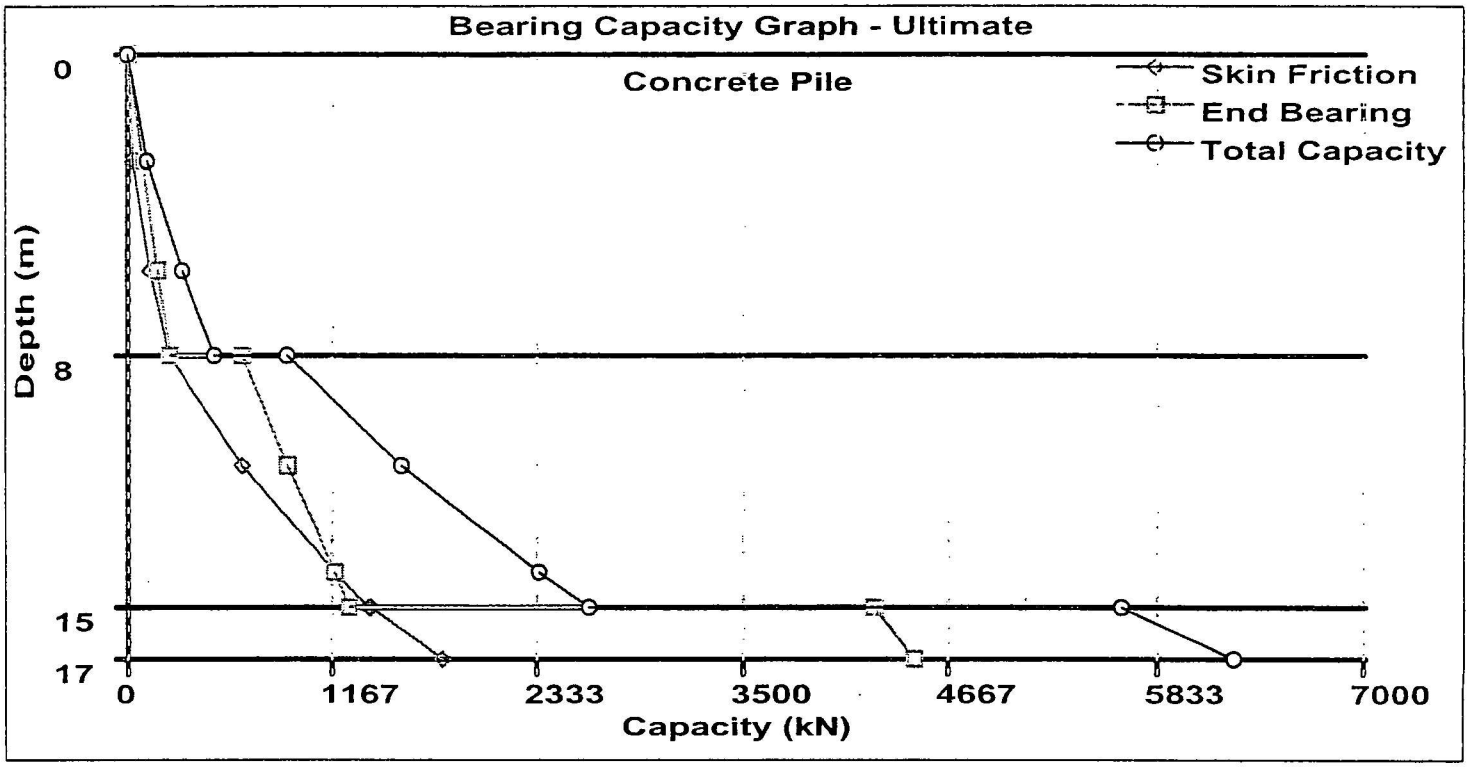

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP2_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	-0.50 m
	- Driving/Restrike	-0.50 m
	- Ultimate:	-0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	8.38 m	0.00%	16.49 kN/m^3	33.8/33.8	Nordlund
2	Cohesionless	7.00 m	0.00%	17.27 kN/m^3	38.6/38.6	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	28.45	N/A	-0.05 kN
3.01 m	Cohesionless	5.17 kPa	28.45	N/A	16.56 kN
6.01 m	Cohesionless	15.20 kPa	28.45	N/A	97.29 kN
8.36 m	Cohesionless	23.07 kPa	28.45	N/A	205.59 kN
8.39 m	Cohesionless	51.15 kPa	32.49	N/A	207.14 kN
11.39 m	Cohesionless	62.36 kPa	32.49	N/A	574.19 kN
14.39 m	Cohesionless	73.56 kPa	32.49	N/A	1073.05 kN
15.36 m	Cohesionless	77.22 kPa	32.49	N/A	1264.58 kN
15.39 m	Cohesionless	103.44 kPa	37.04	N/A	1269.09 kN
16.86 m	Cohesionless	110.72 kPa	37.04	N/A	1661.98 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	53.92	403.84 kN	-21.73 kN
3.01 m	Cohesionless	15.23 kPa	53.92	403.84 kN	68.47 kN
6.01 m	Cohesionless	35.30 kPa	53.92	403.84 kN	158.68 kN
8.36 m	Cohesionless	51.05 kPa	53.92	403.84 kN	226.96 kN
8.39 m	Cohesionless	51.19 kPa	125.28	1870.27 kN	592.28 kN
11.39 m	Cohesionless	73.60 kPa	125.28	1870.27 kN	851.52 kN
14.39 m	Cohesionless	96.00 kPa	125.28	1870.27 kN	1110.76 kN
15.36 m	Cohesionless	103.32 kPa	125.28	1870.27 kN	1195.45 kN
15.39 m	Cohesionless	103.49 kPa	391.00	4465.59 kN	4052.44 kN
16.86 m	Cohesionless	118.04 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.05 kN	-21.73 kN	-21.78 kN
3.01 m	16.56 kN	68.47 kN	85.03 kN
6.01 m	97.29 kN	158.68 kN	255.97 kN
8.36 m	205.59 kN	226.96 kN	432.55 kN
8.39 m	207.14 kN	592.28 kN	799.42 kN
11.39 m	574.19 kN	851.52 kN	1425.71 kN
14.39 m	1073.05 kN	1110.76 kN	2183.82 kN
15.36 m	1264.58 kN	1195.45 kN	2460.03 kN
15.39 m	1269.09 kN	4052.44 kN	5321.53 kN
16.86 m	1661.98 kN	4465.59 kN	6127.57 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	28.45	N/A	-0.05 kN
3.01 m	Cohesionless	5.17 kPa	28.45	N/A	16.56 kN
6.01 m	Cohesionless	15.20 kPa	28.45	N/A	97.29 kN
8.36 m	Cohesionless	23.07 kPa	28.45	N/A	205.59 kN
8.39 m	Cohesionless	51.15 kPa	32.49	N/A	207.14 kN
11.39 m	Cohesionless	62.36 kPa	32.49	N/A	574.19 kN
14.39 m	Cohesionless	73.56 kPa	32.49	N/A	1073.05 kN
15.36 m	Cohesionless	77.22 kPa	32.49	N/A	1264.58 kN
15.39 m	Cohesionless	103.44 kPa	37.04	N/A	1269.09 kN
16.86 m	Cohesionless	110.72 kPa	37.04	N/A	1661.98 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	53.92	403.84 kN	-21.73 kN
3.01 m	Cohesionless	15.23 kPa	53.92	403.84 kN	68.47 kN
6.01 m	Cohesionless	35.30 kPa	53.92	403.84 kN	158.68 kN
8.36 m	Cohesionless	51.05 kPa	53.92	403.84 kN	226.96 kN
8.39 m	Cohesionless	51.19 kPa	125.28	1870.27 kN	592.28 kN
11.39 m	Cohesionless	73.60 kPa	125.28	1870.27 kN	851.52 kN
14.39 m	Cohesionless	96.00 kPa	125.28	1870.27 kN	1110.76 kN
15.36 m	Cohesionless	103.32 kPa	125.28	1870.27 kN	1195.45 kN
15.39 m	Cohesionless	103.49 kPa	391.00	4465.59 kN	4052.44 kN
16.86 m	Cohesionless	118.04 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.05 kN	-21.73 kN	-21.78 kN
3.01 m	16.56 kN	68.47 kN	85.03 kN
6.01 m	97.29 kN	158.68 kN	255.97 kN
8.36 m	205.59 kN	226.96 kN	432.55 kN
8.39 m	207.14 kN	592.28 kN	799.42 kN
11.39 m	574.19 kN	851.52 kN	1425.71 kN
14.39 m	1073.05 kN	1110.76 kN	2183.82 kN
15.36 m	1264.58 kN	1195.45 kN	2460.03 kN
15.39 m	1269.09 kN	4052.44 kN	5321.53 kN
16.86 m	1661.98 kN	4465.59 kN	6127.57 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	28.45	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	28.45	N/A	32.27 kN
6.01 m	Cohesionless	20.10 kPa	28.45	N/A	128.67 kN
8.36 m	Cohesionless	27.97 kPa	28.45	N/A	249.26 kN
8.39 m	Cohesionless	56.05 kPa	32.49	N/A	250.96 kN
11.39 m	Cohesionless	67.26 kPa	32.49	N/A	646.84 kN
14.39 m	Cohesionless	78.46 kPa	32.49	N/A	1174.54 kN
15.36 m	Cohesionless	82.12 kPa	32.49	N/A	1375.48 kN
15.39 m	Cohesionless	108.34 kPa	37.04	N/A	1380.20 kN
16.86 m	Cohesionless	115.62 kPa	37.04	N/A	1790.48 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	53.92	403.84 kN	0.30 kN
3.01 m	Cohesionless	20.13 kPa	53.92	403.84 kN	90.50 kN
6.01 m	Cohesionless	40.20 kPa	53.92	403.84 kN	180.71 kN
8.36 m	Cohesionless	55.95 kPa	53.92	403.84 kN	248.76 kN
8.39 m	Cohesionless	56.09 kPa	125.28	1870.27 kN	648.99 kN
11.39 m	Cohesionless	78.50 kPa	125.28	1870.27 kN	908.23 kN
14.39 m	Cohesionless	100.90 kPa	125.28	1870.27 kN	1167.47 kN
15.36 m	Cohesionless	108.22 kPa	125.28	1870.27 kN	1252.16 kN
15.39 m	Cohesionless	108.39 kPa	391.00	4465.59 kN	4244.35 kN
16.86 m	Cohesionless	122.94 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.30 kN	0.30 kN
3.01 m	32.27 kN	90.50 kN	122.78 kN
6.01 m	128.67 kN	180.71 kN	309.38 kN
8.36 m	249.26 kN	248.76 kN	498.02 kN
8.39 m	250.96 kN	648.99 kN	899.95 kN
11.39 m	646.84 kN	908.23 kN	1555.07 kN
14.39 m	1174.54 kN	1167.47 kN	2342.01 kN
15.36 m	1375.48 kN	1252.16 kN	2627.64 kN
15.39 m	1380.20 kN	4244.35 kN	5624.56 kN
16.86 m	1790.48 kN	4465.59 kN	6256.07 kN

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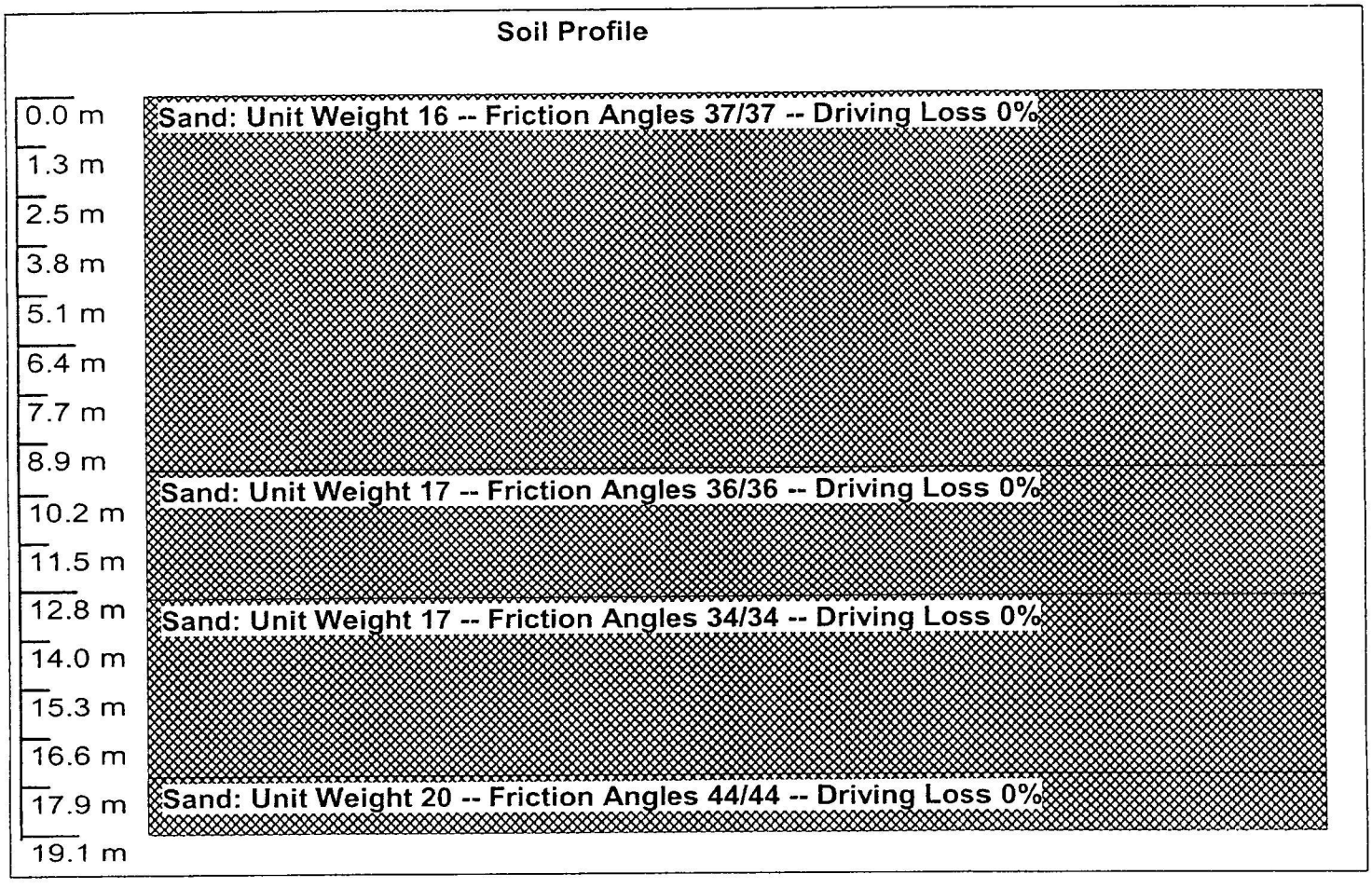

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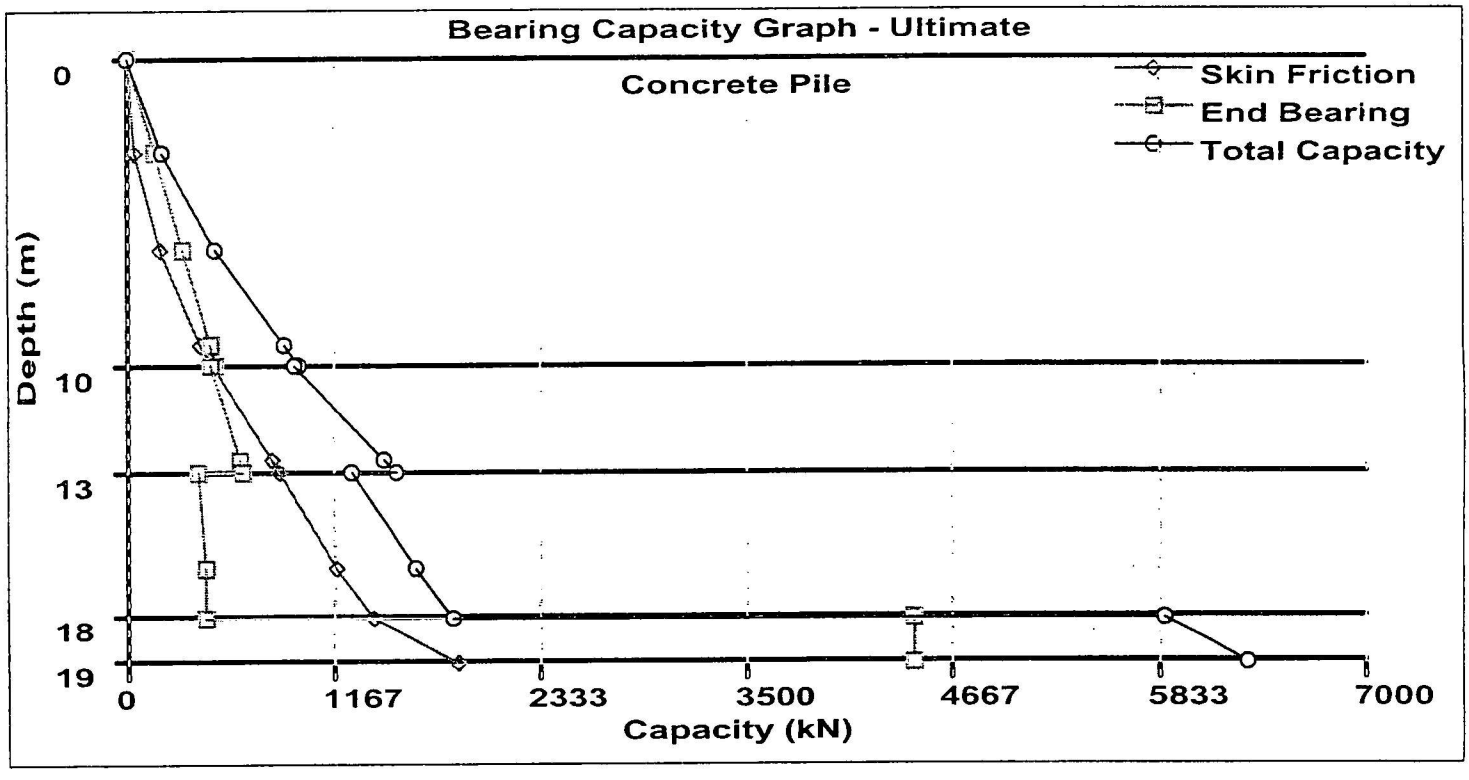

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP3_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.00 m
	- Driving/Restrike	0.00 m
	- Ultimate:	0.00 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	9.62 m	0.00%	16.49 kN/m^3	36.7/36.7	Nordlund
2	Cohesionless	3.38 m	0.00%	17.27 kN/m^3	36.4/36.4	Nordlund
3	Cohesionless	4.62 m	0.00%	17.27 kN/m^3	34.0/34.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	30.89	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	30.89	N/A	46.87 kN
6.01 m	Cohesionless	20.10 kPa	30.89	N/A	186.84 kN
9.01 m	Cohesionless	30.13 kPa	30.89	N/A	419.92 kN
9.61 m	Cohesionless	32.15 kPa	30.89	N/A	478.21 kN
9.64 m	Cohesionless	64.41 kPa	30.64	N/A	480.16 kN
12.64 m	Cohesionless	75.62 kPa	30.64	N/A	816.78 kN
12.99 m	Cohesionless	76.94 kPa	30.64	N/A	863.20 kN
13.01 m	Cohesionless	89.62 kPa	28.62	N/A	865.51 kN
16.01 m	Cohesionless	100.82 kPa	28.62	N/A	1194.23 kN
17.61 m	Cohesionless	106.82 kPa	28.62	N/A	1400.08 kN
17.64 m	Cohesionless	124.17 kPa	37.04	N/A	1404.40 kN
19.11 m	Cohesionless	131.45 kPa	37.04	N/A	1870.82 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	87.12	1142.21 kN	0.52 kN
3.01 m	Cohesionless	20.13 kPa	87.12	1142.21 kN	155.91 kN
6.01 m	Cohesionless	40.20 kPa	87.12	1142.21 kN	311.30 kN
9.01 m	Cohesionless	60.26 kPa	87.12	1142.21 kN	466.69 kN
9.61 m	Cohesionless	64.31 kPa	87.12	1142.21 kN	498.03 kN
9.64 m	Cohesionless	64.45 kPa	83.04	1037.02 kN	472.50 kN
12.64 m	Cohesionless	86.86 kPa	83.04	1037.02 kN	636.35 kN
12.99 m	Cohesionless	89.51 kPa	83.04	1037.02 kN	655.74 kN
13.01 m	Cohesionless	89.66 kPa	55.60	445.11 kN	401.28 kN
16.01 m	Cohesionless	112.06 kPa	55.60	445.11 kN	445.11 kN
17.61 m	Cohesionless	124.05 kPa	55.60	445.11 kN	445.11 kN
17.64 m	Cohesionless	124.22 kPa	391.00	4465.59 kN	4465.59 kN
19.11 m	Cohesionless	138.77 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.52 kN	0.52 kN
3.01 m	46.87 kN	155.91 kN	202.77 kN
6.01 m	186.84 kN	311.30 kN	498.14 kN
9.01 m	419.92 kN	466.69 kN	886.62 kN
9.61 m	478.21 kN	498.03 kN	976.24 kN
9.64 m	480.16 kN	472.50 kN	952.66 kN
12.64 m	816.78 kN	636.35 kN	1453.13 kN
12.99 m	863.20 kN	655.74 kN	1518.94 kN
13.01 m	865.51 kN	401.28 kN	1266.79 kN
16.01 m	1194.23 kN	445.11 kN	1639.33 kN
17.61 m	1400.08 kN	445.11 kN	1845.18 kN
17.64 m	1404.40 kN	4465.59 kN	5869.99 kN
19.11 m	1870.82 kN	4465.59 kN	6336.42 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	30.89	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	30.89	N/A	46.87 kN
6.01 m	Cohesionless	20.10 kPa	30.89	N/A	186.84 kN
9.01 m	Cohesionless	30.13 kPa	30.89	N/A	419.92 kN
9.61 m	Cohesionless	32.15 kPa	30.89	N/A	478.21 kN
9.64 m	Cohesionless	64.41 kPa	30.64	N/A	480.16 kN
12.64 m	Cohesionless	75.62 kPa	30.64	N/A	816.78 kN
12.99 m	Cohesionless	76.94 kPa	30.64	N/A	863.20 kN
13.01 m	Cohesionless	89.62 kPa	28.62	N/A	865.51 kN
16.01 m	Cohesionless	100.82 kPa	28.62	N/A	1194.23 kN
17.61 m	Cohesionless	106.82 kPa	28.62	N/A	1400.08 kN
17.64 m	Cohesionless	124.17 kPa	37.04	N/A	1404.40 kN
19.11 m	Cohesionless	131.45 kPa	37.04	N/A	1870.82 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	87.12	1142.21 kN	0.52 kN
3.01 m	Cohesionless	20.13 kPa	87.12	1142.21 kN	155.91 kN
6.01 m	Cohesionless	40.20 kPa	87.12	1142.21 kN	311.30 kN
9.01 m	Cohesionless	60.26 kPa	87.12	1142.21 kN	466.69 kN
9.61 m	Cohesionless	64.31 kPa	87.12	1142.21 kN	498.03 kN
9.64 m	Cohesionless	64.45 kPa	83.04	1037.02 kN	472.50 kN
12.64 m	Cohesionless	86.86 kPa	83.04	1037.02 kN	636.35 kN
12.99 m	Cohesionless	89.51 kPa	83.04	1037.02 kN	655.74 kN
13.01 m	Cohesionless	89.66 kPa	55.60	445.11 kN	401.28 kN
16.01 m	Cohesionless	112.06 kPa	55.60	445.11 kN	445.11 kN
17.61 m	Cohesionless	124.05 kPa	55.60	445.11 kN	445.11 kN
17.64 m	Cohesionless	124.22 kPa	391.00	4465.59 kN	4465.59 kN
19.11 m	Cohesionless	138.77 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.52 kN	0.52 kN
3.01 m	46.87 kN	155.91 kN	202.77 kN
6.01 m	186.84 kN	311.30 kN	498.14 kN
9.01 m	419.92 kN	466.69 kN	886.62 kN
9.61 m	478.21 kN	498.03 kN	976.24 kN
9.64 m	480.16 kN	472.50 kN	952.66 kN
12.64 m	816.78 kN	636.35 kN	1453.13 kN
12.99 m	863.20 kN	655.74 kN	1518.94 kN
13.01 m	865.51 kN	401.28 kN	1266.79 kN
16.01 m	1194.23 kN	445.11 kN	1639.33 kN
17.61 m	1400.08 kN	445.11 kN	1845.18 kN
17.64 m	1404.40 kN	4465.59 kN	5869.99 kN
19.11 m	1870.82 kN	4465.59 kN	6336.42 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	30.89	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	30.89	N/A	46.87 kN
6.01 m	Cohesionless	20.10 kPa	30.89	N/A	186.84 kN
9.01 m	Cohesionless	30.13 kPa	30.89	N/A	419.92 kN
9.61 m	Cohesionless	32.15 kPa	30.89	N/A	478.21 kN
9.64 m	Cohesionless	64.41 kPa	30.64	N/A	480.16 kN
12.64 m	Cohesionless	75.62 kPa	30.64	N/A	816.78 kN
12.99 m	Cohesionless	76.94 kPa	30.64	N/A	863.20 kN
13.01 m	Cohesionless	89.62 kPa	28.62	N/A	865.51 kN
16.01 m	Cohesionless	100.82 kPa	28.62	N/A	1194.23 kN
17.61 m	Cohesionless	106.82 kPa	28.62	N/A	1400.08 kN
17.64 m	Cohesionless	124.17 kPa	37.04	N/A	1404.40 kN
19.11 m	Cohesionless	131.45 kPa	37.04	N/A	1870.82 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	87.12	1142.21 kN	0.52 kN
3.01 m	Cohesionless	20.13 kPa	87.12	1142.21 kN	155.91 kN
6.01 m	Cohesionless	40.20 kPa	87.12	1142.21 kN	311.30 kN
9.01 m	Cohesionless	60.26 kPa	87.12	1142.21 kN	466.69 kN
9.61 m	Cohesionless	64.31 kPa	87.12	1142.21 kN	498.03 kN
9.64 m	Cohesionless	64.45 kPa	83.04	1037.02 kN	472.50 kN
12.64 m	Cohesionless	86.86 kPa	83.04	1037.02 kN	636.35 kN
12.99 m	Cohesionless	89.51 kPa	83.04	1037.02 kN	655.74 kN
13.01 m	Cohesionless	89.66 kPa	55.60	445.11 kN	401.28 kN
16.01 m	Cohesionless	112.06 kPa	55.60	445.11 kN	445.11 kN
17.61 m	Cohesionless	124.05 kPa	55.60	445.11 kN	445.11 kN
17.64 m	Cohesionless	124.22 kPa	391.00	4465.59 kN	4465.59 kN
19.11 m	Cohesionless	138.77 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.52 kN	0.52 kN
3.01 m	46.87 kN	155.91 kN	202.77 kN
6.01 m	186.84 kN	311.30 kN	498.14 kN
9.01 m	419.92 kN	466.69 kN	886.62 kN
9.61 m	478.21 kN	498.03 kN	976.24 kN
9.64 m	480.16 kN	472.50 kN	952.66 kN
12.64 m	816.78 kN	636.35 kN	1453.13 kN
12.99 m	863.20 kN	655.74 kN	1518.94 kN
13.01 m	865.51 kN	401.28 kN	1266.79 kN
16.01 m	1194.23 kN	445.11 kN	1639.33 kN
17.61 m	1400.08 kN	445.11 kN	1845.18 kN
17.64 m	1404.40 kN	4465.59 kN	5869.99 kN
19.11 m	1870.82 kN	4465.59 kN	6336.42 kN

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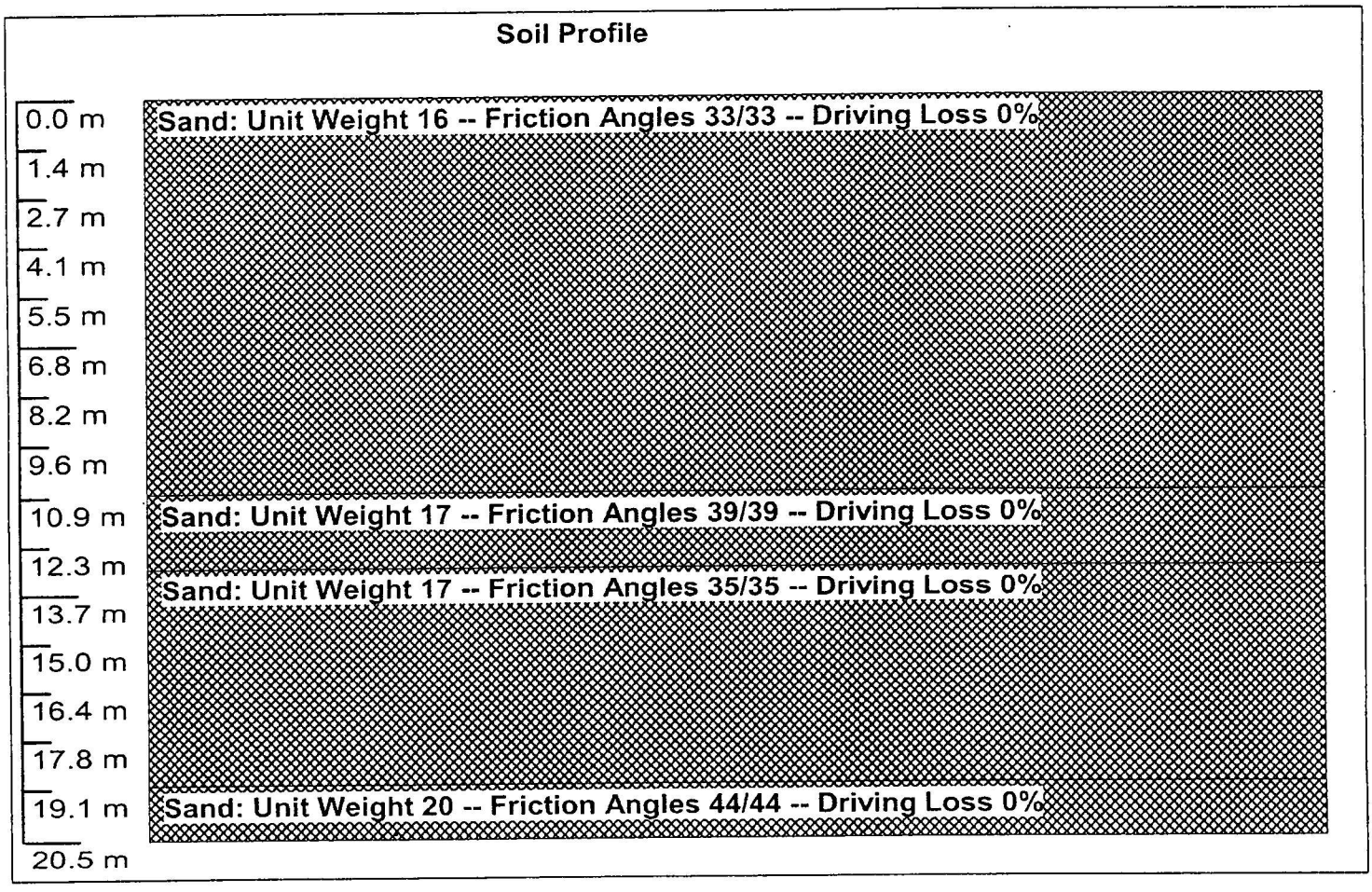

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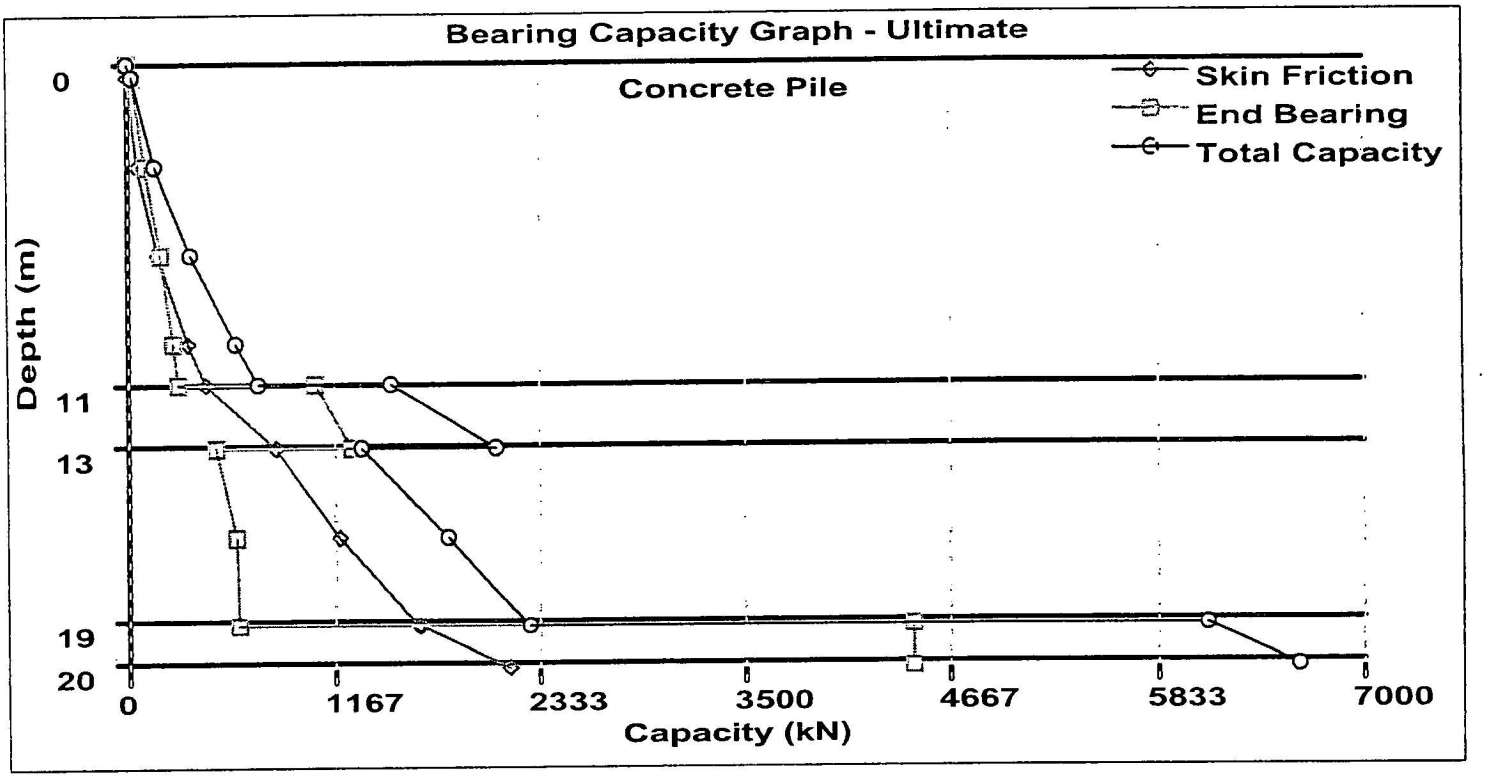

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP4_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.88 m	0.00%	16.49 kN/m^3	33.1/33.1	Nordlund
2	Cohesionless	2.12 m	0.00%	17.27 kN/m^3	39.4/39.4	Nordlund
3	Cohesionless	6.00 m	0.00%	17.27 kN/m^3	34.9/34.9	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	27.86	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	27.86	N/A	1.96 kN
0.51 m	Cohesionless	8.28 kPa	27.86	N/A	2.13 kN
3.51 m	Cohesionless	18.31 kPa	27.86	N/A	56.72 kN
6.51 m	Cohesionless	28.34 kPa	27.86	N/A	171.03 kN
9.51 m	Cohesionless	38.38 kPa	27.86	N/A	345.05 kN
10.86 m	Cohesionless	42.91 kPa	27.86	N/A	443.22 kN
10.89 m	Cohesionless	77.68 kPa	33.17	N/A	445.65 kN
12.99 m	Cohesionless	85.54 kPa	33.17	N/A	831.02 kN
13.01 m	Cohesionless	93.55 kPa	29.38	N/A	834.13 kN
16.01 m	Cohesionless	104.75 kPa	29.38	N/A	1206.15 kN
18.99 m	Cohesionless	115.88 kPa	29.38	N/A	1654.44 kN
19.01 m	Cohesionless	138.37 kPa	37.04	N/A	1659.39 kN
20.49 m	Cohesionless	145.64 kPa	37.04	N/A	2176.17 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	48.04	314.82 kN	0.65 kN
0.49 m	Cohesionless	8.08 kPa	48.04	314.82 kN	31.77 kN
0.51 m	Cohesionless	8.31 kPa	48.04	314.82 kN	32.68 kN
3.51 m	Cohesionless	28.38 kPa	48.04	314.82 kN	111.58 kN
6.51 m	Cohesionless	48.44 kPa	48.04	314.82 kN	190.48 kN
9.51 m	Cohesionless	68.51 kPa	48.04	314.82 kN	261.89 kN
10.86 m	Cohesionless	77.57 kPa	48.04	314.82 kN	292.03 kN
10.89 m	Cohesionless	77.71 kPa	145.12	2241.71 kN	1057.54 kN
12.99 m	Cohesionless	93.43 kPa	145.12	2241.71 kN	1271.48 kN
13.01 m	Cohesionless	93.58 kPa	63.16	630.80 kN	495.30 kN
16.01 m	Cohesionless	115.99 kPa	63.16	630.80 kN	608.34 kN
18.99 m	Cohesionless	138.25 kPa	63.16	630.80 kN	630.80 kN
19.01 m	Cohesionless	138.42 kPa	391.00	4465.59 kN	4465.59 kN
20.49 m	Cohesionless	152.96 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.65 kN	0.65 kN
0.49 m	1.96 kN	31.77 kN	33.74 kN
0.51 m	2.13 kN	32.68 kN	34.81 kN
3.51 m	56.72 kN	111.58 kN	168.30 kN
6.51 m	171.03 kN	190.48 kN	361.51 kN
9.51 m	345.05 kN	261.89 kN	606.93 kN
10.86 m	443.22 kN	292.03 kN	735.25 kN
10.89 m	445.65 kN	1057.54 kN	1503.19 kN
12.99 m	831.02 kN	1271.48 kN	2102.50 kN
13.01 m	834.13 kN	495.30 kN	1329.43 kN
16.01 m	1206.15 kN	608.34 kN	1814.49 kN
18.99 m	1654.44 kN	630.80 kN	2285.24 kN
19.01 m	1659.39 kN	4465.59 kN	6124.99 kN
20.49 m	2176.17 kN	4465.59 kN	6641.76 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	27.86	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	27.86	N/A	1.96 kN
0.51 m	Cohesionless	8.28 kPa	27.86	N/A	2.13 kN
3.51 m	Cohesionless	18.31 kPa	27.86	N/A	56.72 kN
6.51 m	Cohesionless	28.34 kPa	27.86	N/A	171.03 kN
9.51 m	Cohesionless	38.38 kPa	27.86	N/A	345.05 kN
10.86 m	Cohesionless	42.91 kPa	27.86	N/A	443.22 kN
10.89 m	Cohesionless	77.68 kPa	33.17	N/A	445.65 kN
12.99 m	Cohesionless	85.54 kPa	33.17	N/A	831.02 kN
13.01 m	Cohesionless	93.55 kPa	29.38	N/A	834.13 kN
16.01 m	Cohesionless	104.75 kPa	29.38	N/A	1206.15 kN
18.99 m	Cohesionless	115.88 kPa	29.38	N/A	1654.44 kN
19.01 m	Cohesionless	138.37 kPa	37.04	N/A	1659.39 kN
20.49 m	Cohesionless	145.64 kPa	37.04	N/A	2176.17 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	48.04	314.82 kN	0.65 kN
0.49 m	Cohesionless	8.08 kPa	48.04	314.82 kN	31.77 kN
0.51 m	Cohesionless	8.31 kPa	48.04	314.82 kN	32.68 kN
3.51 m	Cohesionless	28.38 kPa	48.04	314.82 kN	111.58 kN
6.51 m	Cohesionless	48.44 kPa	48.04	314.82 kN	190.48 kN
9.51 m	Cohesionless	68.51 kPa	48.04	314.82 kN	261.89 kN
10.86 m	Cohesionless	77.57 kPa	48.04	314.82 kN	292.03 kN
10.89 m	Cohesionless	77.71 kPa	145.12	2241.71 kN	1057.54 kN
12.99 m	Cohesionless	93.43 kPa	145.12	2241.71 kN	1271.48 kN
13.01 m	Cohesionless	93.58 kPa	63.16	630.80 kN	495.30 kN
16.01 m	Cohesionless	115.99 kPa	63.16	630.80 kN	608.34 kN
18.99 m	Cohesionless	138.25 kPa	63.16	630.80 kN	630.80 kN
19.01 m	Cohesionless	138.42 kPa	391.00	4465.59 kN	4465.59 kN
20.49 m	Cohesionless	152.96 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.65 kN	0.65 kN
0.49 m	1.96 kN	31.77 kN	33.74 kN
0.51 m	2.13 kN	32.68 kN	34.81 kN
3.51 m	56.72 kN	111.58 kN	168.30 kN
6.51 m	171.03 kN	190.48 kN	361.51 kN
9.51 m	345.05 kN	261.89 kN	606.93 kN
10.86 m	443.22 kN	292.03 kN	735.25 kN
10.89 m	445.65 kN	1057.54 kN	1503.19 kN
12.99 m	831.02 kN	1271.48 kN	2102.50 kN
13.01 m	834.13 kN	495.30 kN	1329.43 kN
16.01 m	1206.15 kN	608.34 kN	1814.49 kN
18.99 m	1654.44 kN	630.80 kN	2285.24 kN
19.01 m	1659.39 kN	4465.59 kN	6124.99 kN
20.49 m	2176.17 kN	4465.59 kN	6641.76 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	27.86	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	27.86	N/A	1.96 kN
0.51 m	Cohesionless	8.28 kPa	27.86	N/A	2.13 kN
3.51 m	Cohesionless	18.31 kPa	27.86	N/A	56.72 kN
6.51 m	Cohesionless	28.34 kPa	27.86	N/A	171.03 kN
9.51 m	Cohesionless	38.38 kPa	27.86	N/A	345.05 kN
10.86 m	Cohesionless	42.91 kPa	27.86	N/A	443.22 kN
10.89 m	Cohesionless	77.68 kPa	33.17	N/A	445.65 kN
12.99 m	Cohesionless	85.54 kPa	33.17	N/A	831.02 kN
13.01 m	Cohesionless	93.55 kPa	29.38	N/A	834.13 kN
16.01 m	Cohesionless	104.75 kPa	29.38	N/A	1206.15 kN
18.99 m	Cohesionless	115.88 kPa	29.38	N/A	1654.44 kN
19.01 m	Cohesionless	138.37 kPa	37.04	N/A	1659.39 kN
20.49 m	Cohesionless	145.64 kPa	37.04	N/A	2176.17 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	48.04	314.82 kN	0.65 kN
0.49 m	Cohesionless	8.08 kPa	48.04	314.82 kN	31.77 kN
0.51 m	Cohesionless	8.31 kPa	48.04	314.82 kN	32.68 kN
3.51 m	Cohesionless	28.38 kPa	48.04	314.82 kN	111.58 kN
6.51 m	Cohesionless	48.44 kPa	48.04	314.82 kN	190.48 kN
9.51 m	Cohesionless	68.51 kPa	48.04	314.82 kN	261.89 kN
10.86 m	Cohesionless	77.57 kPa	48.04	314.82 kN	292.03 kN
10.89 m	Cohesionless	77.71 kPa	145.12	2241.71 kN	1057.54 kN
12.99 m	Cohesionless	93.43 kPa	145.12	2241.71 kN	1271.48 kN
13.01 m	Cohesionless	93.58 kPa	63.16	630.80 kN	495.30 kN
16.01 m	Cohesionless	115.99 kPa	63.16	630.80 kN	608.34 kN
18.99 m	Cohesionless	138.25 kPa	63.16	630.80 kN	630.80 kN
19.01 m	Cohesionless	138.42 kPa	391.00	4465.59 kN	4465.59 kN
20.49 m	Cohesionless	152.96 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.65 kN	0.65 kN
0.49 m	1.96 kN	31.77 kN	33.74 kN
0.51 m	2.13 kN	32.68 kN	34.81 kN
3.51 m	56.72 kN	111.58 kN	168.30 kN
6.51 m	171.03 kN	190.48 kN	361.51 kN
9.51 m	345.05 kN	261.89 kN	606.93 kN
10.86 m	443.22 kN	292.03 kN	735.25 kN
10.89 m	445.65 kN	1057.54 kN	1503.19 kN
12.99 m	831.02 kN	1271.48 kN	2102.50 kN
13.01 m	834.13 kN	495.30 kN	1329.43 kN
16.01 m	1206.15 kN	608.34 kN	1814.49 kN
18.99 m	1654.44 kN	630.80 kN	2285.24 kN
19.01 m	1659.39 kN	4465.59 kN	6124.99 kN
20.49 m	2176.17 kN	4465.59 kN	6641.76 kN

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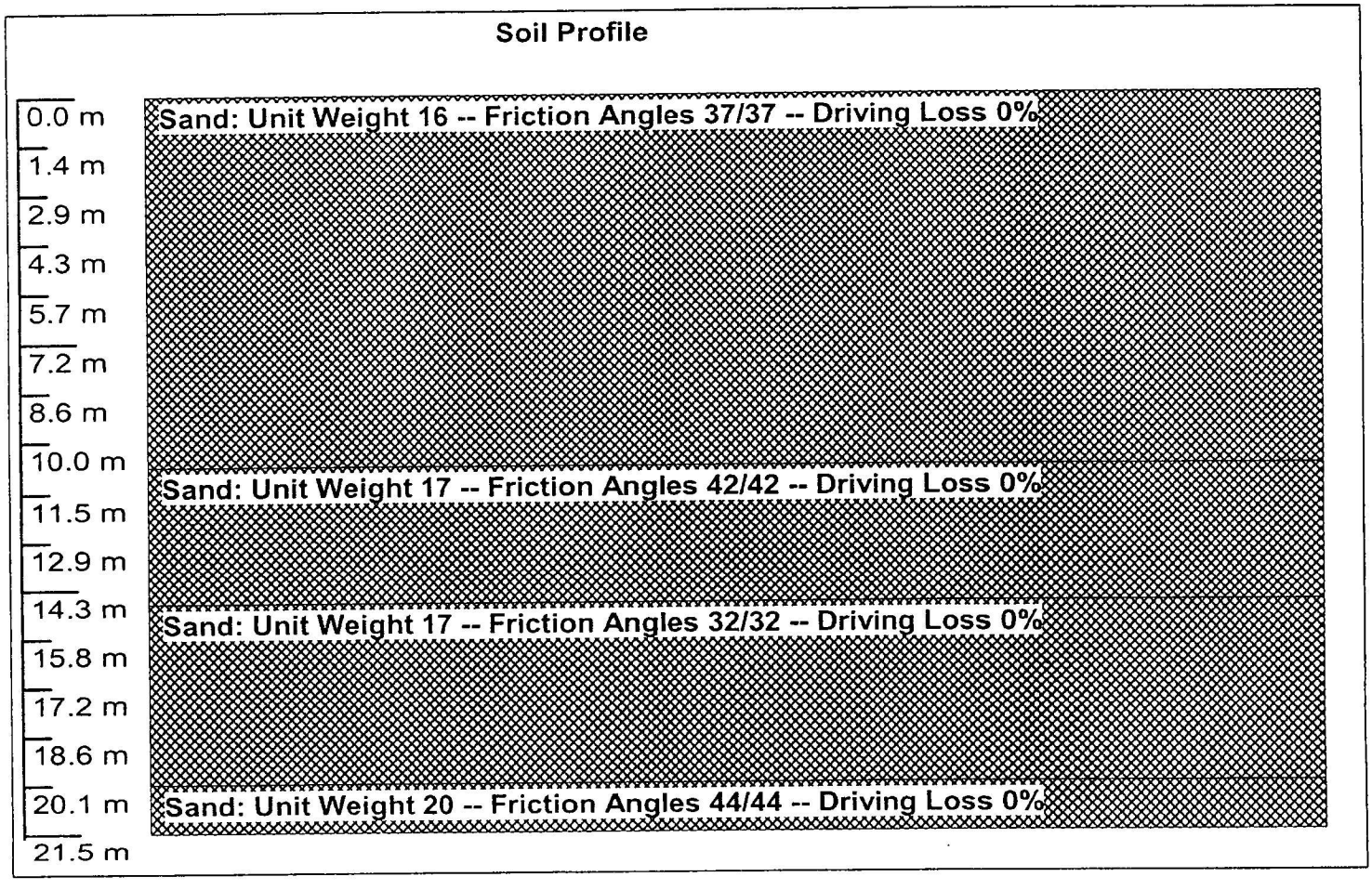

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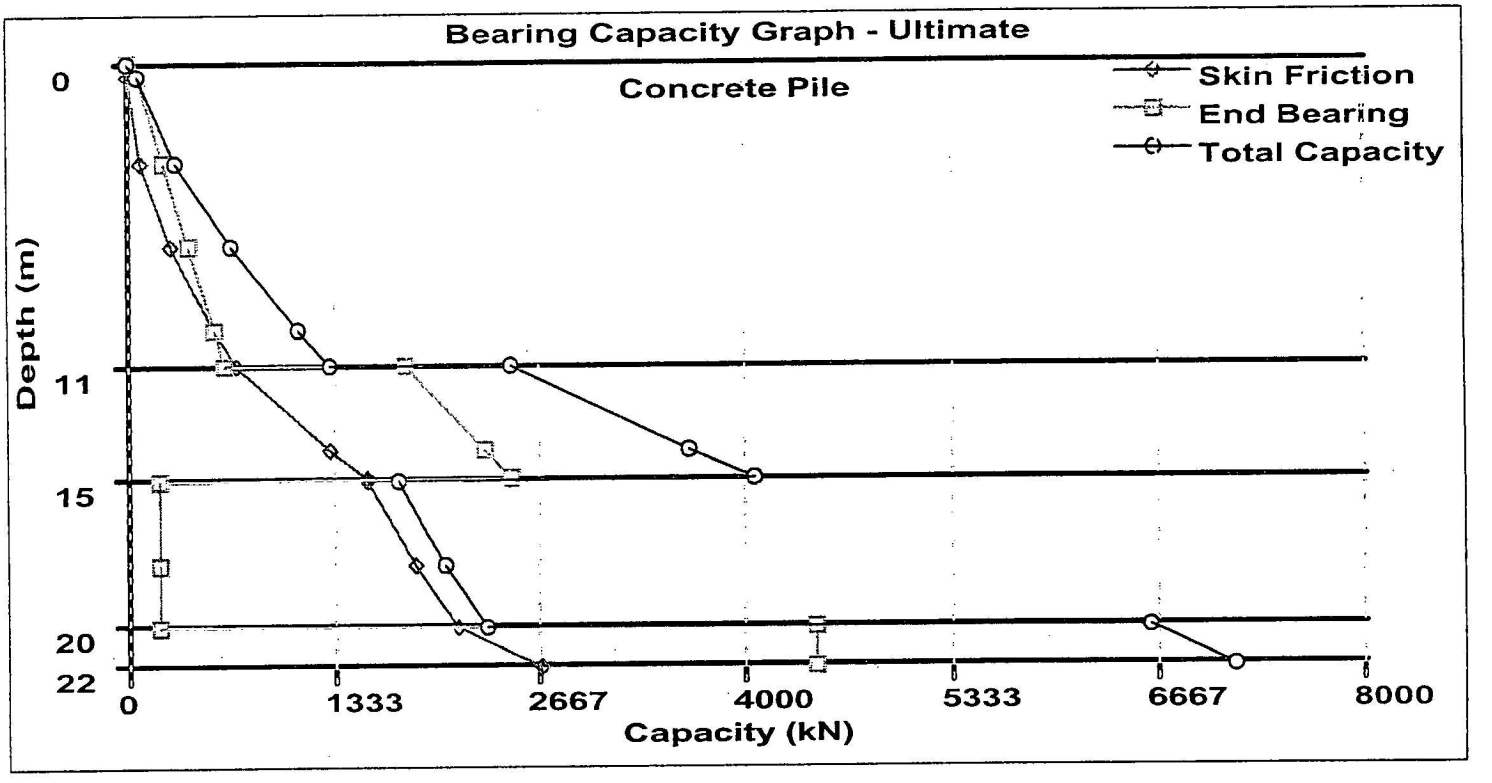

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP5_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.75 m	0.00%	16.49 kN/m^3	36.9/36.9	Nordlund
2	Cohesionless	4.00 m	0.00%	17.27 kN/m^3	41.9/41.9	Nordlund
3	Cohesionless	5.25 m	0.00%	17.27 kN/m^3	32.0/32.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.06	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	31.06	N/A	3.15 kN
0.51 m	Cohesionless	8.28 kPa	31.06	N/A	3.41 kN
3.51 m	Cohesionless	18.31 kPa	31.06	N/A	90.89 kN
6.51 m	Cohesionless	28.34 kPa	31.06	N/A	274.05 kN
9.51 m	Cohesionless	38.38 kPa	31.06	N/A	552.89 kN
10.74 m	Cohesionless	42.49 kPa	31.06	N/A	694.88 kN
10.76 m	Cohesionless	76.84 kPa	35.27	N/A	697.90 kN
13.76 m	Cohesionless	88.04 kPa	35.27	N/A	1316.30 kN
14.74 m	Cohesionless	91.70 kPa	35.27	N/A	1552.40 kN
14.76 m	Cohesionless	106.71 kPa	26.94	N/A	1555.84 kN
17.76 m	Cohesionless	117.92 kPa	26.94	N/A	1867.33 kN
19.99 m	Cohesionless	126.24 kPa	26.94	N/A	2137.20 kN
20.01 m	Cohesionless	145.94 kPa	37.04	N/A	2141.98 kN
21.49 m	Cohesionless	153.21 kPa	37.04	N/A	2685.59 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	89.84	1212.35 kN	1.32 kN
0.49 m	Cohesionless	8.08 kPa	89.84	1212.35 kN	64.81 kN
0.51 m	Cohesionless	8.31 kPa	89.84	1212.35 kN	66.66 kN
3.51 m	Cohesionless	28.38 kPa	89.84	1212.35 kN	227.59 kN
6.51 m	Cohesionless	48.44 kPa	89.84	1212.35 kN	388.52 kN
9.51 m	Cohesionless	68.51 kPa	89.84	1212.35 kN	549.45 kN
10.74 m	Cohesionless	76.74 kPa	89.84	1212.35 kN	615.42 kN
10.76 m	Cohesionless	76.88 kPa	239.80	3532.95 kN	1801.43 kN
13.76 m	Cohesionless	99.28 kPa	239.80	3532.95 kN	2326.45 kN
14.74 m	Cohesionless	106.60 kPa	239.80	3532.95 kN	2497.96 kN
14.76 m	Cohesionless	106.75 kPa	40.40	199.79 kN	199.79 kN
17.76 m	Cohesionless	129.16 kPa	40.40	199.79 kN	199.79 kN
19.99 m	Cohesionless	145.81 kPa	40.40	199.79 kN	199.79 kN
20.01 m	Cohesionless	145.98 kPa	391.00	4465.59 kN	4465.59 kN
21.49 m	Cohesionless	160.53 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.32 kN	1.32 kN
0.49 m	3.15 kN	64.81 kN	67.95 kN
0.51 m	3.41 kN	66.66 kN	70.07 kN
3.51 m	90.89 kN	227.59 kN	318.48 kN
6.51 m	274.05 kN	388.52 kN	662.57 kN
9.51 m	552.89 kN	549.45 kN	1102.34 kN
10.74 m	694.88 kN	615.42 kN	1310.30 kN
10.76 m	697.90 kN	1801.43 kN	2499.33 kN
13.76 m	1316.30 kN	2326.45 kN	3642.76 kN
14.74 m	1552.40 kN	2497.96 kN	4050.36 kN
14.76 m	1555.84 kN	199.79 kN	1755.63 kN
17.76 m	1867.33 kN	199.79 kN	2067.12 kN
19.99 m	2137.20 kN	199.79 kN	2336.99 kN
20.01 m	2141.98 kN	4465.59 kN	6607.58 kN
21.49 m	2685.59 kN	4465.59 kN	7151.19 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.06	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	31.06	N/A	3.15 kN
0.51 m	Cohesionless	8.28 kPa	31.06	N/A	3.41 kN
3.51 m	Cohesionless	18.31 kPa	31.06	N/A	90.89 kN
6.51 m	Cohesionless	28.34 kPa	31.06	N/A	274.05 kN
9.51 m	Cohesionless	38.38 kPa	31.06	N/A	552.89 kN
10.74 m	Cohesionless	42.49 kPa	31.06	N/A	694.88 kN
10.76 m	Cohesionless	76.84 kPa	35.27	N/A	697.90 kN
13.76 m	Cohesionless	88.04 kPa	35.27	N/A	1316.30 kN
14.74 m	Cohesionless	91.70 kPa	35.27	N/A	1552.40 kN
14.76 m	Cohesionless	106.71 kPa	26.94	N/A	1555.84 kN
17.76 m	Cohesionless	117.92 kPa	26.94	N/A	1867.33 kN
19.99 m	Cohesionless	126.24 kPa	26.94	N/A	2137.20 kN
20.01 m	Cohesionless	145.94 kPa	37.04	N/A	2141.98 kN
21.49 m	Cohesionless	153.21 kPa	37.04	N/A	2685.59 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	89.84	1212.35 kN	1.32 kN
0.49 m	Cohesionless	8.08 kPa	89.84	1212.35 kN	64.81 kN
0.51 m	Cohesionless	8.31 kPa	89.84	1212.35 kN	66.66 kN
3.51 m	Cohesionless	28.38 kPa	89.84	1212.35 kN	227.59 kN
6.51 m	Cohesionless	48.44 kPa	89.84	1212.35 kN	388.52 kN
9.51 m	Cohesionless	68.51 kPa	89.84	1212.35 kN	549.45 kN
10.74 m	Cohesionless	76.74 kPa	89.84	1212.35 kN	615.42 kN
10.76 m	Cohesionless	76.88 kPa	239.80	3532.95 kN	1801.43 kN
13.76 m	Cohesionless	99.28 kPa	239.80	3532.95 kN	2326.45 kN
14.74 m	Cohesionless	106.60 kPa	239.80	3532.95 kN	2497.96 kN
14.76 m	Cohesionless	106.75 kPa	40.40	199.79 kN	199.79 kN
17.76 m	Cohesionless	129.16 kPa	40.40	199.79 kN	199.79 kN
19.99 m	Cohesionless	145.81 kPa	40.40	199.79 kN	199.79 kN
20.01 m	Cohesionless	145.98 kPa	391.00	4465.59 kN	4465.59 kN
21.49 m	Cohesionless	160.53 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.32 kN	1.32 kN
0.49 m	3.15 kN	64.81 kN	67.95 kN
0.51 m	3.41 kN	66.66 kN	70.07 kN
3.51 m	90.89 kN	227.59 kN	318.48 kN
6.51 m	274.05 kN	388.52 kN	662.57 kN
9.51 m	552.89 kN	549.45 kN	1102.34 kN
10.74 m	694.88 kN	615.42 kN	1310.30 kN
10.76 m	697.90 kN	1801.43 kN	2499.33 kN
13.76 m	1316.30 kN	2326.45 kN	3642.76 kN
14.74 m	1552.40 kN	2497.96 kN	4050.36 kN
14.76 m	1555.84 kN	199.79 kN	1755.63 kN
17.76 m	1867.33 kN	199.79 kN	2067.12 kN
19.99 m	2137.20 kN	199.79 kN	2336.99 kN
20.01 m	2141.98 kN	4465.59 kN	6607.58 kN
21.49 m	2685.59 kN	4465.59 kN	7151.19 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.06	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	31.06	N/A	3.15 kN
0.51 m	Cohesionless	8.28 kPa	31.06	N/A	3.41 kN
3.51 m	Cohesionless	18.31 kPa	31.06	N/A	90.89 kN
6.51 m	Cohesionless	28.34 kPa	31.06	N/A	274.05 kN
9.51 m	Cohesionless	38.38 kPa	31.06	N/A	552.89 kN
10.74 m	Cohesionless	42.49 kPa	31.06	N/A	694.88 kN
10.76 m	Cohesionless	76.84 kPa	35.27	N/A	697.90 kN
13.76 m	Cohesionless	88.04 kPa	35.27	N/A	1316.30 kN
14.74 m	Cohesionless	91.70 kPa	35.27	N/A	1552.40 kN
14.76 m	Cohesionless	106.71 kPa	26.94	N/A	1555.84 kN
17.76 m	Cohesionless	117.92 kPa	26.94	N/A	1867.33 kN
19.99 m	Cohesionless	126.24 kPa	26.94	N/A	2137.20 kN
20.01 m	Cohesionless	145.94 kPa	37.04	N/A	2141.98 kN
21.49 m	Cohesionless	153.21 kPa	37.04	N/A	2685.59 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	89.84	1212.35 kN	1.32 kN
0.49 m	Cohesionless	8.08 kPa	89.84	1212.35 kN	64.81 kN
0.51 m	Cohesionless	8.31 kPa	89.84	1212.35 kN	66.66 kN
3.51 m	Cohesionless	28.38 kPa	89.84	1212.35 kN	227.59 kN
6.51 m	Cohesionless	48.44 kPa	89.84	1212.35 kN	388.52 kN
9.51 m	Cohesionless	68.51 kPa	89.84	1212.35 kN	549.45 kN
10.74 m	Cohesionless	76.74 kPa	89.84	1212.35 kN	615.42 kN
10.76 m	Cohesionless	76.88 kPa	239.80	3532.95 kN	1801.43 kN
13.76 m	Cohesionless	99.28 kPa	239.80	3532.95 kN	2326.45 kN
14.74 m	Cohesionless	106.60 kPa	239.80	3532.95 kN	2497.96 kN
14.76 m	Cohesionless	106.75 kPa	40.40	199.79 kN	199.79 kN
17.76 m	Cohesionless	129.16 kPa	40.40	199.79 kN	199.79 kN
19.99 m	Cohesionless	145.81 kPa	40.40	199.79 kN	199.79 kN
20.01 m	Cohesionless	145.98 kPa	391.00	4465.59 kN	4465.59 kN
21.49 m	Cohesionless	160.53 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.32 kN	1.32 kN
0.49 m	3.15 kN	64.81 kN	67.95 kN
0.51 m	3.41 kN	66.66 kN	70.07 kN
3.51 m	90.89 kN	227.59 kN	318.48 kN
6.51 m	274.05 kN	388.52 kN	662.57 kN
9.51 m	552.89 kN	549.45 kN	1102.34 kN
10.74 m	694.88 kN	615.42 kN	1310.30 kN
10.76 m	697.90 kN	1801.43 kN	2499.33 kN
13.76 m	1316.30 kN	2326.45 kN	3642.76 kN
14.74 m	1552.40 kN	2497.96 kN	4050.36 kN
14.76 m	1555.84 kN	199.79 kN	1755.63 kN
17.76 m	1867.33 kN	199.79 kN	2067.12 kN
19.99 m	2137.20 kN	199.79 kN	2336.99 kN
20.01 m	2141.98 kN	4465.59 kN	6607.58 kN
21.49 m	2685.59 kN	4465.59 kN	7151.19 kN

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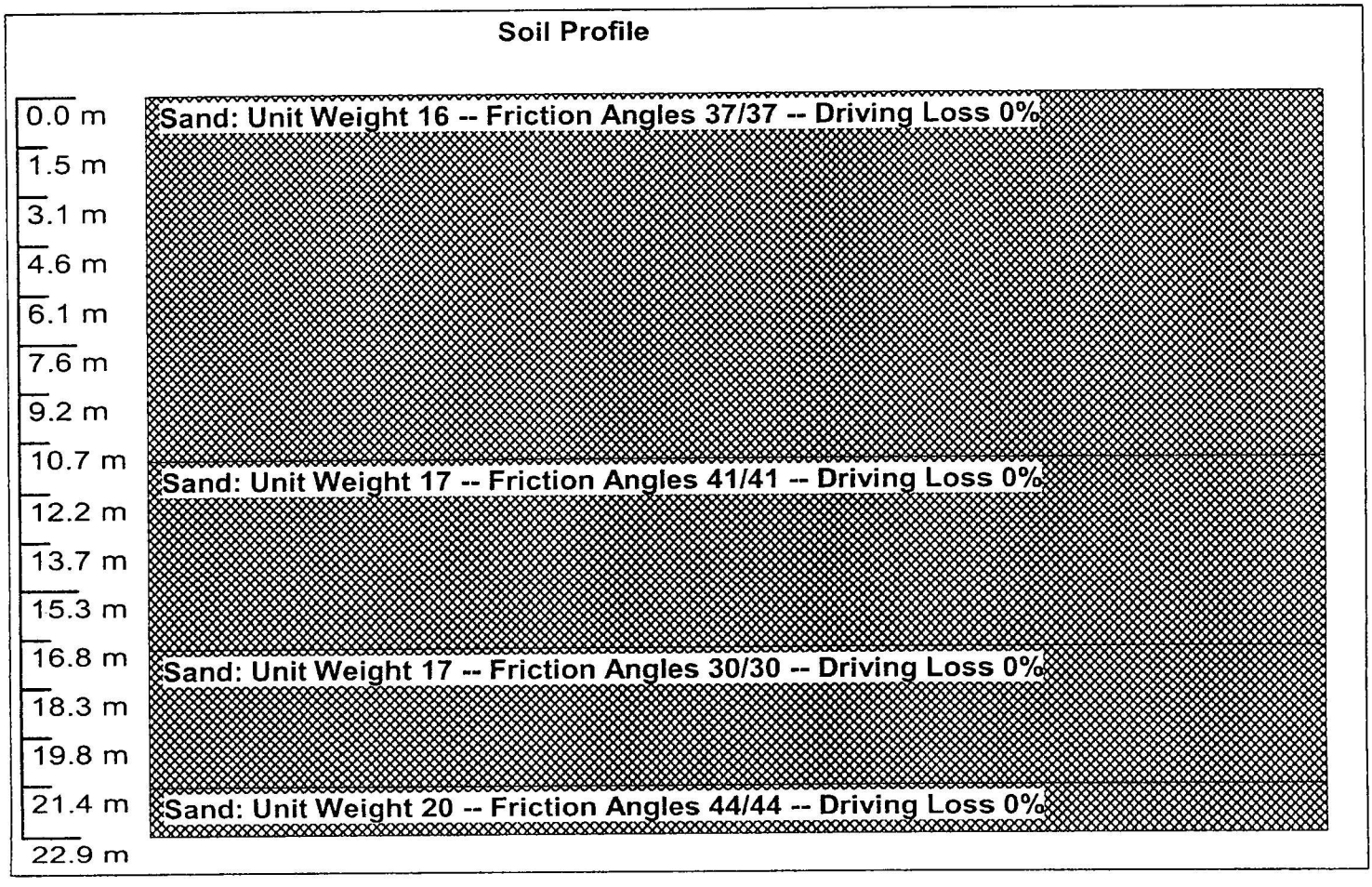

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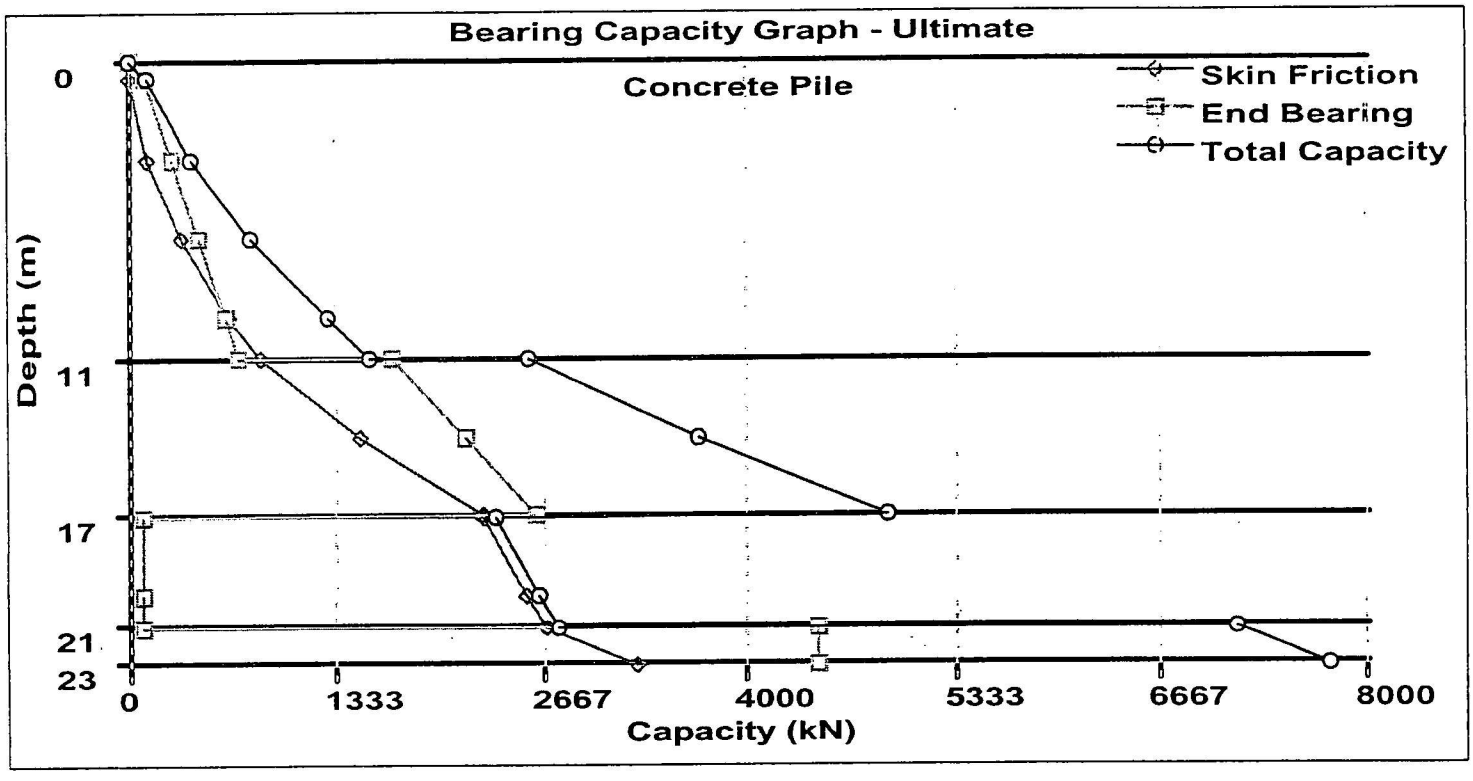

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CAB2_14.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 355.60 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	11.25 m	0.00%	16.49 kN/m^3	37.4/37.4	Nordlund
2	Cohesionless	5.90 m	0.00%	17.27 kN/m^3	41.3/41.3	Nordlund
3	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	29.5/29.5	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.48	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	31.48	N/A	7.66 kN
0.76 m	Cohesionless	12.40 kPa	31.48	N/A	8.08 kN
3.76 m	Cohesionless	22.43 kPa	31.48	N/A	122.51 kN
6.76 m	Cohesionless	32.47 kPa	31.48	N/A	339.11 kN
9.76 m	Cohesionless	42.50 kPa	31.48	N/A	657.91 kN
11.24 m	Cohesionless	47.45 kPa	31.48	N/A	852.83 kN
11.26 m	Cohesionless	82.63 kPa	34.77	N/A	856.14 kN
14.26 m	Cohesionless	93.84 kPa	34.77	N/A	1509.58 kN
17.14 m	Cohesionless	104.59 kPa	34.77	N/A	2283.60 kN
17.16 m	Cohesionless	126.70 kPa	24.83	N/A	2287.37 kN
20.16 m	Cohesionless	137.90 kPa	24.83	N/A	2560.35 kN
21.39 m	Cohesionless	142.49 kPa	24.83	N/A	2685.09 kN
21.41 m	Cohesionless	158.45 kPa	37.04	N/A	2689.93 kN
22.89 m	Cohesionless	165.73 kPa	37.04	N/A	3277.94 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	96.64	1387.68 kN	1.44 kN
0.74 m	Cohesionless	12.20 kPa	96.64	1387.68 kN	106.40 kN
0.76 m	Cohesionless	12.43 kPa	96.64	1387.68 kN	108.42 kN
3.76 m	Cohesionless	32.50 kPa	96.64	1387.68 kN	283.36 kN
6.76 m	Cohesionless	52.57 kPa	96.64	1387.68 kN	458.31 kN
9.76 m	Cohesionless	72.63 kPa	96.64	1387.68 kN	633.26 kN
11.24 m	Cohesionless	82.53 kPa	96.64	1387.68 kN	719.56 kN
11.26 m	Cohesionless	82.67 kPa	214.60	3205.73 kN	1717.49 kN
14.26 m	Cohesionless	105.08 kPa	214.60	3205.73 kN	2182.96 kN
17.14 m	Cohesionless	126.59 kPa	214.60	3205.73 kN	2629.81 kN
17.16 m	Cohesionless	126.74 kPa	28.20	80.64 kN	80.64 kN
20.16 m	Cohesionless	149.14 kPa	28.20	80.64 kN	80.64 kN
21.39 m	Cohesionless	158.33 kPa	28.20	80.64 kN	80.64 kN
21.41 m	Cohesionless	158.50 kPa	391.00	4465.59 kN	4465.59 kN
22.89 m	Cohesionless	173.05 kPa	391.00	4465.59 kN	4465.59 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.44 kN	1.44 kN
0.74 m	7.66 kN	106.40 kN	114.06 kN
0.76 m	8.08 kN	108.42 kN	116.50 kN
3.76 m	122.51 kN	283.36 kN	405.87 kN
6.76 m	339.11 kN	458.31 kN	797.42 kN
9.76 m	657.91 kN	633.26 kN	1291.17 kN
11.24 m	852.83 kN	719.56 kN	1572.39 kN
11.26 m	856.14 kN	1717.49 kN	2573.63 kN
14.26 m	1509.58 kN	2182.96 kN	3692.54 kN
17.14 m	2283.60 kN	2629.81 kN	4913.41 kN
17.16 m	2287.37 kN	80.64 kN	2368.02 kN
20.16 m	2560.35 kN	80.64 kN	2640.99 kN
21.39 m	2685.09 kN	80.64 kN	2765.73 kN
21.41 m	2689.93 kN	4465.59 kN	7155.52 kN
22.89 m	3277.94 kN	4465.59 kN	7743.53 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.48	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	31.48	N/A	7.66 kN
0.76 m	Cohesionless	12.40 kPa	31.48	N/A	8.08 kN
3.76 m	Cohesionless	22.43 kPa	31.48	N/A	122.51 kN
6.76 m	Cohesionless	32.47 kPa	31.48	N/A	339.11 kN
9.76 m	Cohesionless	42.50 kPa	31.48	N/A	657.91 kN
11.24 m	Cohesionless	47.45 kPa	31.48	N/A	852.83 kN
11.26 m	Cohesionless	82.63 kPa	34.77	N/A	856.14 kN
14.26 m	Cohesionless	93.84 kPa	34.77	N/A	1509.58 kN
17.14 m	Cohesionless	104.59 kPa	34.77	N/A	2283.60 kN
17.16 m	Cohesionless	126.70 kPa	24.83	N/A	2287.37 kN
20.16 m	Cohesionless	137.90 kPa	24.83	N/A	2560.35 kN
21.39 m	Cohesionless	142.49 kPa	24.83	N/A	2685.09 kN
21.41 m	Cohesionless	158.45 kPa	37.04	N/A	2689.93 kN
22.89 m	Cohesionless	165.73 kPa	37.04	N/A	3277.94 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	96.64	1387.68 kN	1.44 kN
0.74 m	Cohesionless	12.20 kPa	96.64	1387.68 kN	106.40 kN
0.76 m	Cohesionless	12.43 kPa	96.64	1387.68 kN	108.42 kN
3.76 m	Cohesionless	32.50 kPa	96.64	1387.68 kN	283.36 kN
6.76 m	Cohesionless	52.57 kPa	96.64	1387.68 kN	458.31 kN
9.76 m	Cohesionless	72.63 kPa	96.64	1387.68 kN	633.26 kN
11.24 m	Cohesionless	82.53 kPa	96.64	1387.68 kN	719.56 kN
11.26 m	Cohesionless	82.67 kPa	214.60	3205.73 kN	1717.49 kN
14.26 m	Cohesionless	105.08 kPa	214.60	3205.73 kN	2182.96 kN
17.14 m	Cohesionless	126.59 kPa	214.60	3205.73 kN	2629.81 kN
17.16 m	Cohesionless	126.74 kPa	28.20	80.64 kN	80.64 kN
20.16 m	Cohesionless	149.14 kPa	28.20	80.64 kN	80.64 kN
21.39 m	Cohesionless	158.33 kPa	28.20	80.64 kN	80.64 kN
21.41 m	Cohesionless	158.50 kPa	391.00	4465.59 kN	4465.59 kN
22.89 m	Cohesionless	173.05 kPa	391.00	4465.59 kN	4465.59 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.44 kN	1.44 kN
0.74 m	7.66 kN	106.40 kN	114.06 kN
0.76 m	8.08 kN	108.42 kN	116.50 kN
3.76 m	122.51 kN	283.36 kN	405.87 kN
6.76 m	339.11 kN	458.31 kN	797.42 kN
9.76 m	657.91 kN	633.26 kN	1291.17 kN
11.24 m	852.83 kN	719.56 kN	1572.39 kN
11.26 m	856.14 kN	1717.49 kN	2573.63 kN
14.26 m	1509.58 kN	2182.96 kN	3692.54 kN
17.14 m	2283.60 kN	2629.81 kN	4913.41 kN
17.16 m	2287.37 kN	80.64 kN	2368.02 kN
20.16 m	2560.35 kN	80.64 kN	2640.99 kN
21.39 m	2685.09 kN	80.64 kN	2765.73 kN
21.41 m	2689.93 kN	4465.59 kN	7155.52 kN
22.89 m	3277.94 kN	4465.59 kN	7743.53 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	31.48	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	31.48	N/A	7.66 kN
0.76 m	Cohesionless	12.40 kPa	31.48	N/A	8.08 kN
3.76 m	Cohesionless	22.43 kPa	31.48	N/A	122.51 kN
6.76 m	Cohesionless	32.47 kPa	31.48	N/A	339.11 kN
9.76 m	Cohesionless	42.50 kPa	31.48	N/A	657.91 kN
11.24 m	Cohesionless	47.45 kPa	31.48	N/A	852.83 kN
11.26 m	Cohesionless	82.63 kPa	34.77	N/A	856.14 kN
14.26 m	Cohesionless	93.84 kPa	34.77	N/A	1509.58 kN
17.14 m	Cohesionless	104.59 kPa	34.77	N/A	2283.60 kN
17.16 m	Cohesionless	126.70 kPa	24.83	N/A	2287.37 kN
20.16 m	Cohesionless	137.90 kPa	24.83	N/A	2560.35 kN
21.39 m	Cohesionless	142.49 kPa	24.83	N/A	2685.09 kN
21.41 m	Cohesionless	158.45 kPa	37.04	N/A	2689.93 kN
22.89 m	Cohesionless	165.73 kPa	37.04	N/A	3277.94 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	96.64	1387.68 kN	1.44 kN
0.74 m	Cohesionless	12.20 kPa	96.64	1387.68 kN	106.40 kN
0.76 m	Cohesionless	12.43 kPa	96.64	1387.68 kN	108.42 kN
3.76 m	Cohesionless	32.50 kPa	96.64	1387.68 kN	283.36 kN
6.76 m	Cohesionless	52.57 kPa	96.64	1387.68 kN	458.31 kN
9.76 m	Cohesionless	72.63 kPa	96.64	1387.68 kN	633.26 kN
11.24 m	Cohesionless	82.53 kPa	96.64	1387.68 kN	719.56 kN
11.26 m	Cohesionless	82.67 kPa	214.60	3205.73 kN	1717.49 kN
14.26 m	Cohesionless	105.08 kPa	214.60	3205.73 kN	2182.96 kN
17.14 m	Cohesionless	126.59 kPa	214.60	3205.73 kN	2629.81 kN
17.16 m	Cohesionless	126.74 kPa	28.20	80.64 kN	80.64 kN
20.16 m	Cohesionless	149.14 kPa	28.20	80.64 kN	80.64 kN
21.39 m	Cohesionless	158.33 kPa	28.20	80.64 kN	80.64 kN
21.41 m	Cohesionless	158.50 kPa	391.00	4465.59 kN	4465.59 kN
22.89 m	Cohesionless	173.05 kPa	391.00	4465.59 kN	4465.59 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.44 kN	1.44 kN
0.74 m	7.66 kN	106.40 kN	114.06 kN
0.76 m	8.08 kN	108.42 kN	116.50 kN
3.76 m	122.51 kN	283.36 kN	405.87 kN
6.76 m	339.11 kN	458.31 kN	797.42 kN
9.76 m	657.91 kN	633.26 kN	1291.17 kN
11.24 m	852.83 kN	719.56 kN	1572.39 kN
11.26 m	856.14 kN	1717.49 kN	2573.63 kN
14.26 m	1509.58 kN	2182.96 kN	3692.54 kN
17.14 m	2283.60 kN	2629.81 kN	4913.41 kN
17.16 m	2287.37 kN	80.64 kN	2368.02 kN
20.16 m	2560.35 kN	80.64 kN	2640.99 kN
21.39 m	2685.09 kN	80.64 kN	2765.73 kN
21.41 m	2689.93 kN	4465.59 kN	7155.52 kN
22.89 m	3277.94 kN	4465.59 kN	7743.53 kN

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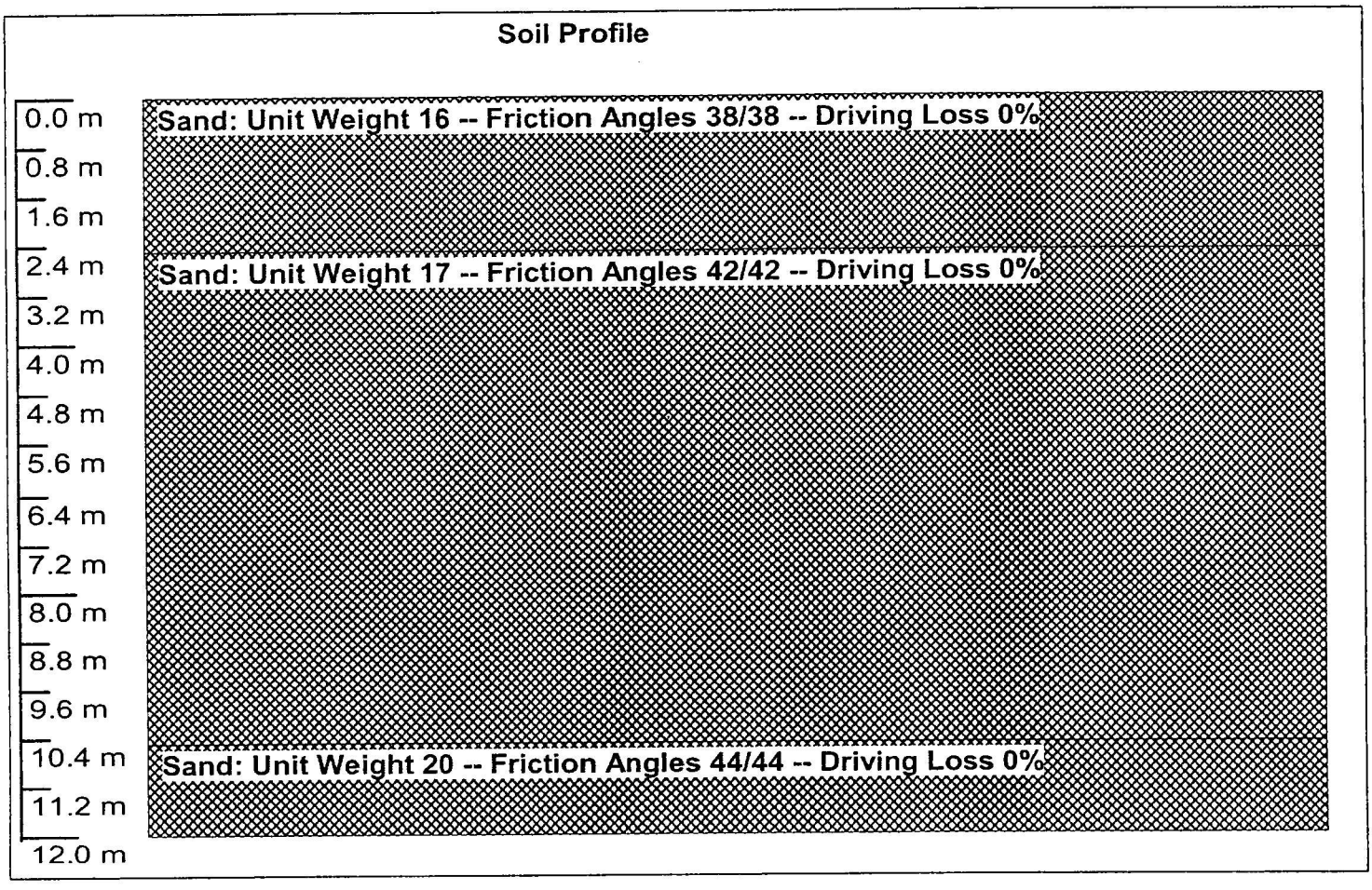

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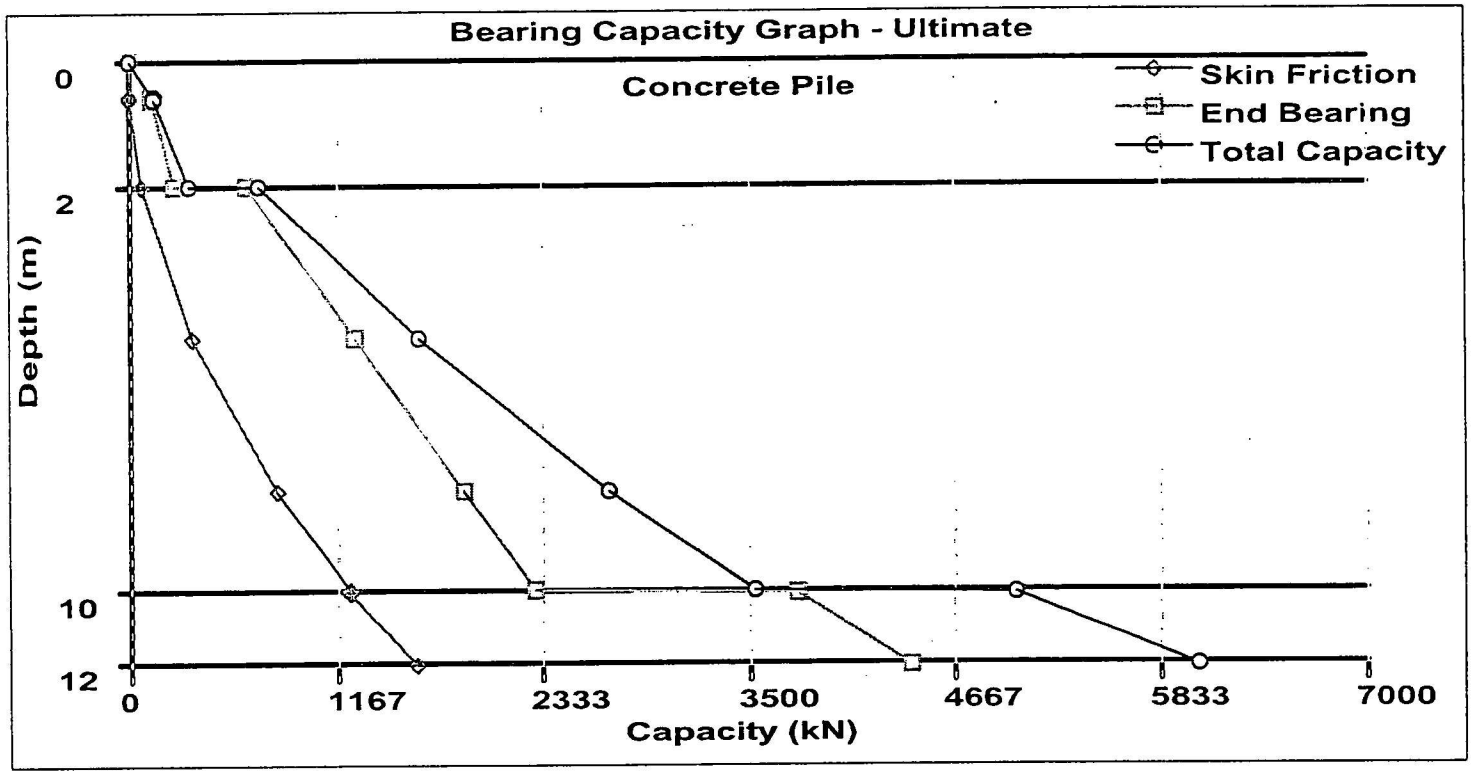

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CAB1_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	2.50 m	0.00%	16.49 kN/m^3	37.8/37.8	Nordlund
2	Cohesionless	8.00 m	0.00%	17.27 kN/m^3	42.0/42.0	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.97	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	32.97	N/A	9.27 kN
0.76 m	Cohesionless	12.40 kPa	32.97	N/A	9.77 kN
2.49 m	Cohesionless	18.19 kPa	32.97	N/A	74.47 kN
2.51 m	Cohesionless	24.11 kPa	36.63	N/A	75.61 kN
5.51 m	Cohesionless	35.31 kPa	36.63	N/A	363.12 kN
8.51 m	Cohesionless	46.52 kPa	36.63	N/A	832.85 kN
10.49 m	Cohesionless	53.91 kPa	36.63	N/A	1242.70 kN
10.51 m	Cohesionless	83.87 kPa	38.37	N/A	1247.31 kN
11.99 m	Cohesionless	91.14 kPa	38.37	N/A	1622.70 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	105.44	1773.36 kN	1.82 kN
0.74 m	Cohesionless	12.20 kPa	105.44	1773.36 kN	134.32 kN
0.76 m	Cohesionless	12.43 kPa	105.44	1773.36 kN	136.88 kN
2.49 m	Cohesionless	24.01 kPa	105.44	1773.36 kN	264.24 kN
2.51 m	Cohesionless	24.15 kPa	244.00	4118.29 kN	661.96 kN
5.51 m	Cohesionless	46.55 kPa	244.00	4118.29 kN	1276.18 kN
8.51 m	Cohesionless	68.96 kPa	244.00	4118.29 kN	1890.39 kN
10.49 m	Cohesionless	83.75 kPa	244.00	4118.29 kN	2295.77 kN
10.51 m	Cohesionless	83.92 kPa	391.00	5126.32 kN	3772.20 kN
11.99 m	Cohesionless	98.47 kPa	391.00	5126.32 kN	4426.06 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.82 kN	1.82 kN
0.74 m	9.27 kN	134.32 kN	143.59 kN
0.76 m	9.77 kN	136.88 kN	146.65 kN
2.49 m	74.47 kN	264.24 kN	338.71 kN
2.51 m	75.61 kN	661.96 kN	737.58 kN
5.51 m	363.12 kN	1276.18 kN	1639.30 kN
8.51 m	832.85 kN	1890.39 kN	2723.24 kN
10.49 m	1242.70 kN	2295.77 kN	3538.47 kN
10.51 m	1247.31 kN	3772.20 kN	5019.51 kN
11.99 m	1622.70 kN	4426.06 kN	6048.76 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.97	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	32.97	N/A	9.27 kN
0.76 m	Cohesionless	12.40 kPa	32.97	N/A	9.77 kN
2.49 m	Cohesionless	18.19 kPa	32.97	N/A	74.47 kN
2.51 m	Cohesionless	24.11 kPa	36.63	N/A	75.61 kN
5.51 m	Cohesionless	35.31 kPa	36.63	N/A	363.12 kN
8.51 m	Cohesionless	46.52 kPa	36.63	N/A	832.85 kN
10.49 m	Cohesionless	53.91 kPa	36.63	N/A	1242.70 kN
10.51 m	Cohesionless	83.87 kPa	38.37	N/A	1247.30 kN
11.99 m	Cohesionless	91.14 kPa	38.37	N/A	1622.70 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	105.44	1773.36 kN	1.82 kN
0.74 m	Cohesionless	12.20 kPa	105.44	1773.36 kN	134.32 kN
0.76 m	Cohesionless	12.43 kPa	105.44	1773.36 kN	136.88 kN
2.49 m	Cohesionless	24.01 kPa	105.44	1773.36 kN	264.24 kN
2.51 m	Cohesionless	24.15 kPa	244.00	4118.29 kN	661.96 kN
5.51 m	Cohesionless	46.55 kPa	244.00	4118.29 kN	1276.18 kN
8.51 m	Cohesionless	68.96 kPa	244.00	4118.29 kN	1890.39 kN
10.49 m	Cohesionless	83.75 kPa	244.00	4118.29 kN	2295.77 kN
10.51 m	Cohesionless	83.92 kPa	391.00	5126.32 kN	3772.20 kN
11.99 m	Cohesionless	98.47 kPa	391.00	5126.32 kN	4426.06 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.82 kN	1.82 kN
0.74 m	9.27 kN	134.32 kN	143.59 kN
0.76 m	9.77 kN	136.88 kN	146.65 kN
2.49 m	74.47 kN	264.24 kN	338.71 kN
2.51 m	75.61 kN	661.96 kN	737.58 kN
5.51 m	363.12 kN	1276.18 kN	1639.30 kN
8.51 m	832.85 kN	1890.39 kN	2723.24 kN
10.49 m	1242.70 kN	2295.77 kN	3538.47 kN
10.51 m	1247.30 kN	3772.20 kN	5019.51 kN
11.99 m	1622.70 kN	4426.06 kN	6048.76 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.97	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	32.97	N/A	9.27 kN
0.76 m	Cohesionless	12.40 kPa	32.97	N/A	9.77 kN
2.49 m	Cohesionless	18.19 kPa	32.97	N/A	74.47 kN
2.51 m	Cohesionless	24.11 kPa	36.63	N/A	75.61 kN
5.51 m	Cohesionless	35.31 kPa	36.63	N/A	363.12 kN
8.51 m	Cohesionless	46.52 kPa	36.63	N/A	832.85 kN
10.49 m	Cohesionless	53.91 kPa	36.63	N/A	1242.70 kN
10.51 m	Cohesionless	83.87 kPa	38.37	N/A	1247.31 kN
11.99 m	Cohesionless	91.14 kPa	38.37	N/A	1622.70 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	105.44	1773.36 kN	1.82 kN
0.74 m	Cohesionless	12.20 kPa	105.44	1773.36 kN	134.32 kN
0.76 m	Cohesionless	12.43 kPa	105.44	1773.36 kN	136.88 kN
2.49 m	Cohesionless	24.01 kPa	105.44	1773.36 kN	264.24 kN
2.51 m	Cohesionless	24.15 kPa	244.00	4118.29 kN	661.96 kN
5.51 m	Cohesionless	46.55 kPa	244.00	4118.29 kN	1276.18 kN
8.51 m	Cohesionless	68.96 kPa	244.00	4118.29 kN	1890.39 kN
10.49 m	Cohesionless	83.75 kPa	244.00	4118.29 kN	2295.77 kN
10.51 m	Cohesionless	83.92 kPa	391.00	5126.32 kN	3772.20 kN
11.99 m	Cohesionless	98.47 kPa	391.00	5126.32 kN	4426.06 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.82 kN	1.82 kN
0.74 m	9.27 kN	134.32 kN	143.59 kN
0.76 m	9.77 kN	136.88 kN	146.65 kN
2.49 m	74.47 kN	264.24 kN	338.71 kN
2.51 m	75.61 kN	661.96 kN	737.58 kN
5.51 m	363.12 kN	1276.18 kN	1639.30 kN
8.51 m	832.85 kN	1890.39 kN	2723.24 kN
10.49 m	1242.70 kN	2295.77 kN	3538.47 kN
10.51 m	1247.31 kN	3772.20 kN	5019.51 kN
11.99 m	1622.70 kN	4426.06 kN	6048.76 kN

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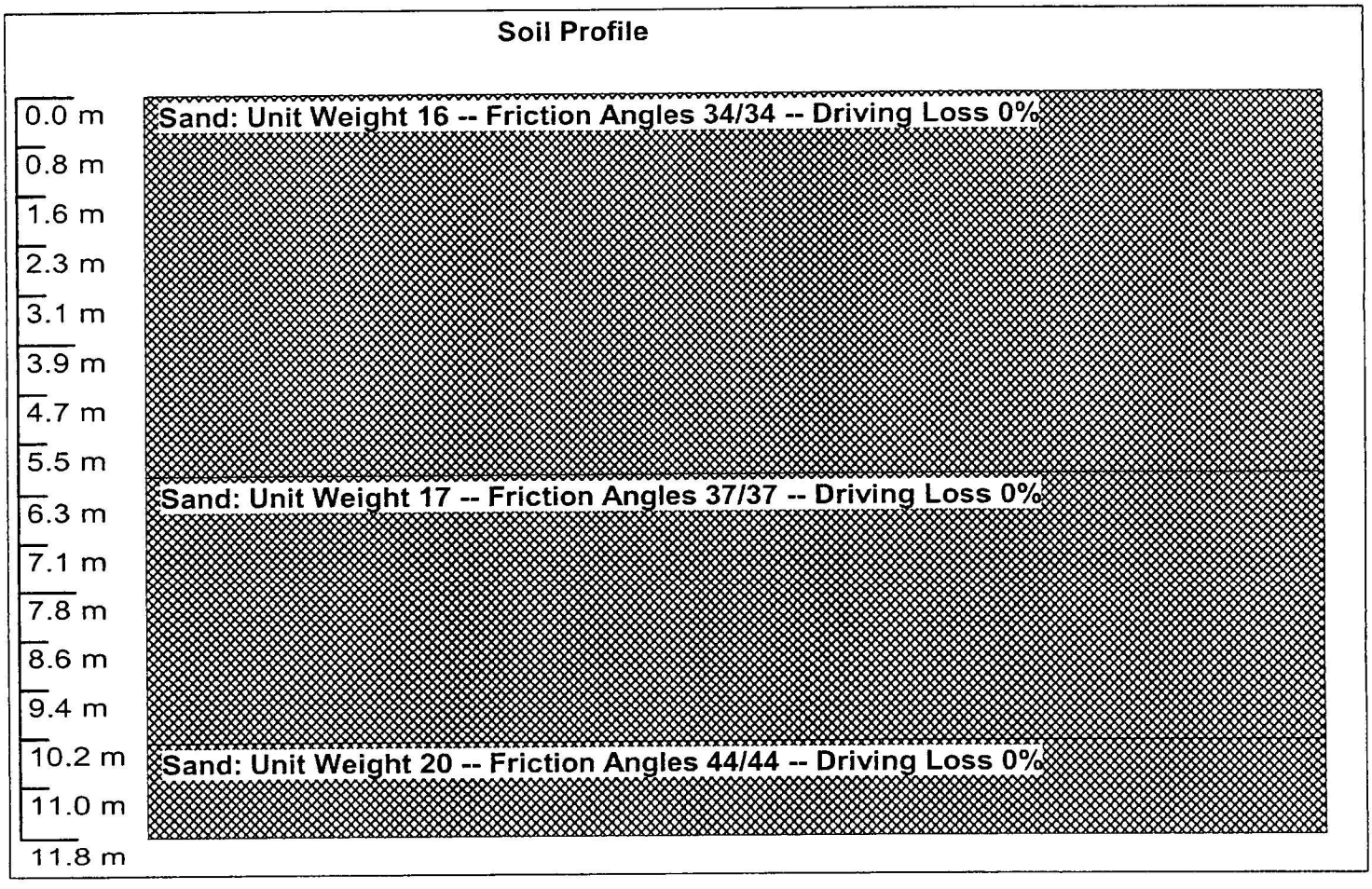

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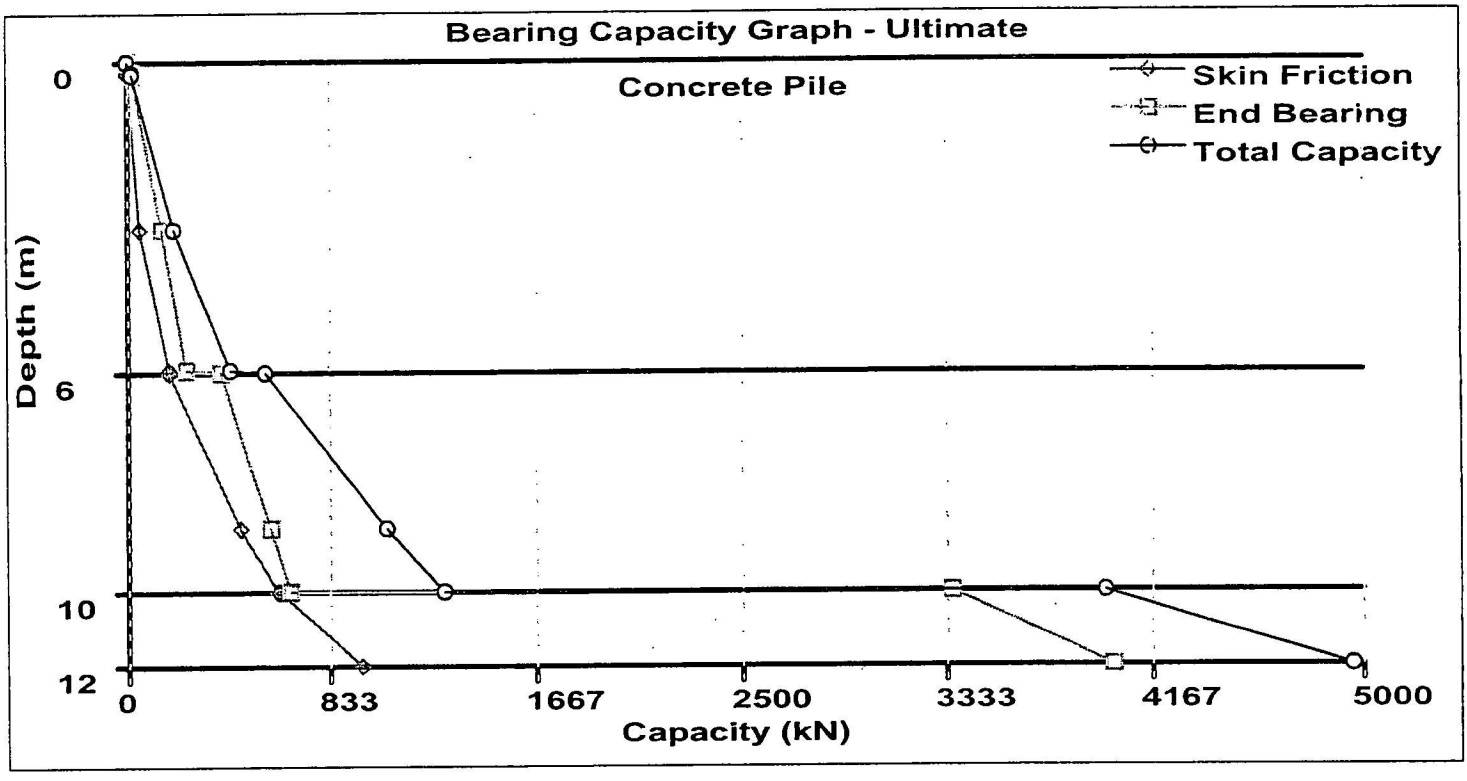

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP1_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.25 m
	- Driving/Restrike	0.25 m
	- Ultimate:	0.25 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	6.00 m	0.00%	16.49 kN/m^3	34.5/34.5	Nordlund
2	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	36.8/36.8	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	30.09	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	30.09	N/A	0.62 kN
0.26 m	Cohesionless	4.16 kPa	30.09	N/A	0.73 kN
3.26 m	Cohesionless	14.19 kPa	30.09	N/A	56.32 kN
5.99 m	Cohesionless	23.32 kPa	30.09	N/A	175.08 kN
6.01 m	Cohesionless	42.62 kPa	32.09	N/A	176.40 kN
9.01 m	Cohesionless	53.82 kPa	32.09	N/A	467.22 kN
10.24 m	Cohesionless	58.41 kPa	32.09	N/A	621.43 kN
10.26 m	Cohesionless	74.37 kPa	38.37	N/A	624.84 kN
11.74 m	Cohesionless	81.65 kPa	38.37	N/A	961.13 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	59.80	629.39 kN	0.96 kN
0.24 m	Cohesionless	3.96 kPa	59.80	629.39 kN	23.07 kN
0.26 m	Cohesionless	4.19 kPa	59.80	629.39 kN	24.42 kN
3.26 m	Cohesionless	24.26 kPa	59.80	629.39 kN	141.36 kN
5.99 m	Cohesionless	42.51 kPa	59.80	629.39 kN	247.77 kN
6.01 m	Cohesionless	42.66 kPa	88.48	1351.47 kN	385.96 kN
9.01 m	Cohesionless	65.06 kPa	88.48	1351.47 kN	588.68 kN
10.24 m	Cohesionless	74.25 kPa	88.48	1351.47 kN	671.80 kN
10.26 m	Cohesionless	74.42 kPa	391.00	5126.32 kN	3345.25 kN
11.74 m	Cohesionless	88.97 kPa	391.00	5126.32 kN	3999.11 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.96 kN	0.96 kN
0.24 m	0.62 kN	23.07 kN	23.68 kN
0.26 m	0.73 kN	24.42 kN	25.14 kN
3.26 m	56.32 kN	141.36 kN	197.68 kN
5.99 m	175.08 kN	247.77 kN	422.85 kN
6.01 m	176.40 kN	385.96 kN	562.36 kN
9.01 m	467.22 kN	588.68 kN	1055.91 kN
10.24 m	621.43 kN	671.80 kN	1293.24 kN
10.26 m	624.84 kN	3345.25 kN	3970.09 kN
11.74 m	961.13 kN	3999.11 kN	4960.24 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	30.09	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	30.09	N/A	0.62 kN
0.26 m	Cohesionless	4.16 kPa	30.09	N/A	0.73 kN
3.26 m	Cohesionless	14.19 kPa	30.09	N/A	56.32 kN
5.99 m	Cohesionless	23.32 kPa	30.09	N/A	175.08 kN
6.01 m	Cohesionless	42.62 kPa	32.09	N/A	176.40 kN
9.01 m	Cohesionless	53.82 kPa	32.09	N/A	467.22 kN
10.24 m	Cohesionless	58.41 kPa	32.09	N/A	621.43 kN
10.26 m	Cohesionless	74.37 kPa	38.37	N/A	624.84 kN
11.74 m	Cohesionless	81.65 kPa	38.37	N/A	961.13 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	59.80	629.39 kN	0.96 kN
0.24 m	Cohesionless	3.96 kPa	59.80	629.39 kN	23.07 kN
0.26 m	Cohesionless	4.19 kPa	59.80	629.39 kN	24.42 kN
3.26 m	Cohesionless	24.26 kPa	59.80	629.39 kN	141.36 kN
5.99 m	Cohesionless	42.51 kPa	59.80	629.39 kN	247.77 kN
6.01 m	Cohesionless	42.66 kPa	88.48	1351.47 kN	385.96 kN
9.01 m	Cohesionless	65.06 kPa	88.48	1351.47 kN	588.68 kN
10.24 m	Cohesionless	74.25 kPa	88.48	1351.47 kN	671.80 kN
10.26 m	Cohesionless	74.42 kPa	391.00	5126.32 kN	3345.25 kN
11.74 m	Cohesionless	88.97 kPa	391.00	5126.32 kN	3999.11 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.96 kN	0.96 kN
0.24 m	0.62 kN	23.07 kN	23.68 kN
0.26 m	0.73 kN	24.42 kN	25.14 kN
3.26 m	56.32 kN	141.36 kN	197.68 kN
5.99 m	175.08 kN	247.77 kN	422.85 kN
6.01 m	176.40 kN	385.96 kN	562.36 kN
9.01 m	467.22 kN	588.68 kN	1055.91 kN
10.24 m	621.43 kN	671.80 kN	1293.24 kN
10.26 m	624.84 kN	3345.25 kN	3970.09 kN
11.74 m	961.13 kN	3999.11 kN	4960.24 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	30.09	N/A	0.00 kN
0.24 m	Cohesionless	1.98 kPa	30.09	N/A	0.62 kN
0.26 m	Cohesionless	4.16 kPa	30.09	N/A	0.73 kN
3.26 m	Cohesionless	14.19 kPa	30.09	N/A	56.32 kN
5.99 m	Cohesionless	23.32 kPa	30.09	N/A	175.08 kN
6.01 m	Cohesionless	42.62 kPa	32.09	N/A	176.40 kN
9.01 m	Cohesionless	53.82 kPa	32.09	N/A	467.22 kN
10.24 m	Cohesionless	58.41 kPa	32.09	N/A	621.43 kN
10.26 m	Cohesionless	74.37 kPa	38.37	N/A	624.84 kN
11.74 m	Cohesionless	81.65 kPa	38.37	N/A	961.13 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	59.80	629.39 kN	0.96 kN
0.24 m	Cohesionless	3.96 kPa	59.80	629.39 kN	23.07 kN
0.26 m	Cohesionless	4.19 kPa	59.80	629.39 kN	24.42 kN
3.26 m	Cohesionless	24.26 kPa	59.80	629.39 kN	141.36 kN
5.99 m	Cohesionless	42.51 kPa	59.80	629.39 kN	247.77 kN
6.01 m	Cohesionless	42.66 kPa	88.48	1351.47 kN	385.96 kN
9.01 m	Cohesionless	65.06 kPa	88.48	1351.47 kN	588.68 kN
10.24 m	Cohesionless	74.25 kPa	88.48	1351.47 kN	671.80 kN
10.26 m	Cohesionless	74.42 kPa	391.00	5126.32 kN	3345.25 kN
11.74 m	Cohesionless	88.97 kPa	391.00	5126.32 kN	3999.11 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.96 kN	0.96 kN
0.24 m	0.62 kN	23.07 kN	23.68 kN
0.26 m	0.73 kN	24.42 kN	25.14 kN
3.26 m	56.32 kN	141.36 kN	197.68 kN
5.99 m	175.08 kN	247.77 kN	422.85 kN
6.01 m	176.40 kN	385.96 kN	562.36 kN
9.01 m	467.22 kN	588.68 kN	1055.91 kN
10.24 m	621.43 kN	671.80 kN	1293.24 kN
10.26 m	624.84 kN	3345.25 kN	3970.09 kN
11.74 m	961.13 kN	3999.11 kN	4960.24 kN

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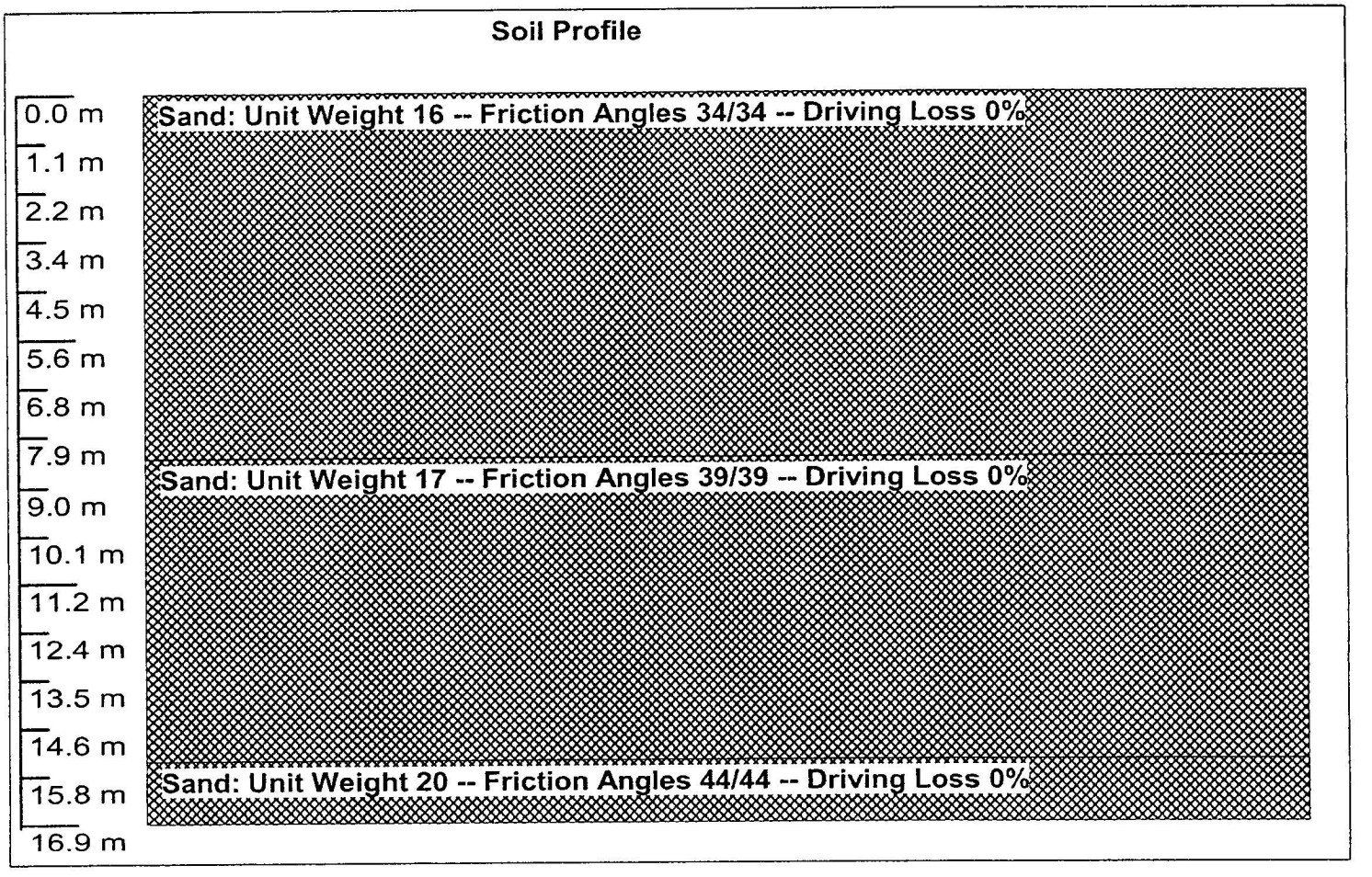

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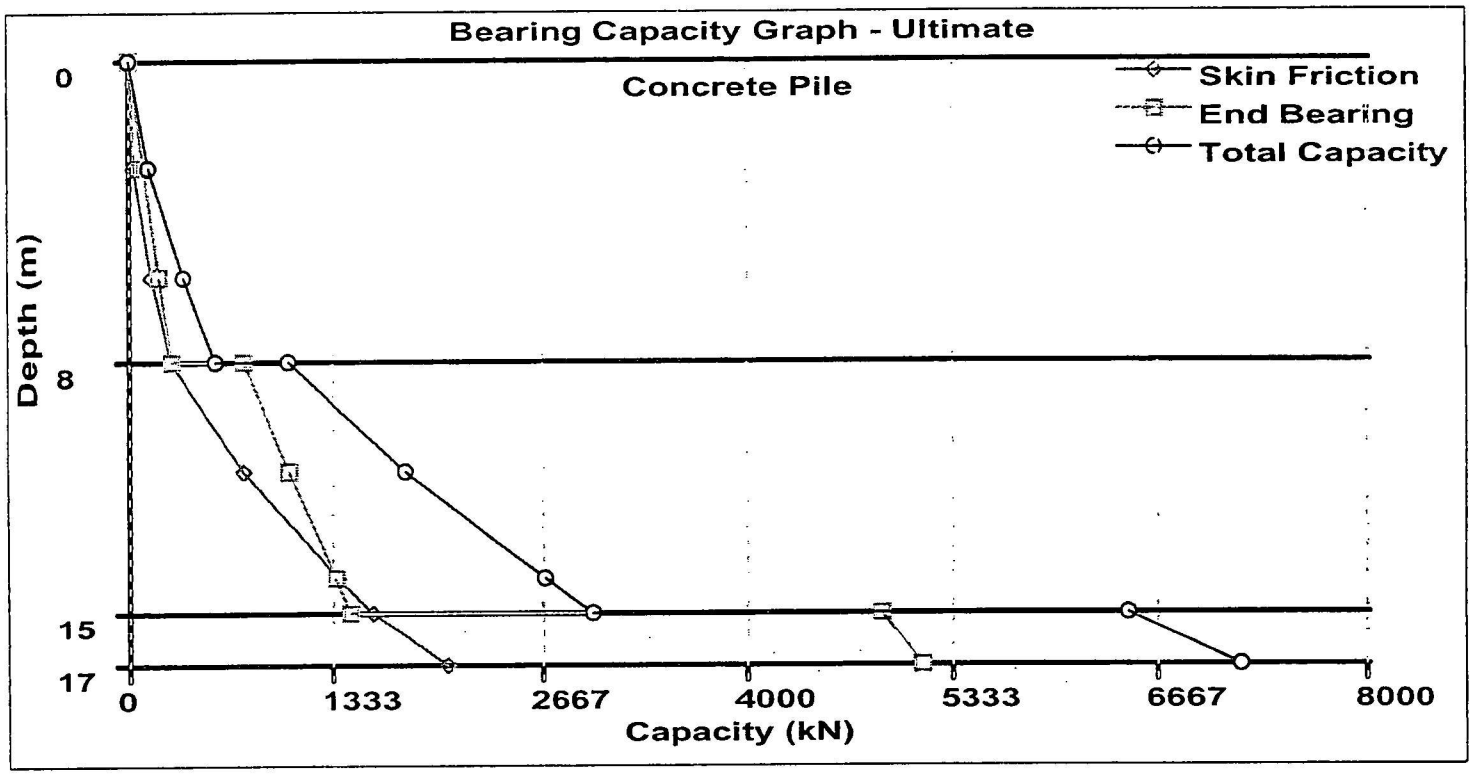

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP2_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	-0.50 m
	- Driving/Restrike	-0.50 m
	- Ultimate:	-0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	8.38 m	0.00%	16.49 kN/m^3	33.8/33.8	Nordlund
2	Cohesionless	7.00 m	0.00%	17.27 kN/m^3	38.6/38.6	Nordlund
3	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	29.48	N/A	-0.06 kN
3.01 m	Cohesionless	5.17 kPa	29.48	N/A	18.91 kN
6.01 m	Cohesionless	15.20 kPa	29.48	N/A	111.10 kN
8.36 m	Cohesionless	23.07 kPa	29.48	N/A	234.77 kN
8.39 m	Cohesionless	51.15 kPa	33.66	N/A	236.55 kN
11.39 m	Cohesionless	62.36 kPa	33.66	N/A	659.14 kN
14.39 m	Cohesionless	73.56 kPa	33.66	N/A	1233.48 kN
15.36 m	Cohesionless	77.22 kPa	33.66	N/A	1453.99 kN
15.39 m	Cohesionless	103.44 kPa	38.37	N/A	1459.20 kN
16.86 m	Cohesionless	110.72 kPa	38.37	N/A	1915.17 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	53.92	463.59 kN	-24.95 kN
3.01 m	Cohesionless	15.23 kPa	53.92	463.59 kN	78.60 kN
6.01 m	Cohesionless	35.30 kPa	53.92	463.59 kN	182.15 kN
8.36 m	Cohesionless	51.05 kPa	53.92	463.59 kN	261.83 kN
8.39 m	Cohesionless	51.19 kPa	125.28	2146.99 kN	679.92 kN
11.39 m	Cohesionless	73.60 kPa	125.28	2146.99 kN	977.51 kN
14.39 m	Cohesionless	96.00 kPa	125.28	2146.99 kN	1275.11 kN
15.36 m	Cohesionless	103.32 kPa	125.28	2146.99 kN	1372.33 kN
15.39 m	Cohesionless	103.49 kPa	391.00	5126.32 kN	4652.04 kN
16.86 m	Cohesionless	118.04 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.06 kN	-24.95 kN	-25.01 kN
3.01 m	18.91 kN	78.60 kN	97.51 kN
6.01 m	111.10 kN	182.15 kN	293.26 kN
8.36 m	234.77 kN	261.83 kN	496.61 kN
8.39 m	236.55 kN	679.92 kN	916.47 kN
11.39 m	659.14 kN	977.51 kN	1636.65 kN
14.39 m	1233.48 kN	1275.11 kN	2508.59 kN
15.36 m	1453.99 kN	1372.33 kN	2826.31 kN
15.39 m	1459.20 kN	4652.04 kN	6111.24 kN
16.86 m	1915.17 kN	5126.32 kN	7041.48 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	-4.87 kPa	29.48	N/A	-0.06 kN
3.01 m	Cohesionless	5.17 kPa	29.48	N/A	18.91 kN
6.01 m	Cohesionless	15.20 kPa	29.48	N/A	111.10 kN
8.36 m	Cohesionless	23.07 kPa	29.48	N/A	234.77 kN
8.39 m	Cohesionless	51.15 kPa	33.66	N/A	236.55 kN
11.39 m	Cohesionless	62.36 kPa	33.66	N/A	659.14 kN
14.39 m	Cohesionless	73.56 kPa	33.66	N/A	1233.48 kN
15.36 m	Cohesionless	77.22 kPa	33.66	N/A	1453.99 kN
15.39 m	Cohesionless	103.44 kPa	38.37	N/A	1459.20 kN
16.86 m	Cohesionless	110.72 kPa	38.37	N/A	1915.17 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	-4.83 kPa	53.92	463.59 kN	-24.95 kN
3.01 m	Cohesionless	15.23 kPa	53.92	463.59 kN	78.60 kN
6.01 m	Cohesionless	35.30 kPa	53.92	463.59 kN	182.15 kN
8.36 m	Cohesionless	51.05 kPa	53.92	463.59 kN	261.83 kN
8.39 m	Cohesionless	51.19 kPa	125.28	2146.99 kN	679.92 kN
11.39 m	Cohesionless	73.60 kPa	125.28	2146.99 kN	977.51 kN
14.39 m	Cohesionless	96.00 kPa	125.28	2146.99 kN	1275.11 kN
15.36 m	Cohesionless	103.32 kPa	125.28	2146.99 kN	1372.33 kN
15.39 m	Cohesionless	103.49 kPa	391.00	5126.32 kN	4652.04 kN
16.86 m	Cohesionless	118.04 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	-0.06 kN	-24.95 kN	-25.01 kN
3.01 m	18.91 kN	78.60 kN	97.51 kN
6.01 m	111.10 kN	182.15 kN	293.26 kN
8.36 m	234.77 kN	261.83 kN	496.61 kN
8.39 m	236.55 kN	679.92 kN	916.47 kN
11.39 m	659.14 kN	977.51 kN	1636.65 kN
14.39 m	1233.48 kN	1275.11 kN	2508.59 kN
15.36 m	1453.99 kN	1372.33 kN	2826.31 kN
15.39 m	1459.20 kN	4652.04 kN	6111.24 kN
16.86 m	1915.17 kN	5126.32 kN	7041.48 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	29.48	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	29.48	N/A	36.86 kN
6.01 m	Cohesionless	20.10 kPa	29.48	N/A	146.93 kN
8.36 m	Cohesionless	27.97 kPa	29.48	N/A	284.64 kN
8.39 m	Cohesionless	56.05 kPa	33.66	N/A	286.59 kN
11.39 m	Cohesionless	67.26 kPa	33.66	N/A	742.37 kN
14.39 m	Cohesionless	78.46 kPa	33.66	N/A	1349.91 kN
15.36 m	Cohesionless	82.12 kPa	33.66	N/A	1581.26 kN
15.39 m	Cohesionless	108.34 kPa	38.37	N/A	1586.72 kN
16.86 m	Cohesionless	115.62 kPa	38.37	N/A	2062.86 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	53.92	463.59 kN	0.35 kN
3.01 m	Cohesionless	20.13 kPa	53.92	463.59 kN	103.90 kN
6.01 m	Cohesionless	40.20 kPa	53.92	463.59 kN	207.45 kN
8.36 m	Cohesionless	55.95 kPa	53.92	463.59 kN	286.97 kN
8.39 m	Cohesionless	56.09 kPa	125.28	2146.99 kN	745.01 kN
11.39 m	Cohesionless	78.50 kPa	125.28	2146.99 kN	1042.61 kN
14.39 m	Cohesionless	100.90 kPa	125.28	2146.99 kN	1340.21 kN
15.36 m	Cohesionless	108.22 kPa	125.28	2146.99 kN	1437.42 kN
15.39 m	Cohesionless	108.39 kPa	391.00	5126.32 kN	4872.35 kN
16.86 m	Cohesionless	122.94 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.35 kN	0.35 kN
3.01 m	36.86 kN	103.90 kN	140.75 kN
6.01 m	146.93 kN	207.45 kN	354.38 kN
8.36 m	284.64 kN	286.97 kN	571.62 kN
8.39 m	286.59 kN	745.01 kN	1031.60 kN
11.39 m	742.37 kN	1042.61 kN	1784.99 kN
14.39 m	1349.91 kN	1340.21 kN	2690.12 kN
15.36 m	1581.26 kN	1437.42 kN	3018.68 kN
15.39 m	1586.72 kN	4872.35 kN	6459.06 kN
16.86 m	2062.86 kN	5126.32 kN	7189.18 kN

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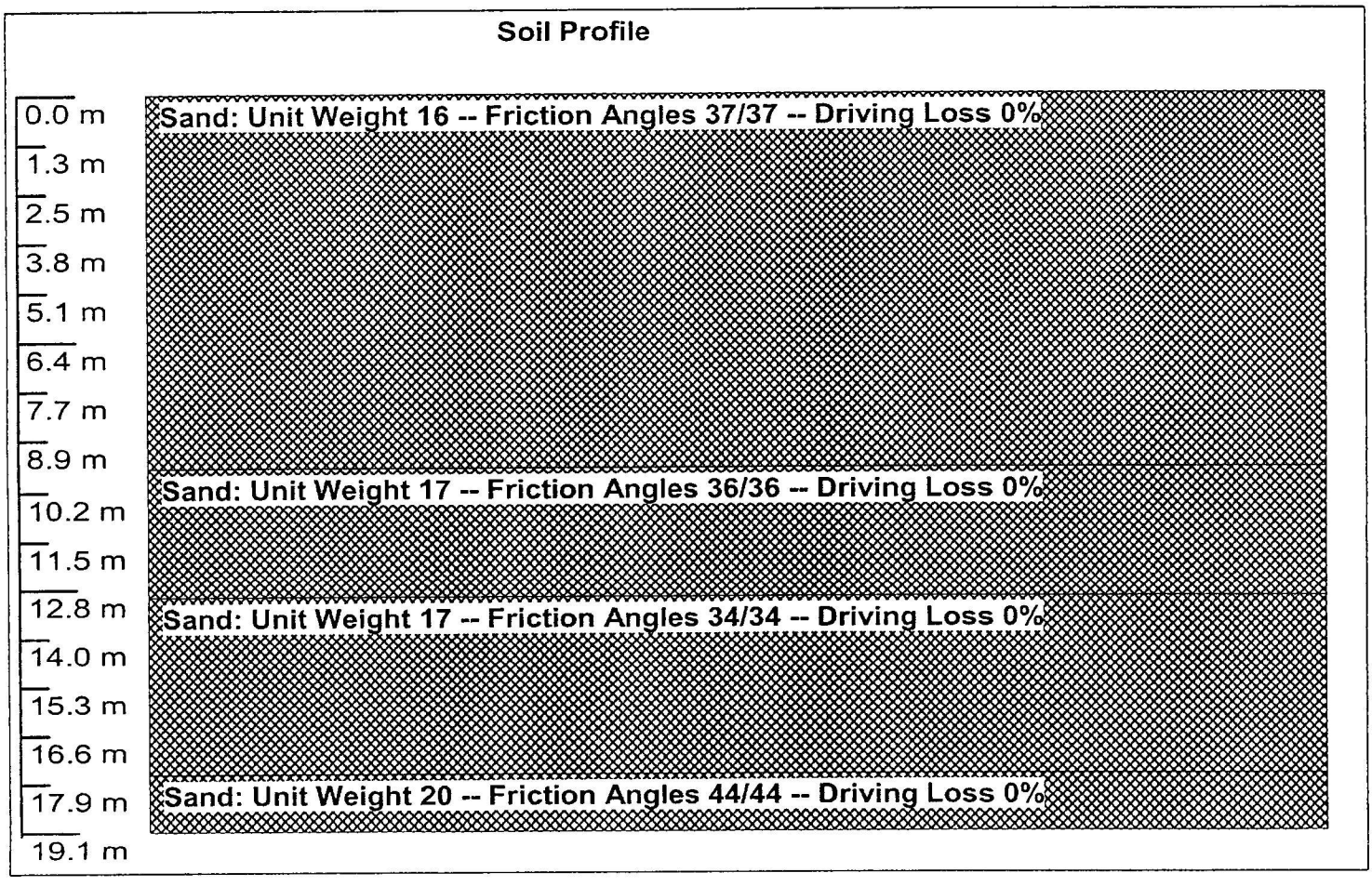

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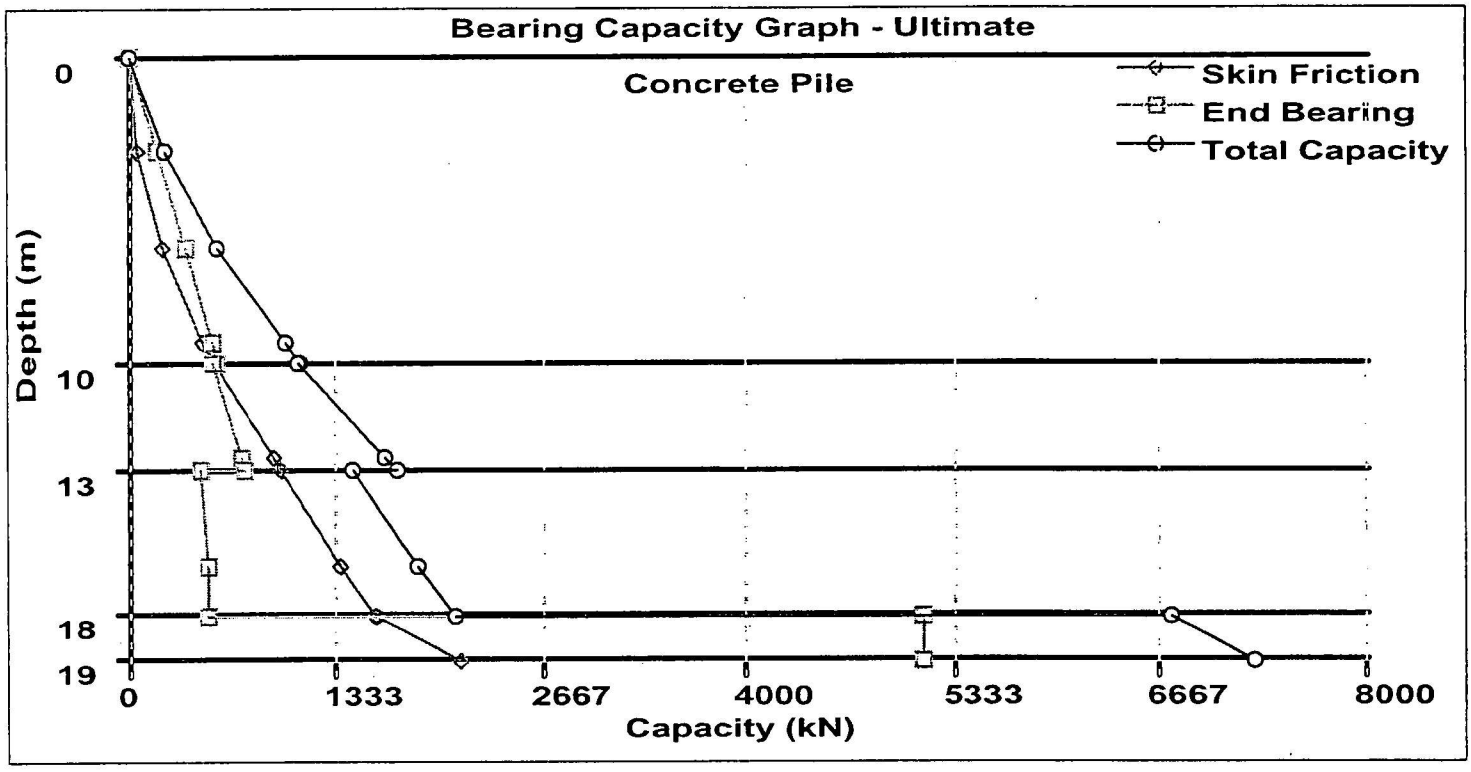

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP3_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.00 m
	- Driving/Restrike	0.00 m
	- Ultimate:	0.00 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	9.62 m	0.00%	16.49 kN/m^3	36.7/36.7	Nordlund
2	Cohesionless	3.38 m	0.00%	17.27 kN/m^3	36.4/36.4	Nordlund
3	Cohesionless	4.62 m	0.00%	17.27 kN/m^3	34.0/34.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	32.01	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	32.01	N/A	53.78 kN
6.01 m	Cohesionless	20.10 kPa	32.01	N/A	214.42 kN
9.01 m	Cohesionless	30.13 kPa	32.01	N/A	481.92 kN
9.61 m	Cohesionless	32.15 kPa	32.01	N/A	548.81 kN
9.64 m	Cohesionless	64.41 kPa	31.75	N/A	551.05 kN
12.64 m	Cohesionless	75.62 kPa	31.75	N/A	937.15 kN
12.99 m	Cohesionless	76.94 kPa	31.75	N/A	990.41 kN
13.01 m	Cohesionless	89.62 kPa	29.65	N/A	993.04 kN
16.01 m	Cohesionless	100.82 kPa	29.65	N/A	1368.53 kN
17.61 m	Cohesionless	106.82 kPa	29.65	N/A	1603.66 kN
17.64 m	Cohesionless	124.17 kPa	38.37	N/A	1608.66 kN
19.11 m	Cohesionless	131.45 kPa	38.37	N/A	2149.96 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	87.12	1311.22 kN	0.59 kN
3.01 m	Cohesionless	20.13 kPa	87.12	1311.22 kN	178.98 kN
6.01 m	Cohesionless	40.20 kPa	87.12	1311.22 kN	357.36 kN
9.01 m	Cohesionless	60.26 kPa	87.12	1311.22 kN	535.74 kN
9.61 m	Cohesionless	64.31 kPa	87.12	1311.22 kN	571.72 kN
9.64 m	Cohesionless	64.45 kPa	83.04	1190.45 kN	542.50 kN
12.64 m	Cohesionless	86.86 kPa	83.04	1190.45 kN	730.62 kN
12.99 m	Cohesionless	89.51 kPa	83.04	1190.45 kN	752.88 kN
13.01 m	Cohesionless	89.66 kPa	55.60	510.96 kN	462.63 kN
16.01 m	Cohesionless	112.06 kPa	55.60	510.96 kN	510.96 kN
17.61 m	Cohesionless	124.05 kPa	55.60	510.96 kN	510.96 kN
17.64 m	Cohesionless	124.22 kPa	391.00	5126.32 kN	5126.32 kN
19.11 m	Cohesionless	138.77 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.59 kN	0.60 kN
3.01 m	53.78 kN	178.98 kN	232.76 kN
6.01 m	214.42 kN	357.36 kN	571.78 kN
9.01 m	481.92 kN	535.74 kN	1017.66 kN
9.61 m	548.81 kN	571.72 kN	1120.53 kN
9.64 m	551.05 kN	542.50 kN	1093.55 kN
12.64 m	937.15 kN	730.62 kN	1667.77 kN
12.99 m	990.41 kN	752.88 kN	1743.28 kN
13.01 m	993.04 kN	462.63 kN	1455.67 kN
16.01 m	1368.53 kN	510.96 kN	1879.49 kN
17.61 m	1603.66 kN	510.96 kN	2114.63 kN
17.64 m	1608.66 kN	5126.32 kN	6734.98 kN
19.11 m	2149.96 kN	5126.32 kN	7276.28 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	32.01	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	32.01	N/A	53.78 kN
6.01 m	Cohesionless	20.10 kPa	32.01	N/A	214.42 kN
9.01 m	Cohesionless	30.13 kPa	32.01	N/A	481.92 kN
9.61 m	Cohesionless	32.15 kPa	32.01	N/A	548.81 kN
9.64 m	Cohesionless	64.41 kPa	31.75	N/A	551.05 kN
12.64 m	Cohesionless	75.62 kPa	31.75	N/A	937.15 kN
12.99 m	Cohesionless	76.94 kPa	31.75	N/A	990.41 kN
13.01 m	Cohesionless	89.62 kPa	29.65	N/A	993.04 kN
16.01 m	Cohesionless	100.82 kPa	29.65	N/A	1368.53 kN
17.61 m	Cohesionless	106.82 kPa	29.65	N/A	1603.66 kN
17.64 m	Cohesionless	124.17 kPa	38.37	N/A	1608.66 kN
19.11 m	Cohesionless	131.45 kPa	38.37	N/A	2149.96 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	87.12	1311.22 kN	0.59 kN
3.01 m	Cohesionless	20.13 kPa	87.12	1311.22 kN	178.98 kN
6.01 m	Cohesionless	40.20 kPa	87.12	1311.22 kN	357.36 kN
9.01 m	Cohesionless	60.26 kPa	87.12	1311.22 kN	535.74 kN
9.61 m	Cohesionless	64.31 kPa	87.12	1311.22 kN	571.72 kN
9.64 m	Cohesionless	64.45 kPa	83.04	1190.45 kN	542.50 kN
12.64 m	Cohesionless	86.86 kPa	83.04	1190.45 kN	730.62 kN
12.99 m	Cohesionless	89.51 kPa	83.04	1190.45 kN	752.88 kN
13.01 m	Cohesionless	89.66 kPa	55.60	510.96 kN	462.63 kN
16.01 m	Cohesionless	112.06 kPa	55.60	510.96 kN	510.96 kN
17.61 m	Cohesionless	124.05 kPa	55.60	510.96 kN	510.96 kN
17.64 m	Cohesionless	124.22 kPa	391.00	5126.32 kN	5126.32 kN
19.11 m	Cohesionless	138.77 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.59 kN	0.60 kN
3.01 m	53.78 kN	178.98 kN	232.76 kN
6.01 m	214.42 kN	357.36 kN	571.78 kN
9.01 m	481.92 kN	535.74 kN	1017.66 kN
9.61 m	548.81 kN	571.72 kN	1120.53 kN
9.64 m	551.05 kN	542.50 kN	1093.55 kN
12.64 m	937.15 kN	730.62 kN	1667.77 kN
12.99 m	990.41 kN	752.88 kN	1743.28 kN
13.01 m	993.04 kN	462.63 kN	1455.67 kN
16.01 m	1368.53 kN	510.96 kN	1879.49 kN
17.61 m	1603.66 kN	510.96 kN	2114.63 kN
17.64 m	1608.66 kN	5126.32 kN	6734.98 kN
19.11 m	2149.96 kN	5126.32 kN	7276.28 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.03 kPa	32.01	N/A	0.00 kN
3.01 m	Cohesionless	10.07 kPa	32.01	N/A	53.78 kN
6.01 m	Cohesionless	20.10 kPa	32.01	N/A	214.42 kN
9.01 m	Cohesionless	30.13 kPa	32.01	N/A	481.92 kN
9.61 m	Cohesionless	32.15 kPa	32.01	N/A	548.81 kN
9.64 m	Cohesionless	64.41 kPa	31.75	N/A	551.05 kN
12.64 m	Cohesionless	75.62 kPa	31.75	N/A	937.15 kN
12.99 m	Cohesionless	76.94 kPa	31.75	N/A	990.41 kN
13.01 m	Cohesionless	89.62 kPa	29.65	N/A	993.04 kN
16.01 m	Cohesionless	100.82 kPa	29.65	N/A	1368.53 kN
17.61 m	Cohesionless	106.82 kPa	29.65	N/A	1603.66 kN
17.64 m	Cohesionless	124.17 kPa	38.37	N/A	1608.66 kN
19.11 m	Cohesionless	131.45 kPa	38.37	N/A	2149.96 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.07 kPa	87.12	1311.22 kN	0.59 kN
3.01 m	Cohesionless	20.13 kPa	87.12	1311.22 kN	178.98 kN
6.01 m	Cohesionless	40.20 kPa	87.12	1311.22 kN	357.36 kN
9.01 m	Cohesionless	60.26 kPa	87.12	1311.22 kN	535.74 kN
9.61 m	Cohesionless	64.31 kPa	87.12	1311.22 kN	571.72 kN
9.64 m	Cohesionless	64.45 kPa	83.04	1190.45 kN	542.50 kN
12.64 m	Cohesionless	86.86 kPa	83.04	1190.45 kN	730.62 kN
12.99 m	Cohesionless	89.51 kPa	83.04	1190.45 kN	752.88 kN
13.01 m	Cohesionless	89.66 kPa	55.60	510.96 kN	462.63 kN
16.01 m	Cohesionless	112.06 kPa	55.60	510.96 kN	510.96 kN
17.61 m	Cohesionless	124.05 kPa	55.60	510.96 kN	510.96 kN
17.64 m	Cohesionless	124.22 kPa	391.00	5126.32 kN	5126.32 kN
19.11 m	Cohesionless	138.77 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.59 kN	0.60 kN
3.01 m	53.78 kN	178.98 kN	232.76 kN
6.01 m	214.42 kN	357.36 kN	571.78 kN
9.01 m	481.92 kN	535.74 kN	1017.66 kN
9.61 m	548.81 kN	571.72 kN	1120.53 kN
9.64 m	551.05 kN	542.50 kN	1093.55 kN
12.64 m	937.15 kN	730.62 kN	1667.77 kN
12.99 m	990.41 kN	752.88 kN	1743.28 kN
13.01 m	993.04 kN	462.63 kN	1455.67 kN
16.01 m	1368.53 kN	510.96 kN	1879.49 kN
17.61 m	1603.66 kN	510.96 kN	2114.63 kN
17.64 m	1608.66 kN	5126.32 kN	6734.98 kN
19.11 m	2149.96 kN	5126.32 kN	7276.28 kN

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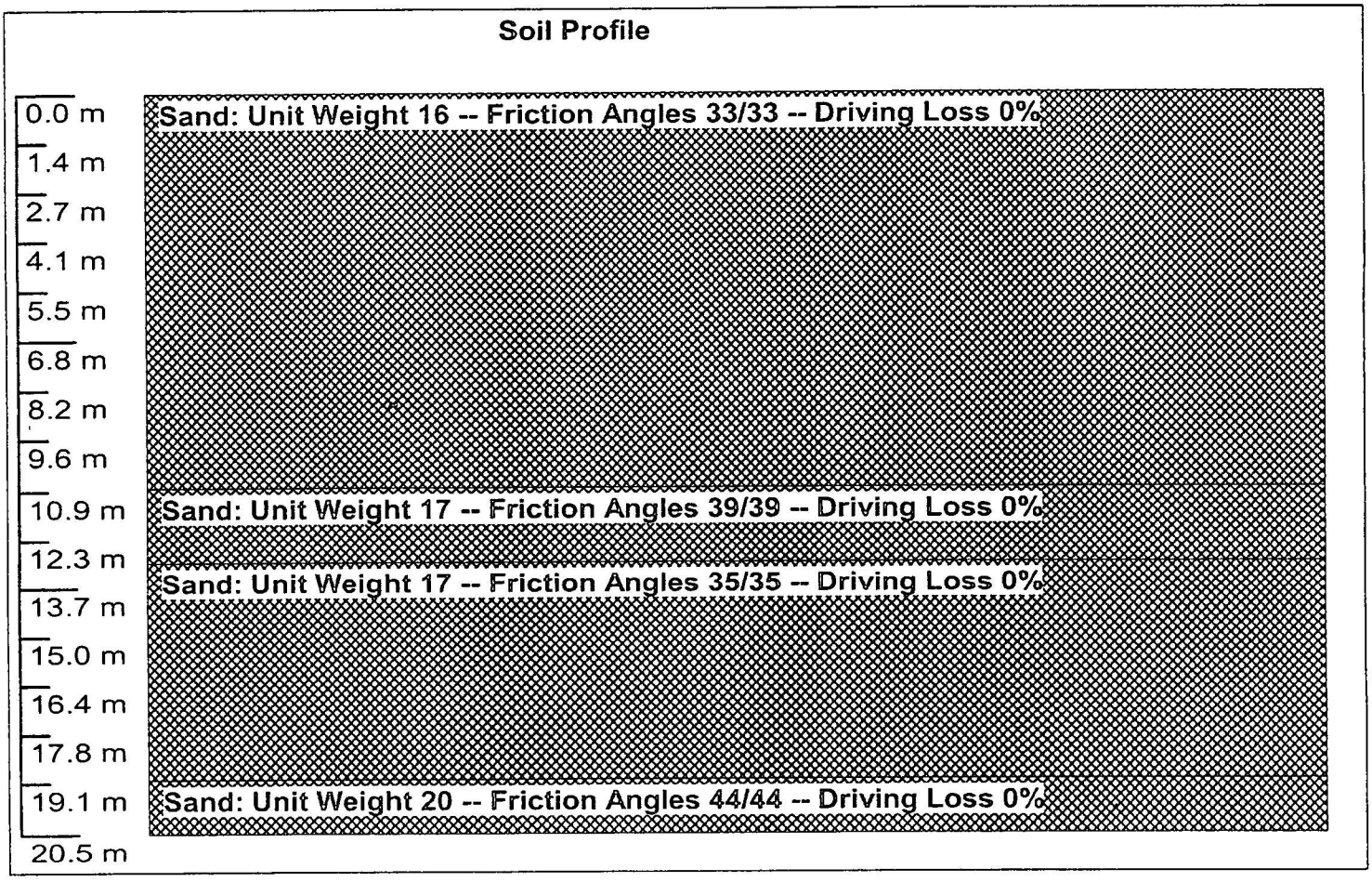

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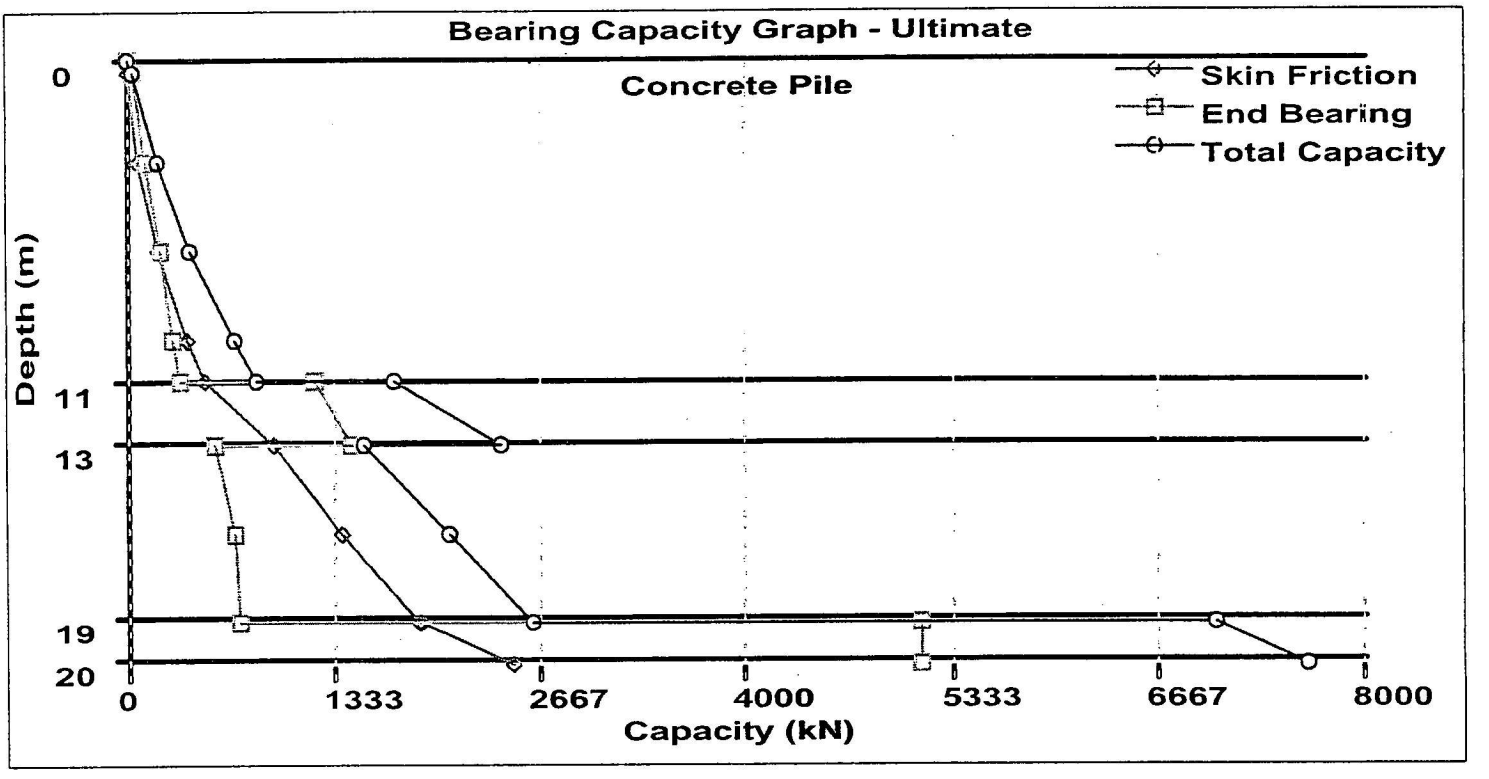

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP4_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.88 m	0.00%	16.49 kN/m^3	33.1/33.1	Nordlund
2	Cohesionless	2.12 m	0.00%	17.27 kN/m^3	39.4/39.4	Nordlund
3	Cohesionless	6.00 m	0.00%	17.27 kN/m^3	34.9/34.9	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	28.87	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	28.87	N/A	2.24 kN
0.51 m	Cohesionless	8.28 kPa	28.87	N/A	2.43 kN
3.51 m	Cohesionless	18.31 kPa	28.87	N/A	64.71 kN
6.51 m	Cohesionless	28.34 kPa	28.87	N/A	195.11 kN
9.51 m	Cohesionless	38.38 kPa	28.87	N/A	393.64 kN
10.86 m	Cohesionless	42.91 kPa	28.87	N/A	505.64 kN
10.89 m	Cohesionless	77.68 kPa	34.36	N/A	508.44 kN
12.99 m	Cohesionless	85.54 kPa	34.36	N/A	952.75 kN
13.01 m	Cohesionless	93.55 kPa	30.44	N/A	956.32 kN
16.01 m	Cohesionless	104.75 kPa	30.44	N/A	1381.76 kN
18.99 m	Cohesionless	115.88 kPa	30.44	N/A	1894.42 kN
19.01 m	Cohesionless	138.37 kPa	38.37	N/A	1900.14 kN
20.49 m	Cohesionless	145.64 kPa	38.37	N/A	2499.88 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	48.04	361.40 kN	0.74 kN
0.49 m	Cohesionless	8.08 kPa	48.04	361.40 kN	36.47 kN
0.51 m	Cohesionless	8.31 kPa	48.04	361.40 kN	37.52 kN
3.51 m	Cohesionless	28.38 kPa	48.04	361.40 kN	128.09 kN
6.51 m	Cohesionless	48.44 kPa	48.04	361.40 kN	218.67 kN
9.51 m	Cohesionless	68.51 kPa	48.04	361.40 kN	302.91 kN
10.86 m	Cohesionless	77.57 kPa	48.04	361.40 kN	337.84 kN
10.89 m	Cohesionless	77.71 kPa	145.12	2573.39 kN	1214.01 kN
12.99 m	Cohesionless	93.43 kPa	145.12	2573.39 kN	1459.60 kN
13.01 m	Cohesionless	93.58 kPa	63.16	724.13 kN	570.08 kN
16.01 m	Cohesionless	115.99 kPa	63.16	724.13 kN	700.60 kN
18.99 m	Cohesionless	138.25 kPa	63.16	724.13 kN	724.13 kN
19.01 m	Cohesionless	138.42 kPa	391.00	5126.32 kN	5126.32 kN
20.49 m	Cohesionless	152.96 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.74 kN	0.75 kN
0.49 m	2.24 kN	36.47 kN	38.71 kN
0.51 m	2.43 kN	37.52 kN	39.95 kN
3.51 m	64.71 kN	128.09 kN	192.80 kN
6.51 m	195.11 kN	218.67 kN	413.78 kN
9.51 m	393.64 kN	302.91 kN	696.55 kN
10.86 m	505.64 kN	337.84 kN	843.48 kN
10.89 m	508.44 kN	1214.01 kN	1722.45 kN
12.99 m	952.75 kN	1459.60 kN	2412.35 kN
13.01 m	956.32 kN	570.08 kN	1526.40 kN
16.01 m	1381.76 kN	700.60 kN	2082.36 kN
18.99 m	1894.42 kN	724.13 kN	2618.55 kN
19.01 m	1900.14 kN	5126.32 kN	7026.46 kN
20.49 m	2499.88 kN	5126.32 kN	7626.20 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	28.87	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	28.87	N/A	2.24 kN
0.51 m	Cohesionless	8.28 kPa	28.87	N/A	2.43 kN
3.51 m	Cohesionless	18.31 kPa	28.87	N/A	64.71 kN
6.51 m	Cohesionless	28.34 kPa	28.87	N/A	195.11 kN
9.51 m	Cohesionless	38.38 kPa	28.87	N/A	393.64 kN
10.86 m	Cohesionless	42.91 kPa	28.87	N/A	505.64 kN
10.89 m	Cohesionless	77.68 kPa	34.36	N/A	508.44 kN
12.99 m	Cohesionless	85.54 kPa	34.36	N/A	952.75 kN
13.01 m	Cohesionless	93.55 kPa	30.44	N/A	956.32 kN
16.01 m	Cohesionless	104.75 kPa	30.44	N/A	1381.76 kN
18.99 m	Cohesionless	115.88 kPa	30.44	N/A	1894.42 kN
19.01 m	Cohesionless	138.37 kPa	38.37	N/A	1900.14 kN
20.49 m	Cohesionless	145.64 kPa	38.37	N/A	2499.88 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	48.04	361.40 kN	0.74 kN
0.49 m	Cohesionless	8.08 kPa	48.04	361.40 kN	36.47 kN
0.51 m	Cohesionless	8.31 kPa	48.04	361.40 kN	37.52 kN
3.51 m	Cohesionless	28.38 kPa	48.04	361.40 kN	128.09 kN
6.51 m	Cohesionless	48.44 kPa	48.04	361.40 kN	218.67 kN
9.51 m	Cohesionless	68.51 kPa	48.04	361.40 kN	302.91 kN
10.86 m	Cohesionless	77.57 kPa	48.04	361.40 kN	337.84 kN
10.89 m	Cohesionless	77.71 kPa	145.12	2573.39 kN	1214.01 kN
12.99 m	Cohesionless	93.43 kPa	145.12	2573.39 kN	1459.60 kN
13.01 m	Cohesionless	93.58 kPa	63.16	724.13 kN	570.08 kN
16.01 m	Cohesionless	115.99 kPa	63.16	724.13 kN	700.60 kN
18.99 m	Cohesionless	138.25 kPa	63.16	724.13 kN	724.13 kN
19.01 m	Cohesionless	138.42 kPa	391.00	5126.32 kN	5126.32 kN
20.49 m	Cohesionless	152.96 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.74 kN	0.75 kN
0.49 m	2.24 kN	36.47 kN	38.71 kN
0.51 m	2.43 kN	37.52 kN	39.95 kN
3.51 m	64.71 kN	128.09 kN	192.80 kN
6.51 m	195.11 kN	218.67 kN	413.78 kN
9.51 m	393.64 kN	302.91 kN	696.55 kN
10.86 m	505.64 kN	337.84 kN	843.48 kN
10.89 m	508.44 kN	1214.01 kN	1722.45 kN
12.99 m	952.75 kN	1459.60 kN	2412.35 kN
13.01 m	956.32 kN	570.08 kN	1526.40 kN
16.01 m	1381.76 kN	700.60 kN	2082.36 kN
18.99 m	1894.42 kN	724.13 kN	2618.55 kN
19.01 m	1900.14 kN	5126.32 kN	7026.46 kN
20.49 m	2499.88 kN	5126.32 kN	7626.20 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	28.87	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	28.87	N/A	2.24 kN
0.51 m	Cohesionless	8.28 kPa	28.87	N/A	2.43 kN
3.51 m	Cohesionless	18.31 kPa	28.87	N/A	64.71 kN
6.51 m	Cohesionless	28.34 kPa	28.87	N/A	195.11 kN
9.51 m	Cohesionless	38.38 kPa	28.87	N/A	393.64 kN
10.86 m	Cohesionless	42.91 kPa	28.87	N/A	505.64 kN
10.89 m	Cohesionless	77.68 kPa	34.36	N/A	508.44 kN
12.99 m	Cohesionless	85.54 kPa	34.36	N/A	952.75 kN
13.01 m	Cohesionless	93.55 kPa	30.44	N/A	956.32 kN
16.01 m	Cohesionless	104.75 kPa	30.44	N/A	1381.76 kN
18.99 m	Cohesionless	115.88 kPa	30.44	N/A	1894.42 kN
19.01 m	Cohesionless	138.37 kPa	38.37	N/A	1900.14 kN
20.49 m	Cohesionless	145.64 kPa	38.37	N/A	2499.88 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	48.04	361.40 kN	0.74 kN
0.49 m	Cohesionless	8.08 kPa	48.04	361.40 kN	36.47 kN
0.51 m	Cohesionless	8.31 kPa	48.04	361.40 kN	37.52 kN
3.51 m	Cohesionless	28.38 kPa	48.04	361.40 kN	128.09 kN
6.51 m	Cohesionless	48.44 kPa	48.04	361.40 kN	218.67 kN
9.51 m	Cohesionless	68.51 kPa	48.04	361.40 kN	302.91 kN
10.86 m	Cohesionless	77.57 kPa	48.04	361.40 kN	337.84 kN
10.89 m	Cohesionless	77.71 kPa	145.12	2573.39 kN	1214.01 kN
12.99 m	Cohesionless	93.43 kPa	145.12	2573.39 kN	1459.60 kN
13.01 m	Cohesionless	93.58 kPa	63.16	724.13 kN	570.08 kN
16.01 m	Cohesionless	115.99 kPa	63.16	724.13 kN	700.60 kN
18.99 m	Cohesionless	138.25 kPa	63.16	724.13 kN	724.13 kN
19.01 m	Cohesionless	138.42 kPa	391.00	5126.32 kN	5126.32 kN
20.49 m	Cohesionless	152.96 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	0.74 kN	0.75 kN
0.49 m	2.24 kN	36.47 kN	38.71 kN
0.51 m	2.43 kN	37.52 kN	39.95 kN
3.51 m	64.71 kN	128.09 kN	192.80 kN
6.51 m	195.11 kN	218.67 kN	413.78 kN
9.51 m	393.64 kN	302.91 kN	696.55 kN
10.86 m	505.64 kN	337.84 kN	843.48 kN
10.89 m	508.44 kN	1214.01 kN	1722.45 kN
12.99 m	952.75 kN	1459.60 kN	2412.35 kN
13.01 m	956.32 kN	570.08 kN	1526.40 kN
16.01 m	1381.76 kN	700.60 kN	2082.36 kN
18.99 m	1894.42 kN	724.13 kN	2618.55 kN
19.01 m	1900.14 kN	5126.32 kN	7026.46 kN
20.49 m	2499.88 kN	5126.32 kN	7626.20 kN

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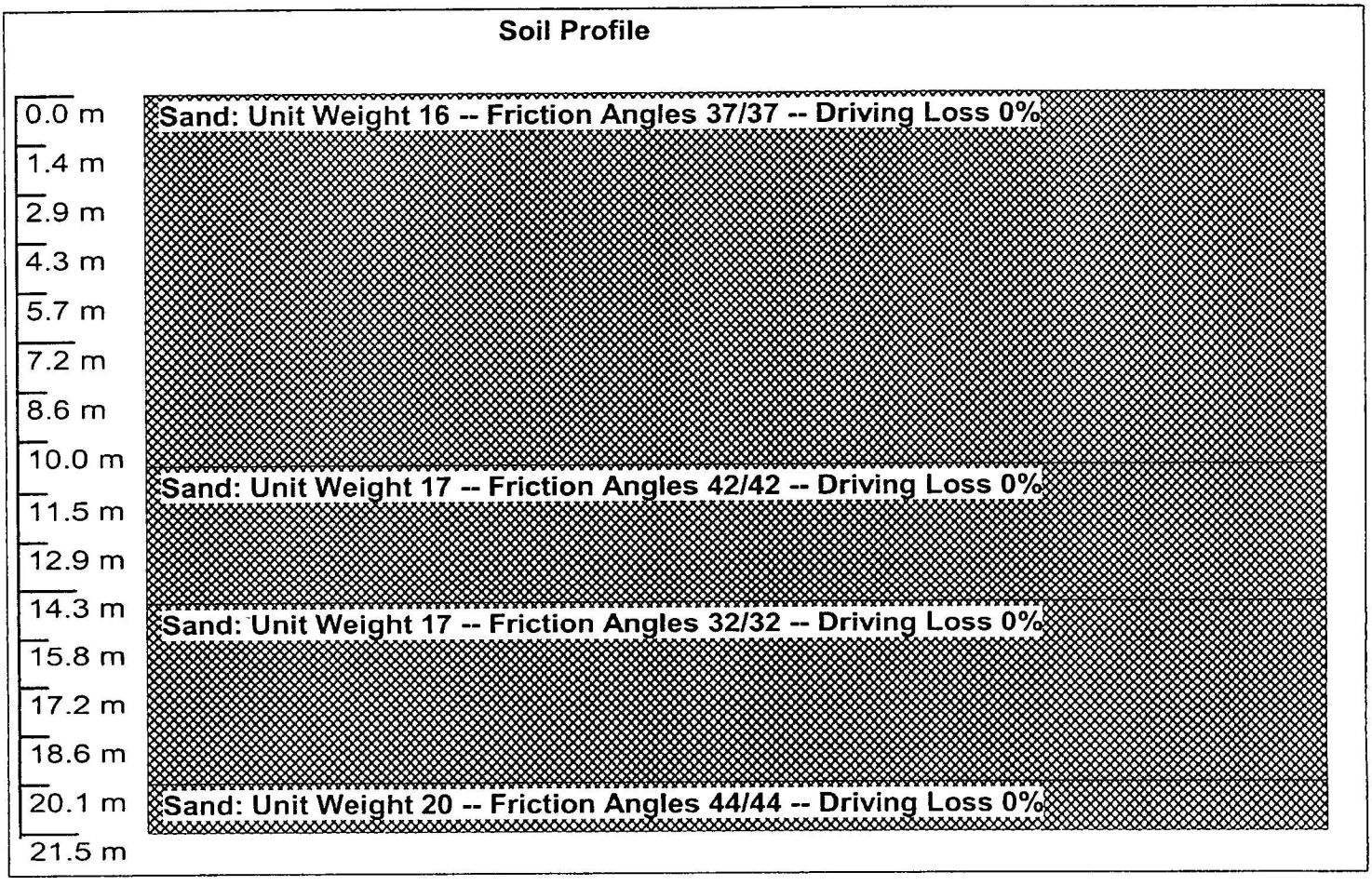

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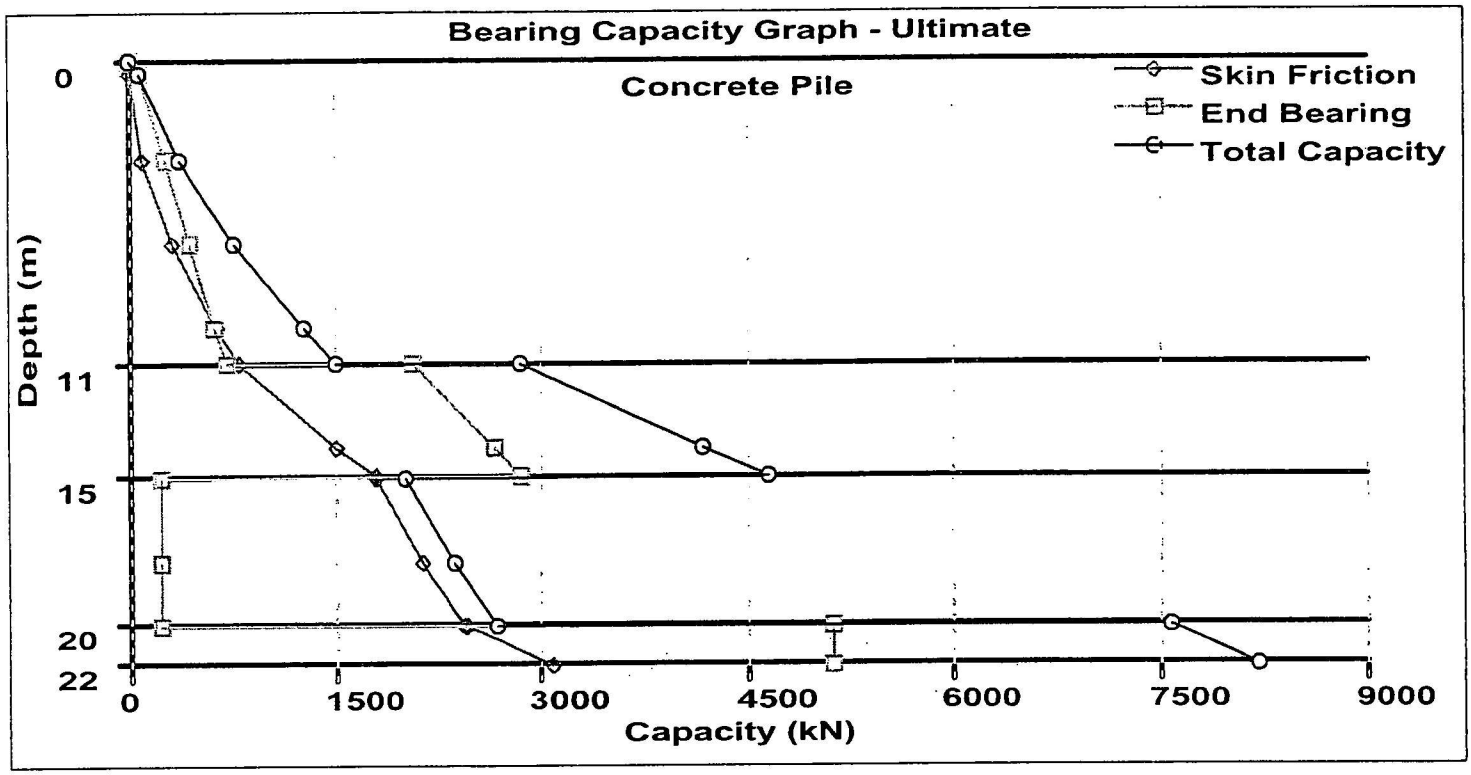

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CP5_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.50 m
	- Driving/Restrike	0.50 m
	- Ultimate:	0.50 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	10.75 m	0.00%	16.49 kN/m^3	36.9/36.9	Nordlund
2	Cohesionless	4.00 m	0.00%	17.27 kN/m^3	41.9/41.9	Nordlund
3	Cohesionless	5.25 m	0.00%	17.27 kN/m^3	32.0/32.0	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.18	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	32.18	N/A	3.61 kN
0.51 m	Cohesionless	8.28 kPa	32.18	N/A	3.91 kN
3.51 m	Cohesionless	18.31 kPa	32.18	N/A	104.34 kN
6.51 m	Cohesionless	28.34 kPa	32.18	N/A	314.62 kN
9.51 m	Cohesionless	38.38 kPa	32.18	N/A	634.74 kN
10.74 m	Cohesionless	42.49 kPa	32.18	N/A	797.74 kN
10.76 m	Cohesionless	76.84 kPa	36.54	N/A	801.22 kN
13.76 m	Cohesionless	88.04 kPa	36.54	N/A	1516.48 kN
14.74 m	Cohesionless	91.70 kPa	36.54	N/A	1789.56 kN
14.76 m	Cohesionless	106.71 kPa	27.91	N/A	1793.52 kN
17.76 m	Cohesionless	117.92 kPa	27.91	N/A	2148.28 kN
19.99 m	Cohesionless	126.24 kPa	27.91	N/A	2455.66 kN
20.01 m	Cohesionless	145.94 kPa	38.37	N/A	2461.18 kN
21.49 m	Cohesionless	153.21 kPa	38.37	N/A	3092.06 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	89.84	1391.72 kN	1.52 kN
0.49 m	Cohesionless	8.08 kPa	89.84	1391.72 kN	74.39 kN
0.51 m	Cohesionless	8.31 kPa	89.84	1391.72 kN	76.53 kN
3.51 m	Cohesionless	28.38 kPa	89.84	1391.72 kN	261.27 kN
6.51 m	Cohesionless	48.44 kPa	89.84	1391.72 kN	446.00 kN
9.51 m	Cohesionless	68.51 kPa	89.84	1391.72 kN	630.74 kN
10.74 m	Cohesionless	76.74 kPa	89.84	1391.72 kN	706.48 kN
10.76 m	Cohesionless	76.88 kPa	239.80	4055.69 kN	2067.97 kN
13.76 m	Cohesionless	99.28 kPa	239.80	4055.69 kN	2670.67 kN
14.74 m	Cohesionless	106.60 kPa	239.80	4055.69 kN	2867.55 kN
14.76 m	Cohesionless	106.75 kPa	40.40	229.35 kN	229.35 kN
17.76 m	Cohesionless	129.16 kPa	40.40	229.35 kN	229.35 kN
19.99 m	Cohesionless	145.81 kPa	40.40	229.35 kN	229.35 kN
20.01 m	Cohesionless	145.98 kPa	391.00	5126.32 kN	5126.32 kN
21.49 m	Cohesionless	160.53 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.52 kN	1.52 kN
0.49 m	3.61 kN	74.39 kN	78.01 kN
0.51 m	3.91 kN	76.53 kN	80.44 kN
3.51 m	104.34 kN	261.27 kN	365.61 kN
6.51 m	314.62 kN	446.00 kN	760.62 kN
9.51 m	634.74 kN	630.74 kN	1265.48 kN
10.74 m	797.74 kN	706.48 kN	1504.22 kN
10.76 m	801.22 kN	2067.97 kN	2869.19 kN
13.76 m	1516.48 kN	2670.67 kN	4187.16 kN
14.74 m	1789.56 kN	2867.55 kN	4657.12 kN
14.76 m	1793.52 kN	229.35 kN	2022.87 kN
17.76 m	2148.28 kN	229.35 kN	2377.63 kN
19.99 m	2455.66 kN	229.35 kN	2685.01 kN
20.01 m	2461.18 kN	5126.32 kN	7587.50 kN
21.49 m	3092.06 kN	5126.32 kN	8218.38 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.18	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	32.18	N/A	3.61 kN
0.51 m	Cohesionless	8.28 kPa	32.18	N/A	3.91 kN
3.51 m	Cohesionless	18.31 kPa	32.18	N/A	104.34 kN
6.51 m	Cohesionless	28.34 kPa	32.18	N/A	314.62 kN
9.51 m	Cohesionless	38.38 kPa	32.18	N/A	634.74 kN
10.74 m	Cohesionless	42.49 kPa	32.18	N/A	797.74 kN
10.76 m	Cohesionless	76.84 kPa	36.54	N/A	801.22 kN
13.76 m	Cohesionless	88.04 kPa	36.54	N/A	1516.48 kN
14.74 m	Cohesionless	91.70 kPa	36.54	N/A	1789.56 kN
14.76 m	Cohesionless	106.71 kPa	27.91	N/A	1793.52 kN
17.76 m	Cohesionless	117.92 kPa	27.91	N/A	2148.28 kN
19.99 m	Cohesionless	126.24 kPa	27.91	N/A	2455.66 kN
20.01 m	Cohesionless	145.94 kPa	38.37	N/A	2461.18 kN
21.49 m	Cohesionless	153.21 kPa	38.37	N/A	3092.06 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	89.84	1391.72 kN	1.52 kN
0.49 m	Cohesionless	8.08 kPa	89.84	1391.72 kN	74.39 kN
0.51 m	Cohesionless	8.31 kPa	89.84	1391.72 kN	76.53 kN
3.51 m	Cohesionless	28.38 kPa	89.84	1391.72 kN	261.27 kN
6.51 m	Cohesionless	48.44 kPa	89.84	1391.72 kN	446.00 kN
9.51 m	Cohesionless	68.51 kPa	89.84	1391.72 kN	630.74 kN
10.74 m	Cohesionless	76.74 kPa	89.84	1391.72 kN	706.48 kN
10.76 m	Cohesionless	76.88 kPa	239.80	4055.69 kN	2067.97 kN
13.76 m	Cohesionless	99.28 kPa	239.80	4055.69 kN	2670.67 kN
14.74 m	Cohesionless	106.60 kPa	239.80	4055.69 kN	2867.55 kN
14.76 m	Cohesionless	106.75 kPa	40.40	229.35 kN	229.35 kN
17.76 m	Cohesionless	129.16 kPa	40.40	229.35 kN	229.35 kN
19.99 m	Cohesionless	145.81 kPa	40.40	229.35 kN	229.35 kN
20.01 m	Cohesionless	145.98 kPa	391.00	5126.32 kN	5126.32 kN
21.49 m	Cohesionless	160.53 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.52 kN	1.52 kN
0.49 m	3.61 kN	74.39 kN	78.01 kN
0.51 m	3.91 kN	76.53 kN	80.44 kN
3.51 m	104.34 kN	261.27 kN	365.61 kN
6.51 m	314.62 kN	446.00 kN	760.62 kN
9.51 m	634.74 kN	630.74 kN	1265.48 kN
10.74 m	797.74 kN	706.48 kN	1504.22 kN
10.76 m	801.22 kN	2067.97 kN	2869.19 kN
13.76 m	1516.48 kN	2670.67 kN	4187.16 kN
14.74 m	1789.56 kN	2867.55 kN	4657.12 kN
14.76 m	1793.52 kN	229.35 kN	2022.87 kN
17.76 m	2148.28 kN	229.35 kN	2377.63 kN
19.99 m	2455.66 kN	229.35 kN	2685.01 kN
20.01 m	2461.18 kN	5126.32 kN	7587.50 kN
21.49 m	3092.06 kN	5126.32 kN	8218.38 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.18	N/A	0.00 kN
0.49 m	Cohesionless	4.04 kPa	32.18	N/A	3.61 kN
0.51 m	Cohesionless	8.28 kPa	32.18	N/A	3.91 kN
3.51 m	Cohesionless	18.31 kPa	32.18	N/A	104.34 kN
6.51 m	Cohesionless	28.34 kPa	32.18	N/A	314.62 kN
9.51 m	Cohesionless	38.38 kPa	32.18	N/A	634.74 kN
10.74 m	Cohesionless	42.49 kPa	32.18	N/A	797.74 kN
10.76 m	Cohesionless	76.84 kPa	36.54	N/A	801.22 kN
13.76 m	Cohesionless	88.04 kPa	36.54	N/A	1516.48 kN
14.74 m	Cohesionless	91.70 kPa	36.54	N/A	1789.56 kN
14.76 m	Cohesionless	106.71 kPa	27.91	N/A	1793.52 kN
17.76 m	Cohesionless	117.92 kPa	27.91	N/A	2148.28 kN
19.99 m	Cohesionless	126.24 kPa	27.91	N/A	2455.66 kN
20.01 m	Cohesionless	145.94 kPa	38.37	N/A	2461.18 kN
21.49 m	Cohesionless	153.21 kPa	38.37	N/A	3092.06 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	89.84	1391.72 kN	1.52 kN
0.49 m	Cohesionless	8.08 kPa	89.84	1391.72 kN	74.39 kN
0.51 m	Cohesionless	8.31 kPa	89.84	1391.72 kN	76.53 kN
3.51 m	Cohesionless	28.38 kPa	89.84	1391.72 kN	261.27 kN
6.51 m	Cohesionless	48.44 kPa	89.84	1391.72 kN	446.00 kN
9.51 m	Cohesionless	68.51 kPa	89.84	1391.72 kN	630.74 kN
10.74 m	Cohesionless	76.74 kPa	89.84	1391.72 kN	706.48 kN
10.76 m	Cohesionless	76.88 kPa	239.80	4055.69 kN	2067.97 kN
13.76 m	Cohesionless	99.28 kPa	239.80	4055.69 kN	2670.67 kN
14.74 m	Cohesionless	106.60 kPa	239.80	4055.69 kN	2867.55 kN
14.76 m	Cohesionless	106.75 kPa	40.40	229.35 kN	229.35 kN
17.76 m	Cohesionless	129.16 kPa	40.40	229.35 kN	229.35 kN
19.99 m	Cohesionless	145.81 kPa	40.40	229.35 kN	229.35 kN
20.01 m	Cohesionless	145.98 kPa	391.00	5126.32 kN	5126.32 kN
21.49 m	Cohesionless	160.53 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.52 kN	1.52 kN
0.49 m	3.61 kN	74.39 kN	78.01 kN
0.51 m	3.91 kN	76.53 kN	80.44 kN
3.51 m	104.34 kN	261.27 kN	365.61 kN
6.51 m	314.62 kN	446.00 kN	760.62 kN
9.51 m	634.74 kN	630.74 kN	1265.48 kN
10.74 m	797.74 kN	706.48 kN	1504.22 kN
10.76 m	801.22 kN	2067.97 kN	2869.19 kN
13.76 m	1516.48 kN	2670.67 kN	4187.16 kN
14.74 m	1789.56 kN	2867.55 kN	4657.12 kN
14.76 m	1793.52 kN	229.35 kN	2022.87 kN
17.76 m	2148.28 kN	229.35 kN	2377.63 kN
19.99 m	2455.66 kN	229.35 kN	2685.01 kN
20.01 m	2461.18 kN	5126.32 kN	7587.50 kN
21.49 m	3092.06 kN	5126.32 kN	8218.38 kN

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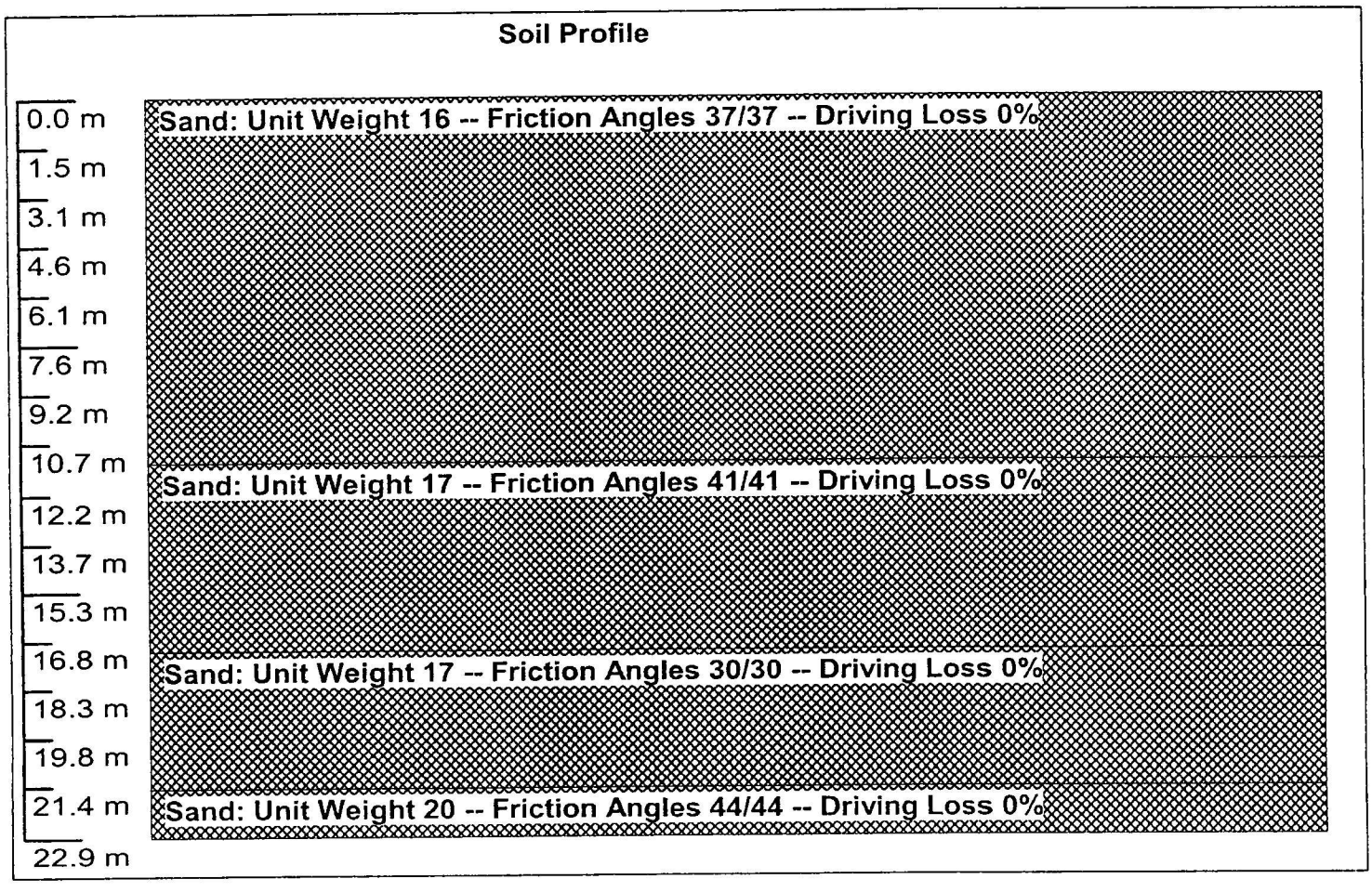

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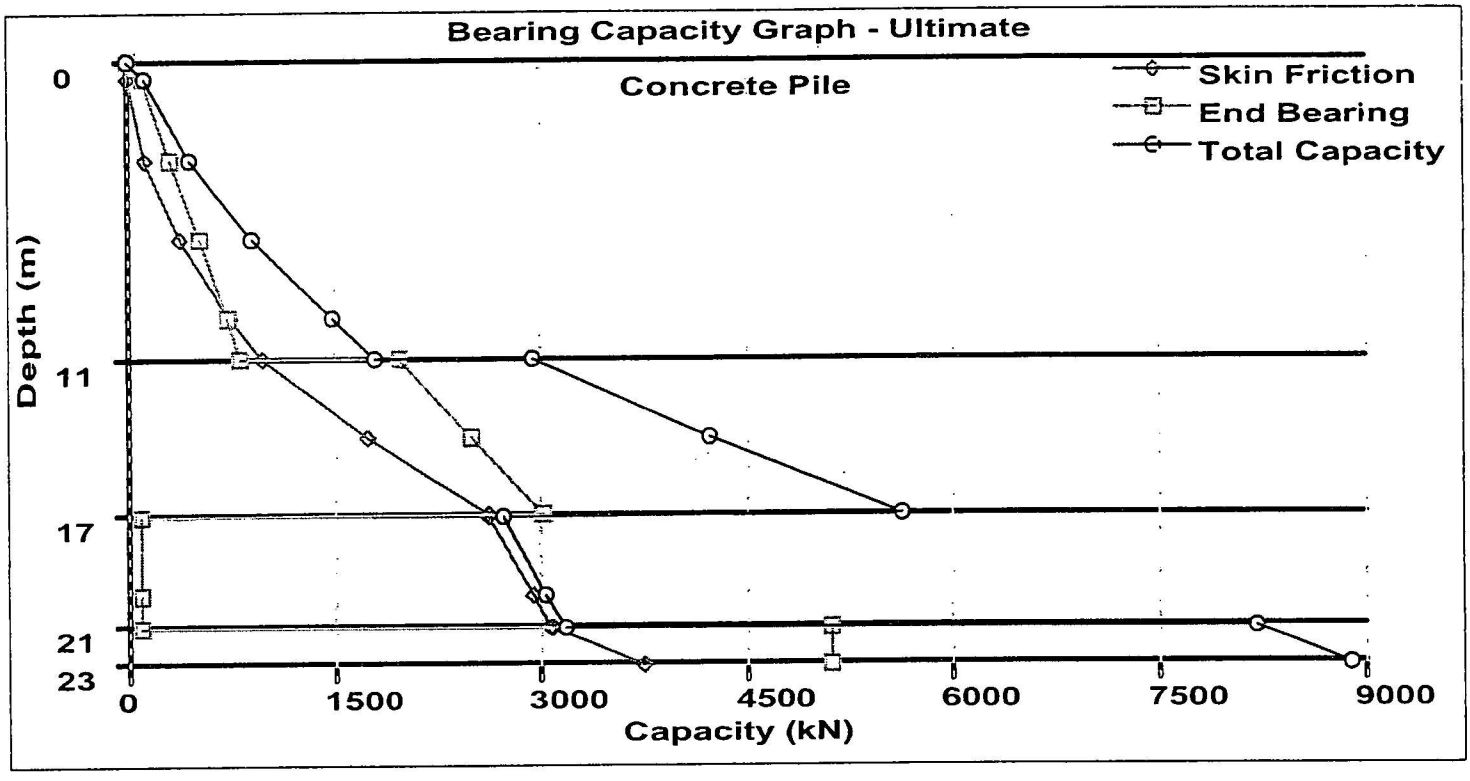

DRIVEN 1.2

GENERAL PROJECT INFORMATION

Filename: G:\GEOTECH\PROJECTS\35321_~1\DRIVEN\CAB2_15.DVN
Project Name: NM State Hwy 126 Project Date: 10/27/2004
Project Client: PBQD
Computed By: Chandra Bhongir
Project Manager: Roland Maynard

PILE INFORMATION

Pile Type: Concrete Pile
Top of Pile: 0.00 m
Length of Square Side: 381.00 mm

ULTIMATE CONSIDERATIONS

Water Table Depth At Time Of:	- Drilling:	0.75 m
	- Driving/Restrike	0.75 m
	- Ultimate:	0.75 m
Ultimate Considerations:	- Local Scour:	0.00 m
	- Long Term Scour:	0.00 m
	- Soft Soil:	0.00 m

ULTIMATE PROFILE

Layer	Type	Thickness	Driving Loss	Unit Weight	Strength	Ultimate Curve
1	Cohesionless	11.25 m	0.00%	16.49 kN/m^3	37.4/37.4	Nordlund
2	Cohesionless	5.90 m	0.00%	17.27 kN/m^3	41.3/41.3	Nordlund
3	Cohesionless	4.25 m	0.00%	17.27 kN/m^3	29.5/29.5	Nordlund
4	Cohesionless	1.50 m	0.00%	19.63 kN/m^3	44.0/44.0	Nordlund

RESTRIKE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.62	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	32.62	N/A	8.81 kN
0.76 m	Cohesionless	12.40 kPa	32.62	N/A	9.29 kN
3.76 m	Cohesionless	22.43 kPa	32.62	N/A	140.75 kN
6.76 m	Cohesionless	32.47 kPa	32.62	N/A	389.63 kN
9.76 m	Cohesionless	42.50 kPa	32.62	N/A	755.91 kN
11.24 m	Cohesionless	47.45 kPa	32.62	N/A	979.86 kN
11.26 m	Cohesionless	82.63 kPa	36.02	N/A	983.69 kN
14.26 m	Cohesionless	93.84 kPa	36.02	N/A	1738.95 kN
17.14 m	Cohesionless	104.59 kPa	36.02	N/A	2633.59 kN
17.16 m	Cohesionless	126.70 kPa	25.73	N/A	2637.93 kN
20.16 m	Cohesionless	137.90 kPa	25.73	N/A	2947.57 kN
21.39 m	Cohesionless	142.49 kPa	25.73	N/A	3089.06 kN
21.41 m	Cohesionless	158.45 kPa	38.37	N/A	3094.65 kN
22.89 m	Cohesionless	165.73 kPa	38.37	N/A	3777.06 kN

RESTRIKE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	96.64	1593.00 kN	1.65 kN
0.74 m	Cohesionless	12.20 kPa	96.64	1593.00 kN	122.14 kN
0.76 m	Cohesionless	12.43 kPa	96.64	1593.00 kN	124.46 kN
3.76 m	Cohesionless	32.50 kPa	96.64	1593.00 kN	325.29 kN
6.76 m	Cohesionless	52.57 kPa	96.64	1593.00 kN	526.12 kN
9.76 m	Cohesionless	72.63 kPa	96.64	1593.00 kN	726.95 kN
11.24 m	Cohesionless	82.53 kPa	96.64	1593.00 kN	826.03 kN
11.26 m	Cohesionless	82.67 kPa	214.60	3680.05 kN	1971.61 kN
14.26 m	Cohesionless	105.08 kPa	214.60	3680.05 kN	2505.95 kN
17.14 m	Cohesionless	126.59 kPa	214.60	3680.05 kN	3018.91 kN
17.16 m	Cohesionless	126.74 kPa	28.20	92.57 kN	92.57 kN
20.16 m	Cohesionless	149.14 kPa	28.20	92.57 kN	92.57 kN
21.39 m	Cohesionless	158.33 kPa	28.20	92.57 kN	92.57 kN
21.41 m	Cohesionless	158.50 kPa	391.00	5126.32 kN	5126.32 kN
22.89 m	Cohesionless	173.05 kPa	391.00	5126.32 kN	5126.32 kN

RESTRIKE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.65 kN	1.65 kN
0.74 m	8.81 kN	122.14 kN	130.95 kN
0.76 m	9.29 kN	124.46 kN	133.75 kN
3.76 m	140.75 kN	325.29 kN	466.04 kN
6.76 m	389.63 kN	526.12 kN	915.75 kN
9.76 m	755.91 kN	726.95 kN	1482.87 kN
11.24 m	979.86 kN	826.03 kN	1805.89 kN
11.26 m	983.69 kN	1971.61 kN	2955.30 kN
14.26 m	1738.95 kN	2505.95 kN	4244.90 kN
17.14 m	2633.59 kN	3018.91 kN	5652.50 kN
17.16 m	2637.93 kN	92.57 kN	2730.50 kN
20.16 m	2947.57 kN	92.57 kN	3040.14 kN
21.39 m	3089.06 kN	92.57 kN	3181.63 kN
21.41 m	3094.65 kN	5126.32 kN	8220.97 kN
22.89 m	3777.06 kN	5126.32 kN	8903.38 kN

DRIVING - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.62	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	32.62	N/A	8.81 kN
0.76 m	Cohesionless	12.40 kPa	32.62	N/A	9.29 kN
3.76 m	Cohesionless	22.43 kPa	32.62	N/A	140.75 kN
6.76 m	Cohesionless	32.47 kPa	32.62	N/A	389.63 kN
9.76 m	Cohesionless	42.50 kPa	32.62	N/A	755.91 kN
11.24 m	Cohesionless	47.45 kPa	32.62	N/A	979.86 kN
11.26 m	Cohesionless	82.63 kPa	36.02	N/A	983.69 kN
14.26 m	Cohesionless	93.84 kPa	36.02	N/A	1738.95 kN
17.14 m	Cohesionless	104.59 kPa	36.02	N/A	2633.59 kN
17.16 m	Cohesionless	126.70 kPa	25.73	N/A	2637.93 kN
20.16 m	Cohesionless	137.90 kPa	25.73	N/A	2947.57 kN
21.39 m	Cohesionless	142.49 kPa	25.73	N/A	3089.06 kN
21.41 m	Cohesionless	158.45 kPa	38.37	N/A	3094.65 kN
22.89 m	Cohesionless	165.73 kPa	38.37	N/A	3777.06 kN

DRIVING - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	96.64	1593.00 kN	1.65 kN
0.74 m	Cohesionless	12.20 kPa	96.64	1593.00 kN	122.14 kN
0.76 m	Cohesionless	12.43 kPa	96.64	1593.00 kN	124.46 kN
3.76 m	Cohesionless	32.50 kPa	96.64	1593.00 kN	325.29 kN
6.76 m	Cohesionless	52.57 kPa	96.64	1593.00 kN	526.12 kN
9.76 m	Cohesionless	72.63 kPa	96.64	1593.00 kN	726.95 kN
11.24 m	Cohesionless	82.53 kPa	96.64	1593.00 kN	826.03 kN
11.26 m	Cohesionless	82.67 kPa	214.60	3680.05 kN	1971.61 kN
14.26 m	Cohesionless	105.08 kPa	214.60	3680.05 kN	2505.95 kN
17.14 m	Cohesionless	126.59 kPa	214.60	3680.05 kN	3018.91 kN
17.16 m	Cohesionless	126.74 kPa	28.20	92.57 kN	92.57 kN
20.16 m	Cohesionless	149.14 kPa	28.20	92.57 kN	92.57 kN
21.39 m	Cohesionless	158.33 kPa	28.20	92.57 kN	92.57 kN
21.41 m	Cohesionless	158.50 kPa	391.00	5126.32 kN	5126.32 kN
22.89 m	Cohesionless	173.05 kPa	391.00	5126.32 kN	5126.32 kN

DRIVING - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.65 kN	1.65 kN
0.74 m	8.81 kN	122.14 kN	130.95 kN
0.76 m	9.29 kN	124.46 kN	133.75 kN
3.76 m	140.75 kN	325.29 kN	466.04 kN
6.76 m	389.63 kN	526.12 kN	915.75 kN
9.76 m	755.91 kN	726.95 kN	1482.87 kN
11.24 m	979.86 kN	826.03 kN	1805.89 kN
11.26 m	983.69 kN	1971.61 kN	2955.30 kN
14.26 m	1738.95 kN	2505.95 kN	4244.90 kN
17.14 m	2633.59 kN	3018.91 kN	5652.50 kN
17.16 m	2637.93 kN	92.57 kN	2730.50 kN
20.16 m	2947.57 kN	92.57 kN	3040.14 kN
21.39 m	3089.06 kN	92.57 kN	3181.63 kN
21.41 m	3094.65 kN	5126.32 kN	8220.97 kN
22.89 m	3777.06 kN	5126.32 kN	8903.38 kN

ULTIMATE - SKIN FRICTION

Depth	Soil Type	Effective Stress At Midpoint	Sliding Friction Angle	Adhesion	Skin Friction
0.01 m	Cohesionless	0.08 kPa	32.62	N/A	0.00 kN
0.74 m	Cohesionless	6.10 kPa	32.62	N/A	8.81 kN
0.76 m	Cohesionless	12.40 kPa	32.62	N/A	9.29 kN
3.76 m	Cohesionless	22.43 kPa	32.62	N/A	140.75 kN
6.76 m	Cohesionless	32.47 kPa	32.62	N/A	389.63 kN
9.76 m	Cohesionless	42.50 kPa	32.62	N/A	755.91 kN
11.24 m	Cohesionless	47.45 kPa	32.62	N/A	979.86 kN
11.26 m	Cohesionless	82.63 kPa	36.02	N/A	983.69 kN
14.26 m	Cohesionless	93.84 kPa	36.02	N/A	1738.95 kN
17.14 m	Cohesionless	104.59 kPa	36.02	N/A	2633.59 kN
17.16 m	Cohesionless	126.70 kPa	25.73	N/A	2637.93 kN
20.16 m	Cohesionless	137.90 kPa	25.73	N/A	2947.57 kN
21.39 m	Cohesionless	142.49 kPa	25.73	N/A	3089.06 kN
21.41 m	Cohesionless	158.45 kPa	38.37	N/A	3094.65 kN
22.89 m	Cohesionless	165.73 kPa	38.37	N/A	3777.06 kN

ULTIMATE - END BEARING

Depth	Soil Type	Effective Stress At Tip	Bearing Cap. Factor	Limiting End Bearing	End Bearing
0.01 m	Cohesionless	0.16 kPa	96.64	1593.00 kN	1.65 kN
0.74 m	Cohesionless	12.20 kPa	96.64	1593.00 kN	122.14 kN
0.76 m	Cohesionless	12.43 kPa	96.64	1593.00 kN	124.46 kN
3.76 m	Cohesionless	32.50 kPa	96.64	1593.00 kN	325.29 kN
6.76 m	Cohesionless	52.57 kPa	96.64	1593.00 kN	526.12 kN
9.76 m	Cohesionless	72.63 kPa	96.64	1593.00 kN	726.95 kN
11.24 m	Cohesionless	82.53 kPa	96.64	1593.00 kN	826.03 kN
11.26 m	Cohesionless	82.67 kPa	214.60	3680.05 kN	1971.61 kN
14.26 m	Cohesionless	105.08 kPa	214.60	3680.05 kN	2505.95 kN
17.14 m	Cohesionless	126.59 kPa	214.60	3680.05 kN	3018.91 kN
17.16 m	Cohesionless	126.74 kPa	28.20	92.57 kN	92.57 kN
20.16 m	Cohesionless	149.14 kPa	28.20	92.57 kN	92.57 kN
21.39 m	Cohesionless	158.33 kPa	28.20	92.57 kN	92.57 kN
21.41 m	Cohesionless	158.50 kPa	391.00	5126.32 kN	5126.32 kN
22.89 m	Cohesionless	173.05 kPa	391.00	5126.32 kN	5126.32 kN

ULTIMATE - SUMMARY OF CAPACITIES

Depth	Skin Friction	End Bearing	Total Capacity
0.01 m	0.00 kN	1.65 kN	1.65 kN
0.74 m	8.81 kN	122.14 kN	130.95 kN
0.76 m	9.29 kN	124.46 kN	133.75 kN
3.76 m	140.75 kN	325.29 kN	466.04 kN
6.76 m	389.63 kN	526.12 kN	915.75 kN
9.76 m	755.91 kN	726.95 kN	1482.87 kN
11.24 m	979.86 kN	826.03 kN	1805.89 kN
11.26 m	983.69 kN	1971.61 kN	2955.30 kN
14.26 m	1738.95 kN	2505.95 kN	4244.90 kN
17.14 m	2633.59 kN	3018.91 kN	5652.50 kN
17.16 m	2637.93 kN	92.57 kN	2730.50 kN
20.16 m	2947.57 kN	92.57 kN	3040.14 kN
21.39 m	3089.06 kN	92.57 kN	3181.63 kN
21.41 m	3094.65 kN	5126.32 kN	8220.97 kN
22.89 m	3777.06 kN	5126.32 kN	8903.38 kN

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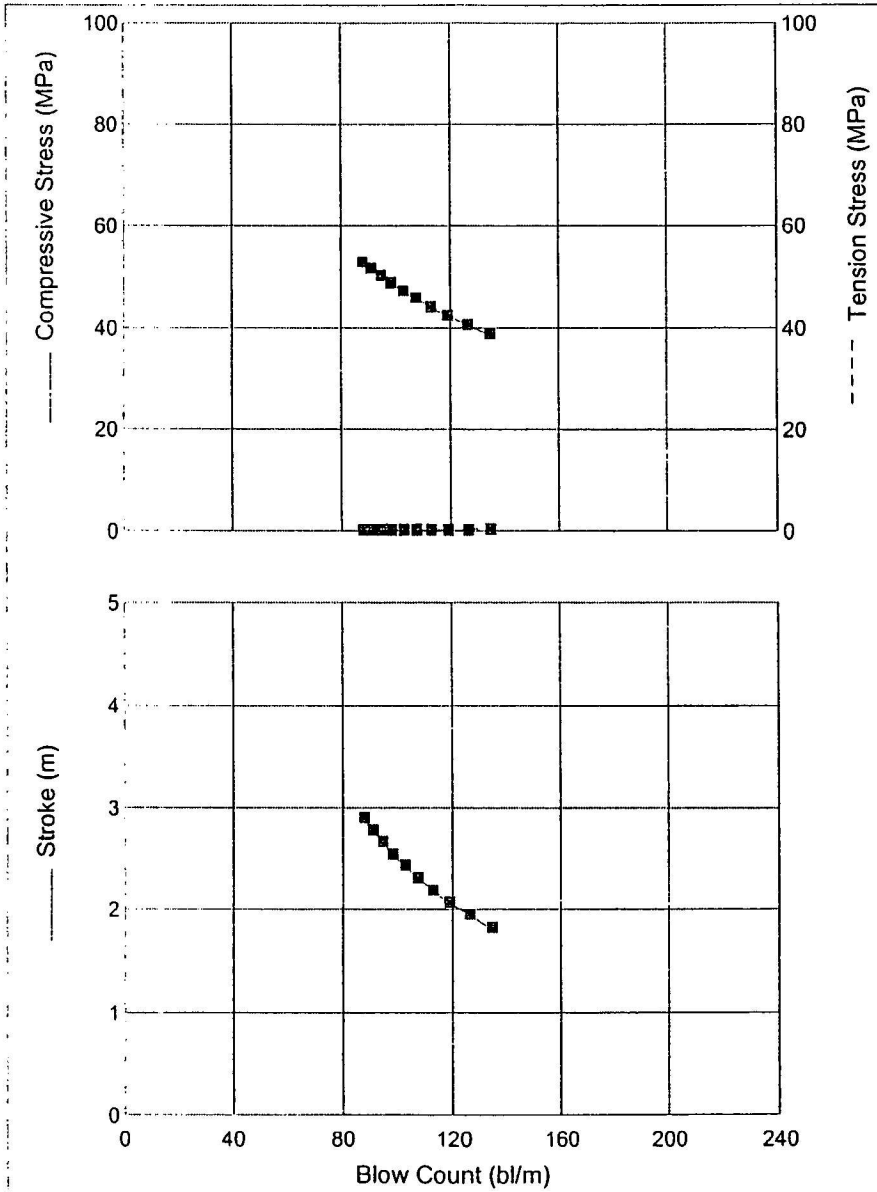
07-Apr-2005
GRLWEAP (TM) Version 2005

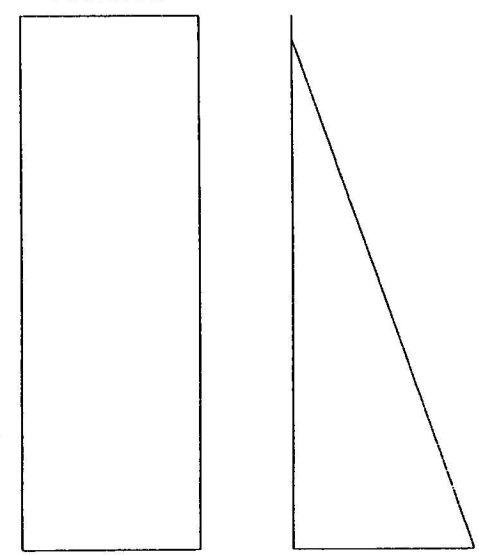


DELMAG D 44

Capacity	2224.1	kN
Efficiency	0.800	
Helmet	9.34	kN
Hammer Cushion	10535	kN/mm
Pile Cushion	5267	kN/mm
Skin Quake	2.500	mm
Toe Quake	3.810	mm
Skin Damping	0.164	sec/m
Toe Damping	0.500	sec/m
Pile Length	10.97	m
Pile Penetration	10.49	m
Pile Top Area	1264.51	cm2

Pile Model

Skin Friction Distribution



Res. Shaft = 23 %
(Proportional)

H-26S

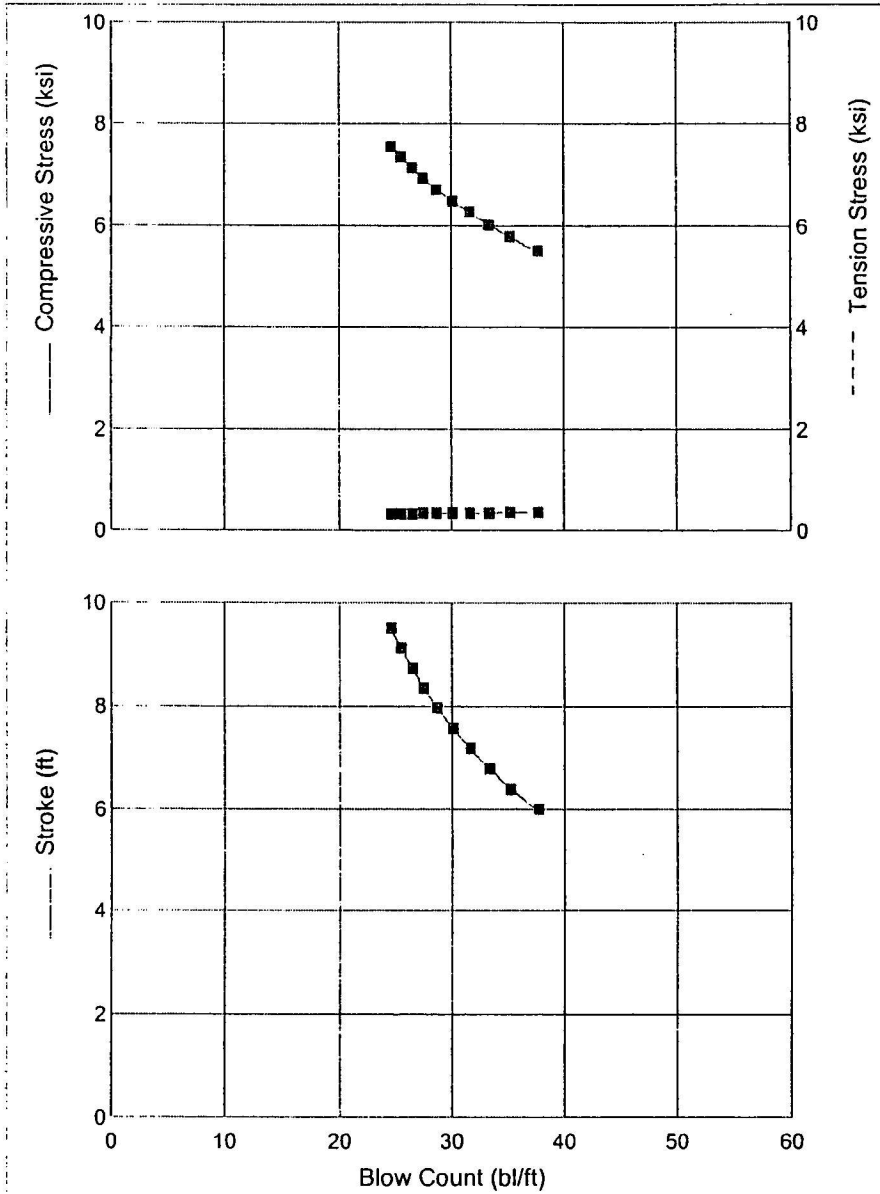
Kleinfelder, Inc.
hwy126 14 conc

07-Apr-2005
GRLWEAP (TM) Version 2005

Ultimate Capacity kN	Maximum Compression Stress MPa	Maximum Tension Stress MPa	Blow Count bl/m	Stroke m	Energy kN-m
2224.1	38.89	0.39	134.4	1.83	39.43
2224.1	40.68	0.35	126.2	1.95	42.09
2224.1	42.46	0.31	118.9	2.07	44.95
2224.1	44.05	0.28	112.7	2.19	47.68
2224.1	45.72	0.26	107.3	2.31	50.40
2224.1	47.20	0.24	102.6	2.43	53.04
2224.1	48.73	0.23	98.3	2.54	55.84
2224.1	50.13	0.22	94.5	2.66	58.49
2224.1	51.53	0.21	91.0	2.78	61.17
2224.1	52.80	0.20	87.8	2.90	63.84

Kleinfelder, Inc.
hwy126 14 conc

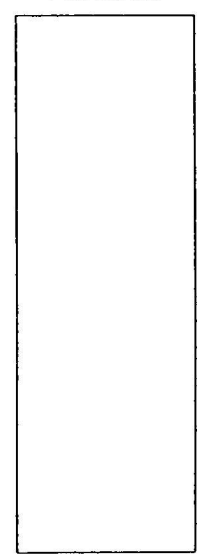
07-Apr-2005
GRLWEAP (TM) Version 2005



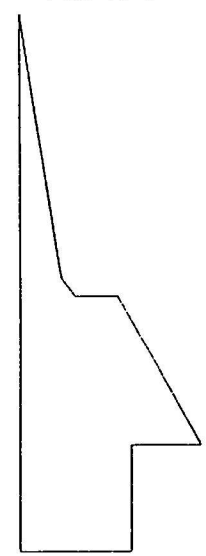
DELMAG D 44

Capacity	500.0	kips
Efficiency	0.800	
Helmet	2.10	kips
Hammer Cushion	60155	kips/in
Pile Cushion	30078	kips/in
Skin Quake	0.100	in
Toe Quake	0.150	in
Skin Damping	0.050	sec/ft
Toe Damping	0.150	sec/ft
Pile Length	70.00	ft
Pile Penetration	70.00	ft
Pile Top Area	196.00	in2

Pile Model



Skin Friction Distribution



Res. Shaft = 23 %
(Proportional)

H-267

Kleinfelder, Inc.
hwy126 14 conc

07-Apr-2005
GRLWEAP (TM) Version 2005

Ultimate Capacity kips	Maximum Compression Stress ksi	Maximum Tension Stress ksi	Blow Count bl/ft	Stroke ft	Energy kips-ft
500.0	5.52	0.36	37.8	6.00	33.12
500.0	5.79	0.35	35.3	6.39	35.38
500.0	6.03	0.35	33.4	6.78	37.49
500.0	6.28	0.34	31.6	7.17	39.78
500.0	6.50	0.34	30.1	7.56	41.94
500.0	6.73	0.34	28.7	7.96	44.04
500.0	6.95	0.33	27.5	8.35	46.22
500.0	7.15	0.33	26.5	8.74	48.30
500.0	7.36	0.32	25.5	9.13	50.53
500.0	7.54	0.32	24.6	9.52	52.64

GRLWEAP - Version 2005
WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS

written by GRL Engineers, Inc. (formerly Goble Rausche Likins and Associates, Inc.) with cooperation from Pile Dynamics, Inc.
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ABOUT THE WAVE EQUATION ANALYSIS RESULTS

The GRLWEAP program simulates the behavior of a preformed pile driven by either an impact hammer or a vibratory hammer. The program is based on mathematical models, which describe motion and forces of hammer, driving system, pile and soil under the hammer action. Under certain conditions, the models only crudely approximate, often complex, dynamic situations.

A wave equation analysis generally relies on input data, which represents normal situations. In particular, the hammer data file supplied with the program assumes that the hammer is in good working order. All of the input data selected by the user may be the best available information at the time when the analysis is performed. However, input data and therefore results may significantly differ from actual field conditions.

Therefore, the program authors recommend prudent use of the GRLWEAP results. Soil response and hammer performance should be verified by static and/or dynamic testing and measurements. Estimates of bending or other local non-axial stresses and prestress effects must also be accounted for by the user.

The calculated capacity - blow count relationship, i.e. the bearing graph, should be used in conjunction with observed blow counts for the capacity assessment of a driven pile. Soil setup occurring after pile installation may produce bearing capacity values that differ substantially from those expected from a wave equation analysis due to soil setup or relaxation. This is particularly true for pile driven with vibratory hammers. The GRLWEAP user must estimate such effects and should also use proper care when applying blow counts from restrike because of the variability of hammer energy, soil resistance and blow count during early restriking.

Finally, the GRLWEAP capacities are ultimate values. They MUST be reduced by means of an appropriate factor of safety to yield a design or working load. The selection of a factor of safety should consider the quality of the construction control, the variability of the site conditions, uncertainties

Originator: JR Date: 6/24/5

Checker: RDM Date: 6/27/05

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in the loads, the importance of building and other factors.

Originator: JR Date: 4/30/5

Checker: RBM Date: 4/29/05

H-270

```
 Input  File: G:\GEOTECH\PROJECTS\35321 CUBA-LACUEVA\REVISIONS\6_26_05
\REV GRLWEAP\AB2_14.GWI
 Hammer File: C:\Program Files\PDI\GRLWEAP 2005\HAMMER2003.GW
 Hammer File Version:  2003 (3/22/2005)

                         Input File Contents
     AB2 - NM State Hwy 126 : 6/26/2005 : TR
 OUT OSG HAM STR FUL PEL  N SPL N-U P-D %SK ISM  0 PHI RSA ITR H-D MXT
DEx
-100   0  11   0   0   0  0   0   0   3  86   0  0   0   0   0   0   0
0.000
    Pile g  Hammer g  Toe Area Pile Size           Pile Type
     0.000     0.000  1260.250    35.500             Unknown
      W Cp      A Cp      E Cp      T Cp       CoR      ROut      StCp
    10.720  1829.000    3654.0    50.000     0.800     3.000       0.0
      A Cu      E Cu      T Cu       CoR      ROut      StCu
  1829.000    3654.0    50.000     0.800     3.000       0.0
      LPle      APle      EPle      WPle      Peri      Strg       CoR
ROut
    21.400  1260.250 40000.000    24.000     1.420    28.000     1.000
3.000
 Manufac  Hmr Name  HmrType No Seg-s
 DELMAG   D 30            1        5
    Ram Wt     Ram L   Ram Dia   MaxStrk   RtdStrk    Efficy
     29.37   3537.46    389.38      2.90      2.76      0.80
    IB. Wt     IB. L   IB.Dia    IB CoR    IB RO
      7.12    627.38    389.38     0.900     3.040
  CompStrk A Chamber V Chamber   C Delay  C Duratn Exp Coeff VolCStart
Vol CEnd
    382.27   1190.84      3.93     0.002     0.002     1.250      0.00
0.00
     P atm        P1        P2        P3        P4        P5
    101.39   9759.98   8787.43   7904.55   7118.23   6407.79
    Stroke    Effic.  Pressure  R-Weight   T-Delay Exp-Coeff   Eps-Str
Total-AW
    2.7600    0.7200 9756.0000    0.0000    0.0000    0.0000    0.0100
0.0000
        Qs        Qt        Js        Jt        Qx        Jx      Rati
Dept
     2.540     5.917     0.395     0.490     0.000     0.000     0.000
0.000
  Research Soil Model: Atoe, Plug,  Gap, Q-fac
     0.000     0.000     0.000     0.000
  Research Soil Model: RD-skn: m, d, toe: m, d
     0.000     0.000     0.000     0.000
  Res. Distribution
    Dpth    Rskn    Dpth    Dpth
    0.00    0.00   21.40   21.40    0.00    0.00    0.00    0.00    0.00
0.00
   11.20    9.53    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   11.20   14.69    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   17.10   31.66    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   17.10   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   21.40   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
  Rult
```

Originator: TR Date: 6/26/5

Checker: RDM Date: 6/27/05

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2225.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0

Originator: [illegible] Date: 6/24/5

Checker: [illegible] Date: 6/27/05

H-272

GRLWEAP: WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS
Version 2005
SI Units

AB2 - NM State Hwy 126 : 6/26/2005 : TR

Hammer Model: D 30 Made by: DELMAG

No.	Weight kN	Stiffn kN/mm	CoR	C-Slk mm	Dampg kN/m/s
1	5.874				
2	5.874	33662.8	1.000	3.0480	
3	5.874	33662.8	1.000	3.0480	
4	5.874	33662.8	1.000	3.0480	
5	5.874	33662.8	1.000	3.0480	
Imp Block	7.120	17841.5	0.900	3.0400	
Helmet	10.720	13366.3	0.800	3.0000	130.7
Cushion		13366.3	0.800	3.0000	
Combined Pile Top		3610.5			

HAMMER OPTIONS:
Hammer File ID No. 11 Hammer Type OE Diesel
Stroke Option FxdP-VarS Stroke Convergence Crit. 0.010
Fuel Pump Setting Maximum

HAMMER DATA:
Ram Weight (kN) 29.37 Ram Length (mm) 3537.46
Maximum (Eq) Stroke (m) 2.90
Rated (Eq) Stroke (m) 2.76 Efficiency 0.720

Maximum Pressure (kPa) 9759.98 Actual Pressure (kPa) 9756.00
Compression Exponent 1.350 Expansion Exponent 1.250
Ram Diameter (mm) 389.38
Combustion Delay (s) 0.00200 Ignition Duration (s) 0.00200

The Hammer Data Includes Estimated (NON-MEASURED) Quantities

HAMMER CUSHION			PILE CUSHION		
Cross Sect. Area	(cm2)	1829.00	Cross Sect. Area	(cm2)	1829.00
Elastic-Modulus	(MPa)	3654.0	Elastic-Modulus	(MPa)	3654.0
Thickness	(mm)	50.00	Thickness	(mm)	50.00
Coeff of Restitution		0.800	Coeff of Restitution		0.800
RoundOut	(mm)	3.0	RoundOut	(mm)	3.0
Stiffness	(kN/mm)	13366.3	Stiffness	(kN/mm)	13366.3

Originator: TR Date: 6/24/05

Checker: RBM Date: 6/27/05

H-273

AB2 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

PILE PROFILE:
Toe Area (cm2) 1260.250 Pile Type
Unknown
Pile Size (cm) 35.500

L b Top	Area	E-Mod	Spec Wt	Perim	Strength	Wave Sp	EA/c
m	cm2	MPa	kN/m3	m	MPa	m/s	kN/m/s
0.00	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69
21.40	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69

Wave Travel Time 2L/c (ms) 10.585

Pile and Soil Model Total Capacity Rut (kN) 2225.0

No.	Weight	Stiffn	C-Slk	T-Slk	CoR	Soil-S	Soil-D	Quake	LbTop	Perim	Area
	kN	kN/mm	mm	mm		kN	s/m	mm	m	m	cm2
1	3.082	4947.	3.000	0.000	1.00	2.4	0.395	2.54	1.02	1.4	1260.2
2	3.082	4947.	0.000	0.000	1.00	7.1	0.395	2.54	2.04	1.4	1260.2
3	3.082	4947.	0.000	0.000	1.00	11.8	0.395	2.54	3.06	1.4	1260.2
4	3.082	4947.	0.000	0.000	1.00	16.5	0.395	2.54	4.08	1.4	1260.3
5	3.082	4947.	0.000	0.000	1.00	21.3	0.395	2.54	5.10	1.4	1260.3
6	3.082	4947.	0.000	0.000	1.00	26.0	0.395	2.54	6.11	1.4	1260.3
7	3.082	4947.	0.000	0.000	1.00	30.7	0.395	2.54	7.13	1.4	1260.3
8	3.082	4947.	0.000	0.000	1.00	35.4	0.395	2.54	8.15	1.4	1260.2
9	3.082	4947.	0.000	0.000	1.00	40.2	0.395	2.54	9.17	1.4	1260.3
10	3.082	4947.	0.000	0.000	1.00	44.9	0.395	2.54	10.19	1.4	1260.3
11	3.082	4947.	0.000	0.000	1.00	49.9	0.395	2.54	11.21	1.4	1260.3
12	3.082	4947.	0.000	0.000	1.00	88.2	0.395	2.54	12.23	1.4	1260.3
13	3.082	4947.	0.000	0.000	1.00	104.2	0.395	2.54	13.25	1.4	1260.3
14	3.082	4947.	0.000	0.000	1.00	120.1	0.395	2.54	14.27	1.4	1260.3
15	3.082	4947.	0.000	0.000	1.00	136.1	0.395	2.54	15.29	1.4	1260.3
16	3.082	4947.	0.000	0.000	1.00	152.1	0.395	2.54	16.30	1.4	1260.2

Originator: TR Date: 6/24/5

Checker: RDM Date: 6/27/05

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```
  17  3.082   4947. 0.000 0.000 1.00   176.5   0.395  2.54  17.32    1.4
1260.2
  18  3.082   4947. 0.000 0.000 1.00   212.6   0.395  2.54  18.34    1.4
1260.2
  21  3.082   4947. 0.000 0.000 1.00   212.6   0.395  2.54  21.40    1.4
1260.2
 Toe                                   311.5   0.490  5.92

     64.726 kN total unreduced pile weight (g=  9.81 m/s2)
      0.000 kN total reduced pile weight   (g=  0.00 m/s2)

  PILE, SOIL, ANALYSIS OPTIONS:
  Uniform pile                          Pile Segments: Automatic
  No. of Slacks/Splices              0  Pile Damping           (%)
3
  Pile Penetration (m)           21.40  Pile Damping Fact.(kN/m/s)
74.801
  % Shaft Resistance                86
  Soil Damping Option            Smith
  Max No Analysis Iterations         0  Time Increment/Critical
160
  Output Time Interval               1  Analysis Time-Input   (ms)
0
  Output Level: Normal
  Gravity Mass, Pile, Hammer:    9.810     0.000     0.000
  Output Segment Generation: Automatic
```

Originator: TR Date: 6/26/15

Checker: RJM Date: 6/27/15

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AB2 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

Rut	Bl Ct	Stroke (m)		Ten Str	i	t	Comp Str	i	t	ENTHRU	Bl Rt
kN	b/m	down	up	MPa			MPa			kJ	b/min
2225.0	249.6	2.09	2.09	-3.23	5	25	38.37	2	2	28.1	45.0

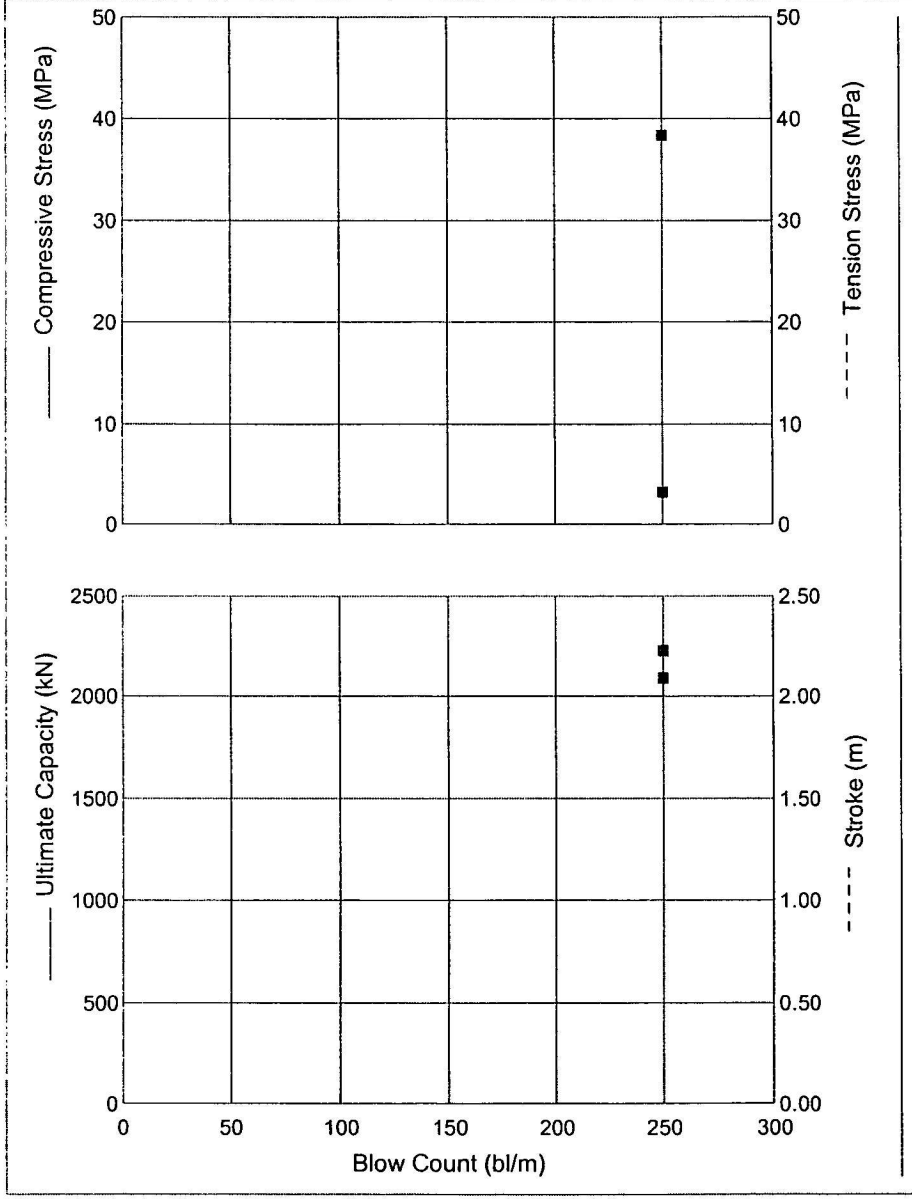
Originator: JR Date: 6/27/05

Checker: RBM Date: 6/27/05

H-276

Kleinfelder, Inc.
AB2 - NM State Hwy 126 : 6/26/2005 : TR

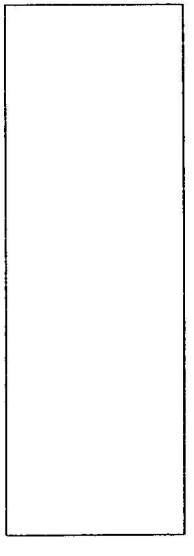
27-Jun-2005
GRLWEAP (TM) Version 2005



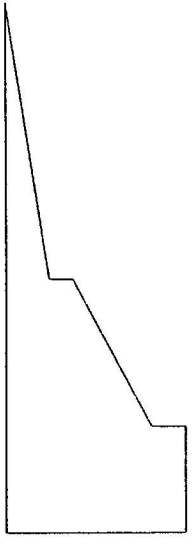
DELMAG D 30

Efficiency	0.720	
Helmet	10.72	kN
Hammer Cushion	13366	kN/mm
Pile Cushion	13366	kN/mm
Skin Quake	2.540	mm
Toe Quake	5.917	mm
Skin Damping	0.395	sec/m
Toe Damping	0.490	sec/m
Pile Length	21.40	m
Pile Penetration	21.40	m
Pile Top Area	1260.25	cm2

Pile Model



Skin Friction Distribution



Res. Shaft = 86 %
(Proportional)

Originator: JC Date: 6/24/5

Checker: RDM Date: 6/27/15

H-277

```
 Input  File: G:\GEOTECH\PROJECTS\35321 CUBA-LACUEVA\REVISIONS\6_26_05
\REV GRLWEAP\P1_14.GWI
 Hammer File: C:\Program Files\PDI\GRLWEAP 2005\HAMMER2003.GW
 Hammer File Version:  2003 (3/22/2005)

                        Input File Contents
     P1 - NM State Hwy 126 : 6/26/2005 : TR
 OUT OSG HAM STR FUL PEL  N SPL N-U P-D %SK ISM  0 PHI RSA ITR H-D MXT
DEx
-100   0  11   0   0   0  0   0   0   3  28   0  0   0   0   0   0   0
0.000
    Pile g  Hammer g  Toe Area Pile Size           Pile Type
     0.000     0.000  1260.250    35.500             Unknown
      W Cp      A Cp      E Cp      T Cp       CoR      ROut      StCp
    10.720  1829.000    3654.0    50.000     0.800     3.000       0.0
      A Cu      E Cu      T Cu       CoR      ROut      StCu
  1829.000    3654.0    50.000     0.800     3.000       0.0
      LPle      APle      EPle      WPle      Peri      Strg       CoR
ROut
    10.250  1260.250 40000.000    24.000     1.420    28.000     1.000
3.000
 Manufac  Hmr Name  HmrType No Seg-s
 DELMAG   D 30            1        5
    Ram Wt     Ram L   Ram Dia   MaxStrk   RtdStrk    Efficy
     29.37   3537.46    389.38      2.90      2.76      0.80
    IB. Wt     IB. L   IB.Dia    IB CoR    IB RO
      7.12    627.38    389.38     0.900     3.040
  CompStrk A Chamber V Chamber   C Delay  C Duratn Exp Coeff VolCStart
Vol CEnd
    382.27   1190.84      3.93     0.002     0.002     1.250      0.00
0.00
     P atm        P1        P2        P3        P4        P5
    101.39   9759.98   8787.43   7904.55   7118.23   6407.79
    Stroke    Effic.  Pressure  R-Weight  T-Delay Exp-Coeff   Eps-Str
Total-AW
    2.7600    0.7200 9756.0000    0.0000    0.0000    0.0000    0.0100
0.0000
        Qs        Qt        Js        Jt        Qx        Jx      Rati
Dept
     2.540     5.917     0.164     0.490     0.000     0.000     0.000
0.000
  Research Soil Model: Atoe, Plug,  Gap, Q-fac
     0.000     0.000     0.000     0.000
  Research Soil Model: RD-skn: m, d, toe: m, d
     0.000     0.000     0.000     0.000
  Res. Distribution
    Dpth    Rskn    Dpth    Dpth
    0.00    0.00   10.25   10.25    0.00    0.00    0.00    0.00    0.00
0.00
    6.00    5.10    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
    6.00    7.87    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   10.25   20.09    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
  Rult
  2225.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
0.0
```

Originator: JR Date: 6/24/5

Checker: RDM Date: 6/27/05

H-278

GRLWEAP: WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS
Version 2005
SI Units

P1 - NM State Hwy 126 : 6/26/2005 : TR

Hammer Model: D 30 Made by: DELMAG

No.	Weight kN	Stiffn kN/mm	CoR	C-Slk mm	Dampg kN/m/s
1	5.874				
2	5.874	33662.8	1.000	3.0480	
3	5.874	33662.8	1.000	3.0480	
4	5.874	33662.8	1.000	3.0480	
5	5.874	33662.8	1.000	3.0480	
Imp Block	7.120	17841.5	0.900	3.0400	
Helmet	10.720	13366.3	0.800	3.0000	130.7
Cushion		13366.3	0.800	3.0000	
Combined Pile Top		3595.2			

HAMMER OPTIONS:
Hammer File ID No. 11 Hammer Type OE Diesel
Stroke Option FxdP-VarS Stroke Convergence Crit. 0.010
Fuel Pump Setting Maximum

HAMMER DATA:
Ram Weight (kN) 29.37 Ram Length (mm) 3537.46
Maximum (Eq) Stroke (m) 2.90
Rated (Eq) Stroke (m) 2.76 Efficiency 0.720

Maximum Pressure (kPa) 9759.98 Actual Pressure (kPa) 9756.00
Compression Exponent 1.350 Expansion Exponent 1.250
Ram Diameter (mm) 389.38
Combustion Delay (s) 0.00200 Ignition Duration (s) 0.00200

The Hammer Data Includes Estimated (NON-MEASURED) Quantities

HAMMER CUSHION			PILE CUSHION		
Cross Sect. Area	(cm2)	1829.00	Cross Sect. Area	(cm2)	1829.00
Elastic-Modulus	(MPa)	3654.0	Elastic-Modulus	(MPa)	3654.0
Thickness	(mm)	50.00	Thickness	(mm)	50.00
Coeff of Restitution		0.800	Coeff of Restitution		0.800
RoundOut	(mm)	3.0	RoundOut	(mm)	3.0
Stiffness	(kN/mm)	13366.3	Stiffness	(kN/mm)	13366.3

Originator: ML Date: 6/20/15

Checker: RDM Date: 6/27/15

H-279

P1 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

PILE PROFILE:
Toe Area (cm2) 1260.250 Pile Type
Unknown
Pile Size (cm) 35.500

L b Top	Area	E-Mod	Spec Wt	Perim	Strength	Wave Sp EA/c
m	cm2	MPa	kN/m3	m	MPa	m/s kN/m/s
0.00	1260.2	40000.	24.00	1.420	28.00	4044. 1246.69
10.25	1260.2	40000.	24.00	1.420	28.00	4044. 1246.69

Wave Travel Time 2L/c (ms) 5.070

Pile and Soil Model Total Capacity Rut (kN) 2225.0

No.	Weight	Stiffn	C-Slk	T-Slk	CoR	Soil-S	Soil-D	Quake	LbTop	Perim Area
	kN	kN/mm	mm	mm		kN	s/m	mm	m	m cm2
1	3.100	4918.	3.000	0.000	1.00	3.7	0.164	2.54	1.02	1.4 1260.2
2	3.100	4918.	0.000	0.000	1.00	11.2	0.164	2.54	2.05	1.4 1260.2
3	3.100	4918.	0.000	0.000	1.00	18.6	0.164	2.54	3.08	1.4 1260.2
4	3.100	4918.	0.000	0.000	1.00	26.1	0.164	2.54	4.10	1.4 1260.3
5	3.100	4918.	0.000	0.000	1.00	33.5	0.164	2.54	5.12	1.4 1260.3
6	3.100	4918.	0.000	0.000	1.00	44.6	0.164	2.54	6.15	1.4 1260.3
7	3.100	4918.	0.000	0.000	1.00	83.5	0.164	2.54	7.18	1.4 1260.3
8	3.100	4918.	0.000	0.000	1.00	108.7	0.164	2.54	8.20	1.4 1260.2
9	3.100	4918.	0.000	0.000	1.00	133.9	0.164	2.54	9.22	1.4 1260.2
10	3.100	4918.	0.000	0.000	1.00	159.1	0.164	2.54	10.25	1.4 1260.2
Toe						1602.0	0.490	5.92		

31.002 kN total unreduced pile weight (g= 9.81 m/s2)
0.000 kN total reduced pile weight (g= 0.00 m/s2)

PILE, SOIL, ANALYSIS OPTIONS:
Uniform pile Pile Segments: Automatic
No. of Slacks/Splices 0 Pile Damping (%) 3
Pile Penetration (m) 10.25 Pile Damping Fact.(kN/m/s) 74.801
% Shaft Resistance 28

Originator: TR Date: 6/26/05
Checker: RDM Date: 6/27/05

H-280

```
  Soil Damping Option              Smith
  Max No Analysis Iterations           0  Time Increment/Critical
160
  Output Time Interval                 1  Analysis Time-Input    (ms)
0
  Output Level: Normal
  Gravity Mass, Pile, Hammer:      9.810      0.000      0.000
  Output Segment Generation: Automatic
```

Originator: TR Date: 6/30/5

Checker: RDM Date: 6/27/05

P1 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

Rut	Bl Ct	Stroke (m)		Ten Str	i	t	Comp Str	i	t	ENTHRU	Bl Rt
kN	b/m	down	up	MPa			MPa			kJ	b/min
2225.0	319.0	2.15	2.15	-0.88	6	43	39.04	3	2	29.5	44.4

Originator: JR Date: 6/26/5

Checker: RDm Date: 6/27/05

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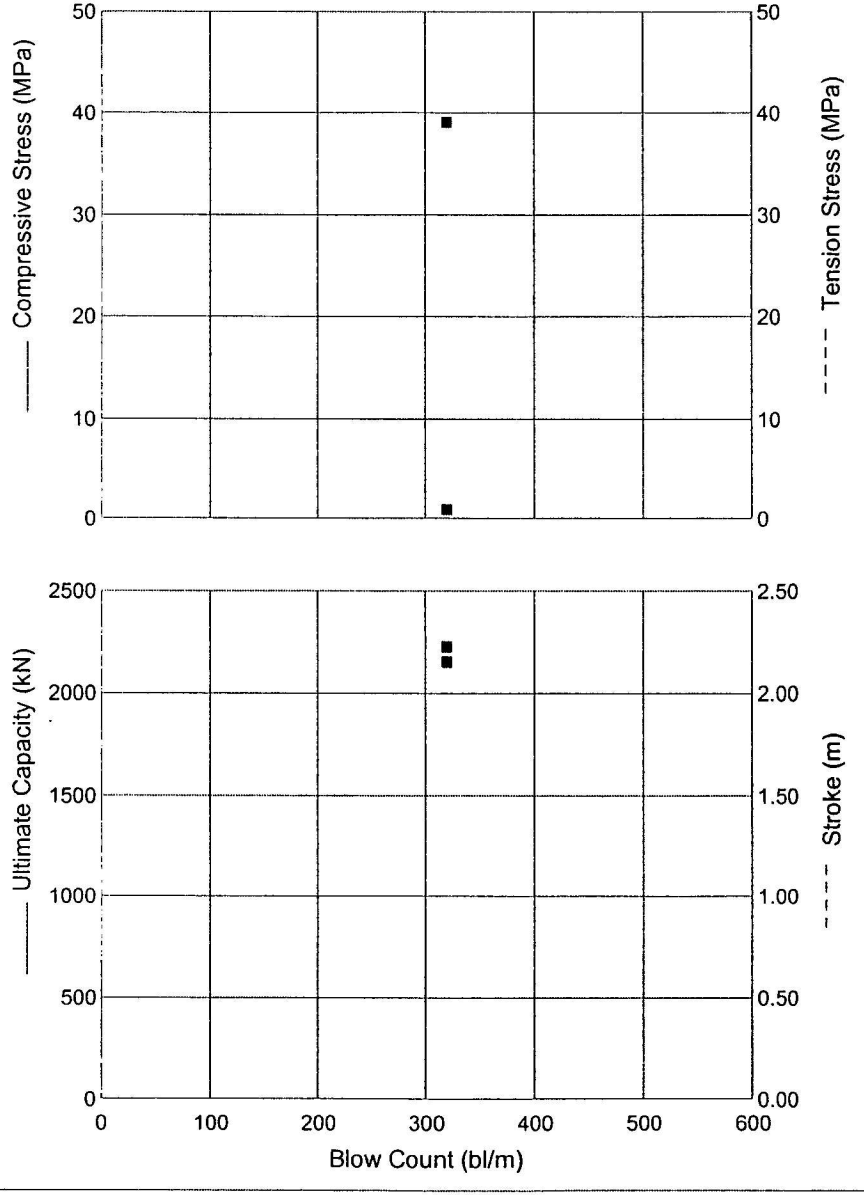
Kleinfelder, Inc.
P1 - NM State Hwy 126 : 6/26/2005 : TR

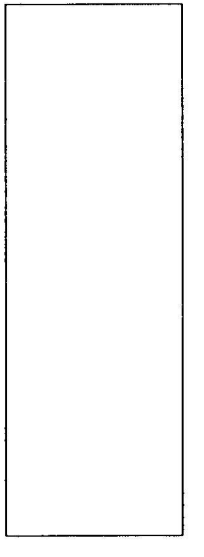
27-Jun-2005
GRLWEAP (TM) Version 2005



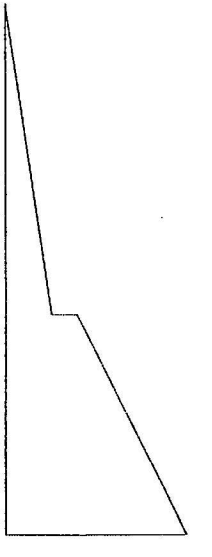
DELMAG D 30

Efficiency	0.720
Helmet	10.72 kN
Hammer Cushion	13366 kN/mm
Pile Cushion	13366 kN/mm
Skin Quake	2.540 mm
Toe Quake	5.917 mm
Skin Damping	0.164 sec/m
Toe Damping	0.490 sec/m
Pile Length	10.25 m
Pile Penetration	10.25 m
Pile Top Area	1260.25 cm2

Pile Model



Skin Friction Distribution



Res. Shaft = 28 %
(Proportional)

Originator: JC Date: 4/25/5

Checker: RDM Date: 4/27/05

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```
 Input  File: G:\GEOTECH\PROJECTS\35321 CUBA-LACUEVA\REVISIONS\6_26_05
\REV GRLWEAP\P2_14.GWI
 Hammer File: C:\Program Files\PDI\GRLWEAP 2005\HAMMER2003.GW
 Hammer File Version:  2003 (3/22/2005)

                         Input File Contents
     P2 - NM State Hwy 126 : 6/26/2005 : TR
 OUT OSG HAM STR FUL PEL  N SPL N-U P-D %SK ISM  0 PHI RSA ITR H-D MXT
DEx
-100   0  11   0   0   0  0   0   0   3  38   0  0   0   0   0   0   0
0.000
    Pile g  Hammer g  Toe Area Pile Size            Pile Type
     0.000     0.000  1260.250    35.500              Unknown
      W Cp      A Cp      E Cp      T Cp       CoR      ROut       StCp
    10.720  1829.000    3654.0    50.000     0.800     3.000        0.0
      A Cu      E Cu      T Cu       CoR      ROut      StCu
  1829.000    3654.0    50.000     0.800     3.000       0.0
      LPle      APle      EPle      WPle      Peri      Strg       CoR
ROut
    15.300  1260.250 40000.000    24.000     1.420    28.000     1.000
3.000
 Manufac  Hmr Name  HmrType No Seg-s
 DELMAG   D 30            1        5
    Ram Wt     Ram L   Ram Dia   MaxStrk   RtdStrk    Efficy
     29.37   3537.46    389.38      2.90      2.76      0.80
    IB. Wt     IB. L   IB.Dia    IB CoR    IB RO
      7.12    627.38    389.38     0.900     3.040
  CompStrk A Chamber V Chamber   C Delay  C Duratn Exp Coeff VolCStart
Vol CEnd
    382.27   1190.84      3.93     0.002     0.002     1.250      0.00
0.00
     P atm        P1        P2        P3        P4        P5
    101.39   9759.98   8787.43   7904.55   7118.23   6407.79
    Stroke    Effic.  Pressure  R-Weight  T-Delay Exp-Coeff   Eps-Str
Total-AW
    2.7600    0.7200 9756.0000    0.0000    0.0000    0.0000    0.0100
0.0000
        Qs        Qt        Js        Jt        Qx        Jx      Rati
Dept
     2.540     5.917     0.164     0.490     0.000     0.000     0.000
0.000
  Research Soil Model: Atoe, Plug,  Gap, Q-fac
     0.000     0.000     0.000     0.000
  Research Soil Model: RD-skn: m, d, toe: m, d
     0.000     0.000     0.000     0.000
  Res. Distribution
    Dpth    Rskn    Dpth    Dpth
    0.00    0.00   15.30   15.30    0.00    0.00    0.00    0.00    0.00
0.00
    8.30    7.06    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
    8.30   10.89    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   15.30   31.02    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
  Rult
  2225.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
0.0
```

Originator: JC Date: 6/24/5

Checker: Pbm Date: 6/27/05

H-284

GRLWEAP: WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS
Version 2005
SI Units

P2 - NM State Hwy 126 : 6/26/2005 : TR

Hammer Model: D 30 Made by: DELMAG

No.	Weight kN	Stiffn kN/mm	CoR	C-Slk mm	Dampg kN/m/s
1	5.874				
2	5.874	33662.8	1.000	3.0480	
3	5.874	33662.8	1.000	3.0480	
4	5.874	33662.8	1.000	3.0480	
5	5.874	33662.8	1.000	3.0480	
Imp Block	7.120	17841.5	0.900	3.0400	
Helmet	10.720	13366.3	0.800	3.0000	130.7
Cushion		13366.3	0.800	3.0000	
Combined Pile Top		3608.1			

HAMMER OPTIONS:
Hammer File ID No. 11 Hammer Type OE Diesel
Stroke Option FxdP-VarS Stroke Convergence Crit. 0.010
Fuel Pump Setting Maximum

HAMMER DATA:
Ram Weight (kN) 29.37 Ram Length (mm) 3537.46
Maximum (Eq) Stroke (m) 2.90
Rated (Eq) Stroke (m) 2.76 Efficiency 0.720

Maximum Pressure (kPa) 9759.98 Actual Pressure (kPa) 9756.00
Compression Exponent 1.350 Expansion Exponent 1.250
Ram Diameter (mm) 389.38
Combustion Delay (s) 0.00200 Ignition Duration (s) 0.00200

The Hammer Data Includes Estimated (NON-MEASURED) Quantities

HAMMER CUSHION			PILE CUSHION		
Cross Sect. Area	(cm2)	1829.00	Cross Sect. Area	(cm2)	1829.00
Elastic-Modulus	(MPa)	3654.0	Elastic-Modulus	(MPa)	3654.0
Thickness	(mm)	50.00	Thickness	(mm)	50.00
Coeff of Restitution		0.800	Coeff of Restitution		0.800
RoundOut	(mm)	3.0	RoundOut	(mm)	3.0
Stiffness	(kN/mm)	13366.3	Stiffness	(kN/mm)	13366.3

Originator: [illegible] Date: 6/26/5

Checker: Ron Date: 6/27/05

4-285

P2 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

PILE PROFILE:
Toe Area (cm2) 1260.250 Pile Type
Unknown
Pile Size (cm) 35.500

L b Top	Area	E-Mod	Spec Wt	Perim	Strength	Wave Sp EA/c
m	cm2	MPa	kN/m3	m	MPa	m/s kN/m/s
0.00	1260.2	40000.	24.00	1.420	28.00	4044. 1246.69
15.30	1260.2	40000.	24.00	1.420	28.00	4044. 1246.69

Wave Travel Time 2L/c (ms) 7.568

Pile and Soil Model Total Capacity Rut (kN) 2225.0

No.	Weight	Stiffn	C-Slk	T-Slk	CoR	Soil-S	Soil-D	Quake	LbTop	Perim	Area
	kN	kN/mm	mm	mm		kN	s/m	mm	m	m	cm2
1	3.085	4942.	3.000	0.000	1.00	2.1	0.164	2.54	1.02	1.4	1260.2
2	3.085	4942.	0.000	0.000	1.00	6.4	0.164	2.54	2.04	1.4	1260.2
3	3.085	4942.	0.000	0.000	1.00	10.6	0.164	2.54	3.06	1.4	1260.2
4	3.085	4942.	0.000	0.000	1.00	14.9	0.164	2.54	4.08	1.4	1260.2
5	3.085	4942.	0.000	0.000	1.00	19.1	0.164	2.54	5.10	1.4	1260.2
6	3.085	4942.	0.000	0.000	1.00	23.4	0.164	2.54	6.12	1.4	1260.2
7	3.085	4942.	0.000	0.000	1.00	27.6	0.164	2.54	7.14	1.4	1260.2
8	3.085	4942.	0.000	0.000	1.00	31.9	0.164	2.54	8.16	1.4	1260.2
9	3.085	4942.	0.000	0.000	1.00	56.1	0.164	2.54	9.18	1.4	1260.3
10	3.085	4942.	0.000	0.000	1.00	72.9	0.164	2.54	10.20	1.4	1260.3
11	3.085	4942.	0.000	0.000	1.00	87.3	0.164	2.54	11.22	1.4	1260.3
12	3.085	4942.	0.000	0.000	1.00	101.7	0.164	2.54	12.24	1.4	1260.3
13	3.085	4942.	0.000	0.000	1.00	116.1	0.164	2.54	13.26	1.4	1260.3
14	3.085	4942.	0.000	0.000	1.00	130.5	0.164	2.54	14.28	1.4	1260.3
15	3.085	4942.	0.000	0.000	1.00	144.8	0.164	2.54	15.30	1.4	1260.2
Toe						1379.5	0.490	5.92			

Originator: TR Date: 6/24/5

Checker: RDM Date: 6/27/05

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```
    46.276 kN total unreduced pile weight (g=  9.81 m/s2)
     0.000 kN total reduced pile weight   (g=  0.00 m/s2)

  PILE, SOIL, ANALYSIS OPTIONS:
  Uniform pile                            Pile Segments: Automatic
  No. of Slacks/Splices                 0 Pile Damping           (%)
3
  Pile Penetration (m)             15.30  Pile Damping Fact.(kN/m/s)
74.801
  % Shaft Resistance                  38
  Soil Damping Option               Smith
  Max No Analysis Iterations            0 Time Increment/Critical
160
  Output Time Interval                  1 Analysis Time-Input    (ms)
0
  Output Level: Normal
  Gravity Mass, Pile, Hammer:      9.810     0.000     0.000
  Output Segment Generation: Automatic
```

Originator: JK Date: 6/26/5

Checker: RDM Date: 6/27/05

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P2 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

Rut	Bl Ct	Stroke (m)		Ten Str	i	t	Comp Str	i	t	ENTHRU	Bl Rt
kN	b/m	down	up	MPa			MPa			kJ	b/min
2225.0	296.5	2.12	2.11	-1.94	6	25	38.61	2	2	29.8	44.8

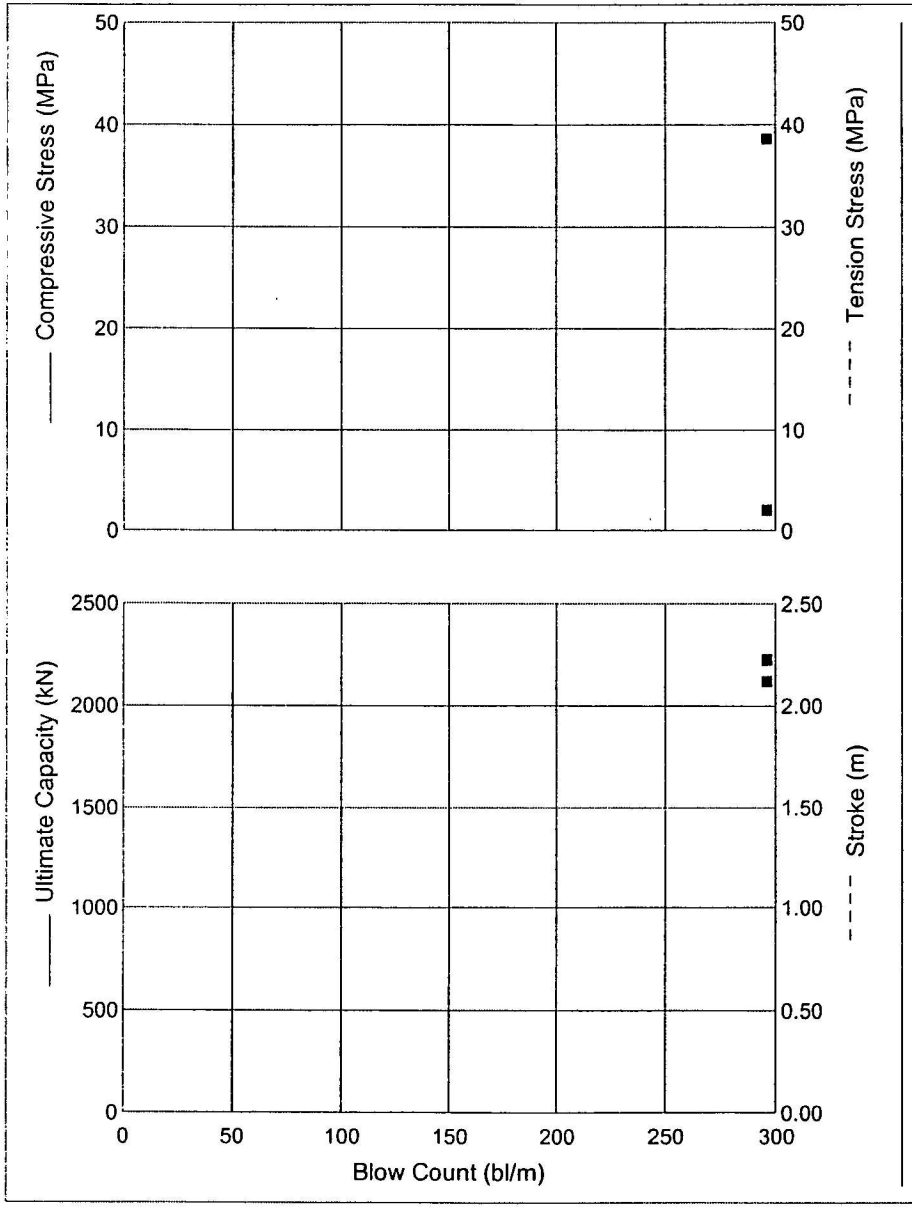
Originator: JCL Date: 6/26/05

Checker: RHM Date: 6/27/05

H-288

Kleinfelder, Inc.
P2 - NM State Hwy 126 : 6/26/2005 : TR

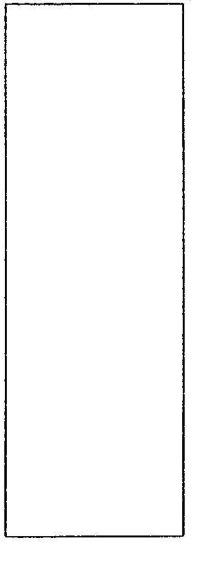
27-Jun-2005
GRLWEAP (TM) Version 2005



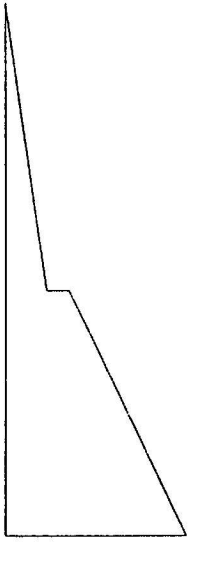
DELMAG D 30

Efficiency	0.720	
Helmet	10.72	kN
Hammer Cushion	13366	kN/mm
Pile Cushion	13366	kN/mm
Skin Quake	2.540	mm
Toe Quake	5.917	mm
Skin Damping	0.164	sec/m
Toe Damping	0.490	sec/m
Pile Length	15.30	m
Pile Penetration	15.30	m
Pile Top Area	1260.25	cm2

Pile Model



Skin Friction Distribution



Res. Shaft = 38 %
(Proportional)

Originator: JC Date: 4/26/5

Checker: RDM Date: 4/27/05

H-289

```
 Input  File: G:\GEOTECH\PROJECTS\35321 CUBA-LACUEVA\REVISIONS\6_26_05
\REV GRLWEAP\P3_14.GWI
 Hammer File: C:\Program Files\PDI\GRLWEAP 2005\HAMMER2003.GW
 Hammer File Version:  2003 (3/22/2005)

                        Input File Contents
     P3 - NM State Hwy 126 : 6/26/2005 : TR
 OUT OSG HAM STR FUL PEL  N SPL N-U P-D %SK ISM  0 PHI RSA ITR H-D MXT
DEx
-100   0  11   0   0   0  0   0   0   3  83   0  0   0   0   0   0   0
0.000
    Pile g  Hammer g  Toe Area Pile Size           Pile Type
     0.000     0.000  1260.250    35.500             Unknown
      W Cp      A Cp      E Cp      T Cp       CoR      ROut       StCp
    10.720  1829.000    3654.0    50.000     0.800     3.000        0.0
      A Cu      E Cu      T Cu       CoR      ROut      StCu
  1829.000    3654.0    50.000     0.800     3.000       0.0
      LPle      APle      EPle      WPle      Peri      Strg       CoR
ROut
    17.600  1260.250 40000.000    24.000     1.420    28.000     1.000
3.000
 Manufac  Hmr Name  HmrType No Seg-s
 DELMAG   D 30            1        5
    Ram Wt     Ram L   Ram Dia   MaxStrk   RtdStrk    Efficy
     29.37   3537.46    389.38      2.90      2.76      0.80
    IB. Wt     IB. L   IB.Dia    IB CoR    IB RO
      7.12    627.38    389.38     0.900     3.040
  CompStrk A Chamber V Chamber   C Delay  C Duratn Exp Coeff VolCStart
Vol CEnd
    382.27   1190.84      3.93     0.002     0.002     1.250      0.00
0.00
     P atm        P1        P2        P3        P4        P5
    101.39   9759.98   8787.43   7904.55   7118.23   6407.79
    Stroke    Effic.  Pressure  R-Weight   T-Delay Exp-Coeff   Eps-Str
Total-AW
    2.7600    0.7200 9756.0000    0.0000    0.0000    0.0000    0.0100
0.0000
        Qs        Qt        Js        Jt        Qx        Jx      Rati
Dept
     2.540     5.917     0.482     0.490     0.000     0.000     0.000
0.000
  Research Soil Model: Atoe, Plug,  Gap, Q-fac
     0.000     0.000     0.000     0.000
  Research Soil Model: RD-skn: m, d, toe: m, d
     0.000     0.000     0.000     0.000
  Res. Distribution
    Dpth    Rskn    Dpth    Dpth
    0.00    0.00   17.60   17.60    0.00    0.00    0.00    0.00    0.00
0.00
    9.60    8.16    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
    9.60   12.59    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   13.00   22.37    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   13.00   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   17.60   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
  Rult
```

Originator: TOR Date: 6/26/05

Checker: RDM Date: 6/27/05

H-290

2225.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0

Originator: [illegible] Date: 6/20/5

Checker: RDM Date: 6/27/05

H-291

GRLWEAP: WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS
Version 2005
SI Units

P3 - NM State Hwy 126 : 6/26/2005 : TR

Hammer Model: D 30 Made by: DELMAG

No.	Weight kN	Stiffn kN/mm	CoR	C-Slk mm	Dampg kN/m/s
1	5.874				
2	5.874	33662.8	1.000	3.0480	
3	5.874	33662.8	1.000	3.0480	
4	5.874	33662.8	1.000	3.0480	
5	5.874	33662.8	1.000	3.0480	
Imp Block	7.120	17841.5	0.900	3.0400	
Helmet	10.720	13366.3	0.800	3.0000	130.7
Cushion		13366.3	0.800	3.0000	
Combined Pile Top		3720.5			

HAMMER OPTIONS:
Hammer File ID No. 11 Hammer Type OE Diesel
Stroke Option FxdP-VarS Stroke Convergence Crit. 0.010
Fuel Pump Setting Maximum

HAMMER DATA:
Ram Weight (kN) 29.37 Ram Length (mm) 3537.46
Maximum (Eq) Stroke (m) 2.90
Rated (Eq) Stroke (m) 2.76 Efficiency 0.720

Maximum Pressure (kPa) 9759.98 Actual Pressure (kPa) 9756.00
Compression Exponent 1.350 Expansion Exponent 1.250
Ram Diameter (mm) 389.38
Combustion Delay (s) 0.00200 Ignition Duration (s) 0.00200

The Hammer Data Includes Estimated (NON-MEASURED) Quantities

HAMMER CUSHION			PILE CUSHION		
Cross Sect. Area	(cm2)	1829.00	Cross Sect. Area	(cm2)	1829.00
Elastic-Modulus	(MPa)	3654.0	Elastic-Modulus	(MPa)	3654.0
Thickness	(mm)	50.00	Thickness	(mm)	50.00
Coeff of Restitution		0.800	Coeff of Restitution		0.800
RoundOut	(mm)	3.0	RoundOut	(mm)	3.0
Stiffness	(kN/mm)	13366.3	Stiffness	(kN/mm)	13366.3

Originator: TR Date: 6/26/05

Checker: RDM Date: 6/27/05

H-292

P3 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

PILE PROFILE:
Toe Area (cm2) 1260.250 Pile Type
Unknown
Pile Size (cm) 35.500

L b Top	Area	E-Mod	Spec Wt	Perim	Strength	Wave Sp EA/c
m	cm2	MPa	kN/m3	m	MPa	m/s kN/m/s
0.00	1260.2	40000.	24.00	1.420	28.00	4044. 1246.69
17.60	1260.2	40000.	24.00	1.420	28.00	4044. 1246.69

Wave Travel Time 2L/c (ms) 8.705

Pile and Soil Model Total Capacity Rut (kN) 2225.0

No.	Weight	Stiffn	C-Slk	T-Slk	CoR	Soil-S	Soil-D	Quake	LbTop	Perim Area
	kN	kN/mm	mm	mm		kN	s/m	mm	m	m cm2
1	2.957	5156.	3.000	0.000	1.00	2.7	0.482	2.54	0.98	1.4 1260.3
2	2.957	5156.	0.000	0.000	1.00	8.1	0.482	2.54	1.96	1.4 1260.3
3	2.957	5156.	0.000	0.000	1.00	13.5	0.482	2.54	2.93	1.4 1260.3
4	2.957	5156.	0.000	0.000	1.00	18.9	0.482	2.54	3.91	1.4 1260.2
5	2.957	5156.	0.000	0.000	1.00	24.3	0.482	2.54	4.89	1.4 1260.2
6	2.957	5156.	0.000	0.000	1.00	29.7	0.482	2.54	5.87	1.4 1260.3
7	2.957	5156.	0.000	0.000	1.00	35.1	0.482	2.54	6.84	1.4 1260.3
8	2.957	5156.	0.000	0.000	1.00	40.5	0.482	2.54	7.82	1.4 1260.3
9	2.957	5156.	0.000	0.000	1.00	45.9	0.482	2.54	8.80	1.4 1260.2
10	2.957	5156.	0.000	0.000	1.00	56.7	0.482	2.54	9.78	1.4 1260.2
11	2.957	5156.	0.000	0.000	1.00	94.2	0.482	2.54	10.76	1.4 1260.2
12	2.957	5156.	0.000	0.000	1.00	112.5	0.482	2.54	11.73	1.4 1260.2
13	2.957	5156.	0.000	0.000	1.00	130.8	0.482	2.54	12.71	1.4 1260.2
14	2.957	5156.	0.000	0.000	1.00	220.6	0.482	2.54	13.69	1.4 1260.2
15	2.957	5156.	0.000	0.000	1.00	253.3	0.482	2.54	14.67	1.4 1260.2
18	2.957	5156.	0.000	0.000	1.00	253.3	0.482	2.54	17.60	1.4 1260.2

Originator: JR Date: 6/27/05

Checker: RBM Date: 6/27/05

H-293

```
Toe                                    378.3   0.490  5.92

    53.233 kN total unreduced pile weight (g=  9.81 m/s2)
     0.000 kN total reduced pile weight   (g=  0.00 m/s2)

  PILE, SOIL, ANALYSIS OPTIONS:
  Uniform pile                            Pile Segments: Automatic
  No. of Slacks/Splices                0  Pile Damping           (%)
3
  Pile Penetration (m)            17.60  Pile Damping Fact.(kN/m/s)
74.801
  % Shaft Resistance                 83
  Soil Damping Option             Smith
  Max No Analysis Iterations          0  Time Increment/Critical
160
  Output Time Interval                1  Analysis Time-Input    (ms)
0
  Output Level: Normal
  Gravity Mass, Pile, Hammer:     9.810     0.000     0.000
  Output Segment Generation: Automatic
```

Originator: _____ Date: 4/20/5

Checker: _____ Date: 4/27/05

H-294

P3 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

Rut	Bl Ct	Stroke (m)		Ten Str	i	t	Comp Str	i	t	ENTHRU	Bl Rt
kN	b/m	down	up	MPa			MPa			kJ	b/min
2225.0	282.3	2.13	2.12	-1.30	9	25	38.79	2	2	28.4	44.6

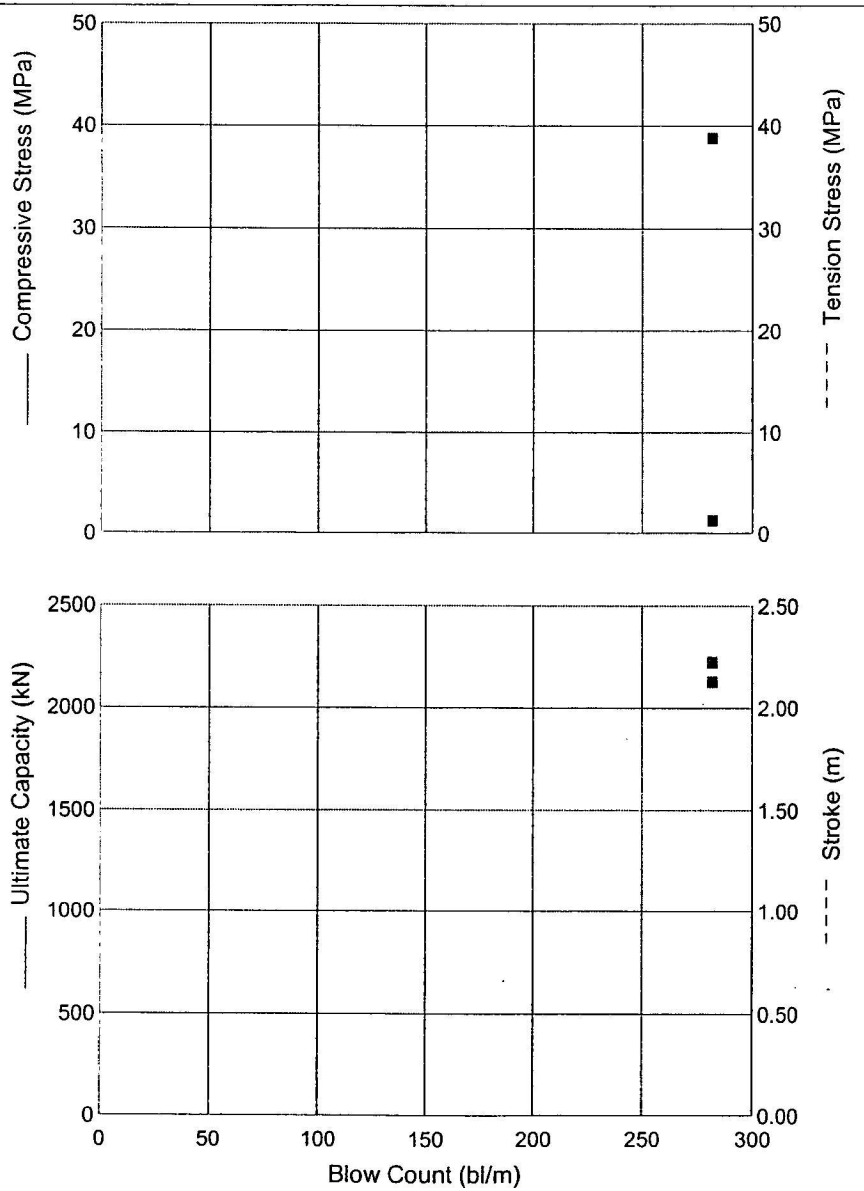
Originator: TR Date: 6/26/5

Checker: RDM Date: 6/27/05

H-295

Kleinfelder, Inc.
P3 - NM State Hwy 126 : 6/26/2005 : TR

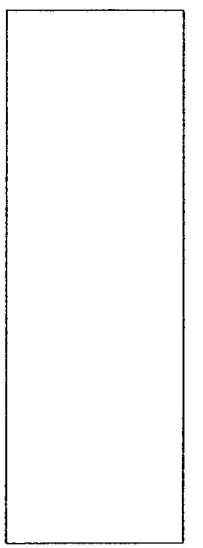
27-Jun-2005
GRLWEAP (TM) Version 2005



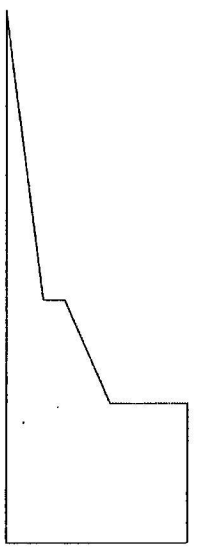
DELMAG D 30

Efficiency	0.720	
Helmet	10.72	kN
Hammer Cushion	13366	kN/mm
Pile Cushion	13366	kN/mm
Skin Quake	2.540	mm
Toe Quake	5.917	mm
Skin Damping	0.482	sec/m
Toe Damping	0.490	sec/m
Pile Length	17.60	m
Pile Penetration	17.60	m
Pile Top Area	1260.25	cm2

Pile Model



Skin Friction Distribution



Res. Shaft = 83 %
(Proportional)

Originator: NC Date: 4/20/05

Checker: RM Date: 4/22/05

H-296

```
 Input  File: G:\GEOTECH\PROJECTS\35321 CUBA-LACUEVA\REVISIONS\6_26_05
\REV GRLWEAP\P4_14.GWI
 Hammer File: C:\Program Files\PDI\GRLWEAP 2005\HAMMER2003.GW
 Hammer File Version:  2003 (3/22/2005)

                         Input File Contents
     P4 - NM State Hwy 126 : 6/26/2005 : TR
 OUT OSG HAM STR FUL PEL  N SPL N-U P-D %SK ISM  0 PHI RSA ITR H-D MXT
DEx
-100   0  11   0   0   0  0   0   0   3  85   0  0   0   0   0   0   0
0.000
    Pile g  Hammer g  Toe Area Pile Size           Pile Type
     0.000     0.000  1260.250    35.500             Unknown
      W Cp      A Cp      E Cp      T Cp       CoR      ROut      StCp
    10.720  1829.000    3654.0    50.000     0.800     3.000       0.0
      A Cu      E Cu      T Cu       CoR      ROut      StCu
  1829.000    3654.0    50.000     0.800     3.000       0.0
      LPle      APle      EPle      WPle      Peri      Strg       CoR
ROut
    19.000  1260.250 40000.000    24.000     1.420    28.000     1.000
3.000
 Manufac  Hmr Name  HmrType No Seg-s
 DELMAG   D 30            1        5
    Ram Wt     Ram L   Ram Dia   MaxStrk   RtdStrk    Efficy
     29.37   3537.46    389.38      2.90      2.76      0.80
    IB. Wt     IB. L   IB.Dia    IB CoR     IB RO
      7.12    627.38    389.38     0.900     3.040
  CompStrk A Chamber V Chamber   C Delay  C Duratn Exp Coeff VolCStart
Vol CEnd
    382.27   1190.84      3.93     0.002     0.002     1.250      0.00
0.00
     P atm        P1        P2        P3        P4        P5
    101.39   9759.98   8787.43   7904.55   7118.23   6407.79
    Stroke    Effic.  Pressure  R-Weight   T-Delay Exp-Coeff   Eps-Str
Total-AW
    2.7600    0.7200 9756.0000    0.0000    0.0000    0.0000    0.0100
0.0000
        Qs        Qt        Js        Jt        Qx        Jx      Rati
Dept
     2.540     5.917     0.522     0.490     0.000     0.000     0.000
0.000
  Research Soil Model: Atoe, Plug,  Gap, Q-fac
     0.000     0.000     0.000     0.000
  Research Soil Model: RD-skn: m, d, toe: m, d
     0.000     0.000     0.000     0.000
  Res. Distribution
    Dpth    Rskn    Dpth    Dpth
    0.00    0.00   19.00   19.00    0.00    0.00    0.00    0.00    0.00
0.00
   10.80    9.19    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   10.80   14.16    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   13.00   20.49    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   13.00   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   19.00   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
  Rult
```

Originator: _____ Date: 6/26/05

Checker: _____ Date: 6/27/05

H-297

2225.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0

Originator: JR Date: 9/26/5

Checker: Rom Date: 4/27/05

H-298

GRLWEAP: WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS
Version 2005
SI Units

P4 - NM State Hwy 126 : 6/26/2005 : TR

Hammer Model: D 30 Made by: DELMAG

No.	Weight kN	Stiffn kN/mm	CoR	C-Slk mm	Dampg kN/m/s
1	5.874				
2	5.874	33662.8	1.000	3.0480	
3	5.874	33662.8	1.000	3.0480	
4	5.874	33662.8	1.000	3.0480	
5	5.874	33662.8	1.000	3.0480	
Imp Block	7.120	17841.5	0.900	3.0400	
Helmet	10.720	13366.3	0.800	3.0000	130.7
Cushion		13366.3	0.800	3.0000	
Combined Pile Top		3660.5			

HAMMER OPTIONS:
Hammer File ID No. 11 Hammer Type OE Diesel
Stroke Option FxdP-VarS Stroke Convergence Crit. 0.010
Fuel Pump Setting Maximum

HAMMER DATA:
Ram Weight (kN) 29.37 Ram Length (mm) 3537.46
Maximum (Eq) Stroke (m) 2.90
Rated (Eq) Stroke (m) 2.76 Efficiency 0.720

Maximum Pressure (kPa) 9759.98 Actual Pressure (kPa) 9756.00
Compression Exponent 1.350 Expansion Exponent 1.250
Ram Diameter (mm) 389.38
Combustion Delay (s) 0.00200 Ignition Duration (s) 0.00200

The Hammer Data Includes Estimated (NON-MEASURED) Quantities

HAMMER CUSHION			PILE CUSHION		
Cross Sect. Area	(cm2)	1829.00	Cross Sect. Area	(cm2)	1829.00
Elastic-Modulus	(MPa)	3654.0	Elastic-Modulus	(MPa)	3654.0
Thickness	(mm)	50.00	Thickness	(mm)	50.00
Coeff of Restitution		0.800	Coeff of Restitution		0.800
RoundOut	(mm)	3.0	RoundOut	(mm)	3.0
Stiffness	(kN/mm)	13366.3	Stiffness	(kN/mm)	13366.3

Originator: TR Date: 6/24/05

Checker: RDM Date: 6/27/05

H-299

P4 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

PILE PROFILE:
Toe Area (cm2) 1260.250 Pile Type
Unknown
Pile Size (cm) 35.500

L b Top	Area	E-Mod	Spec Wt	Perim	Strength	Wave Sp	EA/c
m	cm2	MPa	kN/m3	m	MPa	m/s	kN/m/s
0.00	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69
19.00	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69

Wave Travel Time 2L/c (ms) 9.398

Pile and Soil Model Total Capacity Rut (kN) 2225.0

No.	Weight	Stiffn	C-Slk	T-Slk	CoR	Soil-S	Soil-D	Quake	LbTop	Perim	Area
	kN	kN/mm	mm	mm		kN	s/m	mm	m	m	cm2
1	3.025	5041.	3.000	0.000	1.00	2.5	0.522	2.54	1.00	1.4	1260.2
2	3.025	5041.	0.000	0.000	1.00	7.5	0.522	2.54	2.00	1.4	1260.2
3	3.025	5041.	0.000	0.000	1.00	12.5	0.522	2.54	3.00	1.4	1260.2
4	3.025	5041.	0.000	0.000	1.00	17.5	0.522	2.54	4.00	1.4	1260.2
5	3.025	5041.	0.000	0.000	1.00	22.5	0.522	2.54	5.00	1.4	1260.2
6	3.025	5041.	0.000	0.000	1.00	27.5	0.522	2.54	6.00	1.4	1260.2
7	3.025	5041.	0.000	0.000	1.00	32.5	0.522	2.54	7.00	1.4	1260.2
8	3.025	5041.	0.000	0.000	1.00	37.5	0.522	2.54	8.00	1.4	1260.2
9	3.025	5041.	0.000	0.000	1.00	42.5	0.522	2.54	9.00	1.4	1260.2
10	3.025	5041.	0.000	0.000	1.00	47.5	0.522	2.54	10.00	1.4	1260.2
11	3.025	5041.	0.000	0.000	1.00	58.6	0.522	2.54	11.00	1.4	1260.2
12	3.025	5041.	0.000	0.000	1.00	95.1	0.522	2.54	12.00	1.4	1260.2
13	3.025	5041.	0.000	0.000	1.00	112.0	0.522	2.54	13.00	1.4	1260.2
14	3.025	5041.	0.000	0.000	1.00	229.3	0.522	2.54	14.00	1.4	1260.2
19	3.025	5041.	0.000	0.000	1.00	229.3	0.522	2.54	19.00	1.4	1260.2
Toe						333.8	0.490	5.92			

Originator: [illegible] Date: 4/24/5

Checker: [illegible] Date: 6/27/05

H-300

```
     57.467 kN total unreduced pile weight (g=  9.81 m/s2)
      0.000 kN total reduced pile weight   (g=  0.00 m/s2)

  PILE, SOIL, ANALYSIS OPTIONS:
  Uniform pile                              Pile Segments: Automatic
  No. of Slacks/Splices                 0   Pile Damping           (%)
3
  Pile Penetration (m)             19.00   Pile Damping Fact.(kN/m/s)
74.801
  % Shaft Resistance                  85
  Soil Damping Option               Smith
  Max No Analysis Iterations            0   Time Increment/Critical
160
  Output Time Interval                  1   Analysis Time-Input    (ms)
0
  Output Level: Normal
  Gravity Mass, Pile, Hammer:       9.810     0.000     0.000
  Output Segment Generation: Automatic
```

Originator: JR Date: 6/24/5

Checker: RDM Date: 6/29/05

H-301

P4 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

Rut	Bl Ct	Stroke (m)		Ten Str	i	t	Comp Str	i	t	ENTHRU	Bl Rt
kN	b/m	down	up	MPa			MPa			kJ	b/min
2225.0	291.6	2.14	2.12	-1.96	7	48	38.91	2	2	28.3	44.6

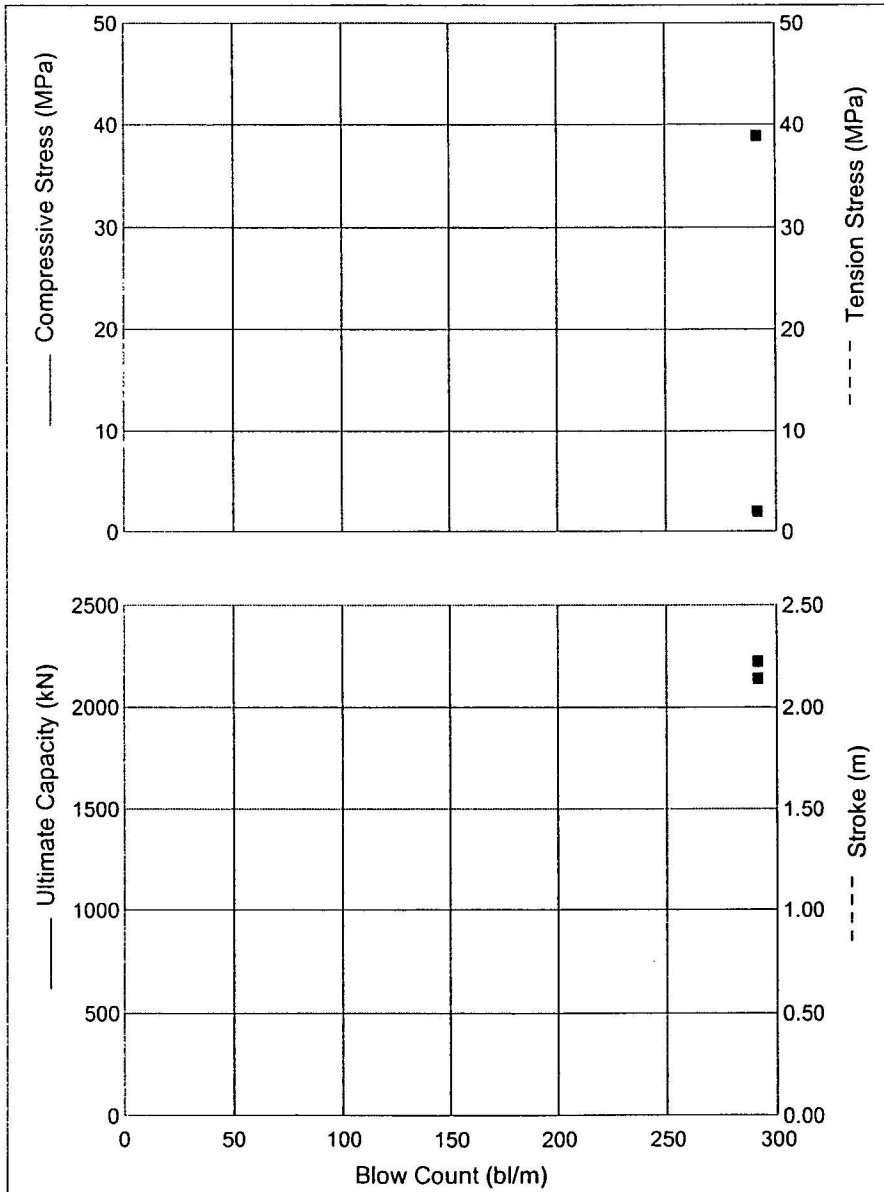
Originator: _____ Date: 6/26/05

Checker: Rom Date: 6/27/05

H-302

Kleinfelder, Inc.
P4 - NM State Hwy 126 : 6/26/2005 : TR

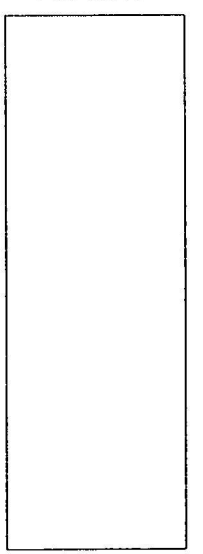
27-Jun-2005
GRLWEAP (TM) Version 2005



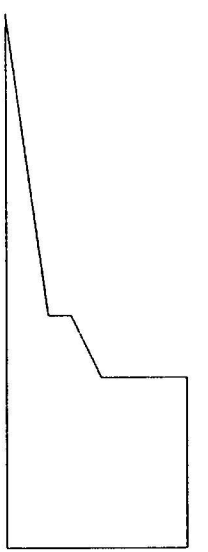
DELMAG D 30

Efficiency	0.720	
Helmet	10.72	kN
Hammer Cushion	13366	kN/mm
Pile Cushion	13366	kN/mm
Skin Quake	2.540	mm
Toe Quake	5.917	mm
Skin Damping	0.522	sec/m
Toe Damping	0.490	sec/m
Pile Length	19.00	m
Pile Penetration	19.00	m
Pile Top Area	1260.25	cm2

Pile Model



Skin Friction Distribution



Res. Shaft = 85 %
(Proportional)

Originator: K Date: 6/27/05

Checker: [illegible] Date: 6/27/05

H-303

```
 Input  File: G:\GEOTECH\PROJECTS\35321 CUBA-LACUEVA\REVISIONS\6_26_05
\REV GRLWEAP\P5_14.GWI
 Hammer File: C:\Program Files\PDI\GRLWEAP 2005\HAMMER2003.GW
 Hammer File Version:  2003 (3/22/2005)

                        Input File Contents
     P5 - NM State Hwy 126 : 6/26/2005 : TR
 OUT OSG HAM STR FUL PEL  N SPL N-U P-D %SK ISM  0 PHI RSA ITR H-D MXT
DEx
-100   0  11   0   0   0  0   0   0   3  85   0  0   0   0   0   0   0
0.000
    Pile g  Hammer g  Toe Area Pile Size           Pile Type
     0.000     0.000  1260.250    35.500             Unknown
      W Cp      A Cp      E Cp      T Cp       CoR      ROut      StCp
    10.720  1829.000    3654.0    50.000     0.800     3.000       0.0
      A Cu      E Cu      T Cu       CoR      ROut      StCu
  1829.000    3654.0    50.000     0.800     3.000       0.0
      LPle      APle      EPle      WPle      Peri      Strg       CoR
ROut
    20.000  1260.250 40000.000    24.000     1.420    28.000     1.000
3.000
 Manufac  Hmr Name  HmrType No Seg-s
 DELMAG   D 30            1        5
    Ram Wt     Ram L   Ram Dia   MaxStrk   RtdStrk    Efficy
     29.37   3537.46    389.38      2.90      2.76      0.80
    IB. Wt     IB. L   IB.Dia    IB CoR    IB RO
      7.12    627.38    389.38     0.900     3.040
  CompStrk A Chamber V Chamber   C Delay  C Duratn Exp Coeff VolCStart
Vol CEnd
    382.27   1190.84      3.93     0.002     0.002     1.250      0.00
0.00
     P atm        P1        P2        P3        P4        P5
    101.39   9759.98   8787.43   7904.55   7118.23   6407.79
    Stroke    Effic.  Pressure  R-Weight  T-Delay Exp-Coeff   Eps-Str
Total-AW
    2.7600    0.7200 9756.0000    0.0000    0.0000    0.0000    0.0100
0.0000
        Qs        Qt        Js        Jt        Qx        Jx      Rati
Dept
     2.540     5.917     0.468     0.490     0.000     0.000     0.000
0.000
  Research Soil Model: Atoe, Plug,  Gap, Q-fac
     0.000     0.000     0.000     0.000
  Research Soil Model: RD-skn: m, d, toe: m, d
     0.000     0.000     0.000     0.000
  Res. Distribution
    Dpth    Rskn    Dpth    Dpth
    0.00    0.00   20.00   20.00    0.00    0.00    0.00    0.00    0.00
0.00
   10.70    9.10    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   10.70   14.03    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   14.70   25.54    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   14.70   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   20.00   39.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
  Rult
```

Originator: JK Date: 6/24/5

Checker: PDM Date: 6/22/05

H-304

2225.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0

Originator: JR Date: 6/24/5

Checker: RDM Date: 6/27/05

H-305

GRLWEAP: WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS
Version 2005
SI Units

P5 - NM State Hwy 126 : 6/26/2005 : TR

Hammer Model: D 30 Made by: DELMAG

No.	Weight kN	Stiffn kN/mm	CoR	C-Slk mm	Dampg kN/m/s
1	5.874				
2	5.874	33662.8	1.000	3.0480	
3	5.874	33662.8	1.000	3.0480	
4	5.874	33662.8	1.000	3.0480	
5	5.874	33662.8	1.000	3.0480	
Imp Block	7.120	17841.5	0.900	3.0400	
Helmet	10.720	13366.3	0.800	3.0000	130.7
Cushion		13366.3	0.800	3.0000	
Combined Pile Top		3660.5			

HAMMER OPTIONS:

Hammer File ID No.	11	Hammer Type	OE Diesel
Stroke Option	FxdP-VarS	Stroke Convergence Crit.	0.010
Fuel Pump Setting	Maximum		

HAMMER DATA:

Ram Weight	(kN)	29.37	Ram Length	(mm)	3537.46
Maximum (Eq) Stroke	(m)	2.90			
Rated (Eq) Stroke	(m)	2.76	Efficiency		0.720
Maximum Pressure	(kPa)	9759.98	Actual Pressure	(kPa)	9756.00
Compression Exponent		1.350	Expansion Exponent		1.250
Ram Diameter	(mm)	389.38			
Combustion Delay	(s)	0.00200	Ignition Duration	(s)	0.00200

The Hammer Data Includes Estimated (NON-MEASURED) Quantities

HAMMER CUSHION			PILE CUSHION		
Cross Sect. Area	(cm2)	1829.00	Cross Sect. Area	(cm2)	1829.00
Elastic-Modulus	(MPa)	3654.0	Elastic-Modulus	(MPa)	3654.0
Thickness	(mm)	50.00	Thickness	(mm)	50.00
Coeff of Restitution		0.800	Coeff of Restitution		0.800
RoundOut	(mm)	3.0	RoundOut	(mm)	3.0
Stiffness	(kN/mm)	13366.3	Stiffness	(kN/mm)	13366.3

Originator: JK Date: 6/24/5

Checker: RDM Date: 6/27/05

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P5 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

PILE PROFILE:
Toe Area (cm2) 1260.250 Pile Type
Unknown
Pile Size (cm) 35.500

L b Top	Area	E-Mod	Spec Wt	Perim	Strength	Wave Sp	EA/c
m	cm2	MPa	kN/m3	m	MPa	m/s	kN/m/s
0.00	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69
20.00	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69

Wave Travel Time 2L/c (ms) 9.892

Pile and Soil Model Total Capacity Rut (kN) 2225.0

No.	Weight	Stiffn	C-Slk	T-Slk	CoR	Soil-S	Soil-D	Quake	LbTop	Perim	Area
	kN	kN/mm	mm	mm		kN	s/m	mm	m	m	cm2
1	3.025	5041.	3.000	0.000	1.00	2.4	0.468	2.54	1.00	1.4	1260.2
2	3.025	5041.	0.000	0.000	1.00	7.2	0.468	2.54	2.00	1.4	1260.2
3	3.025	5041.	0.000	0.000	1.00	12.0	0.468	2.54	3.00	1.4	1260.2
4	3.025	5041.	0.000	0.000	1.00	16.8	0.468	2.54	4.00	1.4	1260.2
5	3.025	5041.	0.000	0.000	1.00	21.6	0.468	2.54	5.00	1.4	1260.2
6	3.025	5041.	0.000	0.000	1.00	26.4	0.468	2.54	6.00	1.4	1260.2
7	3.025	5041.	0.000	0.000	1.00	31.3	0.468	2.54	7.00	1.4	1260.2
8	3.025	5041.	0.000	0.000	1.00	36.1	0.468	2.54	8.00	1.4	1260.2
9	3.025	5041.	0.000	0.000	1.00	40.9	0.468	2.54	9.00	1.4	1260.2
10	3.025	5041.	0.000	0.000	1.00	45.7	0.468	2.54	10.00	1.4	1260.2
11	3.025	5041.	0.000	0.000	1.00	59.4	0.468	2.54	11.00	1.4	1260.2
12	3.025	5041.	0.000	0.000	1.00	92.3	0.468	2.54	12.00	1.4	1260.2
13	3.025	5041.	0.000	0.000	1.00	108.6	0.468	2.54	13.00	1.4	1260.2
14	3.025	5041.	0.000	0.000	1.00	124.9	0.468	2.54	14.00	1.4	1260.2
15	3.025	5041.	0.000	0.000	1.00	163.2	0.468	2.54	15.00	1.4	1260.2
16	3.025	5041.	0.000	0.000	1.00	220.5	0.468	2.54	16.00	1.4	1260.2

Originator: _____ Date: 4/26/5

Checker: RDM Date: 6/27/0

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```
  20  3.025   5041. 0.000 0.000 1.00   220.5   0.468  2.54  20.00    1.4
1260.2
 Toe                                   333.8   0.490  5.92

     60.492 kN total unreduced pile weight (g=  9.81 m/s2)
      0.000 kN total reduced pile weight   (g=  0.00 m/s2)

  PILE, SOIL, ANALYSIS OPTIONS:
  Uniform pile                            Pile Segments: Automatic
  No. of Slacks/Splices                 0 Pile Damping           (%)
3
  Pile Penetration (m)             20.00  Pile Damping Fact.(kN/m/s)
74.801
  % Shaft Resistance                   85
  Soil Damping Option              Smith
  Max No Analysis Iterations            0 Time Increment/Critical
160
  Output Time Interval                  1 Analysis Time-Input    (ms)
0
  Output Level: Normal
  Gravity Mass, Pile, Hammer:      9.810     0.000     0.000
  Output Segment Generation: Automatic
```

Originator: JR Date: 6/24/5

Checker: RDW Date: 6/27/

H-308

P5 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

Rut	Bl Ct	Stroke (m)		Ten Str	i	t	Comp Str	i	t	ENTHRU	Bl Rt
kN	b/m	down	up	MPa			MPa			kJ	b/min
2225.0	274.7	2.12	2.11	-2.42	6	23	38.65	2	2	28.2	44.8

Originator: TR Date: 4/20

Checker: RDM Date: 4/21

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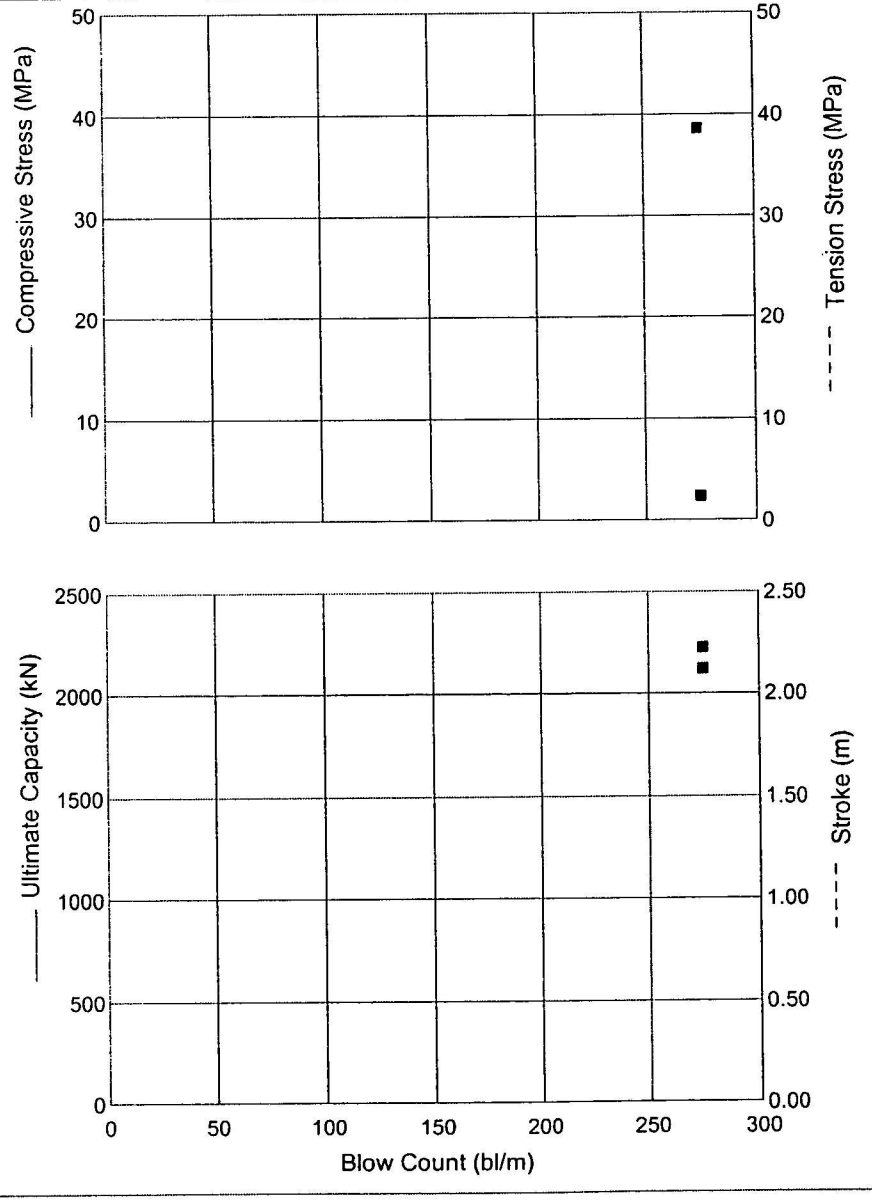
Kleinfelder, Inc.
P5 - NM State Hwy 126 : 6/26/2005 : TR

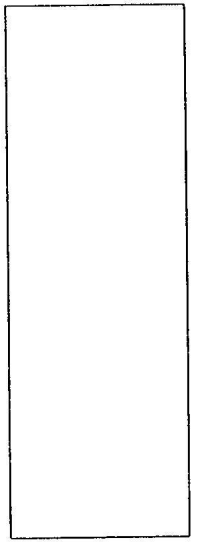
27-Jun-2005
GRLWEAP (TM) Version 2005



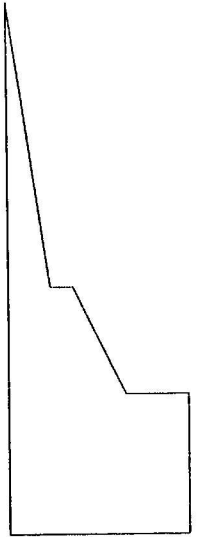
DELMAG D 30

Efficiency	0.720
Helmet	10.72 kN
Hammer Cushion	13366 kN/mm
Pile Cushion	13366 kN/mm
Skin Quake	2.540 mm
Toe Quake	5.917 mm
Skin Damping	0.468 sec/m
Toe Damping	0.490 sec/m
Pile Length	20.00 m
Pile Penetration	20.00 m
Pile Top Area	1260.25 cm2

Pile Model



Skin Friction Distribution



Res. Shaft = 85 %
(Proportional)

Originator: [illegible] Date: 6/26
Checker: [illegible] Date: 6/27
H-310

```
 Input  File: G:\GEOTECH\PROJECTS\35321 CUBA-LACUEVA\REVISIONS\6_26_05
\REV GRLWEAP\AB1_14.GWI
 Hammer File: C:\Program Files\PDI\GRLWEAP 2005\HAMMER2003.GW
 Hammer File Version:  2003 (3/22/2005)

                        Input File Contents
     AB1 - NM State Hwy 126 : 6/26/2005 : TR
 OUT OSG HAM STR FUL PEL  N SPL N-U P-D %SK ISM  0 PHI RSA ITR H-D MXT
DEx
-100   0  11   0   0   0  0   0   0   3  33   0  0   0   0   0   0   0
0.000
    Pile g  Hammer g  Toe Area Pile Size            Pile Type
     0.000     0.000  1260.250    35.500              Unknown
      W Cp      A Cp      E Cp      T Cp       CoR      ROut       StCp
    10.720  1829.000    3654.0    50.000     0.800     3.000        0.0
      A Cu      E Cu      T Cu       CoR      ROut      StCu
  1829.000    3654.0    50.000     0.800     3.000       0.0
      LPle      APle      EPle      WPle      Peri      Strg       CoR
ROut
    10.500  1260.250 40000.000    24.000     1.420    28.000     1.000
3.000
 Manufac  Hmr Name  HmrType No Seg-s
 DELMAG   D 30            1        5
    Ram Wt     Ram L   Ram Dia   MaxStrk   RtdStrk    Efficy
     29.37   3537.46    389.38      2.90      2.76      0.80
    IB. Wt     IB. L   IB.Dia    IB CoR    IB RO
      7.12    627.38    389.38     0.900     3.040
  CompStrk A Chamber V Chamber   C Delay  C Duratn Exp Coeff VolCStart
Vol CEnd
    382.27   1190.84      3.93     0.002     0.002     1.250      0.00
0.00
     P atm        P1        P2        P3        P4        P5
    101.39   9759.98   8787.43   7904.55   7118.23   6407.79
    Stroke    Effic.  Pressure  R-Weight   T-Delay Exp-Coeff   Eps-Str
Total-AW
    2.7600    0.7200 9756.0000    0.0000    0.0000    0.0000    0.0100
0.0000
        Qs        Qt        Js        Jt        Qx        Jx      Rati
Dept
     2.540     5.917     0.164     0.490     0.000     0.000     0.000
0.000
  Research Soil Model: Atoe, Plug,  Gap, Q-fac
     0.000     0.000     0.000     0.000
  Research Soil Model: RD-skn: m, d, toe: m, d
     0.000     0.000     0.000     0.000
  Res. Distribution
    Dpth    Rskn    Dpth    Dpth
    0.00    0.00   10.50   10.50    0.00    0.00    0.00    0.00    0.00
0.00
    2.50    2.13    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
    2.50    3.28    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
   10.50   26.29    0.00    0.00    0.00    0.00    0.00    0.00    0.00
0.00
  Rult
  2225.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
0.0
```

Originator: JR Date: 6/24

Checker: RDM Date: 6/27

H-311

GRLWEAP: WAVE EQUATION ANALYSIS OF PILE FOUNDATIONS
Version 2005
SI Units

AB1 - NM State Hwy 126 : 6/26/2005 : TR

Hammer Model: D 30 Made by: DELMAG

No.	Weight kN	Stiffn kN/mm	CoR	C-Slk mm	Dampg kN/m/s
1	5.874				
2	5.874	33662.8	1.000	3.0480	
3	5.874	33662.8	1.000	3.0480	
4	5.874	33662.8	1.000	3.0480	
5	5.874	33662.8	1.000	3.0480	
Imp Block	7.120	17841.5	0.900	3.0400	
Helmet	10.720	13366.3	0.800	3.0000	130.7
Cushion		13366.3	0.800	3.0000	
Combined Pile Top		3785.4			

HAMMER OPTIONS:

Hammer File ID No.	11	Hammer Type	OE Diesel
Stroke Option	FxdP-VarS	Stroke Convergence Crit.	0.010
Fuel Pump Setting	Maximum		

HAMMER DATA:

Ram Weight	(kN)	29.37	Ram Length	(mm) 3537.46
Maximum (Eq) Stroke	(m)	2.90		
Rated (Eq) Stroke	(m)	2.76	Efficiency	0.720
Maximum Pressure	(kPa)	9759.98	Actual Pressure	(kPa) 9756.00
Compression Exponent		1.350	Expansion Exponent	1.250
Ram Diameter	(mm)	389.38		
Combustion Delay	(s)	0.00200	Ignition Duration	(s) 0.00200

The Hammer Data Includes Estimated (NON-MEASURED) Quantities

HAMMER CUSHION			PILE CUSHION	
Cross Sect. Area	(cm2)	1829.00	Cross Sect. Area	(cm2) 1829.00
Elastic-Modulus	(MPa)	3654.0	Elastic-Modulus	(MPa) 3654.0
Thickness	(mm)	50.00	Thickness	(mm) 50.00
Coeff of Restitution		0.800	Coeff of Restitution	0.800
RoundOut	(mm)	3.0	RoundOut	(mm) 3.0
Stiffness	(kN/mm)	13366.3	Stiffness	(kN/mm) 13366.3

Originator: JC Date: 6/24

Checker: RDM Date: 6/27

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AB1 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

PILE PROFILE:
Toe Area (cm2) 1260.250 Pile Type
Unknown
Pile Size (cm) 35.500

L b Top	Area	E-Mod	Spec Wt	Perim	Strength	Wave Sp	EA/c
m	cm2	MPa	kN/m3	m	MPa	m/s	kN/m/s
0.00	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69
10.50	1260.2	40000.	24.00	1.420	28.00	4044.	1246.69

Wave Travel Time 2L/c (ms) 5.194

Pile and Soil Model Total Capacity Rut (kN) 2225.0

No.	Weight	Stiffn	C-Slk	T-Slk	CoR	Soil-S	Soil-D	Quake	LbTop	Perim	Area
	kN	kN/mm	mm	mm		kN	s/m	mm	m	m	cm2
1	2.887	5281.	3.000	0.000	1.00	2.4	0.164	2.54	0.95	1.4	1260.2
2	2.887	5281.	0.000	0.000	1.00	7.1	0.164	2.54	1.91	1.4	1260.2
3	2.887	5281.	0.000	0.000	1.00	15.1	0.164	2.54	2.86	1.4	1260.2
4	2.887	5281.	0.000	0.000	1.00	33.0	0.164	2.54	3.82	1.4	1260.2
5	2.887	5281.	0.000	0.000	1.00	48.9	0.164	2.54	4.77	1.4	1260.2
6	2.887	5281.	0.000	0.000	1.00	64.8	0.164	2.54	5.73	1.4	1260.2
7	2.887	5281.	0.000	0.000	1.00	80.8	0.164	2.54	6.68	1.4	1260.2
8	2.887	5281.	0.000	0.000	1.00	96.7	0.164	2.54	7.64	1.4	1260.2
9	2.887	5281.	0.000	0.000	1.00	112.6	0.164	2.54	8.59	1.4	1260.2
10	2.887	5281.	0.000	0.000	1.00	128.5	0.164	2.54	9.55	1.4	1260.2
11	2.887	5281.	0.000	0.000	1.00	144.4	0.164	2.54	10.50	1.4	1260.2
Toe						1490.8	0.490	5.92			

31.758 kN total unreduced pile weight (g= 9.81 m/s2)
0.000 kN total reduced pile weight (g= 0.00 m/s2)

PILE, SOIL, ANALYSIS OPTIONS:
Uniform pile Pile Segments: Automatic
No. of Slacks/Splices 0 Pile Damping (%) 3
Pile Penetration (m) 10.50 Pile Damping Fact.(kN/m/s)

Originator: ZR Date: 6/26/5
Checker: PDW Date: 6/27/05

H-313

```
74.801
  % Shaft Resistance                    33
  Soil Damping Option                Smith
  Max No Analysis Iterations             0  Time Increment/Critical
160
  Output Time Interval                   1  Analysis Time-Input    (ms)
0
  Output Level: Normal
  Gravity Mass, Pile, Hammer:        9.810      0.000      0.000
  Output Segment Generation: Automatic
```

Originator: _____ Date: 6/24/5-

Checker: _____ Date: 6/22/05

H-314

AB1 - NM State Hwy 126 : 6/26/2005 : TR
2005/06/27
Kleinfelder, Inc. GRLWEAP(TM)
Version 2005

Rut Bl Rt kN	Bl Ct b/m	Stroke (m) down	up	Ten Str MPa	i	t	Comp Str MPa	i	t	ENTHRU kJ	b/min
2225.0	308.4	2.14	2.14	-1.26	5	21	38.86	3	2	29.3	44.5

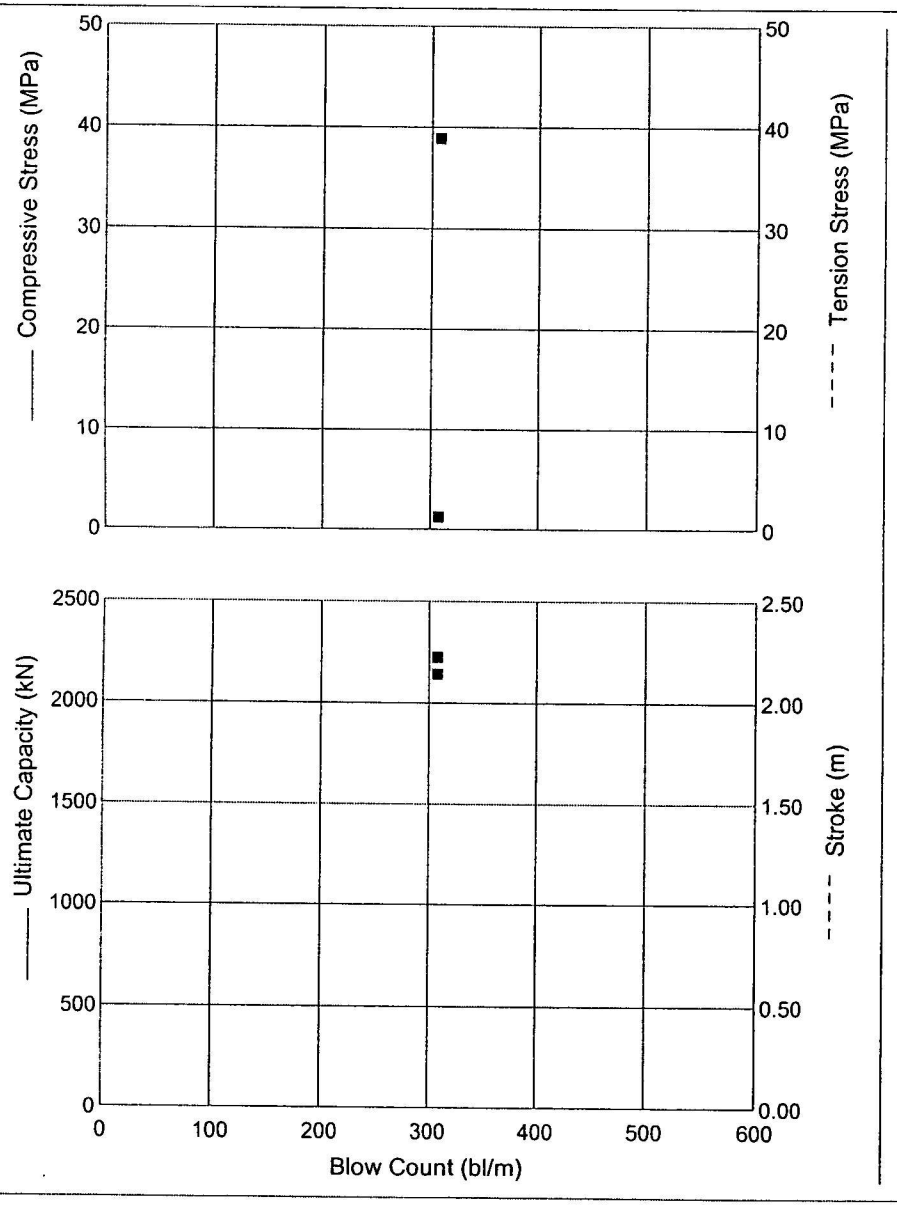
Originator: TR Date: 6/26/5

Checker: RDM Date: 6/27/05

H-315

Kleinfelder, Inc.
AB1 - NM State Hwy 126 : 6/26/2005 : TR

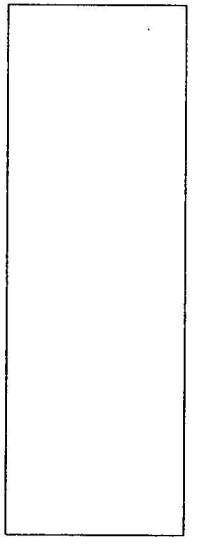
27-Jun-2005
GRLWEAP (TM) Version 2005



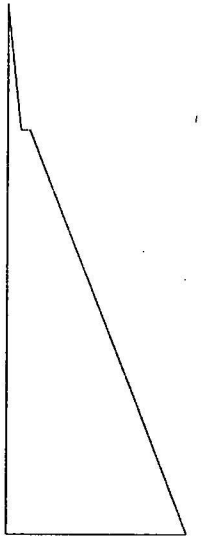
DELMAG D 30

Efficiency	0.720	
Helmet	10.72	kN
Hammer Cushion	13366	kN/mm
Pile Cushion	13366	kN/mm
Skin Quake	2.540	mm
Toe Quake	5.917	mm
Skin Damping	0.164	sec/m
Toe Damping	0.490	sec/m
Pile Length	10.50	m
Pile Penetration	10.50	m
Pile Top Area	1260.25	cm2

Pile Model



Skin Friction Distribution



Res. Shaft = 33 %
(Proportional)

Originator: JK Date: 6/28/05

Checker: DM Date: 6/29/05

H-316