

Silicon Valley Rapid Transit Project Tunnel Segment Geotechnical Data Report Volume II of VI

(P0503-D300-RPT-GEO-002, Rev.0)



Silicon Valley Rapid Transit Project

Tunnel Segment Geotechnical Data Report Volume II of VI

P0503-D300-RPT-GEO-002
Rev. 0



Prepared by
HMM/Bechtel SVRT,
a Joint Venture



B0508-C006

VOLUME II

APPENDIX 1: LOGS OF BORINGS

SPT ENERGY CALIBRATION

GAS MONITORING MEASUREMENTS

APPENDIX 2: FIELD VANE SHEAR TESTS

APPENDIX 1

**LOGS OF BORINGS, SPT ENERGY CALIBRATION AND GAS
MONITORING MEASUREMENTS**

Silicon Valley Rapid Transit Project –Tunnel Segment
Geotechnical Data Report

Appendix 1 presents the results of the Logs of Borings prepared by Parikh Consultants. ABE Engineering calibrated the automatic trip hammer used in the investigation. The SPT energy calibration results are included in Appendix 1. Gas monitoring measurements recorded by Geomatrix Consultants are presented at the end of Appendix 1.

**TUNNEL SEGMENT OF
SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT
SAN JOSE, SANTA CLARA COUNTY, CALIFORNIA**

APPENDIX 1

LOGS OF BORINGS

For

SVRT – HMM/BECHTEL
3331 North First Street, Building B
San Jose, CA 95134



PARIKH CONSULTANTS, INC.
356 S. Milpitas Blvd, Milpitas, CA 95035
(408) 945-1011

June 2005

Job No. 204104.10



PARIKH

Practicing in the Geosciences

Geotechnical ■
Environmental ■
Materials Testing ■
Construction Inspection ■

HMM/BECHTEL
3331 North First Street
San Jose, CA 95134

June 3, 2005
Job No.: 204104.10

Attn.: Mr. Ignacio Arango

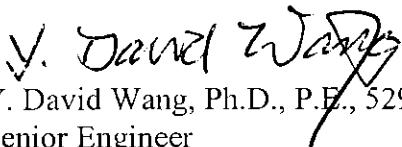
Sub: Appendix 1 – Logs of Borings
Tunnel Segment of Silicon Valley Rapid Transit (SVRT) Project
San Jose, Santa Clara County, California

Dear Mr. Arango:

As requested, we are presenting *Appendix 1 – Logs of Borings* for the proposed Silicon Valley Rapid Transit (SVRT) project in San Jose, California.

Please contact us at (408) 945-1011 if you have any questions regarding the data presented in the appendix.

Very truly yours,
PARIKH CONSULTANTS, INC.


Y. David Wang, Ph.D., P.E., 52911
Senior Engineer


Gary Parikh, P.E., G.E., 666
Project Manager

FW/YDW/GP {\Projects\204104.10\App-1.doc}

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ATTACHMENTS

- Exploratory Borehole & In-Situ Test Program (Table A1-1)
- Logs of Borings (Figures A1-1 thru A1-77b)



APPENDIX 1 – LOGS OF BORINGS

TUNNEL SEGMENT OF SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT SAN JOSE, SANTA CLARA COUNTY, CALIFORNIA

INTRODUCTION

This appendix includes data from our geotechnical exploration performed for the proposed Tunnel Segment of Silicon Valley Rapid Transit (SVRT) project in San Jose, Santa Clara County, California. The fieldwork was performed between October 2004 and April 2005. The work was performed generally in accordance with the project scope and technical specifications prepared by Hatch Mott MacDonald/Bechtel team.

PURPOSE AND SCOPE

The purpose of this exploration was to perform soil borings and in-situ tests and to provide subsurface data for the design team. The scope of work performed for this exploration included drilling 76 rotary wash boreholes (Appendix 1), with majority of them on city streets. In addition, the scope included the following: (1) performing vane shear tests in 23 boreholes (Appendix 2), (2) performing pressuremeter tests in 19 boreholes (Appendix 3), (3) performing P/S wave suspension logging in three boreholes (Appendix 4), and (4) installing vibrating wire piezometer in 17 boreholes (Appendix 5) and standpipe monitoring wells in two boreholes (Appendix 6). The “Exploratory Borehole & In-Situ Test Program” is summarized on Table A1-1.

METHODOLOGY OF EXPLORATION

The geotechnical exploration consisted of 76 boreholes extending to depths between 42.5 feet (portal area) and 217 feet (P/S wave suspension logging boreholes). At the proposed stations, the borehole depths are typically 150 feet. Along the tunnel alignment, the borehole depths cover approximately 20 feet below the planned tunnel invert at the time of drilling. Majority of the exploration program was performed between October 4, 2004 and March 5, 2005; except that BH-78 (in Newhall yard near the west portal) was drilled on April 18, 2005 due to permitting and coordination with Union Pacific Railroad (UPRR).



Rotary Wash Drilling, Sampling & Logging

Pitcher Drilling Company of East Palo Alto performed rotary wash drilling for the project. Multiple drill crews were utilized. The rigs used for the project consisted of two truck-mounted drill rigs - Failing 1500 and Fraste Mutidrill XL, and a Fraste track-mounted rig for BH-04 due to sloping terrain at Route 101/McKee Road interchange (Caltrans right-of-way). The Failing 1500 is a standard rotary wash drill rig, and the Fraste Multidrill XL is a top-drive rig. The top-drive rig was required to perform self-boring Pressuremeter tests. The drill bit is 4-7/8 inches in diameter, and the boreholes are approximately 5 inches in diameter.

Due to limited work hours on the city streets and traffic conditions, most of the boreholes required two to three days to complete. Traffic covers (steel plates welded with short pipe extension) were used to cover the boreholes, and the drilling resumed next day. Drilling spoils were drummed and picked up daily by Integrated Wastestream Management (IWM). Per Santa Clara Valley Water District's (SCVWD) requirements, the boreholes were grouted. In addition, per city's requirements, the boreholes within city's right-of-way were patched with minimum 18 inches non-shrink, non-metallic grout at surface three days after grouting. The intention was to allow the grout to settle.

When applicable, groundwater level was measured on the second or third day in the borehole assuming that the drilling fluid/mud reached equilibrium with natural groundwater level. Therefore, the measured groundwater levels are for information only. For design purposes, vibrating wire piezometers and standpipe monitoring wells were installed to provide groundwater level/pressure information.

The drill rigs were equipped with standard 140-lb hammer for drive-samples. The hammer setup is standard rope and cathead on the Failing 1500 and automatic hammer on the Fraste rig, respectively. During exploration, energy calibration on the automatic hammer (Fraste rig) was performed by ABE Engineering at BH-25 and BH-65 under a separate contract (Appendix 1). The automatic hammer delivered approximately 75% of the theoretical engineering (140-lb hammer at 30-inch drop).



A detailed description of the types of samplers used for the project is presented below. The choice of sampler type was based on the project specifications and discussion with the design team during exploration.

Shelby Tube Sampler. The Shelby Tube Sampler is in compliance with ASTM D1587 and consists of a 3-inch diameter, 36-inch long mild steel thin-walled tube that is hydraulically pushed by the drill rig. The sampler was used to obtain relatively undisturbed samples of soft to stiff clays and silts (fine-grained soils). For each push, the standard length of advance is 30 inches. The magnitude and change of hydraulic pressures during pushing were recorded on the boring logs. Different drill rigs have different hydraulic systems, and the change of hydraulic pressure qualitatively indicates the change of material type or consistency.

In order to obtain high-quality undisturbed samples for laboratory testing, every effort was made to minimize disturbance during sample handling and transportation. The tubes were kept upright in padded wood boxes; the slough in the tubes was removed and empty space filled with Styrofoam packaging peanuts; and the two ends of the tubes were taped and wax-sealed in the laboratory. The samples are currently stored in a temperature-controlled room at Storage USA, 1265 Oakland Road, San Jose, CA 95112. It is intended to keep the samples at least through the end of 35% design.

Pitcher Barrel Sampler. The Pitcher Barrel Sampler is a double-tube core-barrel. The inner barrel, which is a Shelby tube, is affixed to a spring-loaded sampler head that extends or retracts relative to the cutting bit on the outer barrel with changes in soil stiffness. The Pitcher Barrel Sampler was used in very stiff clays and for continuous sampling.

The circulation ports of the Pitcher Barrel Sampler are relatively small. Therefore, when the drilling fluid is thick as required in gravelly formation, the drillers usually avoid using the Pitcher Barrel Sampler because thick mud may lead to circulation difficulties within the sampler and damaging the cutting bit.



Standard Penetration Test (SPT) Sampler. The SPT sampler is a standard split-barrel sampler in compliance with ASTM D 1587. The sampler has an outside diameter of 2 inches and an inside diameter of 1-3/8 inches. The SPT sampler was used to obtain disturbed samples of sand and gravel. The sampler was driven 18 inches into the soils under the impact of a 140-lb hammer free-falling 30 inches. The number of blows required to drive the sampler for the last 12 inches is reported on the boring logs. The blow counts reported on the boring logs are “raw field SPT blow counts.”

Modified California (MC) Sampler. The MC sampler is a thick wall, ring-lined, split-barrel sampler in general compliance with ASTM D 3550. The sampler has an outside diameter of 3 inches and an inside diameter of 2.43 inches. The MC sampler was also used to obtain disturbed samples of sand and gravel. The MC sampler was able to retrieve gravel particles up to 2” plus, which could not be obtained in SPT sampler. The MC sampler was driven 18 inches into the soils under the impact of a 140-lb hammer free-falling 30 inches. The ring samples were first placed in plastic bags and then in plastic canisters. The number of blows required to drive the sampler for the last 12 inches is reported on the boring logs. The blow counts reported on the boring logs are “raw field MC blow counts.”

When applicable, field strength tests including pocket penetrometer (pp) and torvane (tv) tests were performed at end of the tube samples. The pp and tv readings are reported on the boring logs at appropriate sample depths.

The boring logs include drilling notes (such as observations of cuttings in the circulation, caving conditions and loss of drilling fluid) and driller’s comments regarding soil conditions. Soil descriptions were made in general accordance with ASTM D 2487, Standard Classification of Soil for Engineering Purposes (Unified Soil Classification System) and ASTM 2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). The boring logs are presented in gINT format and attached in the report. The gINT boring log template was provided



HMM/Bechtel

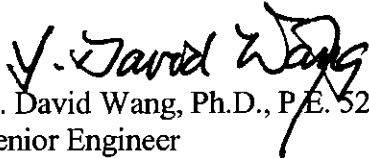
Job No. 204104.10 (SVRT Tunnel Segment – Appendix 1)

June 3, 2005

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by Fugro West, Inc. The elevation data (based on NAVD 88) of the borehole locations were surveyed and provided by Towill, Inc. from San Jose, CA.

Very Truly Yours,
PARIKH CONSULTANTS, INC.



Y. David Wang, Ph.D., P.E. 52911
Senior Engineer

FW/YDW/GP APP-1 (PROJECT\204104.10\APP-1.DOC)



Table A1-1

**Exploratory Borehole & In-Situ Test Program
Silicon Valley Rapid Transit (SVRT) Project
Tunnel Segment
San Jose, California**

7/26/2005

Exploration	Boring Depth	Station (ft)	Offset		Structure	In-Situ Tests			Vib. Wire Piezometers & Standpipe Wells
			(ft)	R/L		Type	Qty	Depth (ft)	
East Portal to Alum Rock Station									
BH-56	42.5	566+11	42	L	Portal	-			-
BH-57	42.5	569+16	18	L	Tunnel	VS	2	9.5 & 29.5	-
BH-01	61.5	574+05	13	L	Tunnel	VS	3	20, 30 & 40	-
BH-02	75.0	578+07	23	R	Tunnel	PM	4	39, 50, 58.5 & 60	25' & 52'
BH-03	90.0	581+81	14	L	Tunnel	Continuous Sampling (30' to 90')			-
BH-04	91.5	590+51	10	L	Tunnel	VS	1	45	20' & 52'
BH-05	92.5	598+17	55	R	Tunnel	-			-
BH-06	82.5	599+61	28	R	Tunnel	PM	5	44, 46, 53.5, 63.5 & 65	-
Alum Rock Station									
BH-58	151.5	600+32	53	R	Station	Continuous Sampling (5' to 70')			30.5'
BH-59	200.5	602+37	146	L	Station	P/S Suspension Logging to 200'			Standpipe Well to 217'
BH-60	152.2	604+20	61	L	Station	PM	11	13, 15, 28, 33.5, 35, 43.5, 45, 73.5, 75, 97.5, 99	
BH-61	151.5	605+84	41	L	Station	VS	12	9, 11, 19.5, 21.5, 30, 32, 39.5, 41.5, 49.5, 51.5, 64.5, 66.5	
BH-62	151.0	607+05	47	L	Station	-			-
BH-63	151.5	607+67	16	R	Station	VS	7	13.5, 15.5, 23.5, 34.5, 36.5, 49.5 & 51.5	81'
Alum Rock Station to Crossover/Downtown Station									
BH-07	86.0	609+41	9	R	Tunnel	VS	2	45 & 54.3	-
BH-08	91.0	615+75	64	R	Tunnel	PM	6	53, 54.5, 63, 64.5, 73.5 & 75	
BH-09	101.5	619+92	26	L	Tunnel	-			30' & 75'
BH-10	105.5	624+91	14	L	Tunnel	VS	1	55	-
BH-11	110.0	627+54	14	L	Tunnel	Continuous Sampling (50' to 110')			-
BH-12	121.5	634+69	13	L	Tunnel	VS	1	50	-
BH-13	131.5	640+81	13	L	Tunnel	PM	3	93.5, 114.5 & 116	30.5' & 100.5'
BH-14	127.0	642+52	15	L	Tunnel	-			-
BH-15	128.0	645+69	97	L	Tunnel	Continuous Sampling (70' to 128')			30' & 90'
BH-16	116.5	650+33	25	L	Tunnel	VS	0	Soil resistance higher than vane shear capacity	
BH-17	107.5	654+44	24	L	Tunnel	-			-
BH-18	100.5	660+03	24	L	Tunnel	PM	3	74.5, 76 & 86	-
BH-19	91.5	666+26	23	L	Tunnel	VS	1	45	30' & 60'
BH-20	91.5	669+80	24	L	Tunnel	Continuous Sampling (30' to 90')			-
BH-21	80.0	675+49	86	R	Tunnel	VS	2	40 & 50	-
BH-50	150.5	681+71	5	L	Tunnel	VS	3	9.5, 34.5 & 40.5	-
BH-52	150.5	684+09	6	L	Tunnel	Continuous Sampling (10' to 70')			-
BH-53	149.0	685+43	17	L	Tunnel	PM	3	25, 45 & 55	-
BH-54	121.5	687+16	10	L	Tunnel	VS	3	24, 34 & 48	-
BH-55	150.0	688+35	11	L	Tunnel	PM	2	25 & 45	-
Crossover/Downtown Station									
BH-23	130.5	690+03	74	R	Crossover	VS	4	14.6, 17.1, 38.5 & 44.6	-
BH-64	141.5	691+93	30	L	Crossover	PM	5	23.5, 25, 53, 54.5 & 74	-
BH-24	151.0	694+52	31	L	Crossover	Continuous Sampling (10' to 70')			-
BH-65	149.0	695+58	16	L	Crossover	PM	7	13, 15, 38, 40, 54, 111.5, & 113	
BH-77	137.5	698+34	16	L	Crossover	VS	4	14.1, 19.1, 24.2 & 39.1	-
BH-25	150.0	701+55	2	R	Station	PM	13	21, 23, 48, 50, 74, 76, 105.5, 107, 113, 114.5, 127.5, 129, 148.5 & 150	
BH-66	130.0	702+51	29	L	Station	VS	3	15.5, 21.5 & 44	-
BH-68	216.0	703+72	69	R	Station	P/S Suspension Logging to 200'			30', 80' & 160' (Piezometer at 30' depth in separate hole)
BH-70	146.5	706+78	47	L	Station	Continuous Sampling (10' to 70')			-
BH-71	148.0	707+62	18	L	Station	PM	6	23.5, 25, 43.5, 45, 63.5 & 65	
BH-72	162.5	709+40	22	L	Station	VS	5	18, 20, 22, 43 & 45	-
BH-26	157.5	710+66	19	L	Station	-			-
Crossover/Downtown Station to Diridon Station									
BH-27	140.5	715+01	131	L	Tunnel	-			-
BH-28	150.0	720+23	48	R	Tunnel	-			-
BH-29	112.5	723+89	29	R	Tunnel	VS	1	88.5	-
BH-30	110.5	728+02	31	R	Tunnel	-			-
BH-31	100.0	731+55	10	L	Tunnel	PM	4	72.5, 74, 82.5 & 84	30' & 60'
BH-32	92.5	733+31	38	L	Tunnel	-			-

Table A1-1

**Exploratory Borehole & In-Situ Test Program
Silicon Valley Rapid Transit (SVRT) Project
Tunnel Segment
San Jose, California**

7/26/2005

Exploration	Boring Depth	Station (ft)	Offset		Structure	In-Situ Tests			Vib. Wire Piezometers & Standpipe Wells
			(ft)	R/L		Type	Qty	Depth (ft)	
Diridon Station									
BH-33	150.8	735+14	52	L	Station	PM	12	13, 15, 23, 25, 43.5, 45, 74.5, 76, 88.5, 90, 113.5 & 115	
BH-73	150.5	736+58	41	L	Station	VS	5	9.7, 11.5, 19.5, 21.5 & 23.5	
BH-74	150.5	738+28	32	R	Station	Continuous Sampling (10' to 70')			30'
BH-75	200.5	739+52	45	R	Station	-			Standpipe Well to 200'
BH-76	152.5	741+02	70	R	Station	PM	9	13, 15, 25, 43.5, 45, 73.5, 75, 93.5 & 95	105'
BH-34	150.8	744+65	79	R	Station	VS	8	14.5, 16.5, 24.5, 26.5, 34.7, 44.5, 46.5 & 54.5	
Diridon Station to West Portal									
BH-35	78.0	750+49	77	R	Tunnel	Continuous Sampling (20' to 78')			-
BH-36	81.0	755+33	101	R	Tunnel	-			-
BH-37	82.5	760+60	53	L	Tunnel	VS	2	42.5 & 52.5	20.5' & 60.5'
BH-38	95.5	765+24	5	L	Tunnel	PM	4	43.5, 51, 65 & 80	-
BH-39	96.0	768+77	17	R	Tunnel	VS	0	Soil resistance higher than vane shear capacity	
BH-40	68.5	775+76	75	L	Tunnel	Continuous Sampling (10' to 69')			-
BH-41	60.0	781+35	12	L	Tunnel	VS	3	19.5, 29.5 & 34.5	20' & 40'
BH-79	216.0	782+50	17	L	Tunnel/Vent Shaft	P/S Suspension Logging to 200'			35.5', 75.5' & 118.5'
BH-42	62.5	785+37	19	L	Tunnel	PM	6	23, 25, 33, 35, 43 & 44.5	
BH-43	60.0	789+72	20	L	Tunnel	Continuous Sampling (5' to 60')			-
BH-80	100.0	794+39	112	L	Tunnel	-			47'
BH-44	61.5	798+28	20	L	Tunnel	VS	2	20 & 30	-
BH-45	85.5	802+44	26	L	Tunnel	PM	4	50, 58.5, 60 & 70	-
BH-46	60.0	809+36	9	L	Tunnel	Continuous Sampling (5' to 60')			-
BH-47	61.5	813+52	52	L	Tunnel	VS	2	22 & 24.5	20' & 40'
BH-48	86.5	818+34	15	R	Tunnel	PM	6	30.5, 32.5, 48.5, 50, 58.5 & 60	
BH-49	77.5	824+28	66	L	Tunnel	-			
BH-78	80.8	831+41	15	L	Portal	-			

Note: Stations and offsets based on the April 2005, S1 track alignment.

Summary	Borings	Downhole Logging	Continuous Sampling	Pressuremeter Testing	Vane Shear Testing	Piezometer/Well Borings
Stations & Crossover	24	2	4	7	8	7
Tunnel	52	1	9	12	17	12

A. Sampling Schedule for Tunnel Borings :

Sampling for tunnel borings focused on the 60' tunnel zone (20' above crown to 20' below invert of the 20' diameter tunnel).

B. Sampling Schedule for Stations and Crossover :

Stations and crossover borings were drilled to approx. 150' depth in general. Shelby tubes or Pitcher barrels were taken in cohesive soils, and SPT sampler (2" O.D. & 1.4" I.D.) or Modified California sampler (3" O.D. & 2.43" I.D.) were typically taken in granular soils.

C. Continuous Sampling :

Continuous Pitcher Barrel or Shelby Tube samples (in cohesive soils) and driven SPT or MC samples (in granular soils) were taken throughout the 60' tunnel zone at specified tunnel boring locations. Continuous Pitcher Barrel or Shelby Tube samples (in cohesive soils) and driven SPT or MC samples (in granular soils) were taken from 10' to 70' at specified station boring locations.

D. Vane Shear Borings :

Vane Shear tests were performed using Geonor H-10 Vane Borer equipment. Vane shear tests were not planned in granular soils and clay soils where the strength exceeded the equipment capacity (2.1 ksf). Along the tunnel alignment, vane shear testing was typically attempted at the tunnel crown, center and invert. Vane Shear tests were performed at specified depths of the station borings.

E. Pressuremeter Borings:

Pressuremeter tests were performed by Hughes Insitu Engineering Inc. Both "pre-bored" and "self-boring" pressuremeter tests were conducted. A top-drive drill rig was used for self-boring pressuremeter tests. In hard soils and gravelly soils, only the "pre-bored" type pressuremeter tests could be conducted. Along the tunnel alignment, pressuremeter testing was typically attempted at the tunnel crown, center and invert. Pressuremeter tests were performed at specified depths of the station borings.

F. Downhole Logging :

GEOVision Geophysical Services performed P/S suspension logging in borings at BH-59, BH-68 and 79.

G. Noise and Vibration Testing :

Noise and vibration tests were performed at BH-03, BH-10, BH-15, BH-19, BH-23, BH-27, BH-35, BH-40 and BH-46

MAJOR DIVISIONS			GROUP NAMES		GENERAL NOTES
COARSE-GRAINED SOILS More than 50% retained on the No. 200 sieve	GRAVELS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	Clean gravels less than 5% fines	GW		
			GP		Poorly Graded Gravel
		Gravels with 5-12% fines	GW-GM		Well-Graded Gravel with Silt
			GW-GC		Well-Graded Gravel with Clay (or Silty Clay)
			GP-GM		Poorly Graded Gravel with Silt
			GP-GC		Poorly Graded Gravel with Clay (or Silty Clay)
			GM		Silty Gravel
		Gravels with more than 12% fines	GC		Clayey Gravel
			GC-GM		Silty, Clayey Gravel
	SANDS MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	Clean sand less than 5% fines	SW		Well-Graded Sand
			SP		Poorly Graded Sand
		Sands with 5-12% fines	SW-SM		Well-Graded Sand with Silt
			SW-SC		Well-Graded Sand with Clay (or Silty Clay)
			SP-SM		Poorly Graded Sand with Silt
			SP-SC		Poorly Graded Sand with Clay (or Silty Clay)
			SM		Silty Sand
		Sands with more than 12% fines	SC		Clayey Sand
SC-SM				Silty, Clayey Sand	
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve	SILTS AND CLAYS Liquid Limit Less than 50%	ML		Silt	
		CL		Lean Clay	
		CL-ML		Silty Clay	
		OL		Organic Silt	
	SILTS AND CLAYS Liquid Limit Greater than 50%	MH		Elastic Silt	
		CH		Fat Clay	
		OH		Organic Clay	
HIGHLY ORGANIC SOILS	PT		Peat or Highly Organic Soils		
	FILL		Debris or Mixed Fill		
	AC		Asphalt Concrete Pavement with Aggregate Base		

SAMPLER TYPE		SOIL STRUCTURE	
1	2	Fissured: Containing shrinkage or relief cracks, often filled with fine sand or silt, usually more or less vertical.	SOIL STRUCTURE Fissured: Containing shrinkage or relief cracks, often filled with fine sand or silt, usually more or less vertical. Pocket: Inclusion of material of different texture that is smaller than the diameter of the sample. Parting: Inclusion less than 1/8 inch thick extending through the sample. Seam: Inclusion 1/8 inch to 3 inches thick extending through the sample. Layer: Inclusion greater than 3 inches thick extending through the sample. Laminated: Soil sample composed of alternating partings or seams of different soil types. Interlayered: Soil sample composed of alternating layers of different soil type. Intermixed: Soil sample composed of pockets of different soil type, and layered or laminated structure is not evident.
3	4	Pocket: Inclusion of material of different texture that is smaller than the diameter of the sample.	
5		Parting: Inclusion less than 1/8 inch thick extending through the sample.	
		Seam: Inclusion 1/8 inch to 3 inches thick extending through the sample.	
		Layer: Inclusion greater than 3 inches thick extending through the sample.	

CONSISTENCY			RELATIVE DENSITY		INCREASING VISUAL MOISTURE CONTENT
Clays	Blows/Foot SPT	Undrained Shear Strength (ksf)	Sands and Gravels	Blows/Foot SPT	
Very Soft	< 2	0 - 0.25	Very Loose	0 - 4	↓ Dry Moist Wet
Soft	2 - 4	0.25 - 0.5	Loose	4 - 10	
Medium	4 - 8	0.5 - 1	Medium Dense	10 - 30	
Stiff	8 - 15	1 - 2	Dense	30 - 50	
Very Stiff	15 - 30	2 - 4	Very Dense	Over 50	
Hard	> 30	Over 4			

Information on each boring log is a compilation of subsurface conditions and soil or rock classifications obtained from the field as well as from laboratory testing of samples. Strata have been interpreted by commonly accepted procedures. The stratum lines on the logs may be transitional and approximate in nature. Water level measurements refer only to those observed at the time and places indicated, and can vary with time, geologic condition, or construction activity.

TERMS AND SYMBOLS USED ON BORING LOGS

FIGURE A1-1

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: N Marburg Way, east of Las Plumas Ave. N 1,955,812 E 6,163,404 SURFACE EL: 86.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
85	ASPHALT	1	20"	200 - 300 psi	4 inches ASPHALT CONCRETE over 8 inches AGGREGATE BASE							
80	CLAY	2	29"	100 psi	FAT CLAY (CH), stiff, dark grayish brown, moist, high plasticity, trace fine grained sand LEAN CLAY (CL), medium to stiff, dark brown, moist, medium plasticity, trace fine grained sand (pp=0.5/1.5 tsf, tv=0.3/0.45 tsf)						1.0 P 0.8 T	
75	SAND	3	26.5"	150 psi	--fine to coarse grained sand seam --stiff, grayish brown (pp=1.0 tsf, tv=0.5/0.6 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)						1.0 P 1.1 T	
70	CLAY	4	30"	150 psi	--mottled grayish brown and brown (pp=1.5/2.0 tsf, tv=0.55/0.6 tsf)	93	30		42	20	1.8 P 1.2 T 1.0 U	
65	CLAY	5	30"	150 psi	FAT CLAY (CH), stiff, mottled grayish brown and gray, moist, high plasticity (pp=1.75/1.9 tsf, tv=0.55/0.6 tsf)						2.1 V 1.8 P 1.2 T	vs = 2046 psf
60	CLAY	6	30"	175 psi	LEAN CLAY (CL), medium to very stiff, mottled brown and gray, moist, medium plasticity, trace fine grained sand --(pp=1.75/2.5 tsf, tv=0.55/0.6 tsf) --lost drilling fluid	94	29		40	17	2.1 P 1.2 T 0.6 U	
55	SAND	7	30"	100 psi	--stiff, dark gray, with fine to medium grained sand, trace angular gravel up to 1/4 inch (pp=1.0/1.25 tsf, tv=0.35/0.5 tsf) (LEL=0.0, OVM=0.0, OXY=20.7)						1.7 V	vs = 1737 psf
50	SAND	8	28"	175 psi	--trace angular gravel up to 3/4 inch, increase sand to 35.5 ft						1.1 P 0.9 T	
45	CLAY	9	30"	150 psi	FAT CLAY (CH), stiff, dark gray, moist, high plasticity (pp=1.5/1.75 tsf, tv=0.625/0.725 tsf) --very stiff --Ended drilling on 1/20/05 at 40 ft --Began drilling on 1/21/05 at 40 ft						1.7 P 1.4 T	>2.1 V vs > 2000 psf
45	CLAY	10	21"	225 psi	LEAN CLAY (CL), stiff to very stiff, mottled gray and brown, moist, medium plasticity, trace fine grained sand and angular gravel to 1/2 inch (pp=1.75/2.5 tsf, tv=0.6/0.7 tsf) at 42.5 ft						2.1 P 1.3 T	
40	SAND			300 psi	CLAYEY SAND WITH GRAVEL (SC), medium dense, mottled gray and brown, moist, fine to coarse grained sand, angular to rounded gravel	113	16	28				

BORING DEPTH: 61.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 20, 2005
COMPLETION DATE: January 21, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-01
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-2a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY, (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: N Marburg Way, east of Las Plumas Ave. N 1,955,812 E 6,163,404	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , Ksf	OTHER TESTS
						SURFACE EL: 86.9 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	35		11 15'		(85)	up to 3/4 inch, refusal after 24 inches --dense, brown, angular to rounded gravel up to 2 inch (LEL=0.0, OVM=0.0, OXY=20.9)		10	17				
	55		12 18"		(34)	--gravel up to 2 1/2 inches SILT WITH SAND (ML), stiff, mottled brown and gray, moist, low plasticity, fine grained sand, trace rounded gravel up to 1/2 inch							
	60		13 11"		(96/11")	FAT CLAY (CH), very stiff, light gray, moist, high plasticity, trace fine grained sand and angular to rounded gravel up to 1/2 inch							
	65					CLAYEY SAND WITH GRAVEL (SC), very dense, brown, moist, fine to coarse grained sand, angular to rounded gravel up to 1 1/2 inch, pockets of silty sand		11	15				
	70												
	75												
	80												
	85												
	90												
	95												
	-10												

BORING DEPTH: 61.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 20, 2005
COMPLETION DATE: January 21, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-01
SVRT DOWNTOWN
San Jose, California

FIGURE A1-2b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: N Marburg Way, west of Lower Silver Creek N 1,955,520 E 6,163,682 SURFACE EL: 85.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
85						6 inches ASPHALT CONCRETE over 30 inches TREATED AGGREGATE BASE over MIRAFI FABRIC							
	5					LEAN CLAY WITH SAND (CL), brown, moist							
	10												
	15		1	30"	100 psi	--very stiff, medium plasticity (pp=2.25/2.25/2.25 tsf)						2.3 P	
	20		2	28"	100 psi								
	25				200 psi	--stiff (pp=1/1/1 tsf, tv=0.55/0.55 tsf)						1.0 P 1.1 T	
	30		3	30"	50 psi								
	35				200 psi	--gray (pp=1.5/1.75/1.75 tsf, tv=0.85/0.8 tsf)						1.6 P 1.7 T	
	40		4	30"	100 psi	SANDY LEAN CLAY WITH GRAVEL (CL), very stiff, gray, moist, subrounded gravel up to 1/2 inch (pp=2.5/3.5/>4.5 tsf)						3.5 P	
	45				250 psi								
	50		5	8"	(23)	LEAN CLAY WITH SAND (CL), medium, gray, moist (pp=1.0/1.0/0.75 tsf, tv=0.4/0.45 tsf)	109	21		27	11	0.9 P 0.9 T	PM test @ 39'
	55		6	26"	100 - 150 psi	--stiff, medium plasticity (pp=2.25/2.0/1.25 tsf, tv=0.75/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=20.4)						1.8 P 1.6 T	
	60		7	30"	0 psi	SANDY LEAN CLAY (CL), medium to very stiff, gray to brown, moist, low plasticity (pp=3.0/3.75/4.25 tsf)						3.7 P 0.9 U	
	65				300 psi		100	25		26	11		
	70					CLAYEY GRAVEL WITH SAND (GC)							PM test @ 50'

BORING DEPTH: 75.0 ft
DEPTH TO WATER: 11.5 ft., 1/21/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 20, 2005
COMPLETION DATE: January 21, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-02
SVRT DOWNTOWN
San Jose, California

FIGURE A1-3a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: N Marburg Way, west of Lower Silver Creek N 1,955,520 E 6,163,682 SURFACE EL: 85.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
35			8 16"		(81)	CLAYEY GRAVEL WITH SAND (GC), dense, brown, moist, subrounded gravel up to 3 inches (LEL=0.0, OVM=0.0, OXY=20.2) --Ended drilling on 1/20/05 at 52 ft		10	15				
55			9 10"		(21)	--Began drilling on 1/21/05 at 52 ft LEAN CLAY WITH SAND (CL), stiff, gray, moist, medium plasticity (pp=1/1/1 tsf, tv=0.6/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=20.2)						1.0 P 1.4 T	PM test @ 58.5' and 60'
60			10 10"		(41)	--(pp=1.5/1.5/1.5 tsf, tv=0.8/0.85 tsf) (LEL=0.0, OVM=0.0, OXY=20.6)						1.5 P 1.7 T	
65			11 10"		150 - 220 psi	--medium to stiff, disturbed sample (pp=0.75/1.25 tsf)						1.0 P	
70			12 6"		150 - 250 psi	--(pp=1.0 tsf)						1.0 P	
75			13 14"		(63)	--very stiff (pp=2.75/2.75/2.25 tsf, tv=>1.0 tsf)						2.6 P >2.0 T	

BORING DEPTH: 75.0 ft
DEPTH TO WATER: 11.5 ft., 1/21/2005

START DATE: January 20, 2005
COMPLETION DATE: January 21, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-02
SVRT DOWNTOWN
San Jose, California

FIGURE A1-3b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private property, North of West End of Marburg Way N 1,955,302 E 6,163,988 SURFACE EL: 90.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION											
90				2 inches GRAVEL (FILL), gravel up to 1/2 inch LEAN CLAY (CL), reddish brown, moist to wet							
85				--gravelly between 5 ft and 6 ft							
80				▽							
75											
70											
65											
60		1 30"	100 psi	-- stiff, grayish brown, wet (pp=1.1/1/1.2 tsf, tv=0.4 tsf)(LEL=0.0, OVM=0.0, OXY=20.4)	85	37				1.1 P 0.8 T	
55		2 25"	100 psi	--very stiff, gray, wet --(pp=2.0/1.6/1.1 tsf, tv=0.5/0.55 tsf)						1.6 P 1.0 T	
50		3 30"	100 psi	CLAYEY SAND WITH GRAVEL (SC), loose, dark gray, wet	115	18	43				
45		4 29"	100 - 150 psi	LEAN CLAY (CL), soft, dark gray, wet, trace sand and subrounded gravel up to 1/4 inch							
		5 18"	16	--very stiff							
		6 30"	100 - 150 psi								
		7 30"	100 - 125 psi	--stiff (pp=1.7/1.7/1.2 tsf, tv=0.71/0.81 tsf) --light brownish gray, wet	99	26				1.5 P 1.5 T 0.5 U	
		8 29"	100 - 200 psi	--(pp=1.05/0.8/1.1 tsf, tv=0.52 tsf)			90			1.0 P 1.0 T	

Continued

BORING DEPTH: 90.0 ft
DEPTH TO WATER: 11.0 ft., 1/4/2005

START DATE: January 3, 2005
COMPLETION DATE: January 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-03
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-4a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/PRESSURE, psi	LOCATION: Private property, North of West End of Marburg Way N 1,955,302 E 6,163,988	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 90.3 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
40			9	30"	100 psi	SILTY SAND WITH GRAVEL (SM), medium dense, dark gray, wet, subrounded fine grained gravel up to 3/4 inch			20				Noise and Vibration tests
35	55		10	28"	100 - 200 psi	LEAN CLAY WITH SAND (CL), very stiff, olive gray, wet, fine grained sand (pp=2.6/2.6/2.8 tsf, tv=0.36/0.58 tsf)(LEL=0.0,OVM=0.0,OXY=20.4)	117	15	83			2.7 P 0.9 T	
			11	30"	100 psi	--more sand at 57 ft --(pp=2.7/3.4/3.2 tsf, tv=0.3/0.38 tsf) --light olive gray, less sand at 58 ft			76			3.1 P 0.7 T	
30	60				150 psi	--(pp=3.0/3.2/2.4 tsf, tv=0.54/0.68 tsf) CLAYEY SAND WITH GRAVEL (SC), light olive gray, wet			49			2.9 P 1.2 T	Noise and Vibration test
			12	30"	100 - 200 psi	--Ended drilling on 1/3/05 at 62.5 ft --Began drilling on 1/4/05 at 62.5 ft			46				
25	65		13	28"	100 - 125 psi	SILTY CLAY WITH SAND (CL-ML), very stiff, gray mottled brown, wet (pp=2.2/2.5/2.3 tsf, tv=0.49/0.72 tsf)	105	22	27			2.3 P 1.2 T	
			14	28"	100 - 250 psi	--silty sand with gravel layer at 64.0 ft --stiff (pp=1.5/1.5/1.5 tsf, tv=0.63/0.72 tsf)			70			1.0 U	
20	70					--very stiff, grayish brown --(pp=3.1/3.1/3.2 tsf, tv>1 tsf) (LEL=0.0, OVM=0.0, OXY=20.5)			87			1.5 P 1.4 T	Noise and Vibration test
15	75		15	28"	100 - 300 psi	POORLY GRADED SAND WITH SILT AND GRAVEL(SP-SM), reddish brown, wet, trace fine grained gravels up to 1/2 inch (LEL=0.0, OVM=0.0, OXY=20.4)	110	15	6			3.1 P >2.0 T	
			16	18"	32	--dense, fine grained sand at 75.5 ft							
10	80		17	30"	100 - 250 psi	LEAN CLAY (CL), very stiff, brown, moist to wet						2.6 P 1.5 T	
			18	12"	100 - 200 psi	--light grayish brown (pp=2.6/2.7/2.4 tsf, tv=0.72/0.81 tsf)						>4.5 P	
			19	30"	100 - 250 psi	SILTY CLAY (CL-ML), hard, light grayish brown, moist to wet (pp=>4.5/>4.5/3.8 tsf)							
5	85		20	30"	100 - 200 psi	LEAN CLAY (CL), very stiff, gray, moist to wet (pp=2.6/2.8/2.75 tsf, tv=0.95 tsf)	101	24				2.7 P 1.9 T	
			21	28"	100 - 250 psi	--dark gray (pp=3.2/3.2/3.2 tsf, tv=0.56/0.72 tsf) SANDY SILT(ML), very stiff, dark gray, moist to wet, fine grained sand (pp=2.2/2.1/2.5 tsf, tv=0.36 tsf)						3.2 P 1.3 T	
0	90						27	61				2.3 P 0.7 T	

BORING DEPTH: 90.0 ft
DEPTH TO WATER: 11.0 ft., 1/4/2005

START DATE: January 3, 2005
COMPLETION DATE: January 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-03
SVRT DOWNTOWN
San Jose, California

FIGURE A1-4b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: HWY 101 NB onramp at McKee Rd. N 1,954,703 E 6,164,620 SURFACE EL: 91.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
90					6 inches LEAN TO FAT CLAY (CL/CH) (FILL), topsoil with roots LEAN CLAY (CL)							
85	5											
80	10											
75	15				--(LEL=0.0, OVM=0.0, OXY=20.4)							
70	20											
65	25											
60	30		1 26"	0 psi	LEAN TO FAT CLAY (CL/CH), medium, gray, moist, medium plasticity (pp=0.7/0.8/0.7 tsf, tv=0.4/0.45/0.5 tsf)	80	40				0.7 P 0.9 T	
55	35		2 26"	0 psi	FAT CLAY (CH), stiff, dark gray, moist, medium to high plasticity (pp=1.1/1.1/1 tsf, tv=0.6/0.6/0.65 tsf)						1.1 P 1.2 T	
50	40		3 30"	0 psi	--gray (pp=1.2/1.2/1.5 tsf, tv=0.6/0.65/0.65 tsf)						1.3 P 1.3 T	
45	45		4 29"	0 psi	--ended drilling on 1/12/05 at 45 ft --began drilling on 1/13/05 at 45 ft --very stiff SANDY LEAN CLAY (CL), stiff, light gray, moist, low to medium plasticity, trace gravel (pp=1.7/1.8/2.0 tsf, tv=0.75/0.78/0.7 tsf)	103	22		38	22	1.8 P 1.5 T 1.2 U	vs>2089 psf

Continued

BORING DEPTH: 91.5 ft
DEPTH TO WATER: 9.0 ft., 1/14/05

START DATE: January 12, 2005
COMPLETION DATE: January 13, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste (Track)
DRILLED BY: Pitcher Drilling, J. Valdez
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-04
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-5a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: HWY 101 NB onramp at McKee Rd. N 1,954,703 E 6,164,620		DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 91.0 ft (1988 NAVD datum)								
MATERIAL DESCRIPTION															
	40		5	9"		700 psi	FAT CLAY WITH SAND (CH), hard, brown, moist, fine to coarse grained sand, trace subrounded gravel up to 1 inch (pp=4.0/>4.5/>4.5 tsf)		79	41	79			>4.5 P	
	55		6	12"		(52)	SILTY CLAY (CL-ML), hard, gray, moist, low plasticity, trace subrounded gravel up to 1 inch								
	60		7	12"		(15)	SANDY LEAN CLAY (CL), stiff, gray, moist, low to medium plasticity (pp=1.4 tsf)		102	25				1.4 P 0.7 U	
	65		8	24"		367 psi	--hard (pp=4.0/>4.5/>4.5 tsf)(refusal after 24 inches)							>4.5 P	
	70		9	27"		800 psi	--(pp=4.0/>4.5/>4.5 tsf) (LEL=0.0, OVM=0.0, OXY=20.4)							>4.5 P	
	75		10	22"		0 psi	--very stiff, yellowish brown, moist, low plasticity (pp=3.0/3.2/3.5 tsf) (refusal after 22 inches)		108	20		28	10	3.2 P 1.9 U	
	80		11	14"		800 psi	--gravelly								
	80		11	14"		(78)	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, yellowish brown, moist, subrounded gravel up to 1 1/2 inch			9	12				
	85		12	16"		(32)	LEAN CLAY (CL), stiff, gray, moist, medium plasticity (pp=1.5 tsf)							1.5 P	
	90		13	16"		(28)	--some gravel at 89 ft --very stiff (pp=2.7 tsf) (LEL=0.0, OVM=0.0, OXY=20.4)		99	27				2.7 P	

BORING DEPTH: 91.5 ft
DEPTH TO WATER: 9.0 ft., 1/14/05

START DATE: January 12, 2005
COMPLETION DATE: January 13, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste (Track)
DRILLED BY: Pitcher Drilling, J. Valdez
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-04
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-5b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: HWY 101 SB onramp at Julian St. N 1,953,970 E 6,164,751	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 85.5 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
85							6 inches LEAN TO FAT CLAY (CL/CH) (FILL), topsoil with roots							
	5						LEAN CLAY (CL), gray, medium plasticity							
80														
	10													
75														
	15						--yellow, low to medium plasticity							
70							--(LEL=0.0, OVM=0.0, OXY=20.4)							
	20						--increase in sand content at 20 ft to 21.5 ft, medium grained sand							
65							--gray, low to medium plasticity, no sand presence							
	25													
60														
	30		1	28"		150 psi	--very stiff, moist							
55							--(pp=2.2/2.0/2.5 tsf, tv=0.65/0.75/0.9 tsf)						2.2 P 1.5 T	
	35		2	28"		200 psi	--stiff, low plasticity							
50							--(pp=1.9/1.6/1.7 tsf, tv=0.7/0.8/0.88 tsf)	38					1.7 P 1.6 T	
	40		3	30"		200 psi	--(LEL=0.0, OVM=0.0, OXY=20.5)							
45							--dark gray, medium to low plasticity (pp=1.5/1.6/1.6 tsf, tv=0.65/0.7/0.78 tsf)						1.6 P 1.4 T	
	45		4	30"		200 psi	--brown, with sand							
40							--(pp=1.2/1.2/1.5 tsf, tv=0.55/0.6/0.65 tsf)	103	23	79			1.3 P 1.2 T 0.9 U	
							--trace subrounded gravel up to 1 1/2 inches at 48.5 ft to 49 ft							

Continued

BORING DEPTH: 92.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 10, 2005
COMPLETION DATE: January 11, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-05
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-6a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: HWY 101 SB onramp at Julian St. N 1,953,970 E 6,164,751 SURFACE EL: 85.5 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
35		5 30"	150 psi	--very stiff, light brown --(pp=2/2/2.1 tsf, tv=0.58/0.62/0.68 tsf)						2.0 P 1.3 T	
30		6 30"	150 psi	--stiff, gray --(pp=1.9/1.7/1.7 tsf, tv=0.7/0.75/0.8 tsf)		35				1.8 P 1.5 T	
25		7 30"	150 psi	--very stiff --(pp=2.2/2.2/2.5 tsf, tv=0.7/0.75/0.85 tsf)	100	24	88			2.3 P 1.5 T 0.8 U	
20		8 28"	150 psi	CLAYEY SAND (SC), dense, yellowish brown, moist, fine to coarse grained sand (pp=1.5 tsf) --subrounded gravel up to 1 inch	117	16	37			1.5 P	
15		9 18"	43	SILTY CLAY (CL-ML), hard, light brown, moist, low plasticity --Ended drilling on 1/10/05 at 73.5 ft (LEL=0.0, OVM=0.0, OXY=20.4) --Began drilling on 1/11/05 at 73.5 ft							
10		10 30"	200 psi	LEAN CLAY (CL), very stiff, greenish gray, moist, low to medium plasticity --(pp=2.5/3.0/3.0 tsf, tv=0.6/0.72/0.8 tsf)		32				2.8 P 1.4 T	
5		11 30"	300 psi	--light brown --(pp=2.2/2.2/2.5 tsf, tv=0.82/0.87/0.89 tsf)						2.3 P 1.7 T	
0		12 24"	300 psi	SANDY SILT (ML), very stiff, light brown, moist, fine grained sand, refusal after 24 inches (pp=2.2/2.5/3.0 tsf)		25				2.6 P	
-5		13 25"	300 psi	--dark gray, no sand presence (pp=2.8/3.0/3.0 tsf) (LEL=0.0, OVM=0.0, OXY=20.3)						2.9 P	
-10											

BORING DEPTH: 92.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 10, 2005
COMPLETION DATE: January 11, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-05
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-6b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: HWY 101 SB on-ramp at Julian St. N 1,953,827 E 6,164,778	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 84.1 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
							LEAN CLAY WITH SAND (CL), gray							
							--light gray							
80	5													
75	10													
70	15						--trace sand, and subrounded gravel up to 1/2 to 3/4 inch							
							--lost approximately 50 gallons of drilling fluid							
65	20						--brown							
			1	30"		140 psi	LEAN CLAY (CL), stiff, brown, moist, medium plasticity (pp=1.0/1.0/1.25 tsf, tv=0.5/0.6 tsf)						1.1 P 1.1 T	
60	25		2	24"		150 psi	--gray, medium to high plasticity						1.0 P 1.2 T	
							--(pp=1.0/1.0/1.0 tsf, tv=0.6/0.6 tsf)							
55	30		3	28"		200 psi	--brown and gray						1.3 P 0.7 T	
							--(pp=1.5/1.25/1.25 tsf, tv=0.35/0.35 tsf)	34						
50	35		4	25"		250 psi	--(pp=1.75/1.5/1.25 tsf, tv=0.5/0.6 tsf)						1.5 P 1.1 T	
							--(LEL=0.0, OVM=0.0, OXY=19.6)							
45	40		5	24"		200 psi	FAT CLAY (CH), medium, gray, moist, medium to high plasticity (pp=0.5/0.5/0.75 tsf, tv=0.25 tsf)	41		61	32	0.6 P 0.5 T		
40	45													PM test @ 44' and 46'
35			6	26"		250 psi	SILTY CLAY (CL-ML), very stiff, brown, moist, low to medium plasticity, trace fine grained sand						2.3 P 0.6 T	

BORING DEPTH: 82.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 24, 2005
COMPLETION DATE: January 25, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-06
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-7a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: HWY 101 SB on-ramp at Julian St. N 1,953,827 E 6,164,778 SURFACE EL: 84.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
30		7 27"		800 psi	(pp=2.0/2.5/2.25 tsf, tv=0.3/0.35 tsf) at 49.5 ft --Ended drilling on 1/24/05 at 50 ft --Began drilling on 1/25/05 at 50 ft	110	19	55			3.2 P	PM test @ 53.5'
55		8 26"		1100 psi	--(pp=3.0/3.0/3.5 tsf)(LEL=0.0, OVM=0.0, OXY=20.2) SANDY SILT (ML), hard, brown to gray, moist, low plasticity (pp=4.0/4.0/4.5 tsf, tv=0.5/0.5 tsf)	99	26		34	6	4.2 P 1.0 T	
25		9 30"		140 psi	LEAN CLAY (CL), very stiff, gray, moist, low plasticity (pp=2.25/2.25/2.5 tsf, tv=0.5/0.5 tsf)						2.3 P 1.0 T	PM test @ 63.5' and 65'
65		10 18"		840 psi	--(pp=3.25/3.5/3.25 tsf, tv=0.7/0.65 tsf)(LEL=0.0, OVM=0.0, OXY=20.3)		28				3.3 P 1.4 T	
15		11 26"		800 psi	--(pp=3.5/3.75/3.5 tsf, tv=0.5/0.55 tsf)						3.6 P 1.1 T	
10		12 24"		800 psi	SILTY CLAY (CL-ML), very stiff, gray and brown, moist, low to medium plasticity (pp=2.75/3.0/3.5 tsf, tv=0.7/0.65 tsf)		30	96			3.1 P 1.4 T	
5		13 30"		860 psi	--gray, medium plasticity --(pp=2.75/3.0/3.0 tsf, tv=0.8/0.9 tsf)						2.9 P 1.7 T	
0												
85												
-5												
90												
-10												
95												
-15												

BORING DEPTH: 82.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 24, 2005
COMPLETION DATE: January 25, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-06
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-7b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW/COUNT/PRESSURE, psi	LOCATION: NB 28th St., north of Five Wounds Ln. N 1,952,846 E 6,164,797 SURFACE EL: 87.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
					6 inches ASPHALT CONCRETE over 3 inches AGGREGATE BASE							
					SANDY SILTY CLAY WITH GRAVEL (CL-ML), (FILL), very stiff, mottled dark brown to brown, moist, medium plasticity, fine to medium grained sand, angular to rounded gravel up to 1 1/2 inch							
					FAT CLAY (CH), stiff, dark brown, moist, high plasticity, trace fine grained sand							
					LEAN CLAY (CL), medium to stiff, brown to yellowish brown, medium plasticity, trace fine grained sand --brown, decrease in sand content at 12 ft							
					FAT CLAY (CH), stiff, grayish brown to dark brown, moist, high plasticity, trace fine grained sand							
					LEAN CLAY (CL), medium to stiff, grayish brown, medium plasticity, trace fine grained sand --lost drilling fluid							
					CLAYEY SAND (SC), grayish brown, low plasticity, fine grained sand							
					LEAN CLAY (CL), stiff, dark grayish brown, moist, medium plasticity, trace fine grained sand (pp=1.75/1.75/2.0 tsf, tv=0.58/0.6 tsf)						1.8 P 1.2 T	
					--medium to stiff (pp=1.0/1.0/1.25 tsf, tv=0.3/0.35 tsf)	91	32				1.1 P 0.7 T	
					FAT CLAY (CH), stiff, grayish brown, moist, high plasticity --(pp=1.6/1.75/2.0 tsf, tv=0.58/0.65 tsf)						1.8 P 1.2 T	
					--(pp=1.5/1.6/2.0 tsf, tv=0.62/0.64 tsf) --very stiff	87	34				1.7 P 1.2 T 1.1 U	
					--(pp=1.75/2.3/2.25 tsf, tv=0.7/0.8 tsf)						>2.1 V	vs>2089 psf
					LEAN CLAY (CL), very stiff, brown, moist						2.1 P 1.4 T	

Continued

BORING DEPTH: 86.0 ft
DEPTH TO WATER: 10.0 ft., 1/25/2005

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 24, 2005
COMPLETION DATE: January 25, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-07
SVRT DOWNTOWN
San Jose, California

FIGURE A1-8a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB 28th St., north of Five Wounds Ln. N 1,952,846 E 6,164,797 SURFACE EL: 87.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
35		6 26"		300 psi	medium plasticity, trace fine grained sand (pp=2.0/2.25/2.5 tsf, tv=0.63/0.71 tsf)						2.3 P 1.3 T	
55		7 26"		200 psi	--(LEL=0.0, OVM=0.0, OXY=20.8)						>2.1 V	vs>2089 psf
30				300 psi	--stiff to very stiff, mottled brown and gray (pp=2.25/3.0/3.25 tsf, tv=0.8/0.95 tsf)	97	25				2.8 P 1.8 T 1.6 U	
60		8 9"		300 psi	--Ended drilling on 1/24/05 at 57.5 ft --Began drilling on 1/25/05 at 57.5 ft							
25					CLAYEY SAND WITH GRAVEL (SC), dense, brown, moist, fine grained sand, trace subrounded to rounded gravel up to 1 inch, Shelby Tube sample refusal after 6 inches							
65		9 9"		(Ref/6")	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, moist, fine grained sand, subrounded to rounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=20.9)	119	15	10				
70		10 9"		(Ref/6")	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown, moist, fine to coarse grained sand, subrounded to rounded gravel up to 1 3/4 inches	121	14	6				
75		11 9"		(50/6")	--subrounded to rounded gravel up to 3/4 inch (LEL=0.0, OVM=0.0, OXY=20.9)							
80		12 9"		(50/5")	WELL-GRADED GRAVEL (GW), very dense, brown, moist, subrounded to rounded gravel up to 1 1/4 inches		6	2				
85		13 7"		150 psi 300 psi	SILTY SAND (SM), dense to very dense, dark brown, moist, non-plastic silt, fine to medium grained sand, refusal after 12 inches							

BORING DEPTH: 86.0 ft
DEPTH TO WATER: 10.0 ft., 1/25/2005

START DATE: January 24, 2005
COMPLETION DATE: January 25, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-07
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-8b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/PRESSURE, psi	LOCATION: Private Property near WB Santa Clara St. and 26th St. N 1,952,267 E 6,164,612 SURFACE EL: 90.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
	5						6 inches PORTLAND CEMENT CONCRETE over 6 inches AGGREGATE BASE							
	5						LEAN CLAY WITH SAND (CL), brown, trace subrounded gravel to 3/4 inch							
85	10													
80	15													
75	20													
70	25													
65	30						GRAVELLY LEAN CLAY WITH SAND (CL), brown							
60	30		1	30"		0 psi	LEAN CLAY WITH SAND (CL), gray, medium plasticity							
55	35		2	30"		0 psi	SILTY SAND (SM), gray, moist, fine grained sand (pp=1.5/1.5/1.25 tsf)						1.4 P	
50	40		3	30"		0 psi	LEAN CLAY WITH SAND (CL), medium to stiff, gray, moist, medium plasticity, interbedded silty sand seams (pp=1.75/2.0/1.5 tsf, tv=0.35/0.35 tsf) (LEL=0.0, OVM=0.0, OXY=19.0)	92	31				1.8 P 0.7 T	
45	45		4	30"		0 - 140 psi	--stiff (pp=1.5/1.75/2.0 tsf, tv=0.7/0.75 tsf)						1.8 P 1.5 T	
			5	30"		0 - 560 psi	--(LEL=0.0, OVM=0.0, OXY=18.2) (pp=1.5/1.25/2.0 tsf, tv=0.55/0.6 tsf) --stiff to very stiff (pp=2.0/2.5/2.25 tsf, tv=0.85/0.8 tsf)	91	30		39	16	1.6 P 1.2 T 1.0 U 2.3 P	

BORING DEPTH: 91.0 ft
DEPTH TO WATER: 13.5 ft., 2/9/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 8, 2005
COMPLETION DATE: February 9, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-08
SVRT DOWNTOWN
San Jose, California

FIGURE A1-9a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private Property near WB Santa Clara St. and 26th St. N 1,952,267 E 6,164,612 SURFACE EL: 90.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
35					MATERIAL DESCRIPTION							
55					LEAN CLAY WITH SAND (CL), stiff to very stiff, gray, moist, medium plasticity						1.7 T	PM test @ 53' and 54.5'
30				0 psi	--(pp=2.5/2.75/2.5 tsf, tv=0.7/0.75 tsf)	94	20		39	17	2.6 P 1.5 T 1.5 U	
25				0 psi	--no recovery in Shelby Tube sample at 66 ft, refusal after 6 inches							PM test @ 63' and 64.5'
20				2000 psi	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown, moist, fine grained sand, subrounded gravel up to 1 1/4 inches, interbedded layers of poorly graded sand (LEL=0.0, OVM=0.0, OXY=18.9)							
15				(80)	--Ended drilling on 2/8/05 at 66 ft --Began drilling on 2/9/05 at 66 ft							
10				(87)	--subrounded gravel up to 1 inch							PM test @ 73.5' and 75'
5				(83)	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), dense, brown, moist, subrounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=18.6)							
0				(92/11.5")	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown and gray, moist, fine to coarse grained sand, subrounded gravel up to 1 1/2 inch	7		12				
-5				(70/6")								

BORING DEPTH: 91.0 ft
DEPTH TO WATER: 13.5 ft., 2/9/05

START DATE: February 8, 2005
COMPLETION DATE: February 9, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-08
SVRT DOWNTOWN
San Jose, California

FIGURE A1-9b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., west of 25th St. N 1,951,907 E 6,164,407 SURFACE EL: 91.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
				MATERIAL DESCRIPTION							
90	0-0			10 inches ASPHALT CONCRETE over 14 inches PORTLAND CEMENT CONCRETE							
85	0-0			LEAN CLAY (CL), brown, moist, low plasticity							
80											
75											
70											
65											
60											
55											
50		1 30"	300 psi	FAT CLAY (CH), medium to stiff, gray, moist, medium to high plasticity (pp=1/1.25/1.5 tsf, tv=0.22/0.42 tsf)						1.3 P 0.6 T	
45		2 30"	450 psi	--stiff (pp=1.5/2/1.5 tsf, tv=0.62/0.82 tsf)						1.7 P 1.4 T	

BORING DEPTH: 101.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 3, 2005
COMPLETION DATE: January 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-09
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-10a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., west of 25th St. N 1,951,907 E 6,164,407 SURFACE EL: 91.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
MATERIAL DESCRIPTION														
	40		3	30"		450 psi	--stiff to very stiff (pp=2/2/2 tsf, tv=0.62/0.92 tsf) (LEL=0.0, OVM=0.0)	93	29				2.0 P 1.5 T 2.1 U	
	55		4	30"		900 psi	--medium (pp=0.5/0.75/0.5 tsf, tv=0.27/0.42 tsf) (LEL=0, OVM=0) disturbed sample LEAN CLAY (CL), stiff to very stiff, brown, moist, low plasticity (LEL=0, OVM=0)						0.6 P 0.7 T	
	60		5	30"		900 psi	--(pp=2/2.25/2 tsf, tv=0.89/>1 tsf) SILTY SAND TO SANDY SILT (SM/ML), very dense, brown, wet, fine to medium grained sand, non-plastic, refusal after 12 inches	95	28				2.1 P 1.9 T 0.7 U	
	65		6	12"		1500 psi		101	24	49				
	70		7	15"	X	42	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown, wet, fine to coarse grained sand --Ended drilling on 1/3/05 at 71.5 ft --Began drilling on 1/4/05 at 71.5 ft		13	8				
	75		8	10"	X	46	--lost drilling fluid at 78 ft		12	7				
	80		9	12"	X	44	--subrounded gravel up to 1/4 inch (LEL=0, OVM=0)		12	7				
	85		10	12"	X	54	--very dense		13	7				
	90		11	10"	X	77	--angular gravel up to 1/2 inch		9	10				
	95		12	12"	X	51	--subrounded gravel up to 1/4 inch		12	8				
			X	0"		975 psi	--no recovery in Shelby Tube sample at 97.5 ft LEAN CLAY (CL), very stiff, gray, moist, medium							

Continued

BORING DEPTH: 101.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 3, 2005
COMPLETION DATE: January 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-09
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-10b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., west of 25th St. N 1,951,907 E 6,164,407	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 91.0 ft (1988 NAVD datum)							
-10		13 18"		23	plasticity							
105												
-15												
110												
-20												
115												
-25												
120												
-30												
125												
-35												
130												
-40												
135												
-45												
140												
-50												
145												
-55												

BORING DEPTH: 101.5 ft
 DEPTH TO WATER: Not Measured

START DATE: January 3, 2005
 COMPLETION DATE: January 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Automatic Trip
 RIG TYPE: Fraste Multidrill XL
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: R. Au
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-09
 SVRT DOWNTOWN
 San Jose, California**

FIGURE A1-10c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 23rd St. and 24th St. N 1,951,658 E 6,163,971	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
							SURFACE EL: 91.7 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	90						1 inch ASPHALT CONCRETE over 6 inches PORTLAND CEMENT CONCRETE over 18 inches AGGREGATE BASE, wood fragments and base rock							
	5						LEAN CLAY WITH SAND (CL), brown to dark brown							
	85													
	10													
	80													
	15													
	75													
	20						--brown							
	70													
	25						GRAVELLY LEAN CLAY TO SANDY LEAN CLAY (CL), fine gravel							
	65						LEAN CLAY WITH SAND (CL)							
	30													
	60													
	35						SANDY LEAN CLAY (CL)							
	55						LEAN CLAY WITH SAND (CL), brown to dark brown							
	40													
	50													
	45			1	29"	100 psi	LEAN CLAY (CL), stiff, gray to brown, moist, medium plasticity (pp=1.5/1.5/1.75 tsf, tv=0.45/0.5 tsf)						1.6 P 1.0 T	

BORING DEPTH: 105.5 ft
 DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: L. Bhangoo
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 7, 2005
 COMPLETION DATE: January 8, 2005
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-10
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-11a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 23rd St. and 24th St. N 1,951,658 E 6,163,971	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
						SURFACE EL: 91.7 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
40	27"		2		100 psi	--(LEL=0.0, OVM=0.0, OXY=19.2) --stiff (pp=2/1.5/2 tsf, tv=0.35/0.4 tsf)						1.8 P 0.8 T	
55	30"		3		100 - 200 psi	--stiff to very stiff, gray (LEL=0.0, OVM=0.0, OXY=19.6) (pp=3.75/3.5/3.5 tsf, tv=0.6/0.6 tsf)						>2.1 V	vs > 2100 psf Noise and Vibration Tests
35	30"		4		100 psi	--very stiff							
60	30"		5		100 psi	--(pp=2.5/3.0/3.0 tsf, tv=0.8/0.7 tsf)	105	21		36	16	3.6 P 1.2 T 1.6 U	
30	30"		6		300 psi	--Ended drilling on 1/7/05 at 62.5 ft --Began drilling on 1/8/05 at 62.5 ft						2.8 P 1.5 T	Noise and Vibration Tests
65	30"		7		100 psi	SILTY CLAY (CL-ML), medium to very stiff, greenish gray, moist (pp=2.75/2.5/2.75 tsf, tv=0.4/0.4 tsf) (LEL=0.0, OVM=0.0, OXY=20.2)	113	14		25	4	2.7 P 0.8 T 0.9 U	
25	6"		8		(88)	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown to gray, wet, medium grained subrounded gravel up to 1 1/2 inches		8	5				
70	6"		9		(50/6")	--very dense							
75	6"		10		(50/3")	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, brown to gray, subrounded gravel up to 2 1/2 inches borehole caved in at 78 ft		8	8				
80	6"		11		(50/4.5")	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, moist, medium grained rounded gravel							
85	10.5"		12		(50/4")								
90	10"		13		(73)	SILTY SAND WITH CLAY (SM), very dense, brown to gray, moist, clay pockets							
95	18"		14			LEAN CLAY WITH SAND (CL), hard, brown to gray, moist, medium plasticity							
-5			15		100 psi								

BORING DEPTH: 105.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 7, 2005
COMPLETION DATE: January 8, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-10
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-11b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 23rd St. and 24th St. N 1,951,658 E 6,163,971	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 91.7 ft (1988 NAVD datum)							
MATERIAL DESCRIPTION												
-10		30		200 psi	LEAN CLAY WITH SAND (CL), hard, brown to gray, moist, medium plasticity							
105		13 17		(95/11")	POORLY GRADED SAND (SP), very dense, brown to gray, wet, fine grained sand							
-15												
-110												
-20												
-115												
-25												
-120												
-30												
-125												
-35												
-130												
-40												
-135												
-45												
-140												
-50												
-145												
-55												

BORING DEPTH: 105.5 ft
 DEPTH TO WATER: Not Measured

START DATE: January 7, 2005
 COMPLETION DATE: January 8, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: L. Bhangoo
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-10
SVRT DOWNTOWN
San Jose, California

FIGURE A1-11c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 22nd St. and 23rd St. N 1,951,527 E 6,163,743 SURFACE EL: 91.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
90	[Hatched]				4 inches ASPHALT CONCRETE							
					LEAN CLAY (CL) (FILL) over 2 to 3 inches CONCRETE over 1 ft wood debris over poorly graded gravel with sand							
5	[Hatched]				LEAN CLAY (CL), medium, gray, medium plasticity, trace fine grained sand and subangular gravel up to 1/2 inch							
85												
10					--increase in fine grained to medium grained sand and fine gravel							
80	[Hatched]				FAT CLAY (CH), stiff, brown, high plasticity, trace fine grained sand							
15												
75	[Hatched]				LEAN CLAY (CL), medium to stiff, yellowish brown, medium plasticity, trace fine to medium grained sand							
20					--grayish brown at 19 ft --brown at 21 ft							
70												
25												
65												
30	[Hatched]				FAT CLAY (CH), stiff, grayish brown, high plasticity, trace fine grained sand							
60												
35												
55												
40	[Hatched]				SILT (ML), medium, grayish brown, low plasticity, trace fine to medium grained sand							
50					FAT CLAY (CH), stiff, grayish brown, moist, high plasticity, trace fine grained sand							
45												
45					--(LEL=0.0, OVM=0.0, OXY=20.9)							

Continued

BORING DEPTH: 110.0 ft
DEPTH TO WATER: 13.8 ft., 1/19/2005

START DATE: January 18, 2005
COMPLETION DATE: January 19, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-11
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-12a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 22nd St. and 23rd St. N 1,951,527 E 6,163,743	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 91.5 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	40		1 24"		100 psi	--stiff to very stiff, mottled gray and brown (pp=2.5 tsf, tv=0.45/0.9 tsf) (OVM=1.9)			100			2.5 P 1.4 T	
			2 30"		100 psi	--grayish brown (pp=2.0 tsf, tv=0.6/0.725 tsf)							
	55		3 30"		100 -							2.0 P 1.3 T	
	35		4 30"		150 psi	--stiff, mottled gray and brown (pp=1.4/1.6 tsf, tv=0.55/0.65 tsf)						1.5 P 1.2 T	
			5 30"		150 psi	--very stiff, grayish brown, decrease in plasticity (pp=2.5/2.75 tsf, tv=0.65/0.75 tsf)						2.6 P 1.4 T	
	60		6 28"		150 psi	LEAN CLAY (CL), very stiff, grayish brown, moist, medium plasticity, trace fine grained sand (pp=3.25 tsf, tv=0.7/0.8 tsf)	105	24					
	30		7 27"		150 psi	--(pp=3.0 tsf, tv=0.5/0.7 tsf) (OVM=0.8)			99			3.3 P 1.5 T	
	65		8 30"		150 psi	--olive brown (pp=2.0/2.5 tsf, tv=0.75/0.85 tsf)						3.0 P 1.2 T	
	25		9 30"		150 psi	--Ended drilling on 1/18/05 at 68.5 ft --Began drilling on 1/19/05 at 68.5 ft --(pp=2.5/2.75 tsf, tv=0.7/0.75 tsf) (LEL=0.0, OVM=0.4, OXY=20.7)	103	25				2.3 P 1.6 T	
	70		10 21"		150 psi	--hard, mottled grayish brown and gray (pp=>4.5 tsf, tv=0.85 tsf)			100			2.6 P 1.5 T	
	20		11 30"		150 psi	--very stiff, grayish brown, fine to coarse grained sand and fine gravel up to 1/4 inch (pp=2.5/3.5 tsf, tv=0.75/0.85 tsf) (LEL=0.0, OVM=0.0, OXY=20.6)			97			>4.5 P 1.7 T	
	75		12 15"		150 psi	--with sand at 76.5 ft			98			3.0 P 1.6 T	
	15		13 15"		(50/6")	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, grayish brown, moist, subangular to rounded gravel up to 1 1/4 inch		9	84				
	80		14 13"		(96/11")	WELL-GRADED GRAVEL WITH SAND (GW), very dense, brown, moist, subangular to rounded gravel up to 1 1/4 inch							
	10		15 8"		(60)	WELL-GRADED GRAVEL WITH SAND (GW), very dense, brown, moist, subangular to rounded gravel up to 1 inch (LEL=0.0, OVM=6.6, OXY=20.9)							
	85		16 12"		100 - 150 psi	SANDY LEAN CLAY (CL), stiff to hard, brown, moist, low to medium plasticity, fine to medium grained sand			80				
	5		17 9"		(50/5")	SILTY SAND WITH GRAVEL (SM), very dense, brown, moist, fine to medium grained sand	112	18	13				
	90		18 15"		(75)	WELL-GRADED SAND WITH GRAVEL (SW), brown, moist, gravel up to 1/2 inch							
	0		19 12"		(94/11")	POORLY GRADED SAND (SP), dense, brown, moist, fine to coarse grained		9	10				
	95		20 14"		(33)	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, moist, fine to coarse grained sand, gravel up to 1 1/4						2.9 P 0.8 T	
	-5		21 24"		150 psi		110	21	99			4.3 P 0.9 T	

Continued

BORING DEPTH: 110.0 ft
DEPTH TO WATER: 13.8 ft., 1/19/2005

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 18, 2005
COMPLETION DATE: January 19, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-11
SVRT DOWNTOWN
San Jose, California

FIGURE A1-12b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 22nd St. and 23rd St. N 1,951,527 E 6,163,743	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
							SURFACE EL: 91.5 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
						200 psi	inch (LEL=0.0, OVM=0.9, OXY=20.9)							
	-10		21	30"		150 psi	LEAN CLAY (CL), very stiff, brown, moist, medium plasticity, trace fine grained sand (pp=2.25/3.5 tsf, tv=0.4 tsf) at 96 ft			98			>4.5 P 1.8 T	
	-10.5		22	30"		150 psi	--hard, mottled grayish brown and brown (pp=4.0/4.5 tsf, tv=0.4/0.45 tsf) (LEL=0.0, OVM=0.0, OXY=20.9) at 99.5 ft			92			4.3 P 1.5 T	
	-15		23	30"		150 psi	--(pp=>4.5 tsf, tv=0.9) at 102.5 ft						4.4 P 1.8 T	
	-11.5		24	30"		150 psi	SILT (ML), hard, olive brown, moist, medium plasticity, trace fine grained sand (pp=4.0/>4.5 tsf, tv=0.7/0.8 tsf)						4.4 P 1.2 T	
	-20						LEAN CLAY (CL), hard, olive brown, moist, medium plasticity, trace fine grained sand (pp=4.25/4.5 tsf, tv=0.9 tsf) at 107.5 ft							
	-115						--(pp=4.25/>4.5 tsf, tv=0.55/0.6 tsf) at 110 ft							
	-25													
	-30													
	-35													
	-40													
	-45													
	-50													
	-55													

BORING DEPTH: 110.0 ft
 DEPTH TO WATER: 13.8 ft., 1/19/2005

START DATE: January 18, 2005
 COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-11
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-12c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/PRESSURE, psi	LOCATION: WB Santa Clara St., between 20th St. and 21st St. N 1,951,172 E 6,163,123	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 93.2 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	90						9 inches ASPHALT CONCRETE over 9 inches PORTLAND CEMENT CONCRETE							
	5						AGGREGATE BASE, reddish brown, dry, angular gravel up to 2 inches							
	85						SILT (ML), light brown, dry, low plasticity							
	10													
	80													
	15													
	75						▽							
	20						Gravel layer							
	70						SANDY LEAN CLAY (CL), brown, moist, fine grained sand, medium plasticity							
	25													
	65													
	30		1	30"		0 psi								
	60					200 psi	SANDY SILT (ML), medium, brown, moist, non-plastic to low plasticity, fine grained sand (pp=0.5/0.5/0.75 tsf, tv=0.25/0.27/0.32 tsf)	96	29				0.6 P 0.6 T	
	35		2	29"		100 psi	LEAN CLAY (CL), very stiff, mottled brown with gray, moist, low plasticity, trace fine grained sand at the top of the sample (pp=2.5/2.5/3 tsf, tv=0.85/0.9/0.8 tsf)	102	13				2.4 P 1.7 T	
	55					225 psi								
	40		3	29"		100 psi	SANDY SILT TO SANDY LEAN CLAY (ML/CL), medium, grayish brown, wet, low plasticity, fine grained sand (pp=0.5/0.5 tsf, tv=0.25/0.3/0.3 tsf)	94	31	70	35	11	0.6 P 0.6 T	
	50					125 psi								
	45		4	30"		100 psi								
	45					250 psi	--gray (pp=1/1/1 tsf, tv=0.28/0.32/0.37 tsf)	86	37				1.0 P 0.7 T	
							FAT CLAY (CH), very stiff, gray, moist							

Continued

BORING DEPTH: 121.5 ft
 DEPTH TO WATER: 18.0 ft., 11/23/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 22, 2004
 COMPLETION DATE: December 12, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-12
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-13a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	LOCATION: WB Santa Clara St., between 20th St. and 21st St. N 1,951,172 E 6,163,123	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 93.2 ft (1988 NAVD datum)							
					MATERIAL DESCRIPTION							
	40		5 30"	100 psi	FAT CLAY (CH), very stiff, high plasticity						>2.1 V	vs>2089 psf
				275 psi	LEAN CLAY (CL), stiff, gray, moist, low plasticity (pp=1.5/1.25 tsf, tv=0.5/0.55 tsf) --Ended drilling on 11/22/04 at 52.5 ft --Began drilling on 11/23/04 at 52.5 ft	98	27				1.4 P 1.0 T	
	55		6 30"	100 psi	FAT CLAY (CH), dark gray, high plasticity							
	35			300 psi	LEAN CLAY (CL), stiff, gray, moist, medium plasticity (pp=1.5/1.5/1.75 tsf, tv=0.75/0.9/0.83 tsf) (LEL=0, OVM=0)	89	32				1.6 P 1.7 T	
	60		7 20"	50 psi	FAT CLAY (CH), hard, gray with mottled brown, moist, high plasticity (pp=2.25/2.5/2.5 tsf) --Ended drilling on 11/23/04 at 59 ft --Began drilling on 12/11/04 at 59 ft						2.4 P	
	30			100 psi								
	65		8 30"	50 psi	SILT TO LEAN CLAY (ML/CL), very stiff, gray with mottled brown, medium plasticity (pp=2.25/2.5/2.5 tsf, tv=0.9/1.0 tsf)	95	29		34	11	2.4 P 1.9 T	
	25			100 psi								
	70		9 26"	50 psi	--medium, mottled brown, wet, with sand, trace subrounded gravel up to 1 inch							
	20			100 psi	WELL-GRADED SAND (SW), mottled brown, wet, fine to medium grained, trace subrounded gravel up to 1 inch	96	25	85			0.8 U	
	75		10 15"	53	CLAYEY SAND (SC), very dense, mottled brown, moist, fine grained sand, trace gray silty sand/sandy silt seam --Ended drilling on 12/11/04 at 75.5 ft --Began drilling on 12/12/04 at 75.5 ft							
	15			53								
	80		11 9"	53	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, wet, fine gravel, lost drilling fluid		13	5				
	10			53								
	85		12 27.5"	50 psi	LEAN CLAY WITH SAND (CL), very stiff, brown with gray, moist, medium plasticity (pp=4.25/4.0/3.5 tsf) (LEL=0, OVM=0)	103	23		33	13	1.5 U 3.8 P	
	5			100 psi								
	90		13 13"	60	CLAYEY SAND WITH GRAVEL (SC), very dense, gray and brown, moist to wet, fine to medium grained sand, trace fine sand seam --interbedded clay/gravel at 88 ft							
	0			60								
	95		14 9"	50/5.5"	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, mottled brown, wet, angular to subrounded gravel up to 3/4 inch (refusal after 12 inches)		9	6				
	-5			69								

Continued

BORING DEPTH: 121.5 ft
DEPTH TO WATER: 18.0 ft., 11/23/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 22, 2004
COMPLETION DATE: December 12, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-12
SVRT DOWNTOWN
San Jose, California

FIGURE A1-13b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 20th St. and 21st St. N 1,951,172 E 6,163,123 SURFACE EL: 93.2 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-10		16 8"	⊗	61	--mottled brown and dark gray --lost drilling fluid							
105		17 4"	⊗	61	--mottled brown, fine gravel, trace rock fragment at the shoe.		11	6				
-15					--brown, increase in clay content							
-20		18 16"	⊗	300 psi	LEAN CLAY (CL), hard, gray, moist, medium plasticity (refusal after 18 inches) --interbedded clay/sand	87	34					
115					GRAVEL layer							
-25		19 30"	⊗	350 psi	LEAN CLAY (CL), hard, brown, with mottled gray, moist, medium plasticity							
120					--(pp=2.75/3.5/2.5 tsf)						2.9 P	
-30												
125												
-35												
130												
-40												
135												
-45												
140												
-50												
145												
-55												

BORING DEPTH: 121.5 ft
DEPTH TO WATER: 18.0 ft., 11/23/2004

START DATE: November 22, 2004
COMPLETION DATE: December 12, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-12
SVRT DOWNTOWN
San Jose, California

FIGURE A1-13c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW/COUNT/PRESSURE, psi	LOCATION: EB Santa Clara St. and 19th St. N 1,950,866 E 6,162,592 SURFACE EL: 95.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
95					MATERIAL DESCRIPTION							
					12 inches ASPHALT CONCRETE over 6 inches PORTLAND CEMENT CONCRETE over 12 inches AGGREGATE BASE							
	5				LEAN CLAY WITH SAND (CL), brown							
90												
	10											
85												
	15											
80					--lost approximately 300 gallons of drilling fluid							
	20				WELL-GRADED SAND WITH GRAVEL (SW), fine to coarse grained gravel							
					LEAN CLAY WITH SAND (CL), brown							
75					▽ --fine to coarse grained sand							
	25				▽							
70												
	30											
65												
	35											
60												
	40											
55					--gray							
	45											
50												

BORING DEPTH: 131.5 ft
 DEPTH TO WATER: 25.0 ft., 1/14/2005, 21.0 ft., 1/15/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Automatic Trip
 RIG TYPE: Fraste Multidrill XL
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: L. Bhangoo/P. Chan
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 13, 2005
 COMPLETION DATE: January 15, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-13
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-14a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St. and 19th St. N 1,950,866 E 6,162,592 SURFACE EL: 95.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
				MATERIAL DESCRIPTION							
45				LEAN CLAY WITH SAND (CL), gray							
55											
60											
65				--gravel at 66.5 ft --brown							
70		1 12"	(90)	SILTY SAND WITH GRAVEL (SM), dense, brown, moist, trace subrounded reddish gravel up to 1 1/2 to 2 inches							
75		2 12"	(81)	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown, moist (LEL=0.0, OVM=0.0, OXY=20.2)		8	6				
80		3 8"	(36)	POORLY GRADED SAND WITH GRAVEL (SP), medium dense, brown to gray, moist, subrounded gravel up to 1 1/2 to 2 inches							
85		4 12"	(98/11.5")	WELL-GRADED SAND WITH GRAVEL (SW), very dense, brown to gray, moist, subrounded gravel to 1 1/2 inches							
90		5 16"	(64)	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, gray, moist, subrounded gravel up to 1 1/2 inches		9	6				
95		6 16"	(90)	--lost approximately 200 gallons of drilling fluid at 90 ft to 95 ft WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, moist, subrounded gravel up to 1 1/2 inches							PM test @ 93.5'
				SANDY SILT TO SILTY SAND (ML/SM), stiff							

Continued

BORING DEPTH: 131.5 ft
DEPTH TO WATER: 25.0 ft., 1/14/2005, 21.0 ft., 1/15/2005

START DATE: January 13, 2005
COMPLETION DATE: January 15, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo/P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-13
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-14b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St. and 19th St. N 1,950,866 E 6,162,592 SURFACE EL: 95.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-5		10"		(15) 150 psi	SANDY SILT TO SILTY SAND (ML/SM), stiff, gray, moist, fine grained sand, trace peat --refusal after pushing Shelby Tube sample 8 inches at 101.5 ft		29	52				
-10		10"		(50/6")	CLAYEY SAND WITH GRAVEL (SC), very dense, grayish brown, wet, moist, subrounded gravel up to 1/2 inch --Ended drilling on 1/14/05 at 105 ft --Began drilling on 1/15/05 at 105 ft							
-15		10"		(46)	WELL-GRADED SAND WITH GRAVEL (SW), medium dense, grayish brown, wet, medium to coarse grained sand, rounded to subrounded gravel up to 1/4 inch (LEL=0.0, OVM=0.0, OXY=20.8)	118	13	4				
-20		11"		(70)	SILTY SAND (SM), dense, grayish brown, wet, fine grained sand							PM test @ 114.5' and 116'
-25		12"		100 - 1400 psi	SANDY LEAN CLAY WITH GRAVEL (CL), very stiff to hard, light brown, moist (pp=3.5/3.7/>4.5 tsf)	119	16				3.9 P 2.0 U	
-30		12"			SILTY CLAY (CL-ML), stiff to very stiff, grayish brown, wet, refusal after 24 inches (pp=1.9/2.0/2.1 tsf, tv=0.55/0.48 tsf) --(LEL=0.0, OVM=0.0, OXY=20.8) --gravelly at 123.5 ft						2.0 P 1.0 T	
-35		13"		(95/6")	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, reddish brown, wet, subrounded to subangular gravel up to 3/4 inch	127	11	6				
-40		14"		(90/11.5")	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), very dense, grayish brown, wet, subrounded to subangular gravel up to 1/4 inch							
-45												
-50												

BORING DEPTH: 131.5 ft
DEPTH TO WATER: 25.0 ft., 1/14/2005, 21.0 ft., 1/15/2005

START DATE: January 13, 2005
COMPLETION DATE: January 15, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo/P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-13
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-14c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW/COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 17th St. and 19th St. N 1,950,779 E 6,162,444	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 94.6 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
							9 inches ASPHALT CONCRETE over 8 inches PORTLAND CEMENT CONCRETE							
							SILT (ML), brown, moist, low plasticity, trace subrounded gravel up to 1 inch at 2 ft							
							--low to medium plasticity							
							CLAYEY SAND (SC), fine with some medium to coarse grained sand							
							LEAN CLAY (CL), brown, low plasticity							
							∇							
							FAT CLAY (CH), grayish brown, medium to high plasticity							
							--sandy layer up to 1 ft thick							
							--trace silt							

BORING DEPTH: 127.0 ft
 DEPTH TO WATER: 20.0 ft., 1/6/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Automatic Trip
 RIG TYPE: Fraste Multidrill XL
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang

START DATE: January 5, 2005
 COMPLETION DATE: January 6, 2005
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-14
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-15a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 17th St. and 19th St. N 1,950,779 E 6,162,444 SURFACE EL: 94.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
40	55	[Hatched pattern]			FAT CLAY (CH), grayish brown, medium to high plasticity --gray							
35	60	[Hatched pattern]										
30	65	[Hatched pattern]										
25	70	[Hatched pattern]	1 15"	45	CLAYEY SAND (SC), dense, grayish brown, wet, fine to medium grained, trace gravel fragments		11	13				
20	75	[Dotted pattern]	2 10"	61	POORLY GRADED SAND WITH GRAVEL (SP), very dense, mottled brown, moist, fine grained sand, subrounded gravel up to 1/4 inch							
15	80	[Dotted pattern]	3 12"	39	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, mottled reddish brown, moist to wet, fine to medium grained sand, subrounded gravel up to 1/2 inch		11	6				
10	85	[Dotted pattern]	4 9"	54	--very dense, mottled brown, wet, fine gravel							
5	90	[Dotted pattern]	5 9"	(57)	--medium dense, mottled brown, subrounded gravel up to 2 inches, trace clay pockets (LEL=0.0, OVM=0.0)		10	5				
0	95	[Dotted pattern]	6 10"	(99/11")	--very dense, fine to medium grained gravel (LEL=0.0, OVM=0.0) --Ended drilling on 1/5/05 at 96.5 ft --Began drilling on 1/6/05 at 96.5 ft		9	9				
-5												

BORING DEPTH: 127.0 ft
DEPTH TO WATER: 20.0 ft., 1/6/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidril XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang

START DATE: January 5, 2005
COMPLETION DATE: January 6, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-14
SVRT DOWNTOWN
San Jose, California

FIGURE A1-15b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 17th St. and 19th St. N 1,950,779 E 6,162,444 SURFACE EL: 94.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-10		9	(96/10")		SILTY SAND WITH GRAVEL (SM), very dense, mottled brown, wet, fine grained gravel up to 1/4 inch (LEL=0.0, OVM=0.0, OXY=20.8)	130	8	17				
-105		8	(50/6")		POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), subrounded gravel up to 1/2 inch, fine to medium grained sand (LEL=0.0, OVM=0.0, OXY=20.8)		12	5				
-110		9	(50/5.5")		POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, mottled brown, wet, subrounded gravel to 1/2 inch (LEL=0.0, OVM=0.0, OXY=20.8)		13	5				
-115		10	(50/4")		--medium grained sand, trace silt		11	3				
-120		11	(75)		--borehole caved in at 118 ft, trace silty clay at 118 ft to 119 ft --dense, yellowish brown, moist to wet							
-125		12	(Ref/3")	91	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, mottled brown, moist, subrounded gravel up to 1 inch		7					
-130		13										
-135												
-140												
-145												
-150												
-155												

BORING DEPTH: 127.0 ft
DEPTH TO WATER: 20.0 ft., 1/6/2005

START DATE: January 5, 2005
COMPLETION DATE: January 6, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang

LOG OF BORING NO. BH-14
SVRT DOWNTOWN
San Jose, California

FIGURE A1-15c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	LOCATION: NB 17th St., South of Santa Clara St. N 1,950,550 E 6,162,210	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 92.0 ft (1988 NAVD datum)							
					MATERIAL DESCRIPTION							
					8 inches ASPHALT CONCRETE							
					SANDY SILT (ML), brown, low plasticity, fine grained sand							
					-lost drilling fluid							
					FAT CLAY (CH), mottled brown, high plasticity							
					▽							
					LEAN CLAY (CL), brown, low to medium plasticity							
					SAND layer							
					FAT CLAY (CH), gray, high plasticity							

BORING DEPTH: 128.0 ft
 DEPTH TO WATER: 24.0 ft., 12/23/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: December 10, 2004
 COMPLETION DATE: December 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-15
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-16a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB 17th St., South of Santa Clara St. N 1,950,550 E 6,162,210	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 92.0 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	40					FAT CLAY (CH), gray, high plasticity							
	55												
	35												
	60												
	30												
	65												
	25												
	70		1	9"	100 psi	--trace fine grained sand and subrounded gravel up to 1 1/2 inches (refusal after 12 inches)		42					
	20		2	12"	250 psi	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), very dense, mottled brown, moist to wet, fine to medium grained, subrounded gravel up to 1/4 inch		11	10				
	75		3	9"	48	--dense, subrounded up to 1/2 inch							
	15		4	15"	50	--very dense, mottled brown and lens of reddish, moist, subangular gravel up to 1/2 inch							
	80		5	10"	68			9	9				
	10		6	10"	65								
	85		7	9"	64	--medium grained gravel, angular to subangular sandstone fragments							
	5		8	7"	40	--dense, brown, wet, fine grained, trace 2 inches lean clay lens							
	90		9	3"	50/5"	--Ended drilling on 12/12/04 at 89 ft --Began drilling on 12/13/04 at 89 ft							
	0		10	2"	55	--very dense, brown and gray, wet, angular gravel below 90 ft (LEL=0, OVM=0)							Noise and Vibration Tests
	95		11	4"	50/6"	CLAYEY GRAVEL WITH SAND (GC), very dense, mottled brown, moist to wet, fine to medium grained sand (LEL=0, OVM=0)							
	-5		12	6.5"	50/6"	--brown, wet (LEL=0, OVM=0)							Noise and Vibration Tests

BORING DEPTH: 128.0 ft
 DEPTH TO WATER: 24.0 ft., 12/23/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: December 10, 2004
 COMPLETION DATE: December 14, 2004
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-15
 SVRT DOWNTOWN
 San Jose, California**

FIGURE A1-16b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB 17th St., South of Santa Clara St. N 1,950,550 E 6,162,210	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 92.0 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	-10		13	13"	⊗	47	--dense, increasing fine content (LEL=0, OVM=0)		12	14				
			14	14"	⊗	80	--Ended drilling on 12/13/04 at 101.5 ft							
			11	11"	⊗		--Began drilling on 12/14/04 at 101.5 ft							
	105		15	9"	⊗	41	--very dense, trace lens of fine grained sand (LEL=0, OVM=0)							
	-15		16	30"	⊗	100 -	SILT (ML), hard, brown, trace fine grained sand, no recovery in SPT sampler at 105 ft			90				
			30	30"	⊗	200 psi				81			>4.5 P	
	110		17	6"	⊗	60	--moist, with sand at 109 ft (pp>4.5 tsf) (LEL=0, OVM=0)							
	-20		18	13"	⊗	75	SILTY SAND (SM), very dense, no recovery in SPT sampler at 110 feet							
			13	13"	⊗		--reddish brown, moist, fine grained sand							
	115		19	18"	⊗	36	--dense, brown, moist to wet		32	30				
	-25		20	50/5"	⊗		--very dense, brown, wet, cemented							
	120		21	50/6"	⊗		WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, wet, fine grained, subangular gravel to 1/4 inch							
	-30		22	50/6"	⊗		--medium to coarse grained sand, fine grained gravel		12	9				
	125		23	50/6"	⊗		--mottled gray and brown, fine grained sand							
	-35		24	50/6"	⊗									
	130													
	-40													
	135													
	-45													
	140													
	-50													
	145													
	-55													

BORING DEPTH: 128.0 ft
 DEPTH TO WATER: 24.0 ft., 12/23/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: December 10, 2004
 COMPLETION DATE: December 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.
 2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-15
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-16c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 15th St. and 16th St. N 1,950,382 E 6,161,773 SURFACE EL: 85.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
85					9 inches ASPHALT CONCRETE over 7 inches PORTLAND CEMENT CONCRETE							
80					POORLY GRADED GRAVEL (GP), angular to subrounded gravel up to 3 inches with concrete rubble, wood fragments; possible railroad debris (FILL)							
75					LEAN CLAY (CL), stiff, brown, moist, medium plasticity, trace fine grained sand --yellowish brown at 5 ft							
70					WELL-GRADED SAND WITH GRAVEL (SW), brown to dark brown, subangular to rounded gravel up to 1/2 inch							
65					SILT (ML), medium to stiff, yellowish brown, low to medium plasticity, trace fine grained sand							
60					FAT CLAY (CH), stiff, brown, moist, high plasticity							
55					LEAN CLAY WITH SAND (CL), medium to stiff, yellowish brown to brown, medium plasticity, fine grained sand							
50					--brown to grayish brown							
45					--lost drilling fluid							
40					--bentonite added							
					LEAN CLAY (CL), medium to stiff, grayish brown, medium plasticity, trace fine grained sand							
					--gray							
					FAT CLAY (CH), stiff, gray, high plasticity, trace fine grained sand							

Continued

BORING DEPTH: 116.5 ft
DEPTH TO WATER: 14.0 ft., 1/27/05

START DATE: January 26, 2005
COMPLETION DATE: January 27, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-16
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-17a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 15th St. and 16th St. N 1,950,382 E 6,161,773	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 85.3 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
35													
	30		1	26"	100 psi	--very stiff, moist (pp=2.75/2.75/2.8 tsf, tv=0.72/0.77 tsf)	90	32				2.8 P 1.5 T	
					250 psi								
	25		2	26"	100 psi								
					300 psi	SANDY LEAN CLAY (CL), very stiff, gray, moist, low plasticity, fine grained sand							
	20		3	7"	300 psi	FAT CLAY (CH), soft to medium, gray, moist, medium plasticity, trace fine grained sand (pp=0.5/0.5/0.5 tsf, tv=0.21/0.27 tsf)	80	42		51	25	0.5 P 0.5 T	
	15		4	7"	(50/4")	WELL-GRADED GRAVEL WITH SAND (GW), very dense, brown, wet, non-plastic, fine to coarse grained sand, subangular to rounded gravel up to 2 inches, lost drilling fluid, bentonite added (LEL=0.0, OVM=0.0, OXY=20.9) --Ended drilling on 1/26/05 at 65.5 ft --Began drilling on 1/27/05 at 65.5 ft							
	10		5	10"	(50/5")	--medium to coarse grained sand, subangular to rounded gravel up to 1 inch; more bentonite added		7	3				
	5		6	6"	(Ref/6")	--subangular to rounded gravel up to 2 inches (LEL=0.0, OVM=0.0, OXY=20.9)							
	0		7	20"	300 psi	FAT CLAY (CH), stiff to very stiff, gray, moist, high plasticity							
	-5		8	5"	(Ref/6")	SILT WITH SAND (ML), very stiff, gray, moist, low plasticity, fine grained sand (pp=3.6/4.0/4.0 tsf, tv=0.5/0.54 tsf)						3.9 P 1.0 T	
	-10		9	4"	(Ref/5")	CLAYEY GRAVEL (GC), very dense, dark brown, moist, non-plastic, subangular to rounded gravel up to 1/2 inch (LEL=0.0, OVM=0.0, OXY=20.9) --subangular to well-rounded gravel up to 1 inch		12	17				

BORING DEPTH: 116.5 ft
 DEPTH TO WATER: 14.0 ft., 1/27/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 26, 2005
 COMPLETION DATE: January 27, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-16
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-17b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 15th St. and 16th St. N 1,950,362 E 6,161,773 SURFACE EL: 85.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
				(46)	MATERIAL DESCRIPTION							
-15		10 18"			SILT TO LEAN CLAY (ML/CL), very stiff, light grayish brown, moist, medium plasticity, trace fine grained sand and subrounded gravel up to 1 1/4 inches	98	27		33	9	2.1 P 1.0 T	
-20		11 18"		200 psi	SILT WITH SAND (ML), stiff to very stiff, gray, moist, low plasticity, fine grained sand (pp=1.75/2.25/2.25 tsf, tv=0.46/0.5 tsf) --medium to stiff (pp=1.25/1.25/1.5 tsf, tv=0.27/0.3 tsf)						1.3 P 0.6 T	
-25		12 27.5"		275 psi	SILTY CLAY (CL-ML), very stiff, gray, moist, medium plasticity, trace fine grained sand SANDY SILT (ML), very stiff, gray, moist, low plasticity, fine grained sand (pp=2.3/2.5/2.5 tsf, tv=0.36/0.38 tsf)	100	26				2.4 P 0.7 T	
-30		13 18"		300 psi	SILTY SAND (SM), dense, brown, moist		26	32				
-35												
-40												
-45												
-50												
-55												
-60												

BORING DEPTH: 116.5 ft
DEPTH TO WATER: 14.0 ft., 1/27/05

START DATE: January 26, 2005
COMPLETION DATE: January 27, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-16
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-17c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 14th St. and 15th St. N 1,950,178 E 6,161,416	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
							SURFACE EL: 82.5 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	80						8 inches ASPHALT CONCRETE over 8 inches PORTLAND CEMENT							
	75						LEAN CLAY WITH SAND (CL), brown, low plasticity							
	70						FAT CLAY (CH), brown, high plasticity							
	65						▽							
	60						LEAN CLAY (CL), brown, medium plasticity							
	55						FAT CLAY (CH), gray, high plasticity							
	50													
	45													
	40													
	35													
				1	23"	100 psi								
						125 psi								
							--stiff, moist (pp=1.5/1.5/1.5 tsf, tv=0.9/0.92/0.95 tsf)						1.5 P 1.8 T	

Continued

BORING DEPTH: 107.5 ft
 DEPTH TO WATER: 14.0 ft., 12/9/2004

START DATE: December 8, 2004
 COMPLETION DATE: December 9, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-17
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-18a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 14th St. and 15th St. N 1,950,178 E 6,161,416 SURFACE EL: 82.5 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
30		2 30"		100 psi	--stiff to very stiff (pp=2.25/2.25/2.25 tsf, tv=0.9 tsf)	92	32				2.3 P 1.8 T 1.4 U	
55		3 30"	100 psi									
25				125 psi	SANDY SILT (ML), very stiff, mottled brown, moist, fine grained sand (pp=2.75/3.0/3.0 tsf) --trace clay	108	20	58			2.9 P	
60		4 9"		100 psi 300 psi	--brown, refusal after 12 inches --Ended drilling on 12/8/04 at 61 ft --Began drilling on 12/9/04 at 61 ft							
20				84	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), very dense, mottled brown, moist, fine to medium grained sand, subangular to subrounded gravel		9	7				
65		5 12"										
15				50/6"	--very dense, no recovery in SPT sampler at 70 ft, sandstone fragments stuck in the shoe							
70		6 0"										
10				300 - 150 psi	LEAN CLAY WITH SAND (CL), grayish brown, medium plasticity							
75		7 3"										
5				100 psi 150 psi	--very stiff, brown and gray, moist, low plasticity, fine grained sand (pp=3.25/2.5/2.5 tsf, tv>1.0 tsf)(LEL=0, OVM=0)	108	20				2.8 P >2.0 T 1.8 U	
80		8 30"										
0				100 psi 200 psi	--stiff, grayish brown, moist to wet (pp=1.25/1.5/1.25 tsf, tv=0.65/0.75/0.68 tsf) (LEL=0, OVM=0)						1.4 P 1.4 T	
85		9 30"										
-5				100 psi 200 psi	--very stiff, moist, medium plasticity (pp=2.25/2.25/2.25 tsf)	100	24				2.3 P	
90		10 26"										
-10				100 psi 150 psi	SANDY LEAN CLAY (CL), hard, gray, moist, low to medium plasticity, fine grained sand (pp>4.5 tsf)						>4.5 P	
95		11 30"										
-15												

BORING DEPTH: 107.5 ft
DEPTH TO WATER: 14.0 ft., 12/9/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: December 8, 2004
COMPLETION DATE: December 9, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-17
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-18b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 14th St. and 15th St. N 1,950,178 E 6,161,416 SURFACE EL: 82.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-20		12 12"		37	<p>MATERIAL DESCRIPTION</p> <p>--increase in sand content</p> <p>SILTY CLAY (CL-ML), hard, gray, moist, low plasticity</p>							
105		13 30"		100 psi	FAT CLAY (CH), very stiff, gray, moist, high plasticity							
-25				300 psi	<p>-(pp=3.5/3.5/>4.5 tsf)</p>						3.8 P	
-30												
-35												
-40												
-45												
-50												
-55												
-60												
-65												

BORING DEPTH: 107.5 ft
 DEPTH TO WATER: 14.0 ft., 12/9/2004

START DATE: December 8, 2004
 COMPLETION DATE: December 9, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-17
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-18c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St, between 12th St. and 13th St. N 1,949,899 E 6,160,931 SURFACE EL: 81.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
80	5					12 inches ASPHALT CONCRETE over 6 inches PORTLAND CEMENT CONCRETE over 6 inches AGGREGATE BASE over 4 inches PORTLAND CEMENT CONCRETE							
75						LEAN CLAY WITH SAND (CL), brown, medium plasticity							
65						--brown to gray							
40	40		1 30"		100 psi	FAT CLAY (CH), medium to stiff, gray, moist, medium to high plasticity (pp=1.0/1.0/1.5 tsf, tv=0.3/0.35 tsf)		36				1.2 P 0.7 T	
35	45		2 30"		100 psi 300 psi	LEAN CLAY (CL), medium to stiff, gray, moist, medium plasticity (pp=1.5/1.5/1.25 tsf, tv=0.35/0.3 tsf)(LEL=0.0, OVM=0.0, OXY=19.6)						1.4 P 0.7 T	

BORING DEPTH: 100.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoon
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 10, 2005
COMPLETION DATE: January 12, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-18
SVRT DOWNTOWN
San Jose, California

FIGURE A1-19a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St, between 12th St. and 13th St. N 1,949,899 E 6,160,931 SURFACE EL: 81.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS	
													MATERIAL DESCRIPTION
30		3 30"		100 psi	FAT CLAY (CH), stiff to very stiff, dark gray, moist, high plasticity (pp=2.5/2.5/2.75 tsf, tv=0.7/0.6 tsf)	89	31		54	27	2.6 P 1.3 T 1.0 U		
				500 psi									
55		4 30"		100 - 1500 psi	LEAN CLAY (CL), no recovery in Shelby Tube sample at 55 ft, refusal after 12 inches POORLY GRADED SAND WITH SILT (SP-SM), medium dense, brown, moist, trace fine to coarse subrounded gravel								
25		5 12"		(61)									
60					WELL-GRADED SAND WITH SILT (SW-SM), brown to gray, fine to coarse grained sand, trace subrounded gravel up to 1 1/2 inches --lost drilling fluid and borehole caved in at 62.5 ft --Ended drilling on 1/10/05 at 66 ft --Began drilling on 1/11/05 at 66 ft								
20													
65		6 12"		(82)	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown to gray, wet, subrounded gravel up to 1 1/2 inches, borehole caved in at 69 ft	7	6						
15													
70		7 30"		100 - 650 psi	LEAN CLAY WITH SAND (CL), very stiff, brown, moist, low plasticity, fine to coarse grained sand (pp=3.5/3.5/3.75 tsf, tv=0.45/0.5 tsf)(LEL=0.0, OVM=0.0, OXY=20.2) --disturbed sample at 71 ft --medium plasticity at 76 ft (pp=3.0/3.0/3.25 tsf, tv=0.55/0.5)	105	21	31	13	3.6 P 1.0 T	PM test @ 74.5' and 76'		
10		8 30"		100 - 650 psi									
75					--light gray --Ended drilling on 1/11/05 at 82.5 ft --Began drilling on 1/12/05 at 82.5 ft								
5													
80		9 30"		100 psi								PM test @ 86'	
0													
85					--very stiff, gray, low plasticity (pp=3.5/3.75/3.5 tsf, tv=0.4/0.35 tsf) --lost drilling fluid at 91 ft								
-5													
90		10 30"		100 psi	(LEL=0.0, OVM=0.0, OXY=20.1) --medium to high plasticity (pp=2.5/2.5/2.75 tsf, tv=0.6/0.65 tsf)						3.6 P 0.8 T		
-10													
95		11 30"		0 psi									
-15													
		12 29"		0 psi	--(pp=2.5/2.75/2.75 tsf, tv=0.7/0.8 tsf)								

BORING DEPTH: 100.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 10, 2005
COMPLETION DATE: January 12, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-18
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-19b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St, between 12th St. and 13th St. N 1,949,899 E 6,160,931 SURFACE EL: 81.0 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-20				400 psi							2.7 1.5	
105												
-25												
110												
-30												
115												
-35												
120												
-40												
125												
-45												
130												
-50												
135												
-55												
140												
-60												
145												
-65												

BORING DEPTH: 100.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 10, 2005
COMPLETION DATE: January 12, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-18
SVRT DOWNTOWN
San Jose, California

FIGURE A1-19c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 10th and 11th St. N 1,949,590 E 6,160,390 SURFACE EL: 80.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
80					10 inches ASPHALT CONCRETE over 7 inches PORTLAND CEMENT CONCRETE over 6 inches AGGREGATE BASE							
75	5				LEAN CLAY (CL) (FILL), stiff to very stiff, dark brown, moist, medium plasticity, trace fine grained sand, trace angular to subrounded gravel up to 3/4 inch							
70	10				LEAN CLAY (CL), stiff, brown, moist, medium plasticity, trace fine grained sand							
65	15				--grayish brown							
60	20				--yellowish brown, low plasticity							
55	25											
50	30		1 25"	100 psi	SILT WITH SAND (ML), medium to stiff, brown, low plasticity, fine grained sand							
45	35		2 26"	150 psi	FAT CLAY (CH), stiff, gray, moist, medium to high plasticity, trace fine grained sand, slight organic smell (pp=1.0/1.25/1.3 tsf, tv=0.31/0.34 tsf)	86	36				1.2 P 0.7 T	
40	40		3 27"	150 psi	--high plasticity, faint organic odor (pp=1.25/1.5/1.5 tsf, tv=0.63/0.6 tsf)						1.4 P 1.2 T	
35	45		4 24"	300 psi	--stiff to very stiff, trace fine grained sand (pp=1.4/1.6/1.8 tsf, tv=0.66/0.7 tsf)		44				1.6 P 1.4 T	
					--(pp=2.0/2.25/2.5 tsf, tv=0.83/0.88 tsf)	87	34				>2.1 V 2.3 P 1.7 T 1.5 U	vs>2089 psf Noise and Vibration test

Continued

BORING DEPTH: 91.5 ft
DEPTH TO WATER: 10.0 ft., 1/31/05

START DATE: January 28, 2005
COMPLETION DATE: January 31, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-19
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-20a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 10th and 11th St. N 1,949,590 E 6,160,390 SURFACE EL: 80.8 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
30	55	[Symbol]	5 24"	[Symbol]	300 psi		--(pp=2.25/2.5/2.6 tsf, tv=0.8/0.93 tsf) --Ended drilling on 1/28/05 at 52.5 ft --Began drilling on 1/31/05 at 52.5 ft						2.6 P 1.7 T	
25	60	[Symbol]	6 23"	[Symbol]	200 psi 300 psi		LEAN CLAY WITH SAND (CL), very stiff, mottled gray and brown, moist, medium plasticity, fine grained sand (pp=2.2/2.4/2.75 tsf, tv=0.58/0.64 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)						2.5 P 1.2 T	
20	65	[Symbol]	7 17"	[Symbol]	(88/11")		POORLY GRADED GRAVEL WITH SAND (GP) SILTY SAND (SM), very dense, brown, moist, fine grained, trace subrounded gravel up to 2 inches		12	16				Noise and Vibration test
15	70	[Symbol]	8 12"	[Symbol]	(79)		WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), dense, grayish brown, wet, subangular to rounded gravel up to 1 1/4 inches, lost drilling fluid (LEL=0.0, OVM=0.0, OXY=20.9)		7	6				
10	75	[Symbol]	9 17"	[Symbol]	(33)		--upward water flow at 70 ft during drilling for 10 to 15 minutes, caved in 70 ft to 75 ft LEAN CLAY (CL), very stiff to hard, brown to gray, moist, high plasticity, trace fine grained sand (pp=4.0/4.25/4.25 tsf)	102	23				4.2 P 2.1 T	Noise and Vibration test
5	80	[Symbol]	10 15"	[Symbol]	(79)		WELL-GRADED GRAVEL (GW), subangular to rounded gravel up to 1 1/4 inches							
0	85	[Symbol]	11 10"	[Symbol]	(50/4")		SILTY SAND (SM), dense, brown, moist, fine grained sand (LEL=0.0, OVM=0.0, OXY=20.7) WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, grayish brown, wet, fine to medium grained sand, angular to rounded gravel up to 1 1/2 inches --gravelly from 82 ft to 90 ft with slight cave-in and moderate loss of drilling fluid		7	8				
-5	90	[Symbol]	12 15"	[Symbol]	(35)		LEAN CLAY WITH GRAVEL (CL), very stiff, yellowish brown, moist, medium plasticity, trace fine to medium grained sand, angular to rounded gravel up to 3/4 inch (pp=1.4/1.8/2.1 tsf, tv=0.85/0.85 tsf)						1.6 P 1.7 T	

BORING DEPTH: 91.5 ft
DEPTH TO WATER: 10.0 ft., 1/31/05

START DATE: January 28, 2005
COMPLETION DATE: January 31, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-19
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-20b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Santa Clara St., between 9th St. and 10th St. N 1,949,413 E 6,160,084 SURFACE EL: 82.2 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
30		9 14"		100 - 200 psi	--with sand (LEL=0, OVM=0)			85			2.0 T 1.4 U	
55		10 23"		150 - 300 psi								
25		11 10"		69	LEAN CLAY WITH SAND (CL), very stiff, reddish brown, moist, low to medium plasticity, trace subrounded gravel up to 1 inch (pp=1.75/2 tsf) (LEL=0, OVM=0)		8	84			1.9 P	
60		12 12"		84	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, mottled reddish brown, moist, fine to medium grained sand, subrounded gravel up to 3/4 inch							
20		13 6"		50	--Ended drilling on 12/6/04 at 56.5 ft --Began drilling on 12/7/04 at 56.5 ft							
65		14 5"		49	--mottled brown, subrounded gravel up to 1/2 inch at 58 ft							
15		15 0"		13	--2 inch thick reddish seam, wet, fine grained sand at 61 ft							
70		16 4"		6	WELL-GRADED GRAVEL WITH SAND (GW), loose, mottled borwn, wet, fine gravel, no recovery in SPT at 65 ft, gravel stuck in shoe	15		4				
10		17 30"		100 psi	ORGANIC CLAY (OL), soft, brown, moist, low plasticity; void from 70 ft to 71 ft, trace brown organic matter at 70 ft	96	28	25	31	5	1.8 P 1.7 T	
75		18 9"		100 psi 300 psi	SILTY SAND WITH GRAVEL (SM), gray, moist SILT (ML), very stiff, gray, moist, trace roots (pp=1.75/2/1.5 tsf, tv=0.8/0.8/0.9 tsf) at 73.5 ft							
5		19 8"		50/6"	--refusal after 12 inches at 75 ft							
80		20 12"		58	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, mottled brown, wet, fine to medium grained sand, fine gravel		11	7				
85		21 6"		50/6"	--medium to coarse grained sand at 80 ft							
-5		22 18"		60	--fine to coarse grained sand, rock fragment stuck at the SPT shoe at 85 ft							

BORING DEPTH: 91.5 ft
DEPTH TO WATER: 11.0 ft., 12/7/2004

START DATE: December 6, 2004
COMPLETION DATE: December 7, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-20
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-21b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: SB 8th St., north of Santa Clara St. N 1,949,224 E 6,159,535 SURFACE EL: 81.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
80							8 inches ASPHALT CONCRETE							
	5						LEAN CLAY (CL), brown							
75														
	10						▽							
70							—more silty from 12 ft to 14.5 ft							
	15						—light brown							
65														
	20		1	30"		100 psi	SANDY LEAN CLAY (CL), stiff, brown, moist, low plasticity, fine to medium grained sand (pp=1.5/1.5/2 tsf, tv=0.3/0.4/0.45 tsf)						1.7 P 0.8 T	
60						150 psi								
	25		2	30"		50 psi	LEAN CLAY (CL), stiff, brown, moist, medium plasticity							
55						125 psi	--(pp=1.5/1.5/2 tsf, tv=0.47/0.52/0.65 tsf)						1.7 P 1.1 T	
	30		3	30"		80 psi								
50						150 psi	—light brown (pp=1.2/1.2/1.5 tsf, tv=0.5/0.55/0.56 tsf)						1.3 P 1.1 T	
	35		4	28"		100 psi	FAT CLAY (CH), stiff, light brown, moist, medium to high plasticity							
45						200 psi	--(pp=1.6/1.7/1.75 tsf, tv=0.77/0.8/0.87 tsf)						1.7 P 1.6 T	
	40		5	26"		100 psi	LEAN CLAY (CL), stiff, light brown, moist, medium plasticity						1.5 V	vs=1535 pcf
40						220 psi	--(pp=2/1.7/1.7 tsf, tv=0.75/0.72/0.87 tsf)						1.8 P 1.6 T	
	45		6	30"		100 psi								
35						250 psi	--(pp=2/1.7/1.7 tsf, tv=0.6/0.8/0.85 tsf) --Ended drilling on 11/1/04 at 47.5 ft --Began drilling on 11/3/04 at 47.5 ft						1.8 P 1.5 T	vs>2089 pcf

Continued

BORING DEPTH: 80.0 ft
DEPTH TO WATER: 9.5 ft., 11/3/2004

START DATE: November 1, 2004
COMPLETION DATE: November 3, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Li/F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-21
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-22a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 81.5 ft (1988 NAVD datum)							
					MATERIAL DESCRIPTION							
30		25"		100 psi	SANDY SILT (ML), very stiff, gray, wet, low plasticity, fine grained sand (pp=4/4/3.5 tsf)						3.8 P	
55		8 11"		49	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), dense, mottled brown, wet, fine to medium grained, lean clay pockets, subrounded gravel up to 1 inch							
25					--lost drilling fluid at 58 ft							
60		9 12"		46	--medium grained, subangular gravel up to 1 inch		10	6				
20												
65		10 13"		83/11.5"	POORLY GRADED SAND WITH GRAVEL (SP), very dense, brown, wet, fine grained, subrounded gravel up to 1 inch							
15					--trace subrounded gravel up to 1/2 inch							
70		11 12"		28	--trace silty sand, fine grained sand							
10					SANDY SILT (ML), very stiff, gray, moist, low plasticity							
					LEAN CLAY (CL)							
75		12 6"		50/6"	WELL-GRADED SAND WITH CLAY (SW-SC), very dense, brown, moist, trace fine gravel up to 1/4 inch							
5					--borehole caved in at 77 ft							
80		13 1"		50/6"	POORLY GRADED GRAVEL (GP), very dense, brown, wet, angular to subangular gravel up to 1 inch							
0												
85												
-5												
90												
-10												
95												
-15												

BORING DEPTH: 80.0 ft
 DEPTH TO WATER: 9.5 ft., 11/3/2004

START DATE: November 1, 2004
 COMPLETION DATE: November 3, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, L. Willard
 LOGGED BY: F. Li/F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-21
 SVRT DOWNTOWN
 San Jose, California**

FIGURE A1-22b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: SB 4th St., north of Santa Clara St. N 1,948,489 E 6,158,282 SURFACE EL: 80.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
80						7 1/2 inches ASPHALT CONCRETE over 12 inches AGGREGATE BASE							
			1	17"	9	FAT CLAY (CH), medium, dry to moist, brown, high plasticity		22					
	5		2	24"	50 psi	LEAN CLAY (CL), stiff, tan, moist, low to medium plasticity							
	75				150 psi	SANDY SILT (ML), stiff, light brown, moist, non-plastic (pp=2/1.75/2 tsf)						1.9 P	
	10		3	30"	80 psi	LEAN CLAY (CL), soft to medium, light brown, moist, low plasticity							
	70				125 psi	--(pp=0.75/0.75/0.75 tsf, tv=0.19/0.23/0.25 tsf)	88	34				0.8 P 0.4 T	
	15					--medium						0.9 V	vs=861 psf
	65					--stiff						1.5 V	vs=1482 psf
	20		4	30"	100 psi								
	60				150 psi	--brown (pp=1.5/1.5/1.25 tsf)		28				1.4 P	
	5		5	21"	150 psi	--medium to stiff (pp=1.25/1/1.25 tsf, tv=0.35/0.45/0.46 tsf)			27			1.2 P 0.8 T	
	55				80 psi								
	30		6	30"	125 psi	--soft (tv=0.19/0.2/0.23 tsf)		32		35	14	0.4 T	
	50					--seams of fine grained sand							
	45		7	30"	80 - 120 psi	--medium, increase in silt (pp=0.75/0.75/1.1 tsf, tv=0.39/0.39/0.45 tsf)			31			0.9 P 0.8 T	
	35		8	30"	100 psi								
	45				170 psi	--(pp=0.75/0.75/1 tsf, tv=0.2/0.3/0.36 tsf)						0.9 P 0.6 T	
	40					--stiff						1.8 V	vs=1769 psf
	40		9	20"	50 psi								
	40				100 psi	--greenish gray (pp=1/1.2/1.6 tsf, tv=0.54/0.6/0.6 tsf)						1.3 P 1.2 T	
	45				50 psi	--very stiff						>2.1 V	vs>2089 psf
	35		10	30"	50 psi								
					150 psi	--(pp=1.5/1.7/1.7 tsf, tv=0.38/0.53/0.53 tsf)	102	26		30	8	1.0 P 1.0 T	
						SANDY LEAN CLAY (CL), medium to stiff							

BORING DEPTH: 130.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 30, 2004
COMPLETION DATE: October 31, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-23
SVRT DOWNTOWN
San Jose, California

FIGURE A1-23a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: SB 4th St., north of Santa Clara St. N 1,948,489 E 6,158,282 SURFACE EL: 80.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
30		11 12"		100 psi	MATERIAL DESCRIPTION		20				12 P 0.8 T	
55				150 psi		SANDY LEAN CLAY (CL), medium to stiff, brown, moist, low plasticity, fine to medium grained sand (pp=1.5/1/1.2 tsf, tv=0.35/0.45/0.45 tsf) --Ended drilling on 10/30/04 at 52.5 ft --Began drilling on 10/31/04 at 52.5 ft						Noise and Vibration Tests
25		12 30"		50 psi	LEAN CLAY (CL), stiff, greenish gray, moist, low plasticity		25				20 P 1.0 T	
60				125 psi	--(pp=1.7/2/2.2 tsf, tv=0.42/0.52/0.6 tsf)							
20												
65		13 30"		100 psi	SANDY SILT (ML), hard, brown, moist, fine grained sand (pp=1.2/2.2/2.2/3 tsf, tv=0.27/0.3/0.3 tsf)	104	22				22 P 0.6 T	
15				300 psi	--trace gravel up to 1/2 inch at 71 ft							
70					SILTY SAND WITH GRAVEL (SM), very dense, brown, moist, coarse grained sand, subrounded gravel up to 1/2 inch, poorly graded sand with gravel from 75 ft to 75.4 ft, coarse grained sand, gravel up to 1 inch		14	14				
10				72								
75		14 15"										
5												
80												
0												
85		15 15"		55	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, brown, moist, subrounded gravel up to 1 inch, poorly graded sand with gravel from 85 ft 85.5 ft, medium to coarse grained sand, subrounded gravel up to 1/2 inch)		8	5				
-5												
90												
-10												
95		16 9"		44	LEAN CLAY (CL), hard, brown, moist, low plasticity		22					
-15												

BORING DEPTH: 130.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 30, 2004
COMPLETION DATE: October 31, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-23
SVRT DOWNTOWN
San Jose, California

FIGURE A1-23b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: SB 4th St., north of Santa Clara St. N 1,948,489 E 6,158,282 SURFACE EL: 80.9 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
-20				LEAN CLAY (CL), hard							
-25		17 22"	100 psi 250 psi	SANDY LEAN CLAY (CL), very stiff, light brown, moist, low plasticity --(pp=2.5/3/3 tsf, tv=0.42/0.5/0.52 tsf)	107	20				2.8 P 1.0 T	
-35		18 28"	100 psi 350 psi	--yellowish brown (pp=2.5/3/3 tsf, tv=0.52/0.62/0.7 tsf)	100	25	69			2.8 P 1.2 T	
-40		19 0" 20 15"	400 psi 47	LEAN CLAY WITH GRAVEL (CL), brown, moist, low plasticity, borehole caved in at 118.5 ft, Shelby Tube sample refusal after 8 inches, no recovery		15					
-45		21 12"	90	SILTY SAND (SM), dense, brown, moist, fine to medium grained sand --borehole caved in at 120 ft SILTY GRAVEL WITH SAND (GM), very dense, brown, moist, gravel up to 1 inch		24	13				
-50		22 18"	41	LEAN CLAY (CL), hard, brown, moist, low plasticity		22					

BORING DEPTH: 130.5 ft
DEPTH TO WATER: Not Measured

START DATE: October 30, 2004
COMPLETION DATE: October 31, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-23
SVRT DOWNTOWN
San Jose, California

FIGURE A1-23c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 2nd St. and 3rd St. N 1,948,174 E 6,157,944 SURFACE EL: 83.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
60		1	18"	7	4 inches ASPHALT CONCRETE over 8 inches of ASPHALT CONCRETE and PORTLAND CEMENT CONCRETE mix over 6 inches PORTLAND CEMENT CONCRETE							
5					SAND layer (FILL)		15					
75					LEAN CLAY WITH SAND (CL), medium, brown with mottled gray, moist, low plasticity, fine grained sand							
10		2	28"	100 psi	SILTY SAND (SM), brown, wet, fine grained sand, non-plastic							
					--(pp=0.5 tsf)	97	28				0.6 P	
70		3	30"	100 psi	LEAN CLAY (CL), very stiff, dark gray, moist, low plasticity (pp=2.25 tsf)	98	25	90	43	24	2.3 P 1.1 U	Hydrometer Test
15		4	30"	100 psi	SANDY LEAN CLAY (CL), medium, brown, moist, low plasticity (pp=1 tsf)	96	30		35	19	1.0 P 0.5 U	
65		5	30"	100 psi	SILT WITH SAND (ML), soft to medium, brown, moist, non-plastic, fine grained sand (pp=0.5tsf)	100	24	81			0.5 P 0.6 U	
20		6	30"	100 psi	LEAN CLAY (CL), medium, brown with mottled gray, moist, low plasticity, trace fine grained sand (pp=0.75 tsf)	92	32				0.8 P	
60		7	30"	100 psi	--(pp=0.5 tsf)	105	23				0.5 P	
25		8	30"	100 psi	--(pp=0.75 tsf)	95	28	86	31	9	0.8 P 0.7 U	Hydrometer Test
55		9	30"	100 psi	SANDY SILT (ML), stiff, gray, moist, non-plastic (pp=1.25 tsf)	95	29				1.3 P	
30		10	29"	100 psi	--(pp=1.25 tsf)	97	26	71	25	1	1.3 P 0.6 U	Hydrometer Test
50		11	30"	100 psi	FAT CLAY (CH), medium, gray, moist, high plasticity (pp=0.5 tsf)	79	44				0.5 P	
35		12	28"	100 psi	LEAN CLAY (CL), medium, gray, moist, low plasticity (pp=1 tsf)	100	28				1.0 P	
45		13	30"	100 psi	SILTY SAND (SM), brown, wet, fine to medium grained sand, non-plastic (pp=0.5 tsf)	110	20	44			0.5 P	
40		14	6"	200 psi	SILTY SAND WITH GRAVEL (SM), brown, wet, subrounded gravel up to 1.5 inches		19	18				
40		15	15"	200 psi	POORLY GRADED GRAVEL WITH SILT (GP-GM), brown, wet, subrounded gravel up to 2 inches		12	9				
45		16	16"	45	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown, wet, subrounded gravel up to 0.5 inch		9	6				
35		17		10								

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 9, 2004
COMPLETION DATE: October 10, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-24
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-24a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 2nd St. and 3rd St. N 1,948,174 E 6,157,944	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 83.7 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
			17			LEAN CLAY WITH SAND (CL), stiff, brown, moist, low plasticity, fine grained sand		25					
			18		200 psi	CLAYEY GRAVEL (GC), brown with mottled gray, moist, low plasticity, subangular gravel up to 1/2 inch	102	25					
	30		19		100 psi		98	26	78	29	7	1.5 P 0.5 U	Hydrometer Test
	55		20		100 psi	SILTY CLAY WITH SAND (CL-ML), stiff, brown, moist, fine grained sand, non-plastic (pp=1.5tsf)							
			21		100 psi	--stiff to very stiff, low plasticity (pp=2 tsf)	107	22					2.0 P
	25		22		100 psi	--very stiff, gray, medium plasticity (pp=3 tsf)	105	21					3.0 P 0.7 U
	60		23		100 psi	--(pp=2.5 tsf)	102	23					2.5 P
	20		24		100 psi	LEAN CLAY (CL), very stiff, gray, moist, low plasticity (pp=2.5 tsf)	103	23	88				2.5 P 1.8 U
	65		25		100 psi	LEAN CLAY WITH SAND (CL), very stiff, brown with mottled gray, moist, low plasticity (pp=3.25 tsf)	99	27					3.3 P
	15		26		200 psi	--(pp>4 tsf) --Ended drilling on 10/9/04 at 70 ft --Began drilling on 10/10/04 at 70 ft	145	17					>4.0 P 1.7 U
	70					POORLY GRADED SAND WITH GRAVEL (SP), brown, wet, subrounded gravel up to 1/4 inch							
	10					--moist, low plasticity							
	75						21	3					Hydrometer Test
	5												
	80												
	85					POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, wet, subangular gravel up to 1/4 inch							
	-5												
	90				60		15	7					Hydrometer Test
	-10					SILTY SAND (SM), grayish brown, moist, fine grained sand, non-plastic							
	95												
	-15				150 psi								

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 9, 2004
COMPLETION DATE: October 10, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-24
SVRT DOWNTOWN
San Jose, California

FIGURE A1-24b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 2nd St. and 3rd St. N 1,948,174 E 6,157,944 SURFACE EL: 83.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
-20							18	29				Hydrometer Test
-25		29	30"	100 psi	SILTY SAND (SM), grayish brown, moist, fine grained sand, non-plastic							
-30					SANDY LEAN CLAY (CL), brown with mottled gray, moist, non-plastic to low plasticity, fine grained sand							
-35					--(pp=4.5 tsf)	105	21	59	27	8	4.5 P 1.3 U	Hydrometer Test
-40					SILTY SAND WITH GRAVEL (SM), brown, moist, subrounded gravel up to 1/4 inch							
-45		30	30"	200 psi			13	22				Hydrometer Test
-50					WELL-GRADED SAND WITH GRAVEL (SW), very dense, brown, wet, subrounded gravel up to 1/4 inch							
-55							8					
-60		31	5"	Ref/5"	SANDY SILTY CLAY (CL-ML), hard, brown, moist, non-plastic to low plasticity, fine grained sand							
-65												
-70		32	30"	150 psi	SANDY SILTY CLAY (CL-ML), hard, brown, moist, non-plastic to low plasticity, fine grained sand							
-75					--(pp=4 tsf)	109	19	56	26	5	4.0 P 0.7 U	Hydrometer Test
-80					SILTY SAND (SM), brown, wet, fine grained sand, non-plastic							
-85		33	30"	200 psi								

Continued

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

START DATE: October 9, 2004
COMPLETION DATE: October 10, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-24
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-24c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 2nd St. and 3rd St. N 1,948,174 E 6,157,944 SURFACE EL: 83.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION	99	25	26	NP	NP		Hydrometer Test
-70												
155												
-75												
160												
-80												
165												
-85												
170												
-90												
175												
-95												
180												
-100												
185												
-105												
190												
-110												
195												
-115												

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

START DATE: October 9, 2004
COMPLETION DATE: October 10, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-24
SVRT DOWNTOWN
San Jose, California

FIGURE A1-24d

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between Market St. and 1st St. N 1,947,853 E 6,157,318 SURFACE EL: 87.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
85		1 18"	6	3 inches new ASPHALT CONCRETE over 9 inches old ASPHALT CONCRETE over 6 inches PORTLAND CEMENT CONCRETE SILTY SAND WITH GRAVEL (SM), loose, dark brown, moist, trace lean clay, low plasticity		7					
80		2 18"	17	WELL-GRADED GRAVEL WITH SAND (GW), medium dense, brown, dry, subangular gravel up to 1 inch							
75		3 30"	72 psi	POORLY GRADED SAND WITH SILT (SP-SM), medium dense, brown, moist, trace subangular to subrounded gravel up to 1/2 inch LEAN CLAY (CL), medium, brown and gray, moist, low plasticity --(pp=0.5/0.5/0.75 tsf, tv=0.24 tsf)	86	35		38	15	0.6 P 0.5 T 1.0 U	
70											
65											PM test @ 21' and 23'
60				SANDY SILT (ML), stiff, brownish gray, moist, non-plastic, fine grained sand							
55		4 30"	580 psi								
50		5 18"	3	--(pp=1/1.25/1.75 tsf, tv=0.27 tsf) --soft, grayish brown		27				1.3 P 0.5 T	
45		6 18"	2	--soft, dark gray							
40		7 14"	1450 psi	ORGANIC SILT/ELASTIC SILT (OH/MH), dark gray, moist, high plasticity, with roots		39					
35				CLAYEY SAND TO SANDY LEAN CLAY (SC/CL), grayish brown, moist, low plasticity, medium to coarse grained sand refusal after 14 inches	94	30		47	21		
30				LEAN CLAY (CL), gray and brown, moist, low plasticity		29					
25											PM test @ 48' and 50'

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 22.0 ft., 11/13/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 6, 2004
COMPLETION DATE: November 14, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-25
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-25a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between Market St. and 1st St. N 1,947,853 E 6,157,318 SURFACE EL: 87.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
35		8 21"		1740 psi	--Ended drilling on 11/6/04 at 50 ft --Began drilling on 11/7/04 at 50 ft	112	9 13	8				
55		9 18"		13	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), brown, wet, subrounded gravel up to 1/2 inch, refusal after 21 inches		28		33	12		
60		10 20"		362 psi	LEAN CLAY WITH SAND (CL), stiff, brown with mottled gray, moist, low plasticity							
25					SANDY SILT (ML), hard, grayish brown, moist, low plasticity, fine grained sand, trace silty clay (pp=>4.5/>4.5/>4.5 tsf)		21		24	4	>4.5 P 1.0 M	
65					SANDY LEAN CLAY (CL), stiff to very stiff, brown and gray, moist, low plasticity							
70		11 30"		580 psi	--pockets of silt at 70.5 ft --(pp=1.75/2/2.25 tsf)	107 101	21 23	69	22 33	1 15	2.0 P 1.8 U	Hydrometer Test
75												PM test @ 74' and 76'
80		12 18"		34	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown, moist, subangular gravel up to 1/2 inch		13	9				
90		13 18"		49	--subangular to subrounded gravel up to 1/2 inch, with low plasticity clay							
95					--lost drilling fluid at 97 ft							

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 22.0 ft., 11/13/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: R. Au
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 6, 2004
COMPLETION DATE: November 14, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-25
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-25b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between Market St. and 1st St. N 1,947,853 E 6,157,318	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
							SURFACE EL: 87.0 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
-15			14	0"		580 psi	LEAN CLAY (CL), brown, moist, trace fine grained sand, no recovery in Shelby Tube sample at 101 ft							
105			15	0"		2900 psi	--hard, grayish brown, moist, low plasticity (pp>4.5 tsf) (refusal after 6 inches)		27		34	16	>4.5 P	
							SAND layer							PM test @ 105.5' and 107'
-20							SANDY LEAN CLAY (CL), very stiff, brown, moist, fine to medium grained sand							
							--Ended drilling on 11/7/04 at 108 ft							
110			16	30"		1090 psi	--Began drilling on 11/13/04 at 108 ft							
							--(pp=2.5/3.5/4 tsf)							
-25			17	12"		1450 psi	--hard, coarse grained sand (pp=>4.5/>4.5/>4.5 tsf) (refusal after 12 inches)						3.3 P	PM test @ 113' and 114.5'
			18	0"		1450 psi			109	17		>4.5 P		
115			19	18"		13	CLAYEY SAND WITH GRAVEL (SC), brown, moist, fine to coarse grained sand, subrounded gravel up to 1 1/4 inches (refusal after 12 inches)							
-30							SILTY SAND (SM), medium dense, brown, wet, fine to medium grained sand, non-plastic							
120			20	18"		58	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, brown, wet, subangular gravel up to 3/4 inch		8	8				
-35							LEAN CLAY WITH SAND (CL), hard, gray with mottled white, moist, low plasticity (pp=>4.5/>4.5/2.75 tsf)						4.0 P	PM test @ 127.5' and 129'
125			21	30"		1160 psi	--very stiff, gray (pp=3.5/3.75/3.5 tsf)						3.6 P	
-40			22	24"		1450 psi	--Ended drilling on 11/13/04 at 130 ft							
130							--Began drilling on 11/14/04 at 130 ft							
-45							--no recovery in Shelby Tube sample at 135 ft							
135			23	0"		1595 psi								
-50			24	18"		17	--stiff, brown							
140			25	18"		72	CLAYEY SAND WITH GRAVEL (SC), very dense, brown, moist, low plasticity, subrounded gravel up to 1/2 inch, no recovery in Shelby Tube sample at 140 ft		10	18				
-55							LEAN CLAY WITH SAND (CL), hard, brown, moist, low plasticity							
145			26	30"		725 psi	--very stiff to hard (pp=3.5/3/>4.5 tsf)						3.7 P	PM test @ 148.5' and 150'
-60			27	30"		1740 psi	--very stiff (pp=2.5/2.75/2.5 tsf)	98	27				2.6 P	

BORING DEPTH: 150.0 ft
 DEPTH TO WATER: 22.0 ft., 11/13/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Automatic Trip
 RIG TYPE: Fraste Multidrill XL
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: R. Au
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 6, 2004
 COMPLETION DATE: November 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-25
 SVRT DOWNTOWN
 San Jose, California**

FIGURE A1-25c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between San Pedro St. and Almaden Ave. N 1,947,381 E 6,156,539 SURFACE EL: 86.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
	85						3 1/2 inches of ASPHALT CONCRETE, SANDY LEAN CLAY (CL)							
	5													
	80													
	10													
	75													
	15													
	70													
	20													
	65		1	30"		100 psi	--very stiff, light gray, moist to wet, sand module up to 1/2 inch (pp=2.5/2.0/2.9 tsf, tv=0.3 tsf)						2.5 P 0.6 T	
	25		2	30"		100 psi	--stiff, olive gray mottled brown (pp=1.5/1.5/1.7 tsf, tv=0.24 tsf)	92	31				1.6 P 0.5 T	
	60													
	30		3	27"		250 psi	CLAYEY SAND TO SANDY LEAN CLAY (SC/CL), light gray, wet, fine grained sand							
	55													
	35		4	14"		26	POORLY GRADED SAND WITH CLAY (SP-SC), medium dense, gray with white specks, wet, medium to coarse grained sand SILTY SAND (SM), medium dense, olive gray, wet							
	50													
	40		5	26"		250 psi	LEAN CLAY (CL), very stiff, light olive gray, moist to wet (pp=2.0/2.2/2.6 tsf, tv=0.5 tsf) --refusal after 26 inches						2.3 P 1.0 T	
	45													
	45		6	24"		100 psi								
	40					300 psi	CLAYEY SAND (SC), light brown, wet --refusal after 24 inches --gravelly from 48.5 to 49.5 ft							

BORING DEPTH: 157.5 ft
DEPTH TO WATER: 24.0 ft, 11/14/04

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 13, 2004
COMPLETION DATE: November 14, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-26
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-26a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between San Pedro St. and Almaden Ave. N 1,947,381 E 6,156,539 SURFACE EL: 86.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	35		7 3"		15	LEAN CLAY (CL), stiff, light grayish brown, moist to wet --gravelly at 53 ft							
	55		8 16"		68	POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), very dense, reddish brown with black and red specks, wet, with gravels up to 1 1/2 inches		13	7				
	60		9 18"		26	SANDY SILT (ML), very stiff, gray, moist to wet							
	65		10 30"		100 psi	LEAN CLAY (CL), very stiff, dark gray, moist to wet, medium plasticity							
	70		11 30"		100 psi	--(pp=2.5/2.9/3.1 tsf, tv >1 tsf)	105	22				2.8 P >2.0 T	
	75		12 30"		100 psi	--hard, some nodules of cemented sand							
	80		13 18"		100 psi	--(pp>4 tsf)							>4.0 P
	85		14 12"		39	--sandy from 72ft to 73.5ft							
	90					--stiff to very stiff, light grayish brown (pp=2.3/1.4/2.0 tsf, tv=0.66 tsf)	99	25				1.8 P 1.3 T	
	95					--hard, grayish brown (pp >4.5 tsf, tv=0.4 tsf) (refusal after 18 inches)							>4.5 P 0.8 T
						--gravelly at 84 ft, fine gravel up to 1/2 inch							
						WELL-GRADED SAND WITH GRAVEL (SW), very dense, grayish brown, wet							
						SANDY LEAN CLAY (CL), very stiff, yellow, moist to wet		26	66				

Continued

BORING DEPTH: 157.5 ft
DEPTH TO WATER: 24.0 ft., 11/14/04

START DATE: November 13, 2004
COMPLETION DATE: November 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-26
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-26b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between San Pedro St. and Almaden Ave. N 1,947,381 E 6,156,539 SURFACE EL: 86.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-15		15 30"		100 psi	SANDY LEAN CLAY (CL), very stiff							
				300 psi	SILTY SAND (SM), light grayish brown, moist to wet, fine to medium grained sand SANDY LEAN CLAY (CL), very stiff, olive gray, moist							
-20					--gravelly from 107 ft to 108 ft, fine subrounded gravel up to 1/2 inch							
-25		16 18"		30			21	69				Hydrometer Test
-30		17 0" 18 16"		300 psi 81/11"	SILTY SAND (SM), very dense, reddish brown, wet, fine to medium grained sand --Ended drilling on 11/13/04 at 117.5 ft --Began drilling on 11/14/04 at 117.5 ft							
-35		19 18"		29	SANDY LEAN CLAY (CL), very stiff, gray, moist to wet, with occasional subangular gravel up to 1/4 inch --gravelly at 123.5 ft							
-40		20 5"		50/5"	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, dark grayish brown, wet, gravel up to 1 1/2 inches, refusal after 11 inches		10	9				
-45		21 18"		36	LEAN CLAY (CL), hard, gray, moist to wet							
-50		X 0" 22 18"		300 psi 36	--increasing silt content with depth --sandy at 138 ft							
-55		23 18"		50	CLAYEY SAND (SC), dense, grayish to reddish brown, wet SANDY LEAN CLAY (CL), hard, light brown, wet							
-60		24 30"			--(pp>4.5 tsf)	103	23				>4.5 P	

Continued

BORING DEPTH: 157.5 ft
DEPTH TO WATER: 24.0 ft., 11/14/04

START DATE: November 13, 2004
COMPLETION DATE: November 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-26
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-26c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between San Pedro St. and Almaden Ave. N 1,947,381 E 6,156,539 SURFACE EL: 86.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-65		25 30"			SANDY LEAN CLAY (CL), hard, light reddish brown, moist to wet (pp>4.5 tsf)						>4.5 P	
-70		26 30"			--(pp>4.5 tsf) --gravelly at 155.5 ft						>4.5 P	
-70		27 25"			WELL-GRADED SAND WITH GRAVEL (SW), dense, dark grayish brown, wet, gravel up to 1 1/2 inches							
-75												
-80												
-85												
-90												
-95												
-100												
-105												
-110												

BORING DEPTH: 157.5 ft
 DEPTH TO WATER: 24.0 ft., 11/14/04

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: P. Chan
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 13, 2004
 COMPLETION DATE: November 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.
 2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-26
SVRT DOWNTOWN
San Jose, California

FIGURE A1-26d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Almaden Blvd., south of Santa Clara St. N 1,947,068 E 6,156,218 SURFACE EL: 83.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
	80						10 1/2 inches PORTLAND CEMENT CONCRETE							
	5						LEAN CLAY (CL) (FILL), dark gray, brick fragments between 3 ft to 4 ft							
	75						LEAN CLAY (CL), dark gray							
	10						--sandy at 6 ft							
	70													
	15													
	65													
	20		1	30"		100 psi	SILTY SAND (SM), dark gray, wet, fine to medium grained sand	109	21	39				
	60													
	25		2	30"		100 psi	SILT (ML), dark gray, wet							
	55						SILTY SAND (SM), dark gray, wet, fine grained sand							
	30		3	30"		100 psi	LEAN TO FAT CLAY (CL/CH), very stiff, dark gray, wet, low plasticity							
	50						--(pp=1.5/1.5/1.75 tsf, tv=0.25 tsf)	91	33		49	24	1.8 P 0.5 T	
	35		4	0"		100 psi	--no recovery in Shelby Tube sample							
	45		5	24"		100 psi	--gravelly silty clay at 37.5 ft, dark gray, moist, refusal after 24 inches							
	40		6	13"		67	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, brown, wet, subangular to sunbrounded gravel up to 1 1/2 inches		9	12				Hydrometer Test
	40						--borehole caved in at 42 ft							
	45		7	13"		69	--dark grayish brown							
	35						--borehole caved in at 48 ft							
							WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC)							

BORING DEPTH: 140.5 ft
 DEPTH TO WATER: 17.8 ft., 11/7/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, R. Kostenko
 LOGGED BY: P. Chan
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 6, 2004
 COMPLETION DATE: November 7, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-27
 SVRT DOWNTOWN
 San Jose, California**

FIGURE A1-27a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Almaden Blvd., south of Santa Clara St. N 1,947,068 E 6,156,218 SURFACE EL: 83.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
	30		8 13"	⊗	48	dense, grayish brown, wet, subangular to subrounded gravels up to 1 1/2 inches		12	7				Hydrometer Test Noise and Vibration Tests
	55		9 13"	⊗	3	LEAN CLAY (CL), soft, olive gray, wet, medium plasticity							
	25		10 26"	⊗	100 psi	CLAYEY SAND (SC) SILTY SAND (SM), medium dense, gray, wet, fine to medium grained sand							Noise and Vibration Tests
	60					SANDY LEAN CLAY (CL), dark gray and brown							
	20		11 24"	⊗	100 - 200 psi	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, grayish brown, wet							Hydrometer Test Noise and Vibration Tests
	65		12 18"	⊗	81	--Ended drilling on 11/6/04 at 70 ft --Began drilling on 11/7/04 at 70 ft (LEL=0.0, OVM=0.0, OXY=20.9)							
	15		13 8"	⊗	67	POORLY GRADED SAND WITH SILT (SP-SM), very dense, grayish brown, wet, fine to medium grained sand, trace subrounded gravel up to 3/4 inch		18	9				
	70					SILTY CLAY (CL-ML), grayish brown							
	10		14 24"	⊗	120 psi	SILTY SAND WITH GRAVEL (SM), medium dense, grayish brown, wet, subrounded gravel up to 1/2 inch							
	75		15 12"	⊗	66	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, light reddish/grayish brown, wet, subangular gravel up to 1 1/2 inch							
	5		16 16"	⊗	29	LEAN CLAY (CL), very stiff, light olive gray, moist, low to medium plasticity							
	80					SANDY SILT (ML), hard, reddish brown, moist, fine grained sand							
	85		17 16"	⊗	42								
	90					WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, reddish brown,							
	95		18	⊗	80/10"								

Continued

BORING DEPTH: 140.5 ft
DEPTH TO WATER: 17.8 ft., 11/7/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 6, 2004
COMPLETION DATE: November 7, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-27
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-27b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Almaden Blvd., south of Santa Clara St. N 1,947,068 E 6,156,218 SURFACE EL: 83.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
						wet, subrounded gravel up to 1 1/2 inch LEAN CLAY (CL), dark gray							
-20													
105						CLAYEY SAND WITH GRAVEL (SC), very dense, reddish brown, wet, subrounded fine gravel up to 1/4 inch							
-25													
110			19	5"	Ref/5"								
-30													
115													
-35						LEAN CLAY (CL), stiff to very stiff, light gray, moist, trace decayed rootlets							
120			20	18"	19								
-40													
125													
-45													
130			21	30"	200 psi	--hard, light brownish yellow (pp>4.5 tsf, tv=0.65 tsf)	98	24	33	13	>4.5 P 1.3 T		
-50													
135													
-55													
140			22	18"	18	--very stiff							
-60													
145													
-65													

BORING DEPTH: 140.5 ft
 DEPTH TO WATER: 17.8 ft., 11/7/2004

START DATE: November 6, 2004
 COMPLETION DATE: November 7, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, R. Kostenko
 LOGGED BY: P. Chan
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-27
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-27c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Santa Clara St., between Almaden Blvd. and HWY 87 N 1,946,904 6,155,702 SURFACE EL: 82.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	80					4 inches ASPHALT CONCRETE over AGGREGATE BASE, wood fragments encountered, followed by gravel							
	75					2 to 3 inches of PORTLAND CEMENT CONCRETE							
	75					SANDY LEAN CLAY (CL), brown, moist, low to medium plasticity							
	75					SILT (ML), brown, low plasticity							
	70					FAT CLAY (CH), dark gray, high plasticity							
	70					∇ LEAN CLAY WITH SAND (CL), brown and gray, low to medium plasticity							
	65												
	60		1	21"	100 psi	CLAYEY GRAVEL (GC), dense, brown, moist to wet, subrounded gravel up to 1 1/2 inches							
	60				300 psi	--refusal after 24 inches							
	55		2	18"	9	SILTY CLAY (CL-ML), stiff, gray, moist		32	87				
	50		3	30"	100 psi	LEAN CLAY (CL), very stiff, gray, moist							
	50				200 psi	--(pp=2.25/2.25 tsf)						2.3 P	
	45		4	29"	100 psi	SILTY SAND (SM), brown, wet, refusal after 24 inches							
	45				250 psi	--gravel at 39 ft							
	40		5	9"	34	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), dense, brown to yellowish brown, wet		10	11				
	40					SILTY SAND WITH GRAVEL (SM), dense, brown, wet							
	35		6	8"	46	SANDY LEAN CLAY (CL), medium, gray, moist							

Continued

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 13.5 ft., 11/18/2004

START DATE: November 17, 2004
COMPLETION DATE: November 18, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: L. Bhangoo/F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-28
SVRT DOWNTOWN
San Jose, California

FIGURE A1-28a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Santa Clara St., between Almaden Blvd. and HWY 87 N 1,946,904 E 6,155,702 SURFACE EL: 82.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
				200 psi	MATERIAL DESCRIPTION							
30		26"			--sampler bent, disturbed sample							
55		8 30"		100 - 200 psi	LEAN CLAY WITH SAND (CL), stiff, gray, moist (pp=1.5/1.5/1.75 tsf)						1.6 P	
25		9 27"		100 psi	--very stiff (pp=2.25/2.5/2.5 tsf)						2.4 P	
60		10 22"		200 psi	SILTY SAND (SM), dense, gray, wet, refusal after 24 inches							
20				300 psi	LEAN CLAY WITH SAND (CL), very stiff, gray, moist							
65		11 10"		28								
70		12 23"		100 psi								
10				350 psi	CLAYEY SAND (SC), dense, yellowish brown, wet --gravel at 73 ft							
75		13 24"		100 psi	SANDY LEAN CLAY (CL), yellowish brown, moist, refusal after 24 inches							
5				300 psi	SILTY SAND WITH GRAVEL (SM), yellowish brown, wet --gravel at 79 ft	21	59					
80		14 24"		150 psi	LEAN CLAY WITH SAND (CL), stiff, gray, moist (pp=1.75/1.75/2 tsf)						1.8 P	
85					--gravel at 87 ft							
90		15 16"		100 psi 300 psi	--yellowish brown (tv=0.85 tsf) (refusal after 18 inches)						1.7 T	
95					SILTY SAND WITH GRAVEL (SM), dense, yellowish brown, wet, rounded gravel up to 1/4 to 1/2 inch							

Continued

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 13.5 ft., 11/18/2004

START DATE: November 17, 2004
COMPLETION DATE: November 18, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: L. Bhangoo/F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-28
SVRT DOWNTOWN
San Jose, California

FIGURE A1-28b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Santa Clara St., between Almaden Blvd. and HWY 87 N 1,946,904 6,155,702 SURFACE EL: 82.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-20		16 17	X	50	--Ended drilling on 11/17/04 at 101.5 ft --Began drilling on 11/18/04 at 101.5 ft							
-25					LEAN CLAY WITH SAND (CL), hard (soft on top), grayish brown, moist, medium plasticity, fine grained sand, trace sandy silt in the top of the sample							
-30		17 30"		0 psi	--(pp>4.5 tsf) (LEL=0.0, OVM=0.0, OXY=20.8)						>4.5 P	
-35		18 8"		300 psi	--more silty							
-40		19 15"	X	32	SILTY SAND (SM), brown, moist, fine grained sand, refusal after 12 inches							
-45		20 8"		0 - 300 psi	--trace gravel SANDY SILT (ML), hard, gray, moist, low plasticity, fine grained sand							
-50		21 30"		50 - 200 psi	SANDY LEAN CLAY (CL), hard, gray, moist, low to medium plasticity, fine grained sand, interbedded material, sand lenses							
-55		22 30"		50 psi	LEAN CLAY (CL), very stiff, gray, moist, low plasticity						2.8 P	
-60		23 30"		50 psi	--(pp=2.75/2.75/3 tsf) SANDY LEAN CLAY (CL), very stiff, gray, moist, medium plasticity, fine grained sand (pp=2.5/2.5/3.5 tsf)						2.8 P	
-65		24 19"		50 psi	--very stiff to hard, brown (pp=3/4.5/4.5 tsf)						4.0 P	
-70		25 21"		50 psi	--trace sand lenses LEAN CLAY WITH SAND (CL), hard, light brown, moist, low plasticity, medium grained sand (pp>4.5 tsf)						>4.5 P	
-75		26 30"		50 psi	SANDY LEAN CLAY (CL), hard, brown, moist, low plasticity, fine grained sand (pp>4.5 tsf) --very stiff (pp=3.5/3.5/2.75 tsf)						3.3 P	
-80		27 30"		50 psi	--grayish brown, low to medium plasticity --hard (pp>4.5 tsf)						>4.5 P	

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 13.5 ft., 11/18/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: L. Bhangoo/F. Wang
CHECKED BY: Y. D. Wang

START DATE: November 17, 2004
COMPLETION DATE: November 18, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-28
SVRT DOWNTOWN
San Jose, California

FIGURE A1-28c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Landscape area, SW corner of Santa Clara St. and HWY 87 N 1,946,631 E 6,155,456 SURFACE EL: 84.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
80					LEAN CLAY (CL), brown, moist							
75					--dark brownish gray							
70					SANDY LEAN CLAY (CL), reddish brown							
65					▽ --gravelly from 16.5 ft to 18 ft							
60					--gravelly at 19 ft							
55					LEAN CLAY (CL), brown							
50					--dark gray, trace sand							
45					--dark brown							
40					--dark gray							
					--brown, red, gray and white, trace subrounded gravel up to 1/4 inch							
					--brown and mottled gray, trace gravel up to 1 inch							
					--brown							

Continued

BORING DEPTH: 112.5 ft
DEPTH TO WATER: 18.0 ft., 1/6/2005

START DATE: January 5, 2005
COMPLETION DATE: January 6, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-29
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-29a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Landscape area, SW corner of Santa Clara St. and HWY 87 N 1,946,631 E 6,155,456 SURFACE EL: 84.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						100 psi	MATERIAL DESCRIPTION							
						250 psi								
30	55		2	9"		100 psi	LEAN CLAY (CL), medium, dark gray, wet, medium plasticity (pp=0.75/0.7/0.3 tsf, tv=0.42/0.53 tsf)						0.6 P 1.0 T	
						250 psi								
25	60		3	18"		65	WELL-GRADED SAND WITH SILT (SW-SM), very dense, dark brown, wet, trace subangular to subrounded gravel up to 3/4 inch (LEL=0.0, OVM=0.0, OXY=20.8)		9	8				
20	65		4	9"		100 psi	SANDY LEAN CLAY WITH GRAVEL (CL), very stiff, yellowish brown, wet		28	54				
						250 psi	CLAYEY GRAVEL (GC)							
15	70		5	9"		0	LEAN CLAY (CL), very soft, yellowish brown, wet (LEL=0.0, OVM=0.0, OXY=20.7)		24		32	15		
10	75		6	18"		(74)	POORLY GRADED SAND WITH CLAY (SP-SC), dense, light reddish brown, wet, fine to medium grained sand							
						100 psi	LEAN CLAY WITH SAND (CL), very stiff, light grayish brown, wet --Ended drilling on 1/5/05 at 76.5 ft --Began drilling on 1/6/05 at 76.5 ft	108	21	83				
5	80		7	30"		200 psi	SILTY CLAY (CL-ML), very stiff, light gray mottled brown, wet (pp=3.1/3.6/3.1 tsf, tv=0.68 tsf)		24		24	5	3.3 P 1.4 T	
0	85		8	18"		(34)	POORLY GRADED SAND (SP), medium dense, gray, wet, fine to medium grained sand SANDY LEAN CLAY (CL), stiff, gray, wet (pp=1.2/1.3 tsf)	104	24	89			1.3 P 1.1 V	vs=1108 psf
-5	90		9	30"		100 psi	--hard, light yellowish brown, fine grained sand (pp=4.2/4.0/4.0 tsf, tv=0.65 tsf)						4.1 P 1.3 T	
						150 psi								
-10	95		10	9"		100 psi	CLAYEY SAND (SC), reddish brown, wet, trace fine grained gravel, refusal after 12 inches	.119	.17	.35				
						250 psi								

Continued

BORING DEPTH: 112.5 ft
DEPTH TO WATER: 18.0 ft., 1/6/2005

START DATE: January 5, 2005
COMPLETION DATE: January 6, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-29
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-29b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Landscape area, SW corner of Santa Clara St. and HWY 87 N 1,946,631 E 6,155,456	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 84.9 ft (1988 NAVD datum)							
MATERIAL DESCRIPTION												
		11 24"		100 psi	SILTY SAND (SM), medium dense, dark gray, wet, refusal after 24 inches							
		12 30"		100 psi	LEAN CLAY (CL), very stiff, dark gray, wet --(pp=2.3/2.3/2.0 tsf, tv=0.54/0.56 tsf) --(LEL=0.0, OVM=0.0, OXY=20.7)		19	40			2.2 P 1.1 T	
		13 30"		100 psi	--stiff to very stiff, light gray, medium plasticity (pp=1.75/2.7/3.0 tsf, tv=0.81/0.85 tsf) (LEL=0.0, OVM=0.0, OXY=20.5)							
				150 psi								2.5 P 1.7 T
-20												
-25												
-30												
-35												
-40												
-45												
-50												
-55												
-60												

BORING DEPTH: 112.5 ft
 DEPTH TO WATER: 18.0 ft., 1/6/2005

START DATE: January 5, 2005
 COMPLETION DATE: January 6, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: P. Chan
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-29
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-29c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Water Company, Parking Lot at Delmas Ave. and Santa Clara St. N 1,946,352 E 6,155,158 SURFACE EL: 86.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	85					3 inches ASPHALT CONCRETE							
	5					LEAN CLAY WITH SAND (CL) (FILL), mottled dark grayish brown and brown, moist, medium plasticity, fine to coarse grained sand, trace gravel up to 2 inches and concrete fragments, brick rubble and metal nails							
	80					LEAN CLAY (CL), medium to stiff, brown, moist, low plasticity, trace fine grained sand							
	10					FAT CLAY (CH), stiff to very stiff, dark grayish brown, moist, high plasticity, trace fine grained sand and caliche nodules up to 1/4 inch							
	75					LEAN CLAY (CL), stiff, mottled grayish brown, medium plasticity, trace fine grained sand							
	15					--gravelly from 15 ft to 20 ft, subrounded to rounded gravel up to 1/2 inch, moderate fluid loss, gas odor from hole detected at 15 ft to 20 ft (maximum OVM=100ppm, stable range is 40 to 60 ppm)							
	70												
	20					--gray (OVM=2ppm)							
	65												
	25					--yellowish brown							
	60												
	30					--gravelly from 36 ft to 38.5 ft, rounded gravel up to 2 inches							
	55												
	35					--orange brown/yellow brown							
	50												
	40												
	45												
	45												
	40												

BORING DEPTH: 110.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: March 5, 2005
COMPLETION DATE: March 5, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-30
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-30a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Water Company, Parking Lot at Delmas Ave. and Santa Clara St. N 1,946,352 E 6,155,158 SURFACE EL: 86.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
35			29		300 psi	LEAN CLAY (CL), stiff, gray, moist, trace fine grained sand and subangular to rounded gravel up to 3/4 inch (pp=1.6/1.8/1.8 tsf, tv=0.62/0.67 tsf) (LEL=0.0, OVM=0.0, OXY=20.0)						1.7 P 1.3 T	
					200 psi								
55			2	30"	0 psi	SILT WITH SAND (ML), very stiff, mottled brown and gray, moist, low plasticity, fine grained sand (pp=2.8/3.2/3.2 tsf, tv=0.3/0.4 tsf)	103	20	77			3.1 P 0.7 T	Hydrometer Test
30					175 psi								
60			3	3"	(Ref/3")	WELL-GRADED GRAVEL WITH CLAY (GW-GC), very dense, grayish brown and brown, angular to rounded gravel up to 2 inches		6	6				
25						--no recovery in MC sampler --angular to subrounded gravel up to 3/4 inch							
65			X	0"	(Ref/6")								
20						POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), very dense, brown, subangular to rounded gravel up to 1 1/4 inch, lost drilling fluid (LEL=0.0, OVM=0.0, OXY=19.3)		8	9				
70			4	7"	(50/6")								
15						LEAN CLAY (CL), stiff to very stiff, gray, moist, medium plasticity, trace fine to medium grained sand, vertical seam of partially decayed wood fibers (pp=2.7/2.7/3.4 tsf, tv=0.92/0.97 tsf)		22		37	22	2.9 P 1.9 T 1.4 U	
75			5	18"	(33)								
10						--mottled light grayish brown and orange brown (pp=2.8/3.0/3.1 tsf, tv=0.83/0.84 tsf) (LEL=0.0, OVM=0.0, OXY=19.7)							
80			6	29"	100 psi								
5						CLAYEY GRAVEL WITH SAND (GC), very dense, mottled dark brown and brown, moist, angular to rounded gravel up to 1 1/4 inches, interbedded lenses of clay --(OVM=1.8) at 84 ft		8	13				
85			7	5"	(Ref/6")		225 psi						
0						POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, mottle dark brown and brown, angular to rounded gravel up to 2 inches (LEL=0.0, OVM=0.0, OXY=19.9) --lost approximately 800 gallons of drilling fluid		7	11				Hydrometer Test
90			8	10"	(50/4")								
-5						LEAN CLAY (CL) layer							
95			9	6"	(50/6")	SANDY SILT (ML), hard, gray, moist, low plasticity, fine grained sand, trace rounded gravel up to 1/2 inch and decayed wood fibers --color change to brown at 95 ft	112	17	65				
-10						LEAN CLAY (CL), very stiff, brown to grayish							
						(69)							

Continued

BORING DEPTH: 110.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: March 5, 2005
COMPLETION DATE: March 5, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-30
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-30b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Water Company, Parking Lot at Delmas Ave. and Santa Clara St. N 1,946,352 E 6,155,158 SURFACE EL: 86.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
-15		10										
105		11		(50/6")	brown, moist, medium plasticity, trace fine to coarse grained sand and rounded gravel to 1/4 inch (pp=3.25/3.7/4.0 tsf, tv=0.78/0.8 tsf)						3.7 P	
-20		12			SILTY GRAVEL WITH SAND (GM), very dense, mottled light olive brown and orange brown, moist, fine to coarse grained sand, rounded gravel up to 1/2 inch, interbedded pockets and layers of silty sand / sandy lean clay	124	10	19			1.6 T	
110		12		(40)	LEAN CLAY (CL), very stiff, gray, moist, medium plasticity, trace fine grained sand and caliche nodules up to 1/2 inch (pp=3.25/3.7/3.5 tsf)						3.5 P	
-25												
115												
-30												
120												
-35												
125												
-40												
130												
-45												
135												
-50												
140												
-55												
145												
-60												

BORING DEPTH: 110.5 ft
DEPTH TO WATER: Not Measured

START DATE: March 5, 2005
COMPLETION DATE: March 5, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-30
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-30c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Parking Lot, East of Los Gatos Creek, at Delmas Ave. and Santa Clara St. N 1,946,160 E 6,154,866 SURFACE EL: 86.2 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
85							3 inches ASPHALT CONCRETE over 5 inches AGGREGATE BASE							
							SILTY SAND WITH GRAVEL (SM) (FILL), brown							
							LEAN CLAY WITH SAND (CL), brown							
	5						--dark gray							
	10						--brown							
	15													
	20													
	25													
	30													
	35													
	40		1	28"		0 psi	--very stiff, brown, moist, fine to coarse grained sand							
	45					100 psi	POORLY GRADED SAND WITH SILT (SP-SM), brown, fine to coarse grained sand		21	75				
	45		2	10"		(13)	LEAN CLAY WITH GRAVEL (CL), stiff, moist, medium plasticity, subrounded gravel up to 1 1/2 inches, pockets of sand (pp=1.5/1.25/1.5 tsf, tv=0.4/0.35 tsf)						1.3 P 0.8 T	
	40		3	24"		0 psi	SANDY LEAN CLAY (CL), hard, gray, moist, interbedded with gray silty sand							

BORING DEPTH: 100.0 ft
DEPTH TO WATER: 18.0 ft., 2/11/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 10, 2005
COMPLETION DATE: February 11, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-31
SVRT DOWNTOWN
San Jose, California

FIGURE A1-31a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Parking Lot, East of Los Gatos Creek, at Delmas Ave. and Santa Clara St. N 1,946,160 E 6,154,866 SURFACE EL: 86.2 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
	35				100 psi			21	61				
	55		4	2"	0 - 100 psi	CLAYEY SAND (SC), dense, brown, moist, fine grained sand (LEL=0.0, OVM=0.0, OXY=18.7)	89	22	32				
	60		5	10"	0 - 300 psi	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), brown, moist, angular gravel up to 1 inch --borehole caved in from 60 ft and 66 ft	122	11	9				
	70		6	26"	0 - 200 psi	LEAN CLAY WITH SAND (CL), medium to very stiff, gray and brown, moist, medium plasticity (pp=2.5/2.5/3.0 tsf, tv=0.55/0.5 tsf) (LEL=0.0, OVM=0.0, OXY=17.9)	102	23				2.7 P 1.1 T 0.5 U	PM test @ 72.5 and 74'
	75		7	30"	0 psi	--Ended drilling on 2/10/05 at 77 ft --Began drilling on 2/11/05 at 77 ft							
	80		8	30"	100 psi 0 psi	POORLY GRADED SAND WITH SILT (SP-SM), brown		22	91				
	85		9	24"	0 - 250 psi	SANDY LEAN CLAY (CL), very stiff, gray, moist, low plasticity (pp=2.75/3.0/3.0 tsf, tv=0.65/0.65 tsf)	108	22				2.0 P 1.3 T 0.6 U	PM test @ 82.5' and 84'
	90		10	4"	(50/5")	CLAYEY SAND WITH GRAVEL (SC), very dense, brown and gray, moist, angular gravel up to 1 1/2 inches --subrounded gravel up to 1 1/2 inches	117	14	13				
	95		11	11"	(71)	--dense, subrounded gravel up to 3/4 inch, pockets of silty sand, borehole caved in from 73 ft to 95 ft (LEL=0.0, OVM=0.0, OXY=18.9)		5	22				
	100		12	14"	(71/11")	LEAN CLAY WITH SAND (CL), hard, yellow to brown, moist, trace subrounded gravel to 3/4 inch, layer of silty sand with gravel from 99.5 ft							

BORING DEPTH: 100.0 ft
DEPTH TO WATER: 18.0 ft., 2/11/2005

START DATE: February 10, 2005
COMPLETION DATE: February 11, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-31
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-31b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Wine & Roses Limo Services, between Los Gatos creek and Autumn St. N 1,946,096 E 6,154,697 SURFACE EL: 87.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
							3 inches ASPHALT CONCRETE over 3 inches AGGREGATE BASE							
	85						LEAN CLAY WITH SAND (CL) (FILL), mottled dark grayish brown, moist, medium plasticity, fine to coarse grained sand, trace angular to subrounded gravel up to 1 inch, oily smell with slight sheen from cuttings (OVM=3ppm)							
	5						LEAN CLAY (CL), medium to stiff, dark grayish brown, moist, low to medium plasticity, trace fine grained sand							
	80						--stiff, brown, trace fine to medium grained sand at 7 ft							
	10						--mottled olive brown and brown, trace fine grained sand at 11 ft							
	75						WELL-GRADED SAND WITH GRAVEL (SW), gravel up to 1/2 inch							
	15						--angular to subrounded gravel up to 2 1/2 inches							
	70						--lost drilling fluid, added bentonite to prevent cave-in							
	20						LEAN CLAY (CL), stiff, mottled gray and brown, moist, medium plasticity, trace fine grained sand							
	65													
	25						--(pp=1.3/1.5/1.6 tsf, tv=0.43/0.47 tsf) (LEL=0.0, OVM=0.0, OXY=19.6)						1.5 P 0.9 T	
	60						--very stiff, mottled dark brown and gray (pp=2.25/2.75/2.75 tsf, tv=0.68/0.7 tsf)							2.6 P 1.4 T
	30		1	29"		150 psi								
	55													
	35		2	29"		0 psi								
	50													
	40		3	24"		100 psi								
	45						SILTY SAND (SM), medium dense to dense, orange brown, fine grained sand, non-plastic, trace rounded gravel up to 1/4 inch	93	25	26				
	45						SILT WITH SAND (ML), stiff to very stiff, mottled orange brown and olive brown, low plasticity, fine grained sand							
	40		4	26"		100 psi	--trace subangular gravel up to 2 inches at 43.5 ft to 44.5 ft							
	40						LEAN CLAY WITH SAND (CL), very stiff, mottled							3.8 P 1.4 T

Continued

BORING DEPTH: 92.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 22, 2005
COMPLETION DATE: February 22, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-32
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-32a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Wine & Roses Limo Services, between Los Gatos creek and Autumn St. N 1,946,096 E 6,154,697 SURFACE EL: 87.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	35		5 27"		100 - 300 psi	orange brown and olive brown, moist, medium plasticity, fine grained sand (pp=3.5/4/4 tsf, tv=0.67/0.68 tsf) at 47 ft --gravel/ sand layer at 48 to 49.5 ft	102	23	81	27	9	1.6 P 1.0 T	
	55		6 25"		150 psi	--stiff, gray, fine to medium grained sand and angular to subangular gravel up to 1 inch (pp=1.5/1.6/1.7 tsf, tv=0.5/0.54 tsf) at 52.3 ft (LEL=0.0, OVM=0.0, OXY=18.8)							
	30		7 10"		250 psi	--very stiff, gray to brown, subrounded gravel up to 1/2 inch (pp=2.75/3.5/3.5 tsf, tv=0.74/0.79 tsf) at 57 ft						3.3 P 1.5 T	
	60		7 10"		(50/5")	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, brown, moist, angular to subrounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=18.7)							
	25		8 22"		300 psi	LEAN CLAY (CL), stiff, mottled gray and brown, moist, medium plasticity, trace fine grained sand (pp=1.25/2.0/2.1 tsf, tv=0.53/0.52 tsf)							
	65		9 18"		100 psi	SANDY LEAN CLAY (CL), hard, mottled brown and gray, trace subangular to subrounded gravel up to 1 1/4 inches, refusal after 18 inches (LEL=0.0, OVM=0.0, OXY=18.8)	112	17	63			4.5 P	
	15		10 24"		300 psi	LEAN CLAY (CL), stiff, grayish brown with gray and orange brown streaks, moist, medium plasticity, trace fine grained sand (pp=1.75/2/2 tsf, tv=0.57/0.65 tsf)							
	75		11 6"		(Ref/6")	CLAYEY GRAVEL WITH SAND (GC), very dense, mottled orange brown and brown, moist to wet, subangular to subrounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=18.9)	123	12	20				
	10		12 26"		100 psi	LEAN CLAY (CL), very stiff, mottled gray and light gray, moist, medium plasticity, trace fine to medium grained sand and caliche (pp=2.7/2.75/2.75 tsf, tv=0.7/0.74 tsf)						2.7 P 1.4 T	
	80		13 30"		200 psi	SANDY SILT (ML), very stiff to hard, brown, moist, low plasticity, fine grained sand, poorly graded sand seam at 92.5 ft (pp=3.8/4.2/4.5 tsf, tv=0.48/0.5 tsf)	104	21	64			4.2 P 1.0 T	
	5				300 psi								
	85												
	0												
	90												
	-5												
	95												
	-10												

BORING DEPTH: 92.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 22, 2005
COMPLETION DATE: February 22, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-32
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-32b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.) SAMPLER TYPE	SAMPLER BLOW/COUNT/ PRESSURE, psi	LOCATION: San Jose Redevelopment Agency Parking Lot, between Autumn St. and Montgomery St. N 1,946,055 E 6,154,517 SURFACE EL: 87.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
					5 inches ASPHALT CONCRETE							
					LEAN CLAY WITH SAND (CL) (FILL), yellow, trace wood fragments							
					LEAN CLAY WITH SAND (CL), very stiff, brown to gray, moist							
			1	27"	14 psi							
					560 psi							
					--(pp=2.0/2.5/2.5 tsf)	98	22				2.3 P	
					CLAYEY SAND TO SANDY LEAN CLAY (SC/CL)							PM test @ 13' and 15'
			2	30"	560 psi							
					SANDY LEAN CLAY (CL), very stiff, brown, moist, fine to coarse grained sand (pp=3.25/3.5/3.5 tsf)							
							20	52			3.4 P	
												PM test @ 23' and 25'
			3	30"	140 psi							
					--low plasticity (pp=2.75/2.25/2.75 tsf, tv=0.45/0.5 tsf) (LEL=0.0, OVM=0.0, OXY=20.1)						2.6 P 1.0 T	
			4	16"	(103/11")							
					WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown, moist, subrounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=20.2)							
					--gravelly at 39 ft							
							9	8				PM test @ 43.5' and 45'
					SILT (ML), very stiff, gray, moist, low to medium plasticity							

BORING DEPTH: 150.8 ft
DEPTH TO WATER: 11.0 ft., 1/28/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 26, 2005
COMPLETION DATE: January 28, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-33
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-33a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Redevelopment Agency Parking Lot, between Autumn St. and Montgomery St. N 1,946,055 E 6,154,517 SURFACE EL: 87.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
35		5	29	(17)	--no recovery --very stiff, gray, moist, low plasticity (pp=2.5/2.75/2.75 tsf, tv=0.55/0.5 tsf)	98	25		31	7	2.7 P 1.1 T	
55												
60		7	30	140 psi	LEAN CLAY WITH SAND (CL), stiff, gray, moist, medium plasticity (pp=2.0/1.75/2.0 tsf, tv=0.8/0.75 tsf)						1.9 P 1.6 T	
65												
70		8	30	140 psi	SANDY LEAN CLAY (CL), very stiff, brown to yellow, moist, medium plasticity --(pp=2.25/2.25/2.25 tsf, tv=0.7/0.65 tsf) --Ended drilling on 1/26/05 at 71 ft --Began drilling on 1/27/05 at 71 ft	106	21	72			2.3 P 1.4 T	Hydrometer Test
75					SILTY SAND WITH GRAVEL (SM), fine to coarse grained gravel							PM test @ 74.5' and 76'
80		9	30	560 psi	LEAN CLAY (CL), very stiff, gray, moist, medium to high plasticity --(pp=2.75/2.5/2.75 tsf)			88			2.7 P	Hydrometer Test
85												
90		10	12	(100/10.5")	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, moist, subrounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=20.3)	129	9	8				PM test @ 88.5' and 90'
95												
-10					LEAN CLAY WITH SAND (CL), stiff							
					SILT WITH SAND (ML), very stiff, gray							

BORING DEPTH: 150.8 ft
DEPTH TO WATER: 11.0 ft., 1/28/2005

START DATE: January 26, 2005
COMPLETION DATE: January 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

Continued

**LOG OF BORING NO. BH-33
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-33b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Redevelopment Agency Parking Lot, between Autumn St. and Montgomery St. N 1,946,055 E 6,154,517 SURFACE EL: 87.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-15		11 9"		(25)	moist, trace subrounded gravel up to 1/2 inch							
105					LEAN CLAY WITH SAND (CL), very stiff, gray, moist, medium to high plasticity (LEL=0.0, OVM=0.0, OXY=20.4)							
-20		12 30"		140 psi	--(pp=3.5/3.25/3.5 tsf, tv=0.8/0.75 tsf)	100	25		32	14	3.4 P 1.6 T	
110												
-25												
115		13 13"		(85)	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dense, brown, moist, subrounded gravel up to 1/2 inch		16	11				PM test @ 113.5' and 115'
-30												
120		14 18"		840 psi	SANDY LEAN CLAY (CL), hard, gray, moist, trace fine gravel (pp=3.0/2.75/3.0 tsf, tv=0.5/0.55 tsf)							
-35												
125		15 26"		860 psi	CLAYEY SAND WITH GRAVEL (SC) LEAN CLAY WITH SAND (CL), hard, gray, medium plasticity						2.9 P 1.1 T	
-40					--(pp=4.0/4.25/4.0 tsf, tv=0.6/0.55 tsf) --Ended drilling on 1/27/05 at 127.5 ft --Began drilling on 1/28/05 at 127.5 ft						4.1 P 1.2 T	
130		16 18"		(34)	--very stiff (pp=2.75/3.0/3.0 tsf, tv=>1/1 tsf)	108	21				2.9 P >2.0 T	
-45												
135		17 24"		840 psi	--(pp=3.0/3.5/3.5 tsf, tv=>1.0/1.0 tsf)						3.3 P >2.0 T	
-50												
140		18 20"		1120 psi	SANDY LEAN CLAY (CL), hard, brown to yellow, low plasticity, trace silt (pp=>4.5/4.5/4.25 tsf, tv=0.45/0.5 tsf)						4.4 P 1.0 T	
-55												
145		19 0"		840 psi	--no recovery, refusal							
-60		20 9"		(50/3")	WELL-GRADED SAND (SW), dense		22	53				

Continued

BORING DEPTH: 150.8 ft
DEPTH TO WATER: 11.0 ft., 1/28/2005

START DATE: January 26, 2005
COMPLETION DATE: January 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-33
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-33c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	LOCATION: San Jose Redevelopment Agency Parking Lot, between Autumn St. and Montgomery St. N 1,946,055 E 6,154,517 SURFACE EL: 87.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
			21 10	(50/4")	MATERIAL DESCRIPTION WELL-GRADED SAND (SW), dense, moist, brown, trace subrounded gravel up to 1 1/2 inches							
-65												
155												
-70												
160												
-75												
165												
-80												
170												
-85												
175												
-90												
180												
-95												
185												
-100												
190												
-105												
195												
-110												

BORING DEPTH: 150.8 ft
 DEPTH TO WATER: 11.0 ft., 1/28/2005

START DATE: January 26, 2005
 COMPLETION DATE: January 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Automatic Trip
 RIG TYPE: Fraste Multidrill XL
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: L. Bhangoo
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-33
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-33d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: South end of White St., south of The Alameda N 1,946,046 E 6,153,559	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 88.7 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
							8 1/2 inches ASPHALT CONCRETE over 3 inches AGGREGATE BASE over 6 inches LIME TREATED SUBBASE							
							LEAN CLAY (CL) (FILL), mottled black and dark brown, moist, medium plasticity, trace fine to medium grained sand and angular to subrounded gravel up to 1 1/4 inch							
							LEAN CLAY WITH SAND (CL), medium to stiff, mottled olive brown and orange brown, moist, low to medium plasticity, fine grained sand, trace angular gravel up to 1/2 inch							
							-decrease in sand (pp=0.5/1.1/1.4 tsf, tv=0.44/0.47 tsf)	92	30				1.0 P 0.9 T	
							--stiff						1.7 V	vs=1684 psf
							--very stiff, brown, increase in plasticity						>2.1 V	vs>2089 psf
							--stiff, brown to grayish brown, medium plasticity							
							SILTY CLAY WITH SAND (CL-ML), medium to stiff, dark gray, moist, low to medium plasticity, fine grained sand (pp=1.0/1.0/1.25 tsf, tv=0.31/0.37 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)							
							--very stiff						1.1 P 0.7 T	
							--sandy from 27 ft to 28 ft						1.8 V	vs=1759 psf
							LEAN CLAY WITH SAND (CL), stiff, mottled light gray and brown, moist, medium plasticity, fine grained sand							
							-(pp=1.8/2.0/2.0 tsf, tv=0.4/0.44 tsf)	101	21				1.9 P 0.8 T	
							--very stiff						>2.1 V	vs>2100 psf
							SILT WITH SAND (ML), stiff, mottled brown and gray, moist, low to medium plasticity, fine grained sand							
							SILTY SAND (SM), dense, dark gray, moist, non-plastic, fine to medium grained sand, trace subrounded gravel up to 1/2 inch (LEL=0.0, OVM=0.0, OXY=20.9)							
							LEAN CLAY (CL), stiff to very stiff (pp=1.25/1.5/1.5 tsf, tv=0.24/0.26 tsf)						1.4 P 0.5 T	
							-Ended drilling on 2/3/05 at 42.5 ft						>2.1 V	vs>2089 psf
							-Began drilling on 2/7/05 at 42.5 ft						>2.1 V	vs>2089 psf

BORING DEPTH: 150.8 ft
 DEPTH TO WATER: 12.0 ft., 2/7/05, 12.5 ft., 2/8/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 3, 2005
 COMPLETION DATE: February 8, 2005
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-34
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-34a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: South end of White St., south of The Alameda N 1,946,046 E 6,153,559	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 88.7 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	35		6 96"		0 psi	LEAN CLAY (CL), very stiff, gray, moist, medium plasticity, trace fine grained sand (pp=2.1/2.25/2.6 tsf, tv=0.75/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)	106	22				2.1 P 1.5 T	vs>2089 psf
	55				150 psi								
	60		7 20"		150 psi	--light brown, increase fine grained sand, trace subangular to subrounded gravel up to 1/2 inch, refusal after 18 inches (pp=2.25/2.5/3.0 tsf, tv=0.76/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)						2.6 P 1.6 T	
	65				300 psi	WELL-GRADED GRAVEL (GW), angular to rounded gravel up to 1 inch							
	70		8 13"		(32)	WELL-GRADED SAND WITH GRAVEL (SW), dense, mottled brown and dark grayish brown, subangular to rounded gravel to 1 1/2 inches, trace layer of clayey gravel from 70 ft 71 ft						2.0 P 1.5 T	
	75					LEAN CLAY (CL), stiff to very stiff, mottled light brown and orange brown, moist, medium plasticity, trace fine grained sand and subangular to rounded gravel up to 3/4 inch (pp=1.75/1.9/2.25 tsf, tv=0.73/0.76 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)							
	80		9 9"		(50/3")	WELL-GRADED SAND WITH SILT (SW-SM), very dense, mottled brown and orange brown, trace angular to rounded gravel up to 2 inches (LEL=0.0, OVM=0.0, OXY=20.9)	117	16	12				
	85					WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, brown, moist, angular to rounded gravel up to 3/4 inch							
	90		10 10"		(50/6")	--Ended drilling on 2/7/05 at 91 ft --Began drilling on 2/8/05 at 91 ft --sandy/gravelly with gravel up to 1/2 inch			7				
	95					LEAN CLAY (CL), yellowish brown, medium plasticity, trace fine grained sand							
	-10					POORLY GRADED SAND WITH SILT (SP-SM)							

BORING DEPTH: 150.8 ft
 DEPTH TO WATER: 12.0 ft., 2/7/05, 12.5 ft., 2/8/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 3, 2005
 COMPLETION DATE: February 8, 2005
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-34
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-34b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: South end of White St., south of The Alameda N 1,946,046 E 6,153,559	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 88.7 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
			11 10"	(50/5")		very dense, brown, moist, fine grained sand (LEL=0.0, OVM=1.2, OXY=20.9) --interbedded layers of sand and silt	106	20					
-15	105												
			12 16"	(53)		LEAN CLAY (CL), very stiff, gray, moist, medium plasticity, trace fine grained sand and caliche							
						SILT (ML), very stiff, gray, moist, low plasticity, trace fine grained sand			90			2.8 P 1.6 T	Hydrometer Test
						FAT CLAY (CH), very stiff, gray, moist, high plasticity, trace fine grained sand (pp=2.75/2.5/3.0 tsf, tv=0.8/0.75 tsf)							
-25	115		13 30"	300 psi		LEAN CLAY (CL), very stiff, grayish brown, moist, medium plasticity, trace fine to medium grained sand and caliche (pp=3.0/3.75/3.8 tsf, tv=0.75/0.85 tsf) (LEL=0.0, OVM=0.0, OXY=20.9) --gray (pp=2.25/3.5/3.0 tsf, tv=0.65/0.7 tsf)						3.5 P 1.6 T	
-30	120		14 30"	200 psi									
-35	125		15 26"	300 psi		--hard, grayish brown, trace fine grained sand and caliche, refusal after 24 inches (pp=3.75/4.0/4.5 tsf, tv=0.96/>1 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)	94	28	97			4.1 P >2.0 T	Hydrometer Test
-40	130		16 22"	300 psi		FAT CLAY (CH), hard, gray, moist, high plasticity, trace fine to coarse grained sand, refusal after 24 inches (pp=4.25/4.5/4.5 tsf, tv=>1 tsf)						4.4 P >2.0 T	
-45	135		17 23"	300 psi									
			18 29"	300 psi		LEAN CLAY (CL), very stiff, moist, medium plasticity, trace fine grained sand and caliche (pp=3.75/3.75/4.0 tsf, tv=0.8/0.78 tsf)						3.8 P 1.6 T	
-50	140					FAT CLAY (CH), very stiff to hard, gray, high plasticity, trace fine grained sand							
			19 25"	300 psi		LEAN CLAY (CL), hard, mottled gray and brown, moist, low to medium plasticity, trace fine to medium grained sand and caliche (pp=3.25/4.2/4.5 tsf, tv=0.9/>1 tsf) --very stiff, mottled brown and gray to orange brown, medium plasticity, trace fine grained sand (pp=3.4/3.6/3.8 tsf, tv=0.95/>1 tsf)	101	24				4.0 P >2.0 T	
-55	145											3.6 P >2.0 T	
-60													

Continued

BORING DEPTH: 150.8 ft
DEPTH TO WATER: 12.0 ft., 2/7/05, 12.5 ft., 2/8/05

START DATE: February 3, 2005
COMPLETION DATE: February 8, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-34
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-34c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: South end of White St., south of The Alameda N 1,946,046 E 6,153,559 SURFACE EL: 88.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-65		20	400 psi	400 psi	MATERIAL DESCRIPTION SANDY SILT (ML), brown, moist, non-plastic, fine to medium grained sand, refusal after 8 inches		23	62				
155												
-70												
160												
-75												
165												
-80												
170												
-85												
175												
-90												
180												
-95												
185												
-100												
190												
-105												
195												
-110												

BORING DEPTH: 150.8 ft
 DEPTH TO WATER: 12.0 ft., 2/7/05, 12.5 ft., 2/8/05

START DATE: February 3, 2005
 COMPLETION DATE: February 8, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-34
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-34d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	BLOW COUNT/ PRESSURE, psi	LOCATION: NB Wilson Ave., South of The Alameda N 1,946,087 E 6,153,015	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 90.4 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
90						5 inches ASPHALT CONCRETE							
	5					LEAN CLAY (CL), dark reddish brown, moist							
						--light grayish brown							
85													
	10					--subangular to subrounded gravel up to 3/4 inch at 8 ft to 10 ft							
80													
	15												
75													
	20					--dark gray							
70			1	25"	100 psi	--soft to medium, wet (tv=0.34/0.42 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)						0.8 T	
	25		2	30"	100 psi								
			3	24"	100 - 150 psi	--medium, light grayish brown to mottled brown, moist to wet (pp=0.5/0.6/0.7 tsf, tv=0.24/0.27 tsf)	93	28				0.6 P 0.5 T	
65			4	30"	100 - 200 psi	--stiff, gray, medium plasticity (pp=1.2/1.25/1.3 tsf, tv=0.52/0.58 tsf)						1.3 P 1.1 T	
	30		5	28"	100 - 150 psi	--dark gray (pp=1.2/1.4/1.3 tsf, tv=0.52/0.56 tsf)						1.3 P 1.1 T	
60			6	28"	100 - 150 psi	--light gray with mottled brown (pp=1.3/1.5/1.6 tsf, tv=0.45/0.44 tsf)						1.5 P 0.9 T	
	35		7	30"	100 - 150 psi	--gray with mottled brown (pp=1.1/1.0/1.0 tsf, tv=0.44/0.5 tsf)						1.0 P 0.9 T	
55			8	29"	100 psi	--(pp=1.5/1.6/1.6 tsf, tv=0.48/0.56 tsf)	103	22				1.6 P 1.0 T	
	40		9	30"	100 psi	--gray, trace fine grained sand and subangular gravel up to 1/2 inch (pp=1.1/2/1.2 tsf, tv=0.5/0.55 tsf)						1.4 P 1.1 T	
50						--medium (pp=0.6/0.6/0.7 tsf, tv=0.53/0.52 tsf)	101	25				0.6 P 1.1 T 0.9 U	Noise and Vibration tests
	45		10	26"	100 psi								
			11	26"	150 - 200 psi	--very stiff, trace fine grained sand (pp=2.2/2.2/1.75 tsf, tv=0.38/0.4 tsf)						2.1 P 0.8 T	
							100	25	94	47		1.9 P 0.5 T	

Continued

BORING DEPTH: 78.0 ft
DEPTH TO WATER: 11.0 ft., 12/20/2004

START DATE: December 17, 2004
COMPLETION DATE: December 20, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-35
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-35a

ELEVATION, R DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Wilson Ave., South of The Alameda N 1,946,087 E 6,153,015 SURFACE EL: 90.4 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
40		12 36"		100 psi	SILTY SAND TO SANDY SILT (SM/ML), medium dense, gray, moist, fine grained sand (pp=1.6/1.8/2.4 tsf, tv=0.25 tsf) at 49.5 ft			94			1.6 P 1.3 T	
55		13 21"		100 - 150 psi		LEAN CLAY (CL), stiff, gray, moist to wet (pp=1.6/1.8/1.9 tsf, tv=0.6/0.67 tsf) at 52.5 ft (LEL=0.0, OVM=0.0, OXY=20.4) --(pp=1.6/1.7/1.6 tsf, tv=0.63/0.7 tsf) at 54.3 ft			86			1.6 P 1.3 T
60		14 29"		100 - 150 psi	--Ended drilling on 12/17/04 at 60 ft --Began drilling on 12/20/04 at 60 ft	101	25	96 72			1.6 P 1.3 T	
30		15 30"		100 - 150 psi	SANDY LEAN CLAY (CL), stiff, gray, moist to wet, trace subrounded gravel up to 1/2 inch (pp=1.5/1.7/1.6 tsf, tv=0.65)			79 71			1.8 U 1.9 P	
25		16 27.5"		100 - 150 psi	--decrease in sand at 61 ft --low to medium plasticity, fine grained sand (pp=2/2/1.75 tsf) (LEL=0, OVM=0)			88			1.2 P	
65		17 29.5"		100 psi	LEAN CLAY (CL), stiff, brown, moist, low plasticity, trace sand and subrounded gravel at top of sample up to 1/4 inch (pp=1/1.25/1.25 tsf)	108	20	59			2.2 P	Noise and Vibration tests
70		18 26.5"		100 - 250 psi	SANDY LEAN CLAY WITH GRAVEL (CL), very stiff, reddish brown with gray, subrounded gravel up to 1/4 inch (pp=2/2.25/2.25 tsf)						>4.5 P	
75		19 6"		Ref/6"	--hard, reddish brown, moist, low plasticity (pp>4.5 tsf)		10	8				
15		20 6"		Ref/6"	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, mottled brown, moist to wet, subangular gravel up to 1/4 inch							
80		21 5.5"		Ref/5.5"	--gray and brown, subrounded gravel up to 3/4 inch --wet, rock fragments							

BORING DEPTH: 78.0 ft
DEPTH TO WATER: 11.0 ft., 12/20/2004

START DATE: December 17, 2004
COMPLETION DATE: December 20, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-35
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-35b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW/COUNT/PRESSURE, psi	LOCATION: Median of The Alameda, between Cleaves Ave. and Sunol St. N 1,946,322 E 6,152,633 SURFACE EL: 91.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
	90	Diagonal hatching			7 inches ASPHALT CONCRETE over 7 inches PORTLAND CEMENT CONCRETE							
	85	Diagonal hatching			FAT CLAY (CH), black, high plasticity							
	80	Diagonal hatching			LEAN CLAY WITH SAND (CL), brown, medium plasticity							
	75	Diagonal hatching			∇ --increase in sandy material							
	70	Diagonal hatching	1 30"	100 psi	FAT CLAY (CH), medium to stiff, gray, moist, medium to high plasticity						0.8 P 1.2 T	
	65	Diagonal hatching	2 30"	100 psi	--sandy material at the top of the sample CLAYEY SAND (SC), loose, brown, moist to wet, fine grained sand (pp=1/0.75 tsf) --trace interbedded sand and clay						0.9 P	
	60	Diagonal hatching	3 30"	100 psi	LEAN TO FAT CLAY (CL/CH), stiff, gray, moist, medium to high plasticity (pp=1/1.25 tsf, tv=0.6/0.7/0.72 tsf)	93	28		50	31	1.1 P 1.4 T 1.2 U	
	55	Diagonal hatching	4 30"	100 psi	LEAN CLAY (CL), stiff, mottled grayish brown, moist, low plasticity, trace fine grained sand						1.6 P 1.5 T	
	50	Diagonal hatching	5 30"	100 psi	--gray (pp=1/1.25/1.25 tsf, tv=0.6/0.7/0.75 tsf) (LEL=0, OVM=0)	99	26		32	13	1.2 P 1.4 T	
	45	Diagonal hatching	6 24"	100 psi	SANDY LEAN CLAY WITH GRAVEL (CL), hard, mottled reddish brown, moist, low plasticity, subrounded gravel up to 1/2 inch (pp>4.5 tsf) (LEL=0, OVM=0) refusal after 24 inches						>4.5 P	

Continued

BORING DEPTH: 81.0 ft
DEPTH TO WATER: 16.0 ft., 12/12/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: December 1, 2004
COMPLETION DATE: December 2, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-36
SVRT DOWNTOWN
San Jose, California

FIGURE A1-36a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of The Alameda, between Cleaves Ave. and Sunol St. N 1,946,322 E 6,152,633 SURFACE EL: 91.5 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
40		7 12"	⊗	80		WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, moist, fine to medium grained sand, subrounded gravel up to 1 inch		9	7				
55		8 3"	⊗	21		LEAN CLAY WITH SAND (CL), very stiff, brown, moist, low plasticity							
60		9 29"	⊗	50 psi		--stiff, gray, fine grained sand (pp=1.25/1.5/1.25 tsf, tv=0.9/0.9/0.85 tsf) (LEL=0, OVM=0)	112	17				1.3 P 1.8 T	
65		10 30"	⊗	100 psi		--stiff to very stiff, medium plasticity (pp=2/1.75/1.75 tsf, tv=0.8/0.76 tsf)	100	24		37	18	1.8 P 1.0 T 1.8 U	
70		11 30"	⊗	100 psi		--stiff, yellowish brown, low plasticity (pp=2/2/1.75 tsf, tv=0.8/0.85/0.9 tsf) --Ended drilling on 12/1/04 at 72.5 ft --Began drilling on 12/2/04 at 72.5 ft						1.9 P 1.6 T	
75		12 4"	⊗	200 - 300 psi		CLAYEY SAND WITH GRAVEL (SC), brown, moist, refusal after 12 inches WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, mottled reddish brown, moist to wet, refusal after 12 inches							
80		13 12"	⊗	50/6"				10	7				

BORING DEPTH: 81.0 ft
DEPTH TO WATER: 16.0 ft., 12/12/2004

START DATE: December 1, 2004
COMPLETION DATE: December 2, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-36
SVRT DOWNTOWN
San Jose, California

FIGURE A1-36b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Morrison Ave., between Julian St. and The Alameda N 1,946,631 E 6,152,197 SURFACE EL: 90.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
90	0	ASPHALT			2 inches ASPHALT CONCRETE over 10 inches PORTLAND CEMENT CONCRETE							
85	5	CLAY			FAT CLAY (CH), black, moist, high plasticity LEAN CLAY (CL), brown with mottled reddish brown, low to medium plasticity							
80	10				--sandy material at 12 ft							
75	15				FAT CLAY (CH), medium, gray, moist, medium to high plasticity							
70	20		1 30"	100 psi	--(pp=0.75/0.75/0.75 tsf, tv=0.62/0.65/0.75 tsf)						0.8 P 1.2 T	
65	25		2 19"	100 - 200 psi	LEAN CLAY (CL), stiff, brown, moist, low plasticity (pp=1.5/1/1 tsf, tv=0.75/0.75/0.9 tsf)						1.2 P 1.6 T	
60	30		3 24"	100 - 300 psi	SANDY LEAN CLAY (CL), very stiff, reddish brown, moist, low plasticity, fine grained sand (pp=1.75/2/2.25 tsf) (refusal after 24 inches)	103	23				2.0 P	
55	35		4 11"	76	CLAYEY SAND TO SANDY LEAN CLAY (SC/CL), very dense, mottled brown, moist to wet, trace subangular gravel up to 1 inch		8	46				
50	40		5 28"	100 psi	LEAN CLAY (CL), stiff, gray, moist, medium plasticity, trace fine grained sand (pp=1.5/1.5/1.25 tsf, tv=0.7/0.8/0.8 tsf) (LEL=0, OVM=0)		25				1.4 P 1.5 T 1.3 U >2.1 V	vs>2089 psf
45	45		6 25"	100 - 200 psi	--very stiff, mottled brown and gray (pp=3.25/2.75/3 tsf) (LEL=0, OVM=0)						3.0 P	

Continued

BORING DEPTH: 82.5 ft
DEPTH TO WATER: Not Measured

START DATE: December 3, 2004
COMPLETION DATE: December 3, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-37
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-37a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Morrison Ave., between Jullian St. and The Alameda N 1,946,631 E 6,152,197	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 90.9 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	40		28"		100 psi	--stiff, gray (pp=1.5/1.5/1.25 tsf, tv=0.9/0.9/0.9 tsf) (LEL=0, OVM=0)	100	25				1.4 P 1.8 T 1.2 U 2.0 V	vs=1961 psf
	55		8"		100 -								
	35		17"		250 psi	SILTY SAND (SM), loose, brown, moist to wet, fine grained (LEL=0, OVM=0) refusal after 24 inches		24	27				
	60		9"		50/6"	WELL-GRADED SAND WITH GRAVEL (SW), very dense, mottled brown, wet, fine to medium grained sand, subangular to subrounded gravel up to 1/4 inch							
	30		9"		50/6"								
	65		10"		46	SILTY SAND (SM), dense, gray, moist, fine grained sand		22	30				
	25		14"		46								
	70		11"		46	--refusal with Shelby Tube sampler							
	20		13"		46	--wet, increasing medium to coarse grained sand at 71 ft							
	75		12"		100 psi	LEAN CLAY WITH SAND (CL), very stiff, gray, moist, low to medium plasticity, fine grained sand						2.2 P 1.8 T	
	15		30"		200 psi	-(pp=2.25/2.25/2 tsf, tv=0.9/0.85/0.95 tsf)	102	23					
	80		13"		100 psi							2.2 P 1.9 T	
	10		30"		200 psi	-(pp=2.25/2.25/2 tsf, tv=0.9/1/1 tsf)							
	85												
	5												
	90												
	95												
	-5												

BORING DEPTH: 82.5 ft
 DEPTH TO WATER: Not Measured

START DATE: December 3, 2004
 COMPLETION DATE: December 3, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-37
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-37b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Morrison Ave., and Julian St. N 1,947,097 E 6,152,110 SURFACE EL: 87.4 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
85				7 inches ASPHALT CONCRETE over 6 inches AGGREGATE BASE							
85				LEAN CLAY WITH SAND (CL), yellow to brown, medium plasticity							
75				▽							
70				SILTY SAND layer (SM)							
65		1 30"	100 psi	LEAN CLAY WITH SAND (CL), stiff, gray, moist, medium plasticity --(pp=1.0/1.25/1.25 tsf, tv=0.35/0.3 tsf)						12 P 0.7 T	
60		2 30"	100 psi	--gray and brown, medium plasticity (pp=1.5/2.0/2.0 tsf, tv=0.55/0.6 tsf)						18 P 1.2 T	
55		3 28"	100 psi	--(LEL=0.0, OVM=0.0, OXY=20.4) --gray to green (pp=1.5/1.25/1.25 tsf, tv=0.4/0.45 tsf)						13 P 0.9 T 1.3 U	
50		4 12"	(55)	--lost drilling fluid	94	28		45	27		
45		5 12"	(58)	SANDY SILT WITH GRAVEL (ML), hard, yellow to brown, moist, fine to coarse grained sand							
40		6 0"	(33)	SILTY GRAVEL WITH SAND (GM), dense, yellow to brown, moist, subrounded gravel up to 2 1/2 inches		15	29				
40		7 29"	100 psi	--medium dense, no recovery in modified California sample							PM test @ 43.5'
40				SILTY SAND (SM), medium dense, yellow, fine grained sand							

Continued

BORING DEPTH: 95.5 ft
DEPTH TO WATER: 13.0 ft., 1/19/05

START DATE: January 18, 2005
COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-38
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-38a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	LOCATION: NB Morrison Ave., and Julian St. N 1,947,097 E 6,152,110 SURFACE EL: 87.4 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION											
35		10 12"	250 psi (55)	SILTY SAND (SM), medium dense, yellow, fine grained sand (pp=2.0/1.5/2.0 tsf) at 51 ft (LEL=0.0, OVM=0.0, OXY=20.2) --(pp=1.75/2.0/1.75 tsf) at 52 ft --dense, yellow and brown (LEL=0.0, OVM=0.0, OXY=20.9) --Ended drilling on 1/18/05 at 52.5 ft --Began drilling on 1/19/05 at 52.5 ft						1.8 P 1.8 P	PM test @ 51'
55		10 16"	(82)			22	14				
60		11 14"	(46)	SANDY SILT (ML), very stiff, yellow to brown, moist, trace fine gravel (pp=2.5/3.25/3.0 tsf)						2.9 P	
65		12 4"	(90/9")	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), very dense, brown, moist, subrounded gravel to 3/4 inch							PM test @ 65'
70		13 12"	(39)	LEAN CLAY WITH SAND (CL), stiff to very stiff, gray, moist, medium plasticity (pp=2.25/2.0/2.25 tsf, tv=0.8/0.85 tsf)	106	21		33	16	2.2 P 1.7 T 1.6 U	
75		14 27"	100 - 250 psi	--(pp=2.75/2.75/2.5 tsf, tv=0.825/0.95 tsf)							
80		15 28"	200 psi	--brown, hard (pp=4.25/4.5/4.25 tsf, tv=0.9 tsf) --no recovery in Shelby Tube sample	99	24	86			2.7 P 1.8 T	
85		16 12"	(80/11")	SILTY SAND (SM), very dense, yellow to brown							PM test @ 80'
90		17 12"	(50/5.5")	LEAN CLAY WITH SAND (CL), hard, yellowish brown, moist							
95		18 6"	(Ref/6")	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown to gray, subrounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=20.3) --dense, subrounded gravel to 1 1/2 inches							
95		19 12"	(52)	SANDY SILTY CLAY (CL-ML), stiff to very stiff, gray, low plasticity --(pp=2.0/2.25/2.5 tsf, tv=0.7/0.7 tsf)	109	20		27	6	2.3 P 1.4 T 1.3 U	

BORING DEPTH: 95.5 ft
DEPTH TO WATER: 13.0 ft., 1/19/05

START DATE: January 18, 2005
COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-38
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-38b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Cinnabar St., between N Morrison Ave. and Stockton Ave. N 1,947,451 E 6,152,092 SURFACE EL: 84.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
							5 inches ASPHALT CONCRETE over 14 inches AGGREGATE BASE							
							LEAN TO FAT CLAY (CL/CH) (FILL), very stiff, dark grayish brown to light grayish brown, medium to high plasticity, trace fine grained sand							
							LEAN CLAY (CL), medium to stiff, mottled olive brown and orange brown, moist, medium plasticity, trace fine to medium grained sand							
							--gray							
							--trace 6 inches sand layer							
							FAT CLAY (CH), medium, gray to dark gray, high plasticity, trace fine grained sand							
						50 psi	SILTY SAND (SM), orange brown, moist, fine grained sand, gravelly, trace subangular to rounded gravel up to 2 inches							
						75 psi								
						(67)	--dense, brown, moist, fine to medium grained sand, trace subangular to rounded gravel up to 3/4 inch		21	31				
						(34)	--angular to rounded gravel up to 3 inches							
						(50/4")	FAT CLAY (CH), very stiff, light brown with orange brown streaks, moist, high plasticity, trace fine grained sand and subangular to rounded gravel up to 1 1/4 inches (pp=2.0/2.5/2.75 tsf, tv=0.85/0.85 tsf)						24 P 1.7 T	

BORING DEPTH: 96.0 ft
DEPTH TO WATER: Not Measured

START DATE: January 22, 2005
COMPLETION DATE: January 22, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-39
SVRT DOWNTOWN
San Jose, California

FIGURE A1-39a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Cinnabar St., between N Morrison Ave. and Stockton Ave. N 1,947,451 E 6,152,092 SURFACE EL: 84.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	30		5	(50/6")		WELL-GRADED GRAVEL WITH SAND (GW), very dense, brown, fine to coarse grained sand, subangular to rounded gravel up to 3 inches							
	55		10"			POORLY GRADED GRAVEL (GP), very dense, mottled gray and brown, dry, angular to rounded gravel up to 2 1/2 inches (LEL=0.0, OVM=0.0, OXY=20.9)		2	1				
	25		6		200 psi	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, brown, moist, fine to coarse grained sand, angular to rounded gravel up to 3 inches, gravel up to 2 inches below 64 ft							
	20		7	(50/3")				7	8				
	15		8	(59)		--decreasing gravel size/content and increasing sand SILT WITH SAND (ML), very stiff, gray, moist, fine grained sand, trace clay at the bottom, gravelly at 71 ft						3.5 P 1.3 T	
	10		9		100 psi	SANDY LEAN CLAY (CL), hard, gray, moist, medium plasticity, fine grained sand (pp=3.75/3.75/3 tsf, tv=0.6/0.65 tsf) --low plasticity (pp=4.0/4.0/4.25 tsf, tv=0.5/0.55 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)						4.1 P 1.1 T	
	5		10		100 psi	LEAN CLAY (CL), stiff, gray, moist, medium plasticity, trace fine grained sand --light gray, medium to high plasticity (pp=2.0/2.0/2.0 tsf, tv=0.8/0.85 tsf)	99	25				20 P 1.7 T 1.8 U	
	0		11		100 psi	--hard, brown to orange brown, medium plasticity (pp=>4.5/>4.5/>4.5 tsf, tv=0.75/0.95 tsf)						>4.5 P 1.7 T	
	-5		12		100 psi	--medium to high plasticity (pp=2.5/2.5/2.7 tsf, tv=0.85/0.9 tsf)	102	25				26 P 1.8 T	
	-10		13		100 psi	SANDY LEAN CLAY (CL), hard, gray to orange brown, moist, medium plasticity, fine grained sand, trace angular to rounded gravel up to 1 inch (pp=>4.5/>4.5/>4.5 tsf)(LEL=0.0, OVM=0.0, OXY=20.9)						>4.5 P	

BORING DEPTH: 96.0 ft
DEPTH TO WATER: Not Measured

START DATE: January 22, 2005
COMPLETION DATE: January 22, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-39
SVRT DOWNTOWN
San Jose, California

FIGURE A1-39b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	BLOW COUNT/ PRESSURE, psi	LOCATION: EB Lenzen Ave., West of Stockton Ave. N 1,948,100 E 6,151,849	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 82.2 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
						4 1/2 inches ASPHALT CONCRETE							
						LEAN CLAY (CL), stiff, dark brown, moist							
						--light grayish brown							
80	5												
75													
	10		1	30"	50 psi								
70			2	25"	50 psi	▽ FAT CLAY (CH), medium, medium to high plasticity (pp=0.9/0.9/1 tsf, tv=0.4 tsf) at 12.5 ft (LEL=0, OVM=0, OXY=20.9)	81	39				0.9 P 0.8 T	
	15		3	20"	50 psi	--stiff (pp=1.2/1/1.6 tsf, tv=0.53) at 14.5 ft						1.3 P 1.1 T	
	65		4	27"	50 psi	--gray (pp=1.2/1/0.8 tsf, tv=0.44 tsf)						1.0 P 0.9 T	
	20		5	0"	50 psi	--dark gray (pp=0.9/1.2/1.4 tsf, tv=0.64 tsf) --no recovery in Pitcher Barrel at 20 ft						1.2 P 1.3 T	
60			6	21"	100 psi	--soft to stiff, dark gray, wet, high plasticity (pp=0.7/0.2/0.1 tsf, tv=0.3 tsf)	83	38	54	32		0.3 P 0.6 T 1.0 U	
	25		7	30"	100 psi	--medium (pp=0.75/0.75/0.7 tsf, tv=0.4/0.41 tsf)						0.7 P 0.8 T	
55			8	30"	150 psi	LEAN CLAY (CL), stiff, dark gray, wet (pp=0.8/1.3/1.2 tsf, tv=0.26/0.45 tsf)						1.1 P 0.7 T	
	30		9	30"	100 psi	--gray (pp=0.8/1.25/1 tsf, tv=0.5/0.53 tsf)	94	29				1.0 P 1.0 T	Noise and Vibration Tests
50			10	30"	150 - 100 psi	SILTY CLAY WITH SAND (CL-ML), medium, gray, wet, fine grained sand (pp=1/1.2/0.8 tsf, tv=0.24/0.26 tsf) (LEL=0, OVM=0, OXY=20.8)						1.0 P 0.5 T	
	45		11	24"	200 psi	--very stiff (pp=2.5/2.6/2.5 tsf, tv=0.37/0.4 tsf)						2.5 P 0.8 T	
	40		12	30"	100 psi	--stiff (pp=1.4/1.5/1.6 tsf, tv=0.58/0.7 tsf)	98	26	27	6		1.5 P 1.3 T 1.1 U	Noise and Vibration Tests
40			13	26"	150 psi	LEAN CLAY (CL), very stiff, gray, wet (pp=2/2/2.4 tsf, tv=0.65/0.78 tsf)						2.1 P 1.4 T	
	45		14	30"	150 psi	--stiff (pp=1/1/1.2 tsf, tv=0.71/0.7 tsf)						1.1 P 1.4 T	

Continued

BORING DEPTH: 68.5 ft
DEPTH TO WATER: 13.0 ft., 12/16/2004

START DATE: December 15, 2004
COMPLETION DATE: December 16, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-40
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-40a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Lenzen Ave., West of Stockton Ave. N 1,948,100 E 6,151,849 SURFACE EL: 82.2 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
30		15 8"		175 psi		--Ended drilling on 12/15/04 at 50 ft --Began drilling on 12/16/04 at 50 ft --very stiff, light gray (pp=2.25/2.6/2.75 tsf, tv=0.72/0.88 tsf) (LEL=0, OVM=0, OXY=20.9)	95	27	94			2.5 P 1.6 T	Noise and Vibration Tests
55		16 30"		100 - 200 psi		--light gray with mottled brown, moist, increase in sand from 55 ft to 56 ft (pp=3/2.8/3.6 tsf, tv=0.89/0.92 tsf)			58 94			3.1 P 1.8 T	
25		17 30"		100 - 200 psi		--trace fine grained sand (pp=3.5/3/3.6 tsf, tv=0.55/0.56 tsf)						3.4 P 1.1 T	
60		18 29"		100 - 150 psi		--light brown with mottled bright orange (pp=2.9/2.9/2.7 tsf, tv=0.92 tsf)	99	24	89			3.4 P 1.1 T	
20		19 18"		100 psi		SILTY SAND (SM), medium dense, reddish brown, moist to wet, trace gravel				90		2.8 P 1.8 T	
65		20 10"		300 psi 50/4"		--very dense, with subrounded gravel up to 1 inch (refusal after 10 inches)		18	18				
15		21 10"		50/4"		--reddish brown with mottled red and orange							
70													
10													
75													
5													
80													
0													
85													
-5													
90													
-10													
95													
-15													

BORING DEPTH: 68.5 ft
DEPTH TO WATER: 13.0 ft, 12/16/2004

START DATE: December 15, 2004
COMPLETION DATE: December 16, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-40
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-40b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Pershing Ave. and Harding Ave. N 1,948,606 E 6,151,636 SURFACE EL: 81.4 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
80					6 inches ASPHALT CONCRETE							
	5		1	100 - 150 psi	SANDY LEAN CLAY (CL), grayish brown, moist, fine to medium grained sand, low plasticity, trace wood fragments at 1.5 ft (FILL)							
	7.5		2	100 psi	FAT CLAY (CH), stiff, grayish brown, moist, medium to high plasticity							
	10		27"	150 psi	SILT (ML), very stiff, brown, moist, low to medium plasticity						2.1 P 1.4 T	
	15		27.5"	100 psi	FAT CLAY (CH), medium to stiff, brown and gray mottling, moist, high plasticity							
	17.5			150 psi	--(pp=1.25/2/1.5 tsf, tv=0.5/0.55 tsf)	81	40				1.6 P 1.0 T 0.8 U	
	20		18"	100 - 200 psi	--very stiff						2.0 V	vs=2025 psf
	22				--gray (LEL=0, OVM=0)							
	25		28.5"	100 psi								
	27.5			200 psi	--brown with gray mottling (pp=1.25, 1.5, 1.5 tsf, tv=0.75/0.8/0.8 tsf) (LEL=0, OVM=0)						1.4 P 1.6 T	
	30		27.5"	100 psi							>2.1 V	vs>2089 psf
	32.5			200 psi	SANDY LEAN CLAY (CL), very stiff, mottled brown and gray, moist, low plasticity, fine grained sand (pp=2/2/2.25 tsf) (LEL=0, OVM=0)	103	23	59			2.1 P 0.7 U	
	35		22"	100 - 200 psi	LEAN CLAY WITH SAND (CL), hard, mottled gray and brown, moist, low plasticity, fine grained sand (pp=2.25/2.25/1.75 tsf, tv=0.85/1 tsf) (LEL=0, OVM=0)						2.0 V	vs=2036 psf
	37.5										2.1 P 1.9 T	
	40		18"	100 psi								
	42.5			300 psi	CLAYEY SAND TO SANDY LEAN CLAY (SC/CL), dense, reddish brown with gray mottling, moist, fine grained sand (pp=2.5/2.25/1.75 tsf) refusal after 18 inches	105	21	48			2.2 P	
	45		15"	68	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, dark brown, wet, fine grained sand, increase in fine gravel content at 46.5 ft		15	7				

Continued

BORING DEPTH: 60.0 ft
DEPTH TO WATER: 15.0 ft., 12/22/2004

START DATE: December 21, 2004
COMPLETION DATE: December 22, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-41
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-41a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Pershing Ave. and Harding Ave. N 1,948,606 E 6,151,636 SURFACE EL: 81.4 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
30		10 13'		100 - 150 psi	SILTY SAND (SM), gray, moist to wet, non-plastic to low plasticity, fine grained sand							
55		11 12'	⊗	50/6"	WELL-GRADED SAND WITH GRAVEL (SW), very dense, gray, wet, fine grained sand, subangular gravel up to 1/2 inch (refusal after 12 inches)							
60		12 12'	⊗	60	--mottled brown, moist to wet, subrounded gravel up to 1/2 inch		9					
20												
65												
15												
70												
10												
75												
5												
80												
0												
85												
-5												
90												
-10												
95												
-15												

BORING DEPTH: 60.0 ft
DEPTH TO WATER: 15.0 ft., 12/22/2004

START DATE: December 21, 2004
COMPLETION DATE: December 22, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-41
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-41b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Stockton Ave., between Harding Ave. and Schiele Ave. N 1,948,912 E 6,151,377	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 82.7 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
						7 inches ASPHALT CONCRETE							
						ORGANIC CLAY (OL), black, moist, medium plasticity (FILL)							
						SANDY LEAN CLAY (CL), hard, light brown, moist, medium plasticity (pp=>4.5 tsf), refusal after 24 inches						>4.5 P	
						SILTY SAND (SM), loose, light brown, moist, fine grained sand							
						LEAN CLAY (CL), soft to medium, brown, moist to wet, low plasticity, trace sand seams from 10 to 12 ft (pp=0.5/0.5/0.5 tsf, tv=0.35/0.3/0.32 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)						0.5 P 0.8 T	
						--wet (pp=0.5/0.5/0.5 tsf, tv=0.4/0.45/0.45 tsf)						0.5 P 0.9 T	
													PM test @ 23' and 25'
						--very stiff, gray, moist, medium plasticity (pp=1.5/1.75/2.0 tsf, tv=0.6/0.65/0.7 tsf)(LEL=0.0, OVM=0.0, OXY=20.8)		29				1.8 P 1.3 T	
						--stiff, light gray, moist, increasing sand content (pp=1.25/1.25/1.25 tsf, tv=0.6/0.65/0.7 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)						1.3 P 1.3 T	
						--sandy at 32 ft --Ended drilling on 1/16/05 at 32 ft --Began drilling on 1/17/05 with Failing 1500 at 32 ft							PM test @ 33' and 35'
						--very stiff, gray, medium plasticity (pp=1.75/1.75/1.5 tsf, tv=0.35/0.35 tsf)	94	28				1.7 P 0.7 T	
						SANDY LEAN CLAY TO CLAYEY SAND (CL/SC), hard, gray, disturbed sample							
						POORLY GRADED SAND WITH SILT (SP-SM), brown	109	18	50				PM test @ 43' and 44.5'
						WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown to gray, subrounded gravel up to 1 1/2 inches							

Continued

BORING DEPTH: 62.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 16, 2005
COMPLETION DATE: January 17, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang/L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-42
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-42a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Stockton Ave., between Harding Ave. and Schiele Ave. N 1,948,912 E 6,151,377 SURFACE EL: 82.7 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
30		10 11		(42)	--(LEL=0.0, OVM=0.0, OXY=20.5) LEAN CLAY WITH SAND (CL), stiff to very stiff, yellow, medium plasticity (pp=2.25/2.5/2.75 tsf)	93	27		38	20	2.5 P 1.0 U	
55		11 29		100 psi								
25				180 psi	--gray (pp=2.5/2.5/2.25 tsf, tv=0.5/0.55 tsf)						2.4 P 1.0 T	
60		12 30		100 psi								
20				200 psi	--(pp=2.5/2.0/2.5 tsf, tv=0.6/0.5 tsf)	107	20		31	15	2.3 P 1.0 T 2.0 U	
65												
15												
70												
10												
75												
5												
80												
0												
85												
-5												
90												
-10												
95												
-15												

BORING DEPTH: 62.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 16, 2005
COMPLETION DATE: January 17, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang/L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-42
SVRT DOWNTOWN
San Jose, California

FIGURE A1-42b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Schiele Ave. and Villa Ave. N 1,949,244 E 6,151,096 SURFACE EL: 81.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	80					7 inches ASPHALT CONCRETE over 2-3 inches PORTLAND CEMENT CONCRETE							
						FILL							
	75		1 15"	6		SANDY SILT (ML), soft, grayish brown, moist, low plasticity, fine grained sand --increase in sand content							
			2 16"	10		--medium, mottled brown and gray, fine grained sand							
	70		3 5"	6		SILTY SAND (SM), loose, gray, moist, fine grained sand, trace subangular gravel up to 1/2 inch							
			4 30"	50 - 100		FAT CLAY (CH), medium to stiff, gray, moist, high plasticity (pp=1.5/1.25 tsf, tv=0.59/0.68/0.7 tsf)						1.4 P 1.3 T	
	65		5 28"	100 - 150		--(pp=1/1/1.25 tsf, tv=0.5/0.55/0.54 tsf)	84	36				1.1 P 1.1 T 0.5 U	
			6 28"	100 - 150		--(pp=1/1/1.25 tsf, tv=0.5/0.6/0.7 tsf)						1.1 P 1.2 T	
	60		7 30"	100 - 150		LEAN CLAY WITH SAND (CL), stiff, gray, moist, low plasticity, fine grained sand (pp=1.5/1.5/1.25 tsf, tv=0.57/0.57/0.6 tsf) (LEL=0.0, OVM=0.0)	100	24				1.4 P 1.2 T	
			8 30"	100 - 250		--medium (pp=1/0.75/1 tsf, tv=0.5/0.45/0.5 tsf)						0.9 P 1.0 T	
	55		9 30"	100 - 200		FAT CLAY (CH), stiff, dark gray, moist, high plasticity (pp=1/1.25/1.25 tsf, tv=0.65/0.7/0.7 tsf) (LEL=0.0, OVM=0.0)	84	38				1.2 P 1.4 T	
			10 30"	100 - 200		LEAN CLAY WITH SAND (CL), stiff, brown, moist, low plasticity, medium to coarse grained sand (pp=1.5/2/1.25 tsf, tv=0.75/0.9/0.9 tsf)	101	22				1.6 P 1.7 T	
	50		11 12"	200 - 300		--trace subrounded gravel up to 2 1/2 inches, refusal after 12 inches						1.0 U	
			12 14"	79		POOLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, mottled brown, wet, fine to medium grained sand, angular to subangular gravel up to 1 inch		8	6				
	45		13 9"	51		--reddish brown, moist at 36 ft (LEL=0.0, OVM=0.0)							
			14 8"	57		--mottled brown, wet at 38.5 ft		10	6				
	40		15 5"	44		WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown, wet, fine to medium grained sand, angular gravel up to 1/2 inch; subangular gravel up to 1/4 inch at 43 ft							
			16 6"	45		--very dense, subrounded gravel up to 1/2 inch							
	35		17 8.5"	73		WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM),		12	10				
			18 6"	61									

Continued

BORING DEPTH: 60.0 ft
DEPTH TO WATER: Not Measured

START DATE: November 30, 2004
COMPLETION DATE: November 30, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-43
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-43a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Schiele Ave. and Villa Ave. N 1,949,244 E 6,151,096 SURFACE EL: 81.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS	
30		19		48	MATERIAL DESCRIPTION dense to very dense, mottled brown, moist, medium grained sand, fine gravel SANDY LEAN CLAY (CL), very stiff, brown, moist to wet, low plasticity; stiff, wet at 52.5 ft (gravel stuck in the SPT shoe causing poor recovery) no recovery in Shelby Tube sample at 55 ft LEAN CLAY (CL), stiff, gray, moist, medium plasticity (pp=1.75/1.5/1.75 tsf, tv=0.9/0.85/0.9 tsf)								
55		20		15									
25		21		100 psi									
60		22		300 psi									
60		30		100 psi		95	28				1.7 P 1.8 T 1.0 U		
20				150 psi									
65													
15													
70													
10													
75													
5													
80													
0													
85													
-5													
90													
-10													
95													
-15													

BORING DEPTH: 60.0 ft
 DEPTH TO WATER: Not Measured

START DATE: November 30, 2004
 COMPLETION DATE: November 30, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-43
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-43b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Stockton Ave., between Asbury St. and Taylor St. N 1,949,897 E 6,150,543 SURFACE EL: 79.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
			1	9"	6	4 inches PORTLAND CEMENT CONCRETE							
			2	14"	11	SANDY LEAN CLAY (CL), brown, moist, trace wood fragments (FILL) FAT CLAY (CH), firm, black, moist, high plasticity, trace fine grained sand --trace wood fragments at 3 ft							
			3	14"	8	SANDY LEAN CLAY (CL), stiff, brown, moist, low plasticity, fine grained sand							
			4	28"	100 psi	CLAYEY SAND TO SANDY LEAN CLAY (SC/CL), loose, brown, wet, fine grained sand		23	48				
			5	30"	75 psi	LEAN TO FAT CLAY (CL/CH), soft to medium, gray, moist, high plasticity (pp=0.75/0.75/0.5 tsf, tv=0.47/0.55/0.5 tsf)	91	32				0.7 P 1.0 T 0.4 U	
			6	30"	125 psi	--stiff						1.0 V	vs=1311 pcf
			7	30"	100 psi	SANDY LEAN CLAY (CL), stiff, gray, moist, low plasticity, fine grained sand (pp=1.25/1.25/1.5 tsf, tv=0.37/0.42/0.44 tsf) (LEL=0.0, OVM=91.0)						1.3 P 0.8 T	
			8	29"	50 psi	LEAN CLAY (CL), stiff, gray with mottled brown, moist, low plasticity (pp=1/1/1.25 tsf, tv=0.52/0.58/0.65 tsf)						1.1 P 1.2 T	
			9	29"	50 psi	SANDY LEAN CLAY (CL), stiff, brown, moist, low plasticity, fine grained sand (pp=1.25/1.25/1.25 tsf, tv=0.45/0.55/0.6 tsf) (LEL=0, OVM=0)	95	26				1.2 V 1.3 P 1.1 T 0.9 U	vs=1451 pcf
			10	10"	63	LEAN CLAY (CL), stiff, gray, moist, low plasticity						1.1 P 1.5 T	
			11	8"	77	--(pp=1/1/1.25 tsf, tv=0.7/0.75/0.8 tsf)							
						SANDY LEAN CLAY WITH GRAVEL (CL), hard, brown, moist, low plasticity, subrounded gravel up to 1 inch	102	24					
						WELL-GRADED GRAVEL WITH SAND (GW), very dense, dark mottled brown, moist, fine to medium grained sand		8	4				
						--increase in gravel content --Ended drilling on 11/15/04 at 46.5 ft --Began drilling on 11/16/04 at 46.5 ft --lost drilling fluid from 48 ft to 49 ft							

Continued

BORING DEPTH: 61.5 ft
DEPTH TO WATER: 16.5 ft., 11/16/2004

START DATE: November 15, 2004
COMPLETION DATE: November 16, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-44
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-44a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Stockton Ave., between Asbury St. and Taylor St. N 1,949,897 E 6,150,543 SURFACE EL: 79.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
25	55	12	13	60	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, mottled brown, wet, fine to medium grained sand, subrounded gravel up to 1/2 inch --refusal with Shelby Tube sample, no recovery with Pitcher Barrel sampler, some caving at 56 ft		9	6				
20	60	11	13	67	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), very dense, mottled brown, moist, fine to medium grained sand, subrounded gravel up to 1 inch							
15	65	14	14	70								
10	70											
5	75											
0	80											
-5	85											
-10	90											
-15	95											

BORING DEPTH: 61.5 ft
DEPTH TO WATER: 16.5 ft., 11/16/2004

START DATE: November 15, 2004
COMPLETION DATE: November 16, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-44
SVRT DOWNTOWN
San Jose, California

FIGURE A1-44b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Asbury St. and Emory St. N 1,950,212 E 6,150,269	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 77.5 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	75					4 inches PORTLAND CEMENT CONCRETE over 12 inches ASPHALT CONCRETE over 6 inches AGGREGATE BASE							
	5					LEAN CLAY (CL) (LEL=0.0, OVM=0.0, OXY=20.7)							
	70					SANDY LEAN CLAY (CL)							
	10												
	65					▽							
	15												
	60					LEAN CLAY (CL), stiff, moist, low to medium plasticity							
	20												
	55												
	25		1	30"	150 psi								
	50				200 psi	--(pp=1.7/1.7/2.1 tsf, tv=0.65/0.75/0.78 tsf)						1.8 P 1.5 T	
	30		2	30"	100 psi								
	45				200 psi	SILTY CLAY (CL-ML), medium, greenish gray, moist, low plasticity (pp=0.8/0.7/0.7 tsf, tv=0.45/0.5/0.55 tsf)		26				0.8 P 1.0 T	
	35		3	13"	(18)	--trace fine to medium grained sand							
	40					SANDY SILT (ML), stiff, greenish gray, moist, low plasticity, fine grained sand							
	40		4	30"	100 psi								
	35				250 psi	LEAN CLAY (CL), medium to stiff, gray, moist, low to medium plasticity							
	45		5	14"	(36)	--(pp=1.6/1.7/2.0 tsf, tv=0.6/0.5/0.5 tsf)	97	26				1.8 P 1.0 T 0.9 U	
	30					--trace subrounded gravel up to 1 inch --medium plasticity (pp=1.8 tsf)(LEL=0.0, OVM=0.0, OXY=20.7)						1.8 P	
						WELL-GRADED SAND WITH GRAVEL (SW),							

BORING DEPTH: 85.5 ft
 DEPTH TO WATER: 13.2 ft., 1/23/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: F. Li
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 22, 2005
 COMPLETION DATE: January 23, 2005
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-45
SVRT DOWNTOWN
San Jose, California

FIGURE A1-45a

ELEVATION, ft DEPTH, R	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Asbury St. and Emory St. N 1,950,212 E 6,150,269	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 77.5 ft (1988 NAVD datum)							
					MATERIAL DESCRIPTION							
25		6 7"		(50/4.5")	very dense, brown, moist, subrounded gravel up to 1 1/2 inches							PM test @ 50'
55		7 8"		(50/6")	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown, moist, subrounded gravel up to 1 inch	114	15	8				
20												PM test @ 58.5' and 60'
60		8 9"		(26)	LEAN CLAY (CL), very stiff, greenish gray, moist, medium plasticity (pp=1.6 tsf) -Ended drilling on 1/22/05 at 62.5 ft -Began drilling on 1/23/05 at 62.5 ft						1.6 P	
15		9 18"		(34)	POORLY GRADED GRAVEL (GP), gravel up to 2 inches						1.6 P	
65					LEAN CLAY (CL), very stiff, greenish gray, moist, medium plasticity (pp=1.6 tsf) (LEL=0.0, OVM=0.0, OXY=20.3)							PM test @ 70'
10		10 24"		150 psi 350 psi	SILTY SAND (SM), very dense, gray, moist, fine to medium grained sand (refusal after 24 inches)							
70		11 14"		(61)	--brown	100	21	20				
5		12 15"		(70)	SANDY LEAN CLAY WITH GRAVEL (CL), stiff, gray, moist, subrounded gravel up to 1 1/2 inches	114	17	43				
75					SILTY SAND (SM), very dense, gray, moist, fine to medium grained sand							
80		13 18"		(51)	SANDY LEAN CLAY WITH GRAVEL (CL), very stiff, gray, moist, medium plasticity, subrounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=20.4)							
-5												
85												
-10												
90												
-15												
95												
-20												

BORING DEPTH: 85.5 ft
DEPTH TO WATER: 13.2 ft., 1/23/2005

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 22, 2005
COMPLETION DATE: January 23, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-45
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-45b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Stockton Ave., north of University Ave. N 1,950,749 E 6,149,834 SURFACE EL: 73.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
70					MATERIAL DESCRIPTION							
5					5 inches ASPHALT CONCRETE over 4 inches PORTLAND CEMENT CONCRETE							
5		1	12"	100 - 200 psi	LEAN CLAY (CL), medium, yellowish brown, moist --(disturbed sample)							
65		2	30"	100 - 200 psi	CLAYEY SAND WITH GRAVEL (SC), very dense, brown, moist							
10		3	13"	19	SILTY SAND (SM), medium dense, yellowish brown, moist							
60		4	24"	100 - 200 psi	LEAN CLAY (CL), medium, yellowish brown, moist (sample slipped off from the tube, disturbed sample)	92	29					
15		5	8"	300 psi	POORLY GRADED SAND WITH GRAVEL (SP), very dense, brown, moist, gravel up to 1/2 inch (refusal after 12 inches)							
55		6	30"	100 - 200 psi	LEAN CLAY (CL), stiff, brown, moist, medium plasticity (pp=1.5/1.2/1 tsf, tv=0.53/0.73/0.75) (LEL=0, OVM=0)						1.2 P 1.3 T	
20		7	30"	100 psi	--medium to stiff (pp=1.2/1.2/1 tsf, tv=0.55/0.65/0.75 tsf) (LEL=0, OVM=0)	91	30		42	20	1.1 P 1.3 T 0.5 U	
50		8	30"	100 - 150 psi	--stiff (pp=1.5/1.5/1.5 tsf, tv=0.65/0.75/0.78 tsf) (LEL=0, OVM=0)						1.5 P 1.5 T	
25		9	30"	100 psi	FAT CLAY (CH), medium, dark gray, moist, high plasticity (pp=0.8/0.8/0.8 tsf, tv=0.58/0.55/0.62 tsf) (LEL=0, OVM=0)	81	41				0.8 P 1.2 T	
45		10	28"	150 psi	CLAYEY SAND WITH GRAVEL (SC), dense, brown, moist			13	11			
30		11	12"	60	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown, moist, gravel up to 1 inch							Noise and Vibration Test
40		12	0"	52	--no recovery in SPT sampler at 35 ft, 2 inch rock in shoe of sampler							
35		13	12"	57	--yellowish brown, fine grained sand							
40		14	13"	90	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, moist, fine to coarse grained sand, gravel up to 1 inch		11	6				Noise and Vibration Test
30		15	15"	12	LEAN CLAY (CL), stiff, yellowish brown, moist, medium plasticity							
45		16	12"	78	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, brown, moist, fine to coarse grained sand, gravel up to 1 inch		12	6				
25		17	15"	17	SILT TO LEAN CLAY (ML/CL), stiff to very stiff,							

Continued

BORING DEPTH: 60.0 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: December 5, 2004
COMPLETION DATE: December 5, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-46
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-46a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: NB Stockton Ave., north of University Ave. N 1,950,749 E 6,149,834 SURFACE EL: 73.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
18		30*		200 psi	MATERIAL DESCRIPTION gray, moist, low plasticity --(pp=1.6/1.3/2 tsf, tv=0.57/0.62/0.6 tsf)	92	30	96	36	11	1.6 P 1.2 T 1.6 U	Noise and Vibration Test
55		19	250 psi					89				
20		30*	250 psi	--with sand (pp=1.2/1.7/1.5 tsf, tv=0.52/0.55/0.6 tsf)				83			1.5 P 1.1 T	
60					SILTY CLAY (CL-ML), stiff, gray, moist, low plasticity (pp=1.7/1.7/1.8 tsf, tv=0.55/0.6/0.65 tsf)	99	25	97			1.7 P 1.2 T	
10												
5												
70												
0												
75												
-5												
80												
-10												
85												
-15												
90												
-20												
95												
-25												

BORING DEPTH: 60.0 ft
DEPTH TO WATER: Not Measured

START DATE: December 5, 2004
COMPLETION DATE: December 5, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-46
SVRT DOWNTOWN
San Jose, California

FIGURE A1-46b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Stockton Ave., west of W Hedding St. N 1,951,006 E 6,149,508	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 72.4 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	70		1	14"	(53)		3 inches ASPHALT CONCRETE over 6 inches AGGREGATE BASE							
	5		2	12"	(35)		LEAN CLAY (CL), hard, dark brown, moist, low to medium plasticity (LEL=0.0, OVM=0.0, OXY=20.7)	115	15					
	65						SILTY SAND WITH GRAVEL (SM), medium dense, brown, moist, subrounded gravel up to 1 inch	115	8	12				
	10		3	13"	(23)		--subrounded gravel up to 2 inches							
	60						SILTY CLAY (CL-ML), stiff, yellowish brown, moist, low plasticity							
	15		4	10"	(20)									
	55		5	30"		150 psi	LEAN CLAY (CL), medium to stiff, brown, moist, low to medium plasticity (pp=1.2/1/1.1 tsf, tv=0.45/0.5/0.6 tsf) --(LEL=0.0, OVM=0.0, OXY=20.7)	99	30			1.1 P 1.0 T 0.5 U >2.1 V	vs>2089 psf	
	20													
	50		6	30"		150 psi	--stiff, gray, medium plasticity (pp=1.5/1.7/2.0 tsf, tv=0.65/0.75/0.8 tsf)					>2.1 V	vs>2110 psf	
	25													
	45		7	4"	(94)		WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), dense, brown, moist, medium to coarse grained sand, subrounded gravel up to 1 1/2 inches							
	30													
	40		8	10"	(50/5")		POORLY GRADED SAND WITH GRAVEL (SP), very dense, yellowish brown, moist, medium to coarse grained sand, subrounded gravel up to 2 inches	120	13	5				
	35													
	40		9	13"	(84)		WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown, moist, subrounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=20.8)							
	30													
	45		10	9"	(98/11")		--very dense	128	11	6				
	25													

BORING DEPTH: 61.5 ft
DEPTH TO WATER: 10.3 ft., 01/16/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 15, 2005
COMPLETION DATE: January 16, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-47
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-47a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Stockton Ave., west of W Hedding St. N 1,951,006 E 6,149,508	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					SURFACE EL: 72.4 ft (1988 NAVD datum)							
20		11 10"	(25)		LEAN CLAY (CL), very stiff, yellowish brown, moist, medium plasticity							
55		12 30"		250 psi	--stiff to very stiff, light brown, medium to low plasticity (pp=2.2/2.5/3.0 tsf tv=0.8/0.85/0.9 tsf) --Ended drilling on 1/15/05 at 55 ft --Began drilling on 1/16/05 at 55 ft (LEL=0.0, OVM=0.0, OXY=20.6)	106	29				2.6 P 1.7 T 1.3 U	
60		13 18"		150 psi 300 psi	SANDY LEAN CLAY (CL), hard, yellowish brown, moist, medium grained sand, trace subrounded gravel up to 1 inch, refusal after 18 inches							
10												
65												
5												
70												
0												
75												
-5												
80												
-10												
85												
-15												
90												
-20												
95												
-25												

BORING DEPTH: 61.5 ft
 DEPTH TO WATER: 10.3 ft., 01/16/2005

START DATE: January 15, 2005
 COMPLETION DATE: January 16, 2005
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: F. Li
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-47
SVRT DOWNTOWN
San Jose, California

FIGURE A1-47b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private property near McKendrie St. and Stockton Ave. N 1,951,346 E 6,149,165	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 72.6 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	70						12 inches AGGREGATE BASE							
							SANDY LEAN CLAY (CL), brown to gray, moist, low to medium plasticity							
	5						SILTY SAND WITH GRAVEL (SM), brown to gray, subrounded gravel up to 1 inch							
	65													
	10						--lost approximately 300 gallons drilling fluid							
	60													
	15		1			(20)								
	55						SILTY SAND (SM), loose, brown, moist, fine grained sand							
	20		2	26"		140 psi	LEAN CLAY WITH SAND (CL), stiff, gray, moist, medium plasticity							
	50						--(pp=1.25/1.25/1.25 tsf, tv=0.45/0.50 tsf)						1.3 P 1.0 T	
	25		3	29"		140 psi								
	45						--(pp=1.5/1.5/1.25 tsf, tv=0.4/0.5 tsf) (LEL=0.0, OVM=0.0, OXY=17.2)						1.4 P 0.9 T	
	30													
	40		4	29"		0 psi	SILT WITH SAND (ML), stiff, gray, moist							PM test @ 30.5' and 32.5'
	35						--(pp=1.75/1.75/1.5 tsf, tv=0.25/0.2 tsf)						1.7 P 0.5 T	
	35		5	30"		0 psi								
	40						LEAN CLAY WITH SAND (CL), hard, gray, moist, low plasticity (pp=4.25/4/4 tsf, tv=0.9/0.9 tsf)	100	10		20	11	4.1 P 1.8 T 1.9 U	
	30		6	18"		0 psi								
	45						SILTY SAND (SM), stiff, brown, moist, fine grained sand (pp=0.5/2.5/2.5 tsf)		24	27			1.8 P	
	25						--Ended drilling on 2/3/05 at 45 ft --Began drilling on 2/4/05 at 45 ft							PM test @ 48.5' and 50'

Continued

BORING DEPTH: 86.5 ft
DEPTH TO WATER: 13.0 ft., 2/4/2005

START DATE: February 3, 2005
COMPLETION DATE: February 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-48
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-48a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private property near McKendrie St. and Stockton Ave. N 1,951,346 E 6,149,165	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
				SURFACE EL: 72.6 ft (1988 NAVD datum)							
MATERIAL DESCRIPTION											
20		7 24"	0 psi	SANDY LEAN CLAY (CL), very stiff, brown, moist							
55			1120 psi	--refusal after 24 inches		23	73			2.1 P	
60		8 20"	0 psi	--very stiff, fine grained sand, silt seams, refusal after 24 inches (LEL=0.0, OVM=0.0, OXY=17.1)							PM test @ 58.5' and 60'
10			1260 psi							2.5 P	
65		9 18"	(94/11.5")	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown to dark brown, moist, subrounded gravel up to 1 inch		10	7				
70		10 8"	(35)	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), medium dense, brown to dark brown, moist		12	9				
75		11 30"	0 psi	SANDY LEAN CLAY (CL), stiff to very stiff, gray, moist, medium plasticity (LEL=0.0, OVM=0.0, OXY=16.9)							
-5			140 psi	--(pp=3.5/3.0/3.5 tsf, tv=0.6/0.55 tsf)	101	24		38	20	3.3 P 1.2 T 1.9 U	
80		12 30"	0 psi	--hard, brown, fine grained sand lenses							
-10			980 psi	(pp=>4.5/>4.5/4.0 tsf, tv=0.35/0.3 tsf)						4.3 P 0.7 T	
85		13 12"	(82)	SILTY SAND WITH GRAVEL (SM), dense, brown, moist, coarse grained sand, subrounded gravel up to 3/4 inch							
90											
95											
-20											
-25											

BORING DEPTH: 86.5 ft
DEPTH TO WATER: 13.0 ft., 2/4/2005

START DATE: February 3, 2005
COMPLETION DATE: February 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-48
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-48b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (ft)	SAMPLER TYPE	SAMPLER BLOW COUNT/PRESSURE, psi	LOCATION: Delta Towing Parking Lot, 1025 Stockton Ave. N 1,951,589 E 6,148,617 SURFACE EL: 71.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	70					2 inches ASPHALT CONCRETE over 4 inches AGGREGATE BASE							
	5					LEAN TO FAT CLAY (CL/CH) (FILL), very stiff, mottled brown, moist, medium to high plasticity, trace fine to coarse grained sand, trace angular to subrounded gravel up to 1 1/2 inches							
	65					POORLY GRADED GRAVEL (GP) (FILL), trace fine grained sand, angular to subrounded gravel up to 1/2 inch							
	10					LEAN CLAY (CL), mottled brown, low to medium plasticity, trace fine to medium grained sand							
	60					-gravelly from 12 ft to 14 ft, angular to rounded gravel up to 1/2 inch							
	15					-medium to stiff, brown, moist, medium plasticity, trace fine grained sand (LEL=0.0, OVM=0.0, OXY=19.7) (disturbed sample)							
	55		1	30"	100 psi								
	20		2	30"	100 psi								
	50					-medium to stiff, mottled brown and grayish brown (pp=1.75/2.0/2.25 tsf, tv=0.4/0.5 tsf)						2.0 P 0.9 T	
	25		3	18"	150 - 250 psi	LEAN CLAY WITH SAND (CL), very stiff, mottled grayish brown, moist, low to medium plasticity, fine grained sand, trace subrounded to rounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=19.6)	99	24					
	45												
	30		4	5"	(Ref/6")	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, mottled brown and orange brown, wet, subangular to rounded gravel up to 1 1/2 inches		8	9				
	40												
	35		5	5"	200 - 300 psi	SANDY SILT (ML), very stiff, gray, moist, low plasticity, fine grained sand, trace angular to subrounded gravel up to 2 inches, refusal after 18 inches (LEL=0.0, OVM=0.0, OXY=19.5)			60				
	35												
	40		6	13"	(32)	-grayish brown to gray, low plasticity to non-plastic							
	30												
	45		7	25"	100 - 300 psi	-hard (pp=>4.5 tsf, tv=0.57/0.65 tsf) (LEL=0.0, OVM=0.0, OXY=19.5)	113	17	67			>4.5 P 1.2 T	
	25					FAT CLAY (CH), very stiff, gray, moist							

BORING DEPTH: 77.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 17, 2005
COMPLETION DATE: February 17, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-49
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-49a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Delta Towing Parking Lot, 1025 Stockton Ave. N 1,951,589 E 6,148,617 SURFACE EL: 71.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	20		8 24"		150 - 300 psi	high plasticity, trace fine grained sand							
						SILTY SAND (SM), brown, moist, non-plastic, fine grained sand, refusal after 24 inches	95	22	31				
	15		9 18"		(38)	LEAN CLAY (CL), stiff to very stiff, brown to gray, moist, medium plasticity, trace fine grained sand (pp=2.25/2.2/2.75 tsf, tv=0.5/0.53 tsf)	101	25				24 P 1.0 T 1.0 U	
	10		10 25"		200 - 300 psi	SILT WITH SAND (ML), very stiff, brown, moist, low plasticity, fine grained sand							
	5		11 28"		100 psi	LEAN CLAY WITH SAND (CL), stiff to very stiff, mottled light brown and orange brown, moist, medium plasticity, fine to coarse grained sand, trace angular to rounded gravel up to 1 inch (pp=1.75/2.25/3.0 tsf, tv=0.64/0.57 tsf) (LEL=0.0, OVM=0.0, OXY=19.4)						23 P 1.2 T	
					200 psi	--gray, fine grained sand (pp=2.5/2.5/2.75 tsf, tv=0.65/0.6 tsf)							26 P 1.3 T
	0		12 24"		100 psi								
	5		13 30"		100 psi	POORLY GRADED SAND WITH CLAY (SP-SC), olive brown, moist, fine to coarse grained sand, trace angular to rounded gravel up to 1 inch, refusal after 24 inches (LEL=0.0, OVM=0.0, OXY=19.3)							
					300 psi	FAT CLAY (CH), very stiff to hard, gray, moist, high plasticity, trace fine grained sand							35 P 1.0 T
	10				300 psi	LEAN CLAY (CL), very stiff, grayish brown, moist, medium plasticity, trace fine grained sand (pp=3.2/3.25/4.2 tsf, tv=0.5/0.54 tsf)							
	15												
	20												
	25												

BORING DEPTH: 77.5 ft
DEPTH TO WATER: Not Measured

START DATE: February 17, 2005
COMPLETION DATE: February 17, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-49
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-49b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 6th St. and 7th St. N 1,948,835 E 6,159,042 SURFACE EL: 80.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
80	0	ASPHALT	1 13"	10	6 inches ASPHALT CONCRETE over 6 inches PORTLAND CEMENT CONCRETE over 6 inches AGGREGATE BASE							
75	5	CLAY	2 21"	150 psi	FAT CLAY (CH), stiff, dark gray, moist, medium to high plasticity		23					
70	10	CLAY	3 26"	100 psi	LEAN CLAY (CL), stiff, brown, moist, medium plasticity, trace medium grained sand (pp=1.25/2.25 tsf, tv=0.6/0.6/0.6 tsf)	104	22		37	15	1.8 P 1.2 T 1.6 U	vs=1247 psf
65	15	CLAY	4 17"	200 psi	--medium, brown with mottled gray, low plasticity (pp=0.5/0.5 tsf, tv=0.42/0.48/0.48 tsf)	92	31		38	16	0.5 P 0.9 T 0.7 U	
60	20	CLAY	5 30"	200 psi	--stiff, grayish brown, medium plasticity (pp=1.25/1.5 tsf, tv=0.9 tsf)	105	23		43	22	1.4 P 1.8 T 1.7 U	
55	25	CLAY	6 27"	200 psi	--stiff, low plasticity, trace fine grained sand (pp=1.25/1.25/1.5 tsf, tv=0.55 tsf)	89	32				1.3 P 1.1 T	
50	30	SILT	7 30"	150 psi	SANDY SILT (ML), very stiff, gray, moist, non-plastic, fine grained sand (pp=3.5 tsf)	91	32				3.5 P	
45	35	CLAY	8 26"	150 psi	LEAN CLAY (CL), medium to stiff, gray, moist, low plasticity (pp=0.5 tsf, tv=0.39/0.44/0.46 tsf)	90	31		35	15	0.5 P 0.9 T 0.6 U 1.1 V	vs=1108 psf
40	40	CLAY	9 30"	80 -	FAT CLAY (CH), stiff, gray, moist, high plasticity (pp=0.75/0.75 tsf, tv=0.55/0.52/0.6 tsf) --Ended drilling on 10/11/04 at 37.5 ft --Began drilling on 10/12/04 at 37.5 ft	80	41		56	29	0.8 P 1.1 T 0.7 U	vs=1535 psf
35	45	CLAY	10 30"	120 psi	LEAN CLAY (CL), stiff, grayish brown, moist, medium to high plasticity, trace fine grained sand (pp=1.75/1.25 tsf, tv=0.65/0.7 tsf)	102	25				1.5 P 1.4 T	
				180 psi	--stiff to very stiff, medium plasticity (pp=2/2 tsf, tv=0.87/0.87 tsf)	99	27				2.0 P 1.7 T	

Continued

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 20.0 ft., 10/12/2004, 14.5 ft., 10/13/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 11, 2004
COMPLETION DATE: October 13, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-50
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-50a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 6th St. and 7th St. N 1,948,835 E 6,159,042 SURFACE EL: 80.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
30			11 30"		80 psi	LEAN CLAY (CL), stiff, brown, moist, low plasticity, more silt (pp=1.5/1.25 tsf, tv=0.5/0.7/0.7 tsf)	90	32		36	13	1.4 P 1.3 T 1.1 U	
					150 psi								
25	55		12 15"		80 psi	--brown with mottled black, wet, low to medium plasticity, refusal after 21 inches							
					350 psi	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, mottled brown, wet, fine grained sand		29					
20	60		13 13.5"		77								
								24	6				
15	65												
10	70		14 17"		21	SANDY SILT (ML), very stiff, gray and grayish brown, moist, non-plastic to low plasticity, fine grained sand		23					
						POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, mottled brown, wet, fine to medium grained, subangular gravel up to 1 inch							
5	75												
0	80		15 17.5"		59			9	6				
						WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, mottled brown, wet, fine to medium grained, subangular gravel up to 3/4 inch							
-5	85												
-10	90		16 12"		68			8	0				
						LEAN CLAY (CL), very stiff to hard, brown, moist, low plasticity, trace gravel at 99 ft							
-15	95												
			17		200 -								

BORING DEPTH: 150.5 ft
 DEPTH TO WATER: 20.0 ft, 10/12/2004, 14.5 ft., 10/13/2004

START DATE: October 11, 2004
 COMPLETION DATE: October 13, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, L. Willard
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-50
 SVRT DOWNTOWN
 San Jose, California**

FIGURE A1-50b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 6th St. and 7th St. N 1,948,835 E 6,159,042 SURFACE EL: 80.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-20		26		250 psi	LEAN CLAY (CL), very stiff to hard, brown, moist, low plasticity, trace gravel at 99 ft (pp=3.5/>4.5 tsf) --Ended drilling on 10/12/04 at 101.5 ft --Began drilling on 10/13/04 at 101.5 ft --trace silt at 102 ft	105	23		33	11	4.0 P	
-25					SANDY SILT TO SILTY SAND (ML/SM), interbedded							
-30		18 29		100 psi	--sandy							
-35				250 psi	LEAN CLAY (CL), very stiff, gray, moist, low plasticity (pp=3.25/3.75/4.25 tsf)	102	22		27	8	3.8 P 1.2 U	
-40		19 18		23	--sandy at 117 ft, interbedded sand and clay seams --very stiff		25	91	36	17		
-45					--trace gravel							
-50		X 20 18		200 - 350 psi 65	SILTY SAND (SM), very dense, gray, wet, fine grained sand --Shelby Tube sample refusal at 129 ft		25	17				
-55												
-60		21 18		24	LEAN CLAY (CL), very stiff, brown, moist, high plasticity		26	94	35	14		
-65					SILT WITH SAND (ML), hard, brown, moist, non-plastic to low plasticity, fine grained sand							
		22		42								

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 20.0 ft., 10/12/2004, 14.5 ft., 10/13/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 11, 2004
COMPLETION DATE: October 13, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-50
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-50c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 6th St. and 7th St. N 1,948,835 E 6,159,042 SURFACE EL: 80.7 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-70		18	X					23	80	31	7		
-75													
-80													
-85													
-90													
-95													
-100													
-105													
-110													
-115													

BORING DEPTH: 150.5 ft
 DEPTH TO WATER: 20.0 ft., 10/12/2004, 14.5 ft., 10/13/2004

START DATE: October 11, 2004
 COMPLETION DATE: October 13, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, L. Willard
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-50
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-50d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 5th St. and 6th St. N 1,948,716 E 6,158,836	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION														
80	0		1	18"		6	4 inches ASPHALT CONCRETE over 2 inches old layer of ASPHALT CONCRETE							
	5		2	30"		150 psi	LEAN CLAY (CL), medium, dark brown, moist, low plasticity		22					
	7.5					325 psi	SANDY SILT (ML), very stiff, light yellowish brown, moist, fine grained sand --(pp=2.5/2.5/1.75 tsf)		21				2.3 P	
	10		3	29"		80 psi	LEAN CLAY (CL), medium to stiff, light olive gray, moist --(pp=0.5/0.5/0.5 tsf, tv=0.55/0.55/0.63 tsf)	94	30				0.5 P 1.2 T	
	15		4	30"		150 psi	▽ --very stiff, dark reddish brown (pp=3.5/2.75/3.5 tsf)	109	21				3.3 P	
	15		5	15"		150 psi	--stiff (pp=1.5/1.5/1.75 tsf)	110	19				1.6 P	
	20		6	24"		150 psi	--hard (pp>4.5 tsf)	112	18		26	9	>4.5 P	
	20		7	24"		150 psi		103	32					
	25		8	26"		100 psi	SANDY SILT (ML), light yellowish brown, moist SANDY LEAN CLAY (CL), stiff, reddish brown and mottled gray, moist (pp=1.5/1.5/1.75 tsf)	98	28				1.6 P	
	25		9	29"		100 psi	--medium, dark gray (tv=0.34/0.36/0.36 tsf)	98	28	55			0.7 T	
	30		10	29"		100 psi	LEAN CLAY (CL), stiff, olive gray, moist (pp=1.5/1.5/1.25 tsf)	100	24				1.4 P	
	30		11	29"		100 psi	--(tv=0.55/0.6/0.6 tsf)	92	30		38	18	1.2 T 0.8 U	
	35		12	30"		80 psi	--medium, slightly silty (pp=0.9/0.8/1 tsf, tv=0.4/0.4/0.4 tsf)	86	37				0.9 P 0.8 T	
	35		13	25"		100 psi	FAT CLAY (CH), stiff, dark olive gray, moist (pp=1.6/1.8/1.8 tsf, tv=0.43/0.43/0.5 tsf)	79	43		51	26	1.7 P 0.9 T 0.8 U	
	35		14	25"		100 psi	--dark gray (pp=1.3/1.4/1.5 tsf, tv=0.65/0.6/0.67 tsf)	81	40		72	44	1.4 P 1.3 T 1.0 U	
	40		15	23"		100 - 140 psi	LEAN CLAY (CL), stiff, dark gray, moist (pp=1.75/1.25/1.5 tsf)	101	26		46	27	1.5 P	
	40		16	30"		140 - 110 psi		95	29				2.1 P 1.7 T	
	45		17	26"		100 psi	--low plasticity (pp=1.8/2.1/2.5 tsf, tv=0.86/0.82/0.86 tsf)	93	28		36	15	1.4 P 1.2 T	
	45		18	28"		100 psi	--dark gray and mottled brown (pp=1.4 tsf, tv=0.5/0.6/0.65 tsf)	90	33				1.7 P 1.3 T	
	45		19	150 psi		150 psi	--yellowish brown (pp=1.7 tsf, tv=0.65/0.65/0.68 tsf)							

Continued

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 14.5 ft., 10/15/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 14, 2004
COMPLETION DATE: October 16, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-52
SVRT DOWNTOWN
San Jose, California

FIGURE A1-51a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 5th St. and 6th St. N 1,948,716 E 6,158,836	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 80.6 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
30	30		30			150 psi	LEAN CLAY (CL), stiff, light gray, moist (pp=1.5/1.75/1.75 tsf)	100	26				1.7 P	
	20		30			50 psi	SANDY SILT (ML), dark yellowish brown, wet, fine grained sand	108	21	56				
25	55		21	26		100 psi	SANDY LEAN CLAY TO CLAYEY SAND (CL/SC), dark gray, moist	92	28	53	33	11	0.9 U	
			22	22		100 psi	--Ended drilling on 10/14/04 at 57 ft --Began drilling on 10/15/04 at 57 ft --very stiff (pp=2.1/2.5/2.2 tsf) at 59 ft	102	26				2.3 P	
20	60		23	18		100 - 200 psi	SILTY SAND (SM), olive gray, moist, fine to medium grained sand (pp=1.5/1.25/1.25 tsf)		28	23			1.3 P	
			24	19		48	WELL-GRADED GRAVEL WITH SAND (GW), olive gray, wet		8					
15	65		25	16		31	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dense, olive gray, wet		10	6				
			26	14		11	SILT (ML), hard, yellowish brown and mottled gray, moist		19					
10	70		27	15		42	SILTY SAND (SM), medium dense, olive gray, moist, fine to medium grained sand		25					
			28	14		20	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dense, yellowish brown, moist		12	10				
5	75		29	12		50	LEAN CLAY (CL), very stiff, light yellowish brown, moist, trace fine grained sand							
			30	11		58	POORLY GRADED SAND WITH SILT (SP-SM), medium dense, light olive gray with bands of brown, moist, fine to medium grained sand		28					
0	80		31	13		55	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense to very dense, reddish brown, wet, gavel up to 2 inches --lost drilling fluid at 84 ft		10	6				
-5	85		32	4			--very dense, reddish grayish brown, gravel up to 1 1/2 inches		12	8				
-10	90		33				LEAN CLAY (CL), hard, light yellowish brown, moist		18					
-15	95													

Continued

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 14.5 ft., 10/15/2004

START DATE: October 14, 2004
COMPLETION DATE: October 16, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-52
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-51b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 5th St. and 6th St. N 1,948,716 E 6,158,836	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 80.6 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
-20			30	30"		80 psi	--light yellowish brown, disturbed sample --Ended drilling on 10/15/04 at 100.5 ft --Began drilling on 10/16/04 at 100.5 ft		19					
-25	105		34	30"		120 psi	--dark gray (pp=3.25/4/3.75 tsf)	109	23				3.7 P	
-30	110		35	30"		90 psi	--sand layer at 109 ft --(pp=2.5/3/3 tsf)	108	22				2.8 P	
-35	115		36	30"		100 psi	SANDY LEAN CLAY (CL), hard, light brown, moist --(pp>4.5 tsf)	104	21	73	33	12	>4.5 P 2.7 U	
-40	120		37	30"		100 psi	CLAYEY SAND TO SANDY LEAN CLAY (SC/CL), dark gray, moist, trace gravel up to 1/2 inch	112	18	48				
-45	125						SILTY CLAY (CL-ML), dark gray, moist							
-50	130		38	16"		67	SILTY SAND (SM), very dense, dark gray, moist, fine grained sand		22	17				
-55	135						LEAN CLAY (CL), very stiff, light yellowish brown, moist							
-60	140		39	30"		100 psi	--(pp=3/3/3.5 tsf)	104	23				3.2 P	
-65	145						POORLY GRADED SAND WITH SILT (SP-SM), dark olive gray, moist							
			40			45								

Continued

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 14.5 ft., 10/15/2004

START DATE: October 14, 2004
COMPLETION DATE: October 16, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-52
SVRT DOWNTOWN
San Jose, California

FIGURE A1-51c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 5th St. and 6th St. N 1,948,716 E 6,158,836 SURFACE EL: 80.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-70		15'			SILTY SAND TO SANDY SILT (SM/ML), dense, dark olive gray, moist, fine to medium grained sand		25	45				
-75												
-80												
-85												
-90												
-95												
-100												
-105												
-110												
-115												

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 14.5 ft., 10/15/2004

START DATE: October 14, 2004
COMPLETION DATE: October 16, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-52
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-51d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 5th St. and 6th St. N 1,948,640 E 6,158,726 SURFACE EL: 80.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
80	0	0-0-0			9 inches ASPHALT CONCRETE over 5 inches CONCRETE, some old ballast up to 1 1/2 inches							
75	5		1 29" 250 psi		LEAN CLAY WITH SAND (CL), stiff, dark brown, moist, low plasticity, fine grained sand (pp=1.25 tsf)	103	21		41	18	1.3 P	
			2 25" 150 psi		--decrease in sand (pp=1.25/1.25 tsf)		27				1.3 P	
70	10		3 26" 50 psi		--medium, gray with mottled brown (pp=0.5 tsf, tv=0.29 tsf)	99	27		32	11	0.5 P 0.6 T	
			4 24.5" 150 psi		--stiff, grayish brown (pp=2/2 tsf, tv=0.85 tsf)	107	21		36	17	2.0 P 1.7 T	
65	15		5 30" 80 - 200 psi		--gray and brown, disturbed sample		32					
60	20		6 30" 200 - 300 psi		SILT (ML), stiff, grayish brown, moist, non-plastic, silty sand seam at 22.5 ft (pp=1.75 tsf, tv=0.75 tsf)	88	33		32	6	1.8 P 1.5 T 0.7 U	PM test @ 25"
55	25		7 26" 80 psi		SANDY LEAN CLAY (CL), stiff, grayish brown, moist, low plasticity, fine grained sand (pp=1.5/1.25 tsf, tv=0.52/0.5 tsf)	100	25		31	9	1.4 P 1.0 T	
50	30		8 18" 3		--medium grained sand layer from 29.5 ft to 30 ft							
45	35		9 30" 80 psi		LEAN CLAY WITH SAND (CL), soft, gray, moist, low plasticity		32					
40	40		10 26" 100 - 200 psi		ELASTIC SILT TO FAT CLAY (MH/CH), medium, dark gray, moist, high plasticity (pp=0.5tsf, tv=0.5 tsf)	66	59		73	38	0.5 P 1.0 T	
			11 30" 250 - 300 psi		LEAN CLAY (CL), stiff, gray, moist, low plasticity --(pp=1.75 tsf, tv=0.9 tsf)	101	24		44	24	1.8 P 1.8 T 1.8 U	
35	45		12 30" 50 psi		--low to medium plasticity (pp=1.75 tsf, tv=0.83 tsf)		24				1.8 P 1.6 T	PM test @ 45"
					--grayish brown, low plasticity (pp=2 tsf, tv=0.9 tsf)	93	29		33	10	2.0 P 1.8 T 1.3 U	
					--Ended drilling on 10/21/04 at 45 ft --Began drilling on 10/22/04 at 45 ft							

BORING DEPTH: 149.0 ft
DEPTH TO WATER: 13.0 ft., 10/22/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 21, 2004
COMPLETION DATE: October 23, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-53
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-52a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 5th St. and 6th St. N 1,948,640 E 6,158,726	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 80.6 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	30		13	30"		50 - 200 psi	LEAN CLAY (CL), very stiff, gray, moist, medium plasticity (pp=2/2.25 tsf, tv=1.4 tsf)		25				2.1 P 2.8 T	
	55		14	20"		150 - 250 psi	SILT WITH SAND (ML), very stiff, brown, moist, non-plastic, fine grained sand pockets (pp=2/2.25 tsf) at 54 ft		24	78	30	6	2.1 P	PM test @ 55'
	25		15	28"		100 psi	--gray	94	29		34	4		
	60		16	29"		100 psi	LEAN CLAY (CL), very stiff, grayish brown with mottled brown, moist, low plasticity							
	20					200 psi	--(pp=2.25/2.5 tsf)	99	24				2.1 P	
	65						--interbedded clay and sand seams from 63 ft to 64 ft							
	15		17	18"		30	SILTY SAND TO SANDY SILT (SM/ML), medium dense, brown, moist, fine grained sand		28	46				
	70		18	18"		27	--gray, trace subrounded gravel up to 1/2 inch, trace silt lump		19					
	10						SANDY LEAN CLAY (CL), gray, moist							
	75		19	16"		63	SILTY SAND (SM), very dense, brown, moist, fine grained sand, trace gravel up to 3 inches		27	14				
	5													
	80		20	12"		68	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, wet, fine to medium grained sand		8	6				
	0													
	85													
	90		21	12"		74	--mottled brown and red, subangular gravel up to 3/4 inch		11					
	-5													
	95													
	-10													
	95						LEAN CLAY (CL), very stiff, brown and gray, moist, low plasticity							
	-15						--Ended drilling on 10/22/04 at 100 ft							
			22			23	--Began drilling on 10/23/04 at 100 ft							

Continued

BORING DEPTH: 149.0 ft
DEPTH TO WATER: 13.0 ft., 10/22/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 21, 2004
COMPLETION DATE: October 23, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-53
SVRT DOWNTOWN
San Jose, California

FIGURE A1-52b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 5th St. and 6th St. N 1,948,640 E 6,158,726	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 80.6 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
-20			18	18"	X		LEAN CLAY (CL), very stiff, brown and gray, moist, low plasticity, interbedded clay and sand/gravel layers from 102.5 ft to 105 ft		29		46	24		
-25	105						--more fine grained material at 105 ft							
-30	110		23	18"	X	14	SANDY LEAN CLAY TO CLAYEY SAND (CL/SC), stiff, gray, moist, low plasticity, fine grained sand		22	52				
-35	115		24	30"		250 psi	CLAYEY SAND (SC), gray, moist, low plasticity, fine grained sand (pp=3.5/3.25 tsf)							
-40	120		25	14"	X	52	POORLY GRADED SAND WITH SILT (SP-SM), very dense, mottled brown, wet, fine to medium grained sand		19	10				
-45	125		26	14"	X	31	SANDY SILT (ML), hard, brown, moist, fine grained sand		32		37	12		
-50	130		27	30"		100 psi	--hard (pp=4.5/4.25 tsf)		33				4.4 P	
-55	135		28	30"		100 psi 150 psi	SANDY LEAN CLAY (CL), very stiff, gray, moist, low plasticity, medium grained sand (pp=3.25/3.5 tsf)		24		41	17	3.4 P	
-60	140		29	29"		100 psi	SILT WITH SAND (ML), hard, gray, moist, non-plastic, fine grained sand --(pp=4.25/4.5 tsf)	106	24	79	23	2	4.4 P	
-65	145		30	30"		100 psi	--hard (pp=4.5 tsf)		23				4.5 P	
			31	30"		100 psi	LEAN CLAY WITH SAND (CL), very stiff, gray, moist, low plasticity (pp=3.5 tsf)	90	32		44	19	3.5 P	

BORING DEPTH: 149.0 ft
 DEPTH TO WATER: 13.0 ft., 10/22/2004

START DATE: October 21, 2004
 COMPLETION DATE: October 23, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, L. Willard
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-53
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-52c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 4th St. and 5th St. N 1,948,560 E 6,158,571 SURFACE EL: 80.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
80		1 18"	X	8	6 inches ASPHALT CONCRETE over 6 inches PORTLAND CEMENT CONCRETE							
75		2 12"	X	6	LEAN CLAY (CL), medium, dark gray to black, moist, low plasticity --medium to stiff, gray (pp=1 tsf)		25					
70		3 19"		100 psi	--gray and mottled brown, moist, disturbed sample	95	31	97	29	9		Hydrometer Test
65		4 24"		170 psi	--stiff to very stiff, brown, trace fine grained sand (pp=2 tsf, tv=0.84/0.95/0.9 tsf)	108	22		30	12	2.0 P 1.8 T 1.5 U	
60		5 30"		100 psi	SANDY SILTY CLAY (CL-ML), stiff, brown, moist, non-plastic --(pp=1.25/1.25/0.75 tsf, tv=0.5/0.63/0.7 tsf)	96	28	69	28	7	2.2 P 1.2 T 0.4 U >1.7 V	Hydrometer Test
55		6 29"		190 psi	FAT CLAY (CH), stiff							vs>1663 psf
50		7 24"		150 psi	LEAN CLAY WITH SAND (CL), very stiff, brown and gray, moist, low plasticity (pp=2.25 tsf) --medium, gray --(pp=0.5 tsf, tv=0.33 tsf)	104	22				2.3 P	
45		8 30"		140 psi	FAT CLAY (CH), medium to stiff, dark gray, moist, high plasticity --(pp=0.75/0.75/0.75 tsf, tv=0.5/0.6/0.63 tsf)	75	46				0.5 P 0.7 T 0.4 U >1.6 V	Hydrometer Test
40		9 30"		180 psi	LEAN CLAY WITH SAND (CL), medium to stiff, dark gray, moist, low plasticity --Ended drilling on 10/9/04 at 42.5 ft --Began drilling on 10/10/04 at 42.5 ft --(pp=0.5/0.5/0.75 tsf)	103	22	76	37	21	0.6 P 1.2 U	Hydrometer Test
35		10 30"		150 psi	LEAN CLAY (CL), stiff, gray, moist, low plasticity --(pp=1 tsf, tv=0.55 tsf)	95	28				1.0 P 1.1 T >1.5 V	vs>1524 psf

Continued

BORING DEPTH: 121.5 ft
DEPTH TO WATER: Not Measured

START DATE: October 9, 2004
COMPLETION DATE: October 10, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-54
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-53a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 4th St. and 5th St. N 1,948,560 E 6,158,571 SURFACE EL: 80.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
	30		11 36"	250 psi	LEAN CLAY (CL), stiff, gray, moist, low plasticity --medium to very stiff, low to medium plasticity, trace fine grained sand (pp=3.75/2 tsf) at 52.5 ft	101	23	88	39	19	2.9 P 0.9 U	Hydrometer Test
	55		12 30"	100 psi	--stiff, low plasticity --(pp=1.5/1 tsf)		25				1.3 P	
	60		13 30"	100 psi								
	20			150 psi	--very stiff, low plasticity (pp=1.75/2.25/2.25 tsf)	108	20		27	11	2.1 P	
	65				SANDY SILT (ML), yellowish brown, moist							
	70		14 17"	180 psi		100	21	65				Hydrometer Test
	75				WELL-GRADED GRAVEL WITH CLAY (GW-GC), mottled brown, wet, subrounded gravel up to 1 inch							
	80		15 12"	52	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, moist, fine to medium grained sand		8	6				
	85											
	90		16 12"	18	LEAN CLAY WITH SAND (CL), very stiff, brown and gray, medium plasticity		26	85	34	15		
	95											
	-15											

Continued

BORING DEPTH: 121.5 ft
DEPTH TO WATER: Not Measured

START DATE: October 9, 2004
COMPLETION DATE: October 10, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-54
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-53b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 4th St. and 5th St. N 1,948,560 E 6,158,571 SURFACE EL: 80.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
-20		17 14	⊗	43	MATERIAL DESCRIPTION LEAN CLAY (CL), hard, brown, moist, non-plastic to low plasticity SILTY SAND (SM), dense, gray, moist, non-plastic		24	40				
-25												
-30		18 12	⊗	66	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, moist, medium grained sand, subangular gravel up to 1 inch		9	9				
-35												
-40		19 9	⊗	45	SILTY SAND TO SANDY SILT (SM/ML), dense, gray, moist, non-plastic, fine grained sand, trace subangular gravel at the top of the sample		19	45				
-45												
-50												
-55												
-60												
-65												

BORING DEPTH: 121.5 ft
DEPTH TO WATER: Not Measured

START DATE: October 9, 2004
COMPLETION DATE: October 10, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-54
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-53c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 4th St. and 5th St. N 1,948,500 E 6,158,469 SURFACE EL: 81.0 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
80		1	13.5'	10	5 inches ASPHALT CONCRETE over 5 inches PORTLAND CEMENT CONCRETE							
75		2	30"	180 psi	LEAN CLAY WITH SAND (CL), stiff, dark brown, moist, low plasticity, fine grained sand		19					
				300 psi	SILT (ML), hard, yellowish brown, moist, non-plastic (pp>4.5 tsf)		14				>4.5 P	
70		3	29"	150 psi	LEAN CLAY (CL), very stiff, brown, moist, low plasticity, trace fine grained sand (pp=1.75/2.75/2 tsf, tv=0.75 tsf)							
				180 psi	--lost drilling fluid at 10 ft	108	16		35	12	2.2 P 1.5 T 2.4 U	
65		4	23"	200 - 80 psi	SANDY LEAN CLAY (CL), very stiff, brown, moist, low plasticity, fine grained sand (pp=2.5/2.75/>4.5 tsf)	108	22	60	32	14	2.6 P	
				250 psi	LEAN CLAY (CL), very stiff, yellowish brown, moist, low plasticity, fine grained sand, trace silty sand at the botom of the sample		24	87				
60		5	18"	16	SILTY SAND (SM)							
55		6	20"	0 psi	LEAN CLAY (CL), medium, brown, moist, low plasticity, trace fine grained sand --(pp=0.5 tsf, tv=0.27 tsf)	96	27		31	11	0.5 P 0.5 T	PM test @ 25'
				100 psi								
50		7	27"	100 psi	--gray to grayish brown (pp=0.5/0.5 tsf, tv=0.25 tsf)		35				0.5 P 0.5 T	
45		8	30"	0 psi	ELASTIC SILT TO FAT CLAY (MH/CH), stiff, dark gray, moist, high plasticity (pp=1.25 tsf, tv=0.66 tsf)	77	47		69	35	1.3 P 1.3 T	
				150 psi								
40		9	30"	150 psi	--trace fine grained sand							
				100 - 200 psi	SANDY LEAN CLAY (CL), stiff, gray, moist, low plasticity, fine grained sand (pp=1.25/1.25 tsf, tv=0.52/0.53 tsf)		22				1.3 P 1.1 T	
35		11	30"	100 psi	LEAN CLAY WITH SAND (CL), stiff, gray, moist, low plasticity (pp=1.5/2.25 tsf, tv=0.84 tsf)	101	24		37	20	1.9 P 1.7 T 1.1 U	PM test @ 45'
				150 psi	--grayish brown (pp=1.4/1/1.5 tsf, tv=0.49/0.47 tsf)	93	30		35	12	1.3 P 1.0 T	

Continued

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 13.5 ft., 10/20/2004

START DATE: October 18, 2004
COMPLETION DATE: November 5, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-55
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-54a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/PRESSURE, psi	LOCATION: WB Santa Clara St., between 4th St. and 5th St. N 1,948,500 E 6,158,469	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 81.0 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
30			12 30"		100 psi	LEAN CLAY WITH SAND (CL), very stiff, light gray, moist, low plasticity (pp=2.5/2 tsf, tv=1.2/0.9 tsf)		30				2.3 P 2.1 T	
					250 psi	--Ended drilling on 10/18/04 at 52.5 ft --Began drilling on 10/19/04 at 52.5 ft							
55			13 30"		80 psi	SILTY CLAY WITH SAND (CL-ML), gray, moist, low plasticity, fine grained sand, disturbed sample		26	79				
25					150 psi								
60			14 30"		100 psi	--very stiff (pp=2.5/2.75 tsf, tv=0.75 tsf)	112	19		24	7	2.6 P 1.5 T	
20					250 psi								
65			15 28"		100 psi	--stiff, mottled gray and brown, silty sand seams at 67.5 ft (pp=1.75 tsf)						1.8 P	
15					200 psi			23					
70			16 19"		150 psi	SANDY SILT (ML), hard, mottled gray, moist, non-plastic, increasing sand content, refusal after 24 inches (pp>4.5 tsf)	103	23	67	23	2	>4.5 P 0.6 U	
10					350 psi								
75						WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, mottled brown, wet, subrounded gravel up to 1 inch							
80													
0			17 18"		52	--Ended drilling on 10/19/04 at 82.5 ft --Began drilling on 10/20/04 at 82.5 ft		10	10				
85			18 8"		74	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, moist, subrounded gravel up to 1 inch		10	8				
90			19 8"		43	--dense, medium grained		13					
95			20 6"		68	SANDY LEAN CLAY (CL), gray and brown, moist, low plasticity, fine grained sand --Ended drilling on 10/20/04 at 92.5 ft --Began drilling on 10/24/04 at 92.5 ft		9	12				
15			21		48	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, brown, moist, fine grained sand							

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 13.5 ft., 10/20/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 18, 2004
COMPLETION DATE: November 5, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-55
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-54b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 4th St. and 5th St. N 1,948,500 E 6,158,469		DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
				SURFACE EL: 81.0 ft (1988 NAVD datum)								
MATERIAL DESCRIPTION												
-20		15'		SANDY SILT (ML), yellowish brown, moist			24	59				Hydrometer Test
-105		22'	150 psi	LEAN CLAY (CL), very stiff, light gray, moist, low plasticity, trace fine grained sand, refusal after 26 inches (pp=3.25/3.25/2.75 tsf, tv=0.45/0.45 tsf) --Ended drilling on 10/24/04 at 103 ft; due to excessive caving, borehole was grouted --Began drilling 4 ft west on 11/4/04 at 103 ft								
-110		22'	200 psi								3.1 P 0.9 T	
-115		23'	100 psi									
-115		23'	400 psi	SANDY SILT (ML), hard, gray, moist, low plasticity to non-plastic (pp=4.25/4.25/4.5 tsf)		102	23				4.3 P	
-120		24'	200 psi	--refusal after 19 inches								
-120		18"	400 psi	SILTY SAND (SM), dense, brown, moist, fine grained sand --trace gravel at 121.5 ft --interbedded silty sand and sandy silt seams			24					
-125		25'	44	SANDY SILT (ML), hard, gray, moist, low plasticity, trace gravel up to 1 inch --Ended drilling on 11/4/04 at 125.5 ft --Began drilling on 11/5/04 at 125.5 ft			26					
-130		26'	150 psi	SANDY LEAN CLAY (CL), very stiff, gray, moist, low to medium plasticity, fine grained sand (pp=3.75/3.75/3.5 tsf)		108	21				3.6 P	
-135		27'	150 psi	LEAN CLAY (CL), very stiff, mottled grayish brown, moist, low plasticity (pp=2.75/2.75/2.5 tsf, tv=>1/>1 tsf)								
-135		30"	300 psi			104	23		39	18	2.6 P >2.0 T	
-140		28'	100 psi									
-140		30"	200 psi	--hard, mottled brown with gray (pp=4.25/4.5/4.5 tsf)		102	23				4.4 P	
-145		29'	100 - 150 psi	SANDY LEAN CLAY (CL), hard, brown with mottled gray, moist, fine grained (pp>4.5 tsf)								
-145		30'	100 - 150 psi	--brown, increasing gravel up to 3/4 inch			19	71			>4.5 P	

BORING DEPTH: 150.0 ft
DEPTH TO WATER: 13.5 ft., 10/20/2004

START DATE: October 18, 2004
COMPLETION DATE: November 5, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-55
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-54c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: East of UPRR railroad track, North of Plumas Ave. N 1,956,467 E 6,162,998	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 89.7 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
			1	15"	(15)	LEAN CLAY (CL) (FILL), very stiff to hard, mottled yellowish brown, moist, medium plasticity, trace fine grained sand --gravel layer from 1.5 to 2 ft, angular to subrounded gravel up to 1 1/2 inches							
85	5		2	23"	100 psi	--trace fine to coarse grained sand and angular to subrounded gravel up to 2 inches, glass/wood debris from 2 to 5 ft						2.2 P 1.1 T	
					150 psi								
80	10		3	14"	100 psi	LEAN CLAY (CL), very stiff, gray to brown, moist, medium plasticity, trace fine grained sand (pp=2.1/2.2/2.3 tsf, tv=0.54/0.6 tsf) at 7 ft --medium, brown, low to medium plasticity at 10 ft (pp=0.75/0.75/0.75 tsf, tv=0.18/0.21 tsf) (LEL=0.0, OVM=0.0, OXY=19.3)						0.8 P 0.4 T	
					150 psi	--medium to very stiff, grayish brown, medium plasticity (pp=2.3/2.6/2.6 tsf, tv=0.86/0.87 tsf)	95	28	45	21		2.5 P 1.7 T 0.8 U	
70	20		5	29"	100 psi	FAT CLAY (CH), very stiff, grayish brown, moist, high plasticity, trace fine grained sand (pp=2.1/2.2/2.3 tsf, tv=0.61/0.68 tsf)						2.2 P 1.3 T	
					250 psi								
65	25		6	26"	150 psi	--mottled grayish brown and gray							
					200 psi	--(pp=2.6/3.0/2.5 tsf, tv=0.68/0.68 tsf)						2.7 P 1.4 T	
60	30		7	28"	100 psi	LEAN CLAY (CL), medium to stiff, mottled gray and brown, moist, medium plasticity, trace fine grained sand and caliche (pp=1.6/1.8/2.2 tsf, tv=0.68/0.74 tsf) (LEL=0.0, OVM=0.0, OXY=19.5)	87	34	45	19		1.9 P 1.4 T 0.8 U	
					200 psi								
55	35		8	26"	100 psi	--stiff, dark gray, trace fine to medium grained sand and subangular to subrounded gravel up to 1 inch (pp=1.6/2.0/2.0 tsf, tv=0.46/0.54 tsf)						1.9 P 1.0 T	
					200 psi								
50	40		9	28"	100 psi	--very stiff, mottled gray and brown, fine grained sand (pp=2.1/2.25/2.25 tsf, tv=0.66/0.7 tsf)						2.2 P 1.4 T	
					200 psi								
45	45												

BORING DEPTH: 42.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 23, 2005
COMPLETION DATE: February 23, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-56
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-55

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: East of UPRR railroad track, North of Las Plumas Ave. N 1,956,184 E 6,163,098 SURFACE EL: 87.9 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
85	5		1 15"		(30)	LEAN CLAY (CL), very stiff to hard, dark brown, moist, medium plasticity, trace fine to medium grained sand and angular to rounded gravel up to 1 1/2 inches (FILL) --very stiff, mottled brown and dark brown, trace glass fragments and wood debris at 4 ft							
80	10		2 28"		100 psi	LEAN CLAY (CL), medium to stiff, brown, moist, medium plasticity, trace fine grained sand (pp=1.1/1.25/1.2 tsf, tv=0.24/0.26 tsf) (LEL=0.0, OVM=0.0, OXY=19.2) --(pp=1.4/1.5/1.7 tsf, tv=0.27/0.27 tsf)						1.2 P 0.5 T	vs =1897 psf
75	15		3 16"		150 psi		95	27				1.5 P 0.5 T 0.5 U	
70	20		4 29"		150 psi	FAT CLAY (CH), very stiff, mottled brown and gray, moist, high plasticity (pp=2.25/2.4/2.6 tsf, tv=0.8/0.81 tsf) (LEL=0.0, OVM=0.0, OXY=19.1)						2.4 P 1.6 T	
65	25		5 26"		200 psi	--stiff to very stiff, grayish brown with gray streaks (pp=2.1/2.3/2.5 tsf, tv=0.63/0.66 tsf)	94	28				2.3 P 1.3 T 1.0 U	
60	30		6 29"		125 psi							1.0 P 1.0 T	vs=1918.5 psf
55	35		7 28"		100 psi	LEAN CLAY (CL), medium to stiff, mottled brown and gray, moist, medium plasticity, trace fine grained sand and caliche (pp=0.6/0.9/1.6 tsf, tv=0.47/0.55 tsf) (LEL=0.0, OVM=0.0, OXY=19.2)						1.9 V	
50	40		8 28"		200 psi	FAT CLAY (CH), stiff, mottled gray and brown, moist, high plasticity (pp=1.4/1.5/1.9 tsf, tv=0.6/0.62 tsf)	86	36				1.6 P 1.2 T	
45	45		9 29"		150 psi	LEAN CLAY WITH SAND (CL), stiff, mottled gray and brown, moist, medium plasticity, fine to medium grained sand (pp=1.6/1.75/1.8 tsf, tv=0.58/0.64 tsf) (LEL=0.0, OVM=0.0, OXY=19.2)						1.7 P 1.2 T	
40	45				200 psi	FAT CLAY (CH), very stiff, grayish brown, moist, high plasticity	102	24				2.0 P 1.2 T	
						LEAN CLAY WITH SAND (CL), stiff to very stiff, mottled gray and brown, moist, medium plasticity, fine grained sand (pp=1.9/2.1/2.1 tsf, tv=0.56/0.64 tsf)							

BORING DEPTH: 42.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 23, 2005
COMPLETION DATE: February 23, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-57
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-56

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: E. St. James St. and N. 30th St. N 1,953,756 E 6,164,753 SURFACE EL: 87.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
	85		1 15"		(17)	2 inches ASPHALT CONCRETE							
	5		2 29"		75	CLAYEY SAND (SC) (FILL), medium dense to dense, brown to orange brown, low to medium plasticity, fine to medium grained sand, angular to subrounded gravel up to 1 inch							
	80		3 30"		150 psi	LEAN CLAY (CL), stiff, dark brown, moist, medium plasticity, trace fine grained sand --(pp=1.6/1.75/2.1 tsf, tv=0.57/0.6 tsf)	100	22		29	11	1.8 P 1.2 T 1.5 M	
	10		4 25"		100 psi	SILTY CLAY (CL-ML), stiff, brown, moist, low plasticity, trace fine grained sand (pp=1.0/1.0/1.25 tsf, tv=0.27/0.33) (LEL=0.0, OVM=0.0, OXY=20.2)	97	27		24	6	1.1 P 0.6 T 0.4 M	
	75		X 0"		100 psi	SILT TO LEAN CLAY (ML/CL), very stiff, grayish brown, medium plasticity, no recovery at 12.5 ft (pp=2.25/2.5/2.6 tsf, tv=0.74/0.75 tsf)	96	28		44	18	2.4 P 1.5 T 1.7 M	
	15		5 30"		100 psi	SILTY CLAY (CL-ML), soft, brown, low plasticity, moist to wet, trace fine to coarse grained sand (tv=0.15/0.15 tsf)	109	22		21	6	0.3 T 0.5 M	
	70		6 30"		100 psi	POORLY GRADED SAND WITH CLAY (SP-SC), medium dense, brown, moist to wet, fine to coarse grained, trace caliche nodules up to 1/2 inch, moderate drilling fluid loss at 19 ft	100	31		35	11	2.1 P 1.3 T 0.8 M	
	20		7 30"		100 psi	SILT TO LEAN CLAY (ML/CL), very stiff, brown, moist, low to medium plasticity (pp=1.9/2.1/2.25 tsf, tv=0.63/0.63 tsf) (LEL=0.0, OVM=0.0, OXY=20.1)	95	26		39	15	2.7 P 0.5 T 0.6 M	
	65		8 21"		100 psi	--trace fine grained sand and caliche at 22 ft (pp=2.6/2.75/2.8 tsf, tv=0.21/0.27 tsf)	95	31		35	9	1.9 P 1.0 T 0.8 M	
	25		9 26"		100 psi	LEAN CLAY (CL), stiff, grayish brown, moist, medium plasticity, trace fine grained sand (pp=1.5/2.0/2.0 tsf, tv=0.48/0.49 tsf)	100	27		30	8	1.7 P 1.3 T 0.7 M	
	60		10 26"		100 psi	SILT (ML), stiff, grayish brown, moist, low to medium plasticity, trace fine grained sand (pp=1.5/1.6/2.0 tsf, tv=0.61/0.66 tsf)	90	34		50	24	2.1 P 1.5 T 0.9 M	
	30		11 25"		100 psi	LEAN TO FAT CLAY (CL/CH), very stiff, grayish brown, moist, high plasticity (pp=2.0/2.0/2.4 tsf, tv=0.74/0.78 tsf) (LEL=0.0, OVM=0.0, OXY=19.9)	98	27		39	12	1.9 P 1.1 T 0.7 M	
	55		12 26"		100 psi	SILT (ML), stiff, grayish brown, moist, low to medium plasticity (pp=1.8/2.0/1.9 tsf, tv=0.51/0.6 tsf); mottled gray and brown at 34 ft (pp=1.75/1.75/2.0 tsf, tv=0.52/0.6 tsf)	94	30		38	9	1.8 P 1.1 T 0.9 M	
	35		13 25"		100 psi	--(pp=1.4/1.5/1.6 tsf, tv=0.34/0.38 tsf) at 37 ft	93	32		37	10	1.5 P 0.7 T 0.8 M	
	50		14 25"		100 psi	ELASTIC SILT TO FAT CLAY (MH/CH), stiff, gray, high plasticity (pp=1.8/1.9/2.0 tsf, tv=0.66/0.72 tsf) (LEL=0.0, OVM=0.0, OXY=19.9)	86	36		63	31	1.9 P 1.4 T 1.4 M	
	40		15 24"		100 psi		93	31		48	21	1.8 P 1.2 T 1.0 M	
	45		16 23"		100 psi		33					2.1 P 1.4 T 1.6 M	
	45		17 26"		100 psi		91	31		51	26	2.1 P 1.4 T 1.6 M	
	40		18 23"		100 psi		93	30		47	23	2.1 P 1.3 T 1.4 M	
						SILT TO LEAN CLAY (ML/CL), stiff, gray, moist,	102	22		45	28	2.1 P 1.3 T 1.4 M	
							109	18		32	18	2.0 P	

Continued

BORING DEPTH: 151.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: March 3, 2005
COMPLETION DATE: March 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-58
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-57a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: E. St. James St. and N. 30th St. N 1,953,756 E 6,164,753	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
						SURFACE EL: 87.5 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	35		19 27"		100 psi	trace fine grained sand (pp=1.75/1.75/2.0 tsf, tv=0.52/0.63 tsf)	102	26		31	14	1.3 T 1.8 M	
			20 27"		100 psi	FAT CLAY (CH), very stiff, gray, moist, high plasticity (pp=2.0/2.1/2.2 tsf, tv=0.7/0.74 tsf)	97	25				1.1 T 0.8 M	
	55		21 30"		100 psi	LEAN CLAY (CL), very stiff, gray, moist (pp=1.9/2.2/2.3 tsf, tv=0.64/0.7 tsf)	97	27		35	10	3.5 P 0.6 T 0.9 M	
	30		22 30"		100 psi	--stiff to very stiff, mottled gray and brown, medium plasticity, trace fine grained sand at 49 ft (pp=1.9/2.0/2.1 tsf, tv=0.62/0.7 tsf) (LEL=0.0, OVM=0.0, OXY=19.9)	92	32		46	20	1.8 P 1.4 T 1.0 M	
	60		23 29"		100 psi	--stiff, light olive brown at 52 ft (pp=1.0/1.0/1.2 tsf, tv=0.35/0.4 tsf)	93	30				2.1 P 1.2 T 1.3 M	
	25		24 30"		100 psi	SILT (ML), very stiff, brown, moist, low plasticity, trace fine grained sand (pp=3.2/3.4/3.9 tsf, tv=0.25/0.3 tsf)	96	29		33	12	2.0 P 1.2 T 1.2 M	
	65		25 30"		100 psi	LEAN CLAY (CL), stiff, brown to orange brown, moist, medium plasticity, trace fine grained sand (pp=1.6/1.8/2.0 tsf, tv=0.64/0.71 tsf)	100	26		25	2	3.8 P 1.4 T 1.4 M	
	20		26 30"		100 psi	SILT (ML), very stiff, brown, moist, low to medium plasticity, trace fine grained sand and pockets of caliche (pp=2.0/2.1/2.25 tsf, tv=0.62/0.62 tsf) (LEL=0.0, OVM=0.0, OXY=19.8)	98	26		35	16	2.5 P 1.4 T 1.1 M	
	70					LEAN CLAY (CL), stiff, brown, moist, medium plasticity, trace fine grained sand (pp=1.8/2.0/2.1 tsf, tv=0.57/0.64 tsf)	104	22		27	8	3.3 P 1.5 T 1.8 M	
	15					SILT (ML), very stiff, grayish brown, medium plasticity, trace fine to coarse grained sand (pp=3.4/3.8/4.1 tsf, tv=0.68/0.76 tsf)							
	75					LEAN CLAY (CL), very stiff, mottled grayish brown and gray, moist, medium plasticity, trace fine grained sand (pp=2.5/2.75/2.3 tsf, tv=0.81/0.62 tsf)						3.8 P 1.8 T	
	10					--grayish brown to brown at 69 ft (pp=3.2/3.3/3.5 tsf, tv=0.7/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=19.9)							
	80		27 24"		100 psi	FAT CLAY (CH), very stiff, gray, moist, high plasticity, trace fine grained sand							
	5				350 psi	LEAN CLAY (CL), very stiff, dark brown, medium plasticity, trace fine grained sand and caliche (pp=3.4/3.9/4.2 tsf, tv=0.9/0.9 tsf) (LEL=0.0, OVM=0.0, OXY=19.9)							
	85					--mottled gray and brown, moist, trace fine grained sand, pockets of lean clay, silt and caliche nodules up to 1/8 inch (LEL=0.0, OVM=0.0, OXY=19.9)							
	0					POORLY GRADED SAND WITH SILT (SP-SM), dense, mottled brown and gray, fine grained	103	23	92				
	90		28 16"		(46)								
	-5												
	95												
	-10												

Continued

BORING DEPTH: 151.5 ft
DEPTH TO WATER: Not Measured

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: March 3, 2005
COMPLETION DATE: March 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-58
SVRT DOWNTOWN
San Jose, California

FIGURE A1-57b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: E. St. James St. and N. 30th St. N 1,953,756 E 6,164,753	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 87.5 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
							sand --very dense, dark gray, low plasticity, layers of sandy silt (LEL=0.0, OVM=0.0, OXY=19.8) --gravelly from 103 ft to 104 ft							
							LEAN CLAY (CL), gray, medium plasticity, trace fine grained sand							
							WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, grayish brown, angular to subrounded gravel up to 1 inch							
								129	10	10				
							LEAN CLAY (CL), very stiff, orange brown, moist, medium plasticity, trace fine grained sand and caliche nodules up to 1/4 inch (pp=3.0/3.25/3.75 tsf, tv=0.55/0.61 tsf)							
								105	24	94	37	14	3.3 P 1.2 T	Hydrometer Test
							SILTY CLAY (CL-ML), hard, dark brown, moist, low to medium plasticity, trace fine grained sand and caliche nodules up to 3/4 inch (pp=3.75/4.25/4.5 tsf, tv=0.47/0.59 tsf) (LEL=0.0, OVM=0.0, OXY=19.9) --Ended drilling on 3/3/05 at 122.5 ft --Began drilling on 3/4/05 at 122.5 ft							
													4.2 P 1.1 T	
							LEAN CLAY (CL), very stiff to hard, medium plasticity, trace fine grained sand							
							POORLY GRADED SAND (SP), dense, non-plastic, fine grained sand		6	7				
							POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, grayish brown and dark brown, angular to rounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=20.0)							
							WELL-GRADED SAND WITH GRAVEL (SW), very dense, grayish brown, angular to subrounded gravel up to 3/4 inch							
							WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, grayish brown, angular to subrounded gravel up to 3/4 inch, pockets of lean clay (LEL=0.0, OVM=0.0, OXY=20.1)							
								130	10	7				
							FAT CLAY (CH), hard, brown, moist, high plasticity, trace fine to coarse grained sand (pp=4.0/4.0/4.25 tsf, tv=>1 tsf)							
							LEAN CLAY (CL), hard, brown with gray streaks							4.1 P 2.0 T

BORING DEPTH: 151.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: March 3, 2005
COMPLETION DATE: March 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-58
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-57c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: E. St. James St. and N. 30th St. N 1,953,756 E 6,164,753 SURFACE EL: 87.5 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-65		38	(90/11")			moist, medium plasticity, trace fine grained sand	110	20					
-155													
-70													
-160													
-75													
-165													
-80													
-170													
-85													
-175													
-90													
-180													
-95													
-185													
-100													
-190													
-105													
-195													
-110													

BORING DEPTH: 151.5 ft
DEPTH TO WATER: Not Measured

START DATE: March 3, 2005
COMPLETION DATE: March 4, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-58
SVRT DOWNTOWN
San Jose, California

FIGURE A1-57d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: East end of SCS Security Storage Lot, west of 30th St. N 1,953,551 E 6,164,952	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 87.7 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	35					LEAN CLAY (CL), very stiff, light gray, moist, medium plasticity, trace fine grained sand (pp=2.75/3.0/3.0 tsf, tv=0.76/0.8 tsf)						2.9 P 1.6 T	
	55												
	60		6	30"	100 psi	--brown to grayish brown (pp=2.5/2.5/2.75 tsf, tv=0.76/0.84 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)		22		30	11	2.6 P 1.6 T	
	65												
	70		7	9"	(50/3")	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, mottled brown, moist, angular to rounded gravel up to 1 inch		9	12				
	75					LEAN CLAY (CL), hard, orange brown, moist, low plasticity, trace fine to coarse grained sand, trace angular to rounded gravel up to 3/4 inch							
	80		8	20"	200 psi	--gravelly to 85 ft, rounded gravel up to 1 inch	105	20	93				
	85					SILT (ML), hard, brown, moist, medium plasticity, trace fine to coarse grained sand --caving at approximately 87 ft							
	90		9	23"	100 psi	--(pp=4.0/4.5/4.5 tsf, tv=0.5/0.53 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)	99	25	97			4.3 P 1.0 T	Hydrometer Test
	95					SILTY SAND (SM), medium dense, grayish brown, moist, low plasticity to non-plastic, fine grained sand, trace angular to rounded gravel up to 1 inch	101	21	28				

Continued

BORING DEPTH: 200.5 ft
 DEPTH TO WATER: 8.0 ft., 2/6/2005

START DATE: February 5, 2005
 COMPLETION DATE: February 7, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, R. Kostenko
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-59
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-58b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: East end of SCS Security Storage Lot, west of 30th St. N 1,953,551 E 6,164,952 SURFACE EL: 87.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-15					--caving at approximately 96 ft							
105		11	9"	(60/6")	CLAYEY GRAVEL WITH SAND (GC), very dense, grayish brown, moist, angular to rounded gravel up to 1/2 inch (LEL=0.0, OVM=0.0, OXY=20.9) --caving at approximately 107 ft		11	12				
-20												
110												
-25												
115					SILT WITH SAND (ML), hard, brown, moist, low to medium plasticity, fine grained sand							
-30		12	20"	100 psi	--(pp=>4.5 tsf, tv=0.6/0.66 tsf)	101	24	76			>4.5 P 1.3 T	Hydrometer Test
120												
-35												
125					SILTY SAND WITH GRAVEL (SM), dense, brown to grayish brown, moist, well graded sand, angular to subrounded gravel up to 1 inch							
-40		13	18"	200 psi			14	20				
130												
-45												
135					WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, brown to grayish brown, wet, angular to rounded gravel up to 3/4 inch							
-50		14	4"	(Ref/5")	--Ended drilling on 2/5/05 at 138.5 ft --Began drilling on 2/6/05 at 138.5 ft							
140												
-55												
145												
-60		15	9"	(50/3")	--gray and mottled brown, subrounded gravel to 1/4 inch							

Continued

BORING DEPTH: 200.5 ft
DEPTH TO WATER: 8.0 ft., 2/6/2005

START DATE: February 5, 2005
COMPLETION DATE: February 7, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-59
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-58c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: East end of SCS Security Storage Lot, west of 30th St. N 1,953,551 E 6,164,952 SURFACE EL: 87.7 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-65					SILTY SAND (SM), mottled brown, fine grained sand							
-70		16	30"	100 psi	LEAN CLAY (CL), stiff to very stiff, brown, moist, medium plasticity, trace fine grained sand							
-75				175 psi	--(pp=2.0/2.0/2.25 tsf, tv=0.8/0.85/0.9 tsf)	105	22		32	11	2.1 P 1.7 T	
-80		17	30"	100 psi								
-85				125 psi	--very stiff, brown and gray (pp=2.75/2.75/2.75 tsf)						2.8 P	
-90		18	30"	100 psi	FAT CLAY (CH), hard, gray, moist, medium to high plasticity							
-95				150 psi	--(pp=4.5/3.75/>4.5 tsf)	104	24				4.3 P	
-100		19	30"	100 psi								
-105				150 psi	--very stiff, grayish brown, high plasticity (pp=3.75/3.5/3.5 tsf)						3.6 P	
-110		20	30"	100 - 150 psi	--hard, medium to high plasticity (pp=>4.5 tsf)							

Continued

BORING DEPTH: 200.5 ft
DEPTH TO WATER: 8.0 ft., 2/6/2005

START DATE: February 5, 2005
COMPLETION DATE: February 7, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-59
SVRT DOWNTOWN
San Jose, California

FIGURE A1-58d

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: East end of SCS Security Storage Lot, west of 30th St. N 1,953,551 E 6,164,952	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					SURFACE EL: 87.7 ft (1988 NAVD datum)							
-115	///					109	21				>4.5 P	
205												
-120												
210												
-125												
215												
-130												
220												
-135												
225												
-140												
230												
-145												
235												
-150												
240												
-155												
245												
-160												

BORING DEPTH: 200.5 ft
 DEPTH TO WATER: 8.0 ft., 2/6/2005

START DATE: February 5, 2005
 COMPLETION DATE: February 7, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, R. Kostenko
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-59
SVRT DOWNTOWN
San Jose, California

FIGURE A1-58e

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Center of SCS Security Storage Lot, east of 28 th St. N 1,953,368 E 6,164,867	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
							SURFACE EL: 87.4 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
85	5		1	13"	(7)	140 psi	3 inches ASPHALT CONCRETE over 6 inches AGGREGATE BASE LEAN CLAY (CL), medium, gray, dry to moist, medium plasticity							
80	10		2	30"		140 psi	--mottled gray and brown, moist (pp=0.5/0.9/0.7 tsf, tv=0.32/0.35/0.37 tsf) (LEL=0.0, OVM=0.0, OXY=18.0)	99	31		28	8	0.7 P 0.7 T	
75	15						POORLY GRADED SAND (SP), lost drilling fluid SILT TO LEAN CLAY (ML/CL), stiff, yellowish brown, moist, low to medium plasticity							PM test @ 13' and 15'
70	20		3	30"		140 psi	--(pp=1/1/2 tsf, tv=0.5/0.45/0.5 tsf) --fine grained sand and clay nodules						1.3 P 1.0 T	
65	25													
60	30		4	30"		280 psi	--very stiff, gray (pp=2/2/2.5 tsf, tv=0.65/0.67/0.75 tsf)							PM test @ 28'
55	35		5	29"		140 psi	--stiff (pp=1.6/1.5/1.5 tsf, tv=0.65/0.7/0.72 tsf) (LEL=0.0, OVM=0.0, OXY=17.9)	100	24		33	10	2.2 P 1.4 T	PM test @ 33.5' and 35'
50	40		6	29"		140 psi	FAT CLAY (CH), stiff, gray, moist, high plasticity (pp=1.1/1.2/1.1 tsf, tv=0.65/0.7/0.72 tsf)							
45	45		7	28"		280 psi	--medium to high plasticity (pp=1.3/1.5/1.75 tsf, tv=0.7/0.7/0.75 tsf)	87	34		63	33	1.1 P 1.4 T	PM test @ 43.5' and 45'
45													1.5 P 1.4 T	
40							LEAN CLAY (CL), stiff, gray, moist, low to medium plasticity							

BORING DEPTH: 152.2 ft
DEPTH TO WATER: 9.0 ft., 2/6/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 5, 2005
COMPLETION DATE: February 7, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-60
SVRT DOWNTOWN
San Jose, California

FIGURE A1-59a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Center of SCS Security Storage Lot, east of 28 th St. N 1,953,368 E 6,164,867	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 87.4 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	35		8 30"		420 psi	LEAN CLAY (CL), stiff, gray, moist, low to medium plasticity (pp=1.2/1.2/1.5 tsf, tv=0.6/0.65/0.75 tsf) --trace stiff fissured lean clay (blocky structure) at 52.5 ft						1.3 P 1.3 T	
	55												
	60		9 30"		240 psi	--medium plasticity --(pp=1.5/1.7/1.8 tsf, tv=0.7/0.72/0.8 tsf)	100	24	94	35	15	1.7 P 1.4 T	Hydrometer Test
	25												
	65												
	70		10 30"		140 psi	--brown, medium plasticity --(pp=1.8/2.0/2.2 tsf, tv=0.7/0.75/0.8 tsf)							
	15		11 30"		560 psi	--very stiff, brown (pp=2.7/3.2/2.5 tsf, tv=0.75/0.85/0.9 tsf) --Ended drilling on 2/5/05 at 75 ft --Began drilling on 2/6/05 at 75 ft						1.8 P 1.5 T	PM test @ 73.5' and 75' Hydrometer Test
	75							24	92	30	11	2.8 P 1.7 T	
	10												
	80		12 10"		1400 psi	SILT WITH SAND (ML), brown, moist, fine grained sand, refusal after 12 inches	101	23	77 82				Hydrometer Test
	5												
	85					WELL-GRADED SAND (SW), fine to coarse grained sand, trace fine grained gravel (based on the cuttings)							
	0												
	90		13 24"		840 psi	SILT (ML), hard, gray, moist, low to medium plasticity							
	-5		X 0"		840 psi	--refusal after 24 inches (pp=4.0/3.7/4.5 tsf)		26	99	36	11	4.1 P	Hydrometer Test
	95				1260 psi	--no recovery in Shelby Tube sample at 92 ft, refusal after 18 inches							
	-10												PM test @ 97.5' and 99'

BORING DEPTH: 152.2 ft
DEPTH TO WATER: 9.0 ft., 2/6/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 5, 2005
COMPLETION DATE: February 7, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-60
SVRT DOWNTOWN
San Jose, California

FIGURE A1-59b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Center of SCS Security Storage Lot, east of 28 th St. N 1,953,368 E 6,164,867 SURFACE EL: 87.4 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-15		14 14"	(44)	(44)	MATERIAL DESCRIPTION SILT (ML), very stiff, gray, moist, low plasticity, trace fine to medium grained sand (LEL=0.0, OVM=0.0, OXY=17.8) --trace gravel up to 1 inch	105	23	96				
105		15 12"	(52/6")	(52/6")	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, brown, moist, subrounded gravel up to 1 inch --Ended drilling on 2/6/05 at 115 ft --Began drilling on 2/7/05 at 115 ft	126	9	8				
-20		16 12"	(53)	(53)	POORLY GRADED GRAVEL WITH SAND (GP), medium dense, gray, moist, subrounded gravel up to 1 1/2 inches LEAN CLAY (CL), hard, brown, moist, medium plasticity							
-25		17 7"		1120 psi	SILT (ML), very stiff, greenish gray, moist --refusal after 18 inches (pp=3.2/3.7/2.0 tsf)	106	21	90			3.0 P	
-30		18 29"		280 psi	LEAN CLAY (CL), very stiff, gray, moist, medium plasticity --(pp=2.5/2.7/3.2 tsf, tv=0.7/0.75/0.8 tsf)						2.8 P 1.5 T	
-35		19 28"		560 psi	--(pp=3.2/3.5/3.0 tsf, tv=0.75/0.82/0.9 tsf)						3.2 P 1.7 T	
-40		20 18"		1120 psi	--light gray, low plasticity, refusal after 18 inches (pp=3.0/2.5/2.5 tsf) (LEL=0.0, OVM=0.0, OXY=18.2)						2.7 P	
-45		21 24"		700 psi	--hard, light brown, medium plasticity, refusal after 24 inches (pp=4.0/4.0/4.2 tsf)						4.1 P	
-50												
-55												
-60												

BORING DEPTH: 152.2 ft
DEPTH TO WATER: 9.0 ft., 2/6/2005

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 5, 2005
COMPLETION DATE: February 7, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-60
SVRT DOWNTOWN
San Jose, California

FIGURE A1-59c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Center of SCS Security Storage Lot, east of 28 th St. N 1,953,368 E 6,164,867 SURFACE EL: 87.4 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-65		22		840 psi	--refusal after 26 inches (pp=4.2/4.2/4.5 tsf)						4.3 P	
155												
-70												
160												
-75												
165												
-80												
170												
-85												
175												
-90												
180												
-95												
185												
-100												
190												
-105												
195												
-110												

BORING DEPTH: 152.2 ft
DEPTH TO WATER: 9.0 ft., 2/6/2005

START DATE: February 5, 2005
COMPLETION DATE: February 7, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-59d

ELEVATION, R	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Security Contractor Services yard, east of 28th St. N 1,953,204 E 6,164,847	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 89.1 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	85		1	30"		250 psi	6 inches AGGREGATE BASE and ASPHALT CONCRETE over 6 inches PORTLAND CEMENT CONCRETE POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC) (FILL), trace rubble from 3 to 3.5 ft							
	80						FAT CLAY (CH), very stiff, dark grayish brown, moist, high plasticity, trace fine grained sand LEAN CLAY (CL), very stiff, dark grayish brown, moist, medium plasticity, trace fine grained sand (pp=2.25/2.5/2.5 tsf, tv=0.87/0.93 tsf) (LEL=0.0, OVM=0.0, OXY=20.9) --color change to brown from 9 to 10 ft, increase in silt and fine grained sand						2.4 P 1.8 T >2.1 V	vs>2089 psf
	75		2	28"		250 psi	FAT CLAY (CH), very stiff, brown to dark brown, moist, high plasticity, trace fine grained sand LEAN CLAY (CL), stiff, dark brown, moist, medium plasticity, trace fine grained sand (pp=1.25/1.3/1.5 tsf, tv=0.54/0.6 tsf)	103	23			1.4 P 1.1 T 1.7 V	vs=1652 psf	
	70												>2.1 V	vs>2089 psf
	65		3	25"		50 psi	SILTY CLAY (CL-ML), medium to stiff, brown, moist, low to medium plasticity, trace fine grained sand (pp=1/1/1 tsf, tv=0.27/0.27 tsf) (LEL=0.0, OVM=0.0, OXY=20.9) LEAN CLAY (CL), stiff to very stiff, brown						1.0 P 0.5 T >2.1 V	vs=2089 psf
	60												1.9 V	vs=1908 psf
	55		4	27"		175 psi	FAT CLAY (CH), stiff, grayish brown, high plasticity LEAN CLAY (CL), very stiff, mottled brown, gray and grayish brown, moist, medium plasticity (pp=2.3/2.3/2.4 tsf, tv=0.53/0.55 tsf) (LEL=0.0, OVM=0.0, OXY=20.1)	96	29			2.3 P 1.1 T 1.9 V	vs=1919 psf	
	50												>2.1 V	vs>2089 psf
	45		5	28"		275 psi	FAT CLAY (CH), stiff to very stiff, gray, moist, high plasticity, trace fine grained sand --(pp=1.75/1.9/2.5 tsf, tv=0.7/0.8 tsf)					2.1 P 1.5 T >2.1 V	vs>2089 psf	

Continued

BORING DEPTH: 151.5 ft
DEPTH TO WATER: 8.8 ft., 2/10/05, 9.5 ft., 2/11/05

START DATE: February 9, 2005
COMPLETION DATE: February 11, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-61
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-60a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Security Contractor Services yard, east of 28th St. N 1,953,204 E 6,164,847	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 89.1 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
	35		6	28"		300 psi	--very stiff FAT CLAY (CH), very stiff, gray, moist, high plasticity, trace fine grained sand --Ended drilling on 2/9/05 at 51.5 ft --Began drilling on 2/10/05 at 51.5 ft						>2.1 V	vs>2089 psf
	60		7	30"		100 psi 250 psi	LEAN CLAY (CL), very stiff, grayish brown, moist, medium plasticity, trace fine grained sand (pp=2.9/2.9/3.5 tsf, tv=0.63/0.65 tsf) (LEL=0.0, OVM=0.0, OXY=20.9) --(pp=1.9/2.1/2.25 tsf, tv=0.7/0.7 tsf)	98	25				3.1 P 1.3 T	
	65												2.1 P 1.4 T	vs>2089 psf
	70		8	29"		300 psi	--mottled olive brown and brown, trace caliche (pp=2.4/2.4/2.8 tsf, tv=0.67/0.75 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)	105	23	92	34	13	2.5 P 1.4 T	Hydrometer Test
	80		9	23"		300 psi	FAT CLAY (CH), very stiff to hard, mottled gray and brown, moist, high plasticity, trace fine grained sand, refusal after 24 inches (pp=4.0/4.25/4.5 tsf, tv=>1 tsf)						4.3 P >2.0 T	
	85						WELL-GRADED GRAVEL WITH SAND (GW), dense, angular to rounded gravel up to 1 1/2 inches							
	90		10	23"		300 psi	LEAN CLAY (CL), very stiff to hard, mottled brown and gray, moist, medium plasticity, trace fine grained sand and caliche (pp=3.5/4.0/4.25 tsf, tv=0.75/0.77 tsf)	98	27	95	43	18	3.9 P 1.5 T	Hydrometer Test
	95						FAT CLAY (CH), very stiff to hard, gray, moist, high plasticity, trace fine grained sand							

Continued

BORING DEPTH: 151.5 ft
DEPTH TO WATER: 8.8 ft., 2/10/05, 9.5 ft., 2/11/05

START DATE: February 9, 2005
COMPLETION DATE: February 11, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-61
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-60b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Security Contractor Services yard, east of 28th St. N 1,953,204 E 6,164,847 SURFACE EL: 89.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-15		11 17"		100 psi	SILT WITH SAND (ML), very stiff, dark gray, moist, non-plastic, fine grained sand, refusal after 18 inches	103	22	78			3.0 P	
-20		12 4"	(65/6")	300 psi	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, dark grayish brown, subangular to subrounded gravel up to 2 inches --significant loss of drilling fluid from 102 ft to 120 ft --refusal after 6 inches		9	12				
-25		13 5"	(65/6")	300 psi	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, grayish brown, angular to rounded gravel up to 1 1/2 inches --refusal after 6 inches at 115 ft		9	11				
-30		14 14"	(60)	300 psi	FAT CLAY (CH), very stiff, mottled orange brown and light gray, moist, high plasticity (pp=2.3/2.6/2.9 tsf, tv=0.72/0.75 tsf) --Ended drilling on 2/10/05 at 121.5 ft --Began drilling on 2/11/05 at 121.5 ft --trace angular to rounded gravel up to 2 inches --hard, orange brown to grayish brown (pp=4.0/4.5/4.5 tsf, tv=>1) (LEL=0.0, OVM=0.0, OXY=20.7)	95	30			2.6 P 1.5 T		
-35		15 30"		300 psi	--very stiff (pp=3.0/3.6/4.0 tsf, tv=0.92/0.96 tsf)		29				4.3 P >2.0 T	
-40		16 29"		300 psi	--hard (pp=>4.5 tsf, tv=>1)						3.5 P 1.9 T	
-45		17 29"		300 psi							>4.5 P >2.0 T	
-50		18 24"		300 psi	LEAN CLAY (CL), hard, brown, moist, medium plasticity, trace fine grained sand, refusal after 24 inches (pp=4.0/4.5/4.5 tsf, tv=0.82/0.9 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)	104	23				4.3 P 1.7 T	
-55		19 12"		300 psi	--hard, trace fine to medium grained sand, refusal after 12 inches (pp=>4.5 tsf, tv=>1 tsf)						>4.5 P >2.0 T	
-60												

BORING DEPTH: 151.5 ft
DEPTH TO WATER: 8.8 ft., 2/10/05, 9.5 ft., 2/11/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 9, 2005
COMPLETION DATE: February 11, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.
2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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SVRT DOWNTOWN
San Jose, California**

FIGURE A1-60c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Security Contractor Services yard, east of 28th St. N 1,953,204 E 6,164,847	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					SURFACE EL: 89.1 ft (1988 NAVD datum)							
-65 155		20 18"		(54)	SILT WITH SAND (ML), stiff to very stiff, brown, moist, low to medium plasticity, fine grained sand (pp=1.9/2.25/2.8 tsf, tv=0.62/0.7 tsf)	108	21	80			2.3 P 1.3 T	
-70 160												
-75 165												
-80 170												
-85 175												
-90 180												
-95 185												
-100 190												
-105 195												
-110												

BORING DEPTH: 151.5 ft
 DEPTH TO WATER: 8.8 ft., 2/10/05, 9.5 ft., 2/11/05

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 9, 2005
 COMPLETION DATE: February 11, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-60d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,083 E 6,164,853	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 88.9 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
						3 inches ASPHALT CONCRETE over 12 inches AGGREGATE BASE							
						LEAN CLAY (CL), stiff, gray, dry to moist, medium plasticity							
85	5		1 9"		12								
						SANDY LEAN CLAY (CL), soft to medium, yellowish brown, moist, medium to high plasticity (pp=0.2/0.3/0.3 tsf, tv=0.3/0.3/0.4 tsf)	104	19				0.3 P 0.7 T	
80	10		2 26"		150 psi								
						LEAN CLAY (CL), medium, yellowish brown, moist, medium plasticity							
75	15		3 12"		(10)								
						--stiff, brown (pp=1.1/1.2/1.1 tsf, tv=0.6/0.65/0.7 tsf) (LEL=0.0, OVM=0.0, OXY=19.4)						1.1 P 1.3 T	
70	20		4 30"		200 psi								
						SILT (ML), stiff, brown, moist, trace fine to medium grained sand	99	25	91			1.4 P	
65	25		5 29"		100 psi								
						LEAN CLAY (CL), medium, gray, moist, medium plasticity							
60	30		6 30"		200 psi	--(pp=0.8/0.7/0.8 tsf, tv=0.3/0.35/0.4 tsf)						0.8 P 0.7 T	
55	35		7 30"		250 psi	--stiff to very stiff (pp=1.7/2.2/3.2 tsf, tv=0.7/0.75/0.8 tsf)						2.4 P 1.5 T	
50	40		8 30"		200 psi	--stiff (pp=1.2/1.3/1.5 tsf, tv=0.6/0.7/0.75 tsf)	90	32				1.4 P 1.4 T	
45	45		9 29"		300 psi	--stiff to very stiff (pp=2.0/1.9/2.2 tsf, tv=0.9/0.8/0.8 tsf)						2.1 P 1.6 T	
40	45		10 30"		200 psi	--(pp=2.1/2.2/1.9 tsf, tv=0.8/0.85/0.9 tsf)						2.1 P 1.7 T	

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 19, 2005
COMPLETION DATE: February 27, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-61a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,083 E 6,164,853 SURFACE EL: 88.9 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
35		11 28"		300 psi	--(pp=2.2/1.9/2.3 tsf, tv=0.85/0.9/0.9 tsf) (LEL=0.0, OVM=0.0, OXY=19.2)	103	22				2.1 P 1.8 T	
55		12 6"		300 psi	--(pp=2.0 tsf)						2.0 P	
60		13 30"		200 psi	--stiff, brown, trace fine grained sand (pp=1.5/1.7/2.0 tsf)	100	24	91			1.8 P	
65		14 3"		300 psi	CLAYEY SAND (SC), dense, brown, moist, fine to medium grained sand							
70		15 11"		(50/5")	POORLY GRADED SAND WITH SILT (SP-SM), very dense, brown, moist --refusal after 11 inches		5	7				
80		16 26"		300 psi	LEAN CLAY (CL), very stiff, gray, moist, low to medium plasticity --(pp=2.5/2.2/2.0 tsf, tv=0.8/0.85/0.9 tsf)		29	98	40	16	2.2 P 1.7 T	Hydrometer Test
90		17 28"		300 psi	--(pp=2.5/2.9/3.5 tsf) (LEL=0.0, OVM=0.0, OXY=19.3)	97	27				3.0 P	

Continued

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

START DATE: February 19, 2005
COMPLETION DATE: February 27, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-62
SVRT DOWNTOWN
San Jose, California

FIGURE A1-61b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,083 E 6,164,853	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 88.9 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
			18	7"	PH		--(pp=2.5/2.7/3.2 tsf)						2.8 P	
-15	105													
-20	110		19	5"	(Ref/5")		CLAYEY GRAVEL WITH SAND (GC), very dense, gray, moist, medium to coarse grained sand, subrounded gravel up to 2 inches, refusal after 5 inches --Ended drilling on 2/19/05 at 110 ft --Began drilling on 2/27/05 at 110 ft		10	18				
-25	115		20	11"	(50/5")		POORLY GRADED GRAVEL WITH SAND (GP), very dense, gray, moist, medium to coarse grained sand, subrounded gravel up to 1 1/2 inches							
-30	120		21	9"	(50/4")		POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), very dense, gray, moist, subrounded gravel up to 2 inches, medium to coarse grained sand --added bentonite to prevent cave-in at 120 ft		10	8				
-35	125		22	12"	(50/5")		POORLY GRADED GRAVEL WITH SAND (GP), very dense, gray, moist, subrounded gravel up to 2 inches, medium to coarse grained sand							
-40	130		23	12"		350 psi	LEAN CLAY (CL) CLAYEY GRAVEL (GC), very dense, gray, moist, subrounded gravel up to 1 inch, refusal after 18 inches	119	14	23				
-45	135		24	30"		100 psi 250 psi	LEAN CLAY (CL), hard, gray, moist, low to medium plasticity (pp=4.3/4.5/4.5 tsf, tv=0.75/0.9/0.95 tsf) (LEL=0.0, OVM=0.0, OXY=20.3)						4.5 P 1.8 T	
-50	140		25	10"	(50/4")		--medium plasticity, refusal after 10 inches							
-55	145		26	6"	(90/9")		--trace coarse grained sand --gravelly lean clay seam at 144 ft, refusal after 15 inches							
-60			27			100 -	--refusal after 24 inches	103	23					

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 19, 2005
COMPLETION DATE: February 27, 2005

- NOTES: 1. Terms and symbols defined on Plate A-1.
2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-61c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,083 E 6,164,853 SURFACE EL: 88.9 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
-65		10"		400 psi									
155													
-70													
160													
-75													
165													
-80													
170													
-85													
175													
-90													
180													
-95													
185													
-100													
190													
-105													
195													
-110													

BORING DEPTH: 151.0 ft
DEPTH TO WATER: Not Measured

START DATE: February 19, 2005
COMPLETION DATE: February 27, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-62
SVRT DOWNTOWN
San Jose, California

FIGURE A1-61d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,020 E 6,164,790	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 88.2 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
						2 1/2 inches ASPHALT CONCRETE over 9 inches AGGREGATE BASE							
						LEAN CLAY (CL), stiff to very stiff, brown to dark brown, moist, medium plasticity, trace fine grained sand							
85	5												
			1	27"	25 psi	SILT WITH SAND (ML), medium to stiff, brown, moist, low plasticity, fine grained sand							
					150 psi	LEAN CLAY (CL), medium to stiff, brown, moist, medium plasticity (pp=1.0/1.25/1.25 tsf, tv=0.34/0.44 tsf) (LEL=0.0, OVM=0.0, OXY=19.3)						1.2 P 0.8 T	
80	10												
						FAT CLAY (CH), very stiff, brown to grayish brown, moist, high plasticity							1.4 V vs=1386 psf
75	15												>2.1 V vs>2089 psf
70	20		2	28"	100 psi	SILT WITH SAND (ML), stiff, brown, moist, medium plasticity, fine grained sand, trace caliche nodules up to 1 inch (pp=1.6/1.45/2.0 tsf, tv=0.24/0.25 tsf) (LEL=0.0, OVM=0.0, OXY=19.2)							
					175 psi	--layer of sandy silt/silty sand from 18 ft to 19.5 ft	100	26				1.7 P 0.5 T	vs>2089 psf
65	25		3	29"	50 psi	--(pp=1.5/1.5/1.5 tsf, tv=0.14/0.2 tsf)							
					180 psi							1.5 P 0.3 T	
60	30		4	30"	100 psi	LEAN CLAY (CL), stiff, grayish brown, moist, medium plasticity, trace fine grained sand and caliche nodules (pp=1.3/1.5/1.75 tsf, tv=0.37/0.49 tsf) (LEL=0.0, OVM=0.0, OXY=19.4)							
					150 psi	--very stiff						1.5 P 0.9 T	vs>2089 psf
55	35												2.1 V vs=2057 psf
50	40		5	30"	100 psi	FAT CLAY (CH), very stiff, gray to grayish brown, moist, high plasticity, trace fine grained sand (pp=2.25/2.75/2.75 tsf, tv=0.72/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=19.3)							
					150 psi	--Ended drilling on 2/19/05 at 42.5 ft	93	30				2.6 P 1.5 T	
45	45		6	30"	100 psi	--Began drilling on 2/20/05 at 42.5 ft							
					200 psi	LEAN CLAY (CL), stiff, gray, moist, medium to high plasticity							
40						--(pp=1.1/1.2/1.5 tsf, tv=0.55/0.62/0.7 tsf)						1.3 P 1.3 T	vs>2089 psf
						--very stiff							

Continued

BORING DEPTH: 151.5 ft
DEPTH TO WATER: 9.5 ft., 2/20/05, 10.5 ft., 2/26/05

START DATE: February 19, 2005
COMPLETION DATE: February 26, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: D. Alexander/ F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-62a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,020 E 6,164,790	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 88.2 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
	35					--trace clay nodules from cuttings						>2.1 V	vs>2089 psf
	55		7 24"		100 psi 350 psi	--light brown (pp=2.4/2.6/2.7 tsf, tv=0.6/0.7/0.9 tsf)						2.6 P 1.6 T	
	60												
	25					WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown, moist, fine to medium grained sand, subrounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=20.1)		12	9				
	65		8 14"		54								
	70					--subrounded gravel up to 1 inch, refusal after 12 inches							
	75		10 12"		86			9	10				
	80					POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, moist, subrounded gravel up to 1 inch							
	85												
	90		X 0"		200 - 350 psi	SANDY SILTY CLAY (CL-ML), hard, brown --no recovery in Shelby Tube sample at 90 ft --moist (pp=>4.5 tsf)	112	19	29	8	>4.5 P		
	95		12 4" 13 16"		37			25	70				Hydrometer Test
	-5												
	-10					SILT (ML), hard, gray, moist, low to medium plasticity, no recovery in Shelby Tube sample, resampled with SPT							

BORING DEPTH: 151.5 ft
DEPTH TO WATER: 9.5 ft, 2/20/05, 10.5 ft., 2/26/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: D. Alexander/ F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 19, 2005
COMPLETION DATE: February 26, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-62b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,020 E 6,164,790	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 88.2 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
						SILT (ML), hard, gray, moist		25	98				Hydrometer Test
-15	105					--Ended drilling on 2/20/05 at 109.5 ft --Began drilling on 2/26/05 at 109.5 ft							
-20	110		15 11"	400 psi	68	SILTY SAND (SM), very dense, moist, non-plastic to low plasticity, fine grained sand (LEL=0.0, OVM=0.2, OXY=19.1)		23	44				
-25	115		16 14"			--poorly graded sand layer from 108.5 ft to 109.5 ft, Shelby Tube sample refusal after 1 inch at 109 ft							
-30	120		17 3"	70/8"		--refusal after 8 inches, 1 inch gravel in shoe							
-35	125		18 6"	60/6"		SILTY GRAVEL WITH SAND (GM), very dense, brown, moist, fine to coarse grained sand, subrounded to rounded gravel up to 1 inch, refusal after 6 inches (LEL=0.0, OVM=0.0, OXY=19.3)		11	13				
-40	130		19 6"	50/6"		CLAYEY SAND WITH GRAVEL (SC), very dense, brown, moist, subrounded to rounded gravel up to 1/2 inch		12	21				
-45	135		20 24"	200 psi	350 psi	--interbedded clay and sand layers from 126.5 ft to 128.5 ft						3.1 P 1.2 T	
-50	140		21 18"	33		LEAN CLAY (CL), very stiff, gray to grayish brown, moist, medium plasticity, trace caliche nodules, disturbed sample (pp=3.8/3.2/2.2 tsf, tv=0.56/0.6 tsf)							
-55	145		22 30"	100 psi	200 psi	--trace sand at 133 ft							
-60	150		23 29"	200 psi		--hard, grayish brown, trace fine grained sand (LEL=0.0, OVM=0.0, OXY=19.4)		23					
						--brown, trace fine grained sand and caliche (pp=4.0/4.25/4.5 tsf, tv=>1)						4.3 P >2.0 T	
						FAT CLAY (CH), very stiff, grayish brown, moist, high plasticity (pp=2.75/3.2/3.25 tsf, tv=>1) (LEL=0.0, OVM=0.0, OXY=19.4)						3.1 P >2.0 T	
						CLAYEY SAND (SC), brown							

Continued

BORING DEPTH: 151.5 ft
DEPTH TO WATER: 9.5 ft., 2/20/05, 10.5 ft., 2/26/05

START DATE: February 19, 2005
COMPLETION DATE: February 26, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: D. Alexander/ F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-63
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-62c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Mission Concrete Yard, east of 28th St. N 1,953,020 E 6,164,790 SURFACE EL: 88.2 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
		24	X	37	FAT CLAY (CH), hard, gray							
-65												
-155												
-70												
-160												
-75												
-165												
-80												
-170												
-85												
-175												
-90												
-180												
-95												
-185												
-100												
-190												
-105												
-195												
-110												

BORING DEPTH: 151.5 ft
 DEPTH TO WATER: 9.5 ft., 2/20/05, 10.5 ft., 2/26/05

START DATE: February 19, 2005
 COMPLETION DATE: February 26, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, L. Willard
 LOGGED BY: D. Alexander/ F. Li
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-63
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-62d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 3rd St. and 4th St. N 1,948,305 E 6,158,168	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 82.5 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
80	5	Diagonal lines (top to bottom)	1	16"	11		10 inches ASPHALT CONCRETE over 4 inches CONCRETE over 16 inches old ballast/subballast							
75	10	Vertical lines	2	28"	120 psi		LEAN CLAY WITH SAND (CL), stiff, brown, moist, trace ballast, low plasticity		13		26	12		
70	15	Vertical lines			150 psi		SILT WITH SAND (ML), stiff, brown, moist, non-plastic							
65	20	Diagonal lines (bottom to top)	3	30"	50 - 100 psi		--(pp=1/1.5/1.25 tsf)	92	32		31	2	1.3 P	
60	25	Diagonal lines (bottom to top)	4	27"	100 psi		LEAN CLAY (CL), stiff, gray, moist, medium plasticity --brown							
55	30	Diagonal lines (bottom to top)	5	30"	100 psi		SILT WITH SAND (ML), medium, brown, wet (pp=0.75/0.5/0.75 tsf)		27				0.6 P	PM test @ 23.5' and 25'
50	35	Diagonal lines (bottom to top)			150 psi		LEAN CLAY WITH SAND (CL), medium, brown, wet, low plasticity (pp=0.25/0.75/0.75 tsf)	98	27		33	15	0.5 P 0.6 U	
45	40	Diagonal lines (bottom to top)	6	28"	50 psi		--gray (pp=0.75/0.75/0.75 tsf)							
40	45	Diagonal lines (bottom to top)			150 psi			88	38		40	15	0.8 P	
35	50	Diagonal lines (bottom to top)	7	8"	47		--very stiff, gray, trace gravel and pockets of sand (pp=1.75/2/2.5 tsf)		23				2.1 P	
		Vertical lines			400 psi		POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dense, gray and brown, wet, rounded gravel up to 1 inch		10	7				
		Vertical lines					SANDY SILT (ML), medium, brown, wet							

Continued

BORING DEPTH: 141.5 ft
DEPTH TO WATER: Not Measured

START DATE: October 23, 2004
COMPLETION DATE: October 24, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-63a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 3rd St. and 4th St. N 1,948,305 E 6,158,168 SURFACE EL: 82.5 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
30		2g		50 - 120 psi		SANDY SILT (ML), medium, brown, wet, non-plastic (pp=0.75/0.75/0.75 tsf)	108	21		23	1	0.8 P	PM test @ 53' and 54.5'
55		2g		120 psi		LEAN CLAY WITH SAND (CL), stiff, brown and gray, moist, low plasticity (pp=1.5/1.5/1.25 tsf)		21				1.4 P	
25						--increasing sand content							
60		10		34		POORLY GRADED SAND WITH SILT (SP-SM), dense, light brown, wet, some sandy lean clay at the bottom of the sample		26	10				
20		12				LEAN CLAY WITH SAND (CL), stiff, gray, moist, medium plasticity							
65													
70		11		50 - 240 psi		--hard, trace rounded gravel up to 1 inch (pp=3.75/2.75/3.25 tsf)	102	24		35	14	3.4 P	PM test @ 74'
10		12		100 psi		SANDY SILT (ML), very stiff, reddish brown, moist, non-plastic (pp=2/2/2.25 tsf)	98	9		NP	NP	2.1 P	
75		18		400 psi		--increasing gravel content							
5						WELL-GRADED GRAVEL (GW), yellowish brown, dry, rounded gravel up to 1 inch							
80		13				--Pitcher Barrel sample recovered 1 inch		4					
0													
85		14		32		WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown to gray, moist, subrounded gravel up to 1 inch --Ended drilling on 10/23/04 at 84.5 ft --Began drilling on 10/24/04 at 84.5 ft		10	7				
-5													
90		15		70		--very dense, rounded gravel up to 3/4 inch		10	10				
-10		11											
95						LEAN CLAY (CL), gray							
-15													

BORING DEPTH: 141.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 23, 2004
COMPLETION DATE: October 24, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-63b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 3rd St. and 4th St. N 1,948,305 E 6,158,168 SURFACE EL: 82.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-20		16 17 17	FE	43	MATERIAL DESCRIPTION SANDY SILT TO SILTY SAND (ML/SM), hard, gray, moist		27	53				
-105		18 25		100 psi	LEAN CLAY WITH SAND (CL), very stiff, gray, moist, low plasticity (pp=2.75/2.75/2.5 tsf)	100	25		37	16	2.6 P	
-110		0	X		-no recovery in Shelby Tube sample at 110 ft							
-115		19 29			-brown (pp=2.25/3/2/2.5 tsf)	93	27		38	17	2.5 P 0.9 U	
-120		20 24			POORLY GRADED SAND WITH SILT (SP-SM), brown, moist, fine grained		24	11				
-125		21 12	FE	60	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, brown and gray, moist, rounded gravel up to 3/4 inch		9	11				
-130		22 12	FE	100	-rounded gravel up to 1/2 inch		13					
-135		23 23			LEAN CLAY WITH SAND (CL), very stiff, gray, moist, low plasticity, refusal after 24 inches (pp=3.25/3.25/3 tsf)	102	23		35	15	3.2 P 1.7 U	
-140		0	X	34	-interbedded sand and gravel at 139 ft, no recovery in SPT sampler at 140 ft							
-145												
-65												

BORING DEPTH: 141.5 ft
DEPTH TO WATER: Not Measured

START DATE: October 23, 2004
COMPLETION DATE: October 24, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-64
SVRT DOWNTOWN
San Jose, California

FIGURE A1-63c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 2nd St. and 3rd St. N 1,948,135 E 6,157,845 SURFACE EL: 84.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
80		1	5"	6	6 inches ASPHALT CONCRETE over 5 inches OLD PORTLAND CEMENT CONCRETE							
75		2	24"	140 psi	SILT WITH GRAVEL (ML), dark brown; gravel likely old railroad ballast							
75					SANDY LEAN CLAY (CL), medium, brown, moist, low to medium plasticity, fine to medium grained sand	93	29		31	7	1.3 P	
75					SILT (ML), stiff, yellowish brown, moist, non-plastic (pp=1.5/1.2/1.2 tsf)							
70					▽							PM test @ 13' and 15'
65		3	30"	70 psi	LEAN CLAY (CL), medium, grayish brown, moist, low plasticity							
65					--(pp=0.75/0.75/0.75 tsf, tv=0.35/0.4/0.45 tsf)		25				0.8 P 0.8 T	
60												
55		4	30"	70 psi	SANDY LEAN CLAY (CL), medium, brown (yellow in the upper portion of the sample), moist, low plasticity, fine grained							
55					--(pp=0.75/0.75/1 tsf)	98	27		30	10	0.8 P	
50												
45					--gravel at 40 ft							PM test @ 38' and 40'
40		5	12"	56	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), very dense, brown, moist, subangular gravel up to 1 1/2 inches, medium to coarse grained sand (LEL=0, OVM=0)							
40						9	7					

Continued

BORING DEPTH: 149.0 ft
DEPTH TO WATER: 15.0 ft., 11/10/2004

START DATE: November 8, 2004
COMPLETION DATE: November 20, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-65
SVRT DOWNTOWN
San Jose, California

FIGURE A1-64a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 2nd St. and 3rd St. N 1,948,135 E 6,157,845	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							SURFACE EL: 84.3 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
							SANDY LEAN CLAY (CL), stiff, gray, moist, low plasticity, fine grained sand --Ended drilling on 11/8/04 at 51 ft --Began drilling on 11/9/04 at 51 ft --borehole caved in overnight from 8 ft to 51 ft --(pp=1.5/2/1.7 tsf, tv=0.65/0.65/0.7 tsf)	103	23				1.7 P 1.3 T	PM test @ 54'
							140 psi							
							6 30"							
							100 psi							
							7 30"							
							very stiff, yellowish brown (pp=3/3.3/2.7 tsf, tv=0.65/0.75/0.8 tsf)	105	21				3.0 P 1.5 T	
							POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dense, brown, moist, subrounded gravel up to 1 inch, medium to coarse grained sand							
							36							
							8 12"							
							WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown, moist, subrounded gravel up to 1 1/2 inches, medium to coarse grained sand							
							40							
							9 11.5"							
							39							
							10 15"							
							--subrounded gravel up to 1 inch							
							LEAN CLAY (CL), very stiff, gray, moist, 2 inch silt seam at 96 ft	20						

BORING DEPTH: 149.0 ft
DEPTH TO WATER: 15.0 ft., 11/10/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 8, 2004
COMPLETION DATE: November 20, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-65
SVRT DOWNTOWN
San Jose, California

FIGURE A1-64b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between 2nd St. and 3rd St. N 1,948,135 E 6,157,845 SURFACE EL: 84.3 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-20		11		140 psi	--Ended drilling on 11/9/04 at 105 ft --Began drilling on 11/10/04 at 105 ft --refusal after 24 inches							
-25		12		1400 psi	SILTY SAND WITH GRAVEL (SM), dense, yellowish brown, moist, fine grained	107	19					PM test @ 111.5' and 113'
-30		12		40	--brown, medium grained sand, subrounded gravel up to 1 inch							
-35		13		700 psi	LEAN CLAY (CL), very stiff, greenish gray, moist (gravel up to 2 inches in the slough) --some caving in at 120 ft --(pp=2.2/2.7/3 tsf)	104	23				2.6 P	
-40		14		47	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dense, brown, moist, medium to coarse grained sand, gravel up to 1 1/2 inches --Ended drilling on 11/10/04 at 125 ft and grouted borehole							
-45		15		43	--Began drilling adjacent hole on 11/20/04, approximately 4 ft southwest of original location LEAN CLAY (CL), hard, brown, moist, medium plasticity --some caving in at 133 ft							
-50		16		1400 psi	--(pp=4.4/4.5/4.5 tsf)	104	23				4.3 P	
-55		17		1400 psi	--some caving in at 140 ft --light brown, medium plasticity (pp=3.7/4.2/4 tsf)						4.0 P	
-60		18		1750 psi	SANDY SILT (ML), hard, yellowish brown, moist, fine grained sand --(pp=4.5/4.5/>4.5 tsf)	100	22				>4.5 P	
-65		19		44	SILTY SAND (SM), dense, yellowish brown, moist, fine grained sand (pp=4.5/4.2/4.5 tsf)						4.4 P	

BORING DEPTH: 149.0 ft
DEPTH TO WATER: 15.0 ft., 11/10/2004

START DATE: November 8, 2004
COMPLETION DATE: November 20, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-65
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-64c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between Market St. and 1st St. N 1,947,778 E 6,157,251 SURFACE EL: 88.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
85		1 14"	8		10 inches of ASPHALT CONCRETE over 7 inches of PORTLAND CEMENT CONCRETE							
80		2 15"		100 psi	SANDY SILT (ML), medium, brown, moist, non-plasticity, fine grained sand		19					
75		3 13"	4		--soft, mottled brown, fine to medium grained sand, trace subrounded gravel up to 1/4 inch --lost drilling fluid from 10 ft to 11 ft							
70		4 24"		100 psi 175 psi	FAT CLAY (CH), very stiff, gray, moist, medium to high plasticity		10				2.1 V	vs=2068 psf
65		5 24"		200 psi	--Shelby Tube sample refusal after 24 inches (tv=0.4/0.4 tsf)		37				0.8 T	
60		6 29"		300 psi 200 psi	--stiff LEAN CLAY WITH SAND (CL), stiff, gray, moist, medium plasticity, refusal after 24 inches (pp=1.75/1.75 tsf, tv=0.75/0.75 tsf)	94	27				1.8 P 1.5 T	
55		7 30"		300 psi	SANDY LEAN CLAY (CL), very stiff, light gray, moist, low plasticity (pp=2.25/2.5 tsf, tv=0.7/0.6 tsf)	101	24				2.4 P 1.3 T	
50		8 6"	16	100 psi 200 psi	SILTY SAND (SM), medium dense, gray, moist, fine grained sand --(pp=2.5/2.25 tsf)	100	25				2.4 P	
45		9 18"	9		POORLY GRADED SAND WITH SILT (SP-SM), medium dense, gray, wet, fine grained sand, medium to coarse grained sand seams		17	9				
40		10 30"		100 psi 300 psi	SANDY SILT/SILTY SAND (ML/SM), stiff, gray, moist, non-plastic, trace interbedded sand SANDY LEAN CLAY (CL), very stiff, gray, moist, low plasticity, fine to medium grained sand --(pp=2.75/2.75/3.0 tsf, tv=0.6/0.7 tsf) --Ended drilling on 11/6/04 at 47.5 ft --Began drilling on 11/7/04 at 47.5 ft		37				2.1 V	vs=2089psf

Continued

BORING DEPTH: 130.0 ft
DEPTH TO WATER: Not Measured

START DATE: November 6, 2004
COMPLETION DATE: November 7, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. Lovdahl
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-66
SVRT DOWNTOWN
San Jose, California

FIGURE A1-65a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between Market St. and 1st St. N 1,947,778 E 6,157,251 SURFACE EL: 88.1 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
35		11 30"		100 psi	POORLY GRADED SAND WITH SILT (SP-SM), loose, gray, wet, fine grained		26					
55					SANDY LEAN CLAY (CL), stiff, gray, moist, low plasticity, fine grained sand							
60		12 30"		100 psi	--(pp=1.25/1.5/1.25 tsf, tv=0.65 tsf)	99	25		35	19	1.3 P 1.3 T	
65					SANDY SILTY CLAY (CL-ML), stiff, grayish brown, moist, low plasticity, increasing fine grained sand							
70		13 30"		80 psi	--(pp=1.5/1.25/1.75 tsf, tv=0.58/0.6 tsf)	107	20		22	6	1.5 P 1.2 T	
75					--less sand content at 76 ft							
80		14 13"		68	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, mottled brown, wet, subangular gravel up to 3/4 inch, fine to medium grained sand		10	9				
85												
90		15 8"		45	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, mottled brown, wet, subangular gravel up to 3/4 inch, trace 2 inches gravel from cutting		13					
95					--no gravel at 99 ft							
-10					SANDY LEAN CLAY (CL), very stiff, gray, moist,							

Continued

BORING DEPTH: 130.0 ft
DEPTH TO WATER: Not Measured

START DATE: November 6, 2004
COMPLETION DATE: November 7, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. Lovdahl
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-66
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-65b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between Market St. and 1st St. N 1,947,778 E 6,157,251 SURFACE EL: 88.1 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
					low to medium plasticity, disturbed sample		27	69				
-15												
105												
-20					--gravel layer from 108 ft to 109 ft							
110												
-25					--grayish brown, low plasticity, trace fine grained sand (pp=2.25/2.25/2.5 tsf, tv=1.05 tsf)	101	24		37	18	2.3 P 2.1 T	
115												
-30					POORLY GRADED GRAVEL (GP), medium dense, grayish brown, wet, fine grained, subrounded gravel/cobbles up to 3 inches		20	5				
120					SILTY SAND WITH GRAVEL (SM), very dense, mottled brown, moist, fine to medium grained sand		12	13				
-35												
125					--dense, no recovery in SPT sampler							
-40					SANDY SILTY CLAY (CL-ML), stiff, gray, moist, low to medium plasticity	110	19		25	7		
130												
-45												
135												
-50												
140												
-55												
145												
-60												

BORING DEPTH: 130.0 ft
DEPTH TO WATER: Not Measured

START DATE: November 6, 2004
COMPLETION DATE: November 7, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. Lovdahl
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-66
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-65c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private Property (Washington Mutual Parking Lot) @ 55 W. Santa Clara St. N 1,947,803 E 6,157,096 SURFACE EL: 87.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
							3 inches ASPHALT CONCRETE, trace AGGREGATE BASE							
	85		1	13"		(25)	GRAVELLY LEAN CLAY (CL), very stiff, mottled brown, dry to moist, low to medium plasticity, trace brick and subrounded gravel up to 1/2 inch (FILL) -trace brick, concrete, wood pieces at 4 ft -lost drilling fluid at 5 ft -no recovery in Shelby Tube sample at 8.5 ft							
	5													
	80		2	0"		100 psi								
	10													
	75		3	25"		100 psi	FAT CLAY (CH), stiff, mottled brown, moist, high plasticity (pp=1.0/1.25/1.25 tsf, tv=0.6/0.65/0.7 tsf)						1.2 P 1.3 T	
	15													
	70		4	26"		50 psi	-medium, dark gray, medium plasticity (pp=0.5/0.75/0.75 tsf, tv=0.5/0.6/0.65 tsf) (LEL=0.0, OVM=0.0, OXY=20.8)	81	40				0.7 P 1.2 T	
	20													
	65													
	25													
	60		5	9"		(28)	SILTY SAND WITH GRAVEL (SM), medium dense, gray, wet, subrounded gravel up to 1/2 inch	116	18	24				
	30													
	55													
	35													
	50		6	13"		(23)	SILTY CLAY (CL-ML), stiff, gray, moist, low plasticity SILTY SAND (SM), medium dense, moist to wet, fine grained sand, trace clay CLAYEY SAND (SC), loose to medium dense, gray, wet, low plasticity clay, fine grained sand							
	40													
	45													
	45													
	40		7	30"		50 psi								

BORING DEPTH: 216.0 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 17, 2005
COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-68
SVRT DOWNTOWN
San Jose, California

FIGURE A1-66a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private Property (Washington Mutual Parking Lot) @ 55 W. Santa Clara St. N 1,947,803 E 6,157,096 SURFACE EL: 87.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
					75 psi	--(pp=0.75/0.75/1.0 tsf, tv=0.3/0.35 tsf) (LEL=0.0, OVM=0.0, OXY=20.8)			43			0.8 P 0.7 T	
					50 psi	--no recovery in Shelby Tube sample at 58.5 ft							
					(28)	LEAN CLAY WITH GRAVEL (CL), very stiff, light gray, moist, low to medium plasticity, fine gravel, trace root							
						SANDY SILT (ML), very stiff, gray, moist, low plasticity, fine grained sand							
						CLAYEY SAND (SC) layer							
					50 psi	LEAN CLAY (CL), hard, greenish gray, moist, medium plasticity, trace fine grained sand (pp=2.25/2.5/2.5 tsf, tv=0.8/1.0/1.05 tsf)							Hydrometer Test
					75 psi	--Ended drilling on 1/17/05 at 71 ft --Began drilling on 1/18/05 at 71 ft	104	22	92			2.4 P 1.9 T	
					(Ref/6")	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, mottled brown, wet, fine to medium grained sand, subangular gravel up to 3/4 inch		9	5				
					50 psi	LEAN CLAY (CL)							
					100 psi	POORLY GRADED GRAVEL (GP), very dense, gray to brown, wet, 3 inch cobble in bottom of Shelby Tube sample							
					(45)	LEAN CLAY WITH SAND (CL), very stiff	101	25					

BORING DEPTH: 216.0 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 17, 2005
COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-68
SVRT DOWNTOWN
San Jose, California

FIGURE A1-66b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private Property (Washington Mutual Parking Lot) @ 55 W. Santa Clara St. N 1,947,803 E 6,157,096 SURFACE EL: 87.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION											
-15				LEAN CLAY WITH SAND (CL), very stiff, yellowish brown and gray, moist, low to medium plasticity, fine grained sand							
105											
-20				--very stiff to hard, yellowish brown with reddish brown mottling, low plasticity (pp=4.0/4.0/3.75 tsf)						3.9 P	
110		14 30"	50 psi								
-25											
115				POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), very dense, mottled reddish brown, moist, medium grained sand, subangular gravel up to 2 inches							
-30											
120		15 6"	(50/3")			10	9				
-35											
125				FAT CLAY (CH), hard, gray, dry to moist, medium to high plasticity, trace clay/silty sand interface at 130 ft							
-40											
130		16 18"	(69)								
-45				SANDY SILT (ML)							
135											
-50											
140		17 30"	50 psi	SILTY CLAY (CL-ML), very stiff to hard, gray, dry to moist, low plasticity (pp=4.0/4.0/3.75 tsf)						3.9 P	
-55											
145			100 psi								
-60				LEAN CLAY (CL), hard, brown and mottled gray, moist, medium plasticity							
		18 30"	50 psi								

BORING DEPTH: 216.0 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 17, 2005
COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-68
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-66c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private Property (Washington Mutual Parking Lot) @ 55 W. Santa Clara St. N 1,947,803 E 6,157,096 SURFACE EL: 87.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
-65				100 psi	--(pp=4.25/4.5/4.0 tsf)	98	26				4.3 P	
-155					--lost drilling fluid							
-70		19 4"	(50/4")		SILTY SAND (SM), very dense, brown, moist, fine grained sand	113	22	21				Hydrometer Test
-160					--Ended drilling on 1/18/05 at 160 ft --Began drilling on 1/19/05 at 160 ft							
-80		20 10"	(50/4")		POORLY GRADED GRAVEL WITH SAND (GP), very dense, mottled brown, wet, medium grained sand, subrounded to subangular gravel up to 1/4 inch		8	5				
-170												
-90		21 24"		50 psi	FAT CLAY (CH), hard, gray, moist, high plasticity, trace fine grained sand							
-180				100 psi	--(pp=>4.5 tsf)	99	26	99			>4.5 P	
-185					--medium to high plasticity							
-100		22 24"		50 psi	WELL-GRADED GRAVEL WITH SILTY CLAY AND SAND (GW-GC), very dense, mottled brown, wet, subrounded gravel up to 1 inch							
-190				100 psi								
-195												
-110		23 6"	(50/6")		GRAVELLY LEAN CLAY WITH SAND (CL), hard, mottled yellowish brown, moist to wet,							

BORING DEPTH: 216.0 ft
DEPTH TO WATER: Not Measured

START DATE: January 17, 2005
COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

Continued

**LOG OF BORING NO. BH-68
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-66d

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Private Property (Washington Mutual Parking Lot) @ 55 W. Santa Clara St. N 1,947,803 E 6,157,096 SURFACE EL: 87.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-115	[Hatched Pattern]				subangular gravel --gravelly to 211 ft							
205												
-120	[Hatched Pattern]				LEAN CLAY (CL), brown							
210												
-125	[Hatched Pattern]				--sandy from 214 ft to 216 ft							
215												
-130												
220												
-135												
225												
-140												
230												
-145												
235												
-150												
240												
-155												
245												
-160												

BORING DEPTH: 216.0 ft
DEPTH TO WATER: Not Measured

START DATE: January 17, 2005
COMPLETION DATE: January 19, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-68
SVRT DOWNTOWN
San Jose, California

FIGURE A1-66e

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between San Pedro St. and Market St. N 1,947,549 E 6,156,889 SURFACE EL: 87.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	85					6 inches PORTLAND CEMENT CONCRETE							
	5					SANDY LEAN CLAY (CL), dark reddish brown, damp							
	80		1	28"	100 psi	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), reddish brown, moist, fine gravel up to 1/4 inch							
							102	16					
	10		2	11"	20	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), medium dense, brown, moist, fine gravel up to 1/4 inch							
	75		3	14"	14	LEAN CLAY (CL), stiff, light reddish brown, moist							
	15		4	0"	50 psi	--no recovery in Shelby Tube sample							
	70		5	18"	12	--grayish brown		36					
	20		6	25"	100 - 150 psi	--silt layer from 20 ft to 22 ft	87	33		34	6	2.4 P	
						--stiff to very stiff, light grayish brown (pp=2.4/2.6/2.1 tsf, tv=0.5 tsf)	92	18				1.0 T	
	65		7	30"	250 psi	--sand at 23 ft		27				1.4 M	
	25		8	28"	150 - 250 psi	--light gray (pp=2.75/2/1.75 tsf, tv=0.45 tsf)	102	21		32	13	2.2 P	
						--silty clay layer at 26.5 ft	100	21		28	7	0.9 T	
	60		9	18"	23	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), medium dense, gray, moist, fine to medium grained sand	100	23				1.5 M	
	30		10	18"	49	WELL-GRADED SAND WITH GRAVEL (SW), dense, dark bluish gray, wet, fine gravel							
	55		11	18"	34	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dense, subrounded gravel up to 1/4 inch		15	10				
	35		12	6"	30								
	50		13	18"	16	SANDY SILTY CLAY (CL-ML), very stiff, dark gray, moist							
	40		14	11"	8	SILTY SAND (SM), medium dense, dark gray, wet		19	42				Hydrometer test
	45		15	30"	100 - 250 psi	LEAN CLAY (CL), medium, dark bluish gray, moist to wet							
	45		16	30"	100 - 200 psi	--stiff, light olive gray (pp=1.4/1.5/1.7 tsf, tv=0.45 tsf)	100	27		45	20	1.5 P	
							102	23		30	11	0.9 T	
	40		17	21"	100 - 250 psi	--(pp=2/1.5/2.2 tsf)	95	44		32	14	1.9 P	
						POORLY GRADED SAND WITH SILT (SP-SM), light reddish brown, wet, fine to medium grained	100	26				0.9 M	
							94	25					

Continued

BORING DEPTH: 146.5 ft
DEPTH TO WATER: 16.6 ft., 11/21/2004

START DATE: November 20, 2004
COMPLETION DATE: November 21, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-70
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-67a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between San Pedro St. and Market St. N 1,947,549 E 6,156,889 SURFACE EL: 87.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
			18		42								
			19		50/5.5"	sand, refusal after 24 inches --dense, trace subrounded fine gravel		23	11				
35			20		20	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, grayish brown, wet, subrounded gravel up to 1/2 inch, refusal after 11.5 inches --lost drilling fluid and gravelly from 54 ft to 55 ft							
55			21		100 -	LEAN CLAY (CL), very stiff, dark olive gray							
30			22		125 psi	--stiff to very stiff, olive gray and mottled brown, moist to wet (pp=2/2.5/2.3 tsf, tv=0.725 tsf)	103	28					
60			23		200 psi	--stiff, light gray, moist (pp=1.4/1.6/1 tsf, tv=0.46 tsf) (LEL=0, OVM=0)	107	20		33	12		
25			24		100 -	--lost drilling fluid from 62.5 ft and 65 ft	99	25				1.3 P 0.9 T	
65			25		200 psi	--(pp=1.4/1.6/1.7 tsf, tv=0.48 tsf)						1.6 P 1.0 T	
20			26		200 -	SILTY CLAY (CL-ML), stiff, gray, wet (pp=1.6/2.2/1.9 tsf, tv=0.27 tsf)						1.9 P 0.5 T 1.2 M	
70			27		150 psi		108	19					
15						POORLY GRADED SAND WITH SILT (SP-SM), light gray, wet	111	19		22	5		
75						POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), very dense, light reddish brown, wet, subrounded gravel up to 1 1/2 inch							
10													
80					Ref/1.5"			11	6				
5						--Ended drilling on 11/20/04 at 82 ft --Began drilling on 11/21/04 at 82 ft							
85													
90					Ref/6"	--dark reddish brown, subangular gravel up to 2 inches							
95													
-10						LEAN CLAY (CL), trace subangular gravel							

BORING DEPTH: 146.5 ft
DEPTH TO WATER: 16.6 ft., 11/21/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 20, 2004
COMPLETION DATE: November 21, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-70
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-67b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in.)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between San Pedro St. and Market St. N 1,947,549 E 6,156,889 SURFACE EL: 87.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-15		28	Q	200 - 300 psi	--no recovery, refusal after 18 inches							
-20		29	Q	38	--gravelly --hard, brown with mottled gray, wet, 2 inches of recovery in SPT							
-25		30	11"	72	SILTY SAND (SM), very dense, grayish brown, wet --gravelly from 111 ft to 113 ft		25	33				Hydrometer Test
-30		31	17"	100 - 300 psi	SANDY LEAN CLAY (CL), very stiff --(pp=1.7/2/2.6 tsf), refusal after 17 inches --gravelly at 119 ft	98	27				2.1 P	
-35		32	4"	Ref/4"	WELL-GRADED SAND WITH GRAVEL (SW), very dense, reddish/grayish brown, wet, subangular gravel up to 1 inch							
-40		33	18"	31	SILT (ML), hard, olive gray, moist							
-45		34	28"	100 psi 250 psi	--(pp=2.3/2.3/2.75 tsf, tv=0.3 tsf)						2.5 P 0.6 T	
-50		35	28"	100 psi 250 psi	FAT CLAY (CH), hard, light reddish brown, moist, medium plasticity --(pp=4.5/4.2/3.9 tsf, tv=1.05 tsf)						4.2 P >2.0 T	
-55		36	6"	100 - 300 psi	--bright brownish red, refusal after 6 inches CLAYEY SAND WITH GRAVEL (SC), very dense, grayish brown, wet, subangular gravel up to 1 inch	81	40	84				Hydrometer Test
-60		37	6" 38 11"	Ref/6" 50/5.5"	--grayish/reddish brown, fine to medium grained sand, refusal after 11.5 inches							

BORING DEPTH: 146.5 ft
DEPTH TO WATER: 16.6 ft., 11/21/2004

START DATE: November 20, 2004
COMPLETION DATE: November 21, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: P. Chan
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-70
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-67c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between San Pedro St. and Market St. N 1,947,533 E 6,156,802 SURFACE EL: 88.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
							10 inches ASPHALT CONCRETE over 4 inches PORTLAND CEMENT CONCRETE							
							LEAN CLAY WITH SAND (CL), soft, brown, moist							
85	5		1	6.5"		3	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), medium dense, brown and gray, moist, rounded to angular gravel up to 1 inch							
							--rounded to angular gravel up to 3/4 inch		9	6				
80	10		2	9"		16	SILT (ML), very stiff, gray, moist							
							--(pp=2.5/2.2/2.7 tsf)						2.5 P	
75	15		3	10"		24	ORGANIC CLAY (OH), stiff, black, moist, high plasticity, trace odor (pp=0.9/1.0/0.95 tsf, tv=0.7 tsf)	82	39		70	42	1.0 P 1.4 T	
							--very stiff (pp=1/1.2/1.25/1.2 tsf)						1.2 P	PM test @ 23.5' and 25'
70	20		4	23"		150 psi	SANDY SILT (ML), stiff, gray, moist							
							--trace fine gravel at 29.5 ft							
65	25		5	12"		100 - 200 psi								
							--trace sand at 35 ft							
60	30		6	30"		150 psi	FAT CLAY (CH), stiff, gray, moist, medium plasticity							
							--(tv=0.66/0.76/0.8 tsf)	86	36		51	25	1.5 T	PM test @ 43.5' and 45'
55	35		7	18"		9								
							--(tv=0.7 tsf)						1.4 T	
50	40		8	24"		0 psi								
45	45		9	25"		175 psi 150 psi								
40	45					250 psi								

Continued

BORING DEPTH: 148.0 ft
DEPTH TO WATER: 28.0 ft., 10/27/2004

START DATE: October 25, 2004
COMPLETION DATE: October 27, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-71
SVRT DOWNTOWN
San Jose, California

FIGURE A1-68a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between San Pedro St. and Market St. N 1,947,533 E 6,156,802 SURFACE EL: 88.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
35	55		10	13"	10	72	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, moist, medium grained, rounded gravel up to 3/4 inch		9	9				
							--Ended drilling on 10/25/04 at 56 ft --Began drilling on 10/26/04 at 56 ft							
30	60		12	30"	12	150 psi	LEAN CLAY WITH SAND (CL), stiff to very stiff, gray, moist							
							--(tv=0.7/0.75/0.8 tsf)	98	26		36	16	1.5 T 1.5 U	PM test @ 63.5' and 65'
25	65		13	23"	13	180 psi 150 psi	--gray, disturbed sample							
20	70		14	23"	14	80 psi								
15	75					400 psi	SANDY LEAN CLAY (CL), brown, moist, trace gravel at the bottom of the sample	109	19	61				
							POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown to yellow, moist							
10	80		15	8"	15	76			10	6				
5	85													
0	90		16	8"	16	40	--dense, brown to gray, clay seams							
-5	95						LEAN CLAY WITH SAND (CL), hard, gray, moist							
-10			17		17	31		18						

BORING DEPTH: 148.0 ft
DEPTH TO WATER: 28.0 ft., 10/27/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 25, 2004
COMPLETION DATE: October 27, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-71
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-68b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: WB Santa Clara St., between San Pedro St. and Market St. N 1,947,533 E 6,156,802 SURFACE EL: 88.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-15					--interbedded sand seams				33	17		
105					POORLY GRADED SAND WITH SILT (SP-SM), very dense, yellowish brown, moist, some fine grained sand pockets							
-20					--no recovery in Shelby Tube sample at 109 ft, refusal after 12 inches							
110		X 0" 18 16"	X	95								
-25					--dense, trace rounded gravel up to 3/4 inch		20	10				
115		19 15"	X	44								
-30					--very dense --Ended drilling on 10/26/04 at 120.5 ft --Began drilling on 10/27/04 at 120.5 ft							
120		20 11"	X	97								
-35					LEAN CLAY WITH SAND (CL), very stiff, gray, moist, low plasticity							
125		21 18"	X	100 psi 350 psi	--(pp=2.8/3.9/3 tsf)	103	22	28	8	3.2 P 1.8 U		
-40					--greenish gray, refusal after 18 inches (pp=3.3/3.1/2.8/3.4 tsf)							
130		22 13"	X	150 psi 400 psi							3.2 P	
-45					SANDY SILT (ML), hard, gray and brown, moist, low plasticity		35	25	1			
135		23 14"	X	61								
-50					SANDY LEAN CLAY WITH GRAVEL (CL), hard, brown, moist							
140		24 8"	X	50/2"								
-55					POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), very dense, brown, moist, fine to coarse gravel, refusal after 12 inches		14	12				
145		25 11"	X	64/6"								
-60												

BORING DEPTH: 148.0 ft
DEPTH TO WATER: 28.0 ft., 10/27/2004

START DATE: October 25, 2004
COMPLETION DATE: October 27, 2004


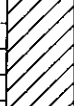

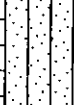
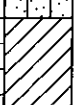
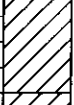
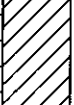
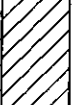
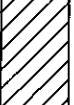
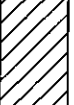
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-71
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-68c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between Almaden Ave. and San Pedro St. N 1,947,442 E 6,156,650 SURFACE EL: 87.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION														
85	5						5 inches ASPHALT CONCRETE over 5 inches FILL over 7 inches PORTLAND CEMENT CONCRETE							
80	10						LEAN CLAY (CL), brown, dry to moist, low plasticity --increase in sand, mottled gray and brown							
75	15						SANDY LEAN CLAY (CL), brown and gray, dry to moist, low plasticity, fine grained sand SILTY SAND WITH GRAVEL (SM), brown, dry, fine grained sand, fine subrounded gravel up to 1/4 inch							
70	20						LEAN CLAY (CL), stiff to very stiff, grayish brown, moist, low plasticity --trace 3 inch cobbles						2.0 V vs=1993 psf	
65	25						SANDY LEAN CLAY (CL), gray, medium plasticity --color change to mottled brown --fine to medium grained sand						1.9 V vs=1908 psf	
60	30						--trace sand and gravel from 29 ft to 40 ft						>2.1 V vs>2089 psf	
55	35													
50	40													
45	45						--stiff to very stiff, low plasticity, fine to medium grained sand						1.9 V vs=1919 psf	
40	45												>2.1 V vs>2089 psf	

BORING DEPTH: 162.5 ft
DEPTH TO WATER: 25.5 ft., 11/14/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 13, 2004
COMPLETION DATE: November 14, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-72
SVRT DOWNTOWN
San Jose, California

FIGURE A1-69a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in) SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between Almaden Ave. and San Pedro St. N 1,947,442 E 6,156,650 SURFACE EL: 87.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION											
35				-grayish brown							
55											
60											
65				-trace sand/silt lenses from 64 ft to 65.5 ft							
20				LEAN CLAY (CL), hard, grayish brown, medium plasticity, less sand content							
70		1 29"	100 psi								
15			250 psi	-brown with mottled reddish brown (pp=2.5/2.5/2.5 tsf, tv=>1.0/0.9/>1.0 tsf)	98	25				2.5 P >2.0 T	
75				WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, mottled brown, wet, fine to medium graded sand, subangular gravel up to 1 inch -lost drilling fluid at 76 ft							
80		2 14"	62			10	6				
85											
90		3 18"	17	LEAN CLAY WITH SAND (CL), very stiff, gray, moist, medium plasticity, fine grained sand (LEL=0, OVM=0)			80				Hydrometer Test
95				SANDY LEAN CLAY (CL), hard, gray, moist, medium plasticity							
-10											

BORING DEPTH: 162.5 ft
DEPTH TO WATER: 25.5 ft., 11/14/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 13, 2004
COMPLETION DATE: November 14, 2004
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-72
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-69b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between Almaden Ave. and San Pedro St. N 1,947,442 E 6,156,650 SURFACE EL: 87.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-15		4	4"	250 psi	--disturbed sample		24					
105				300 psi								
-20					--gravelly							
110		5	14"	90/10"	POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), very dense, mottled brown, wet, fine to medium grained sand, subrounded gravel up to 3/4 inch		11	10				
-25					--Ended drilling on 11/13/04 at 111.5 ft --Began drilling on 11/14/04 at 111.5 ft							
115		6	10"	85								
-30					SANDY SILTY CLAY (CL-ML), gray, moist, trace subrounded gravel up to 3/4 inch (refusal after 28 inches)							
120		7	26.5"	150 psi								
-35					SANDY LEAN CLAY (CL), very stiff, light brown, moist (pp=3/4/3 tsf)	103	20				3.3 P	
125		8	13"	82/11"	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), very dense, mottled brown, moist, fine to medium grained sand, subangular gravel stuck in the shoe							
-40												
130		9	11"	56	SILTY SAND TO SANDY SILT (SM/ML), very dense, grayish brown, moist, fine grained sand (LEL=0, OVM=0)			48				Hydrometer Test
-45												
135		10	14"	50	--gray, moist to wet							
-50												
140		11	18"	45	SILT WITH SAND (ML), hard, brown with gray, moist, low plasticity, trace subrounded gravel at the top of the sample up to 1/2 inch							
-55												
145		12	30"	100 psi								
-60					LEAN CLAY (CL), hard, gray, moist, low plasticity (pp>4.5 sf)	110	20				>4.5 P	
				200 psi								
					SILTY CLAY (CL-ML), hard, brown, moist, low plasticity							
				150 psi								

BORING DEPTH: 162.5 ft
DEPTH TO WATER: 25.5 ft., 11/14/2004

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, L. Willard
LOGGED BY: F. Wang
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 13, 2004
COMPLETION DATE: November 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-72
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-69c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between Almaden Ave. and San Pedro St. N 1,947,442 E 6,156,650 SURFACE EL: 87.7 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-65		30			--(pp>4.5 sf)						>4.5 P	
155		14	30"	100 psi	SILT (ML), hard, brown, moist, low plasticity, fine grained sand --(pp>4.5 tsf)	100	24	92			>4.5 P	Hydrometer Test
-70												
160		15	24"	100 psi	SILTY SAND (SM), dense, brown, moist, fine grained							
-75												
165												
-80												
170												
-85												
175												
-90												
180												
-95												
185												
-100												
190												
-105												
195												
-110												

BORING DEPTH: 162.5 ft
 DEPTH TO WATER: 25.5 ft., 11/14/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, L. Willard
 LOGGED BY: F. Wang
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: November 13, 2004
 COMPLETION DATE: November 14, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.
 2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-72
SVRT DOWNTOWN
San Jose, California

FIGURE A1-69d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Redevelopment Agency, Parking Lot between Montgomery St. and Autumn St. N 1,946,045 E 6,154,373 SURFACE EL: 87.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							MATERIAL DESCRIPTION							
85	5		1	13"		(20)	6 inches ASPHALT CONCRETE							
			2	27"		200 psi	LEAN TO FAT CLAY (CL/CH), very stiff, mottled gray and brown, moist, medium to high plasticity, trace fine to medium grained sand and subangular gravel up to 1 1/2 inches (FILL) (pp=3.0/3.0/3.0 tsf, tv=0.8/0.87 tsf)						3.0 P 1.7 T	
80	10						LEAN CLAY (CL), stiff, dark grayish brown to mottled olive brown, moist, medium plasticity, trace fine grained sand (pp=1.2/1.75/1.8 tsf, tv=0.47/0.56 tsf) (LEL=0.0, OVM=0.0, OXY=20.3)	90	26				1.6 P 1.0 T	vs >2089 psf
75	15						SILT (ML), stiff, mottled brown and gray, moist, low plasticity, trace fine grained sand						>2.1 V	vs >2089 psf
70	20		3	26"		150 psi	LEAN CLAY (CL), stiff, brown, moist, medium plasticity, trace fine grained sand (pp=1.3/1.75/2.0 tsf, tv=0.41/0.48 tsf) (LEL=0.0, OVM=0.0, OXY=20.2) --very stiff from 18 ft to 21.5 ft --stiff						1.7 P 0.9 T	vs >2089 psf
65	25						--stiff to very stiff, mottled orange brown, light brown and dark brown, trace fine to coarse grained sand (pp=1.9/2.1/2.2 tsf, tv=0.63/0.65 tsf) (LEL=0.0, OVM=0.0, OXY=19.8)						2.0 V	vs=2014 psf
60	30		4	25"		250 psi							1.6 V	vs=1609 psf
55	35		5	8"		37	--refusal after 12 inches, subangular to subrounded gravel up to 1 1/4 inch							
			6	15"			CLAYEY GRAVEL WITH SAND (GC), dense, orange brown and light brown, moist, low plasticity, subangular to rounded gravel up to 3/4 inches		11	24				
50	40		7	13"		61	--very dense, grayish brown, non-plastic, subangular to rounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=19.7)							
45	45		8	14"		84	WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC), very dense, brown, moist, subangular to rounded gravel up to 1 inch		10	11				
40	45		X	0"		15	--medium dense, no recovery in SPT sampler --medium to coarse grained sand --lost drilling fluid							

Continued

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 16.0 ft., 2/15/05, 19.5 ft., 2/16/05

START DATE: February 14, 2005
COMPLETION DATE: February 16, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-73
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-70a

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Redevelopment Agency, Parking Lot between Montgomery St. and Autumn St. N 1,946,045 E 6,154,373 SURFACE EL: 87.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
35		10 ⁹	50/6"		CLAYEY GRAVEL WITH SAND (GC), very dense, mottled brown and yellowish brown, moist, angular to subrounded gravel up to 1/2 inch --lost drilling fluid at 54 ft, angular to subrounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=20.0) --Ended drilling on 2/14/05 at 56.5 ft --Began drilling on 2/15/05 at 56.5 ft							
55		10 ¹³	77				11	20				
60		11 ³⁰	150 psi		LEAN CLAY WITH GRAVEL (CL), very stiff, gray, moist, medium plasticity, trace fine grained sand, subangular to subrounded gravel up to 2 1/2 inches at 60 ft (pp=2.5/3.25/3.5 tsf, tv=0.7/0.8 tsf)						3.1 P 1.5 T	
65		12 ¹⁸	25		SILT WITH SAND (ML), very stiff, gray, moist, low plasticity, fine grained sand LEAN CLAY (CL), stiff to very stiff, gray, moist, medium plasticity, trace fine grained sand (pp=1.8/2.25/2.0 tsf)						2.0 P	
70		13 ⁰	17		--very stiff, no recovery in SPT sampler --trace subrounded to rounded gravel up to 1/2 inch to 3/4 inch							
80		13 ²⁰	600 psi		SILT (ML), stiff, orange brown, moist, trace fine grained sand (pp=1.8/2.1/2.0 tsf)	90	34	91	29	4	2.0 P	Hydrometer Test
90		14 ²⁶	100 psi		FAT CLAY (CH), very stiff to hard, gray, moist, high plasticity, trace fine grained sand							
95			350 psi		SANDY LEAN CLAY (CL), stiff, brown, moist, low plasticity, fine grained sand, trace subrounded to rounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=20.0) --interbedded clay and sand layers to 100 ft		23	64			1.4 P	

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 16.0 ft., 2/15/05, 19.5 ft., 2/16/05

START DATE: February 14, 2005
COMPLETION DATE: February 16, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-73
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-70b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Redevelopment Agency, Parking Lot between Montgomery St. and Autumn St. N 1,946,045 E 6,154,373 SURFACE EL: 87.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
					MATERIAL DESCRIPTION							
-15		15 18"	⊗	23	LEAN CLAY (CL), very stiff, gray, moist, medium plasticity, trace fine to medium grained sand							
105												
-20												
110		16 28"	⊗	100 psi								
-25					SILT (ML), hard, grayish brown, moist, low plasticity, trace fine grained sand (pp=4.5/4.5/4.5 tsf, tv=0.33/0.43 tsf) (LEL=0.0, OVM=0.0, OXY=19.8)	104	21	90	22	1	4.5 P 0.8 T	Hydrometer Test
115		17 14"	⊗	72	SILTY SAND (SM), very dense, gray, moist, non-plastic, fine grained sand		19	43				
-30												
120		18 23"	⊗	100 psi 350 psi	LEAN CLAY (CL), very stiff, olive brown, moist, medium plasticity, trace fine grained sand (pp=1.75/2.2/2.75 tsf, tv=0.57/0.65 tsf) (LEL=0.0, OVM=0.0, OXY=19.8)						2.2 P 1.2 T	
-35					--lost drilling fluid --hard							
125		19 15"	⊗	94/9"			15	47				
-40					SANDY LEAN CLAY WITH GRAVEL (CL), hard, mottled light gray to grayish brown, moist, non-plastic, fine grained sand with some medium to coarse grained sand, angular to subrounded gravel up to 3/4 inch							
130		20 18"	⊗	43	--Ended drilling on 2/15/05 at 126.25 ft --Began drilling on 2/16/05 at 126.25 ft						>4.5 P >2.0 T	
-45					FAT CLAY (CH), hard, gray, moist, high plasticity, trace fine grained sand and caliche (pp=4.25/>4.5/>4.5 tsf, tv=>1/>1 tsf) (LEL=0.0, OVM=0.0, OXY=19.8)							
135		21 28"	⊗	300 psi							4.2 P >2.0 T	
-50					LEAN CLAY (CL), hard, light brown, moist, medium plasticity, trace caliche (pp=3.75/4.25/4.5 tsf, tv=>1/>1 tsf)							
140		22 21"	⊗	300 psi	SILTY CLAY (CL-ML), hard, mottled olive brown and brown, moist, low plasticity, trace fine grained sand (pp=4.2/4.4/4.5 tsf, tv=0.44/0.5 tsf) (LEL=0.0, OVM=0.0, OXY=19.6)						4.4 P 0.9 T	
-55												
145		23 18"	⊗	59	FAT CLAY (CH), hard, gray, moist, high plasticity, trace fine grained sand --mottled olive brown and orange brown, interbedded seams of lean clay							
-60					CLAYEY SAND WITH GRAVEL (SC)							

Continued

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 16.0 ft., 2/15/05, 19.5 ft., 2/16/05

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 14, 2005
COMPLETION DATE: February 16, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-73
SVRT DOWNTOWN
San Jose, California

FIGURE A1-70c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: San Jose Redevelopment Agency, Parking Lot between Montgomery St. and Autumn St. N 1,946,045 E 6,154,373 SURFACE EL: 87.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
-65		9.24	X	65/6"	MATERIAL DESCRIPTION very dense, mottled brown and orange brown, moist, subrounded to rounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=19.5)		12	17				
155												
-70												
160												
-75												
165												
-80												
170												
-85												
175												
-90												
180												
-95												
185												
-100												
190												
-105												
195												
-110												

BORING DEPTH: 150.5 ft
 DEPTH TO WATER: 16.0 ft., 2/15/05, 19.5 ft., 2/16/05

START DATE: February 14, 2005
 COMPLETION DATE: February 16, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-73
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-70d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA parking Lot, between Montgomery St. and Cahill St. N 1,946,092 E 6,154,195	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 88.3 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
						6 inches ASPHALT CONCRETE over 12 inches AGGREGATE BASE							
85	5		1 15"		(20)	LEAN TO FAT CLAY (CL/CH) (FILL), very stiff, mottled dark grayish brown, brown, black, and yellowish brown, moist, medium to high plasticity, trace fine grained sand and angular to subrounded gravel up to 1 inch (pp=2.75/3.25/3.25 tsf)		28				3.1 P	
			2 16"									2.0 P	
			3 29"									1.0 T	
80	10		4 23"		100 psi	LEAN CLAY (CL), very stiff, light grayish brown, moist, medium plasticity, trace fine grained sand, disturbed sample (pp=1.75/2.0/2.25 tsf, tv=0.5/0.5 tsf)	96	26	40	21		2.0 P	
			5 30"		100 psi	--(pp=2.5/2.5/2.75 tsf, tv=0.77/0.77 tsf) at 9.9 ft	105	19	28	8		1.4 T	
75	15		6 24"		100 psi	--hard, mottled brown and gray (pp=>4.5 tsf, tv=0.7/0.7 tsf)	100	25	34	10		1.4 T	
			7 27"		100 psi	--very stiff (pp=1.8/2.25/2.1 tsf, tv=0.55/0.55 tsf) trace silt at 15 ft	105	21	24	3		2.1 P	
70	20		8 29"		100 psi	SILT (ML), hard, brown, moist, low to medium plasticity, trace fine grained sand (pp=>4.5 tsf, tv=0.43/0.55 tsf)	101	24	30	12		1.1 T	
			9 28"		100 psi	LEAN CLAY (CL), stiff, brown, moist, medium plasticity, trace fine grained sand (pp=1.0/1.25/1.5 tsf, tv=0.4/0.51 tsf) (LEL=0.0, OVM=0.0, OXY=20.9)	101	24	28	4		1.0 M	
65	25		10 30"		100 psi	SILT (ML), stiff to very stiff, brown, moist, low plasticity (pp=1.75/2.0/2.25 tsf, tv=0.4/0.41 tsf)	98	26	43	20		1.5 T	
			11 21"		100 psi	LEAN CLAY (CL), very stiff, gray, moist, medium to high plasticity, trace fine grained sand (pp=2.2/2.25/2.25 tsf, tv=0.73/0.75 tsf)	87	34	57	25		1.3 M	
60	30		12 24"		100 psi	ELASTIC SILT TO FAT CLAY (MH/CH), very stiff, mottled olive brown and orange brown, moist, medium plasticity, trace fine grained sand (pp=2.0/2.25/2.3 tsf, tv=0.7/0.85 tsf)	87	33	57	30		2.2 P	
			13 23"		100 psi	LEAN CLAY (CL), stiff, mottled olive brown and orange brown, moist, medium plasticity, trace fine grained sand and rounded gravel up to 3/4 inch (pp=1.25/1.3/1.5 tsf, tv=0.47/0.53 tsf) at 29 ft; trace rounded gravel up to 1/2 inch at 32 ft (pp=1/1.25/1.5 tsf, tv=0.4/0.45 tsf)	99	25	36	17		1.6 T	
55	35		14 26"		100 psi	SILTY CLAY (CL-ML), grayish brown, subrounded to rounded gravel up to 1 inch	99	25	36	17		0.8 M	
			15 27"		100 psi	LEAN CLAY (CL), very stiff, light grayish brown and orange brown mottling, moist, medium plasticity, trace fine grained sand (pp=2.25/2.5/2.7 tsf, tv=0.46/0.53 tsf)	93	28	36	14		1.4 P	
50	40		16 26"		100 psi	SANDY SILT (ML), stiff, brown, moist, low plasticity, fine grained sand (pp=1.6/1.7/1.8 tsf, tv=0.33/0.34 tsf) (LEL=0.0, OVM=0.0,	108	21	27	4		1.0 M	
			17 26"		100 psi		96	26	11	NP		1.7 P	
45	45		18 30"		100 psi		96	26	11	NP		0.7 T	
			19 30"		100 psi		106	22	27	12		0.3 M	
40							106	21	27	12		4.0 P	
							20	21	27	12		1.1 T	
							97	25	30	10		1.4 M	
							7	25	30	10		2.8 P	
								7	24	5		0.8 M	

Continued

BORING DEPTH: 150.5 ft
 DEPTH TO WATER: 19.5 ft, 2/2/05, 22.0 ft, 2/3/05

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 1, 2005
 COMPLETION DATE: February 3, 2005
 NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-74
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-71a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA parking Lot, between Montgomery St. and Cahill St. N 1,946,092 E 6,154,195 SURFACE EL: 88.3 ft (1988 NAVD datum)	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
			20 36"		100 psi		OXY=20.9	109	20		20	7	1.1 P 0.5 T	
			21 36"		100 psi		--grayish brown, non-plastic (pp=1.75/1.5/2.5 tsf, tv=0.32/0.35 tsf) at 42 ft	101	25		30	5	0.8 M	
	35		22 36"		100 psi		POORLY GRADED SAND WITH SILT (SP-SM), medium dense, brown, moist, fine grained sand	28	25		34	15	2.2 P 1.4 T	
	55		23 27"		100 psi		LEAN CLAY (CL), very stiff, light bluish gray, moist, medium plasticity, trace fine grained sand (pp=2.0/2.1/2.25 tsf, tv=0.57/0.6 tsf)	97	17		29	6	2.2 P 0.9 M	
	30		24 27"		100 psi		--stiff (pp=1.4/1.7/1.7 tsf)	108	19		34	16	3.0 P 1.4 T	
	60		25 29"		100 psi		SILTY CLAY WITH SAND (CL-ML), stiff, mottled brown and bluish gray, moist, low to medium plasticity, fine grained sand (pp=1.25/1.5/0.5 tsf tv=0.19/0.27 tsf)	99	25		35	15	2.7 P 1.4 T	
	25		26 25"		100 psi		SILT (ML), very stiff, bluish gray, moist, low plasticity	108	19		30	6	1.3 M	
	65		27 22"		100 psi		LEAN CLAY (CL), very stiff, bluish gray, moist, high plasticity, trace fine grained sand (pp=2.0/2.2/2.25 tsf, tv=0.71/0.7 tsf)	104	20		32	4	1.3 P 0.4 T	
	20	X 0"	28 3.5"	(50/6")			SILT (ML), very stiff, gray, moist, low plasticity		17	47				
	70		29 3.5"		(50/6")		LEAN CLAY (CL), very stiff, gray, moist, medium plasticity, trace fine grained sand (pp=2.1/2.1/2.3 tsf, tv=0.41/0.5 tsf) at 55 ft		9	14				
	15		30 29"		200 psi		--(pp=2.75/3.5/2.8 tsf, tv=0.65/0.7 tsf) at 57.3 ft							
	75		31 29"		200 psi		--(pp=2.6/2.6/2.8 tsf, tv=0.7/0.7 tsf) at 59.7 ft (LEL=0.0, OVM=0.0, OXY=20.9)							
	10		32 27"		200 psi		SILT (ML), stiff, mottled brown and gray, moist, low plasticity, trace fine grained sand	104	23	80	30	13	2.5 P 1.4 T	Hydrometer Test
	80		33 27"		200 psi		--yellowish brown (pp=1.0/1.25/1.5 tsf, tv=0.15/0.2 tsf)							
	5		34 28"		300 psi		SILTY SAND (SM), medium dense, yellowish brown, moist, trace subangular to subrounded gravel up to 3/4 inch						4.3 P 1.6 T	
	85		35 28"		300 psi		SILTY GRAVEL WITH SAND (GM), very dense, brown, moist, angular to rounded gravel up to 1 inch							
	0		36 21"		300 psi		--Ended drilling on 2/1/05 at 70 ft --Began drilling on 2/2/05 at 70 ft						>4.5 P 1.5 T	
	90		37 21"		300 psi		LEAN CLAY WITH SAND (CL), very stiff, gray, moist, medium plasticity, fine grained sand (pp=2.25/2.5/2.6 tsf, tv=0.67/0.74 tsf)							
	-5		38 8"	(50/3")			LEAN CLAY (CL), hard, gray, moist, medium plasticity, trace fine grained sand (pp=3.75/4.5/4.5 tsf, tv=0.8/0.9 tsf)	100	23				>4.5 P 1.5 T	
	95		39 8"		(50/3")		SANDY LEAN CLAY (CL), hard, orange brown, moist, low to medium plasticity, fine grained sand (pp=>4.5 tsf, tv=0.74/0.81 tsf) at 87 ft		11	4				
	-10						--(pp=>4.5 tsf, tv=0.7/0.74 tsf) at 91.5 ft WELL-GRADED GRAVEL WITH SAND (GW),							

Continued

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 19.5 ft., 2/2/05, 22.0 ft., 2/3/05

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 1, 2005
COMPLETION DATE: February 3, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-74
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-71b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA parking Lot, between Montgomery St. and Cahill St. N 1,946,092 E 6,154,195	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 88.3 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
						(50/6")	very dense, dark grayish brown, wet, medium to coarse grained sand, angular to subrounded gravel up to 1 1/2 inches --no recovery, lost drilling fluid at 100.5 ft							
						200 psi	LEAN CLAY (CL), gray, moist, medium plasticity, trace fine grained sand --hard, gray to orange brown, trace rounded gravel up to 1/2 inch at 107 ft (pp=3.7/3.8/4.5 tsf, tv=0.8/0.74 tsf)	97	24				4.0 P 1.5 T	
						(90/6")	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, brown, moist, well-graded sand, subangular to rounded gravel up to 1 1/4 inches, refusal after 6 inches (LEL=0.0, OVM=0.0, OXY=20.9)		9	8				Hydrometer Test
						(55/6")	WELL-GRADED SAND WITH GRAVEL (SW), very dense, brown, moist, subangular to rounded gravel up to 3/4 inch, refusal after 6 inches							
						(50/3")	LEAN CLAY WITH SAND (CL), orange brown, medium plasticity, fine grained sand WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, grayish brown, moist, angular to rounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=20.5)		11	11				
						(60)	LEAN CLAY (CL), very stiff to hard, brown, moist, medium plasticity, trace fine grained sand (pp=3.6/3.8/4.0 tsf, tv=0.75/0.8 tsf)							3.8 P 1.6 T
						(87)	SILTY SAND (SM), dense to very dense, brown to gray, moist, fine grained sand, trace rounded gravel up to 1/4 inch --Ended drilling on 2/2/05 at 126.5 ft --Began drilling on 2/3/05 at 126.5 ft	97	21					
						(88)	FAT CLAY (CH), hard, gray, moist, high plasticity, trace fine grained sand (LEL=0.0, OVM=0.0, OXY=20.9) --(pp=4.0/4.0/4.25 tsf, tv=>1 tsf)							4.1 P >2.0 T
						(50/4")	CLAYEY GRAVEL WITH SAND (GC), very dense, mottled orange brown and olive brown, moist, fine grained sand, rounded gravel up to 1 1/2 inches							
						(50/6")	--cave in of 10 to 15 ft of soil LEAN CLAY WITH SAND (CL), very stiff, orange brown to brown, moist, medium plasticity, trace fine grained sand (pp=2.75/3.5/3.5 tsf, tv=>1), cave in of 10 to 15 ft of soil	113	19					3.3 P >2.0 T

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 19.5 ft., 2/2/05, 22.0 ft., 2/3/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 1, 2005
COMPLETION DATE: February 3, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.
2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-74
SVRT DOWNTOWN
San Jose, California

FIGURE A1-71c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA parking Lot, between Montgomery St. and Cahill St. N 1,946,092 E 6,154,195 SURFACE EL: 88.3 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
		42	(70/6")		MATERIAL DESCRIPTION SILTY GRAVEL WITH SAND (GM), very dense, brown, moist, subangular to rounded gravel up to 3/4 inch, refusal after 6 inches		9	16				
-65												
155												
-70												
160												
-75												
165												
-80												
170												
-85												
175												
-90												
180												
-95												
185												
-100												
190												
-105												
195												
-110												

BORING DEPTH: 150.5 ft
DEPTH TO WATER: 19.5 ft., 2/2/05, 22.0 ft., 2/3/05

START DATE: February 1, 2005
COMPLETION DATE: February 3, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-74
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-71d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA Parking Lot, between Montgomery St. and Cahill St. N 1,946,086 E 6,154,069	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
							SURFACE EL: 89.8 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
							4 inches ASPHALT CONCRETE over 8 inches AGGREGATE BASE, trace bricks and concrete rubble							
							LEAN CLAY (CL), dark grayish brown with bright red spotting, moist							
85	5													
80	10		1	17"		100 psi	--very stiff, light gray with brown mottling (pp=2.0/1.8/1.75 tsf, tv=0.7/0.8 tsf)						1.0 P 1.5 T	
75	15													
70	20		2	30"		100 psi	LEAN CLAY WITH SAND (CL), medium, reddish brown, moist, fine grained sand (pp=1.0/0.9/0.9 tsf, tv=0.56/0.65 tsf)	105	23				0.9 P 1.2 T	
65	25													
60	30		3	29"		100 psi	LEAN CLAY (CL), medium, olive gray with mottled brown, moist (pp=0.7/0.7/0.75 tsf, tv=0.5/0.6 tsf) (LEL=0.0, OVM=0.0, OXY=20.2)						0.7 P 1.1 T	
55	35													
50	40		4	30"		100 psi	--very stiff, brown (pp=2.1/2.2/2.6 tsf, tv=0.62/0.58 tsf)	103	21				2.3 P 1.2 T	
45	45													
			5	30"		50 psi								

Continued

BORING DEPTH: 200.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 24, 2005
COMPLETION DATE: January 26, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: P. Chan/F. Wang
CHECKED BY: Y. D. Wang

**LOG OF BORING NO. BH-75
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-72a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA Parking Lot, between Montgomery St. and Cahill St. N 1,946,086 E 6,154,069 SURFACE EL: 89.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
	35		6	30"	100 psi	--greenish gray, low plasticity, trace fine grained sand (pp=2/2/2 tsf, tv=0.8/0.9/0.9 tsf) (LEL=0.0, OVM=0.0, OXY=20.2)		23	91			20 P 1.7 T	
	30				100 psi	SILTY SAND (SM), very dense, brown, moist, fine grained sand							
	25				100 psi	LEAN CLAY (CL), brown and gray, low plasticity							
	20		7	24"	50 psi								
	15				100 psi	CLAYEY SAND WITH GRAVEL (SC), mottled brown, wet, fine grained sand (LEL=0.0, OVM=0.0, OXY=20.4) SILT WITH SAND (ML), very stiff, gray, moist, low plasticity, fine grained sand		18	15				
	10		8	30"	50 psi								
	5				100 psi	--(pp=2.5/2.25/2.5 tsf, tv=0.75/0.85/0.95 tsf)						24 P 1.7 T	
	0		9	10"	(50/6")	SANDY LEAN CLAY (CL), hard, gray and brown mottling, moist, fine grained sand, trace subangular gravel up to 1 inch	104	23	62				Hydrometer Test
	-5		10	6"	(92/11")	WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC), very dense, mottled brown, wet, medium grained sand, subangular to subrounded gravel up to 1 inch	123	9	7				

BORING DEPTH: 200.5 ft
DEPTH TO WATER: Not Measured

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: P. Chan/F. Wang
CHECKED BY: Y. D. Wang

START DATE: January 24, 2005
COMPLETION DATE: January 26, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

**LOG OF BORING NO. BH-75
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-72b

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA Parking Lot, between Montgomery St. and Cahill St. N 1,946,086 E 6,154,069 SURFACE EL: 89.8 ft (1988 NAVD datum) MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
-15												
-20		11	24"	50 psi	SANDY LEAN CLAY (CL), hard, brown, moist, low plasticity							
-20				100 psi	--(pp=>4.5 tsf) --some sand and gravel from 110.5 ft to 115 ft						>4.5 P	
-25					--1 ft thick sand and gravel layer							
-30		12	30"	50 psi	LEAN CLAY (CL), very stiff to hard, gray and brown, moist, low plasticity, trace fine grained sand (pp=4.0/4.0/3.75 tsf)	107	20				3.9 P	
-30				100 psi								
-35					POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), very dense, mottled brown, wet, fine grained sand, subrounded gravel up to 1/4 inch							
-40		13	4"	(100/8")	--refusal after 13.5 inches --Ended drilling on 1/24/05 at 130 ft --Began drilling on 1/25/05 at 130 ft		12	8				
-45					SANDY LEAN CLAY (CL), hard, grayish brown with reddish brown mottling, moist, fine grained sand							
-50		14	29.5"	50 psi	--(pp=>4.5 tsf)	104	20	78			>4.5 P	Hydrometer Test
-55					--1 ft thick gravel layer							
		15	29.5"	50 psi	--very stiff, reddish brown, moist, low plasticity							

Continued

BORING DEPTH: 200.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 24, 2005
COMPLETION DATE: January 26, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: P. Chan/F. Wang
CHECKED BY: Y. D. Wang

LOG OF BORING NO. BH-75
SVRT DOWNTOWN
San Jose, California

FIGURE A1-72c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA Parking Lot, between Montgomery St. and Cahill St. N 1,946,086 E 6,154,069 SURFACE EL: 89.8 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
				100 psi	MATERIAL DESCRIPTION (pp=3.75/4.0/3.75 tsf)						3.8 P	
-65 155					--trace sand and gravel from 154 ft to 158 ft							
-70 160		16 18"		50 - 100 psi	--hard, medium plasticity (pp=>4.5 tsf)	106	21				>4.5 P	
-75 165												
-80 170		17 16"		50 psi	CLAYEY GRAVEL WITH SAND (GC), medium dense, light brown, moist							
-85 175												
-90 180		18 5"		(100/8")	POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), very dense, mottled brown, fine to medium grained sand, subangular gravel up to 1/2 inch, refusal after 12 inches LEAN CLAY (CL), hard, mottled brown, moist, low plasticity		13	8				
-95 185												
-100 190		19 28"		50 psi 100 psi	--(pp=>4.5 tsf)						>4.5 P	
-105 195					SILTY SAND (SM), dense, brown, moist, fine grained sand							
		20 22"		200 psi								

Continued

BORING DEPTH: 200.5 ft
DEPTH TO WATER: Not Measured

START DATE: January 24, 2005
COMPLETION DATE: January 26, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, R. Kostenko
LOGGED BY: P. Chan/F. Wang
CHECKED BY: Y. D. Wang

LOG OF BORING NO. BH-75
SVRT DOWNTOWN
San Jose, California

FIGURE A1-72d

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: VTA Parking Lot, between Montgomery St. and Cahill St. N 1,946,086 E 6,154,069	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
					SURFACE EL: 89.8 ft (1988 NAVD datum)							
				400 psi			15	28				
-115												
-120												
-125												
-130												
-135												
-140												
-145												
-150												
-155												

BORING DEPTH: 200.5 ft
 DEPTH TO WATER: Not Measured

START DATE: January 24, 2005
 COMPLETION DATE: January 26, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, R. Kostenko
 LOGGED BY: P. Chan/F. Wang
 CHECKED BY: Y. D. Wang

LOG OF BORING NO. BH-75
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-72e

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Peninsula Corridor Joint Power Board (PCJPB) Parking Lot, between Caltrain Station and Cahill St. N 1,946,088 E p. 153 918 SURFACE FL: 90.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
90	0	3 inches ASPHALT CONCRETE over 8 inches AGGREGATE BASE over 5 inches ASPHALT CONCRETE											
85	5	LEAN CLAY WITH SAND (CL) (FILL), yellow to brown, medium plasticity											
		LEAN CLAY WITH SAND (CL), stiff, dark brown to gray, moist, medium plasticity			140 psi								
80	10					--lost approximately 300 gallons of drilling fluid from 10 ft to 20 ft							PM test @ 13' and 15'
75	15												
70	20				100 psi	--very stiff (pp=2.75/2.5/2.25 tsf, tv=0.55/0.6 tsf) (LEL=0.0, OVM=0.0, OXY=19.8)	100	26			2.5 P 1.2 T		
65	25												PM test @ 25'
60	30				140 psi	--medium, gray to brown							
55	35												
50	40				(53)	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), medium dense, brown to yellow, moist, fine to coarse grained sand, fine subrounded gravel	122	8	12				PM test @ 43.5' and 45'
45	45					LEAN CLAY WITH SAND (CL), gray, trace gravel							
						CLAYEY SAND (SC), gray, pockets of lean clay							

Continued

BORING DEPTH: 152.5 ft
 DEPTH TO WATER: 18.5 ft, 2/1/05

START DATE: January 31, 2005
 COMPLETION DATE: February 2, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Automatic Trip
 RIG TYPE: Fraste Multidrill XL
 DRILLED BY: Pitcher Drilling, R. Medina
 LOGGED BY: L. Bhangoo
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-76
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-73a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Peninsula Corridor Joint Power Board (PCJPB) Parking Lot, between Caltrain Station and Cahill St. N 1,946,088 E p 153 918 SURFACE EL: 90.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
40			5		840 psi	no recovery with Shelby Tube sample at 50 ft							
35	55		6	30"	280 psi	LEAN CLAY WITH SAND (CL), very stiff, gray, moist, medium plasticity (pp=2.5/2.75/2.75 tsf, tv=0.6/0.55 tsf)(LEL=0.0, OVM=0.0, OXY=20.1)	103	23				2.7 P 1.2 T	
30	60		7	30"	280 psi	SANDY LEAN CLAY (CL), very stiff, gray, moist, low plasticity (pp=2.75/3.0/3.0 tsf, tv=0.5/0.55 tsf) --Ended drilling on 1/31/05 at 62.5 ft --Began drilling on 2/1/05 at 62.5 ft						2.9 P 1.1 T	
25	65					SILTY SAND WITH GRAVEL (SM)							
20	70		8	10"	(72)	POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), dense, brown to gray, moist, subrounded gravel up to 1 inch	126	10	13				
15	75					SANDY LEAN CLAY (CL), brown to gray, low plasticity							PM test @ 73.5' and 75'
10	80		9		100 psi	--gray, low to medium plasticity, no recovery --no recovery at 82.5 ft							
5	85		10	30"	240 psi	LEAN CLAY WITH SAND (CL), very stiff, gray, moist							
0	90		11	30"	560 psi	--(pp=2.75/2.75/2.5 tsf, tv=0.5/0.55 tsf) (LEL=0.0, OVM=0.0, OXY=20.1) LEAN CLAY WITH SAND (CL), very stiff, gray, moist, medium plasticity (pp=2.5/2.75/2.75 tsf)	107	21	82	28	8	2.5 P 1.0 T	Hydrometer Test
						LEAN CLAY WITH SAND (CL), very stiff, gray, moist, medium plasticity (pp=2.5/2.75/2.75 tsf)							
						SILTY SAND WITH GRAVEL (SM)							
						LEAN CLAY WITH SAND (CL), very stiff, yellow							PM test @ 93.5' and 95'

Continued

BORING DEPTH: 152.5 ft
DEPTH TO WATER: 18.5 ft, 2/1/05

START DATE: January 31, 2005
COMPLETION DATE: February 2, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

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SVRT DOWNTOWN
San Jose, California**

FIGURE A1-73b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Peninsula Corridor Joint Power Board (PCJPB) Parking Lot, between Caltrain Station and Cahill St. N 1,946,088 E p. 153 918 SURFACE EL: 90.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
-10			12 14"		(39)	MATERIAL DESCRIPTION to brown, moist, medium plasticity							
-15	105					POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, brown, moist, subrounded gravel up to 1/2 inch, trace clay pockets							
-20	110		13 12"		(56/6")		121	8	7				Hydrometer Test
-25	115		14 30"		1100 psi	SILTY SAND WITH GRAVEL (SM), gray, subrounded gravel up to 1/2 inch to 3/4 inch SANDY LEAN CLAY (CL), hard, gray, moist, trace subrounded gravel up to 1/2 inch to 3/4 inch --Ended drilling on 2/1/05 at 117.5 ft --Began drilling on 2/2/05 at 117.5 ft		17	62				
-30	120		15 14"		(40)	LEAN CLAY WITH SAND (CL), very stiff, gray, moist, coarse grained sand (pp=2.5/2.5/2.0 tsf, tv=0.8/0.85 tsf)						2.3 P 1.7 T	
-35	125		16 30"		140 psi	--medium to high plasticity (pp=2.75/3.0/3.0 tsf, tv=0.65/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=20.2)						2.9 P 1.5 T	
-40	130		17 0" 18 12"		1240 psi (59/6")	--no recovery, refusal after 12 inches SILTY SAND (SM), very dense, gray, moist, fine grained sand		20	37				
-45	135		19 12"		1240 psi	SANDY LEAN CLAY WITH GRAVEL (CL), hard, gray, moist, low plasticity (pp=>4.5/>4.5 tsf) (LEL=0.0, OVM=0.0, OXY=19.8)						>4.5 P	
-50	140		20 12"		1240 psi	SANDY LEAN CLAY (CL), very stiff, mottled brown and gray, moist, fine grained sand, refusal after 12 inches (pp=2.5/2.75/2.5 tsf)		23	75			2.6 P	
-55	145		21 16"		(54)	LEAN CLAY WITH SAND (CL), very stiff, brown to gray, moist, medium plasticity (pp=3.5/3.5/3.75 tsf, tv=>1.0 tsf)						3.6 P >2.0 T	

Continued

BORING DEPTH: 152.5 ft
DEPTH TO WATER: 18.5 ft., 2/1/05

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: January 31, 2005
COMPLETION DATE: February 2, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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FIGURE A1-73c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Peninsula Corridor Joint Power Board (PCJPB) Parking Lot, between Caltrain Station and Cahill St. N 1,946,088 E p 153 918 SURFACE EL: 90.5 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
MATERIAL DESCRIPTION												
-60		22		1120 psi	--hard, brown to yellow (pp=4.5/4.5/4.25 tsf, tv=>1.0 tsf)						4.4 P >2.0 T	
-65												
-70												
-75												
-80												
-85												
-90												
-95												
-100												
-105												

BORING DEPTH: 152.5 ft
DEPTH TO WATER: 18.5 ft, 2/1/05

START DATE: January 31, 2005
COMPLETION DATE: February 2, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Automatic Trip
RIG TYPE: Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

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San Jose, California**

FIGURE A1-73d

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 1st St. and 2nd St. N 1,947,997 E 6,157,605	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
							SURFACE EL: 86.1 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
85	0	ASPHALT	1	3"	Ref/5.5"		4 inches ASPHALT CONCRETE over 5 inches AGGREGATE BASE and 6 inches PORTLAND CEMENT CONCRETE		7					
80	5	GRAVEL	2	30"		200 psi	CLAYEY GRAVEL (GC) (FILL), railroad ballast and concrete fragments							
		SAND				300 psi	SILTY SAND (SM), brown, moist, trace gravel	101	18	34				
75	10	CLAY	3	12"		4	LEAN CLAY (CL), soft, yellowish brown, moist, low plasticity		41		47	23		
70	15	SILT	4	30"		200 psi	SANDY SILT (ML), stiff, yellowish brown, moist						>1.6 V	vs>1556 psf
						220 psi	--(pp=1.5/1.5/1.6 tsf)	93	26		23	NP	1.5 P 0.2 U	
65	20	CLAY	5	28"		75 psi	LEAN CLAY (CL), very stiff, grayish brown, moist, low plasticity (pp=3.8/4.2/3.8 tsf, tv=0.3/0.3/0.2 tsf)	92	31				1.3 V	vs=1311 psf
						100 psi							3.9 P 0.6 T	
60	25	CLAY	6	18"		325 psi	SANDY LEAN CLAY (CL), stiff to very stiff, brown, moist, low plasticity						1.2 V	vs=1151 psf
							--medium to very stiff (pp=3/2.2/2 tsf)	106	21		28	10	2.4 P 0.5 U	
55	30	SAND	7	24"		175 psi	--fine to medium grained sand							
						300 psi	--Ended drilling on 10/23/04 at 33.7 ft	91	31		41	19		
							--Began drilling on 10/24/04 at 33.7 ft							
50	35	SAND	8	6"		400 psi	SILTY SAND (SM), very dense, brown, moist, fine to medium grained sand		23					
		CLAY	9	13"		9	SILTY CLAY (CL-ML), stiff, brown, moist		27					
45	40	CLAY	10	18"		100 psi	SANDY LEAN CLAY WITH GRAVEL (CL), stiff, yellowish brown, moist, gravel up to 2 inches	111	18		28	13	1.1 U	vs=1268 psf
						300 psi								
40	45	SAND					WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown, moist, gravel up to 1 inch							

Continued

BORING DEPTH: 137.5 ft
 DEPTH TO WATER: 15.0 ft., 10/24/2004

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. Lovdahl
 LOGGED BY: F. Li
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: October 23, 2004
 COMPLETION DATE: October 27, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

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FIGURE A1-74a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 1st St. and 2nd St. N 1,947,997 E 6,157,605	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
							SURFACE EL: 86.1 ft (1988 NAVD datum)							
							MATERIAL DESCRIPTION							
35			9	11	⊗	34	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown, moist, gravel up to 1 inch		11	11				
55														
30														
60			12	20	⊗	100 psi	SANDY LEAN CLAY (CL), soft, grayish brown, moist (pp=0.3/0.3/0.3 tsf)		25				0.3 P	
25						300 psi	GRAVEL layer							
65														
20														
70			13	19	⊗	100 psi	LEAN CLAY (CL), very stiff, grayish brown, moist							
15						400 psi	--(pp=2.5/2.5/2 tsf)	110	20		30	10	2.3 P	
75							GRAVEL layer							
10														
80			14	13	⊗	50	SILTY GRAVEL WITH SAND (GM), dense to very dense, brown, moist, gravel up to 2 inches		8					
5														
85														
0							POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, brown, moist, gravel up to 1 1/2 inches							
90			15	15	⊗	68			12	7				
-5														
95														
-10							LEAN CLAY (CL), very stiff, grayish brown, moist, low plasticity							

Continued

BORING DEPTH: 137.5 ft
DEPTH TO WATER: 15.0 ft., 10/24/2004

START DATE: October 23, 2004
COMPLETION DATE: October 27, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. Lovdahl
LOGGED BY: F. Li
CHECKED BY: Y. D. Wang, Ph.D., P.E.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-74b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: EB Santa Clara St., between 1st St. and 2nd St. N 1,947,997 E 6,157,605	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						SURFACE EL: 86.1 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
-15			18 24"		200 psi	--(pp=2.7/2.5/2.5 tsf)	97	27		30	9	2.6 P	
					300 psi								
105													
-20													
110			17 5"		200 psi 400 psi	--very stiff to hard, low to medium plasticity (pp=4.5/3.5/3 tsf)		21				3.7 P	
						WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), very dense, brown, moist, gravel up to 1 inch							
-25													
115			18 12"		77								
-30													
120			19 13"		29	SANDY SILTY CLAY (CL-ML), very stiff, brown, moist, low plasticity (lean clay at the bottom 4 inches of the sample)		21	52				
-35													
125			20 10"		400 psi	LEAN CLAY WITH SAND (CL), hard, brown, moist, low plasticity --Ended drilling on 10/24/04 at 125 ft --Began drilling on 10/27/04 at 125 ft	101	24	85				
-40													
130			21 30"		200 psi	SILT (ML), very stiff, brown, moist, low plasticity --(pp=2.5/3/3.5 tsf)	112	16		29	6	3.0 P 1.9 U	
-45													
135			22 30"		220 psi	LEAN CLAY (CL), hard, brown, moist, low plasticity --(pp=4/4/4.5 tsf)						4.2 P	
-50													
140													
-55													
145													
-60													

BORING DEPTH: 137.5 ft
 DEPTH TO WATER: 15.0 ft, 10/24/2004

START DATE: October 23, 2004
 COMPLETION DATE: October 27, 2004

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. Lovdahl
 LOGGED BY: F. Li
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-77
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-74c

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Newhall Yard N 1,952,005 E 6,148,036	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
						SURFACE EL: 68.0 ft (1988 NAVD datum)							
						MATERIAL DESCRIPTION							
65	5		1 15"	(20)		3 inches ASPHALT CONCRETE							
			2 18"		175 psi	CLAYEY SAND WITH GRAVEL (SC) (FILL), loose, mottled brown, moist, trace interbedded fat clay, low to high plasticity, fine to coarse grained sand, gravel up to 1/2 inch							
60	10		3 27"		150 psi	FAT CLAY (CH), stiff, dark grayish brown, moist, medium plasticity, trace sand (pp=1.4/1.6/1.75 tsf, tv=0.56/0.61 tsf)	74	43				1.6 P 1.2 T	
55	15		4 30"		100 psi	--trace fine grained sand, increasing sand (pp=1.6/1.7/2 tsf, tv=0.3/0.3 tsf)						1.8 P 0.6 T	
50	20		5 30"		200 psi	--brown, medium to high plasticity (pp=1.3/1.6/1.9 tsf, tv=0.48/0.55 tsf)	86	35				1.6 P 1.0 T	
45	25		6 10"	(43)	300 psi	--grayish brown, medium plasticity (LEL=0.0, OVM=0.0, OXY=20.9)							
40	30		7 14"	(71)		CLAYEY SAND (SC), medium dense to dense, brown, fine grained sand, trace subangular to subrounded gravel up to 1/2 inch							
35	35		8 9"	(50/6")		WELL-GRADED GRAVEL WITH SAND (GW), medium dense, mottled brown and dark grayish brown, wet, subangular to subrounded gravel up to 2 1/2 inches							
30	40		9 15"	(42)		--subangular to rounded gravel up to 1 inch at 26 ft	126	9	16				
25	45		10 14"	(25)		--gravel up to 3 inches, lost drilling fluid, hole caved in at 30 ft							
20						SILTY GRAVEL WITH SAND (GM), dense, mottled brown and dark grayish brown, wet, subangular to rounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=20.8)							
						--very dense, angular to subrounded gravel up to 2 inches, lost drilling fluid							
						--gravelly to 40 ft	107	20					
						LEAN CLAY (CL), very stiff, orange brown, moist, medium plasticity, trace fine grained sand							
						SILTY SAND (SM), medium dense, bluish gray, moist, low plasticity to non-plastic, fine grained sand (LEL=0.0, OVM=0.0, OXY=20.4)						3.0 P 1.8 T	
						FAT CLAY (CH), very stiff, mottle bluish gray and grayish brown, moist, high plasticity, trace subangular gravel up to 1 inch							

Continued

BORING DEPTH: 80.8 ft
DEPTH TO WATER: Not Measured

START DATE: April 18, 2005
COMPLETION DATE: April 18, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Failing 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

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SVRT DOWNTOWN
San Jose, California

FIGURE A1-75a

LOCATION: Newhall Yard N 1,952,005 E 6,148,036				SURFACE EL: 68.0 ft (1988 NAVD datum)									
ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	MATERIAL DESCRIPTION	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
			11 14"	(39)		LEAN CLAY (CL), stiff to very stiff, mottled grayish brown and orange brown, moist, medium plasticity, trace fine grained sand ($pp=2.75/2.9/3.5$ tsf, $tv=0.82/>1$ tsf)		21	61				
15	55		12 12"	(50/5")		SANDY SILT (ML), very stiff, mottled grayish brown and orange brown, fine grained sand							
10	60		13 13"	(65)		WELL-GRADED GRAVEL WITH SAND (GW), very dense, brown, moist, angular to subrounded gravel up to 1 1/2 inches							
5	65		14 8"	(22)		WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM), dense, brown, moist, subangular to rounded gravel up to 1 1/2 inches, lost drilling fluid	121	12	9				
0	70		15 29"		200 psi	LEAN CLAY (CL), stiff, gray, moist, medium plasticity, trace fine grained sand and gravel slough, disturbed sample							
-5	75		16 9"	(50/6")	250 psi	--very stiff, mottled grayish brown and brown to mottled olive brown and orange brown, trace angular to rounded gravel up to 1/2 inch ($pp=2.5/2.7/2.75$ tsf, $tv=0.95/1$ tsf)	99	25				2.7 P 2.0 T	
-10	80		17 9"	(50/3")		POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), very dense, brown, moist, subangular to rounded gravel up to 1 1/4 inches		10	10				
-15	85					LEAN CLAY (CL), brown, refusal with Shelby Tube sample at 80 ft, switched to MC sampler							
-20	90					SILTY SAND WITH GRAVEL (SM), very dense, orange brown, moist, fine to coarse grained sand, angular to rounded gravel up to 1 inch,							
-25	95												
-30													

BORING DEPTH: 80.8 ft
 DEPTH TO WATER: Not Measured

START DATE: April 18, 2005
 COMPLETION DATE: April 18, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-78
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-75b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Pershing Ave. and Harding Ave. N 1,948,694 E 6,151,562 SURFACE EL: 81.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	80					8 inches ASPHALT CONCRETE							
	75					CLAYEY SAND (SC) (FILL), dense, brown, dry, low plasticity, fine to medium grained sand, subangular to rounded gravel up to 1 1/2 inches							
	70					LEAN CLAY (CL) (FILL), very stiff, mottled dark grayish brown, moist, medium plasticity, trace fine to medium grained sand and subrounded to rounded gravel up to 3/4 inch							
	65					LEAN CLAY (CL), light brown, moist, medium plasticity, trace fine grained sand and some caliche							
	60					--very stiff, mottled gray and orange brown (pp=2.0/2.0/2.1 tsf, tv=0.58/0.65 tsf)						2.0 P 1.2 T	
	55					--color change to brown							
	50					FAT CLAY (CH), stiff to very stiff, mottled dark brown, moist, high plasticity, trace fine grained sand (pp=1.75/2.0/2.2 tsf, tv=0.65/0.62 tsf) (LEL=0.0, OVM=0.1, OXY=19.4)	83	38	65	38		2.0 P 1.3 T	
	45					SILT WITH SAND (ML), very stiff, dark gray, moist, low plasticity, fine grained sand (pp=2.75/3.25/3.25 tsf, tv=0.47/0.49 tsf)							3.1 P 1.0 T
	40					LEAN CLAY (CL), grayish brown, medium plasticity, trace fine grained sand							
	35					SANDY SILT (ML), stiff, mottled light brown and orange brown, moist, low plasticity, fine grained sand, trace subrounded gravel up to 3/4 inch (LEL=0.0, OVM=0.0, OXY=19.4)	107	19	53				1.4 P
	30					WELL-GRADED SAND WITH GRAVEL (SW), medium dense, mottled orange brown, moist, subangular to subrounded gravel up to 1 inch							

BORING DEPTH: 216.0 ft
 DEPTH TO WATER: 11.5 ft, 3/1/05, 15.0 ft, 3/2/05

Continued

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Failing 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

START DATE: February 28, 2005
 COMPLETION DATE: February 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

LOG OF BORING NO. BH-79
SVRT DOWNTOWN
 San Jose, California

FIGURE A1-76a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO	RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Pershing Ave. and Harding Ave. N 1,948,694 E 6,151,562 SURFACE EL: 81.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						(30)	MATERIAL DESCRIPTION							
	30		5	5"			LEAN CLAY (CL), stiff, mottled orange brown and light brown, moist, medium plasticity, trace fine grained sand and caliche nodules (pp=1.75/2.0/2.0 tsf, tv=0.53/0.6 tsf) --color change to gray						1.9 P 1.4 T	
	55		6	29"		100 psi	--stiff to very stiff, mottled gray and light gray (pp=1.75/2.25/2.75 tsf, tv=0.71/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=19.6)	100	25		33	16	2.3 P 1.5 T 1.3 U	
	20				150 psi									
	60		7	29"		100 psi	--very stiff, gray, trace sand (pp=3.25/3.5/3.5 tsf, tv=0.68/0.73 tsf) --sandy --gravelly, subangular to subrounded gravel up to 3/4 inch						3.4 P 1.4 T	
	25				150 psi									
	65		8	30"		150 psi	--mottled light brown and light grayish brown, with sand (pp=2.25/2.5/3.25 tsf, tv=0.8/0.88 tsf) (LEL=0.0, OVM=0.0, OXY=19.6) --subangular to subrounded gravel up to 3/4 inch, gravelly from 84 ft to 90 ft	103	23		35	18	2.7 P 1.7 T	
	20				250 psi									
	70		9	18"		(22)	--trace subrounded gravel up to 1 inch --mottled olive brown and orange brown (pp=2.9/3.4/3.6 tsf, tv=0.74/0.82 tsf)						3.3 P 1.6 T	
	75						WELL-GRADED SAND WITH GRAVEL (SW), very dense, mottled dark brown and brown, subangular to subrounded gravel up to 1 inch (LEL=0.0, OVM=0.0, OXY=19.7) --gravelly from 93 ft to 100 ft, gravel up to 3/4 inch							

Continued

BORING DEPTH: 216.0 ft
DEPTH TO WATER: 11.5 ft., 3/1/05, 15.0 ft., 3/2/05

START DATE: February 28, 2005
COMPLETION DATE: February 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-79
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-76b

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Pershing Ave. and Harding Ave. N 1,948,694 E 6,151,562 SURFACE EL: 81.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
	-20		10 9"	(50/6")		--lost drilling fluid from 100.5 ft to 102 ft LEAN CLAY (CL), gray, medium plasticity, trace fine grained sand							
	-25												
	-30		11 25"		100 psi 300 psi	--dark gray SILT WITH SAND (ML), hard, olive brown, moist, low plasticity, fine grained sand (pp=>4.5 tsf)	106	21	80			>4.5 P	
	-35					--sandy/gravelly from 114 ft to 120 ft, trace subrounded gravel up to 1 inch							
	-40		12 16"	(94)		SILT TO LEAN CLAY (ML/CL), hard, brown to gray, moist, low to medium plasticity, trace fine to coarse grained sand and rounded gravel up to 1/4 inch (LEL=0.0, OVM=0.0, OXY=19.8)							
	-45					--trace fine grained sand, silt and lean clay interbedded lenses from 125 ft to 130 ft							
	-50		13 27"		200 psi 300 psi	--hard, mottled gray and brown, trace fat clay with fine grained sand seams from 130 ft to 131 ft (pp=>4.5 tsf, tv=0.66/0.75 tsf)	100	25		32	9	>4.5 P 1.4 T	
	-55												
	-60		14 4"		250 psi 300 psi	--very stiff, mottled grayish brown and brown (pp=3.25/3.75/3.9 tsf, tv=0.7/0.8 tsf) (LEL=0.0, OVM=0.0, OXY=19.7)						3.6 P 1.5 T	
	-65					--color alternating from brown to gray to 150 ft							
						SILTY SAND TO SANDY SILT (SM/ML)							

Continued

BORING DEPTH: 216.0 ft
DEPTH TO WATER: 11.5 ft., 3/1/05, 15.0 ft., 3/2/05

START DATE: February 28, 2005
COMPLETION DATE: February 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-79
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-76c

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Stockton Ave., between Pershing Ave. and Harding Ave. N 1,948,694 E 6,151,562 SURFACE EL: 81.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
-70		15	(50/3")		very dense/hard, mottled brown and orange brown, moist, low plasticity, fine grained sand		22	34				
-75					SILTY GRAVEL WITH SAND (GM), very dense, mottled orange brown, yellowish brown and gray, subangular to subrounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=19.6), refusal after 6 inches							
-80		17	(65/6")		--subrounded to rounded gravel up to 1/2 inch		9	15				
-85					SILT WITH SAND (ML), hard, mottled light grayish brown and orange brown, moist, low plasticity, fine grained sand							
-90		18	(50/6")		--sandy from 172 ft to 177 ft							
-95					POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, dark brown, moist, subangular to surrounded gravel up to 3/4 inch (LEL=0.0, OVM=0.0, OXY=19.9), refusal after 6 inches							
-100		19	(65/6")		--very dense, subrounded gravel up to 1 inch		12	8				
-105					SILT WITH SAND (ML), hard, mottled orange brown and light grayish brown, moist, low plasticity, fine grained sand							
-110		20	(92/9")		LEAN CLAY (CL), hard, brown, moist, medium plasticity, trace fine grained sand							

Continued

BORING DEPTH: 216.0 ft
DEPTH TO WATER: 11.5 ft, 3/1/05, 15.0 ft, 3/2/05

START DATE: February 28, 2005
COMPLETION DATE: February 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead
RIG TYPE: Falling 1500
DRILLED BY: Pitcher Drilling, M. MacDonald
LOGGED BY: D. Alexander
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-79
SVRT DOWNTOWN
San Jose, California

FIGURE A1-76d

ELEVATION, ft DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	LOCATION: Median of Stockton Ave., between Pershing Ave. and Harding Ave. N 1,948,694 E 6,151,562 SURFACE EL: 81.6 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S_u , ksf	OTHER TESTS
				MATERIAL DESCRIPTION							
-120		91	(Ret/6")	CLAYEY SAND WITH GRAVEL (SC), very dense, brown, moist, angular to subrounded gravel up to 1/2 inch (LEL=0.0, OVM=0.0, OXY=19.9) --subrounded to rounded gravel up to 3/4 inch, gravelly from 204 ft to 209.5 ft		11	23				
-125											
-130				LEAN CLAY WITH SAND (CL), orange brown, moist, medium plasticity							
-135				POORLY GRADED SAND WITH CLAY (SP-SC) layer							
-140				CLAYEY GRAVEL TO GRAVELLY LEAN CLAY (GC/CL), very dense/hard, rounded gravel up to 1/2 inch							
-145											
-150											
-155											
-160											
-165											

BORING DEPTH: 216.0 ft
 DEPTH TO WATER: 11.5 ft, 3/1/05, 15.0 ft, 3/2/05

START DATE: February 28, 2005
 COMPLETION DATE: February 28, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
 HAMMER TYPE: Rope and Cathead
 RIG TYPE: Falling 1500
 DRILLED BY: Pitcher Drilling, M. MacDonald
 LOGGED BY: D. Alexander
 CHECKED BY: Y. D. Wang, Ph.D., P.E.

**LOG OF BORING NO. BH-79
 SVRT DOWNTOWN
 San Jose, California**

FIGURE A1-76e

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Taylor St., west of Stockton Ave. N 1,949,541 E 6,150,724 SURFACE EL: 80.2 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _v , ksf	OTHER TESTS
MATERIAL DESCRIPTION													
						6 inches ASPHALT CONCRETE over 6 inches AGGREGATE BASE							
						LEAN CLAY WITH GRAVEL (CL), brown, subrounded gravel up to 3/4 inch							
75	5		1	10"	(52)	SILTY SAND WITH GRAVEL (SM), medium dense, brown, moist, subrounded gravel up to 3/4 inch							
70	10		2	10"	(93/11")	SILTY GRAVEL WITH SAND (GM), very dense, brown, moist, subrounded gravel up to 3 inches							
						--refusal after 17 inches							
65	15		3	0"	(37)	--medium dense, no recovery in MC sampler							
						LEAN CLAY WITH SAND (CL), stiff, brown, moist, low plasticity							
60	20		4	12"	(20)	--(pp=1.75/1.5/1.5 tsf, tv=0.3/0.3 tsf) (LEL=0.0, OVM=0.0, OXY=20.1)						1.6 P 0.6 T	
55	25		5	30"		0 psi							
						200 psi							
						--dark brown, medium plasticity (pp=1.75/1.5/1.5 tsf, tv=0.75/0.85 tsf)							
50	30		6	30"		0 psi							
						125 psi							
						--brown to gray (pp=1.75/2.0/2.0 tsf, tv=0.6/0.6 tsf)							
45	35		7	30"		0 psi							
						120 psi							
						--light gray (pp=1.75/1.75/1.25 tsf, tv=0.6/0.65 tsf)							
40	40		8	12"		0 psi							
						350 psi							
						SANDY SILT (ML), stiff, brown, moist, fine to coarse grained sand, refusal after 15 inches	105	20	66			1.8 P	
35	45		9	12"	(67)	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), dense, brown to gray, wet, subrounded gravel up to 2 inches (LEL=0.0, OVM=0.0, OXY=18.9)		9	6				
						--lost approximately 600 gallons drilling fluid							
			10		(22)	SANDY LEAN CLAY (CL), very stiff,							

Continued

BORING DEPTH: 100.0 ft
DEPTH TO WATER: Not Measured

START DATE: February 22, 2005
COMPLETION DATE: February 23, 2005

NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead/Automatic
RIG TYPE: Failing 1500/ Fraste Multidril XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhangoo
CHECKED BY: Y. D. Wang

**LOG OF BORING NO. BH-80
SVRT DOWNTOWN
San Jose, California**

FIGURE A1-77a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO. RECOVERY (in)	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE, psi	LOCATION: Median of Taylor St., west of Stockton Ave. N 1,949,541 E 6,150,724 SURFACE EL: 80.2 ft (1988 NAVD datum)	DRY UNIT WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX	UNDRAINED SHEAR STRENGTH, S _u , ksf	OTHER TESTS
						MATERIAL DESCRIPTION							
			14"			yellowish brown, moist, low plasticity (pp=2.5/2.5/3.0 tsf, tv=0.5/0.55 tsf)	102	24		29	8	2.7 P 1.1 T	
25	55		11"		0 - 350 psi	--stiff, refusal after 16 inches							
			12"			POORLY GRADED SAND WITH SILT (SP-SM), brown, trace subrounded gravel up to 1 inch	96	26	64			1.3 P	
20	60		12"		(50/5")	SILTY SAND WITH GRAVEL (SM), very dense, yellow to brown, moist, subrounded gravel up to 1 inch, refusal after 11 inches							
15	65		13"		(87/11")	--no recovery in MC sampler							
10	70		14"		50 - 250 psi	LEAN CLAY WITH SAND (CL), very stiff, light gray, moist, medium plasticity (pp=2.5/2.75/2.75 tsf, tv=0.5/0.6 tsf)	104	23		29	9	2.7 P 1.1 T	
5	75		15"		0 psi	SILTY SAND (SM), brown, moist, fine grained sand, refusal after 16 inches --Ended drilling on 2/22/05 at 70.5 ft with Failing 1500 --Began drilling on 2/23/05 at 70.5 ft with Fraste Multidrill XL		26	41				
0	80		16"		(71)	SILTY SAND WITH GRAVEL (SM), dense, grayish brown, moist, subrounded gravel up to 1 inch							
-5	85		17"		(91/11")	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), very dense, gray, moist, subrounded gravel up to 1 1/2 inches (LEL=0.0, OVM=0.0, OXY=18.5)	132	9	11				
-10	90		18"		(50/4")	--refusal after 10 inches							
-15	95		19"		(33)	--medium dense, no recovery in MC sampler							
			20"		0 - 280 psi	LEAN CLAY WITH SAND (CL), very stiff, gray, moist (pp=2.5/2.5/2.75 tsf, tv=0.85/0.8 tsf)						2.6 P 1.7 T	

BORING DEPTH: 100.0 ft
DEPTH TO WATER: Not Measured

START DATE: February 22, 2005
COMPLETION DATE: February 23, 2005
NOTES: 1. Terms and symbols defined on Plate A-1.

2. Groundwater levels measured at the time of drilling may not be representative of actual groundwater conditions and should not be used for design purposes. For applicable groundwater information, please refer to piezometer and observation well data.

DRILLING METHOD: 5-in. dia. Rotary Wash
HAMMER TYPE: Rope and Cathead/Automatic
RIG TYPE: Failing 1500/ Fraste Multidrill XL
DRILLED BY: Pitcher Drilling, R. Medina
LOGGED BY: L. Bhargoo
CHECKED BY: Y. D. Wang, Ph.D., P.E.

LOG OF BORING NO. BH-80
SVRT DOWNTOWN
San Jose, California

FIGURE A1-77b

SPT ENERGY CALIBRATION

ABE Engineering

2230 Lariat Lane, Walnut Creek, CA 94596
PHONE: 925-944-6363 FAX: 925-476-1588
EMAIL: SA@AbeEngineering.com

December 9, 2004

HMM/Bechtel SVRT, a Joint Venture
Silicon Valley Rapid Transit Project
3103 N. First Street, Fl. 2
San Jose, CA 95134-1927

Attn: Thomas E. Hunt, P.E.

Re: SPT Energy Measurements
VTA Project
San Jose, California
November 6-9, 2004

Job No. 04072

Dear Tom,

This report presents the results of SPT (Standard Penetration Test) energy measurements obtained for the project referenced above on November 6, 7, and 9, 2004. Dynamic measurements were made with a PDA (Pile Driving Analyzer) during SPT sampling for soil boring BH25 at depths ranging from 55 ft to 90 ft and for BH65 at depths of 85 ft and 95 ft. The objective of the dynamic measurements was to determine the energy transfer ratio (ETR) or efficiency of the SPT systems, which is used to normalize the SPT N values to a standard efficiency of 60% (N_{60}).

DYNAMIC TESTING AND FIELD DETAILS

Drill Rig and SPT Hammer Description

The SPT hammer was a 140 lb CME automatic hammer, which has a 30-inch nominal drop height and theoretical potential energy of 350 ft-lbs. The SPT rod was NW-J rod which was supplied in 5-ft lengths. The sampler was a 2-inch OD split spoon. Further details regarding the SPT equipment are beyond the scope of this report and should be obtained from the manufacturers.

Dynamic Test Instrumentation

Dynamic measurements of strain and acceleration were taken on a 2-ft long section of NW rod, which was attached to the top of the sample rod string just below the hammer. The rod section was instrumented with two strain bridges and two piezoresistive accelerometers. By averaging the measurements taken from opposite sides of the rod, the effects of non-uniform hammer impacts to the recorded signals were minimized.

Strain and acceleration signals were conditioned and converted to force and velocity records by a PAK Model, Pile Driving Analyzer[®] (PDA). This dynamic testing equipment is the same equipment that is routinely used for conventional pile driving analysis. The dynamic force and velocity records were the basis of the computed energy results presented in this report. In the field the force and velocity records from the PDA were viewed on a graphic LCD screen to evaluate data quality. A representative sample of the force and velocity records was also digitally stored on disc for back up.

DISCUSSION OF DYNAMIC TEST RESULTS

Calculation of Energy Transfer

The energy transferred to the instrumented rod section was computed from the dynamic force and velocity records by the EFV method, which uses both the force and velocity records to calculate the maximum transferred energy as:

$$EFV = \int F(t) V(t) dt$$

The integration is performed over the time period from which the energy transfer begins (non-zero) and terminates at the time when the energy transfer reaches a maximum value. This method is theoretically correct for all rod lengths regardless of the $2L/c$ stress wave travel time (L is the rod length and c is the stress wave speed in the rod) and the number of non-uniform rod corrections. This calculation is the method we use to compute the energy transfer ratio, ETR, which is computed as:

$$ETR = EFV / \text{Rated Hammer Energy}$$

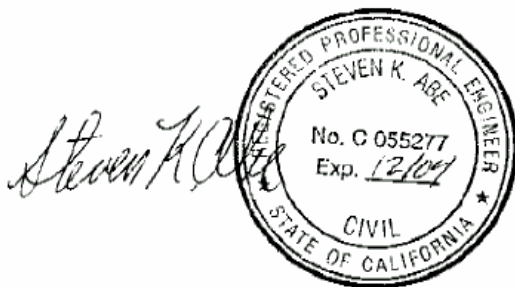
Dynamic Test Results

The PDA calculated results are given in Appendix A and include the energy transfer (EFV), the energy transfer ratio (ETR), the hammer blow rate (BPM), the maximum impact force (FMX), and the maximum rod velocity (VMX). For each sample depth interval, the average, maximum, minimum and standard deviation of each value are given in Appendix A. Other information includes the sample depth interval and the total number of blows for the reported depth interval. The statistical mean ETR for the CME hammer was 75% for a total of 265 sample blows.

I appreciate the opportunity to be of assistance to you on this project. Please contact me if you have any questions regarding this report, or if I may be of further service.

Very truly yours,
ABE Engineering

Steven K. Abe, P.E.



APPENDIX A

Dynamic Measurement Results

 ETR: Energy Transfer Ratio
 EFV: Max Transferred Energy
 BPM: Blows Per Minute

FMX: Max Measured Force
 VMX: Max Measured Velocity
 EF2: Energy by F^2 Method

BL#	depth	TYPE	#Bls	ETR	EFV	BPM	FMX	VMX	EF2	
end	ft			%	ft-lb	bl/min	kips	ft/sec	ft-lb	
4	32.5-	34.0	AVG	4	68	240	24.4	44.3	9.5	215
			STD	4	3	10	0.5	1.8	0.2	14
			MAX	4	71	251	25.0	45.8	9.7	229
			MIN	4	64	226	24.0	41.7	9.3	196
6	35.0-	36.50	AVG	2	67	235	23.6	35.9	10.3	179
			STD	2	1	2	0.5	0.1	0.1	1
			MAX	2	67	236	24.0	36.0	10.3	179
			MIN	2	66	233	23.3	35.8	10.2	178

DRIVEN (2004-Nov-06 : B25.MDF)

File: BH25
Info: PITCHER/NW

Proj: VTA/ BECHTEL

Pg1

ETR: Energy Transfer Ratio
EFV: Max Transferred Energy
BPM: Blows Per Minute

FMX: Max Measured Force
VMX: Max Measured Velocity
EF2: Energy by F^2 Method

BL#	depth	TYPE	#Bls	ETR	EFV	BPM	FMX	VMX	EF2	
end	ft			%	ft-lb	bl/min	kips	ft/sec	ft-lb	
18	55.0-	56.5	AVG	18	75	263	34.2	39.5	10.8	202
			STD	18	1	3	0.3	0.5	0.1	2
			MAX	18	76	267	34.4	40.4	11.1	205
			MIN	18	72	254	33.0	38.6	10.7	197
67	80.0-	81.5	AVG	49	75	264	33.2	41.3	11.2	209
			STD	49	1	3	0.1	0.8	0.1	2
			MAX	49	78	274	33.4	42.1	11.7	213
			MIN	49	72	254	33.0	37.6	11.0	201
144	90.0-	91.50	AVG	77	76	268	35.2	42.0	11.6	218
			STD	77	1	2	0.1	0.4	0.1	2
			MAX	77	78	273	35.3	42.8	11.9	224
			MIN	77	75	262	35.0	40.6	11.3	211

DRIVEN (2004-Nov-07 : B25-2.MDF)

Pile: BH65
Info: PITCHER/NW

Proj: VTA/ BECHTEL

Pg1

ETR: Energy Transfer Ratio
EFV: Max Transferred Energy
BPM: Blows Per Minute

FMX: Max Measured Force
VMX: Max Measured Velocity
EF2: Energy by F^2 Method

BL#	depth	TYPE	#Bls	ETR	EFV	BPM	FMX	VMX	EF2	
end	ft			%	ft-lb	bl/min	kips	ft/sec	ft-lb	
58	85.0-	86.5	AVG	58	75	265	35.2	41.5	11.5	212
			STD	58	1	2	0.0	0.5	0.1	2
			MAX	58	77	269	35.3	42.5	11.6	216
			MIN	58	74	259	35.0	40.0	11.2	205
115	95.0-	96.5	AVG	57	75	262	35.3	42.6	11.3	221
			STD	57	1	3	0.0	0.7	0.2	4
			MAX	57	76	268	35.4	43.8	11.5	228
			MIN	57	73	255	35.1	41.0	10.9	214

DRIVEN (2004-Nov-09 : BH65.Q01)

GAS MONITORING MEASUREMENTS

March 16, 2005
Project 8679.000

Mr. Tom Hunt
SVRT-HMM/Bechtel
3331 North First Street, Building B
San Jose, California 95134

Subject: Gas Monitoring Measurements
Silicon Valley Rapid Transit Project
Santa Clara County, California

Dear Mr. Hunt:

This letter presents the results of air space vapor monitoring measurements in certain monitoring wells and piezometers on December 30, 2004 and February 3, 2005 for the Silicon Valley Rapid Transport Project project. The samples were collected by Geomatrix Consultants, Inc. (Geomatrix) on behalf of SVRT-HMM/Bechtel under subcontract No. 24965-AE-003. The work was requested to provide information to meet the intent of tunnel classification regulations contained in California Code of Regulations, Title 8, Section 8422. Results of the measurements are provided in Table 1; the process for collecting the samples is described in the following paragraphs.

The gas measurements were performed by Geomatrix staff on December 30, 2004 and on February 3, 2005 on behalf of HMM Bechtel, in piezometers NW-01, NW-05, NW-06, MW-1, MW-2, and MW-3. After measuring the depth to water in the piezometers, air samples were collected from the air space above the water surface within each piezometer. The air space was measured for percentage lower explosive limit (% LEL), methane, combustible gases without methane, and hydrogen sulfide using an INNOVA 4-gas meter in December 2004 and a QRAE PLUS 4-gas meter in February 2005. The measurements were made at two depths within each piezometer air space column: (a) 2 inches above the water table; and, (b) 2 feet below the ground surface. Because these piezometers were not constructed with the intent of making gas measurements, a new procedure was developed to facilitate the measurements. Thus, the measurements made are considered qualitative but likely representative. The technique used to make the measurements consisted of the following steps:

- Isolating the piezometer casing from the ambient atmosphere using plastic wrap and silicon
- Securing dedicated tubing approximately two inches above the measurement tip of the water level meter probe.
- Removing the well cap within the intact plastic wrap.
- Penetrating the plastic wrap with the water level meter probe and gas collection tubing while maintaining pressure around the probe and taping to reduce gas leakage.

Mr. Tom Hunt
SVRT-HMM/Bechtel
March 16, 2005
Page 2

- Following collection of a reading at depth above the piezometric surface, the water level meter probe and attached tubing is pulled up to approximately 2 feet below ground surface and the measurement process repeated. Gas measurements are observed throughout the piezometer column as the tubing is being raised to the second measurement location.
- After gas measurements are collected at both depths within the piezometer, water level is measured and recorded.

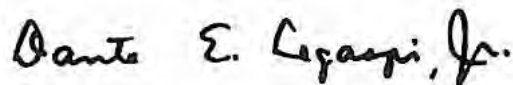
Water levels and results of the gas measurements are provided in Table 1. Because target gases were not detected by the gas monitoring device, with the exception of two unsustained carbon monoxide readings, vapor samples were not collected for laboratory analysis.

Please contact either of the undersigned if you have questions or require additional information.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read "Yemia Hashimoto".

Yemia Hashimoto, C.Hg.
Project Hydrogeologist

A handwritten signature in black ink, appearing to read "Dante E. Legaspi, Jr.". The signature is written in a cursive style.

Dante Legaspi, Ph.D., P.E.
Senior Engineer

A handwritten signature in black ink, appearing to read "Scott D. Warner". The signature is written in a cursive style.

Scott D. Warner, C.Hg., C.EG.
Principal Hydrogeologist

TABLE 1
WATER LEVEL/GAS MONITORING
 Silicon Valley Rapid Transit
 San Jose, California
 Job No. 8679.000

WELL ID	Sampling Date	Depth to Water (ft bgs)	Measurement Depth (ft bgs)	H ₂ S (ppm)	%LEL (ppm)	%LEL w/o methane (ppm)	Methane (ppm)	Comments
NW-01	12/30/2004	N/A	N/A	N/A	N/A	N/A	N/A	Not Accessible - car blocking access
	2/3/2005	12.32	2	0	0	0	0	12 ppm spike of CO
12.12			0	0	0	0		
NW-05	12/30/2004	19.6	2	0	0	0	0	
			19.4	0	0	0	0	
	2/3/2005	19.6	2	0	0	0	0	
			19.4	0	0	0	0	
NW-06	12/30/2004	18.87	2	0	0	0	0	
			18.67	0	0	0	0	
	2/3/2005	17.68	2	0	0	0	0	
			17.48	0	0	0	0	
WELL #18	12/30/2004	--	--	--	--	--	--	Not Accessible
	2/3/2005	--	--	--	--	--	--	Not Accessible
MW-1	12/30/2004	8.97	2	0	0	0	0	
			8.77	0	0	0	0	
	2/3/2005	N/A	N/A	N/A	N/A	N/A	N/A	Not accessible - well damaged
MW-2	12/30/2004	9.99	2	0	0	0	0	
			9.79	0	0	0	0	4 ppm spike of CO
	2/3/2005	8.08	2	0	0	0	0	
			7.88	0	0	0	0	
MW-3	12/30/2004	9.38	2	0	0	0	0	
			9.18	0	0	0	0	
	2/3/2005	N/A	N/A	N/A	N/A	N/A	N/A	Not accessible - well destroyed

APPENDIX 2
FIELD VANE SHEAR TESTS

Silicon Valley Rapid Transit Project –Tunnel Segment
Geotechnical Data Report

Parikh Consultants performed Field Vane Shear Testing. A description of the test equipment, testing procedures and results are presented in Appendix 2.

**TUNNEL SEGMENT OF
SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT
SAN JOSE, SANTA CLARA COUNTY, CALIFORNIA**

APPENDIX 2

FIELD VANE SHEAR TESTS

For

SVRT - HMM/BECHTEL
3331 North First Street, Building B
San Jose, CA 95134



PARIKH CONSULTANTS, INC.
356 S. Milpitas Blvd, Milpitas, CA 95035
(408) 945-1011

June 2005

Job No. 204104.10



PARIKH

Practicing in the Geosciences

Geotechnical ■
Environmental ■
Materials Testing ■
Construction Inspection ■

HMM/BECHTEL
3331 North First Street
San Jose, CA 95134

June 3, 2005
Job No.: 204104.10

Attn.: Mr. Ignacio Arango

Sub: Appendix 2 – Field Vane Shear Tests
Tunnel Segment of Silicon Valley Rapid Transit (SVRT) Project
San Jose, Santa Clara County, California

Dear Mr. Arango:

As requested, we are presenting *Appendix 2 – Field Vane Shear Tests* for the proposed Silicon Valley Rapid Transit (SVRT) project in San Jose, California.

Please contact us at (408) 945-1011 if you have any questions regarding the data presented in the appendix.

Very truly yours,
PARIKH CONSULTANTS, INC.

Y. David Wang, Ph.D., P.E., 52911
Senior Engineer

Gary Parikh, P.E., G.E., 666
Project Manager

FW/YDW/GP {\Projects\204104.10\App-2 (cover).doc}

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PURPOSE AND SCOPE.....	1
METHODOLOGY OF EXPLORATION	1
<i>Field Vane Shear Testing</i>	<i>1</i>

ATTACHMENTS

- Exploratory Borehole & In-Situ Test Program (Table A2-1)
- Summary of Field Vane Shear Test Results (Tables A2-2 thru A2-6)
- Field Vane Shear Test Data (Figures A2-1 thru A2-77)
- Instrument Calibration Sheets (Figures A2-78A and A2-78B)



APPENDIX 2 – FIELD VANE SHEAR TESTS

TUNNEL SEGMENT OF SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT SAN JOSE, SANTA CLARA COUNTY, CALIFORNIA

INTRODUCTION

This appendix includes data from our geotechnical exploration performed for the proposed Tunnel Segment of Silicon Valley Rapid Transit (SVRT) project in San Jose, Santa Clara County, California. The fieldwork was performed between October 2004 and April 2005. The work was performed generally in accordance with the project scope and technical specifications prepared by Hatch Mott MacDonald/Bechtel team.

PURPOSE AND SCOPE

The purpose of this exploration was to perform soil borings and in-situ tests and to provide subsurface data for the design team. The scope of work performed for this exploration included drilling 76 rotary wash boreholes (Appendix 1), with majority of them on city streets. In addition, the scope included the following: (1) performing vane shear tests in 23 boreholes (Appendix 2), (2) performing pressuremeter tests in 19 boreholes (Appendix 3), (3) performing P/S wave suspension logging in three boreholes (Appendix 4), and (4) installing vibrating wire piezometer in 17 boreholes (Appendix 5) and standpipe monitoring wells in two boreholes (Appendix 6). The “Exploratory Borehole & In-Situ Test Program” is summarized on Table A2-1.

METHODOLOGY OF EXPLORATION

Field Vane Shear Testing

Field Vane Shear Tests were performed by Parikh Consultants using GEONOR H-10 Vane Borer equipment in eight boreholes for “Cut-and-Cover” structure locations and 17 boreholes along “Tunnel” alignment (Table A2-1). The test procedures are in general accordance with ASTM



D2573 and manual provided by GEONOR. The vane size was 2.16 “ x 4.33 “ (55 mm x 110 mm), and the shearing/rotational rate was 0.2 deg/second. The equipment capacity of GEONOR H-10 is 1 Ton/sq. ft. The raw field vane shear test data are attached.

At “Cut-and-Cover” structure locations, the vane shear tests were performed typically within the upper 50 feet depth below existing ground surface. Along “Tunnel” alignment, the vane shear tests were attempted at tunnel crown, center and invert at the time of drilling. Vane shear tests were not performed in granular soils and clayey soils where the strength exceeded the equipment capacity. At initial stage of the boring program, the vane shear tests at BH-54 were not conducted to full equipment capacity before the material reached its peak strength due to concerns of equipment damage. Later on, we decided to conduct the tests to full equipment capacity.

Deploy of GEONOR H-10 Vane Borer. The GEONOR H-10 Vane Borer System consists of a vane borer connected to strings of inner and outer rods. The vane is connected to the inner rod and protected in the borer during insertion. After drilling/sampling to the desired depths, the vane borer with rods was lowered down to the bottom of the borehole. The hydraulic system of the rig was used through the kelly to push the vane borer a minimum of six inches into native soil and to extend the vane another 19 inches into the native soil in accordance with GEONOR manual. Assembly and adjustment of the last piece of inner and outer rods were required for the pushing action and hooking up of the readout unit. The readout unit was then clamped on the outer rod. Shearing action was generated manually (cracking at 1 rev./sec), creating a rotational shearing rate of 0.2 deg./sec of the vane. Gauge reading was recorded at 30-second intervals.

Remolded tests were performed after reaching the peak material strength and rotating the vane by turning the readout unit 25 revolutions per GEONOR manual. Remolded tests were not performed if the resistance during the 25 revolutions exceeded equipment capacity.



HMM/Bechtel

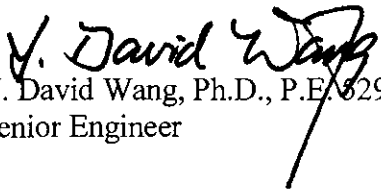
Job No. 204104.10 (SVRT Tunnel Segment – Appendix 2)


June 3, 2005

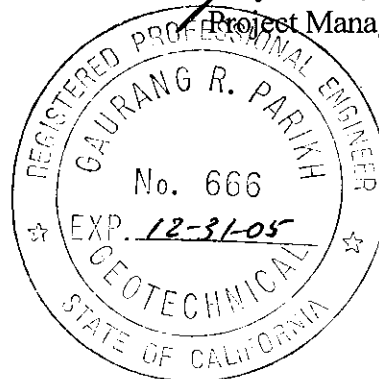
Page 3

Continuous vane shear tests were attempted in BH-23, 34, 47, 61, 63, 72 and 73 by retrieving vane into the borer, adding rods, pushing the vane borer, extending the vane and performing tests at 2 to 2.5 feet intervals. Continuous vane shear tests were stopped when the pushing (hydraulic system of the rig) reached practical refusal.

Very Truly Yours,
PARIKH CONSULTANTS, INC.


Y. David Wang, Ph.D., P.E. 52911
Senior Engineer


Gary Parikh, P.E., G.E 666
Project Manager



FW/YDW/GP APP-2 (S:\ON GOING PROJECTS\204104.10\APP-2.DOC}



Table A2-1

**Exploratory Borehole & In-Situ Test Program
Silicon Valley Rapid Transit (SVRT) Project
Tunnel Segment
San Jose, California**

7/26/2005

Exploration	Boring Depth	Station (ft)	Offset		Structure	In-Situ Tests			Vib. Wire Piezometers & Standpipe Wells
			(ft)	R/L		Type	Qty	Depth (ft)	
East Portal to Alum Rock Station									
BH-56	42.5	566+11	42	L	Portal	-			-
BH-57	42.5	569+16	18	L	Tunnel	VS	2	9.5 & 29.5	-
BH-01	61.5	574+05	13	L	Tunnel	VS	3	20, 30 & 40	-
BH-02	75.0	578+07	23	R	Tunnel	PM	4	39, 50, 58.5 & 60	25' & 52'
BH-03	90.0	581+81	14	L	Tunnel	Continuous Sampling (30' to 90')			-
BH-04	91.5	590+51	10	L	Tunnel	VS	1	45	20' & 52'
BH-05	92.5	598+17	55	R	Tunnel	-			-
BH-06	82.5	599+61	28	R	Tunnel	PM	5	44, 46, 53.5, 63.5 & 65	-
Alum Rock Station									
BH-58	151.5	600+32	53	R	Station	Continuous Sampling (5' to 70')			30.5'
BH-59	200.5	602+37	146	L	Station	P/S Suspension Logging to 200'			Standpipe Well to 217'
BH-60	152.2	604+20	61	L	Station	PM	11	13, 15, 28, 33.5, 35, 43.5, 45, 73.5, 75, 97.5, 99	
BH-61	151.5	605+84	41	L	Station	VS	12	9, 11, 19.5, 21.5, 30, 32, 39.5, 41.5, 49.5, 51.5, 64.5, 66.5	
BH-62	151.0	607+05	47	L	Station	-			-
BH-63	151.5	607+67	16	R	Station	VS	7	13.5, 15.5, 23.5, 34.5, 36.5, 49.5 & 51.5	81'
Alum Rock Station to Crossover/Downtown Station									
BH-07	86.0	609+41	9	R	Tunnel	VS	2	45 & 54.3	-
BH-08	91.0	615+75	64	R	Tunnel	PM	6	53, 54.5, 63, 64.5, 73.5 & 75	
BH-09	101.5	619+92	26	L	Tunnel	-			30' & 75'
BH-10	105.5	624+91	14	L	Tunnel	VS	1	55	-
BH-11	110.0	627+54	14	L	Tunnel	Continuous Sampling (50' to 110')			-
BH-12	121.5	634+69	13	L	Tunnel	VS	1	50	-
BH-13	131.5	640+81	13	L	Tunnel	PM	3	93.5, 114.5 & 116	30.5' & 100.5'
BH-14	127.0	642+52	15	L	Tunnel	-			-
BH-15	128.0	645+69	97	L	Tunnel	Continuous Sampling (70' to 128')			30' & 90'
BH-16	116.5	650+33	25	L	Tunnel	VS	0	Soil resistance higher than vane shear capacity	
BH-17	107.5	654+44	24	L	Tunnel	-			-
BH-18	100.5	660+03	24	L	Tunnel	PM	3	74.5, 76 & 86	-
BH-19	91.5	666+26	23	L	Tunnel	VS	1	45	30' & 60'
BH-20	91.5	669+80	24	L	Tunnel	Continuous Sampling (30' to 90')			-
BH-21	80.0	675+49	86	R	Tunnel	VS	2	40 & 50	-
BH-50	150.5	681+71	5	L	Tunnel	VS	3	9.5, 34.5 & 40.5	-
BH-52	150.5	684+09	6	L	Tunnel	Continuous Sampling (10' to 70')			-
BH-53	149.0	685+43	17	L	Tunnel	PM	3	25, 45 & 55	-
BH-54	121.5	687+16	10	L	Tunnel	VS	3	24, 34 & 48	-
BH-55	150.0	688+35	11	L	Tunnel	PM	2	25 & 45	-
Crossover/Downtown Station									
BH-23	130.5	690+03	74	R	Crossover	VS	4	14.6, 17.1, 38.5 & 44.6	-
BH-64	141.5	691+93	30	L	Crossover	PM	5	23.5, 25, 53, 54.5 & 74	-
BH-24	151.0	694+52	31	L	Crossover	Continuous Sampling (10' to 70')			-
BH-65	149.0	695+58	16	L	Crossover	PM	7	13, 15, 38, 40, 54, 111.5, & 113	
BH-77	137.5	698+34	16	L	Crossover	VS	4	14.1, 19.1, 24.2 & 39.1	-
BH-25	150.0	701+55	2	R	Station	PM	13	21, 23, 48, 50, 74, 76, 105.5, 107, 113, 114.5, 127.5, 129, 148.5 & 150	
BH-66	130.0	702+51	29	L	Station	VS	3	15.5, 21.5 & 44	-
BH-68	216.0	703+72	69	R	Station	P/S Suspension Logging to 200'			30', 80' & 160' (Piezometer at 30' depth in separate hole)
BH-70	146.5	706+78	47	L	Station	Continuous Sampling (10' to 70')			-
BH-71	148.0	707+62	18	L	Station	PM	6	23.5, 25, 43.5, 45, 63.5 & 65	
BH-72	162.5	709+40	22	L	Station	VS	5	18, 20, 22, 43 & 45	-
BH-26	157.5	710+66	19	L	Station	-			-
Crossover/Downtown Station to Diridon Station									
BH-27	140.5	715+01	131	L	Tunnel	-			-
BH-28	150.0	720+23	48	R	Tunnel	-			-
BH-29	112.5	723+89	29	R	Tunnel	VS	1	88.5	-
BH-30	110.5	728+02	31	R	Tunnel	-			-
BH-31	100.0	731+55	10	L	Tunnel	PM	4	72.5, 74, 82.5 & 84	30' & 60'
BH-32	92.5	733+31	38	L	Tunnel	-			-

Table A2-1

**Exploratory Borehole & In-Situ Test Program
Silicon Valley Rapid Transit (SVRT) Project
Tunnel Segment
San Jose, California**

7/26/2005

Exploration	Boring Depth	Station (ft)	Offset		Structure	In-Situ Tests			Vib. Wire Piezometers & Standpipe Wells
			(ft)	R/L		Type	Qty	Depth (ft)	
<i>Diridon Station</i>									
BH-33	150.8	735+14	52	L	Station	PM	12	13, 15, 23, 25, 43.5, 45, 74.5, 76, 88.5, 90, 113.5 & 115	
BH-73	150.5	736+58	41	L	Station	VS	5	9.7, 11.5, 19.5, 21.5 & 23.5	
BH-74	150.5	738+28	32	R	Station	Continuous Sampling (10' to 70')			30'
BH-75	200.5	739+52	45	R	Station	-			Standpipe Well to 200'
BH-76	152.5	741+02	70	R	Station	PM	9	13, 15, 25, 43.5, 45, 73.5, 75, 93.5 & 95	105'
BH-34	150.8	744+65	79	R	Station	VS	8	14.5, 16.5, 24.5, 26.5, 34.7, 44.5, 46.5 & 54.5	
<i>Diridon Station to West Portal</i>									
BH-35	78.0	750+49	77	R	Tunnel	Continuous Sampling (20' to 78')			-
BH-36	81.0	755+33	101	R	Tunnel	-			-
BH-37	82.5	760+60	53	L	Tunnel	VS	2	42.5 & 52.5	20.5' & 60.5'
BH-38	95.5	765+24	5	L	Tunnel	PM	4	43.5, 51, 65 & 80	-
BH-39	96.0	768+77	17	R	Tunnel	VS	0	Soil resistance higher than vane shear capacity	
BH-40	68.5	775+76	75	L	Tunnel	Continuous Sampling (10' to 69')			-
BH-41	60.0	781+35	12	L	Tunnel	VS	3	19.5, 29.5 & 34.5	20' & 40'
BH-79	216.0	782+50	17	L	Tunnel/Vent Shaft	P/S Suspension Logging to 200'			35.5', 75.5' & 118.5'
BH-42	62.5	785+37	19	L	Tunnel	PM	6	23, 25, 33, 35, 43 & 44.5	
BH-43	60.0	789+72	20	L	Tunnel	Continuous Sampling (5' to 60')			-
BH-80	100.0	794+39	112	L	Tunnel	-			47'
BH-44	61.5	798+28	20	L	Tunnel	VS	2	20 & 30	-
BH-45	85.5	802+44	26	L	Tunnel	PM	4	50, 58.5, 60 & 70	-
BH-46	60.0	809+36	9	L	Tunnel	Continuous Sampling (5' to 60')			-
BH-47	61.5	813+52	52	L	Tunnel	VS	2	22 & 24.5	20' & 40'
BH-48	86.5	818+34	15	R	Tunnel	PM	6	30.5, 32.5, 48.5, 50, 58.5 & 60	
BH-49	77.5	824+28	66	L	Tunnel	-			
BH-78	80.8	831+41	15	L	Portal	-			

Note: Stations and offsets based on the April 2005, S1 track alignment.

Summary	Borings	Downhole Logging	Continuous Sampling	Pressuremeter Testing	Vane Shear Testing	Piezometer/Well Borings
Stations & Crossover	24	2	4	7	8	7
Tunnel	52	1	9	12	17	12

A. Sampling Schedule for Tunnel Borings :

Sampling for tunnel borings focused on the 60' tunnel zone (20' above crown to 20' below invert of the 20' diameter tunnel).

B. Sampling Schedule for Stations and Crossover :

Stations and crossover borings were drilled to approx. 150' depth in general. Shelby tubes or Pitcher barrels were taken in cohesive soils, and SPT sampler (2" O.D. & 1.4" I.D.) or Modified California sampler (3" O.D. & 2.43" I.D.) were typically taken in granular soils.

C. Continuous Sampling :

Continuous Pitcher Barrel or Shelby Tube samples (in cohesive soils) and driven SPT or MC samples (in granular soils) were taken throughout the 60' tunnel zone at specified tunnel boring locations. Continuous Pitcher Barrel or Shelby Tube samples (in cohesive soils) and driven SPT or MC samples (in granular soils) were taken from 10' to 70' at specified station boring locations.

D. Vane Shear Borings :

Vane Shear tests were performed using Geonor H-10 Vane Borer equipment. Vane shear tests were not planned in granular soils and clay soils where the strength exceeded the equipment capacity (2.1 ksf). Along the tunnel alignment, vane shear testing was typically attempted at the tunnel crown, center and invert. Vane Shear tests were performed at specified depths of the station borings.

E. Pressuremeter Borings:

Pressuremeter tests were performed by Hughes Insitu Engineering Inc. Both "pre-bored" and "self-boring" pressuremeter tests were conducted. A top-drive drill rig was used for self-boring pressuremeter tests. In hard soils and gravelly soils, only the "pre-bored" type pressuremeter tests could be conducted. Along the tunnel alignment, pressuremeter testing was typically attempted at the tunnel crown, center and invert. Pressuremeter tests were performed at specified depths of the station borings.

F. Downhole Logging :

GEOVision Geophysical Services performed P/S suspension logging in borings at BH-59, BH-68 and 79.

G. Noise and Vibration Testing :

Noise and vibration tests were performed at BH-03, BH-10, BH-15, BH-19, BH-23, BH-27, BH-35, BH-40 and BH-46

Boring Number	Test Number	Vane Tip Depth (ft)	Vane Tip Elevation (ft)	Field Shear Strength (psf)			Remarks
				Undisturbed	Remolded	Sensitivity	
BH-1	VS-1	20.0	66.9	2046.4	1364.2	1.50	
BH-1	VS-2	30.0	56.9	1737.3	1129.8	1.54	
BH-1	VS-3	40.0	46.9	> 2089.0			
BH-4	VS-1	45.0	46.0	> 2089.0			
BH-7	VS-1	45.0	42.9	> 2089.0			
BH-7	VS-2	54.3	33.6	> 2089.0			
BH-10	VS-1	55.0	36.7	> 2089.0			
BH-12	VS-1	50.0	43.2	> 2089.0			
BH-19	VS-1	45.0	35.8	> 2089.0			
BH-21	VS-1	40.0	41.5	1534.8	899.5	1.71	
BH-21	VS-2	50.0	31.5	> 2089.0			
BH-23	VS-1	14.6	66.3	860.9	474.9	1.81	
BH-23	VS-2	17.1	63.8	1481.5	991.2	1.49	
BH-23	VS-3	38.5	42.4	1769.3	899.5	1.97	
BH-23	VS-4	44.6	36.3	> 2089.0			
BH-29	VS-1	88.5	-3.6	1108.4			

SUMMARY OF FIELD VANE SHEAR RESULTS

TUNNEL SEGMENT OF SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT
SAN JOSE, CALIFORNIA



PARIKH CONSULTANTS, INC.
Geotechnical & Materials Engineering

Notes:

- *Vane Size: 55 mm/110 mm *Rotational Rate: 0.2 deg/s
- *Equipment: GEONOR H-10 Vane Borer, Serial # 2529
- *Calibration Date: 5/7/2004

Date: 4/2005

Job No.: 204104.TO2


Boring Number	Test Number	Vane Tip Depth (ft)	Vane Tip Elevation (ft)	Field Shear Strength (psf)			Remarks
				Undisturbed	Remolded	Sensitivity	
BH-34	VS-1	14.5	74.2	1684.0	716.2	2.35	
BH-34	VS-2	16.5	72.2	> 2089.0			
BH-34	VS-3	24.5	64.2	1758.6	928.5	1.89	
BH-34	VS-4	26.5	62.2	> 2131.6			
BH-34	VS-5	34.7	54.0	> 2099.7			
BH-34	VS-6	44.5	44.2	> 2089.0			
BH-34	VS-7	46.5	42.2	> 2089.0			
BH-34	VS-8	54.5	34.2	> 2089.0			
BH-37	VS-1	42.5	48.4	> 2089.0			
BH-37	VS-2	52.5	38.4	1961.1	1215.0	1.61	
BH-41	VS-1	19.5	61.9	2025.1			
BH-41	VS-2	29.5	51.9	> 2089.0			
BH-41	VS-3	34.5	46.9	2035.7			
BH-44	VS-1	20.0	59.8	1311.0	494.2	2.65	
BH-44	VS-2	30.0	49.8	1151.1	667.9	1.72	
BH-47	VS-1	22.0	50.4	> 2089.0			
BH-47	VS-2	24.5	47.9	> 2110.3			
BH-50	VS-1	9.5	71.2	1247.0	359.1	3.47	
BH-50	VS-2	34.5	46.2	1108.4	658.3	1.68	
BH-50	VS-3	40.5	40.2	1534.8	610.0	2.52	
SUMMARY OF FIELD VANE SHEAR RESULTS TUNNEL SEGMENT OF SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT SAN JOSE, CALIFORNIA				Notes: *Vane Size: 55 mm/110 mm *Rotational Rate: 0.2 deg/s *Equipment: GEONOR H-10 Vane Borer, Serial # 2529 *Calibration Date: 5/7/2004			
 PARIKH CONSULTANTS, INC. Geotechnical & Materials Engineering				Date: 4/2005		Job No.: 204104.TO2	

TABLE A2-3


Boring Number	Test Number	Vane Tip Depth (ft)	Vane Tip Elevation (ft)	Field Shear Strength (psf)			Remarks
				Undisturbed	Remolded	Sensitivity	
BH-54	VS-1	24.0	56.8	> 1662.7			
BH-54	VS-2	34.0	46.8	> 1556.1			
BH-54	VS-3	48.0	32.8	> 1524.1			
BH-57	VS-1	9.5	78.4	1897.2	832.0	2.28	
BH-57	VS-2	29.5	58.4	1918.5	938.1	2.05	
BH-61	VS-1	9.0	80.1	> 2089.0			
BH-61	VS-2	11.0	78.1	> 2089.0			
BH-61	VS-3	19.5	69.6	1652.0	532.8	3.10	
BH-61	VS-4	21.5	67.6	> 2089.0			
BH-61	VS-5	30.0	59.1	> 2089.0			
BH-61	VS-6	32.0	57.1	1907.8	793.4	2.40	
BH-61	VS-7	39.5	49.6	1918.5	1300.3	1.48	
BH-61	VS-8	41.5	47.6	> 2089.0			
BH-61	VS-9	49.5	39.6	> 2089.0			
BH-61	VS-10	51.5	37.6	> 2089.0			
BH-61	VS-11	64.5	24.6	> 2089.0			
BH-61	VS-12	66.5	22.6	> 2089.0			
SUMMARY OF FIELD VANE SHEAR RESULTS TUNNEL SEGMENT OF SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT SAN JOSE, CALIFORNIA				Notes: *Vane Size: 55 mm/110 mm *Rotational Rate: 0.2 deg/s *Equipment: GEONOR H-10 Vane Borer, Serial # 2529 *Calibration Date: 5/7/2004			
				Date: 4/2005	Job No.: 204104.TO2		

TABLE A2-4


Boring Number	Test Number	Vane Tip Depth (ft)	Vane Tip Elevation (ft)	Field Shear Strength (psf)			Remarks
				Undisturbed	Remolded	Sensitivity	
BH-63	VS-1	13.5	74.5	1385.6	1311.0	1.06	
BH-63	VS-2	15.5	72.5	> 2089.0			
BH-63	VS-3	23.5	64.5	> 2089.0			
BH-63	VS-4	34.5	53.5	> 2089.0			
BH-63	VS-5	36.5	51.5	2057.0	1119.1	1.84	
BH-63	VS-6	49.5	38.5	> 2089.0			
BH-63	VS-7	51.5	36.5	> 2089.0			
BH-66	VS-1	15.5	72.6	2067.7	667.9	3.10	
BH-66	VS-2	21.5	66.6	1854.5	1108.4	1.67	
BH-66	VS-3	44.0	44.1	> 2089.0			
BH-72	VS-1	18.0	69.7	1993.1	446.0	4.47	
BH-72	VS-2	20.0	67.7	1907.8	320.5	5.95	
BH-72	VS-3	22.0	65.7	> 2089.0			
BH-72	VS-4	43.0	44.7	1918.5			
BH-72	VS-5	45.0	42.7	> 2089.0			
BH-73	VS-1	9.7	77.8	> 2089.0			
BH-73	VS-2	11.5	76.0	> 2089.0			
BH-73	VS-3	19.5	68.0	> 2089.0			
BH-73	VS-4	21.5	66.0	2014.4	889.9	2.26	
BH-73	VS-5	23.5	64.0	1609.4			
SUMMARY OF FIELD VANE SHEAR RESULTS TUNNEL SEGMENT OF SILICON VALLEY RAPID TRANSIT (SVRT) PROJECT SAN JOSE, CALIFORNIA				Notes: *Vane Size: 55 mm/110 mm *Rotational Rate: 0.2 deg/s *Equipment: GEONOR H-10 Vane Borer, Serial # 2529 *Calibration Date: 5/7/2004			
				Date: 4/2005	Job No.: 204104.TO2		

TABLE A2-5

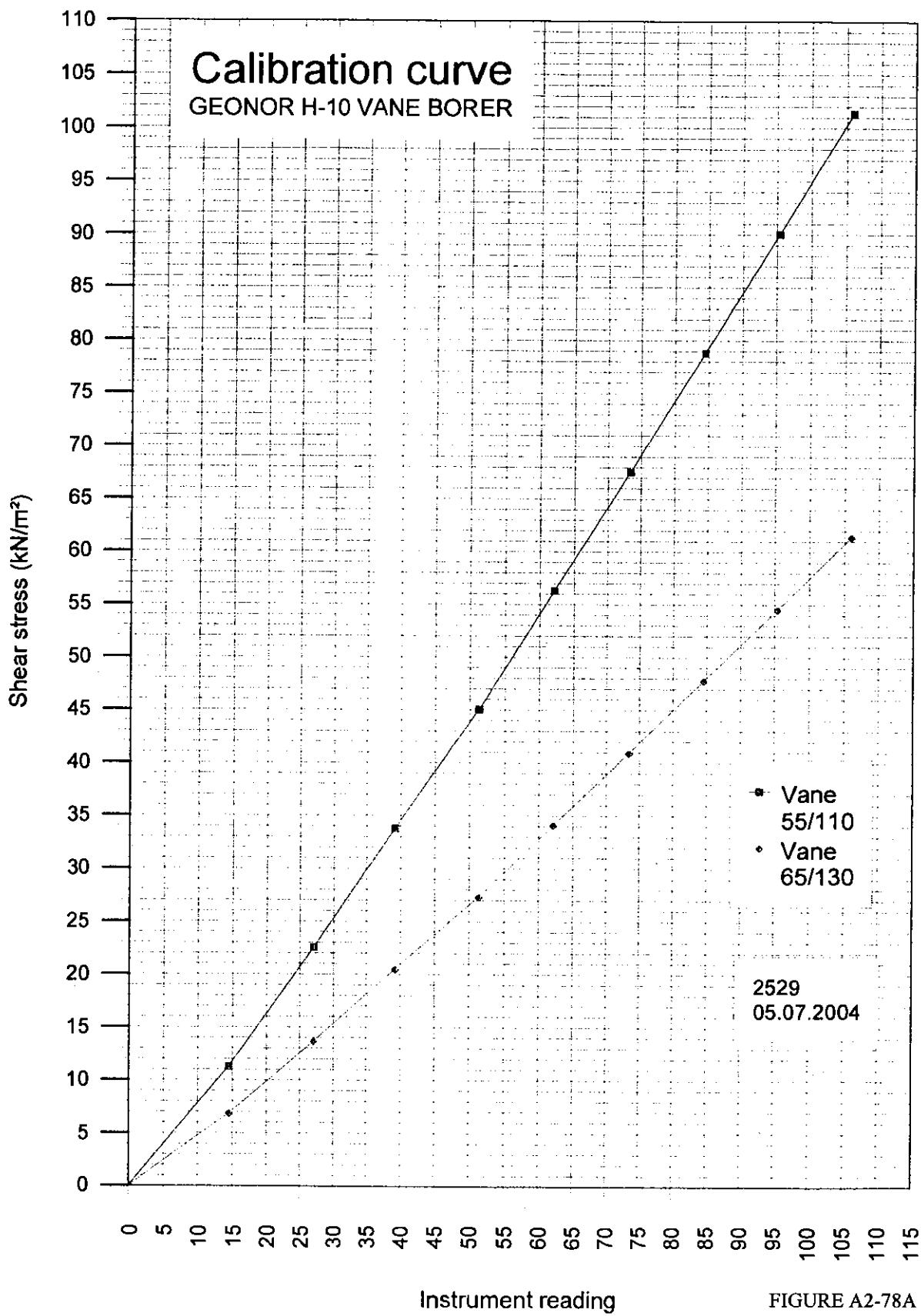


FIGURE A2-78A

CALIBRATION SCHEME FOR GEONOR H-10 VANE BORER INSTRUMENT

Instrument no.:	2529	Order No.
Calibrated date :	*****	To:
Print date :	05.07.2004	
Sign.	I.L.	

TOTAL LOAD (N)	INSTRUMENT READING				AVERAGE (1+3) / 4	SHEAR STRESS kN/m ²	
	UP	DOWN	UP	DOWN		VANE	VANE
	(1)	(2)	(3)	(4)		55/110	65/130
0	0,0	0,0	0,0	0,0	0,0	0,00	0,00
39,24	14,5	14,5	14,5	14,4	14,5	11,26	6,82
78,48	27,0	27,0	27,1	27,0	27,1	22,52	13,64
117,72	39,3	39,2	39,2	39,5	39,3	33,79	20,46
156,96	51,5	51,0	51,2	51,2	51,4	45,05	27,28
196,2	62,1	62,1	62,1	62,2	62,1	56,31	34,09
235,44	73,4	73,3	73,5	73,5	73,5	67,57	40,91
274,68	84,5	84,4	84,5	84,5	84,5	78,83	47,73
313,72	95,4	95,2	95,4	95,2	95,4	90,04	54,52
353,16	106,0	106,0	106,0	106,0	106,0	101,36	61,37

FORMULAS (*) :

Vane 55/110 : $T = 0,164 * T (\text{max})$ (kN/m²)

Vane 65/130 : $T = 0,00993 * T (\text{max})$ (kN/m²)

Torque : $T (\text{max}) = (\text{TOTAL LOAD}) * 17,5$ (Ncm)

Shear stress : $T = 2,73 * T (\text{max}) / D^3$

(*) Providing length of vane = 2 * diameter (D)

D = Diameter of vane (cm) (D = 5,5 or 6,5cm for standard vanes

Calibration performed with kg-weights and TOTAL LOAD calculated

Maximum instrument reading : 106,5