

Source: City of Issaquah

(ID#1) 95-52

(ID#2) Police Station

Site Address E. Sunset Way

Date Copied 2-1-02 By D.R.

- Title page with the following information:
 - Company (Author) name
 - Report date
 - Project Name
 - Company's job number
 - Site address
- Executive Summary / Introduction of the report
- Table of contents
- Project Location Map / Vicinity Map
- Site / Exploration Plans, Boring Location Plans
- Cross-sections / Subsurface profiles
- Exploration Logs
- Monitoring Well Logs
- Cone Penetrometer Logs
- Groundwater Elevation Tables / Data

Includes data from Previous Reports

No new data / data review

Missing Data / Illegible Data
Explanation _____

Comments: _____

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7/2

July 23, 1996

Our ref: 963-1415

7171

RECEIVED JUL 24 1996

City of Issaquah
Public Works Department
P.O. Box 1307
Issaquah, Washington 98027-1307

ATTENTION: Mr. Steve Clark

RE: RESULTS OF GEOTECHNICAL INVESTIGATION
POLICE STATION AND JAIL BUILDING
ISSAQUAH, WASHINGTON

Dear Mr. Clark:

Golder Associates Inc. is pleased to present the final results of our geotechnical investigation for the proposed police station and jail. Preliminary design recommendations were provided to you and your design team in a letter report dated June 27, 1996. We proceeded with this study based on your written authorization to our proposal dated April 16, 1996. The purpose of this study was to provide geotechnical engineering recommendations for the design and construction of the proposed project. Environmental sampling and testing were not within the scope of this report.

Based on the results of our study, the proposed facility appears feasible for the observed site conditions. Conventional spread footings and interior isolated column footings can be founded on native sandy gravel once upper native alluvial silt and previously placed fill is removed. More specific geotechnical recommendations are provided in section 4.

1. PROPOSED DEVELOPMENT AND SITE DESCRIPTION

1.1 Proposed Development

The project will be located off of Sunset Way in Issaquah as shown on Figure 1 and 2. Based on preliminary drawings by Concept Engineering Inc., provided by the city, the site development plans consist of the construction of a two story above ground steel and concrete building with an additional below grade parking level to house the new police station and jail. We received a list of specific geotechnical design parameters from CTS Engineers at the start of the project. We contacted CTS on June 26, and discussed the list and obtained additional information on site grades and building footing and slab elevations. Based on discussions with Mr. John Jochnk of CTS Engineers, Inc. we understand that the

planned structure will include two stories above grade and a partial below grade parking level. The parking level finish floor slab elevation will be at about 92 feet. The footing elevation will be about 2 feet below at about elevation 90 feet. The existing ground surface elevations on the site vary from a low of about elevation 93 at the west end of the site to a maximum of about 100 feet in the southeast corner of the site. This will result in cuts for footing grades on the order of three to ten feet, generally increasing from west to east.

There are two buildings currently on the site. The post office occupies the building to the east and the police station and City Hall are located in the building to the west. These two buildings are to be demolished to make way for the new construction.

1.2 Site Description

As shown on Figure 2, the two existing buildings are aligned east to west and are separated by a narrow paved walkway. The buildings have parking to the east and west. A city park borders the site on the south and East Sunset Boulevard is to the north. A fire station is located on the adjacent property to the east and a Burlington Northern Railroad siding is to the west. The site slopes gently to the west with an elevation change of approximately 7 feet.

2. SUBSURFACE FIELD INVESTIGATION

Our subsurface field investigation was carried out on June 18th, 24th and 25th, 1996. Three geotechnical borings (BH-1, BH-2, and BH-3) were drilled along with one infiltration test boring (I-1). BH-1 and I-1 were started with hollow stem auger methods and completed using HWT casing. Due to considerable drilling difficulty in compact to dense, gravelly cobbles and occasional boulders, we recommended changing the drilling method to complete the remaining two holes. BH-2 and BH-3 were then drilled using air rotary methods. The borings were drilled to a maximum depth of 58 feet below the ground surface. The locations of our explorations are shown on Figure 2. The explorations were located by measuring from features shown on the site plan drawing provided to us, and should be considered approximate.

Representative but disturbed soil samples were collected at about 5 foot intervals in the explorations. The soils were described according to the Unified Soil Classification System, and Golder Associates Inc. technical procedures. Soil samples were collected, and described in the field by our geologist, and then sealed in moisture proof containers for later examination at our soils laboratory. Logs of the explorations and laboratory test data are included in the Appendix to this report.

2.1 Infiltration Test

A maximum infiltration test was conducted in borehole I-1, located approximately 5 feet east of BH-1, in order to determine the relative hydraulic conductivity of the subsurface soils. The test was conducted in accordance with the EPA test method "Falling Head Percolation

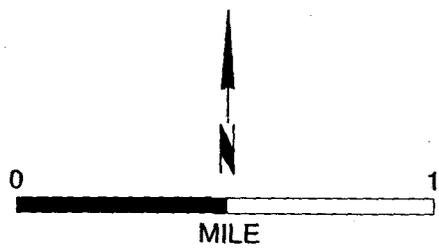
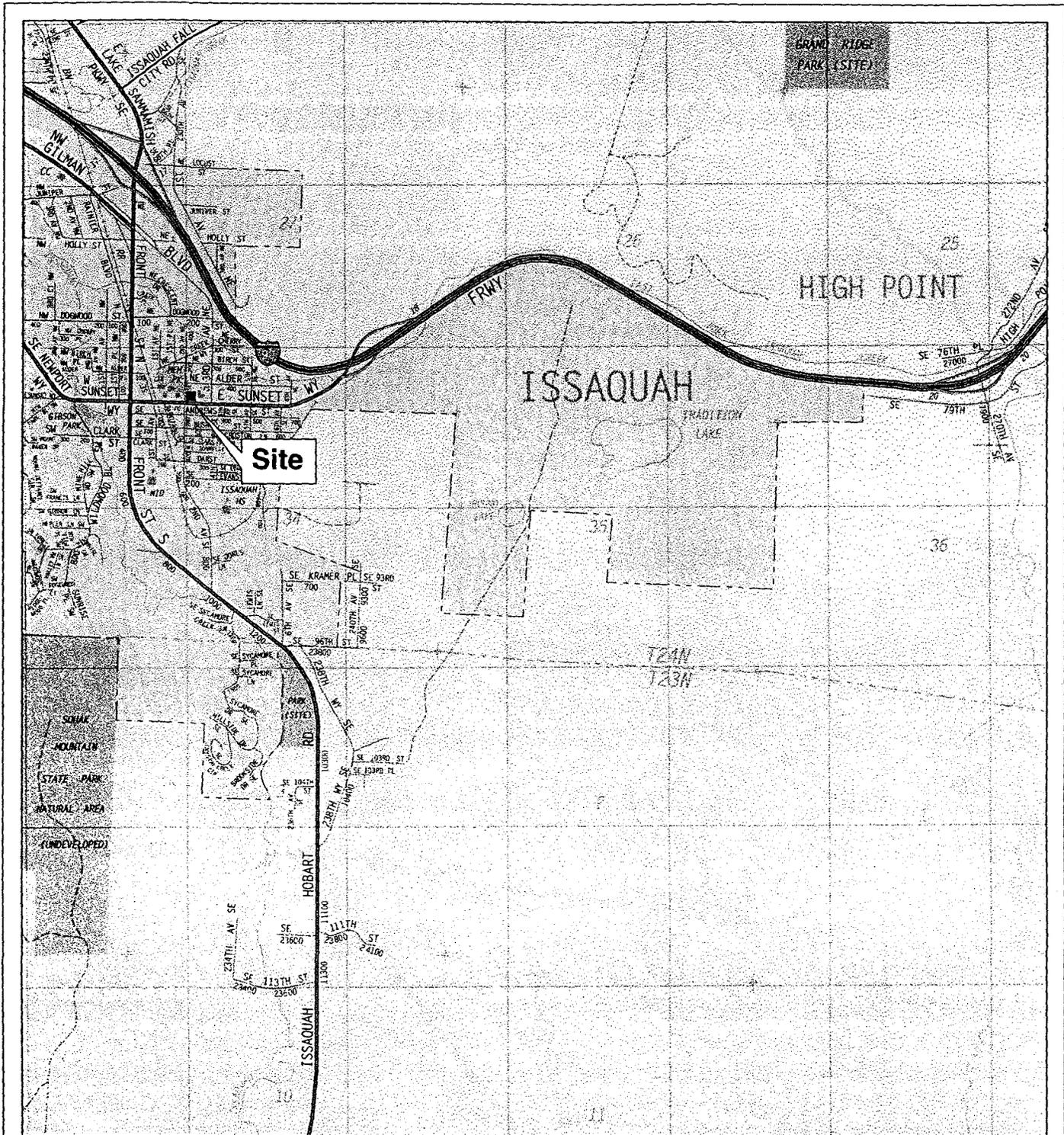
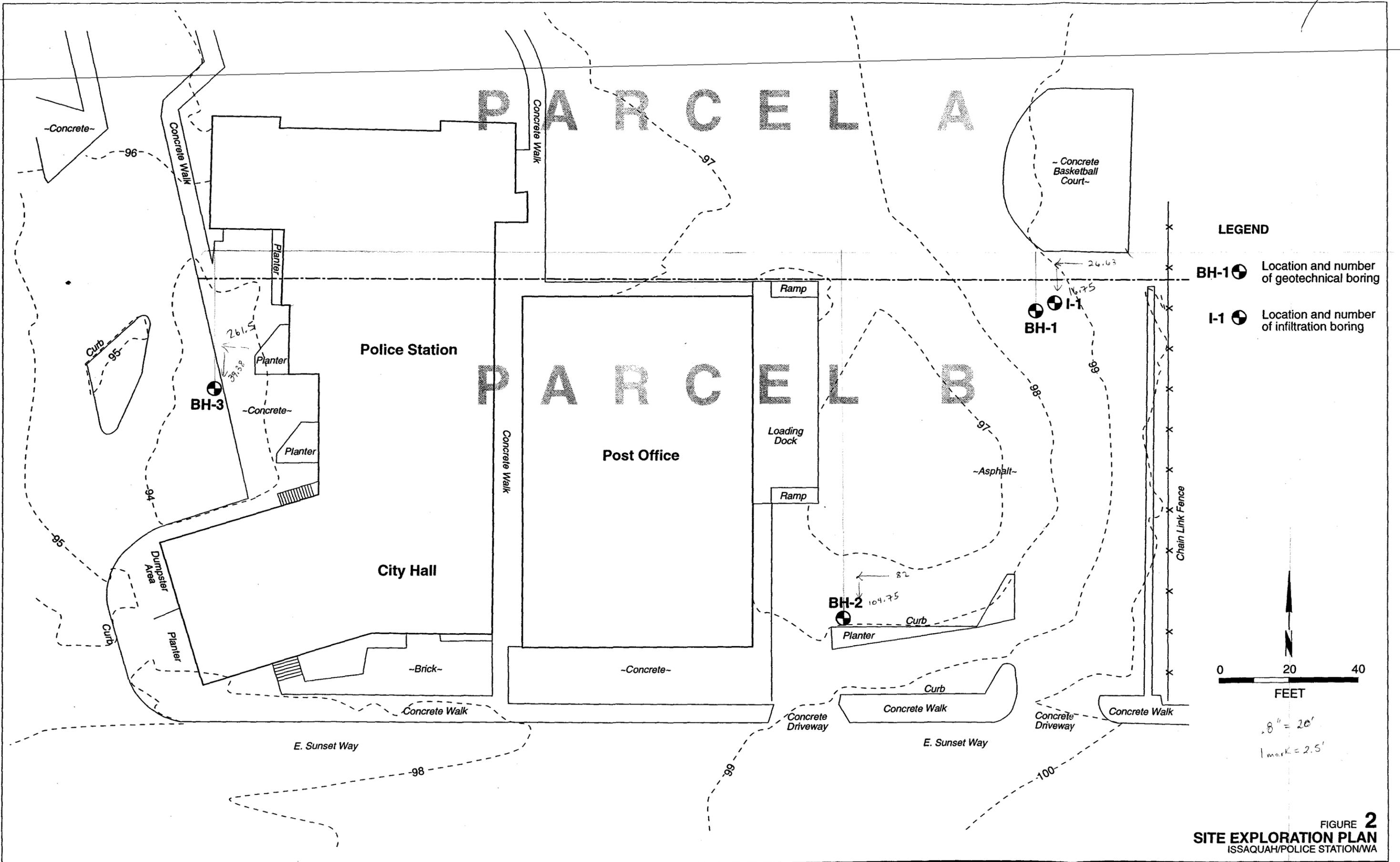


FIGURE 1
VICINITY MAP
 ISSAQUAH/POLICE STATION/WA



PROJECT: Issaquah/Police Sta./WA

RECORD OF BOREHOLE BH-1

SHEET 1 OF 1

PROJECT NUMBER: 963 1415.100

BORING LOCATION: North side of the Post Office Parking Lot

DATUM: MSL

BORING DATE: 6/18/96

DEPTH FEET	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS/FT.			PIEZOMETER GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	REC/ATT	WATER CONTENT, PERCENT (Wp, W, WI)		
0	6.25-inch HSA	Asphalt			99.0								
		Crushed base	GM		0.0								
		Dark yellowish brown (10YR 4/2), CLAYEY SILT, little coarse to fine gravel and sand, damp (CL)(FILL)	ML										
		Firm, mottled medium yellowish brown (10YR 5/4), SILTY CLAY to CLAYEY SILT matrix with little to some coarse to fine gravel and sand, subangular to subrounded, iron oxide staining, trace organics, damp (ALLUVIUM)	ML										
5					94.0								
					5.0								
					92.5	1	SS	1-3-2	5	1.0/1.5		29.6%	
					6.5								
			7.5': Drilling like gravel										
			Dense to very dense, mottled moderate yellowish brown (10YR 5/4), coarse to fine GRAVEL and COBBLES, some coarse to fine sand, trace to little silt, trace boulders, iron oxide staining (ALLUVIUM)	GP-GM									
10				89.0									
		10.5': Drilling like cobbles											
				10.0									
				87.5	2	SS	26-39-48	87	0.5/1.5				
				11.5									
15				84.0									
		15.0-16.5': Drilling like boulder											
		15.0': Refusal with HSA. Switch to HWT Casing.											
		16.5': Drilling like cobbles											
				15.0	3	SS	50/2"	50/2	.1/2				
				15.2									
20				84.0									
		19.0': Drilling like gravels											
				79.0									
				20.0									
				77.5	4	SS	46-45-26	71	0.7/1.5				
				21.5									
		Bottom of hole at 21.5' bgs. 6/18/96											
25													
30	HWT Casing												

DRILL RIG: CME 85

LOGGED: K. Schneck

DRILLING CONTRACTOR: Gregory Drilling

CHECKED: J. Johnson

DRILLER: L. Gregory

DATE: 6/28/96



PROJECT: Issaquah/Police Sta./WA

RECORD OF BOREHOLE ~~BN-2~~

SHEET 1 OF 2

PROJECT NUMBER: 963 1415.100

BORING LOCATION: South Side of the Post Office Parking Lot

DATUM: MSL

BORING DATE: 6/24/96

DEPTH FEET	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE BLOWS/FT		PIEZOMETER GRAPHIC WATER LEVEL
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	REC/ATT	Wp	
0		Asphalt			98.0							
		Crushed rock fill	GM									
		Stiff, dark yellowish brown (10YR 4/2), clayey SILT, some fine to medium sand, trace rounded fine gravel (ALLUVIUM)	ML		95.5							
					2.5	1	HD	2-1-14	15	18/18		27.4% 27 35
					94.0							
					4.0							
5		Dense to very dense, light olive brown (5Y 5/6), sandy coarse GRAVEL and COBBLES, trace to little silt with less cobbles with depth (ALLUVIUM)										
		Blow count overstated			90.5							
					7.5	2	HD	40-50/2"	50/2	1/8		
					8.2							
		Blow count overstated			85.5							
					12.5	3	HD	50/3"	50/3	3/3		
					13.25							
					80.5							
			GPGM		17.5	4	HD	30-35-35	70	18/18		3.3% G
					79.0							
					19.0							
					75.5							
					22.5	5	HD	50/5"	50/5	5/5		
					22.9							
					70.5							
					27.5	6	HD	22-50/5"	50/5	11/11		
					28.4							

DRILL RIG: Faling 300

DRILLING CONTRACTOR: Holt Drilling

DRILLER:

LOGGED: J. Coleman

CHECKED: J. Johnson

DATE: 6/28/96



PROJECT: Issaquah/Police Sta./WA

RECORD OF BOREHOLE BH-3

SHEET 1 OF 2

DATUM: MSL

PROJECT NUMBER: 963 1415.100

BORING LOCATION: West of Police Entrance

BORING DATE: 6/25/96

DEPTH FEET	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS/FT. ■					PIEZOMETER GRAPHIC		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	REC/ATT	WATER CONTENT, PERCENT						WATER LEVEL	
					DEPTH						Wp	W	Wi					
0	Air Rotary Casing Advancer	Asphalt			93.0													
		Dense, light olive gray (5Y 5/2), sandy, medium to coarse GRAVEL, some silt (CRUSHED ROCK FILL)	GM															
		No recovery. Cuttings logged as: Stiff, light olive brown (5Y 5/8), clayey SILT, trace fine gravel, little fine to coarse sand (ALLUVIUM)	ML		90.5													
					2.5	1	HD	10-6-4	10	0/18								
					89.0													
					4.0													
5			Very dense, light olive brown (5Y 5/6), sandy GRAVEL, trace to little cobbles, trace to little silt (ALLUVIUM)															
					85.5													
					7.5	2	HD	50/5*	50/5	5/5								
					8.0													
					80.5													
			Blow count overstated. No recovery		12.5	3	HD	50/3*	50/3	0/3								
					14.0													
15			Large cobbles-small boulders Very hard drilling															
					75.5													
				17.5	4	HD	17-40-50/5*	50/5	17/17			4.4% OG						
				74.0														
				19.0														
20		Very hard drilling																
				70.5														
				22.5	5	HD	32-42-50/5*	50/5	17/17									
				69.0														
				24.0														
25		Cobbles																
				65.5														
				27.5	6	HD	36-50/4*	50/4	10/10									
				64.7														
				28.3														
30																		

DRILL RIG: Faling 300

DRILLING CONTRACTOR: Holt Drilling

DRILLER:

LOGGED: J. Coleman

CHECKED: J. Johnson

DATE: 6/28/96



PROJECT: Issaquah/Police Sta./WA

RECORD OF BOREHOLE BH-3

SHEET 2 OF 2

DATUM: MSL

PROJECT NUMBER: 963 1415.100

BORING LOCATION: West of Police Entrance

BORING DATE: 6/25/96

DEPTH FEET	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE BLOWS/FT.				PIEZOMETER GRAPHIC				
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	REC/ATT	WATER CONTENT, PERCENT				WATER LEVEL			
DEPTH	Wp				W						Wi							
30	Air Rotary Casing Advancer	Very dense, light olive brown (5Y 5/6), sandy GRAVEL, trace to little cobbles, trace to little silt (ALLUVIUM)	GWGM		63.0													
					60.5													
					32.5	7	HD	15-31-19	50	17/17			7.3%					32.0' ATD
					59.0													
					34.0													
35																		
					55.5													
					37.5	8	HD	17-17-18	35	18/18								
					54.0													
					38.0													
40						-2' boulder												
	50.5																	
	42.5	9	HD	20-50/5*	50/5	11/11												
	43.4																	
45																		
	45.5																	
	47.5																	
	44.0	10	HD	15-38-48	86	18/18												
	49.0																	
50																		
	40.5																	
	52.5																	
	39.0	11	HD	25-44-50/5*	50/5	17/17												
	54.0																	
55		Bottom of hole at 54.0' below ground surface. 6/26/96																
60																		

DRILL RIG: Faling 300
 DRILLING CONTRACTOR: Holt Drilling
 DRILLER:

LOGGED: J. Coleman
 CHECKED: J. Johnson
 DATE: 6/28/96

