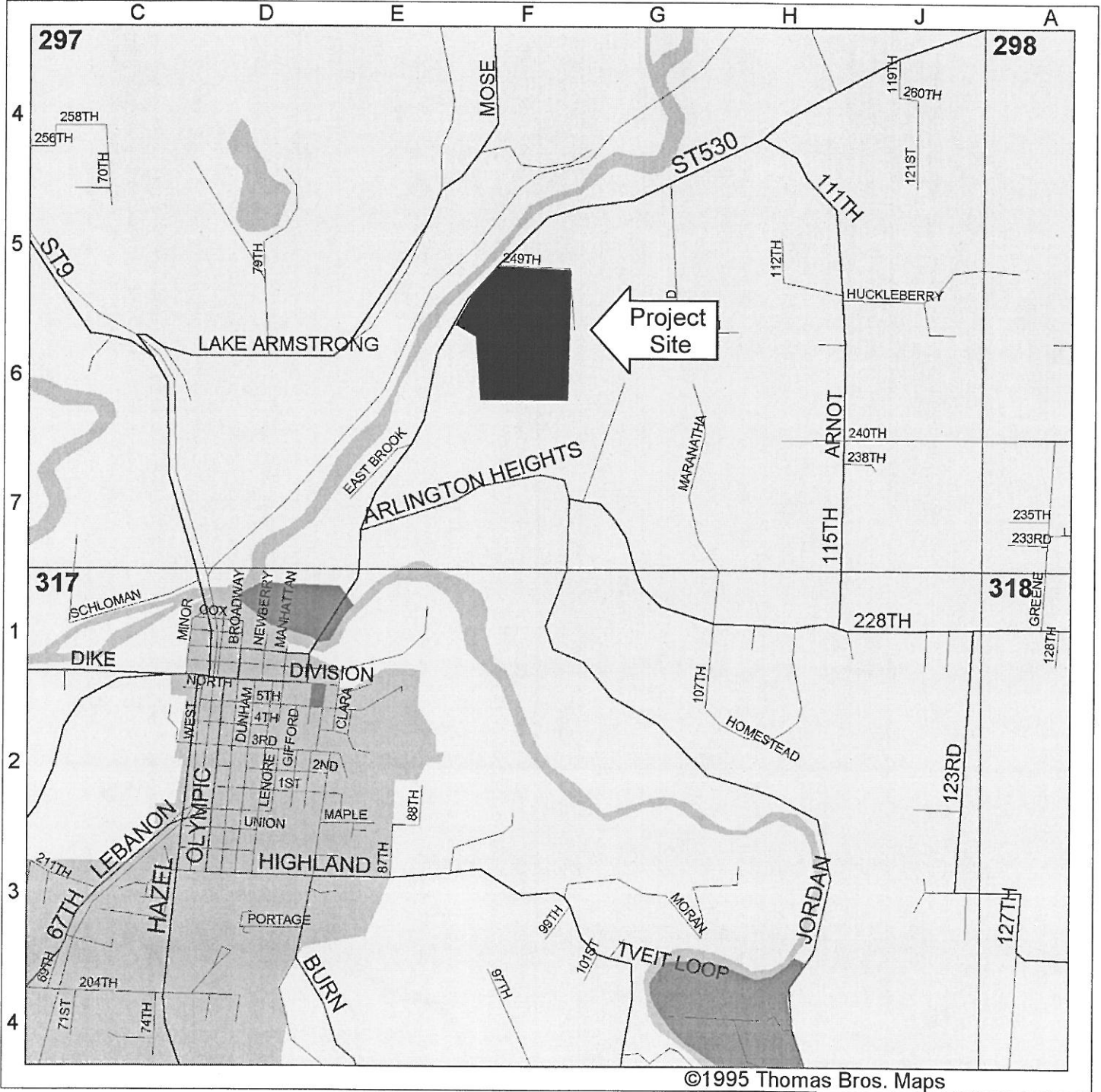


VICINITY MAP



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FIGURE

1

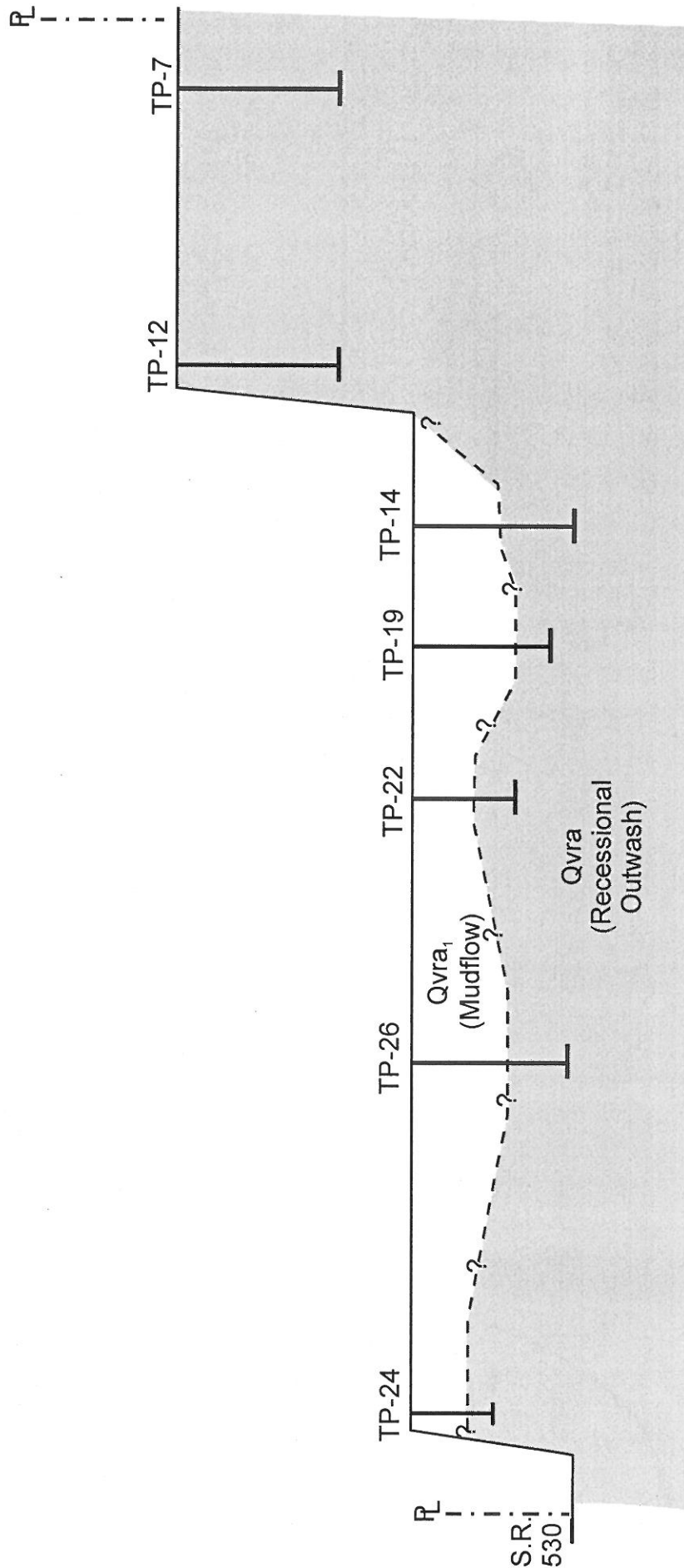
FILE NO.

192796

DATE

February 1997

Schematic Cross-Section A-A'



Reference: Cross section is schematic and not based on an actual field survey.

Scale:

1"=300' Horizontal

1"=10' Vertical

FIGURE

4

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DATE

February 1997

FILE NO.

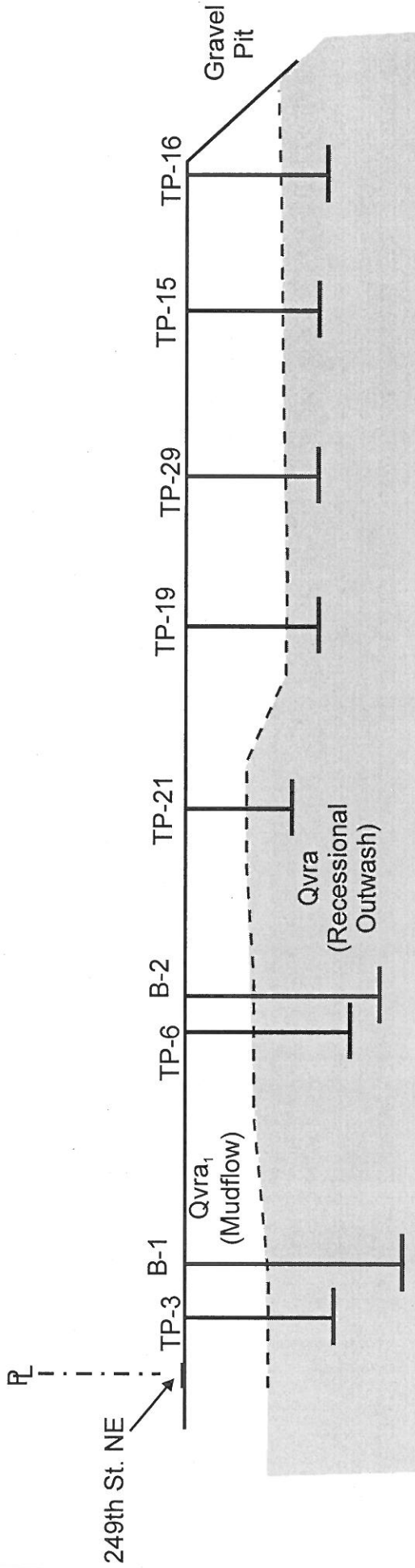
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Schematic Cross-Section B-B'



Reference: Cross section is schematic and not based on an actual field survey.

Scale:
 1"=300' Horizontal
 1"=10' Vertical

FIGURE

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5

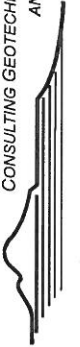
FILE NO.

192796

DATE

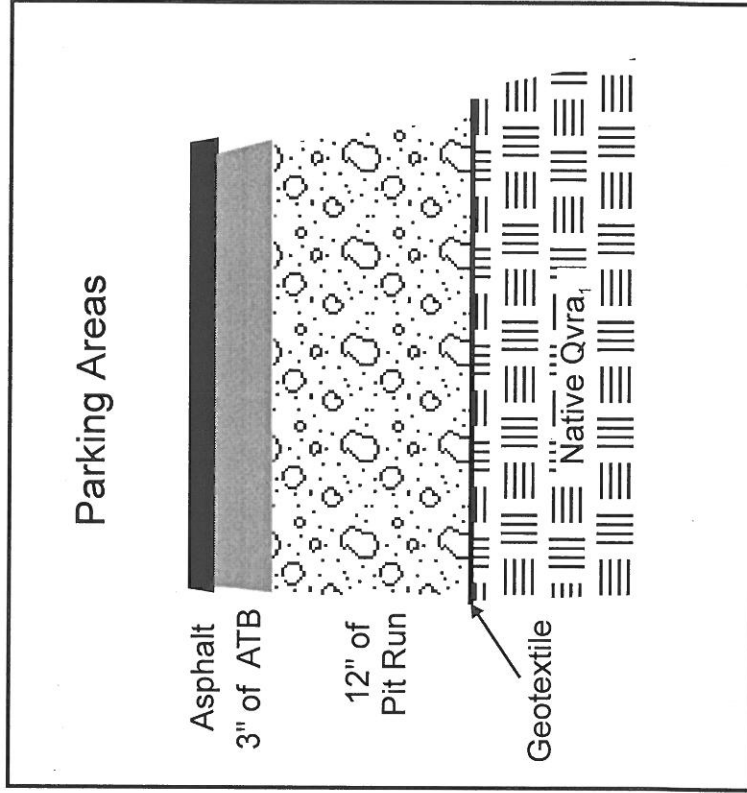
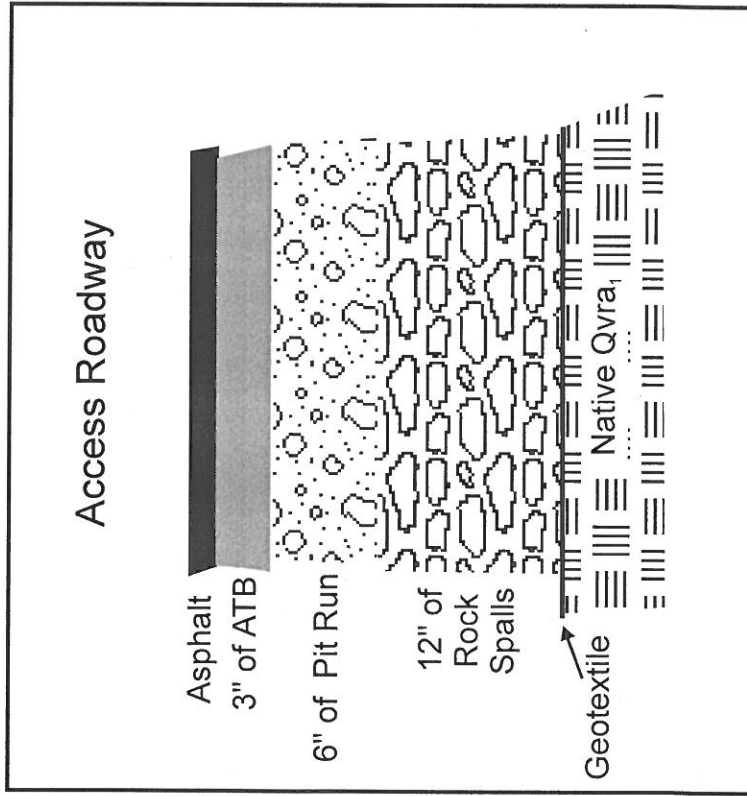
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Typical Pavement Sections

(Over Qvra, Mudflow Soils)



Note: These sections may vary based on conditions in the field. The use of the parking section shown will be dependent on the ability to compact the Qvra. If it cannot be compacted without disturbing the access roadway section may be more appropriate. Areas may be encountered where additional overexcavation would be required.

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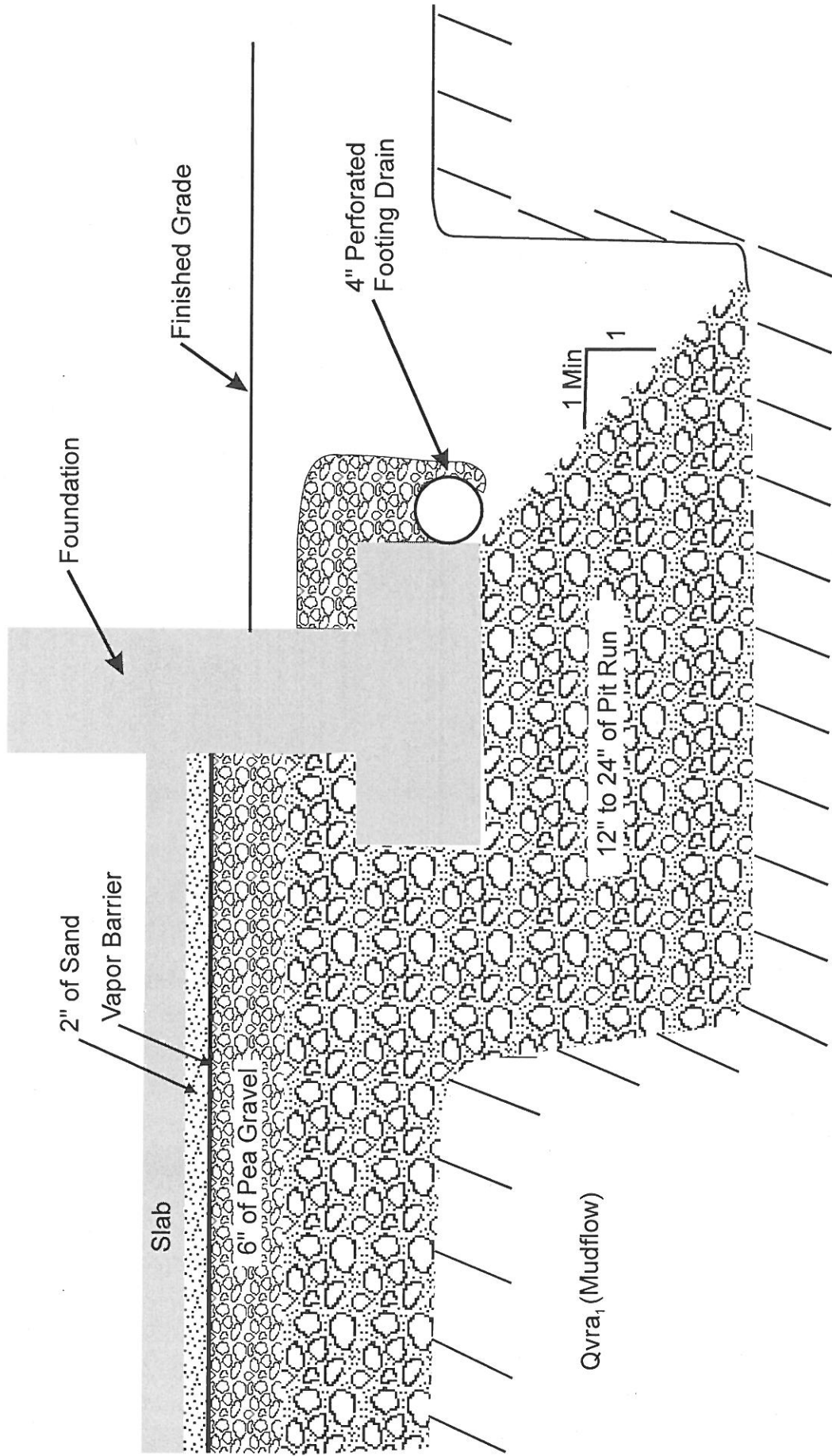
FIGURE 6

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DATE

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Typical Foundation and Slab Section (Qvra₁ Soils)



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FIGURE 7

FILE NO. 192796

DATE February 1997

APPENDIX A FIELD EXPLORATIONS

The soil conditions were evaluated by excavating thirty-two test pits and three borings. The approximate locations of the explorations are shown on the Site Plan in Figure 2. Following the test pit investigation, it was determined that borings would be used to sample the mudflow deposits for laboratory testing. A geologist from this firm was on site during the explorations. The geologist located the explorations approximately, and maintained logs of the soils encountered. The soils were visually classified in general accordance with the Unified Soil Classification System, a copy of which is presented as Figure A-1. Representative soil samples were collected for further review and classification. The test pit logs are shown on Figures A-2 through A-11, and the boring logs in Figures A-12 through A-14. Laboratory testing was performed on selected samples from the test pits and borings. The laboratory test results are presented in Appendix B.

The test pits were excavated using a rubber-tired backhoe. The borings were drilled using a hollow stem auger drill rig. Samples were obtained using a 3 inch outside diameter split spoon (California type) sampler. The sampler was driven using a 140 pound hammer falling 30 inches. The sampler was driven 18 inches when possible. The blow count to drive the sampler the last 12 inches is shown on the boring logs. Representative relatively undisturbed ring samples were obtained for further evaluation and testing in our laboratory.

o O o

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		GROUP SYMBOL	GROUP NAME	
COARSE - GRAINED SOILS MORE THAN 50% RETAINED ON NO. 200 SIEVE	GRAVEL MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVEL	GW WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL	
		GRAVEL WITH FINES	GP POORLY-GRADED GRAVEL	
		GM	SILTY GRAVEL	
		GC	CLAYEY GRAVEL	
	SAND MORE THAN 50% OF COARSE FRACTION PASSES NO. 4 SIEVE	CLEAN SAND	SW	WELL-GRADED SAND, FINE TO COARSE SAND
			SP	POORLY-GRADED SAND
		SAND WITH FINES	SM	SILTY SAND
			SC	CLAYEY SAND
FINE - GRAINED SOILS MORE THAN 50% PASSES NO. 200 SIEVE	SILT AND CLAY LIQUID LIMIT LESS THAN 50%	INORGANIC	ML SILT	
		CL	CLAY	
		ORGANIC	OL ORGANIC SILT, ORGANIC CLAY	
	SILT AND CLAY LIQUID LIMIT 50% OR MORE	INORGANIC	MH	SILT OF HIGH PLASTICITY, ELASTIC SILT
			CH	CLAY OF HIGH PLASTICITY, FAT CLAY
		ORGANIC	OH ORGANIC CLAY, ORGANIC SILT	
HIGHLY ORGANIC SOILS		PT	PEAT	

NOTES:

- 1) Field classification is based on visual examination of soil in general accordance with ASTM D 2488-83.
- 2) Soil classification using laboratory tests is based on ASTM D 2487-83.
- 3) Descriptions of soil density or consistency are based on interpretation of blowcount data, visual appearance of soils, and/or test data.

SOIL MOISTURE MODIFIERS

Dry- Absence of moisture, dusty, dry to the touch
 Moist- Damp, but no visible water

Wet- Visible free water or saturated, usually soil is obtained from below water table

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT ONE		
0.0 - 1.2	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.2 - 8.0	SM	RUST-MOTTLED GRAY SILTY FINE TO COARSE SAND (MEDIUM DENSE TO DENSE, WET) (Qvra ₁)
8.0 - 9.3	SW	RUST BROWN FINE TO COARSE SAND WITH GRAVEL AND COBBLES (DENSE, WET) (Qvra)
		SAMPLES WERE COLLECTED AT 2.8, 4.5 AND 9.3 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.8 FEET HEAVY GROUND WATER SEEPAGE WAS ENCOUNTERED AT 8.0 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.3 FEET ON 01-08-97
TEST PIT TWO		
0.0 - 1.0	SM	BROWN SILTY FINE SAND WITH ORGANICS (LOOSE, MOIST) (TOPSOIL)
1.0 - 6.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
6.0 - 9.5	SW	BROWN TO GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (DENSE, WET) (Qvra)
		SAMPLES WERE COLLECTED AT 2.0 AND 9.5 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.8 FEET HEAVY GROUND WATER SEEPAGE WAS ENCOUNTERED AT 6.5 FEET MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 6.0 FEET TEST PIT WAS COMPLETED AT 9.5 FEET ON 01-08-97
TEST PIT THREE		
0.0 - 1.8	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.8 - 5.5	SM	RUST-MOTTLED GRAY SILTY FINE TO COARSE SAND (MEDIUM DENSE TO DENSE, WET) (Qvra ₁)
5.5 - 9.5	SW	BROWN TO GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE NOT COLLECTED MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 1.8 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.5 FEET ON 01-08-97
TEST PIT FOUR		
0.0 - 0.8	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.8 - 5.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
5.0 - 8.5	SW	BROWN TO GRAY FINE TO COARSE SAND WITH TRACE GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE COLLECTED AT 3.5 AND 5.5 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 1.8 FEET MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 2.0 FEET TEST PIT WAS COMPLETED AT 8.5 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT FIVE		
0.0 - 1.5	SM	BROWN SILTY SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.5 - 8.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
8.0 - 9.0	SW	BROWN TO GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 2.5 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.0 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.0 FEET ON 01-08-97
TEST PIT SIX		
0.0 - 0.5	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.5 - 4.5	SM	RUST-MOTTLED GRAY SILTY FINE SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
4.5 - 10.5	SW	RUST BROWN FINE TO COARSE SAND WITH TRACE GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra)
		SAMPLE WAS COLLECTED AT 3.5 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 5.0 FEET AND BELOW MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 5.0 FEET TEST PIT WAS COMPLETED AT 10.5 FEET ON 01-08-97
TEST PIT SEVEN		
0.0 - 0.8	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.8 - 2.0	SW-SM	RUST BROWN FINE TO COARSE SAND WITH SILT (MEDIUM DENSE TO DENSE, MOIST) (WEATHERED Qvra)
2.0 - 7.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND TRACE COBBLES (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
		SAMPLE WAS COLLECTED AT 1.5 FEET GROUND WATER SEEPAGE WAS NOT ENCOUNTERED TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 7.0 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT EIGHT		
0.0 - 1.0	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 2.0	SW-SM	RUST BROWN FINE TO COARSE SAND WITH SILT (MEDIUM DENSE TO DENSE, MOIST) (WEATHERED Qvra)
2.0 - 5.3	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND TRACE COBBLES (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
5.3 - 7.3	SW	GRAY FINE TO COARSE SAND (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
7.3 - 8.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
		SAMPLE WAS COLLECTED AT 1.5 FEET GROUND WATER SEEPAGE WAS NOT ENCOUNTERED MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 5.0 FEET TEST PIT WAS COMPLETED AT 8.5 FEET ON 01-08-97
TEST PIT NINE		
0.0 - 1.5	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.5 - 2.5	SW	RUST BROWN FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, MOIST) (WEATHERED Qvra)
2.5 - 9.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
		SAMPLE WAS COLLECTED AT 2.0 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 8.5 FEET AND BELOW TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.0 FEET ON 01-08-97
TEST PIT TEN		
0.0 - 0.8	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.8 - 2.0	SP-SM	RUST BROWN FINE TO MEDIUM SAND WITH SILT (MEDIUM DENSE, MOIST) (WEATHERED Qvra)
2.0 - 8.0	SP	GRAY FINE TO MEDIUM SAND (MEDIUM DENSE, MOIST) (Qvra)
8.0 - 9.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
		SAMPLES WERE COLLECTED AT 1.5 AND 4.0 FEET GROUND WATER SEEPAGE WAS NOT ENCOUNTERED TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.0 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT ELEVEN		
0.0 - 0.5	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST)
0.5 - 1.9	SP-SM	RUST BROWN FINE TO MEDIUM SAND WITH SILT (MEDIUM DENSE TO DENSE, MOIST) (WEATHERED Qvra)
1.9 - 3.0	SP	GRAY FINE TO MEDIUM SAND (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
3.0 - 4.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND TRACE COBBLES (Qvra)
4.5 - 11.0	SW	GRAY FINE TO COARSE SAND WITH TRACE GRAVEL (Qvra)
		SAMPLE WAS COLLECTED AT 1.0 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 10 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 11.0 FEET ON 01-08-97
TEST PIT TWELVE		
0.0 - 0.5	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.5 - 1.5	SW-SM	RUST BROWN FINE TO COARSE SAND WITH SILT AND GRAVEL (MEDIUM DENSE TO DENSE, MOIST) (WEATHERED Qvra)
1.5 - 9.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND TRACE COBBLES (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
		SAMPLE WAS COLLECTED AT 1.0 FOOT GROUND WATER SEEPAGE WAS NOT ENCOUNTERED TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.5 FEET ON 01-08-97
TEST PIT THIRTEEN		
0.0 - 0.3	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.3 - 1.0	SM	BROWN-GRAY SILTY SAND WITH ROOTS (MEDIUM DENSE TO DENSE, MOIST)
1.0 - 6.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra₁)
6.0 - 9.0	SW	BROWN-GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE COLLECTED AT 0.8 AND 3.0 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 6.0 FEET AND BELOW MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 6.0 FEET TEST PIT WAS COMPLETED AT 9.0 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT FOURTEEN		
0.0 - 1.0	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 5.5	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
5.5 - 10.0	SP-SM	GRAY FINE TO MEDIUM SAND WITH SILT (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra)
		SAMPLE WAS COLLECTED AT 3.5 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.5 FEET AND BELOW MODERATE TO SEVERE TEST PIT CAVING WAS ENCOUNTERED BELOW 6.0 FEET TEST PIT WAS COMPLETED AT 10.0 FEET ON 01-08-97
TEST PIT FIFTEEN		
0.0 - 1.3	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.3 - 3.3	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET)
3.3 - 4.0	SM	BLUE-GRAY SILTY FINE SAND (DENSE, MOIST)
4.0 - 6.0	SM	GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET)
6.0 - 9.0	SP-SM	BROWN TO GRAY FINE TO MEDIUM SAND WITH SILT (Qvra)
9.0 - 9.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND TRACE COBBLES (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE COLLECTED AT 2.0 AND 3.3 FEET MINOR TO MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.8 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.5 FEET ON 01-08-96
TEST PIT SIXTEEN		
0.0 - 1.8	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.8 - 6.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
6.0 - 8.5	SW-SM	GRAY FINE TO COARSE SAND WITH SILT (MEDIUM DENSE TO DENSE, WET) (Qvra)
8.5 - 9.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 3.0 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.3 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.0 FEET ON 01-09-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT SEVENTEEN		
0.0 - 1.0	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 5.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST) (Qvra ₁)
5.0 - 9.5	SW	RUST BROWN TO GRAY FINE TO COARSE SAND WITH GRAVEL AND TRACE COBBLES (DENSE, MOIST) (Qvra)
		SAMPLE WAS COLLECTED AT 7.0 FEET GROUND WATER SEEPAGE WAS NOT ENCOUNTERED TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.5 FEET ON 01-08-97
TEST PIT EIGHTEEN		
0.0 - 0.5	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.5 - 1.5	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST)
1.5 - 5.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
5.0 - 8.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra)
		SAMPLE WAS COLLECTED AT 3.5 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 6.0 FEET AND BELOW TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 8.0 FEET ON 01-08-97
TEST PIT NINETEEN		
0.0 - 1.0	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 6.5	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST) (Qvra ₁)
6.5 - 8.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE NOT COLLECTED HEAVY GROUND WATER SEEPAGE WAS ENCOUNTERED AT 6.5 FEET AND BELOW TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 8.5 FEET ON 01-08-97
TEST PIT TWENTY		
0.0 - 1.0	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 5.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
5.0 - 8.5	SW	GRAY FINE TO COARSE SAND WITH TRACE FINE GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 2.5 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.0 FEET MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 2.0 FEET TEST PIT WAS COMPLETED AT 8.5 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT TWENTY-ONE		
0.0 - 1.0	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 4.5	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
4.5 - 7.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 2.0 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.0 FEET SEVERE TEST PIT CAVING WAS ENCOUNTERED BELOW 2.0 FEET TEST PIT WAS COMPLETED AT 7.0 FEET ON 01-08-97
TEST PIT TWENTY-TWO		
0.0 - 0.8	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.8 - 4.0	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
4.0 - 5.5	SP-SM	RUST-MOTTLED FINE SAND WITH SILT AND TRACE COARSE SAND SEAMS (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra)
5.5 - 6.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE NOT COLLECTED MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 1.0 FOOT SEVERE TEST PIT CAVING WAS ENCOUNTERED BELOW 2.0 FEET TEST PIT WAS COMPLETED AT 6.5 FEET ON 01-08-97
TEST PIT TWENTY-THREE		
0.0 - 1.8	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.8 - 3.0	SM	RUST BROWN SILTY FINE SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
3.0 - 7.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 1.8 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 1.5 FEET MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 3.0 FEET TEST PIT WAS COMPLETED AT 7.0 FEET ON 01-08-97
TEST PIT TWENTY-FOUR		
0.0 - 1.0	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 3.5	SM	RUST BROWN SILTY FINE SAND WITH ROOTS (MEDIUM DENSE TO DENSE, WET) (Qvra ₁)
3.5 - 5.0	SW	BROWN TO GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 2.0 FEET VERY HEAVY GROUND WATER SEEPAGE WAS ENCOUNTERED AT 1.8 FEET VERY SEVERE TEST PIT CAVING WAS ENCOUNTERED AT 1.0 FOOT TEST PIT WAS COMPLETED AT 5.0 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT TWENTY-FIVE		
0.0 - 0.8	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.8 - 1.5	SM	RUST BROWN SILTY FINE SAND WITH ROOTS (MEDIUM DENSE TO DENSE, MOIST TO WET)
1.5 - 3.0	SM	BROWN-GRAY SILTY SAND (MEDIUM DENSE, WET) (Qvra ₁)
3.0 - 8.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE COLLECTED AT 2.5 AND 7.5 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.5 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 8.0 FEET ON 01-08-97
TEST PIT TWENTY-SIX		
0.0 - 1.3	SM	BLACK TO DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.3 - 2.8	SM	BROWN SILTY FINE SAND WITH ROOTS (MEDIUM DENSE TO DENSE, MOIST TO WET)
2.8 - 6.0	SM	RUST MOTTLED GRAY SILTY FINE SAND (MEDIUM DENSE TO DENSE, WET) (Qvra ₁)
6.0 - 9.8	SW	BROWN TO GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 2.7 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.0 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.8 FEET ON 01-08-97
TEST PIT TWENTY-SEVEN		
0.0 - 0.8	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.8 - 1.5	SM	BROWN SILTY FINE SAND WITH ROOTS (MEDIUM DENSE TO DENSE, MOIST)
1.5 - 3.3	SM	GRAY SILTY FINE SAND (MEDIUM DENSE TO DENSE, MOIST) (Qvra ₁)
3.3 - 8.0	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
		SAMPLE WAS COLLECTED AT 2.3 FEET GROUND WATER SEEPAGE WAS NOT ENCOUNTERED TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 8.0 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
TEST PIT TWENTY-EIGHT		
0.0 - 1.0	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 4.3	SM	RUST-MOTTLED GRAY SILTY SAND (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra ₁)
4.3 - 6.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLES WERE NOT COLLECTED MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 3.0 FEET MODERATE GROUND WATER SEEPAGE WAS ENCOUNTERED AT 4.5 FEET MODERATE TEST PIT CAVING WAS ENCOUNTERED BELOW 4.5 FEET TEST PIT WAS COMPLETED AT 6.5 FEET ON 01-08-97
TEST PIT TWENTY-NINE		
0.0 - 0.8	SM	BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.8 - 6.3	SM	RUST BROWN SILTY FINE SAND WITH ROOTS (MEDIUM DENSE TO DENSE, WET) (Qvra ₁)
6.3 - 8.5	SW	BROWN TO GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 7.0 FEET MINOR GROUND WATER SEEPAGE WAS ENCOUNTERED AT 2.5 FEET TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 8.5 FEET ON 01-08-97
TEST PIT THIRTY		
0.0 - 1.0	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 7.5	SW	GRAY FINE TO COARSE SAND (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
7.5 - 9.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL (MEDIUM DENSE TO DENSE, WET) (Qvra)
		SAMPLE WAS COLLECTED AT 7.0 FEET GROUND WATER SEEPAGE WAS ENCOUNTERED AT 7.5 FEET AND BELOW TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 9.5 FEET ON 01-08-97
TEST PIT THIRTY-ONE		
0.0 - 1.0	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
1.0 - 2.5	SW-SM	RUST BROWN FINE TO COARSE SAND WITH GRAVEL AND SILT (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
2.5 - 8.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL AND COBBLES (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra)
		SAMPLES WERE NOT COLLECTED GROUND WATER SEEPAGE WAS ENCOUNTERED AT 6.0 FEET AND BELOW TEST PIT CAVING WAS NOT ENCOUNTERED TEST PIT WAS COMPLETED AT 8.5 FEET ON 01-08-97

LOG OF EXPLORATION

DEPTH	USCS	SOIL DESCRIPTION
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TEST PIT THIRTY-TWO

0.0 - 0.5	SM	DARK BROWN SILTY FINE SAND WITH ROOTS (LOOSE, MOIST) (TOPSOIL)
0.5 - 1.8	SW-SM	BROWN FINE TO COARSE SAND WITH SILT AND GRAVEL (MEDIUM DENSE TO DENSE, MOIST) (Qvra)
1.8 - 6.5	SW	GRAY FINE TO COARSE SAND WITH GRAVEL, COBBLES AND A BOULDER (MEDIUM DENSE TO DENSE, MOIST TO WET) (Qvra)

SAMPLES WERE NOT COLLECTED
HEAVY GROUND WATER SEEPAGE WAS ENCOUNTERED AT 4.5 FEET AND BELOW
MODERATE TO SEVERE TEST PIT CAVING WAS ENCOUNTERED AT BELOW 2.0 FEET
TEST PIT CAVING WAS NOT ENCOUNTERED
TEST PIT WAS COMPLETED AT 6.5 FEET ON 01-08-97